

12th APMEC
Asia Pacific Medical
Education Conference

&

3rd ICFDHP
International Conference on
Faculty Development in
the Health Professions

Enhancing Faculty Development at the Workplace: From Theory to Practice

Trends · Issues · Priorities · Strategies

4th-8th February 2015, Singapore

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Centre for Medical Education
Yong Loo Lin School of Medicine

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ESSENTIAL SKILLS IN MEDICAL EDUCATION (ESME) COURSE

ESSENTIAL SKILLS IN MEDICAL EDUCATION ASSESSMENT (ESMEA) COURSE

RESEARCH ESSENTIAL SKILLS IN MEDICAL EDUCATION (RESME) COURSE

ESME COURSE

Wednesday 4th February 2015 (8.30am)	Multipurpose Room 1, Level 3, MD1, NUS Yong Loo Lin School of Medicine
Thursday 5th February 2015	ESME Course participants should register for one or two 12th APMEC pre-conference workshops (cost not included).
Friday 6th (12.45pm) and Saturday 7th February (1.15pm) 2015	Function Room 1, Level 1, University Cultural Centre
Sunday 8th February 2015 (9.00am)	Learning Room 01-01A, Level 1, Centre for Translational Medicine (CeTM), NUS Yong Loo Lin School of Medicine

ESMEA COURSE

Wednesday 4th February 2015	ESMEA Course participants should register for one or two 12th APMEC pre-conference workshops (cost not included).
Thursday 5th February 2015 (8.30am)	Multipurpose Room 1, Level 3, MD1, NUS Yong Loo Lin School of Medicine
Friday 6th (12.45pm) and Saturday 7th February (1.15pm) 2015	Faculty members will be available for advice and discussion at the AMEE stand at lunchtime
Sunday 8th February 2015 (9.00am)	Learning Room 01-01B, Level 1, Centre for Translational Medicine (CeTM), NUS Yong Loo Lin School of Medicine

RESME COURSE

Wednesday 4th February 2015	RESME Course participants should register for one or two 12th APMEC pre-conference workshops (cost not included).
Thursday 5th February 2015 (8.30am)	Multipurpose Room 3, Level 3, MD1, NUS Yong Loo Lin School of Medicine
Friday 6th (12.45pm) and Saturday 7th February (1.15pm) 2015	VIP Lounge, Level 2, University Cultural Centre

Rationale

With the increasing professionalisation of medical education, the need for doctors and other healthcare professionals to have training in teaching is widely recognized. Whilst many institutions worldwide offer Diploma and Masters courses in medical education, there is a lack of accredited basic level courses. The ESME Programme has been designed to meet the need for an entry level teaching qualification and will be of particular interest to teachers who are engaging with medical education for the first time. It will also be valuable for more experienced teachers who have been given some new responsibilities or assignment relating to teaching or assessment, or who wish to have an introduction to the theory underpinning the practice of teaching. It has been designed in the context that all doctors in any branch of medicine or field of practice are likely to have some teaching responsibilities for undergraduates, postgraduates, peers, other healthcare workers or patients. ESME's novel course structure combines a purpose-built course on teaching with an international medical education Conference.

ESME is accredited by AMEE and approved by an international Advisory Board.

Since the introduction of the original ESME course in 2005, several other courses have been developed to meet specific needs:

- Essential Skills in Medical Education Assessment (ESMEA)
- Research Essential Skills in Medical Education (RESME)
- Essential Skills in Medical Education Simulation (ESMESim)

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- Essential Skills in Computer-Enhanced Learning (ESCEL)
- Essential Skills in Continuing Education and Professional Development (ESCEPD)
- Essential Skills in Medical Education Online (ESME Online)
- Essential Skills in Medical Education Leadership Online (ESME Leadership Online)

ESME at 12th APMEC

Three ESME Courses are offered at this Conference: (1) the original Essential Skills in Medical Education, (2) Essential Skills in Medical Education Assessment, and (3) Research Essential Skills in Medical Education. Please note: it is not possible to attend more than one course at APMEC due to timing conflicts.

1. Essential Skills in Medical Education

This broad-based course has been designed around a set of competencies that all practising teachers should possess. These include: Effective Teaching, Skilled Educational Planning and Informed Assessment and Evaluation.

ESME Course schedule

Wednesday 4 February 0830-1700 - ESME Pre-conference Session:

- The Skilled Educational Planner: specifying and using learning outcomes and how the learning can be organised in a curriculum;
- The Effective Teacher: including some helpful basic principles relating to large and small group teaching; independent learning; the new learning technologies;

Thursday 5 February: Attend other Pre-conference Workshops (cost not included)

Friday 6 February: Attend 12th APMEC Conference; lunch meeting with ESME Facilitators

Saturday 7 February: Attend 12th APMEC Conference; lunch meeting with ESME Facilitators

Sunday 8 February 0900-1230 - ESME Post-conference Session:

- The Informed Assessor/Evaluator: the key assessment principles and the tools available to the teacher;
- The Scholarly Educator, including Professionalism in medical education; Roles of the teacher; Best Evidence Medical Education (BEME);
- A look at the requirements for completion of the ESME Certificate in Medical Education.

ESME Course Faculty

Course Director: Professor Ronald Harden, formerly Director of the Centre for Medical Education, University of Dundee, UK, and currently General Secretary/Treasurer of AMEE and Editor of Medical Teacher;

Faculty members:

Professor Matthew C. E. Gwee, Professorial Fellow and Chairman, International & Education Programmes, Centre for Medical Education (CenMED), Dean's Office, NUS Yong Loo Lin School of Medicine, National University Health System

Dr Dujeepa Samarasekera, Director, Centre for Medical Education (CenMED), NUS Yong Loo Lin School of Medicine, National University Health System

Associate Professor Tan Chay Hoon, Department of Pharmacology, and Associate, Centre for Medical Education (CenMED), NUS Yong Loo Lin School of Medicine, Consultant Psychiatrist, National University Hospital, National University Health System

Associate Professor Zubair Amin, Associate, Centre for Medical Education (CenMED), and Associate Professor, Department of Paediatrics, NUS Yong Loo Lin School of Medicine, National University of Singapore & Consultant Neonatologist, National University Hospital, National University Health System

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ESME Course Fee: US\$ 575

Included in the course fee is:

- One full-day pre-conference session
- Two lunchtime discussion sessions with faculty during APMEC
- One half-day post-conference session
- Printed course programme
- Set of resource materials provided on USB memory stick
- Certificate of participation
- Optional submission and assessment of a post-course report, details of which will be given during the Course
- Award of ESME Certificate in Medical Education if the post-course report is assessed as meeting the requirements of the Certificate.

Please note: In addition to the ESME course fee, participants are required to register for 12th APMEC and pay the registration fee, and pay to attend one or two pre-conference workshops of their choice.

2. Essential Skills in Medical Education Assessment (ESMEA)

The purpose of this course is to introduce participants to the principles of good assessment practice, and give them a good grasp of the essential skills which are critical in designing fair and robust assessment programmes. The course is aimed at participants new to assessment who wish to gain basic understanding and skills in assessment. No prior knowledge or experience is necessary. It is a broad based course, giving a general overview, but participants can expect to gain understanding of the underlying principles of assessment and experience in designing assessments, writing test material and standard setting.

Course schedule

Wednesday 4 February: Attend other Pre-conference Workshops (cost not included)

Thursday 5 February: 0830-1700 – ESMEA Pre-conference Session:

Through a range of interactive lectures, presentations and small group work, the following topics will be covered:

- Principles of assessment
- Blueprinting
- Item writing (SBAs)
- OSCE principles
- Designing OSCE stations
- Introduction to WBAs

Friday 6 February: Attend 12th APMEC Conference; faculty members will be available for advice and discussion at the AMEE stand at lunchtime

Saturday 7 February: Attend 12th APMEC Conference; faculty members will be available for advice and discussion at the AMEE stand at lunchtime

Sunday 8 February 0900-1230 - ESMEA Post-conference Session:

- Principles of Standard setting
- Angoff exercise
- Planning for implementing new assessment programmes

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ESMEA Course Faculty

Professor Katharine Boursicot, Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore (Designer and Course Leader)

Faculty member: Professor Trudie Roberts, University of Leeds, UK

Course Administrator: Mrs Pat Lilley, AMEE

ESMEA Course Fee: US\$ 575

Included in the course fee is:

- One full-day pre-conference session
- One half-day post-conference session
- Printed course programme
- Set of resource materials provided on USB memory stick
- Certificate of participation
- Optional submission and assessment of a post-course report, details of which will be given during the Course
- Award of ESMEA Certificate in Medical Education if the post-course report is assessed as meeting the requirements of the Certificate.

Please note: In addition to the ESMEA course fee, participants are required to register for 12th APMEC and pay the registration fee, and pay to attend one or two pre-conference workshops of their choice.

3. Research Essential Skills in Medical Education (RESME)

The RESME Course provides an introduction to the essential principles and methods of conducting research in medical education: formulating research questions, choosing a research approach, selecting an appropriate global methodology and constructing a research plan. Through a series of short presentations and small group work, this highly interactive course will introduce basic concepts and principles using a variety of examples relating to theory. After completing the course, participants will have acquired a framework for understanding and application of essential concepts and principles for research in medical education. Within six months of completion of the course, participants may choose to submit a short research proposal on a topic of their interest describing the application of concepts and principles covered in the course, leading to award of the RESME Certificate in Medical Education.

RESME Course Schedule

Wednesday 4 February: Attend other Pre-conference Workshops (cost not included)

Thursday 5 February 0830-1700: RESME Pre-conference Session

Friday 6 February: Attend 12th APMEC Conference; lunch meeting with RESME Facilitators

Saturday 7 February: Attend 12th APMEC Conference; lunch meeting with RESME Facilitators; In-conference workshop

RESME Course Faculty

Charlotte Ringsted (Wilson Centre/University of Toronto, Canada (Course Leader)

Tina Martimianakis (University of Toronto, Canada)

Albert Scherpbier (Maastricht University, Netherlands)

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RESME Course Fee: US\$ 575

Included in the course fee is:

- One full-day pre-conference session
- Two lunchtime discussion sessions with faculty during APMEC
- One in-conference workshop
- Printed course programme
- Set of resource materials
- Certificate of participation
- Optional submission and assessment of a post-course report, details of which will be given during the Course
- Award of RESME Certificate in Medical Education if the post-course report is assessed as meeting the requirements of the Certificate.

Please note: In addition to the RESME course fee, participants are required to register for 12th APMEC and pay the registration fee, and pay to attend one or two pre-conference workshops of their choice.

How to register for ESME, ESMEA or RESME

Participants should register for either ESME, ESMEA or RESME by selecting the appropriate option on the 12th APMEC registration form. It is not possible to attend more than one course due to scheduling conflicts.

Questions about the Courses

For queries specifically about ESME, ESMEA or RESME course content please contact AMEE:

AMEE, 12 Airlie Place, Dundee DD1 4HJ, UK

Tel: +44 (0)1382 381953; Fax: +44 (0)1382 381987; www.amee.org Email: amee@dundee.ac.uk

For all other questions please contact 12th APMEC registration: apmec@nuhs.edu.sg

FUNDAMENTALS IN LEADERSHIP AND MANAGEMENT IN EDUCATION (FLAME) COURSE

Wednesday 4th February 2015 (8.30am)	<i>Multipurpose Room 1, Level 3, MD1, NUS Yong Loo Lin School of Medicine</i>
Thursday 5th February 2015	<i>FLAME Course participants should register for one or two 12th APMEC pre-conference workshops (cost not included).</i>
Friday 6th (12.45pm) and Saturday 7th February (1.15pm) 2015	<i>Function Room 2, Level 2, University Cultural Centre</i>
Sunday 8th February 2015 (9.00am)	<i>Learning Room 01-02, Level 1, Centre for Translational Medicine (CeTM), NUS Yong Loo Lin School of Medicine</i>

+ self-directed activities and readings prior to and during the conference

Rationale

Most educators and clinical teachers have some level of management or leadership responsibility, whether this is leading a team or managing a module, programme or educational activity. The need for medical and healthcare educators to have some formal management and leadership training is now widely recognised. A range of institutionally organised and Masters level courses in leadership and management are available but there is a lack of introductory, basic level courses specifically for healthcare educators. The FLAME Programme has been designed to meet the need for those who are new to the theory of leadership and management and who feel they want to gain more understanding of the skills required to lead and manage contemporary education. The FLAME course will be of particular interest to those who want to develop their understanding of leadership and apply theory to practice, including those new to education as well as those who have been given new responsibilities. The course has been designed by experienced faculty to meet the needs of educators at all stages of career and uses highly interactive activities which can be related directly to practice.

FLAME is accredited by ASME.

ASME has run leadership development programmes specifically for healthcare educators since 2002, including:

FLAME (Fundamentals in Leadership and Management in Education)

DLH (Developing Leaders in Healthcare Education)

'Dean's retreat' (a two-day experiential course for Deans of Healthcare Education)

Masterclasses in change management

The Leadership Course offered at 12th APMEC & 3rd ICFDHP 2015 is the Fundamentals in Leadership and Management in Education (FLAME) Course.

Fundamentals in Leadership and Management in Education (FLAME) Course

This introductory course has been designed around a set of core skills and understanding that leaders and managers in education should possess. These include:

- **Leadership and management:** understanding the differences between leadership and management and key activities required under each of these;
- **Leadership theory to practice:** understanding key leadership frameworks and how these apply to the practice of a healthcare education leader/manager;
- **Developing and communicating the vision:** creative ways of setting a vision for change and communicating this to others;
- **Developing self as leader,** developing self-insight, goal setting and action planning.

Post-course report: Participants may choose to submit, within six months of completion of the course, a short report describing the application of the concepts and principles covered in the FLAME Course to their own leadership and management, leading to award of the ASME-FLAME Certificate in Fundamentals of Leadership and Management in Education.

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Course schedule:

Wednesday 4 February 0830-1700

Friday and Saturday 6 and 7 February 2015 – facilitated lunchtime meeting during main conference

Sunday 8 February 2015: 0900 - 1230

FLAME Course Faculty:

Professor Judy McKimm, Dean of Medical Education, Swansea University, United Kingdom and Director of the ASME Educational Leadership Programme

Mr Paul Jones, Programme Director, Graduate Entry Medicine programme, Swansea University, United Kingdom

Associate Professor Wayne Hazell, Emergency Physician & Director of Clinical Training, The Prince Charles Hospital (TPCH), Australia

Professor Kirsty Forrest, Director of Medical Education, Faculty of Medicine and Health Sciences, Macquarie University, Australia

Course Administrator: Nicky Pender, ASME

FLAME Course fee: US\$575

Includes:

- One full-day post-conference session (4 February 2015)
- Printed course programme
- Readings and workbook
- Set of additional resource materials
- Certificate of participation
- Two facilitated lunchtime meetings during the main conference (6 and 7 February 2015)
- A half day post conference workshop (8 February 2015)
- Optional submission and assessment of a post-course report, details of which will be given during the Course;
- Award of ASME FLAME Certificate if the post-course report is assessed as meeting the requirements of the Certificate.

Please note: In addition to the FLAME course fee, participants are required to register and pay the registration fees for 12th APMEC & 3rd ICFDHP 2015 main conference and one or two pre-conference workshops of their choice.

A11

Wednesday 4th February 2015, 8.30am – 5.30pm

Computer Lab 1, Level 8, MD1

National University of Singapore

USING SPSS FOR DATA ANALYSIS

Chan Yiong Huak

Singapore

This course uses SPSS to understand the statistical analysis for research data. Setting up a database in SPSS and importing Excel files will be discussed. Basic applications using SPSS commands to compute new variables, selecting subsets, subgroup analysis and recoding will be illustrated. Basic and intermediate statistical techniques will be discussed, pertaining to proper result presentation for publications.

B11

Wednesday 4th February 2015, 8.30am – 12.30pm

Smart Classroom, Level 4, MD6

National University of Singapore

PROFESSIONALISM SYMPOSIUM 1: DESIGNING EFFECTIVE TEACHING, LEARNING AND ASSESSMENT IN PROFESSIONALISM

¹Alastair Campbell, ¹Anita Ho, ²Richard Knox, ³Ming Lee and ²Pirashanthie Vivekananda-Schmidt

¹Singapore, ²United Kingdom, ³USA

This symposium assembles an international teaching faculty who will debate the meaning of professionalism in healthcare and the best ways to teach it. They will share their knowledge of effective pedagogies that address common barriers to professionalism education for medical students, and the factors that have greatest impact on students' professional development. Symposium speakers will show how authentic assessments may be designed, and how assessment strategies play a role in shaping learning outcomes and future clinical practice.

B12Wednesday 4th February 2015, 8.30am – 12.30pm

Multipurpose Room 2, Level 3, MD1

National University of Singapore

AN EXPERIENTIAL EXPLORATION, OVERVIEW AND UNDERSTANDING OF THE MINDFULNESS-BASED-STRESS-REDUCTION (MBSR) PROGRAM**Jerry Adams***Sint Maarten***Workshop Description**

Mindfulness is a state of being; a mental state achieved through focusing one's awareness on the present moment, while openly acknowledging and accepting one's feelings, thoughts, and bodily sensations. The list of potential benefits obtained from training the mind to be in the present moment with non-judgmental awareness is extensive and includes: Enhancements in concentration, clarity of thought, feelings of inner-peace, balance, calmness and well-being; improved quality of sleep and increased energy; enhanced efficacy in the overall adaptation to daily tasks and life's demands. Mindfulness, in terms of both its practice and as an area of research, is expanding exponentially within mainstream society and specifically within the field of medicine. A major contributor to this worldwide interest and growth in the practice of mindfulness can be traced back to 1979 when Kabat-Zinn founded the Mindfulness-Based-Stress-Reduction (MBSR) Program at the University of Massachusetts/School of Medicine. MBSR is viewed as "pioneering the integration of meditation and mindfulness into mainstream medicine and health care" and has advanced the legitimacy of mind-body medicine. While MBSR has its roots as a hospital-based mind-body intervention, over the years it has become a popular practice for physicians, physician-in-training and other health-care professionals in regards to both the practitioner's self-care and clinical practice. Epstein (1999) concludes that "as a link between relationship-centered care and evidence-based medicine, mindfulness should be considered a characteristic of good clinical practice." This workshop will provide an opportunity to learn more about mindfulness and mindfulness-based interventions via a direct hands-on experience with some of the methods and meditations practiced in the MBSR program. While primarily experiential, this workshop will also briefly review some of the scientific findings relevant to mindfulness in medicine. If the best way to really know something is through directly experiencing it yourself, then this workshop will provide that opportunity to be introduced to the methods, techniques, meditation practices and foundational intentions of the MBSR program.

Workshop Outcome

Participants will:

1. Have the opportunity to experientially explore some of the methods and practices of MBSR
2. Have the opportunity to engage in mindful meditations and to obtain a beginning understanding of the potential tranquility and well-being associated with moment-to-moment non-judgmental awareness.
3. Have an enhanced comprehension and understanding when reading professional articles or hearing colleagues talk about mindfulness
4. Begin to obtain some understanding of how mindfulness can enhance contentment and/or efficacy re: various aspects of a practitioner's professional endeavors, e.g., how a "mindful practice" can lead to a better quality of patient care. Or, how mindfulness can increase empathy and lower physician burnout/emotional exhaustion.
5. Likely gain some self-awareness and insight into their own mental habits, thereby increasing options for adaptive change and more skillful living.
6. Obtain the basics of a new option in stress management.
7. Be able to make an experientially-informed decision if they want to pursue a mindfulness practice for themselves and/or to encourage their students and/or institutions.

Who Should Attend

Physicians, physicians-in-training, other health-care providers, educators and anyone interested in an experientially-based introduction to mindfulness and mindful meditation.

C11

Wednesday 4th February 2015, 8.00am – 10.00am

Tutorial Room 1, Level 9, MD1

National University of Singapore

BECOMING A BETTER TEACHER THROUGH PEER-OBSERVATION OF TEACHING

Jayne Lysk, Justin Bilszta

Australia

Workshop Description

There is growing interest among health professionals in developing a deeper understanding of teaching methods in order to enhance student learning. Whilst clinicians utilise peer feedback to review clinical performance and competency, peer feedback to identify how to develop clinical teaching approaches or to identify areas where clinical teaching methods can be improved, is infrequent and opportunistic with the observer and the observee unsure of their 'roles', and in instances where feedback is overly negative or critical, resulting in a loss of confidence in teaching or reluctance to seek further feedback (Adshead et al 2006; Tighe and Bradshaw 2012). Peer Observation of Teaching (PoT) provides clinical teachers with the opportunity to engage with a colleague, within a structured framework, which clarifies the role of the observer and the observee and provides a format for the provision of constructive and insightful peer feedback. When coupled with video recording of teaching 'in action', the development of a peer observation partnership and a community of colleagues willing to participate in PoT results in a powerful mechanism to affect change in teaching approaches. This workshop will provide a brief introductory presentation in which key concepts of PoT will be discussed. Opportunities will exist for individual and peer assisted reflection on current teaching practice and the opportunities for peer observation. Participants will be invited to join group discussions of case vignettes that demonstrate issues, problems or successes that have utilised PoT and will plan their own peer observation process using their own teaching responsibilities as an example.

Workshop Outcome

By the end of this workshop participants will have a better understanding of the theory behind the use of PoT and will be able to identify the key elements in an effective peer-observation partnership. They will critically reflect on the challenges of observing a teaching activity in the clinical environment and using the example of their own teaching responsibilities and clinical discipline, participants will consider how to incorporate PoT into their workplace. This workshop is also designed to assist clinical teachers reflect on the impact of pedagogical practices on student outcomes and appreciate the importance of gaining feedback, support and assistance from colleagues.

Who Should Attend

This workshop is relevant for all health professional educators interested in employing procedures and strategies that enhance effectiveness in various clinical teaching contexts.

C12

Wednesday 4th February 2015, 8.00am – 10.00am

Learning Room #01-01B, Level 1, MD6

National University of Singapore

A NETWORKED APPROACH TO CREATING COMMUNITIES OF PRACTICE TO SUPPORT TEACHING AND EDUCATIONAL SCHOLARSHIP ACROSS A TEACHING HOSPITAL

Latika Nirula, Sophie Soklaridis, Ivan Silver

Canada

Workshop Description

Recent literature has called for the exploration of communities of practice in academic health sciences workplaces as an approach to faculty development to support the work of health professions educators (Leslie, Baker, Egan-Lee, Esdaile & Reeves, 2013; Warm, Logio, Pereira, Buranosky & McNeill, 2013; Steinert, 2012; O'Sullivan & Irby, 2011, Steinert, 2010). Communities of practice are defined as groups of people who share a concern, set of problems, or a common passion for a given topic, and deepen their knowledge and expertise through interacting on an ongoing basis (Wenger, McDermott & Snyder, 2002).

This interactive workshop will describe a community of practice approach for distributed faculty development across a large psychiatric academic teaching hospital. We will share our networked approach for tackling faculty development through deliberate fostering of multiple communities of practice in the workplace, with the aim of creating a multi-layer network of engaged educators within our hospital who provide leadership, mentorship, innovate, and contribute to educational scholarship. Therefore, the goal of this approach is to test the value of learning in the workplace and belonging to a community of practice as a relevant mechanism for not only building one's role as educators but by also developing faculty members' other roles (Steinert, 2014) that contribute to the academic mission of the hospital. Participants will be exposed to this model of a *multimembership learning cycle* or "double knit" structure of communities (Wenger, 2002) and how it may cultivate the development of a learning organization.

The workshop facilitators will map the creation of informal and formal faculty development activities at their hospital as part of the delivery of a faculty development curricula (Steinert, 2010), including workshops, consultations, simulation, work-based learning and communities of practice. Participants will explore the value of going for 'early wins' (Kotter, 1996) to meet the faculty development needs and generate interest across the organization. These 'early wins' are also illustrated as mechanisms for bringing faculty from the periphery of a community (Lave and Wenger, 1991) and moving them to full participation. Early stages of community development will be explored (Wenger et al., 2002), with participants identifying key considerations for growing and sustaining such communities. Based on our experiences, we will demonstrate how establishing communities of practice can be a critical step in starting a faculty development program and establishing its curriculum, design, and methods of delivery (Silver, 2014).

Participants in this workshop will explore principles guiding the formation and development of communities of practice through multiple interactive exercises to apply these principles. Using small group learning techniques including a novel icebreaker, a group card sorting exercise, and the use of bouncing balls to enhance discussion, participants will have opportunities to not only be exposed to practical strategies but to develop their own action plan for fostering such communities of practice in their settings.

Workshop Outcome

In this workshop, participants will:

- explore a network model of a multimembership learning cycle or "double knit" structure for communities of practice
- map informal and formal faculty development activities as they may contribute to the development of a work-based faculty development curricula
- explore principles guiding the formation, development, and sustainability of communities of practice through multiple interactive exercises in small groups

C13

Wednesday 4th February 2015, 8.00am – 10.00am

Learning Room #03-04, Level 3, MD6

National University of Singapore

STEMS - A NON-LINEAR PEDAGOGICAL APPROACH TO DEVELOPING COMPETENCY AND CAPABILITY IN SYSTEMS BASED PRACTICE AND TEAM WORK IN JUNIOR SURGICAL RESIDENTS

Vijayan Appasamy, Tan Ming Yuan, Seek Win Nie

Singapore

Workshop Description

Patient care is delivered in a complex and dynamic environment through team work. The delivery of effective patient care requires not only medical knowledge and skills but also the understanding and ability to work effectively in clinical systems as part of a multi-disciplinary and inter-professional health care team. This requires the residents to develop expertise in a progressive manner, understand and utilise distributed intelligence in a dynamic and situated environment utilising multiple forms of knowledge and reasoning. Developing a curriculum that exploits these principles of learning, contextualising the learning to the clinical work environment and that which primes the junior residents' further development, is challenging. The Systems and Team work in Emergency Management in Surgery (STEMS) Program was developed to address these challenges and provide the junior residents with a safe, standardised and comprehensive approach to developing their knowledge and skills in clinical systems, teamwork and critical decision making. The curriculum design uses non-linear pedagogical approaches as its primary mode of stimulating learning. Nurses in the various clinical areas participate in the program in both leading and supporting the inter-professional learning environment. This design may be used as a template in any surgical or non-surgical subspecialty training.

Workshop Outcome

To present and discuss the design and effectiveness of the STEMS program as a multi-dimensional inter-professional interactive learning environment that provides a holistic learning experience for the junior residents, together with nurses, in developing competencies in clinical systems -human factors interactions, team work, effective communications and decision making.

At the end of the workshop, the participants will be able to;

1. Identify areas in their program curriculum where similar non-linear multidimensional inter-professional educational curriculum may be initiated
2. Plan for and identify resources required for organising a similar educational initiative in their residency program or other learning environment
3. Assess the effectiveness of the curriculum.

Who Should Attend

Program Directors, Educators, Clinical and Nursing Faculty

C14

Wednesday 4th February 2015, 8.00am – 10.00am

Learning Room #01-01A, Level 1, MD6

National University of Singapore

FEEDBACK IN CLINICAL EDUCATION – HARD TO GIVE, HARD TO TAKE, HARD TO USE

Debra Nestel, Margaret Bearman

Australia

Workshop Description

Although feedback is considered critical to learning, it is often a significant source of dissatisfaction for learners and sometimes for their teachers/supervisors. In this workshop we explore the experience of feedback in clinical settings from perspectives of learners and teachers/supervisors including factors that facilitate and create barriers. We consider reasons as to why feedback is typically hard to give, hard to take, and hard to use. Participants will have an opportunity to reflect on their own feedback practices and consider these in the light of key conceptual frameworks outlined in the edited book by Boud and Molloy (2013). Strategies for enabling effective feedback in clinical education will be articulated.

Workshop Outcome

1. Reflect on current approaches to feedback in clinical education
2. Outline key conceptual frameworks that inform feedback practices
3. Consider strategies for enabling effective feedback in clinical education

Who Should Attend

The workshop is designed for any health professional educator.

D11

Wednesday 4th February 2015, 10.30am – 12.30pm

Tutorial Room 1, Level 9, MD1

National University of Singapore

STRATEGIES FOR EFFECTIVE IMPLEMENTATION OF AN E-PORTFOLIO, LESSONS FROM A FACULTY DEVELOPMENT PROGRAM

Abbas Ghavam-Rassoul, Shirley Lee, Susanna Talarico, Helen Batty

Canada

Workshop Description

Use of e-portfolios is a growing trend in medical education, including in many faculty development programs. Our Health Practitioner Teacher Education Program uses an electronic portfolio as a part of the educational curriculum and as a strategy for assessment of our learners. During this workshop we will briefly share our experiences in the faculty development setting, then we will use interactive methods to facilitate a discussion about how to succeed at portfolio implementation. Our program has experience with various electronic platforms for housing portfolios, especially blogs. In addition we have developed and refined rubrics to aid faculty portfolio assessment standardization, which is a challenging area for teachers. We will review the current use of portfolios in medical education, the strengths and weaknesses of different electronic platforms, the utility of reflection support meetings and the use of rubrics for portfolio assessments. Participants will have an opportunity to explore an e-portfolio housed on a blog site and experiment with providing feedback to faculty learners using different rubrics. We will end with a discussion of the use of portfolios as a strategy for assessment of specific competencies.

Workshop Outcome

After the session participants will be able to describe the basic elements of portfolios; participants will be able to contrast the strengths and weaknesses of various electronic platforms; participants will value the use of a rubric for assessment of portfolios; participants will experience giving feedback after reviewing a segment of an actual e-portfolio.

Who Should Attend

This workshop will be of interest to a range of participants from novice to expert interested in developing their own portfolios or in implementation of an e-portfolio in their program.

D12

Wednesday 4th February 2015, 10.30am – 12.30pm

Learning Room #01-01A, MD6

National University of Singapore

ABE THE TUMMY DUMMY

Erle Lim

Singapore

Workshop Description

Abe the Tummy Dummy is an abdominal manikin designed to teach the steps of the abdominal examination, and to allow students and trainees to be tested. Abe features interchangeable plug and play organs, and a moving “diaphragm” into which the organs are plugged, for verisimilitude.

Invented in 2012/3, Abe is being launched for worldwide use, and we are seeking to collaborate in its use for teaching and assessment purposes. Attend the symposium to try Abe out.

D13

Wednesday 4th February 2015, 10.30am – 12.30pm

Learning Room #03-04, Level 3, MD6

National University of Singapore

FACULTY DEVELOPMENT - THE NHG WAY

Nicholas Chew, Tham Kum Ying, Serene Goh

Singapore

Workshop Description

The National Healthcare Group (NHG) Faculty Development Program for Health Professions Education is conceptualized to prepare clinicians to be effective teachers. This is necessary because of the rapidly changing education landscape for health professions – medical, nursing, pharmacy and allied health, at undergraduate and postgraduate levels. Given the diversity of learners and settings in our complex healthcare system whereby healthcare professionals are called upon to teach, it is imperative to enhance every faculty member’s ability to teach and engage learners and thereby build our institution’s organizational capabilities and shape its culture. During this interactive workshop, the participants will be presented with different faculty personas that are representative of the teachers and educators in a healthcare institution. They include junior faculty, experienced faculty who take up education leadership roles, and established faculty who are well-loved by students/trainees and are nearing retirement. Using the faculty personas as examples, the participants will be taken through the steps of the various aspects of putting in place a faculty development plan.

The following aspects will be covered:

- How to classify the different groups of faculty;
- How to determine the learning needs and competencies for each group;
- How to plan for the development of each group;
- How to build up our faculty using the Lego® blocks concept;
- How to incorporate Plan-Do-Study-Act to continually improve our programs, and
- How to overcome the challenges.

Besides engaging the participants, the facilitators will also share the NHG journey of developing its faculty development program.

Workshop Outcome

By the end of the workshop, participants will be able to:

- a) Identify the different groups of different faculty and their learning needs;
- b) Understand the challenges of faculty development;
- c) Articulate the processes involved in designing a faculty development program.

Who Should Attend

This workshop is intended for those who are interested in designing or refining a faculty development program for its faculty.

D14

Wednesday 4th February 2015, 10.30am – 12.30pm

Learning Room #01-01B, MD6

National University of Singapore

THE ART OF GIVING HIGH QUALITY FEEDBACK

Tanja Svirskis, Maria Vuorilehto

Finland

Workshop Description

A high quality feedback is a powerful tool to enhance the learning of the learner. In this workshop participants will get familiar with the scientific evidence of how feedback shapes learning and the ways how feedback should be given in order to be effective. With various case scenarios each participant will be given the possibility to practice how to give feedback, and at the same time to receive feedback on his/her performance.

Workshop Outcome

After this workshop the participants will be able to:

- Understand the importance of giving feedback to the learner
- Know the principles of how good quality feedback should be given and translate these principles into practice
- Identify challenges in making feedback to be effective
- Understand the position of the person receiving feedback
- Continue using the principles of high quality feedback in personal work

Who Should Attend

Teachers, lecturers, supervisors, trainees and students

Level: Beginner - intermediate

E11

Wednesday 4th February 2015, 1.30pm – 5.30pm

Smart Classroom, Level 4, MD6

National University of Singapore

**PROFESSIONALISM SYMPOSIUM 2:
FACULTY DEVELOPMENT IN PROFESSIONALISM AND SELF-REFLECTION**

¹Alastair Campbell, ¹Anita Ho, ¹T Thirumoorthy, ²Sheilla Pinjani, ³Amal Khidir

¹Singapore, ²Pakistan, ³Qatar

This highly interactive symposium focuses on equipping clinical faculty for discussing concepts in healthcare professionalism, developing interpersonal skills, communication with colleagues and students, structured self-transformation, and role-modelling for medical educators.

E12

Wednesday 4th February 2015, 1.30pm – 5.30pm

Learning Room #03-04, Level 3, MD6

National University of Singapore

DEBRIEFING IN SIMULATION-BASED HEALTHCARE EDUCATION: KNOWLEDGE AND PRACTICE

¹Siau Chiang, ¹Terry Pan, ¹Suresh Pillai, ¹Nicola Ngiam, ²Geoffrey Miller

¹Singapore, ²USA

Workshop Description

Conducting a debriefing session can be a daunting task when there are differences in the faculty's and learner's perception of how the simulation session went or when there is a significant gap in performance expectation. This half-day workshop aims to provide participants with the opportunity to build on their facilitating skills to conduct an effective debriefing session. Participants will work in groups to discuss the various situations faced by faculty when conducting simulation-based training for adult learners. Utilizing both video clips and role-play, participants will apply the different debriefing techniques and strategies discussed in the practical session. Participants will also reflect, evaluate and receive feedback on their own performance during debriefing. They will be encouraged to share their thoughts and ideas on debriefing during the workshop.

Learning Objectives:

- Describe the concepts and processes involved in effective debriefing
- Explore the barriers and factors involved achieving debriefing objectives
- Practice using different techniques to debrief learners and receive feedback on performance
- Discuss and practice strategies to consider when faced with difficulty during debriefing sessions

Who Should Attend

This workshop is for UG & PG faculty who wish to broaden and deepen their understanding of the theory & practice of effective debriefing.

F11

Wednesday 4th February 2015, 1.00pm – 3.00pm

Tutorial Room 1, Level 9, MD1

National University of Singapore

USING MODERN TEST THEORY FOR STANDARD SETTING IN MEDICAL AND HEALTH SCIENCES EDUCATION

Boaz Shulruf

Australia

Workshop Description

The decision to pass or fail a medical student is a 'high stakes' one. The literature offers a range of quality standard setting methods, yet all have limitations. Among those limitations or challenges might be the need to recruit a panel of experts to set up the standards, the need to employ a statistician or psychometrician who is able to undertake complex statistical analysis, the need to communicate the results to the affected students in a simplified way and the need to provide robust justification for the pass/fail decisions should such decisions be legally challenged. This workshop will first introduce the Objective Borderline Method (OBM), which is a new standard setting method derived from the principles of Modern Test Theory. The OBM is a probability base model, that can be applied for most types of examinations and yet is mathematically simple, which is applicable for users with no statistical background. The second part of the workshop will introduce the Rasch Borderline Method (RBM), a method that uses parameters from Rasch models to make pass/fail decisions for borderline grades.

Workshop Outcome

Participants will be able to use the Objective Borderline Method (OBM) and the Rasch Borderline Method (RBM) for setting objective Pass/Fail standards for clinical and other examinations within their own clinical and educational contexts.

Who Should Attend

Medical educators who have strong interest in assessment and standard setting. Handouts with guidelines and illustrations will be provided to the participants.

F12

Wednesday 4th February 2015, 1.00pm – 3.00pm

Multipurpose Room 2, Level 3, MD1

National University of Singapore

FAMILY MEDICINE TEACHING AND ROLE MODELING IN THE INPATIENT SETTING

Ang Seng Bin, Goh Lee Gan

Singapore

Workshop Description

This workshop aims to share a framework for the teaching of family medicine in the inpatient setting. A framework will be used in the workshop using the triad of: Family Medicine Focus, Disease and Communications.

Facilitators will share their experience and strategies in providing family medicine teaching in the inpatient setting in the first part of the workshop. Two case scenarios: one in paediatric inpatient setting and another in the adult inpatient setting will be used for role-playing by participants. The roles will include: Tutor, residents, patients and observer.

Workshop Outcome

Participants will be able to provide teaching and role modeling of family medicine in the inpatient setting which is an ACGME-International Advanced Specialty Program Requirements for Graduate Medical Education in Family Medicine in a structured manner.

Who Should Attend

Teaching faculties from other specialties as well as allied health professionals involved in residency teaching in the inpatient setting can also benefit from the session.

F13

Wednesday 4th February 2015, 1.00pm – 3.00pm

Learning Room #01-01B, Level 1, MD6

National University of Singapore

TIPS AND TRICKS FOR SUCCESSFULLY PUBLISHING SCHOLARLY WORK IN AN INTERNATIONAL JOURNAL ON MEDICAL EDUCATION

Peter G.M. de Jong and Julie Hewett

USA

Workshop Description

Based on several brainstorm exercises and actual experiences from the audience, the presenters will provide tips and recommendations. In publishing scholarly work, not only the writing skills of the author are important. Choosing the right strategy in submitting the work to the most appropriate journal is equally as important. It is also useful to know how the Editorial Office and Editorial Board of a journal handle the manuscripts received. Knowledge of these last two aspects can significantly increase the chances of acceptance of the manuscript.

Workshop Outcome

The workshop will give the attendees more insight in the editorial processes of a journal and several concrete strategies to increase the chances of acceptance of their work. First an overview of several journals for Medical Education will be presented and the differences in focuses will be discussed. As an example, the presenters will showcase the internal procedures of one of those journals to explain to the attendees what is happening behind the scenes of a journal. Some general advice will be given in order to make the process of submission as successful as possible. At the end of the workshop the participants will have a better understanding of scientific publishing and the way in how a manuscript should be submitted.

Who Should Attend

The workshop is intended for those with no or little experience in submitting manuscripts to international journals.

F14

Wednesday 4th February 2015, 1.00pm – 3.00pm

Learning Room #01-01A, Level 1, MD6

National University of Singapore

PRESENTATION DESIGN: STRUCTURE AND ENGAGEMENT

Douglas Buller and Cynthia Whitehead

Canada

Workshop Description

Presenting research/scholarly findings in an interdisciplinary context is one of the hardest forms of dissemination. In this interactive workshop, we will focus on the application of visual design theory and techniques that make presentations more engaging, easier to understand and more memorable. Participants will have the opportunity to work on their own (or an assigned) presentation, receiving instruction and guidance on how to choose and incorporate images, how to distil textual slide content, and how to organize the flow of the presentation. The workshop will also focus on how to balance the presentation's aesthetics with rigorous academic expectations.

Workshop Outcome

- A basic understanding of the importance of connecting presentation structure to presentation content.
- A basic understanding of the role of design for presentation materials.
- Practical visual design tools (principles) for creating more engaging presentation materials.
- Tactics for establishing the appropriate volume and nature of the content being presented.

Who Should Attend

Intermediate level presenters who have a working knowledge of presentation software but want to create presentations that are more effective at engaging audience with its content.

G11

Wednesday 4th February 2015, 3.30pm – 5.30pm

Tutorial Room 1, Level 9, MD1

National University of Singapore

FEEDBACK IN UNDERGRADUATE TEACHING AND ASSESSMENT – IS THERE A UTILITARIAN APPROACH?

Lau Wee-Ming

Malaysia

Workshop Description

It is a fact that feedback is integral to life-long learning in higher and professional education. Much has been published on feedback and how to make the feedback process most effective for attaining personal growth and deep learning. Due to fluidity of the teaching and learning environment, these references do not offer solutions for every dilemma involving feedback, in particular in the early years of the MBBS undergraduate programme. Students are hungry for feedback but may also be turned off by poor feedback from their teachers. Conflicts can arise for both the provider and recipient that can hinder personal growth and improvement for both parties. This workshop will involve discussion of personal and observed encounters with feedback dilemmas. Problems of feedback in higher education, exploration of the different types of feedback, their advantages and disadvantages will be discussed.

Workshop Outcome

After participating in this workshop, it is expected that participants will be able to:

- Demonstrate a framework in giving effective feedback in teaching and assessment.
- Describe the difficulties in giving and accepting feedback.
- Discuss how to get the most out of a feedback session, even when comments are negative.
- Generate interest in collaborative studies in feedback, in particular those that involve undergraduate medical students.

Who Should Attend

Medical students and all participants who are keen to impart feedback in teaching and assessment.

G12

Wednesday 4th February 2015, 3.30pm – 5.30pm

Learning Room #01-01A, Level 1, MD6

National University of Singapore

IMPROVING THE DEFENSIBILITY OF ASSESSMENT DECISIONS

Richard Hays

Australia

Workshop Description

Medical students and postgraduate trainees are increasingly likely to challenge decisions that delay or prevent academic progress, and are more likely to seek legal advice in mounting challenges. University processes may not always reflect the complexity of assessment in medical education, where there are particular views about item banking, blueprinting, standard setting, defining and managing borderline or poor performance, and providing remediation and allowing re-sit assessments. In this workshop we will present a small number of case studies that highlight common pitfalls in assessment practices that may affect confidence in assessment decisions, and discuss ways of improving the validity, reliability and acceptability of assessment practices.

Workshop Outcome

Increased knowledge of how to improve the quality assurance of assessment practices in erases knowledge of how to develop fair and open processes for managing borderline performance and appeals processes.

Who Should Attend

Medical educators and assessment managers.

G13

Wednesday 4th February 2015, 3.30pm – 5.30pm

Learning Room #01-01B, Level 1, MD6

National University of Singapore

MENTORSHIP AS A FACULTY DEVELOPMENT STRATEGY: AN INTERNATIONAL LENS

Michelle Elizov, Miriam Boillat, Yvonne Steinert

Canada

Workshop Description

Mentorship is increasingly recognized as a powerful faculty development strategy. Mentorship can take many forms: formal or informal, hierarchical or peer-to-peer, dyadic or group, virtual or face-to-face, and involving single or multiple mentors. Mentor and mentee may come from different cultural backgrounds, and promoting mentorship as an effective faculty development strategy must take into consideration different cultural contexts. This workshop seeks to explore the differences, challenges and opportunities that arise when mentoring occurs across cultures, and to better understand how mentorship is both perceived and practiced within different cultural contexts. Themes that will be discussed include cultural differences in the understanding of the roles of mentors and mentees, and expectations for the mentoring relationship.

The workshop includes a brief interactive plenary wherein key concepts are presented, followed by small group discussions using case vignettes and the experiences of the participants to explore issues that may arise when mentoring occurs across cultures, and differences in the mentoring relationship in different cultural contexts.

Summary: This is a workshop that looks at mentorship as a faculty development strategy within different cultural contexts.

Workshop Outcome

By the end of the workshop, participants will be able to:

1. Highlight the benefits of mentoring as a faculty development strategy in the health professions
2. Describe various mentoring models and their advantages and disadvantages
3. Explore the perceptions and practices of mentorship in different cultural contexts
4. Suggest strategies to enhance mentoring relationships

G14

Wednesday 4th February 2015, 3.30pm – 5.30pm

Multipurpose Room 2, Level 3, MD1

National University of Singapore

IOSCE: AN EXCITING NEW TWIST ON AN OLD OSCE

¹Thomas Lin Che-Wei, ²Hurley Myers and ¹Jen-Chieh Wu

¹Taiwan, ²USA

Workshop Description

Each simulation component has its strengths and limitations. We share the idea of hybridizing three simulation to conduct a learning experience of critical thinking, interpersonal skill and technical skill and conduct a new OSCE_iOSCE. This is a unique experience as it will be an interactive session giving the participants a chance to interact with a standardized patient, virtual patient and electronic patient in order to fully experience this type of hybrid simulation. In this workshop, we will lead the participant to:

1. List the advantages and limitations of standardized patient, virtual patient and electronic patient.
2. Present our solution to design the iOSCE of TMU by integrated simulation
3. Develop a strategy to hybrid simulations in competency teaching and training.
4. Identify the benefit of hybrid simulation in competency teaching.

Workshop Outcome

We will help the participant to:

1. Recognize the strength and limitation for each simulation component
2. Identifying the role of faculty to design scenario according to learning objective.
3. Learn the skill of integrating each simulation component

Who Should Attend

Simulation Education Faculty, Curriculum Designer, Competency Educator

B21

Thursday 5th February 2015, 8.30am – 12.30pm

Learning Room #03-04, Level 3, MD6

National University of Singapore

USING SIMULATED OR STANDARDIZED PATIENTS TO ENHANCE YOUR CURRICULUM – CASE WRITING

Nicola Ngiam, Mara McAdams, Tanya Tierney, Joanne Wang, Hor Chuen Yee

Singapore

Workshop Description

Simulated or standardized patients (SPs) are a valuable tool in medical education. Over time, the role of SPs has expanded from history taking and practice of communication skills to facilitation of teaching sessions and providing feedback. This workshop aims to demonstrate how you can write a case that will allow the SP to meet the objectives and educational outcomes of your curriculum. There will be opportunity to write your own SP case and engage in a training session for the SP.

Workshop Outcome

At the end of the workshop, the participants should have experienced:

1. Writing a case for an SP to use in a teaching activity
2. Observing a training session for an SP preparing to portray a case

Who Should Attend

Medical educators interested in using SPs in their medical curriculum.

B22

Thursday 5th February 2015, 8.30am – 12.30pm

Multipurpose Room 2, Level 3, MD1

National University of Singapore

HOW TO ORGANIZE OBJECTIVE STRUCTURED TEACHING EXAMS AND EXERCISES (OSTEs) FOR FACULTY DEVELOPMENT

¹Elizabeth Kachur, ¹TJ Jirasevijinda, ²Tan Chay Hoon, ²Chaoyan Dong

¹USA, ² Singapore

Workshop Description

High expectations for teaching skills have been set, and there is increasing pressure to create strategies for developing and measuring such competencies. Even postgraduate medical programs have developed “residents as teachers” training to assure that young faculty will be well equipped to take on a diverse set of academic responsibilities. The first articles on the use of OSCEs for faculty development (e.g., Objective Structured Teaching Exercises and Exams – OSTEs) emerged in the 1990’s. Simultaneously the concept of the “simulated/standardized learner” was born. Scenarios typically include presentation and feedback skills, one-on-one or small group teaching, teaching with and on patients, evaluating learners and addressing behavioral or academic problems. Yet, not all teaching tasks can be addressed in encounters between faculty and learners. Negotiating with co-teachers, interacting with other professionals and administrative personnel may be equally necessary skills to be successful as a teacher. Similar type of multiple station events (e.g., Curriculum OSCEs) can be helpful in providing faculty with the competencies needed for program development, implementation and evaluation. In addition OSCE-type formats have been used as program evaluation strategy (e.g., using a pre/post-test format) and as screening tool for potential preceptors. This pre-course will summarize the current information available on OSTEs and similar multiple station exercises. Organizers will share their own extensive experience with such instructional tools and participants will be invited to describe their experiences. After some initial presentations which will include a video demonstration, participants will engage in some brainstorming activities to identify the opportunities and challenges of using multiple-station formats to address faculty tasks. These will include strategies for overcoming resource and time limitations (e.g., lack of standardized learners, limited workshop time) and maximizing learner’s participation. Subsequently, in small groups, participants will work on developing OSTE-related stations. In a large group format these creations will be presented and discussed. Participants should be able to walk away with some new skills on how to plan and implement such programs. A Take-Home-Points exercise at the end will help clarify the achievement of the outcome objectives.

Workshop Outcome

By the end of the pre-course participants should be able to:

1. give an example of how they can integrate an OSTE or similar program into their faculty training endeavors
2. develop faculty-relevant training scenarios and strategies for bringing such encounters to life
3. describe the opportunities and challenges inherent in having faculty undergo a multiple station exercise or exam as part of their training

Who Should Attend

Faculty Developers, Academic Administrators

C21

Thursday 5th February 2015, 8.00am – 10.00am

Learning Room #01-01A, Level 1, MD6

National University of Singapore

QUALITATIVE DATA ANALYSIS –SCAT (STEPS FOR CODING AND THEORIZATION) AS A PRACTICAL TOOL

Hiroshi Nishigori, Takashi Otani, Muneyoshi Aomatsu

Japan

Workshop Description

Qualitative research has been recently attracted to many medical educators who are willing to conduct research in medical education. However, its methodologies are quite different from those of natural sciences including medicine, and novices usually feel difficult to master how to conduct it. Under these circumstances, we developed a practical tool for qualitative data analysis, the SCAT (Steps for Coding And Theorization), which consists of 4-step coding, story description, and theorization. This approach is similar to thematic analysis, easy for beginners, transparent in process, and suitable for small-sized data. In this workshop, first, we will introduce general picture of qualitative research and its various methodologies. Second, we will explain what the SCAT is and how to analyze data by the SCAT. Third, the participants will experience qualitative data analysis in groups by the SCAT with the sample data we will offer. Finally, the participants will share the results in the plenary and discuss the process of analysis, just like triangulation. -Reference- Takashi Otani (2008) “SCAT” A Qualitative Data Analysis Method by Four-Step Coding: Easy Startable and Small Scale Data-Applicable Process of Theorization. Bulletin of the Graduate School of Education and Human Development (Educational Sciences), Nagoya University, Vol.54. No.2. 27-44

Workshop Outcome

At the end of this workshop, participants will be able to:

1. Understand roughly what qualitative research is about
2. Know various methodologies of qualitative research
3. Know what the SCAT is and how to use it for qualitative data analysis
4. Conduct qualitative data analysis for small-sized data by the SCAT

Who Should Attend

Medical educators who would like to conduct qualitative research. Novices are the most welcome.

C22

Thursday 5th February 2015, 8.00am – 10.00am

Learning Room #01-01B, Level 1, MD6

National University of Singapore

THE ART AND SCIENCE OF DEVELOPING RATING SCALES IN HEALTH PROFESSIONS' EDUCATION RESEARCH AND ASSESSMENT

Gominda Ponnamparuma, Asela Olupeliyawa

Sri Lanka

Workshop Description

Rating scales are an extensively used tool in student assessment and educational research. They can be effectively used to measure domains of competence and respondent attitudes that are hard to measure. Particularly in clinical settings, judgments on the trainees' level of competence are largely dependent on the quality of the scales used. In educational research or in curriculum evaluation, rating scales are important to capture the variations in participant perceptions and attitudes. In assessment, especially in assessment of behaviour, rating scales play a pivotal role in providing valid and reliable judgements on the candidate ability and in providing quality feedback. Hence, the quality of research (including curriculum evaluation) and assessment are very much dependent on the scales used. Although there are many types of rating scales only a few common formats are used routinely both in medical education research and in assessment. This could be mainly due to the lack of know-how of developing different types of rating scales to suit varying purposes. The principles of developing such different types of rating scales, however, are more or less the same. Hence, if medical educationists are aware of these principles, they can select the right format for the right purpose and design appropriate scales for their own situation. However, this may not occur in practice if guidance and awareness on developing rating scales scientifically are not available. This workshop first introduces the participants to rating rubrics. It will then take the participants through the steps of systematically developing a rating rubric such as identifying what is being measured, determining the number of scale points, writing labels and descriptors, and piloting, implementing, and evaluating the scale.

Workshop Outcome

At the end of the workshop participants should be able to:

- Recognise the different uses of rating scales
- Evaluate the differences between checklists and rating scales
- Compare the different types of rating scales
- Select the most appropriate type of rating scale/s for a given purpose
- Design an appropriate rating scale based on the principles of educational measurement
- Evaluate and refine the rating scale

Who Should Attend

This workshop will be useful for all health care professions teachers, researchers and administrators. In particular, this workshop targets those who are involved in or are planning to be involved in educational research, curriculum evaluation, and student assessment.

C23

Thursday 5th February 2015, 8.00am – 10.00am

LT37, Level 3, MD1

National University of Singapore

“THE BEAUTY OF TWO WORLDS” – STRATEGIES TO DEVELOP AWARENESS OF THE ROLE OF MEDICAL TEACHERS IN FACILITATING STUDENTS’ CLINICAL REASONING SKILLS DEVELOPMENT

¹Ardi Findyartini, ²Justin Bilszta, ¹Diantha Soemantri

¹Indonesia, ²Australia

Workshop Description

Clinical reasoning skills development in undergraduate medical programs is one of the highlights of the curriculum worldwide. Its complexity requires careful building blocks of contextual biomedical and clinical knowledge and ability to apply the relevant knowledge in diagnosing and managing clinical cases. There are clear roles of both biomedical and clinical knowledge in developing students’ clinical reasoning which supported attention to students’ clinical reasoning skills development from earlier stages of medical training. Clinical knowledge highlights signs and symptoms of diseases whereas biomedical knowledge provides explanation to the diseases.

Despite different structures and characteristics of both knowledge, the ‘beauty of these two worlds’ are actually completing each other in structuring students’ knowledge for clinical reasoning. Medical teachers may not be familiar with the nature of clinical reasoning skills development across the years which involves knowledge structure development from dispersed to high-compiled. Medical teachers who are participating in various sessions in preclinical and clinical years may not always be aware of these issues. Thus, they may not know how they actually can be more helpful to students’ in any stages of their training either.

This workshop will start by highlighting some main issues relating to basics of clinical reasoning, roles of biomedical and clinical knowledge in clinical reasoning skills development and how to teach it. Afterwards, through discussions, case studies and role play, the ability of medical teachers in preclinical and clinical years to describe clinical relevance when discussing biomedical knowledge and to explain basic explanation when analyzing disease signs and symptoms will be addressed. Exploring ‘the beauty of two worlds’ is indeed applicable and useful for teaching clinical reasoning.

Workshop Outcome

At the end of this workshop, participants will recognize the principles of facilitating medical students’ clinical reasoning skills development.

At the end of this workshop, participants will be able to facilitate students in developing their clinical reasoning skills according to their roles in preclinical and clinical year of education.

Who Should Attend

Medical teachers with interest in clinical reasoning teaching both at preclinical and clinical stage of education.

C24

Thursday 5th February 2015, 8.00am – 10.00am

Smart Classroom, Level 4, MD6

National University of Singapore

BETTER-CRAFTED SLIDES FOR BETTER LEARNING

Nomar Alviar

Philippines

Workshop Description

The ever-present slideware (presentation software) have made slides the default communication aids for lectures, talks, and other presentations. Slideware, such as Microsoft PowerPoint® and Apple Keynote®, have empowered anyone with basic computer skills to put together lecture slides with significantly less effort and expense. Because of this, ineffective slide presentations which contain inadequately, if not poorly, communicated messages have become prevalent. In this workshop, participants will have the opportunity to apply the principles of multimedia learning, as well as recent updates in visual science, to analyze and improve presentation slides. Following a short plenary discussion of these principles, participants will work in small groups to appraise and redesign actual slides.

Workshop Outcome

This workshop will help participants prepare better-crafted lecture slides which carry more clearly formulated content for more efficient message uptake.

Who Should Attend

Participants who have a working knowledge of creating presentation slides using PowerPoint® or Keynote®. They may bring their own presentation slides to work on.

D21

Thursday 5th February 2015, 10.30am – 12.30pm

Learning Room #01-01A, Level 1, MD6

National University of Singapore

FACILITATING A TEACHING SESSION FOR THE HYPOTHESIS-DRIVEN PHYSICAL EXAMINATION (HDPE): TEACHING PHYSICAL EXAMINATION ALONG WITH CLINICAL REASONING

Makoto Kikukawa, Hiroshi Nishigori, Yuka Urushibara-Miyachi

Japan

Workshop Description

A common teaching method adopted by many medical schools to teach the physical examination to their medical students is to begin by teaching them some 140 or so physical exam manoeuvres. Although students can master each examination manoeuvre through this learning process, it is not uncommon for them to have difficulty associating the manoeuvres with the meaning of specific clinical findings while sorting out a differential diagnosis. We developed a model teaching session for a Hypothesis-Driven Physical Examination (HDPE), in which the technical and cognitive aspects of physical examination are better integrated. First we will introduce the concept of a Hypothesis-Driven Physical Examination (HDPE). Second, the participants will watch a video for tutors in which a model of a small-group teaching session is described. Third, the participants will write a scenario for their own context and reflect on its application during a plenary. Finally, the preliminary HDPE-OSCE we developed will be introduced for student assessment.

Workshop Outcome

At the end of this workshop, participants will be able to facilitate a HDPE teaching session to teach the physical examination, along with clinical reasoning, to medical students.

Who Should Attend

Faculty members who teach and assess physical examination to medical students

D22

Thursday 5th February 2015, 10.30am – 12.30pm

Learning Room #01-01B, Level 1, MD6

National University of Singapore

USING QUALITATIVE RESEARCH IN THE EVALUATION OF EDUCATIONAL PROGRAMMES

Gominda Ponnamperuma, Indika Karunathilake

Sri Lanka

Workshop Description

Qualitative research methods are being increasingly used in evaluating both individual educational activities and overall curricula. They can be used either alone or together with quantitative methods; i.e. in mixed-methods research. The strengths of qualitative methods include the potential to target all four Kirkpatrick's levels of evaluation, and the versatility in analysing human behaviour and perceptions in-depth. However, qualitative research is oft criticized as the opinion of a few individuals. Such criticism is mainly due to the lack of awareness of how to maintain the scientific rigor in qualitative research. Hence, it is important that medical educators understand the full potential of qualitative research in curriculum evaluation to ensure the scientific rigor in such evaluations. This workshop will introduce the participants to several qualitative research approaches used in social sciences and humanities, and their applicability in curriculum evaluation. It will then take participants through the steps of developing a framework for evaluation, identifying the different data collection instruments, and developing an evaluation plan.

Workshop Outcome

At the end of the workshop participants should be able to:

- Recognize the different methodologies and approaches in qualitative research
- Evaluate the differences between qualitative and quantitative methods of evaluation
- Discuss the uses of different qualitative methods in data collection and analysis
- Select the most appropriate data collection instrument/s for the four Kirkpatrick's levels
- Discuss techniques to maintain rigor including triangulation and reflexivity
- Design an evaluation plan based on qualitative methods while maintaining the scientific rigor of the overall evaluation process

Who Should Attend

This workshop is intended for educationists, researchers and administrators who already conduct or wish to conduct evaluations of educational programmes using qualitative research methods.

D23

Thursday 5th February 2015, 10.30am – 12.30pm

LT37, Level 3, MD1

National University of Singapore

FLIPPING THINGS AND OTHER INNOVATIONS IN EDUCATIONAL DESIGN

Lawrence Sherman and Kathy Chappell

USA

Workshop Description

CME and CPD providers have innovative and interesting options to consider when developing activities, courses and curricula. This interactive workshop will provide participants with the tools necessary to incorporate these techniques into their educational armamentarium. Techniques such as Flipped Classroom, Social Media, Curricular and Learning Space Design, Evaluation Techniques, and Wearable Technologies will be used to guide participants through

Workshop Objectives

At the end of this workshop, participants will be able to:

1. Incorporate new and innovative techniques into future course and curricular design
2. Describe opportunities for enhancing current activities and courses

D24

Thursday 5th February 2015, 10.30am – 12.30pm

Smart Classroom, Level 4, MD6

National University of Singapore

ART AND EMPATHY AS A GENERAL AESTHETIC

Terence Tan Si Peng

Singapore

Workshop Description

The desire to live and live well comes from pro-social behavior, therefore anti-social tendencies of patients need to be treated as well. This workshop will introduce the concepts of art, empathy, and the human connection as an important part of healing, which 50 artists and volunteers recently used for 400 patients in the wards of the National University Hospital. Several examples of how the teams used drawing and painting, dance, storytelling, and theatre will be presented, and participants shall likewise experience the benefits of incorporating aesthetics in caregiving both for the patient and medical caregiver.

Workshop Outcome

After this workshop the participants will be introduced to:

- The importance of aesthetics and empathy in medicine and nursing
- Possible methods and approaches to art and empathy for patients
- A portfolio of patients who benefit most from aesthetics and art

E21

Thursday 5th February 2015, 1.30pm – 5.30pm

Learning Room #03-04, Level 3, MD6

National University of Singapore

USING SIMULATED OR STANDARDIZED PATIENTS TO ENHANCE YOUR CURRICULUM – HOW AN SP CAN HELP

Nicola Ngiam, Mara McAdams, Tanya Tierney, Joanne Wang, Hor Chuen Yee
Singapore

Workshop Description

Simulated or standardized patients (SPs) are a valuable tool in medical education. Over time, the role of SPs has expanded from history taking and practice of communication skills to facilitation of teaching sessions and providing feedback. This workshop aims to demonstrate how SPs can enhance your current curriculum and assist in meeting educational outcomes. We will explore value-added SP skills such as providing feedback on communication skills, SPs as physical examination teaching associates and SPs in hybrid simulations where interaction with SPs will be available.

Workshop Outcome

At the end of the workshop, the participants should have experienced:

1. SPs giving feedback on communication skills
2. A physical examination teaching associate facilitating a teaching session
3. SPs in hybrid simulations

Who Should Attend

Medical educators interested in using SPs in their medical curriculum.

E22

Thursday 5th February 2015, 1.30am – 5.30pm

Multipurpose Room 2, Level 3, MD1

National University of Singapore

BRINGING OUT THE BEST IN OUR CHIEF RESIDENTS

Goh Siang Hong, Llewellyn Lee, Sophia Archuleta, Nicholas Chew, Raymond Goy, Lim Boon Leng, Shirley Ooi
Singapore

Workshop Description

Learning from the US ACGME Program Chief Residency Model What encourages and discourages a Resident from taking on Chief Resident Responsibilities? How can we empower our Chief Residents? Does Singapore need a national Chief Residency training program? How do we measure the outputs and contributions of our Chief Residents?

F21

Thursday 5th February 2015, 1.00pm – 3.00pm

Learning Room #01-01A, Level 1, MD6

National University of Singapore

BEST PRACTICES IN MEDICAL SCHOOL ACCREDITATION

Dan Hunt

USA

Workshop Description

This workshop will explore the variations around the world in the nature and type of standards that are in use for medical education accreditation. The advantages and disadvantages of “prescriptive versus non-prescriptive” standards will be understood through the use of case based examples. Participants will “serve” as survey teams members and will reach compliance decisions using different types of standards based on information provided by hypothetical schools. At the conclusion of the workshop participants will be able to describe the pros and cons of the type of standards and explain when in-depth training of team members is necessary based on the type of standard being used.

F22

Thursday 5th February 2015, 1.00pm – 3.00pm

Learning Room #01-01B, Level 1, MD6

National University of Singapore

DEVELOP A SIMULATION BASED OBJECTIVE STANDARDISED CLINICAL EXAM (OSCE) IN A COMPETENCY BASED MEDICAL EDUCATION (CBME) ERA

Briseida Mema, Anne Kawamura, Afrothite Kotsakis

Canada

Workshop Description

Competency based medical education (CBME), a new era in medical education involves outcomes driven education and assessment to ensure that physicians have the knowledge and skills needed for independent practice. CBME needs strong multifaceted assessment of competency in real life and simulation. Increased complexity of patients, shortened training time and concern for patients safety also calls for simulation based practice and assessments in a safe environment. Gold standards for tests are not available in medical education. Assessment tools and judgments that are made as a consequence of those assessments are important and actions made on assessment, scores should be compatible with assessment strength (validity). In a recent systematic review of simulation based assessment Cook et al found that from 217 eligible studies only 6 provided a unified five source validity framework and call for more robust studies with good validity evidence. We share our experience having built an OSCE for assessment of competence in Critical Care Medicine trainees and having validated the OSCE using Messick's five-point, unified construct validity framework. The workshop focuses on discussion and application on planning to implement an OSCE and preparing the necessary data for validity evidence based on Messick's five-point, unified construct validity framework, that is: content, response process, internal structure, relationship to other variables, and consequences.

The structure of the workshop:

1. Facilitators give an example of how to build an organizational structure for OSCE. Participants discuss in groups how that structure will look like in their own institution and the sources they would need to mobilise.
2. Facilitators give examples of identifying target learners to be assessed, developing the blueprint of competencies to be assessed. Participants in groups discuss and then share with the class the competencies they want to assess in their own learners.
3. Facilitators lecture on building an OSCE scenario and building an OSCE bank. Participants work through an objective and build an OSCE scenario.
4. Facilitators lecture on training the simulation coordinators, standardizing patients and assessors. Participants ask questions and discuss issues that they foresee.
5. Facilitators discuss Messick's unified validity framework. Facilitators explain what data needs to be collected and how to have an informed discussion with statistician. Participants are given a set of OSCE data and work through analysing the data using Messick's unified validity framework.

Workshop Outcome

By the end of this workshop the participants will be able to:

1. Identify important elements of an organizational structure responsible for the OSCE
2. Identify competencies they want to assess and build an OSCE scenario
3. Identify the sources of validity evidence using Messick's unified validity framework Practice having an informed conversation with a statistician regarding the validity framework analysis.

Who Should Attend

Educators in health professions education preparing an OSCE as an assessment tool

F23

Thursday 5th February 2015, 1.00pm – 3.00pm

LT37, Level 3, MD1

National University of Singapore

THE BMJ OR INSTRUCTIONAL SCIENCE: HOW TO GET YOUR PAPERS PUBLISHED IN DIFFERENT TYPES OF JOURNALS?

Erik Driessen

The Netherlands

Background

As a (young) researcher it is wise to think about your publication strategy: what kind of journals are you opting to publish your papers? The journal with the highest impact factor? Or the journal that is read most by the teachers and policy makers? Or the journal in which the theory you just modified with your study is discussed widely? And what will be the effect of your publication strategy for your scientific career? In this workshop we will discuss four articles on the same topic published in four different types of journals. We will look at writing style, structure, the composition of the introduction and discussion sections of the papers. Next to the technical aspects, we will also discuss the ethical side of publishing in different types of journals: how far are you prepared to go to get your paper published in that high impact journal? For example: to what extent will you follow up requirements of the editors for modification of your paper?

Intended Outcomes

- More insight on how to plan a personal publication strategy.
- Awareness of the differences between journals and the impact this has on the reviewing of your paper.

Structure

After a short introduction we will discuss four articles on the same topic published in four different types of journals.

Who Should Attend

People who (want to) publish research about medical education

Level Of Workshop

Intermediate

F24

Thursday 5th February 2015, 1.00pm – 3.00pm

Smart Classroom, Level 4, MD6

National University of Singapore

SUCCESS STORIES OF INTERPROFESSIONAL ACTIVITIES – FROM CONCEPTUALIZATION TO PRACTICE

Wong Li Lian, Blessy Koottappal Mathew

Singapore

Workshop Description

The delivery of present patient care is often multi-disciplinary in nature and involves close collaboration between different healthcare professionals. As such, the introduction of interprofessional education (IPE) programs into undergraduate health professional programs aim to increase the students awareness as well as to increase collaborative activities of practitioners. Interprofessional activities play an important role in facilitating student awareness in interprofessional education. Therefore, this workshop aims to help participants acquire basic knowledge on conceptualization of interprofessional activities for students. In addition to that, students will also be sharing their learning process in conceptualizing an IPE activity from theory into practice.

G21

Thursday 5th February 2015, 3.30pm – 5.30pm

Learning Room #01-01A, Level 1, MD6

National University of Singapore

APPLYING INNOVATIONS IN TECHNOLOGY TO ENRICH LEARNING AND FEEDBACK EXPERIENCES

¹Pirashanthie Vivekananda-Schmidt, ²Zubair Amin

¹United Kingdom, ²Singapore

Workshop Description

Currently, technological developments are occurring at an exponential rate. Exploiting these opportunities is key to engaging undergraduate students and trainees in their learning and development. The workshop will introduce participants to new developments in technology through examples of good practice; and support participants to consider how these developments can be appropriately integrated in enhancing one's own teaching delivery.

Examples to be considered include application of gamification in enriching learning experiences and use of Twitter to develop learning communities. Participants will have the opportunity to see, hear and discuss a range of exciting possibilities that technology can offer to add value to their students' learning experience.

We will focus on how technology enhanced learning can support good practice in giving feedback and can be an effective medium where students are motivated to engage and respond to that feedback.

We will also consider current evidence on effective ways to implement these developments.

Through activities, participants will have the opportunity to reflect on which of these technologies may suit to develop their current practice and to work through how they may approach implementation. We will consider educational principles, approaches to learning and a SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats) based reflection when considering adapting a technological innovation to one's practice.

Workshop Outcome

At the end of the workshop participants will

1. understand developments in technology that can enhance their educational practice and student learning;
2. have had the opportunity to consider how to apply these appropriately to develop their current practice;
3. have had the opportunity to reflect with colleagues and workshop facilitators on the challenges and requirements relevant to taking their intentions forward

Who Should Attend

This workshop is relevant to those with an interest in applying the developments in technology to enhance their educational practice.

G22

Thursday 5th February 2015, 3.30pm – 5.30pm

Learning Room #01-01B, Level 1, MD6

National University of Singapore

EFFECTIVE FEEDBACK: THROUGH THE LOOKING GLASS

Anne Kawamura, Afrothite Kotsakis, Briseida Mema

Canada

Workshop Description

Feedback is a powerful method to promote learning and is an essential skill for all teachers. Although feedback is critical for learning, teachers in the health professions are rarely taught how to provide feedback effectively. This workshop will discuss the importance of feedback, review important elements of the feedback session and provide participants with evidence-based models for approaching the feedback process with students. The course will focus on practicing feedback techniques and discussing difficult feedback cases

Structure of the workshop:

- (20 minutes): What is feedback? Introduction reviewing the definition of feedback and the importance of feedback in learning. Interactive exercise reflecting on memorable feedback encounters.
- (30 minutes): Elements of effective feedback Review of literature focusing on important elements of feedback
- (30 minutes): Discuss 6 Stages of Effective Feedback model. Practice feedback model using role play
- (30 minutes): Discuss PEARLS/ Stages of Change model for providing feedback. This model will challenge participants to consider difficult feedback situations and to discuss solutions using cases.
- (10 minutes) – Summary and Questions

Workshop Outcome

At the end of this workshop participants will be able to:

1. Define feedback and explain why it is important
2. Describe elements of effective feedback
3. Practice providing feedback using two evidence-based models

Who Should Attend

Teachers in health professions

G23*Thursday 5th February 2015, 3.30pm – 5.30pm**LT37, Level 3, MD1**National University of Singapore***SHARING THE LIGHT: OVERCOMING THE CHALLENGES OF TEACHING DIFFERENT LEVELS OF LEARNERS IN BUSY CLINICAL SETTINGS*****Magda Wagdy, Amal Khidir, Ahmed Alhammadi, Marcellina Mian****Qatar***Workshop Description**

Teaching in busy clinical sites can be challenging especially with different levels of learners. Clinical educators must maintain a safe learning environment, overcome the hierarchy within teaching structures, respond to the needs of learners and support trainees as teachers, while still providing effective patient care. Balancing these tasks becomes more difficult in a multicultural context. Faculty need to be armed with a practical approach and some tools to support their efforts. The workshop will start with a brief interactive didactic introduction addressing adult learning theory and the different contexts (inpatient, small groups and outpatient settings) in which clinical teaching and learning take place. Three interactive exercises are planned using video clips illustrating clinical teaching scenarios to trigger discussion and reflection. Another participatory exercise will be a role-play portraying clinical teaching that involves different levels of learners, in which the participants will be able to apply some of the concepts and methods learned in the previous exercise. Attendees will be invited to share their observations, reflections and provide feedback to each other during the debriefing.

Throughout the workshop the emphasis will be on

- a) evaluating and responding to the needs of different levels of learners,
- b) maintaining a safe and welcoming learning environment,
- c) usage of known tools to facilitate the educational interaction in a busy clinical setting so as to maximize efficiency in time management and retention of the material being learned
- d) supporting residents in their role as teachers.

These activities will represent interactions among a multicultural group of learners who are at different levels in their training and will include learners with problematic behaviors. Role modeling of faculty on how to address these various needs while maintaining a positive learning climate and encouraging residents to assume the teacher function will be demonstrated. This will include the use of simple recognized tools, such as the One Minute Preceptor and SNAPPS.

Workshop Outcome

At the end of this workshop, participants will be able to:

1. establish a positive learning environment, taking into consideration the hierarchy common in multicultural contexts;
2. identify strategies to support and respond to the needs of multiple learners while teaching;
3. utilize recognized teaching tools to optimize limited teaching time; and
4. demonstrate support for residents as teachers

Who Should Attend

Educators in any healthcare profession who teach and supervise postgraduate or undergraduate trainees, and those interested in faculty development

G24

Thursday 5th February 2015, 3.30pm – 5.30pm

Tutorial Room 2, Level 9, MD1

National University of Singapore

MENTORING FOR PROFESSIONAL GROWTH AND ACADEMIC EXCELLENCE

¹TJ Jirasevijinda, ¹Elizabeth Kachur, ²Dong Chaoyan

¹USA and ²Singapore

Workshop Description

Professional growth in academic medicine can be a challenge, especially for junior faculty members. Lack of an experienced mentor poses an additional challenge. Yet, academic and scholarly activities are routine demands that new and seasoned faculty members have to meet. Institutions around the world have different criteria for recognizing academic excellence and promotion. However, the definition of rigorous scholarship is universally recognized. The Glassick Criteria for Scholarship have been increasingly recognized as a framework to evaluate excellence in academic medicine. This highly interactive workshop will consist of three parts. The first will explore the basics of mentoring in the context of professional growth and academic excellence. Participants will reflect on their own mentor/mentee experience and explore characteristics of an effective mentor. They will learn about effective mentoring strategies: including finding mentors, mutual goal setting, defining success, maintaining relationship as a two-way street, mentee empowerment, and monitoring growth. Participants will then be divided into smaller groups to examine 3-4 cases of challenges in the mentoring process, with debriefing in the large group. In the second part of the workshop, participants will discuss Glassick Criteria for Scholarship and examples for each of the six components: clear goals, adequate preparation, appropriate methods, significant results, effective dissemination, and reflective critique. Again, in small groups, participants will use worksheets to examine their current or planned projects in the Glassick framework. The exercise will result in step-wise outlines for their (proposed) projects from planning to implementation to evaluation to dissemination. The third part will tie mentoring and scholarship together in order to generate professional growth. Participants will set their short, medium and long-term goals, and share lessons learned from the workshop in order to plan next steps after returning to their home institutions.

Workshop Outcome

At the end of the session participants will be able to:

- Describe components of effective mentoring
- Discuss Glassick Criteria for Scholarship
- Examine and revise current or planned projects using Glassick's framework
- Plan for effective mentoring to achieve academic success

Who Should Attend

Junior and Senior Faculty, Trainees, Educators

Level of Workshop

All levels

L1

Friday 6th February 2015, 9.00am

Hall, Level 1, University Cultural Centre

DEVELOPING FACULTY IN HIGHER EDUCATIONAL INSTITUTES: NUS EXPERIENCE

Tan Eng Chye

Deputy President (Academic Affairs) and Provost, National University of Singapore, Singapore

Medicine is a multi-faceted science. The practice of medicine and the roles of medical practitioners have become more complex. Medical education must thus evolve, to train up the next generation of medical practitioners who are expected to possess solid clinical knowledge and proficiency, and technical competency to execute ever advancing treatments and more complex illnesses. Beyond this, in the Singapore public health context, patients and society are placing increasing demands on medical practitioners, to deliver personalized and holistic treatments plans, to be up to date with new illnesses, treatments, drugs, etc., as well as to engage in research to advance healthcare delivery, and to train up the next generation.

Faculty members are at the core of a university, and faculty members in a medical school are expected to fulfil roles in education, research, clinical service and service to the university. This presentation will discuss how NUS has evolved various schemes to recruit, retain and develop faculty members. The schemes are flexible and seek to accommodate the varying interests and inclinations towards clinical practice, research and medical education. Beyond recognizing and rewarding excellence, NUS also actively supports faculty members to excel in one or more areas. For instance, faculty who innovate in pedagogy and teaching methods may be supported by the Learning Innovation Fund – Technology which has seeded successful projects in redefining the delivery of medical education. Moving forwards, NUS will play a greater role in the science and research of learning and education, to become a leading university for learning innovation and teaching excellence.

L2

Friday 6th February 2015, 10.15am

Hall, Level 1, University Cultural Centre

FACULTY DEVELOPMENT FOR RESEARCH: PAST, PRESENT, FUTURE

Brian D Hodges

Professor, Faculty of Medicine and Faculty of Education (OISE/UT), University of Toronto; The Richard and Elizabeth Currie Chair in Health Professions Education Research, Wilson Centre for Research in Education; and Vice President Education, University Health Network (Toronto General, Toronto Western, Princess Margaret and Toronto Rehab Hospitals), Canada

University health sciences faculty members strive to balance research, teaching and clinical responsibilities. To support the clinical roles, many universities have developed continuing education programs. To support teaching, there are faculty development programs. Yet despite an almost universal imperative for scholarly productivity, programs to help faculty develop skills in research are not widely available. In her book *Faculty Development in the Health Professions: A Focus on Research and Practice* (Springer, 2014) Steinert recommends expansion of the concept of faculty development to include development for scholarship and research. In this presentation Brian Hodges will explore the challenges and opportunities of faculty development for research capacity building, including an overarching developmental trajectory for faculty.

Friday 6th February 2015, 11.00am

Hall, Level 1, University Cultural Centre

**SYMPOSIUM 1 – FACULTY DEVELOPMENT AT WORKPLACE: BEST PRACTICES,
CHALLENGES AND OPPORTUNITIES**

Faculty Development Programmes: Synergising Adult Learning Theories with Practicality to Inspire Academics

Vishna Devi V Nadarajah, Malaysia

Workplace-based Faculty Development - Lessons from Kyoto University

Hiroshi Nishigori, Japan

Striving For Excellence In Medical Teaching: Challenges In Securing A Faculty Development System

Diantha Soemantri, Indonesia

A Framework for Evaluating Faculty Development Programmes

Lap Ki Chan, Hong Kong S.A.R.

Implementing an Institution-wide Resident-as-Teacher Program: Successes and Challenges

Sophia Archuleta, Singapore

S1

Friday 6th February 2015, 11.00am
Hall, Level 1, University Cultural Centre

FACULTY DEVELOPMENT PROGRAMMES: SYNERGISING ADULT LEARNING THEORIES WITH PRACTICALITY TO INSPIRE ACADEMICS

Vishna Devi V Nadarajah

Dean, Learning and Teaching, International Medical University, Malaysia

Effective faculty development programmes (FDP) are needed to ensure effective teaching-learning sessions. Improvements for teaching-learning are needed in relation to faculty's ability to stimulate critical thinking, give constructive feedback, promote self-directed learning and assessing both cognitive and non-cognitive attributes. It is proposed that faculty teaching-learning skills can be improved through FDP that are based on adult learning theoretical frameworks. This paper discusses and evaluates two examples of FDP, (i) the PBL Facilitator and (ii) the Fundamentals of Teaching and Learning training course that incorporates the theoretical framework of Constructive, Contextual, Collaborative, Self-directed (CCCS) and transformative learning strategies. The setting of this paper is the International Medical University in Kuala Lumpur, Malaysia. The faculty members participating in these FDP are from the schools of medicine, dentistry, pharmacy, health sciences and postgraduate studies. Participating faculty members are of varying academic designation and teaching-learning experiences. Faculty feedback on the FDP was obtained via the course evaluation form, open ended questions and post programme assignments. Our experience suggest that in spite of the initial challenges in implementing the FDP and faculty resistance to participate, these FDP has been well received by participants with some evidence of improvement in their teaching-learning skills. The implication for educational practice is, it is worthwhile to design faculty training based on theoretical frameworks that enhance CCCS and transformative learning.

Friday 6th February 2015, 11.00am

Hall, Level 1, University Cultural Centre

WORKPLACE-BASED FACULTY DEVELOPMENT - LESSONS FROM KYOTO UNIVERSITY

Hiroshi Nishigori

Center for Medical Education, Kyoto University Graduate School of Medicine

In Kyoto University Faculty of Medicine, we have been under reform of undergraduate curriculum. One change we have been making is the style of clinical clerkship, which we have been trying to make more participatory. In addition, we stopped using paper-based final exam and have been trying to introduce work-based assessment. In the process of the changes, we needed extensive communication with faculty members who were involved in teaching medical students.

One strategy we employed was workplace-based faculty development. We “visited” each department, met the doctor in charge of clinical clerkship (liaison faculty), listened to their current situation, sometimes offered educational “evidences” on clinical clerkship, and “thought together” how they (or we) made it more participatory or how they assessed students “in their own contexts”. Here, we valued “dialogue” with liaison faculty. In addition to this approach, we also held standard-style faculty development, asking the doctors in charge of clinical clerkship to come to the meeting, explaining what the center for medical education (CME) planned, having some discussion, and asking them to implement it.

What we found through our experiences was that the strategy of standard-style faculty development might be “teacher-centered”. We usually tell faculty members to be more “student-centered” in standard-style faculty development. However, I would like to propose that we should be more aware of this double standard. We may have asked them to be student-centered in a teacher-centered way in faculty development. This might be a reason why we had difficulty in attracting faculties to attend faculty development, which I would like to discuss further.

On the other hand, there is a huge difficulty in workplace-based faculty development approach, which is “time”. In Kyoto University, we have more than twenty clinical departments and it takes an immense amount of time to visit all. As many medical educators have already been extremely busy, this could be the biggest barrier of this approach. Indeed recently we have had difficulty to find time to visit.

There is always no one best answer in medical education including faculty development. I look forward to welcoming other experiences of workplace-based faculty development or counterargument to my proposal.

S1

Friday 6th February 2015, 11.00am
Hall, Level 1, University Cultural Centre

STRIVING FOR EXCELLENCE IN MEDICAL TEACHING: CHALLENGES IN SECURING A FACULTY DEVELOPMENT SYSTEM

Diantha Soemantri

MD, MMedEd, PhD, Lecturer in Medical Education, Faculty of Medicine Universitas Indonesia, Indonesia

According to Harden (2011) curriculum development is basically a faculty development programme. Changes in the curriculum require changes in the capacity of the teaching staff who will run it. The success of an institution in implementing a curriculum depends on the ability of the staff in translating the curriculum into relevant instructional designs. Attached to the title of a faculty member is the role and responsibility of teaching, which not many of them know how to do it, although perhaps some of them know what to teach (Miller, 1980). Nonetheless, as argued by Wilkerson and Doyle (2011), some still consider “effective teaching” as only “demonstrating expertise in the specified content area through publications and research grants”. This presentation will focus on the faculty development in the area of curriculum design, delivery and assessment.

Curriculum changes in the Faculty of Medicine Universitas Indonesia (FMUI, 2005 and 2012) is one of the driving force for the establishment of a faculty development system in FMUI. At the national level, the Bills of Medical Education has also provided a legal force, which further support the needs to structure a systematic faculty development system. The term system is used to emphasize that arranging a faculty development program is not simply listing various training programs, but it relates to conducting needs assessment, staging the level of training, defining the prerequisites and competencies for each stage, multiplying competent trainers, standardising training programmes and so forth.

Faculty of Medicine Universitas Indonesia has started to develop its faculty development system with the Department of Medical Education as the main locomotors. The training programmes were developed based on the twelve roles of medical teacher framework described by Harden and Crosby (2000). A thorough literature review was performed to design the objectives and content of each programme. The situated learning theory and experiential learning cycle are some of the theoretical frameworks used to inform the training programme. The existing curriculum was also taken into account since the training programme should be tailored to the needs and prior knowledge and skills of the faculty.

The FMUI faculty development training programme can be roughly divided into those in the area of curriculum and instructional design development and the others are related to the delivery of the curriculum. This scheme poses a challenge of which faculty member should attend which programme. Therefore, a levelling system that is recognized and in line with the career development path within the institution will be more motivating for teachers. Another challenge specific for medical education institutions is the involvement of large number of clinical staff in the main or affiliated teaching hospitals as the clinical teachers. Clinical staff duties in medical services and research may take the bulk of their working hours and this often serves as the main barrier for effective training programme.

The large number of faculty members and their various background remains a challenge for securing a sustainable and continuous faculty development system in a workplace, including clinical workplace; how to keep them interested, motivated and feel the needs for a faculty development as part of their everyday life as teachers. Aligning the system with a set of generic training programme developed by the university is also a challenge. A faculty development system has become a nation-wide requirement for each institution and the challenge now is how FMUI can contribute to the establishment of nation-wide medical teachers – faculty development system to produce competent and standardized medical teachers.

Friday 6th February 2015, 11.00am

Hall, Level 1, University Cultural Centre

A FRAMEWORK FOR EVALUATING FACULTY DEVELOPMENT PROGRAMMES

Lap Ki Chan

Associate Professor, Institute of Medical and Health Sciences Education, Department of Anatomy, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong S.A.R.

Faculty development is an essential activity in most tertiary institutions, especially in this era of rapidly evolving pedagogies, ever-shrinking curricular time, increasingly diverse students and faculty, rapidly increasing use of technology in education, and budgetary constraints. Moreover, all faculties have multiple responsibilities and may not be able to spend much time developing their teaching competencies and performance, thus making highly efficient and effective faculty development even more important. Evaluation of faculty development programmes thus provides important data on how these programme can be improved. This talk is about the framework for evaluating faculty development programmes, exemplified in one developed for the one-minute preceptor (OMP).

The OMP was originally developed for the busy primary care clinical environment, as a time-efficient and learner-centered teaching technique. Because the teaching environment in the gross-anatomy laboratory is similar to the primary care clinic in that teachers need to supervise multiple groups of students simultaneously and thus have very short time to engage each, it has been suggested that OMP can also be applied in the gross-anatomy laboratory. Using the outcome-based approach and the predisposing-enabling-reinforcing instructional framework by Green and Kreuter, we designed a faculty development programme for novice anatomy teachers on OMP. The CME outcome framework, Miller's triangle, and Kirkpatrick's model are integrated into a framework for evaluating the programme. The various possible methods of evaluation at the level of participation, satisfaction, learning (declarative knowledge, procedural knowledge and competency), performance, and student learning, as well as some of the evaluation results, will be described in the talk.

S1

Friday 6th February 2015, 11.00am
Hall, Level 1, University Cultural Centre

IMPLEMENTING AN INSTITUTION-WIDE RESIDENT-AS-TEACHER PROGRAM: SUCCESSES AND CHALLENGES

Sophia Archuleta

Assistant Professor and Infectious Diseases Senior Residency Program Director, National University Health System, Singapore

This session will describe the design and implementation of a Resident-as-Teacher (RAT) program in an academic medical center in Singapore. Successes and challenges, as well as practical tips and lessons learned, will be discussed.

Background

Singapore implemented Accreditation Council for Graduate Medical Education-International (ACGME-I) residency program standards in 2010. ACGME-I requires the development of residents' teaching skills in order to achieve competency in Practice-Based Learning and Improvement (PBLI). Our goal was to integrate a RAT workshop into the curriculum of all residency programs offered at our institution. The RAT workshop was developed to meet the new accreditation standards as well as to enhance residents' effectiveness in educating medical students and other residents. Despite having major contributions to both undergraduate and postgraduate teaching, residents previously received no formal training in this area. For academic medical centers with learners of various seniorities embedded in nearly all clinical teams, the involvement of residents in teaching, assessing and providing feedback is essential - especially since they often have more direct contact time with students than senior faculty.

Program Implementation

An eight-hour, interactive workshop using experiential learning theory was developed to impart best-practices and hone skills in: a) bedside teaching; b) formative work-based assessment; and c) feedback. The format included interactive small group discussion with problem-based scenarios, role-play, direct observation and videoed micro-teaching exercises incorporating techniques such as the RIME model, 1-minute preceptor and modified Pendleton feedback model. These practical techniques were selected to promote timely, concise teaching output relevant to a busy resident and to address the challenges of effectively engaging learners at multiple levels. The workshop has been offered four times with a total attendance of 69 residents to date. A post-workshop assignment consists of video recording and analysis (with workshop faculty feedback) of a resident-delivered bedside teaching session and is required for certification of the resident as teacher.

Successes and Challenges

Fifty-seven residents (83%) have completed feedback on their RAT workshop experience, with 96% rating it as good, very good or excellent. Participants rated the workshop especially highly in terms of helping them to plan and implement teaching activities in their daily practice more effectively. When asked what immediate changes they would implement, most comments focused on integrating the specific, practical techniques shared in the workshop into their routine student contact. Overall, the practical and hands-on nature of the workshop was well received with participants feeling empowered and requesting even more practical exposure. The post-workshop assignment was designed to address this and to complete the learning cycle but completion of this assignment remains a challenge. Anticipated next steps include peer observation and feedback of resident teaching for the ongoing development of our residents as faculty. Finally, from an institutional perspective, the workshop became a key component in satisfying the ACGME-I PBLI accreditation requirement.

Friday 6th February 2015, 11.00am

Theatre, Level 1, University Cultural Centre

SYMPOSIUM 2 – "HAS THE ACGME-I TRAINING SYSTEM SERVED SINGAPORE TRAINING WELL?"

¹Chen Fun Gee, ²Kenneth Mak, ³Malcolm Mahadevan, ⁴Chow Wan Cheng

¹Director, Division of Graduate Medical Studies, National University of Singapore, Singapore, ²Chairman, Medical Board, and Senior Consultant, Department of Surgery, Khoo Teck Puat Hospital, Singapore, ³Head and Senior Consultant, Emergency Medicine Department, National University Hospital, National University Health System, Singapore, ⁴Chairman, Division of Medicine, and Senior Consultant, Department of Gastroenterology and Hepatology, Singapore General Hospital, Singapore

The ACGME-I Residency Training System was introduced and successfully implemented in Singapore since 2010. For the past 4 years, with support and resources from our Ministry of Health Singapore, Educators are empowered to bring forth structured changes to our postgraduate education system.

The ACGME-I structure and curriculum replaces the opportunistic learning in our previous BST / AST training system. There are clear competency milestones upon which our trainees work towards specialization. Work place evaluations of Residents are strengthened and the process of providing feedback is made more objective. Faculty contributions to supervision and training are also better recognized.

In this symposium, we will hear from our Senior Leaders, on their objective views of the impact of implementation of ACGME-I. We focus on the desired outcomes of postgraduate education, namely academic certifications, clinician competency, quality clinical care and patient outcomes. Topics covered are as follow:

Transiting 2 Training Systems: A Leadership Perspective On Objectives, Challenges And Outcomes

Chen Fun Gee, Singapore

Structured Training, Better Surgeons? Impact of ACGME-I Education on General Surgical Competency Training

Kenneth Mak, Singapore

Managing Service and Training Resources in Emergent Care: A HOD's Perspective

Malcolm Mahadevan, Singapore

Impact of ACGME-I Training Requirements on Ward Based Specialties

Chow Wan Cheng, Singapore

S2

Friday 6th February 2015, 11.00am

Theatre, Level 1, University Cultural Centre

TRANSITING 2 TRAINING SYSTEMS: A LEADERSHIP PERSPECTIVE ON OBJECTIVES, CHALLENGES AND OUTCOMES

Chen Fun Gee

Director, Division of Graduate Medical Studies, National University of Singapore, Singapore

Postgraduate medical training in Singapore started in 1969 with the setup up of the School of Postgraduate Graduate Medical Studies, National University of Singapore. Training and examinations were conducted in collaboration with the Royal Colleges in the United Kingdom and Australia / New Zealand. In 2010, postgraduate training was modified and followed the requirements as stipulated by the Accreditation Council of Graduate Medical Education (ACGME) of the United States.

The ACGME is a private non-profit council that evaluates and accredits medical residency training. Its main focus is on competency-based education. Residents were trained and assessed on competencies in patient care, medical knowledge, practice based learning and improvement, system based practice, professionalism and interpersonal skills and communication. Training changed from being opportunistic to one of being structured where resident education supersedes that of service. Training hours were limited to 80 hours per week of supervised practice, and yet required fulfillment of a specified number of cases before they were allowed to move to the next phase of training. Simulation training was allowed, if there were insufficient clinical cases.

The transition from an existing training system that has been in existence for 40 years to the ACGME program necessitated reorganization in the training system. In the presentation, the changes will be discussed. As there is an existing system of BST and AST, the last intake being in 2010, there needs to be 2 concurrent system of training that needs to be supported until the trainees in the old system complete their training. The challenges in running 2 systems and maintaining equity will also be discussed.

It is currently too early to have hard data on the outcomes of the change as the first batch of ACGME residents have yet to complete their training. The presentation will discuss what are the soft outcomes so far after 4 years of residency.

Friday 6th February 2015, 11.00am

Function Room 1, Level 1, University Cultural Centre

SYMPOSIUM 3 – A LEARNING SCIENCES-BASED APPROACH TO FACULTY DEVELOPMENT AT A HEALTH SCIENCES CENTER

Frank Papa, Lisa Nash, Don Peska

University of North Texas Health Science Center, USA

Our evolving understanding of the cognitive factors underlying the development of medical competencies has made clear that it is time to re-invent health sciences education. More specifically, there is both rationale and evidence sufficient to utilize the literature of the learning sciences to formulate foundational principles and frameworks that will inform faculty in the design and implementation of 21st century health sciences curricula.

What foundational learning sciences' principles and frameworks will enable medical educators and administrators to successfully transform late 20th century health sciences curricular models (i.e., systems, problem-based and presentation-based) into a 21st century approach to curricular reform? What types of faculty development programs are going to be needed to support faculty and administrators in developing and applying these potentially transformational learning sciences principles and frameworks? What are the financial, logistical and institutional implications associated with providing resources and committing faculty to the types of faculty development programs required to prepare them to play critical roles in designing, leading and implementing new curricular models?

Friday 6th February 2015, 11.00am

Function Room 2, Level 2, University Cultural Centre

SYMPOSIUM 4 – EARLY INVESTIGATORS’ FORUM

Practice Based Educational Research Through The Lens of A Clinician Educator

Poh-Sun Goh, Singapore

One Question: At Least 6 Different Answers: And All Correct

Lambert Schuwirth, Australia

How to Publish from an Editor’s Perspective: Tips for a Young Writer

Indika Karunathilake, Sri Lanka

S4

Friday 6th February 2015, 11.00am

Function Room 2, Level 2, University Cultural Centre

PRACTICE BASED EDUCATIONAL RESEARCH THROUGH THE LENS OF A CLINICIAN EDUCATOR

Poh-Sun Goh

Associate Professor and Senior Consultant, Department of Diagnostic Radiology, National University Hospital, National University Health System, Singapore

A clinician educator is faced with several challenges, but also many opportunities when considering which area of their educational practice to evaluate and investigate further. There are many research perspectives, educational practice questions, and research methods that could be chosen. I will present one clinician's educational journey, over the last 13 years, starting with small pilot projects, systematically presenting this at regional and international conferences for feedback, and iterative improvement; leading to an educational Masters program, and subsequently through refinement and deepening of understanding and insight into clinical and educational practice into a program of practice based research, focused on the use technology enhanced learning or (e)Learning to support deliberate practice for mastery training in clinical radiology, from undergraduate, through postgraduate to the lifelong learning continuum, using an indexed hyperlinked digital teaching case repository.

S4

Friday 6th February 2015, 11.00am

Function Room 2, Level 2, University Cultural Centre

ONE QUESTION: AT LEAST 6 DIFFERENT ANSWERS: AND ALL CORRECT

Lambert Schuwirth

Professor, Department of Educational Development and Research, FICE, Flinders University Adelaide, Australia; and Adjunct Professor, Innovative Assessment Maastricht University, The Netherlands

Medical education research is one of the broader research domains. Not only is there a myriad of domains and topics to be explored, such as admissions/selections, assessment, curriculum development, educational change management, programme evaluation, learning environments, staff development, and many others, but also a large variety of scientific approaches can be adopted. In this presentation I will explore the same research question from different epistemological/ontological angles, from qualitative and quantitative perspectives and from a fundamental and justification study type to illustrate the choices research can and will have to make when designing their research.

S4

Friday 6th February 2015, 11.00am

Function Room 2, Level 2, University Cultural Centre

HOW TO PUBLISH FROM AN EDITOR'S PERSPECTIVE: TIPS FOR A YOUNG WRITER

Indika Karunathilake

Director, Medical Education Development and Research Centre (MEDARC), Faculty of Medicine, University of Colombo, Sri Lanka

Publication of scientific literature in peer reviewed journals is now an expected and integral aspect of an academic's role. Increasingly universities and other academic establishments insist on proof of publication as criteria for consideration of career promotions. This trend has resulted in more young academics attempting to publish their work, especially research findings. However, due to the competitiveness, the expected standards of journal editors are high. Consequently, getting a paper published is not easy. During this session the tips for young writers to maximize the likelihood of publication success will be discussed based on following areas;

- Identifying a clear message to be disseminated based on the research finding
- Selecting a journal
- Ethical aspects
- Following the manuscript submission guidelines
- Revising of manuscripts before submission
- Correspondence and Communication
- Consultation with colleagues
- Handling reviewer feedback and revisions

This discussion will give an insider's view on how decisions are made "behind the scenes" during the review process. An original, practically important, academically rigorous study, presented as a well written manuscript and a strategic approach based on a clear understanding of how reviewers and editors make decisions will maximize the publication success rate of a young writer.

Friday 6th February 2015, 11.00am

VIP Lounge, Level 2, University Cultural Centre

SYMPOSIUM 5 – DEVELOPING INNOVATIVE TEACHING & LEARNING IN THE 21ST CENTURY

¹Elizabeth Kachur, ²Chaoyan Dong, ³Thanakorn Jirasevijinda, ⁴Nobutaro Ban, ⁵Ducksun Ahn

¹Medical Education Development, United States of America, ²Medical Education Specialist and Assistant Director, Centre for Medical Education, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, ³Associate Professor of Pediatrics, Weill Cornell Medical College, New York, United States of America, ⁴Professor, Department General Medicine, Nagoya University Graduate School of Medicine, Japan, ⁵Professor, Department of Medical Education, Korea University Medical College, South Korea

Various national and international developments have spurred innovations in medical education. Now educators think more broadly, and gradually creativity is becoming more desirable across the globe. This symposium will discuss the development of new thinking and educational strategies in four countries: Japan, Korea, Singapore and USA. Panelists who made creative contributions to the field will share their insights as they explore institutional and cultural factors. The symposium topics include:

1. Multiple teaching modalities to fit local medical schools' needs
2. Cultural factors influencing the adoption of innovations
3. Videos in Health Professional Education
4. Generational factors when structuring the curriculum

Symposium participants will be prompted to answer a series of questions and to share their views on these issues during the symposium.

Friday 6th February 2015, 2.00pm

Hall, Level 1, University Cultural Centre

SYMPOSIUM 6 – QUALITY ASSURANCE IN MEDICAL EDUCATION

Continuous Quality Improvement of Medical Education

Dan Hunt, USA

Quality Assurance In Postgraduate Training

Chen Fun Gee, Singapore

Accreditation of Medical Schools in Singapore

Koh Dow Rhoon, Singapore

Accreditation of Medical School – Taiwan's Perspective

Lai Chi-Wan, Taiwan

Staff Development Programs for Postgraduate Faculty: Hong Kong Experience

NG Patil, Hong Kong S.A.R.

Quality Assessment and Improvement of Medical Education through Accreditation in Japan

Nobuo Nara, Japan

S6

Friday 6th February 2015, 2.00pm

Hall, Level 1, University Cultural Centre

CONTINUOUS QUALITY IMPROVEMENT OF MEDICAL EDUCATION

Dan Hunt

Co-Secretary, Liaison Committee on Medical Education (LCME); and Senior Director, Accreditation Services at the Association of American Medical Colleges, USA

The need for ongoing monitoring of the quality of medical education in the United States and Canada has become abundantly clear with the recent increase in the number of medical schools receiving “Severe Action Decisions” as a result of their accreditation visits. This increase is traced back to a relatively simple reformatting and clarification of the standards in 2002 which was done in order to more clearly describe the intent of the accreditation standards which would assist schools, team members, and the accreditation committee in making decisions about compliance. Unfortunately, as the Liaison Committee on Medical Education (LCME) and its accreditation survey teams became better able to identify what was acceptable and what was not acceptable, schools with visits only every eight years did not see this change in rigor and for the past five years have been caught unprepared. Thus, a new standard was created that now requires schools to establish continuous quality monitoring systems medical education. Examples of these systems and preliminary results will be shared in this session.

S6

Friday 6th February 2015, 2.00pm

Hall, Level 1, University Cultural Centre

QUALITY ASSURANCE IN POSTGRADUATE TRAINING

Chen Fun Gee

Director, Division of Graduate Medical Studies, National University of Singapore, Singapore

Postgraduate Training is resource intensive. Rising costs and increased emphasis on efficiency and effectiveness have incited the need for quality assurance. Developing and implementing a system for quality assurance and having a quality culture unfortunately lags behind what is practiced in undergraduate education institutions.

Quality assurance is defined as the planned systematic activities that are put in place to ensure that quality requirements for a product or service are fulfilled (Bowden & Marton 2000). In the educational setting, it focuses on quality of teaching, quality of teaching staff, quality of assessment, as well as faculty development, processes and management of the programs. In general, the 2 main goals of quality assurance are to provide information to account on the quality of the educational program (detecting weaknesses by monitoring the quality of education), and to generate data that can help to improve the quality of the education (diagnosing weakness and providing information for improvement).

A common quality assurance process is program evaluation. This requires a systematic approach involving stakeholders using a variety of instruments such as evaluation questionnaires, interviews with program directors and residents, to gather data necessary for evaluation. All too often, this ends with the generation of a report and no changes are made. To assure improvement, there is a need for a systematic 3 step cyclical process comprising: (1) defining and measuring quality (2) judging quality against predefined standards to determine strengths and weaknesses and (3) defining priorities and plans for improvements. After carrying out the changes the 3 steps need to be restarted to measure whether changes have actually resulted in improvements.

In Singapore, the postgraduate training programs are largely under the ACGME I as well as JCST. The goal is to provide training to enable a resident to acquire competencies in the specialty chosen to be able to provide comprehensive care as a specialist. The training is usually apprenticeship based and upon successful completion of both training and the summative assessments, the resident is eligible to enter the specialists' rolls.

The ACGME I and JCST conducts quality assurance processes in collecting data in the site accreditation processes, to measure the quality of education, determine strengths and weaknesses, and provide recommendations for improvement. The program then defines the plans for improvement in preparation for the next cycle for quality assurance review. It is this quality framework that is embedded in ACGME I, that has transformed the Singapore postgraduate training system since 2010. The quality assurance processes in the UK postgraduate training programs under the GMC will be compared in the presentation to illustrate different approaches to quality assurance.

Reference:

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Dolmans, D.H.J.M, Wolfhagen, H.A.P, Scherpbier, A.J.J.A. (2003). *From quality assurance to total quality management: how can quality assurance result in continuous improvement in health professions education*. *Education for Health*, 16, 2, 210-217.

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Friday 6th February 2015, 2.00pm
Hall, Level 1, University Cultural Centre

ACCREDITATION OF MEDICAL SCHOOLS IN SINGAPORE

Koh Dow Rhoon

Associate Professor, Department of Physiology and Associate, Centre for Medical Education, NUS Yong Loo Lin School of Medicine; and Visiting Senior Consultant, Division of Rheumatology, Department of Medicine, National University Hospital, National University Health System, Singapore

Medical education is constantly changing in Singapore. At the Yong Loo Lin School of Medicine, a regular process of curricular review and improvement has been in place since the late 1990s. In addition, two other new medical schools have been started in Singapore in order to cope with the increasing demands for training more doctors. These schools provide diversity in training and have unique strengths. Best practices have been put in place to facilitate a more outcome focused, student-centric learning, foster a culture of excellence and establish life-long learning. In order to ensure that standards are maintained, the schools have established some form of benchmark and independent review process that ensure that standards are met and improved upon. As medical education becomes more global and interdependent, there is a need for developing a quality framework and to set in place processes to ensure that quality standards are met and any gaps corrected. Efforts are underway at the YLLSOM to setup a quality framework based on the WFME global standards and to develop a structured external review with the accrediting body to ensure compliance to the standards as well as to nurture an education ecosystem capable of sustaining a continual quality improvement in medical education. This will ensure that quality achievement will be bottom-up, built on trust and constantly able to maintain standards as well as excel despite the changing education and health landscape.

S6

Friday 6th February 2015, 2.00pm
Hall, Level 1, University Cultural Centre

ACCREDITATION OF MEDICAL SCHOOL – TAIWAN'S PERSPECTIVE

Lai Chi-Wan

Chairman, Taiwan Medical Accreditation Council, Taiwan

Taiwan currently has a total of 12 medical schools. Taiwan Medical Accreditation Council (TMAC) was formed in 2000 as an independent accrediting body with the endorsement of the Ministry of Education (MOE) and the Conference of the Deans of Medical Colleges in Taiwan (CDMCT).

Accreditation activities began in 2001. Full accreditation is awarded for a term of seven years, but a follow-up visit is conducted two or three years thereafter. The first cycle of visits was completed in 2004, and a review of the results from both the initial and follow-up visits was conducted in 2008. The second cycle of reviews began in 2009. In addition to regular reviews, schools have been requested to report “major changes” annually.

TMAC was reviewed and deemed “comparable” in 2002, and “re-determination” in 2009 by the National Committee on Foreign Medical Education and Accreditation of the USA. From its inception to the present, TMAC has accomplished its mandate as the sole accreditation council for all medical schools in Taiwan. The decisions of TMAC have been fully supported by the MOE and the recommendations from TMAC have been adopted by all medical schools for the improvement of medical education.

In 2009, TMAC began to revise its accreditation standards, using the LCME standards as reference. Taking into account Taiwan's own infrastructural tradition, regulatory norms, and historical differences in medical practice, the revised accreditation standards were initially accepted by the CDMCT and then tested in 2012 in several schools. The newly modified standards were fully implemented in the year 2014.

Although TMAC has requested that an “annual update” be submitted by schools for Continuous Quality Improvement (CQI), the expectations for the content and format of annual reports have not, to date, been standardized, and the ability of the accrediting body to systematically review and provide feedback on the reports has been limited owing to manpower shortage and budget constraints. TMAC is seeking further support from the MOE to strengthen quality improvement by an additional “mid-cycle accreditation visit” to serve as a “formative” assessment to help schools in preparing for the next full accreditation visit at the end of the cycle.

Friday 6th February 2015, 2.00pm

Hall, Level 1, University Cultural Centre

STAFF DEVELOPMENT PROGRAMS FOR POSTGRADUATE FACULTY: HONG KONG EXPERIENCE

NG Patil

Professor, The University of Hong Kong, Hong Kong S.A.R.

Hong Kong Academy of Medicine (HKAM) with its 15 constituent professional postgraduate colleges is mandated to supervise and award postgraduate fellowship degree prior to registration as a specialist by Medical Council of Hong Kong. Educational committees of these colleges have membership drawn from both academic and non-academic clinicians in Hong Kong involved in curriculum planning, training and assessments all needing staff development programs to make sure quality and standards are maintained as stipulated by HKAM and Medical Council. Author has been privileged to facilitate workshops on question writing, conducting clinical examinations, standard setting and competency based syllabus. The main challenge for conducting staff development programs for professional colleges is to encourage and motivate 'Clinical Supervisors' to enroll and actively participate in educational activities of the colleges as their main preference is towards attending clinical specialty meetings than workshops related to educational pedagogy etc.. Award of CME points for active participation in staff development programs, submission of quality questions for written exams and examinership has provided incentive and opportunity for clinicians to get involved in professional development as educators. Author will highlight strategies and solutions in implementation of staff development programs for postgraduate teachers and educators.

S6

Friday 6th February 2015, 2.00pm
Hall, Level 1, University Cultural Centre

QUALITY ASSESSMENT AND IMPROVEMENT OF MEDICAL EDUCATION THROUGH ACCREDITATION IN JAPAN

Nobuo Nara

Director, Center for Education Research in Medicine and Dentistry, Tokyo Medical and Dental University, Tokyo, Japan

The major mission of medical school is to turn out excellent physicians to protect the public health. To meet this purpose, the program evaluation should be necessary. Furthermore, the internationally recognized accreditation is required to contribute to the globalization of medical practice.

In Japan, the accreditation for medical education has been started since 2012 by Japan Accreditation Council for Medical Education (JACME). JACME is recognized by the Ministry of Education and by the deans committee. The aim of JACME is to accredit medical schools for quality and to improve medical education, to foster the training of excellent physicians.

The basic framework for medical school recognition and accreditation by JACME is based on the internationally recognized process; the self-evaluation by each medical school and external-evaluation by medical experts. Self-evaluation is useful for the internal quality improvement of medical education, and external-evaluation provides objective assessment. At least 6 members attend at the external-evaluation to conduct fair and equitable assessment.

For the internal- and external evaluation, JACME conforms the criteria by WFME global standards of 2012 with minor modifications for accreditation to meet the regional circumstances in Japan. The fundamental criteria are not changed; we just added core-curriculum, nationwide common achievement testing etc. specifically introduced in Japan.

The WFME criteria contain 9 areas and 36 subareas. Medical school has to review and check its education based on the criteria. The report of self-evaluation will be sent to JACME. The committee of JACME will check and review it. JACME will give some questions or request additional data in need.

The site-visit is carried out by at least 6 accreditors for 5 days. It contains the discussion with faculty and administrative staffs of medical school, the observation of lectures, clinical clerkships, and laboratory experiments, and the inspection on educational facilities such as lecture theaters. Meetings with students and residents are also included to check the outcome of education. At the final day accreditors review with the school after site-visit and give some comments to the medical school for the quality assurance and improvement.

Five medical schools have taken the accreditation as trial since 2012. JACME will expand the accreditation for other 75 schools.

JACME will establish the medical education accreditation system in Japan which will conform to global standards. The accreditation by JACME should contribute to the continuous quality improvement in medical education in medical schools in our countries.

Friday 6th February 2015, 2.00pm

Theatre, Level 1, University Cultural Centre

SYMPOSIUM 7 – GLOBALISATION AND MEDICAL EDUCATION: EFFECTS, CHALLENGES AND OPPORTUNITIES

^{1,2}**Tina Martimianakis**, ^{2,3}**Brian Hodges**, ^{2,4}**Robert Paul**, ^{2,5}**Cynthia Whitehead**, ^{2,6}**Jerry Maniate**

¹Department of Paediatrics, ²Wilson Centre for Research in Education, ³Department of Psychiatry, ⁴Institute of Health Policy Management and Evaluation, ⁵Department of Family and Community Medicine, and ⁶Department of Medicine, Faculty of Medicine, University of Toronto, Canada

Medical education is rapidly taking up the language, ideas and practices of globalization. Terms such as outsourcing, off-shoring, efficiency and profit have found their way into medical education. The result is the emergence of practices such as selling curricula, off-shoring medical schools, trade in health professionals and the development of profit-oriented medical education. In the analysis of globalization outside of medicine, significant concerns have been raised about some adverse effects of unfettered economic models including unevenly distributed benefits, failure to develop international regulatory mechanisms and the homogenization of diversity. All of these issues are relevant to, but rarely discussed in, medical education. The talks in this symposium open the door to a line of research that can shed light on these pressing issues. We explore reasons why medical school, health care institutions and regulatory bodies engage in international work, the opportunities afforded by this activity and the effects of a growing commitment to globalization related agendas. Topics covered are as follow:

Globalization - From Discourse to Practice: Reflecting on the Impact of Globalization in Medical Education

Brian Hodges, Canada

Why Pursue International Collaborations? : Opportunities, Effort, Engagement, Experiences Part 1

Robert Paul, Canada

Why Pursue International Collaborations? : Opportunities, Effort, Engagement, Experiences Part 2

Cynthia Whitehead, Canada

Why Pursue International Collaborations? : Opportunities, Effort, Engagement, Experiences Part 3

Jerry Maniate, Canada

Deconstructing Discourses of Global Physician Competency

Tina Martimianakis, Canada

Friday 6th February 2015, 2.00pm

Function Room 1, Level 1, University Cultural Centre

SYMPOSIUM 8 – SOCIAL RESPONSIBILITY

Teaching Social Determinants of Health In Medical Schools In The Asia-Pacific Region: Current Practices, Future Perspectives

Y. S. Sivan, India

Developing Social Responsibility through Co-Curricular Activities in Medical, Dental, Nursing And Social Work Students: the NUS Neighbourhood Health Screening Experience

Gerald Koh & Chiong Yee Keow, Singapore

Role of MOH in Training Healthcare Professionals Who Are ‘Fit-For-Purpose’

Mabel Yap, Singapore

Roles of Medical Students in Social Accountability

Judy McKimm, United Kingdom

Friday 6th February 2015, 2.00pm

Function Room 1, Level 1, University Cultural Centre

TEACHING SOCIAL DETERMINANTS OF HEALTH IN MEDICAL SCHOOLS IN THE ASIA-PACIFIC REGION: CURRENT PRACTICES, FUTURE PERSPECTIVES

Y. S. Sivan

Associate Professor, PSG Institute of Medical Sciences & Research, India

Teaching social determinants of health (SDH) in medical schools is an area that is less discussed but needs more attention. This symposium aims to (i) portray the current practice of teaching social sciences in medical schools in the Asia-Pacific region (APR) in view of the increasing need to study social determinants of health (SDH) by the medical undergraduate students; (ii) challenges faced in teaching SDH in medical schools in the region and (iii) suggest measures to invigorate the teaching of SDH in medical schools in the APR. Specifically, the issues to be discussed in the symposium under the three major headings include (but not limited to):

1. Is it taught?
 2. Dedicated teaching hours for SDH
 3. What is taught?
 4. Curriculum and syllabus
 5. Who teaches SDH?
 6. How is it taught? (Teaching modalities)
 7. SDH content in medical undergraduate textbooks
 8. The major turf in the medical school for teaching SDH
 9. The need for developing a special cadre of sociologists to teach SDH in medical schools
 10. Where (which department) to locate the SDH cadre of faculty?
 11. Opportunities for continuing professional development of SDH faculty
 12. Advocacy strategies for promoting teaching SDH in medical schools in the APR
- Consensus reached based on best practices on these issues reported should drive a new initiative on teaching SDH in medical schools in the region. Apart from this, it is expected that a critical mass of educators focusing on teaching SDH in medical schools could be identified and brought together to take the initiative forward in the APR.

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Friday 6th February 2015, 2.00pm

Function Room 1, Level 1, University Cultural Centre

DEVELOPING SOCIAL RESPONSIBILITY THROUGH CO-CURRICULAR ACTIVITIES IN MEDICAL, DENTAL, NURSING AND SOCIAL WORK STUDENTS: THE NUS NEIGHBOURHOOD HEALTH SCREENING EXPERIENCE

¹Gerald Koh, and ²Chiong Yee Keow

¹Associate Professor, Saw Swee Hock School of Public Health, National University Health System, Singapore, and ²Resident (Medical Officer), Khoo Teck Puat-University Children Medical Institute, National University Health System, Singapore

The NUS Neighbourhood Health Screening (NHS) Project was first started in 2008 with the aim of bridging the gap between the elderly and poor living in rented flats to the healthcare system by carrying out door-to-door health screening. Volunteer doctors are also stationed at the void deck or common area to provide medical advice for the residents who might have urgent health issues to address.

It has received tremendous support from the student body that has continued to volunteer for annually, and has expanded to include medical, nursing, dental and social work students providing comprehensive support to address barriers to healthcare that these residents face, and allow them to better access the healthcare system.

Many students have benefitted from this experience and they have reported that NHS has helped them develop communication skills, teamwork, identify social issues, improve knowledge on chronic disease management and healthcare challenges faced by lower-income Singaporeans, and apply knowledge learnt to better interact with patients' relatives, recommend screening tests, refer for psychosocial help, and improve patient compliance. They also felt more confident in tackling the various steps of the care pathway: first screening, then clinical procedures, and finally encouraging compliance and providing non-medical assistance, eventually leading to better management of chronic disease.

With this in mind, and with the eventual graduation into their respective careers, it is our hope that these students will continue to make a difference in the lives of the elderly and poor with their expertise long after graduation.

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Friday 6th February 2015, 2.00pm

Function Room 1, Level 1, University Cultural Centre

ROLE OF MOH IN TRAINING HEALTHCARE PROFESSIONALS WHO ARE ‘FIT-FOR-PURPOSE’

Mabel Yap

Director, Ministry of Health, Singapore

The Ministry of Health’s “Healthcare 2020 Masterplan” articulates the government’s strategy to achieve an inclusive healthcare system that meet’s the population’s present and future needs. Among other things, it calls for the expansion of existing healthcare infrastructure to better improve access to healthcare services. To achieve this, two new acute-service hospitals and three community hospitals are slated to open between 2015 and 2020. However, while healthcare facilities can be built and designed for specific population needs, the bigger challenge lies in producing “fit-for-purpose” healthcare professionals capable of serving such needs and within the desired model of healthcare delivery.

In the case of medical manpower, an increase in the student intake of Singapore’s three medical schools and the entry of foreign-trained doctors are expected to grow the number of new doctors. Regulatory measures have been strengthened to ensure that standards for safe and competent practice continue to be met, particularly before conferment of full medical registration. The establishment of structured specialist training with credible and relevant assessment systems and the planned introduction of common medical education and assessments standards are other instances where the Ministry takes progressive steps in maintaining the calibre of the medical workforce. As Singapore’s population ages, “fit-for-purpose” doctors must also be able to effectively manage complex, chronic medical conditions. Hence, the Ministry takes an active role in growing specialist capabilities in broad-based disciplines such as General Internal Medicine or Family Medicine, as well as incorporating broad-based competencies even in more specialised disciplines. Overall, the Ministry takes a multi-pronged approach using governance, regulatory and funding levers to achieve its manpower training objectives to support its Healthcare 2020 strategy.

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Friday 6th February 2015, 2.00pm

Function Room 1, Level 1, University Cultural Centre

ROLES OF MEDICAL STUDENTS IN SOCIAL ACCOUNTABILITY

Judy McKimm

Dean of Medical Education, College of Medicine, Swansea University, Wales, United Kingdom

Medical schools around the world are making great strides in meeting their social accountability responsibilities and faculty are engaged in many activities, ranging from partnership between schools in high and low resource countries to travelling to schools who need training for their teachers. Whilst many medical students undertake elective studies in overseas countries, there has been a lot of criticism that this is a ‘one way street’ as often students from low resource countries cannot afford to travel overseas. This presentation and discussion sets out some of the ways in which medical students do (and can) engage in the social accountability agenda, both locally in their own countries and on a wider scale through formal links and partnerships.

Friday 6th February 2015, 2.00pm

Function Room 2, Level 2, University Cultural Centre

**SYMPOSIUM 9 – TO ERR IS HUMAN TO TEACH TO PREVENT - DIVINE:
TEACHING AND DEVELOPING PATIENT SAFETY CURRICULA AT
ACADEMIC MEDICAL INSTITUTIONS**

Doctors are Too Smart and Nurses are Too Fierce

Lau Tang Ching, Singapore

Changing Patient Safety Culture amongst Undergraduates By Working With The ‘Dark Force’

Gilberto K.K. Leung, Hong Kong S.A.R.

Procedural Teaching in Medical Education: Beyond ... “See One”, “Do One” ... “Kill One”

Briseida Mema, Canada

The Art and Science of Patient Safety for Medical Students: Perspective from an Academic Medical Centre

Tay Sook Muay, Singapore

Stories are for Kids

Ong Biauwei Chi, Singapore

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Friday 6th February 2015, 2.00pm

Function Room 2, Level 2, University Cultural Centre

DOCTORS ARE TOO SMART AND NURSES ARE TOO FIERCE**Lau Tang Ching***Vice Chairman Medical Board (Education), National University Hospital; Associate Professor, Department of Medicine, and Assistant Dean (Education), Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore*

Communication and teamwork between doctors and nurses is critical for optimal patient care. Simulation and interprofessional education are emerging as significant learning strategies to promote teamwork and communication between different health professionals. The talk will describe the development, implementation and evaluation of a simulation-based interprofessional education (Sim-IPE) for improving medical and nursing students' communication skills in caring of a patient with physiological deterioration. A presage-process-product (3P) model was used as framework to develop and evaluate the Sim-IPE program. The program was conducted using full-scale simulation and communication strategies adapted from Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS). Pre and post-tests were conducted to assess the students' self-confidence in interprofessional communication and perception in interprofessional learning. After the training, the students completed a satisfaction questionnaire to evaluate their simulation experiences. Both medicine and nursing groups demonstrated a significant improvement on post-test score from pre-test score for self-confidence ($p < .0001$) and perception ($p < .0001$) with no significant differences detected between the two groups. The participants were highly satisfied with their simulation learning. The Sim-IPE program has better prepared the medical and nursing students in communicating with one another in providing safe care for deteriorating patient. In addition, it has improved their perception towards interprofessional learning. Such early development could prepare them for more comprehensive team training at post-registration level.

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Friday 6th February 2015, 2.00pm

Function Room 2, Level 2, University Cultural Centre

CHANGING PATIENT SAFETY CULTURE AMONGST UNDERGRADUATES BY WORKING WITH THE 'DARK FORCE'**Gilberto K.K. Leung***Medical Law and Ethics Unit, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong*

Patient safety education can be challenging partially due to the scarcity of clinical academics who are equipped with the necessary skills and knowledge. At the University of Hong Kong, patient safety teaching involves multiple clinical disciplines as well as our Medical Law and Ethics Unit and the Medical Humanities Programme, using didactic lectures and small group tutorials for both medical and nursing students. To compensate for a lack of expertise, administrators with clinical backgrounds from the Hong Kong Hospital Authorities were invited to be our faculties. We found that not only could they deliver teaching in clinically relevant contexts, but that they were also in a privileged position to illustrate basic safety principles through the sharing of detailed insider information on the handling of real-life and media-sensitive medical incidents. A 'before-and-after' study demonstrated welcoming responses from our students and positive impacts on their patient safety culture. While clinicians going into healthcare administration are sometimes described as having defected to the 'Dark Force', they can be valuable education resources when treated kindly and with respect.

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Friday 6th February 2015, 2.00pm

Function Room 2, Level 2, University Cultural Centre

PROCEDURAL TEACHING IN MEDICAL EDUCATION: BEYOND ... “SEE ONE”, “DO ONE” ... “KILL ONE”

Briseida Mema

Assistant Professor, Staff Physician, Hospital for Sick Children, Canada

The two approaches to training of procedures described in the literature involve apprentice-based and/or simulation-based paradigms. Ethical and economical considerations highlight problems with using the apprenticeship-based approach as the sole education delivery model. Consequently, simulation training has been advocated to augment the apprentice model. Especially, acute life-saving procedures represent an imbalance of low frequency (i.e. they are less commonly indicated) and a critical need for competence (i.e. they are acute, time-sensitive and the initial attempts must be successful). Simulation represents an attractive option because aside from costs (e.g. equipment, time) the approach affords opportunity for repetitive and progressive practice, and feedback, and it constitutes no immediate patient risk. Indeed, simulation training -and deliberate practice- has been shown to help master performance of important procedures (e.g. thoracocentesis, lumbar puncture, Advance Cardiac Life Support (ACLS), central venous catheter insertion), when such performance is tested in simulation models.

Transfer of skills from simulation to practice then is critical because the goals of an education program are not meaningfully achieved unless transfer of skills to bedside -with impact on patient outcome- has occurred. Lave and Wegner argue that learning is situated and occurs as a function of the activity, context and culture. Indeed, it has been argued that in order for the simulation of procedural skills to be effective, the simulation must be realistic, patient-focused and grounded in a clinical context. In an attempt to address this issue, ‘hybrid’ simulation, which combines a low fidelity task trainer (body part) coupled with either a standardized patient (an actor) or a high-fidelity mannequin; has been used for training and assessment as this allows more discrimination of acquired skills.

Motor learning theories such as, Ericsson’s theory of expertise stresses the importance of engagement in deliberate practice, with feedback for acquisition and maintenance of expertise. Allowing learners to have repetitive practice with one to one feedback facilitates the transfer of skills from simulation to practice. Continued access to deliberate practice in the simulation environment, to augment real life situations is the key to success. The challenge point framework concludes that for optimal learning and retention to occur, the performer’s expertise and task complexity (psychological or physical) should match. Learners benefit from real life or simulation experiences that appropriately challenged them. Once their performance improves, future simulation training focused on practicing more complex and difficult tasks.

Based on these learning theories we have built simulation curricula that promote achievement of expertise and transfer of skills from simulation to practice and therefore promote patients’ safety. We share the data from our latest study that follows our learners from simulation training to performing the first procedures in practice. As more studies confirm the superiority of simulation training versus apprenticeship training for initial student learning of clinical skills, and in turn patient outcomes, curriculum designers can gain insight into factors that facilitate and hinder the transfer of skills from simulation to practice and impact the performance of the learner. Many of these factors are indeed modifiable. As simulation further augments clinical learning, efforts should be made to modify the curricular and bedside factors that further promote the transfer of skills from simulation to bedside.

S9*Friday 6th February 2015, 2.00pm**Function Room 2, Level 2, University Cultural Centre***THE ART AND SCIENCE OF PATIENT SAFETY FOR MEDICAL STUDENTS:
PERSPECTIVE FROM AN ACADEMIC MEDICAL CENTRE****Tay Sook Muay***Senior Consultant Anaesthesiologist, Department of Anaesthesia & Surgical Intensive Care, Singapore General Hospital, Singapore*

With the increasing awareness and recognition of the harms caused by healthcare arises the need for medical students to know how to deliver safer care. Several high-profile reports have called for reform of medical education and a consensus has emerged that it's not enough for medical students, residents, and other trainee health care professionals to be taught the biomedical sciences and fundamentals of evidence-based care. Clinicians also need to know how to apply and integrate their knowledge in the messy, real world of hospitals, clinics and patient care. This involves being able to work collaboratively with other health professionals, communicate effectively with patients, navigate a complex and changing health care system, manage scarce resources and reduce waste, and be accountable for their performance and outcome. Singapore General Hospital weaves in the teaching and implementation of patient safety education to prepare students for safe practices.

S9*Friday 6th February 2015, 2.00pm**Function Room 2, Level 2, University Cultural Centre***STORIES ARE FOR KIDS****Ong Biauwei Chi***Senior Consultant, Dept of Anaesthesiology, and Director, Clinical Governance/Patient Safety, Singapore General Hospital, Singapore*

Patient safety involves not only systems but also human factors, interactions and emotions. Stories are often much more effective in conveying the subtle background to why things happen and is often better remembered. These stories need to be contextualised and distilled to give the important messages.

Friday 6th February 2015, 2.00pm

VIP Lounge, Level 2, University Cultural Centre

GREAT IDEAS IN MEDICAL EDUCATION (GIME)

The Development of a Novel CME Program To Enhance Emergency Medicine Care in Rural Areas: The SEME (Supplemental Emergency Medicine Experience) Program

Shirley Lee, Canada

Understanding The Faculty Development Needs of Part-Time Faculty

Sarah Bunton, USA

Integrated Quiz Competition: A Innovative Method of Teaching And Learning In Undergraduate First Year Medical Course At Rakmhsu, UAE

B.K.Manjunatha Goud, UAE

Mastering Mastery

Tracy Nielson, Australia

GIME**THE DEVELOPMENT OF A NOVEL CME PROGRAM TO ENHANCE EMERGENCY MEDICINE CARE IN RURAL AREAS: THE SEME (SUPPLEMENTAL EMERGENCY MEDICINE EXPERIENCE) PROGRAM**

Lee S, Ovens H, Letovsky E, Foote J, Borgundvaag B

Dept of Family and Community Medicine, Faculty of Medicine, University of Toronto, Canada

Aims

Emergency Medicine (EM) is an integral part of primary care medicine, and a core component of all Family Medicine (FM) training programs. More than 78% of MDs working in Canadian Emergency departments have no specialized EM training. The challenge of equipping family physicians (FPs) to work in rural Emergency Dept environments lacking specialist support is thought to contribute to the current crisis of access to care for patients in rural areas. Current CME programs do not adequately address the specific needs of rural physicians. We describe the development and implementation of the Supplemental Emergency Medicine Experience (SEME) for Family physicians wishing to practice comprehensive primary care in rural or remote settings. The program was funded by the Ministry of Health and Long-term Care, Province of Ontario.

Methods

The SEME curriculum was developed using the Canadian College of Family Practice-EM (CCFP(EM) list of national competencies, and a survey of a convenience sample of Family physicians. Incorporating trainee feedback, the program has evolved since the first session to adapt to the specific needs of the participants.

Results

To date, SEME has enrolled 4 cohorts (40 individual) trainees. The SEME program is a 3-month continuing medical education program. The academic program consists of a series of 12 three-hour seminars, 4 high-fidelity simulation sessions, 4 procedural workshops (including ultrasound training), and 65 e-learning modules (Ipad friendly) for self-directed learning. SEME includes a mandatory, but flexible EM component, with available subspecialty electives of 1-4 weeks duration (e.g., ICU, anesthesia). Participants must complete the seminar series, 12 weeks of clinical rotations, and review a minimum of 10 e-learning modules prior to graduation. Preliminary data to date has shown that learner confidence to practice EM in rural areas improved dramatically and remained high six-months after completion of the program. Participants are working in several rural communities and providing EM services. Currently the program is being developed for expansion to rural medicine training sites, as well as to other provinces.

Conclusion

We have successfully developed a novel CME program to enhance family physician skills and confidence to work in the ED environment. Evaluation of this training on physician practice behaviour is ongoing.

GIME

UNDERSTANDING THE FACULTY DEVELOPMENT NEEDS OF PART-TIME FACULTY¹*Bunton S*, ²*Dandar V*¹*Organization and Management Studies, Association of American Medical Colleges, USA*, ²*Faculty Forward, Academic Affairs, AAMC, USA***Aims**

Part-time faculty members represent a sizeable component of the faculty workforce at U.S. medical schools. Estimates suggest that in 2013 there were over 26,000 part-time faculty members, reflecting 17% of the total faculty population. Academic medicine has used part-time work schedules as a mechanism to recruit and retain high-quality faculty members. Supporting faculty with part-time appointments can help yield high-functioning health care teams. Yet understanding the experiences and needs, as well as the benefits and challenges associated with these appointments, is limited. This session is designed to provide insight into what we know about part-time faculty in the United States from research efforts and to put forward strategies for strengthening academic medicine's capacity to support these faculty

After participating in this session, participants will be able to:

- Understand the critical role that the part-time faculty plays in academic medicine
- Identify demographics and characteristics of satisfaction and engagement of part-time faculty
- Explore benefits and challenges associated with part-time faculty
- Develop strategies for understanding the development needs of part-time faculty, and for strengthening their institution's capacity to support them

Methods

Data are from:

1. Focus groups conducted with part-time faculty at medical schools. These groups were designed to explore what comprises workplace satisfaction and prominent areas of concern for part-time faculty (2001, n=63).
2. Responses from faculty at 21 institutions that participated in the AAMC Faculty Forward Engagement Survey-a survey that assesses satisfaction and engagement in the academic workplace-between 2011 and 2014 (quantitative and qualitative results).
3. Results from the 2012 Faculty Personnel Policies Survey (n=126 institutions)-the survey gathered policy information on faculty personnel policies, including the number of policies governing part-time faculty in place at institutions.

Data are presented and action recommendations will be made.

Results

Several salient themes emerged from focus groups and qualitative survey results around job satisfaction and development needs for these faculty. Most part-time faculty were satisfied with their career choice and flexibility, despite challenges like perceptions of negative attitudes around their roles and lack of clarity around expectations. Data suggests that most part-time faculty are working at least 0.5 FTE, are female, and are in clinical departments. While overall satisfaction levels are comparable to those of full-time faculty, results show that faculty report decreased satisfaction in the ability to manage workload and the availability of clear expectations around responsibilities. Policy survey results show that while over three-quarters of institutions have specific faculty tracks in place for these faculty, institutional policies around productivity and performance expectations for their work vary and just 26% of institutions had a written policy in place that articulated expectations.

Conclusion

Part-time career pathways allow institutions to employ and retain high-quality faculty in mutually beneficial ways. These faculty contribute to an institution's ability to achieve its mission. These results suggest numerous ways to improve the workplace and to address part-time faculty development needs, and these strategies will be presented in this session.

GIME**INTEGRATED QUIZ COMPETITION: A INNOVATIVE METHOD OF TEACHING AND LEARNING IN UNDERGRADUATE FIRST YEAR MEDICAL COURSE AT RAKMHSU, UAE****Goud B***Biochemistry, College of Medical Sciences, RAK Medical & Health Sciences University, United Arab Emirates***Aims**

In today's world of education, there is lot of information available to the students and they are overburdened with increasing academic load making learning painful instead of enjoyable. Innovative methods of teaching are the goal of many educators to deliver innovative curriculum. Among the several methods of learning and teaching, quizzes are considered to be one of the most effective. During preparatory phase prior to the quiz, students are encouraged to study more intensively. Post-quiz it may generate interest in several topics that may otherwise be ignored by the students. Main objective of this innovative active learning approach was to increase student's interest in basic science subjects and to enhance student participation in acquiring the knowledge in the core and applied aspects of Anatomy, Physiology and Biochemistry.

Methods

It was a comparative cross sectional study to find out whether Quiz competitions are effective teaching learning methodologies. There were 96 students in the class and students were asked to make their groups for the competition. Level of the questions asked in the integrated quiz varied from simple recall, comprehension, to application type from all three specialties.

Results

A total ninety six students were involved in the study and results of the study showed a statistically significant improvement in the performance of students who have participated in the competition. The study also compared the performance of students who participated in the competition with non-quiz participants and we found that there was a statistically significant improvement in the performance of students who participated in the quiz competition with non-quiz participants $P < 0.001$ both in theory (RRE) as well as in MCQ s section.

Conclusion

Rak medical and health sciences university (RAKMHSU) an evolving university in United Arab Emirates was started in 2006 with a mission to prepare graduates who are able to develop critical skills in their practice and application of knowledge, equipping them with practical and clinical skills and enabling them to make a valuable contribution to patient and health care as individuals and as responsible members of society. Data in this study indicated that students read and discussed various topics of quiz competition both before, during as well after the quiz. The studies have shown that apart from conventional teaching the quizzes are considered effective in formative assessment and allow the students to develop competitive spirit. Our research can be compared with a study done by Rachna Gupta et.al in order to evaluate final MD examination. Overall performance of the candidates who participated in the quiz was better in comparison to those who did not. Further, those who scored more in the quiz also performed better during the examination. We proposed that voluntary participation opportunities in academic activities such as quizzes provide a platform for learning and self-assessment for students. The results in this study suggest that the integrated quizzes stimulate self and collaborative learning. They enhance the cognitive level of medical students and also help them to retain academic content.

GIME

MASTERING MASTERY

Nielson T, Bishop J, Brazil V, Johnson P, Nielson T

Medicine, Faculty of Health Sciences and Medicine, Bond University, Australia

Aims

The study aims to ensure all students on graduation are able to demonstrate evidence of mastery of all procedural skills required (programme specific). Historically, students would be required to undergo assessment of procedural skills during OSCE examination only. The current format of OSCE examinations only allows limited sampling from the programmatic blueprint and defines the number of the skills assessed each year. We recognize that all students should be competent at all procedures before their junior doctor/intern year and that the continual assessment throughout the program at a passing or failing level (hurdle based) will not only drive student engagement but improve safety too.

Methods

Within the Clinical Skills theme at Bond, a range of competencies have been identified that require demonstration of mastery as appropriate for the specific year of learning. The term “mastery” is not used as a term of excellence, but rather a level of expected proficiency. It was agreed that some procedures did not suit the time constraints of an OSCE examination e.g indwelling cauterization and therefore the faculty involved with teaching and assessing were confident knowing that these skills would be ‘mastered’ by all students. Each procedural skill is taught by demonstration, small group teaching and supplemented with videos developed by faculty which were uploaded to the local virtual learning environment for students’ self-directed learning along with the marking criteria. Drop in opportunities were tabled and students encouraged to attend these sessions to allow additional practice, to ask questions but not as a supplementary teaching session.

Results

All students are assessed individually each year and given direct feedback, both verbally and in written format. The ‘mastery assessment’ takes place using a simulated patient or task trainer with a trained educator (examiner) in the room. Feedback includes a review of the checklist; what was done correctly, what was omitted and how the student could improve. On reaching the required level of skill, students were deemed to have achieved “mastery”. Within year 3 students are required to demonstrate competency of the published skills before they are eligible to sit their end of year/ point of progression clinical skills exam. This personalized approach has ensured that students are more confident in these skills with subsequent opportunity to demonstrate ongoing competency in later years. We recognise that students will not always need to perform many of these procedures under ‘stressful’ conditions, and feel strongly that by removing time-constraints, students are able to achieve the precision these skills require.

Conclusion

This mastery approach encompasses different aspects of clinical competence beyond the level of a checklist format. Students and staff have enjoyed the one-on-one teaching without time pressure as well the published outcomes giving students a clear understanding of what is required to achieve a pass. Minimal numbers of students have required repeat attempts; one or two students per year have needed more focused training and more attempts to achieve mastery.

Friday 6th February 2015, 3.30pm

Hall, Level 1, University Cultural Centre

FACULTY DEVELOPMENT IS MORE IMPORTANT THAN CURRICULUM DEVELOPMENT

Ronald M Harden

Professor of Medical Education (Emeritus), University of Dundee, General Secretary of AMEE and Editor of Medical Teacher, United Kingdom

Much of the emphasis in medical education has been on the curriculum and on the student. Less attention has been paid to the teacher despite the fact that the teacher is key to the success of a curriculum and to the students' learning. Three case studies will be used to highlight the importance of the teacher and of faculty development. As recognised at this Conference and in publications, increasing attention is being paid to staff development (1,2). In reality however, in medical schools frequently only lip service is paid to faculty development. Why is faculty development not perceived as important?

Although individual teachers have their own beliefs and practices about teaching and learning, schools collectively also have practices about teaching and learning that constitute what complexity theorists refer to as the "collective conceptual orientation" (3). Maslow described a hierarchy of needs in a paper on "A theory of human motivation". A hierarchy of needs in an institution is described in this presentation, with regulatory requirements, research, external reputation and student satisfaction coming before faculty development. The need to fulfil these needs takes priority over faculty development, which is higher up the hierarchy.

The excellent teacher has the necessary teaching skills, the appropriate approach to their teaching and a professionalism to their job. These three domains raise issues relating to faculty development.

It is recommended that:

1. The culture of institutions should be changed to promote and recognise faculty development and to give it a higher priority in the hierarchy of an institution's needs;
2. Faculty development should be personalised and tailored to the needs of each individual teacher;
3. Greater attention should be paid in faculty development to how the teacher approaches their tasks as a teacher;
4. Teachers should accept responsibility for their own personal development as a teacher.

References

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- (2) Steinert, Y., Mann, K., Centeno, A., Dolmans, D., Spencer, J., Gelula, M. and Prideaux, D. (2006). *A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education: BEME Guide no. 8*. Dundee: AMEE.
- (3) Opfer, V.D. and Pedder, D. (2011) *Conceptualizing Teacher Professional Learning*. *Review of Educational Research* 81(3):376-407.

L4

Friday 6th February 2015, 4.15pm
Hall, Level 1, University Cultural Centre

FACULTY DEVELOPMENT: OBLIGATION AND INVESTMENT

Matthew C.E. Gwee

Professorial Fellow and Chairman, International & Education Programmes, Centre for Medical Education, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

*“Professional education has not kept pace with these challenges, largely because of **fragmented, outdated and static curricula** that produce **ill-equipped graduates**. The problems are systemic: **mismatch** of competencies to patient and population needs; complacency will only perpetuate the **ineffective application** of 20th century educational strategies that are **unfit** to tackle 21st century challenges.”* (Frenk, Chen, et al., The Lancet, 2010, 376: 1923-1957).

Teachers (educators) in health professional education need to acquire **new enabling competencies** required to **optimise student learning** for the **acquisition** of **requisite professional competencies** (**Knowledge, Skills, Attitudes**) for the delivery of healthcare in the **21st century**. This has been clearly articulated by **Derek Bok**, a former President of Harvard University, when he said “*Asking faculty members [teachers] to teach in new ways requires helping them learn how to do so effectively.*” Teachers also need **evidence-based data** (**Best Evidence Medical Education**) to **make decisions** when planning, developing and implementing curricular reforms. In this context then, it becomes an **obligation** of health professional institutions to **support** faculty development (**FD**) programmes aimed at **enhancing** the **educational competence and capabilities** of teachers (who are mostly **discipline experts** generally lacking educational insights). The **more immediate beneficiaries** of such educational support to teachers (faculty) will be the **students-** the **future healthcare practitioners**. The **ultimate beneficiaries** will, of course, be our **patients** and the **community-** the **key recipients** of the **K, S, A** acquired by healthcare practitioners through their respective educational programmes. From this viewpoint then, **health professional institutions** should consider **faculty development programmes** as **investment in human capital** aimed specifically at **enhancing**, not only their own *global standing*, but also the *efficiency and effectiveness* of their teachers (educators) in educating today’s health professional students to become tomorrow’s **competent, caring** and **ethical** practitioners equipped with appropriate skills to **match** the healthcare needs and challenges of patients and the community in the **21st century**.

The presentation will elaborate on the **key features** of faculty development: in particular, the **primary focus** will be on the **need** for and the potential **outcomes** (*i.e. the expected returns on investment, ROI*) of implementing faculty developmental programmes in health professional institutions. The significant **paradigm shifts** in faculty development **concepts** and **practices** will also be addressed.

Saturday 7th February 2015, 8.00am

FACULTY DEVELOPMENT (FD) SESSION

FD 1 - Faculty Development for Research: Moving Toward Best Practices at Your University

Brian Hodges, Canada

FD 2 - Encouraging Participation in Faculty Development

Yvonne Steinert, Canada

FD 3 - Impact of Culture and Context on Faculty Development

Chan Lap Ki, Hong Kong S.A.R.

FD 4 - Developing Programs with Limited Resources

Indika Karunathilake, Sri Lanka

FD 5 - Leading the Evolution of Simulation Centres

Donald Combs, USA

FD 1*Saturday 7th February 2015**Hall, Level 1, University Cultural Centre***FACULTY DEVELOPMENT FOR RESEARCH: MOVING TOWARD BEST PRACTICES AT YOUR UNIVERSITY****Brian Hodges***Canada*

As discussed in the APMEC 2015 plenary university health sciences faculty members strive to balance research, teaching and clinical responsibilities. To support the clinical roles, many universities have developed continuing education programs. To support teaching, there are faculty development programs. This discussion, which will expand on Brian Hodges' plenary talk and his chapter in Steinert's 2015 book on faculty development, explores various forms of development for research and an overarching developmental trajectory for faculty.

FD 2*Saturday 7th February 2015**Theatre, Level 1, University Cultural Centre***ENCOURAGING PARTICIPATION IN FACULTY DEVELOPMENT****Yvonne Steinert***Canada*

It has often been said that “those who need faculty development the most attend the least”. What are some of the reasons that faculty members participate in both formal and informal approaches to faculty development? What are some of the barriers that they face? Formal approaches to faculty development refer to workshops and seminars, short courses or longitudinal programs; informal approaches include learning in action through observation and reflection, peer coaching, and learning from student feedback. The goal of this discussion is to examine some of the factors that influence participation (e.g. logistical issues; the clinical reality; support and recognition from the organization at large) and discuss ways in which we can encourage active engagement and involvement. We will also discuss learning in the workplace and consider ways in which we can make this learning more visible, recognizing it as a legitimate form of faculty development. Our colleagues frequently report a desire to excel in what they do. Participation in ongoing professional development is one way in which to achieve this objective.

FD 3*Saturday 7th February 2015**Function Room 1, Level 1, University Cultural Centre***IMPACT OF CULTURE AND CONTEXT ON FACULTY DEVELOPMENT****Lap Ki Chan***Hong Kong S.A.R.*

The session “Impact of Culture and Context on Faculty Development” will begin with a brief presentation on what faculty development is, its brief history and the forms it takes in different schools. Following the presentation will be a discussion with and among the participants on how these faculty development activities can be affected by the organizational and curricular context, such as the curriculum structure and philosophy, intended outcomes, teaching and learning activities, assessments, the use of technology, the types of faculty development centre and activity, the resources available, reward for teaching excellence, etc. The nature of culture of professional development and how it can affect the faculty development activities will also be discussed.

FD 4

Saturday 7th February 2015

Function Room 2, Level 2, University Cultural Centre

DEVELOPING PROGRAMS WITH LIMITED RESOURCES

Indika Karunathilake

Sri Lanka

Faculty development in medical education is a process through which medical school faculty works systematically to improve their competency as teachers. It is a complex, multifaceted process due to the diverse roles and responsibilities of a medical educator as a clinician, facilitator, administrator, assessor, mentor, researcher, and educational leader. High quality faculty development programs will result in competent faculty who can not only inspire and nurture students and prepare them to deliver high-quality health care, but also cultivate a culture of continued self and institutional development. The medical students have to be trained to become competent, safe, and caring practitioners, providing health care to diverse populations in many different settings. The need to train teachers to function as effective facilitators of learning in these diverse settings makes faculty development in medical education a challenging process.

Faculty development faces many challenges including engagement of institutions, skills availability, logistical, financial and technological. These factors are exaggerated in settings with limited resources. Many faculty have little to no training as teachers. Because of situational needs, new medical graduates become teachers with only a minimal background in education and no experience in teaching and learning. Although faculty development teaching in low-resource countries can be challenging and difficult, it is an essential pre-requisite in order to improve the quality of medical education and subsequently the healthcare provided to society. Such faculty development programs should be tailored to the health needs of the country as well as the training needs of the individuals and faculty in general.

A range of approaches and strategies are required to overcome the challenges of faculty development in low-resource countries. Possible delivery modes include approaches such as degree awarding programs, non-degree awarding programmes, short courses, workshops, fellowships and mentoring. In low resource settings strategies such as sharing resources between institutions, maximizing the use of available technology and sharing expertise within and between counties are important in successful implementation of faculty development. It is the use innovative use of established methods which builds capacity and flexibility to address situational challenges. Most importantly, a well designed system need to be in place.

FD 5

Saturday 7th February 2015

VIP Lounge, Level 2, University Cultural Centre

LEADING THE EVOLUTION OF SIMULATION CENTRES

Donald Combs

USA

The global simulation industry is both growing and evolving as are the requirements for healthcare delivery. These two forces of change present challenges to managers of simulation centers—how do they develop programs to address currently identified needs and how do they plan for the different sorts of programs that will be required in the future. Dr. Combs will share his reflections as a leader of a large simulation program, as a member of the Society for Simulation in Healthcare Board member, and as a researcher on the future of healthcare simulation.

Saturday 7th February 2015, 8.45am

Hall, Level 1, University Cultural Centre

FREE COMMUNICATION 1 - FACULTY DEVELOPMENT 1

Residents-As-Teachers: Developing The Next Generation of Clinical Teachers

Sophia Archuleta, Singapore

The Importance of Faculty Development for The Regional Implementation of A Global Competency-Based Curriculum for Spine Surgeons

Miriam Uhlmann, Switzerland

Utilising The 'Developing A Clinical Teacher' (DCT) Framework As A Novel Tool for Auditing Junior Clinicians' Teaching Skills

Michael Cannon, United Kingdom

Evaluation of Mentors By Resident And Fellows In A Structured Mentoring Program In The United States

Vijay Rajput, USA

Competitive Posture of Selected Medical School Deans

Harivelle Charmaine Hernando, Philippines

Improving Teaching Performances By Using A Web-Based Multisource-Feedback Tool for Teachers

Lisette van Bruggen, The Netherlands

RESIDENTS-AS-TEACHERS: DEVELOPING THE NEXT GENERATION OF CLINICAL TEACHERS

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Aims

Singapore implemented Accreditation Council for Graduate Medical Education-International (ACGME-I) residency program standards in 2010. ACGME-I requires the development of residents' teaching skills in order to achieve competency in Practice-Based Learning and Improvement (PBLI). Our goal was to integrate a residents-as-teachers (RaTs) workshop into the curriculum of all residency programs offered at our institution.

The RaTs workshop was developed to meet the new accreditation standards as well as to enhance residents' effectiveness in educating medical students and other residents¹. Despite having major contributions to both undergraduate and postgraduate teaching, residents previously received no formal training in this area. As an academic medical centre with learners of various seniorities embedded in nearly all clinical teams, the involvement of residents in teaching, assessing and providing feedback is essential - especially since they often have more direct contact time with students than senior faculty.

Methods

An eight-hour, interactive workshop using experiential learning theory was developed to impart best-practices and hone skills in: a) bedside teaching; b) formative work-based assessment; and c) feedback. The format included interactive small group discussion with problem-based scenarios, role-play, direct observation and videoed micro-teaching exercises incorporating techniques such as the RIME model, one-minute preceptor and modified Pendleton feedback model. These practical techniques were selected to promote timely, concise teaching output relevant to a busy resident and to address the challenges of effectively engaging learners at multiple levels. The workshop has been offered four times with a total attendance of 69 residents to date. A post-workshop assignment consists of video recording and analysis (with workshop faculty feedback) of a resident-delivered, bedside teaching session and is required for certification of the resident as teacher.

Results

Fifty-seven residents (83%) have completed feedback on their RaTs workshop experience, with 96% rating it as good, very good or excellent. Participants rated the workshop especially highly in terms of helping them to plan and implement teaching activities in their daily practice more effectively. When asked what immediate changes they would implement, most comments focused on integrating the specific, practical techniques shared in the workshop into their routine student contact. Overall, the practical and hands-on nature of the workshop was well received with participants feeling empowered and requesting even more practical exposure. The post-workshop assignment was designed to address this and to complete the learning cycle.

Conclusion

Anticipated next steps include peer observation and feedback of resident teaching for the ongoing development of our residents as faculty. Finally, from an institutional perspective, the workshop became a key component in satisfying the ACGME-I PBLI accreditation requirement.

THE IMPORTANCE OF FACULTY DEVELOPMENT FOR THE REGIONAL IMPLEMENTATION OF A GLOBAL COMPETENCY-BASED CURRICULUM FOR SPINE SURGEONS

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¹Faculty Development and ⁵Curriculum Development, AO Education Institute, AO Foundation, Switzerland, ²Department of Orthopedic and Traumatology, Spine Unit and Pain Treatment, Hospital Universitario Clínica San Rafael, Colombia, ³Canberra Hospital, Australia, ⁴Professional Resource Network, Inc., USA

Aims

AOSpine has created a comprehensive, modular curriculum to support the continuous acquisition of knowledge and skills by spine surgeons worldwide at all stages of their career. A major challenge for worldwide implementation is that courses are chaired regionally and locally by surgeons with great variation in their familiarity with the concept of competency-based medical education. This research evaluated curriculum implementation during the first 3 years after its launch and how faculty development contributes to success.

Methods

Over 3 years, the curriculum was implemented in over 200 clinical education events: face-to-face courses, webinars, and online learning. During this time the competency-based faculty development programs for faculty, chairpersons, and educational advisors were adapted to address curriculum implementation intensively; comprehensive resources (checklists, course learning outcomes, program templates, prepared lectures, and cases for discussions) were provided. The curriculum was promoted by AOSpine's international and regional leaders to ensure buy-in and motivation. In order to avoid technical or administrative barriers, the implementation of the curriculum was included in staff training and the implementing surgeons received support materials (online tools and modules, hard copy brochures and guides).

During 2013, a global needs analysis was conducted using qualitative interviews followed by a structured online questionnaire with coded responses and open-text fields (quantitative and some qualitative data). Profiling of respondents was conducted to enable subgroup analysis; the intended sample size was N = 850.

Results

The survey showed the following results: Out of the 848 respondents, 256 (30%) were faculty members; almost all respondents reported high levels of agreement with statements regarding the positive impact of the curriculum; awareness of the AOSpine Curriculum varied depending on the region and the role of the respondent (participant or faculty); 34% of faculty respondents had applied the curriculum when they were faculty, chairperson, or educational advisor; half of the faculty members who applied the curriculum as a chairperson completed a training for chairpersons in the past 2 years; and most respondents who attended a faculty development program expressed further need for education, especially to provide advice/support to colleagues and explain the value of the curriculum to learners.

Conclusion

Global Curriculum implementation: intensified communication on all levels is needed; in some regions, chairpersons and educational advisors seek more information and training; faculty development programs improve the awareness of the curriculum but there is still a need to train faculty members who have not recently been involved in educational activities and also to train those who have had recent faculty assignments but did not complete an updated faculty development program.

Supporting and educating chairpersons and educational advisors in the planning phase is crucial for successful implementation of a competency-based curriculum (Dath D, Iobst W, 2010). Faculty members should also be informed well in advance about the concept of competency-based medical education. A new faculty newsletter has been launched to inform our community about ongoing changes in the curriculum.

UTILISING THE 'DEVELOPING A CLINICAL TEACHER' (DCT) FRAMEWORK AS A NOVEL TOOL FOR AUDITING JUNIOR CLINICIANS' TEACHING SKILLS

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²Newcastle Hospitals NHS Trust, United Kingdom

Aims

1. Evaluate junior clinicians' teaching skills using the 'developing a clinical teacher' (DCT) framework set by the UK Foundation Programme
2. Identify areas of weakness and target teaching interventions appropriately
3. Explore the efficacy of the DCT framework as an audit tool for teaching initiatives

Methods

The DCT framework was set by the UK foundation programme (2012) to clarify the teaching skills expected of junior clinicians. The auditing tool was created from this framework to comprise a 15-item questionnaire designed using a 10-point Likert scale. The standard was set at $\geq 8/10$. Surgical foundation year one (FY1s) doctors participated in a case-based teaching project in which teacher and peer-reviewed questionnaires were collated (cohort A). The DCT tool will be presented fully but comprises four main areas:

1. Preparation and setting
2. Teaching
3. Subject knowledge and ability to answer questions
4. Interaction with the group

A second cohort (B) attended a one-hour teaching workshop focussed around weaknesses identified from Cohort A before delivering their teaching session. This was supported by an e-learning module. Each cohort comprised a defined group of surgical FY1s who completed the questionnaires, reducing reporting bias. Comparisons between the groups were analysed using an independent t-test and Pearson's correlation coefficient calculated.

Results

Cohort A: N = 9 teachers with 48 peer reviews

Cohort B: N = 7 teachers with 46 peer reviews

Prior teaching experience > 3hours:

Cohort A: 44.4% (n = 4)

Cohort B: 14.3% (n = 1)

Percentage of cohort achieving $\geq 8/10$ for all DCT criteria:

Cohort A: Peer 73%, Self-assessment 60%

Cohort B: Peer 100%, Self-assessment 40%

Weaknesses identified by the DCT tool from cohort A were: 'not establishing prior learning', 'inappropriate pace' and 'topic could be clearer'. Individually, teachers felt their personal introduction, answering questions clearly and maintaining eye contact could be improved. Their peer audience however felt group participation could be improved. Despite less practical experience, teachers in Cohort B achieved a greater average feedback score (Mean = 9.27, SE = 0.10) than those in Cohort A (Mean = 8.99, SE = 0.09). This difference was significant $t(28) = -2.131$, one tailed $p < 0.05$; and represented a medium- to large-sized effect $r = 0.42$. However, teachers in Cohort B were more self-critical with only 40% (Mean score = 7.71) feeling they met the DCT criteria compared with 60% of Cohort A (Mean score = 8.2). A supportive debrief on teaching was provided following the session to aid reflection for teachers.

Conclusion

Although a small case study, we have demonstrated effective use of the DCT framework as an auditing tool. Results focussed our teaching skills initiatives - here, a short workshop and online module - and outcomes improved to meet 100% of the standard. Additionally, the DCT tool supports reflection of teaching performance in a structured way; aiding further development of junior clinicians' teaching skills. Overall the DCT tool provided greater insight into junior clinicians' teaching skills both objectively and subjectively. We propose wider use of this tool to assess the success of educational initiatives in developing the junior clinical teacher.

EVALUATION OF MENTORS BY RESIDENT AND FELLOWS IN A STRUCTURED MENTORING PROGRAM IN THE UNITED STATES

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Aims

In graduate medical education there is often a lack of structured academic and professional development programs for trainee. Residents and fellows have different academic and professional growth needs throughout their career. These differences are not well studied in graduate medical education.

Methods

Since 2011, we have had a formal mentoring program in place to foster relationships between faculty and residents and fellows in the Department of Medicine. The mentor and mentee are required to meet face-to-face for a one hour session at least two times a year at a local restaurant; meal vouchers are provided. They can continue their relationship outside of this program as per their needs. Academic scholarship is a major emphasis of this program. Residents and fellows are required to identify their professional and/or academic mentor and a mentor-mentee contract was signed by both parties and placed into their portfolio. Program Directors help to identify the mentors as needed. We conducted IRB approved research by developing an anonymous structured questionnaire based on prior literature. We identified survey questions in 17 areas of mentor's qualities and attributes, using a four point agreement scale. Twenty one questions were grouped into four categories based on the mentor's personal attributes (honesty, integrity, privacy, enthusiasm, advocacy, and communications), action characteristics (inspiration, feedback, encouragement, approachability, and availability) and the short term and long term career goals of the mentee. We assessed the quality and satisfaction ratings of an existing mentoring program in the Department of Medicine for the 2013-14 academic year. A total of 60 residents (PGY 1-3) and 39 fellows from ten specialties of internal medicine (PGY 4-7) completed the survey at the end of the academic year. We compared the perception of residents and fellows about their mentor's personal attributes and action skills. We also analysed the difference between residents with a known research interest versus no interest and mentors attributes for long term versus short term goals. We used Student's T Test, Pearson Chi Square and Fisher Exact test for statistical analyses.

Results

Overall, fellows were more satisfied with their mentors than residents ($p=0.017$). The fellows were more satisfied with their mentor's actions characteristics than residents ($P=.045$). All residents and fellows with declared research interest were more satisfied with mentors attributes and skills to help them with their long term goals. ($P=0.046$) Junior residents perceived that their mentors were not able to challenge them enough or beyond the check list exercise. These differences between residents and fellows may be due to maturity, established goals, or professional growth. The junior residents were not able to develop as strong a connection with their mentor as their senior colleagues.

Conclusion

The mentoring is a dynamic dyad interaction with immediate and long term impact. The junior residents may require different skills and attributes from faculty mentors compared to fellows. This research will help in developing future faculty development and mentoring programs across graduate medical education. Residents and fellows with established research interests may benefit with help for long term career goals.

COMPETITIVE POSTURE OF SELECTED MEDICAL SCHOOL DEANS

Hernando HC

Departments of Anatomy and Anesthesiology, University of Perpetual Help Rizal Jonelta Foundation School of Medicine, Philippines

Aims

This paper analysed the competitive posture of the medical school dean as perceived by the deans themselves, the faculty and students. It sought to answer the following: What is the level of effectiveness of the dean in terms of academic, administrative and leadership competencies? Are there significant differences from the 3 groups of respondents? What is the level of effectiveness of the dean in the following key areas: student services, physical plant / resources, teaching - learning aspect, research, social relations and responsibilities, staff and student management? Are there significant differences from the 3 groups of respondents? What are the strengths, weaknesses, opportunities and threats on the medical school dean in terms of their competencies?

Methods

The system model (input-process-output) was utilised as the conceptual framework. The input focused on the dean's competencies and effectiveness in the aforementioned key areas. The respondents consisted of 3 Deans, 384 faculty members and 646 students from 3 selected medical schools in Manila. The research is descriptive, utilising both quantitative (ratings from questionnaire) and qualitative (interviews, records, reports) data.

Results

The principal findings are: 1) the level of effectiveness of the medical school dean in terms of: a) competencies - ranged from good to excellent; b) key areas tested - ranged from good to excellent; 2) significant differences were evident in the perceptions of the 3 groups of respondents in various areas tested; and 3) the strengths and opportunities for the dean to build upon in order to upgrade and develop oneself and the institution are also recommended as imperatives and presented as an assessment model for the dean.

Conclusion

- 1) All three deans were considered effective in terms of their academic, administrative and leadership competence;
- 2) The differences in the self-ratings of the deans in terms of the three competencies were reflective of the status of the school they head. That there were no differences in the perception of the faculty shows that as medical practitioners, they view things objectively. The differences in the ratings of the students mirror their perception of how they regard their dean;
- 3) All three deans were considered effective in terms of the following key areas:
 - a) student services,
 - b) physical plant/resources,
 - c) teaching - learning aspect,
 - d) research,
 - e) social relations and responsibilities and,
 - f) management of staff and students;
- 4) The differences in the ratings in the effectiveness of the dean on the seven key areas reflect the differences in the school categories;
- 5) In view of the strengths and opportunities of the dean, the three deans personify the effective head, based on the competitive posture of the medical school dean.

IMPROVING TEACHING PERFORMANCES BY USING A WEB-BASED MULTISOURCE-FEEDBACK TOOL FOR TEACHERS

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Center for Research and Development of Education, University Medical Center Utrecht, The Netherlands

Aims

Competent teachers are indispensable when providing high quality education. Feedback plays a crucial role in encouraging teachers to think about their performance and ways of improving it. Single evaluation sources, like student evaluations, provide valuable insights, but using multiple sources of information and observation can give a broader picture of teaching ability. Multisource feedback is already widely accepted for learners in healthcare. We found this approach to be useful for teachers, to construct more personalised teacher development paths in teaching certification programs.

Methods

University Medical Centre Utrecht (UMCU) developed a web-based multisource feedback (MSF) instrument to collect feedback from different sources. Eleven teaching tasks in medical education are predefined in the tool. For each of those tasks five key questions were defined and linked to the competencies of communication, organisation, collaboration, professional expertise, and teaching skills. Free textboxes are added to each task to collect tips en tips. Teachers select the tasks they want to be evaluated on and select their evaluators. The tool was presented to and discussed with 40 experienced teachers and was subsequently implemented in our Basic en Senior Teaching Certification programs. This an early report of our experiences.

Results

Teachers report a high face validity of the tool. They judged the tool to be very user friendly and effective. The collected and aggregated multisource feedback on teaching was considered to be very valuable. Teachers indicated that the information leads to enhanced reflection and self-directed learning. And that indeed it helped to establish their personal learning goals to improve their teaching skills. We found that teachers need some stimulation to start with the MSF procedure, but once finished, are satisfied with its results.

Conclusion

The web-based MSF-teaching tool designed to provide an overview of teacher performance and to foster reflective behaviour and self-directed learning has been well received in its early stage. The tool was found useful to collect feedback from a variety of sources on different teaching tasks. And it proved useful to provide teachers with information on their teaching skills as a base to develop personal learning pathways to improve teaching performances. A systematic evaluation of its use and benefits will be a next step.

Saturday 7th February 2015, 8.45am

Theatre, Level 1, University Cultural Centre

FREE COMMUNICATION 2 - TEACHING & LEARNING 1

Pharmacology Apps for Nursing Students: Are They Really Useful?

Eugenie Phyu Aye Thwin, Singapore

The Standardized Patients Training Program In The Immediate Post-Test Feedback Techniques of PGY1 OSCE

Jiun-Lu Lin, Taiwan

“Talk About Speaking”: The New Session for Enhancing Communication Skills of Medical Students

Itthipon Wongprom, Thailand

Bloody Realistic: Toward Better Training In Recognizing & Managing GI Bleeding

Koh Jianyi Calvin, Singapore

Case Based Learning In Medical Education: Gender And Clinic Based Perspective

Mamoon Ahmed, Pakistan

Simulator-Based Enactment of Clinical Conditions To Enhance Integrative Learning of Physiology In The Undergraduate Medical Curriculum

Celestial T. Yap, Singapore

PHARMACOLOGY APPS FOR NURSING STUDENTS: ARE THEY REALLY USEFUL?

Thwin EPA, Tan T

Department of Biological Sciences, School of Health Sciences, Nanyang Polytechnic, Singapore

Aims

- To identify how nursing students utilise the pharmacology apps for their studies
- To determine the students' perception and attitudes towards these apps
- To explore benefits and constraints they encountered in using the apps

Methods

Study design: A cross sectional descriptive study

Study population: Year 1 Diploma in Nursing Students (academic year 2013/14) from School of Health Sciences, Nanyang Polytechnic

Data collection method: Distribution of a hard-copy self-administered questionnaire

Data analysis: Remark OMR scan and SPSS 17.0 for quantitative variables and content analysis for qualitative variables

Outcome measures: Utilisation of two pharmacology apps and students' perception on using the apps, the benefits and constraints they encountered

Results

There are a total of 605 students in this cohort and the response rate of the survey was 83%. The majority of the respondents (89.1%) are between 16 and 25 years old and female students predominate (85.9%). Almost all students (97.4%) used pharmacology apps for their studies and among two recommended apps, 95.6% used uCentral Davis's Drug Guide and 52.8% used MIMS Singapore. Ninety percent of the respondents downloaded the apps into their smart phones. The other devices used to download the apps included laptops (16.5%), iPad (11.1%), tablets (5.4%) and desktop computers (1.4%). They used these apps mostly during pharmacology tutorial classes (87.5%), in preparatory work for in-course assessments (78.6%) and in revising for examination (69.8%). The students also used the apps during nursing laboratory classes (37.9%) and in hospital clinical attachment (20.2%). The frequency of usage of the apps was 2-4 times a week in 48% of the respondents. Most of them (89.8%) felt that these apps enhanced their learning of pharmacology and 88% agreed that every student should use the pharmacology apps for their studies. Nearly all participants of the survey (98.8%) mentioned they would recommend these apps to their friends. They expressed the benefits of pharmacology apps as being convenient to use, providing quick reference and drugs information on the go. They also mentioned that they can pronounce the drugs names correctly after listening to the actual pronunciation from build-in pronunciation functions of the apps. However, a flaw identified was the long updating time taken for uCentral which caused the students frustration.

Conclusion

Although the study cannot objectively measure the effectiveness of the two pharmacology apps, it provides preliminary evidence of how these mobile apps can broaden the horizon of students' learning in pharmacology. Further qualitative studies are recommended to determine how these apps are useful in clinical practice of the students.

THE STANDARDISED PATIENTS TRAINING PROGRAM IN THE IMMEDIATE POST-TEST FEEDBACK TECHNIQUES OF PGY1 OSCE

¹Lin J, ²Lin C, ³Hsu Y, ⁴Peng C, ⁵Hsu H, ²Shih S

Divisions of ¹Endocrinology and Metabolism, ²Gastroenterology and ⁵Rectal Surgery, Mackay Medical College, Mackay Memorial Hospital, Taiwan, Departments of ³Anesthesiology and ⁴Pediatrics, Mackay Medical College, Mackay Memorial Hospital, Taiwan

Aims

Background: The modern day trend for clinical care focuses on patient-centred care, where the patient's involvement and opinions are highly valued during treatment. As first-line clinical practitioners, it is essential that residents are able to understand how to deliver patient-centred care. However, such understanding is only gained through experience and residents are often unable to obtain feedback and suggestions from actual patients for them to reflect upon their performance.

Objective: We aim to improve understanding on patient-centred care by being able to provide the standardised patient's immediate feedback to the postgraduate year one (PGY1) residents after the objective structured clinical examination (OSCE). This will allow PGY1 residents to obtain suggestions and direct information as to how the standardised patient (SP) felt about their performance, so that they can use it as a reference for self-improvements.

Methods

We conducted a "Feedback Technique of Standardised Patients Workshop" to enhance the SP's ability to provide real-time feedback. After PGY1 residents complete their small-scale feedback type OSCE in which their ACGME core competencies were evaluated, a two-minute SP's instant feedback followed. To evaluate the effectiveness of the workshop, specifically designed questionnaires were given to the PGY1 residents before and after the workshop to observe if there were improvements to the feedback they were getting from the SPs. Score sheet and questionnaire format utilises Likert's 5 level options (Likert scale).

Results

28 SPs (8 men, 20 women) participated in the feedback technique training workshop. After the workshop, the results for SPs' self-assessment capabilities had significant improvement (3.21 ± 0.05 vs 3.48 ± 0.69 , $p = 0.04$). Before the workshop, questionnaires collected from PGY1 residents showed that they considered the feedback capability of OSCE faculties to be better than SPs (4.75 ± 0.44 vs. 4.55 ± 0.51 , $p = 0.04$); but after the workshop, questionnaires showed that PGY1 residents considered both SPs and OSCE faculties to be capable of providing good real-time feedback (4.57 ± 0.60 vs. 4.57 ± 0.51 , $p = 1.00$).

Conclusion

SPs' feedback and suggestions were found to be very helpful for PGY1 residents as it provides a different outlook from the patient's point of view. It allows PGY1 residents to have a more comprehensive understanding of patient-centred care of which they can reflect up and further improve their clinical skills. Through the "Feedback Technique of Standardised Patients Workshop", SPs can get the necessary experience to be accustomed to providing real-time feedback.

“TALK ABOUT SPEAKING”: THE NEW SESSION FOR ENHANCING COMMUNICATION SKILLS OF MEDICAL STUDENTS

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Aims

Effective communication is an important skill for competent doctors. The new educational session about public speaking and presentation techniques was included in family/community medicine rotation for 4th year medical students. Instead of providing traditional lecture, the new 2 hour-interactive session was applied by using experiential learning model.

In this session, every student gave a three minute-presentation to the group after choosing their own topic. The students were not informed in advance about the activity until class started, but they got a six minute-preparation session in the class. The self and peer assessment were included at the end of the session.

The information about students' acceptance and benefit are needed for an innovative effort. This research focuses on students' perceptions and views on: their satisfaction towards the learning process, overall benefits from this activity and their expectations of and views on implementing in the curriculum. Results will help developing conceptual framework not only for further curriculum development but also energising the students' participation.

Methods

This study was qualitative study using in-depth, semi-structured interview. All 17 fourth year medical students from Family Medicine department, Mahasarakham Hospital, Thailand, who joined this activity, were interviewed. Two independent researchers performed thematic analysis of these interview data.

Results

The students expressed that this new learning method is valuable and appropriate for them in that they were able to 1) realise how important the communication and presentation skill is 2) reflect on their own presentations 3) identify the causes of poor presentation. They also perceived positive impact on their personal and professional development aspects from participating in this activity 1) apply some new skills to their various types of communication/presentation 2) plan to apply the presentation skills they learned in their future career. However, there were few concerns: Most students wanted more sessions for practicing after receiving the feedback and they wanted to practice more communication skill thorough the whole curriculum. They also suggested this activity should include more examples about public speaking and more time spent on making presentation media.

Conclusion

Socio-cultural context of Thai students' learning style and limited time for preparation were issues of our concern before implementing this activity. Although many Thai medical students were familiar and felt more comfortable with classical lecture, this study shows that they were opened to new style of learning and received educational benefit from it. Medical students' viewed this activity was beneficial to themselves; expressions reflect achievement of three aspects of learning objective: cognitive, affective and psychomotor. The study shows at least 3 level of Kirkpatrick's evaluation model including reaction, knowledge and behavioral change. Therefore, we plan to implement this innovative method in other courses, even though some concerns emerged. Future curriculum development and studies to validate whether this learning has been applied in subsequent session are planned.

BLOODY REALISTIC: TOWARD BETTER TRAINING IN RECOGNISING & MANAGING GI BLEEDING

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Aims

Gastrointestinal (GI) bleeding is a common clinical scenario encountered by junior doctors, but there is a paucity of information on effective teaching methods for recognising and managing this medical emergency appropriately.

The aim of this study is to demonstrate the utility of a multimodal teaching module incorporating the use of simulated melena stool, a high-fidelity simulation mannequin and teaching slides to reinforce a case-based approach to GI bleeding.

Methods

A key point in recognising GI bleeding is differentiating melena stool from other causes of discolored stool such as iron stool. While the use of actual stool is impossible, simulated stool was made from water, starch and food coloring to mimic the color and consistency of melena stool.

This simulated stool was incorporated into a clinical case scenario using a high fidelity simulation mannequin that can mimic sounds, and vital parameters for a realistic simulation experience to reinforce key points in assessing for and managing GI bleeding.

4 case scenarios were run and brief didactic teaching slides were used to highlight key diagnostic and management points in each scenario.

Participants filled up a pre and post module survey and the responses were collated and analysed. The primary endpoint was confidence in managing GI bleeding, and other data points measured include aspects of GI bleeding that participants felt they needed more training in, and subsequently if these goals were met.

Results

12 first-year residents in the National University Hospital, Singapore took part in the GI bleeding training module, of which 41.7% were internal medicine residents. The primary endpoint - confidence level in managing GI bleeding had a mean 1.5 point increase on a 9-point scale ($p=0.004$) after the teaching intervention.

Prior to the training, 91.6% of the participants felt that more training was required, specifically in the following aspects: indications for urgent endoscopy (91.7%), post endoscopy management (75.0%), assessing severity of GI bleeding (58.3%) and initial management of GI bleeding (58.3%).

All participants agreed that the use of simulated stool was useful in the training and they unanimously felt more prepared to manage GI bleeding after the training.

Interestingly, 50% disagreed that this multimodal simulation module can be replaced by an online module, suggesting that the web-based learning, while convenient, cannot substitute the look, feel and panic of a GI bleeding scenario.

Conclusion

In conclusion, the use of simulated stool and a high-fidelity simulation mannequin to run clinical scenarios has been shown to enhance participants' confidence in recognising and managing GI bleeding. Simulated stool using a combination of food coloring, starch and water was able to mimic a series of scenarios realistically and enhance the learning process in managing this common medical emergency.

CASE BASED LEARNING IN MEDICAL EDUCATION: GENDER AND CLINIC BASED PERSPECTIVE

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¹National University of Sciences and Technology, Pakistan, ²Department of Physiology, Army Medical College, National University of Sciences and Technology, Pakistan, ³Army Medical College, National University of Sciences and Technology, Pakistan

Aims

Our study attempted to explore effectiveness of Case Based Learning (CBL) sessions in medical education, when compared to traditional lecture based learning and tutorial sessions, based on gender and pre-clinical/ clinical years of medical education

Methods

Our study was carried out at College of Medical Sciences, National University of Sciences and Technology (NUST), Rawalpindi, Pakistan from 15th Dec 2012 to 20th Feb 2013. Participants of the study included 500 randomly selected under graduate medical students of pre clinical/ clinical years. A questionnaire investigating six different aspects of CBL learning was distributed among 2nd, 3rd, 4th and final year students. 50 male and 50 female students were included from 2nd and 3rd year, while 75 male and 75 female students were included from 4th and final year.

Results

Feedback was received from 466 out of 500 (93.2%) students. Male students showed general trend of better adapting to CBL sessions when compared to female students. There was skewed response on the basis of pre-clinical/ clinical years of education. Students in pre-clinical years ranked CBLs higher for 'evoking creativity', 'favoring small group discussions' and 'strengthening interpersonal skills' while clinical students rated CBLs higher for 'inducing problem solving capacity', 'providing proper attention of facilitator' and 'providing hands-on approach'.

Conclusion

Although all students inclined towards CBL as a better learning option, male students had a more positive opinion regarding all six aspects of Case Based Learning included in questionnaire of present study. Furthermore, clinical students regarded CBL as more effective tool of learning as compared to pre-clinical students. Our study revealed, interestingly, that male students rate CBL sessions significantly better compared to their female counterparts. The reasons behind this conundrum need to be explored.

Considering social factors, authors assume that female students might have had fear of being victimised and being criticised by male students, if they made any faux pas during CBL session. As there is very less exposure to such interactive small group discussions in pre-medical college years, so female students might have liked to go with the status quo and hence did not rate CBL sessions as high as male students did. This aspect needs to be further explored considering the social restrictions of Asian and Muslim culture.

Educators should try to find causes of as to why female students don't have as positive perception about CBL sessions as male students. The high response rate of female students (98.4%) compared to their male counterparts (88%) depicts that although they are more interested in quality education, but unfortunately they are not as satisfied as boys are.

SIMULATOR-BASED ENACTMENT OF CLINICAL CONDITIONS TO ENHANCE INTEGRATIVE LEARNING OF PHYSIOLOGY IN THE UNDERGRADUATE MEDICAL CURRICULUM

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Departments of ¹Physiology and ²Anaesthesia, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Aims

Aims: Our aim is to contextualise physiological principles in clinical scenarios, correlating patient's clinical presentations with the underlying physiological processes for students in the pre-clinical phase of the medical curriculum.

Background: Basic medical sciences, including Physiology, are central to the undergraduate medical curriculum. They form the foundations for understanding clinical conditions as well as formulation of diagnoses and treatment. However, the pedagogical approaches to integrating basic sciences into the clinical syllabus remain challenging. An important consideration is the limitations to which structured learning in basic sciences may be synchronised with clinical exposure. Traditionally, Physiology is taught in the earlier undergraduate curriculum when students have rudimentary exposure to clinical conditions, and limited appreciation of the clinical context for applying physiological principles.

The Yong Loo Lin School of Medicine, National University of Singapore, started incorporating simulation-based Physiology teaching since 1999, demonstrating physiological concepts using high-fidelity Human Patient Simulator® (HPS). Through the years, we have increased the emphasis on correlating physiology with patient symptoms and signs, as well as responses to therapy. Our recent evaluation of the HPS session reviews students' perception and learning outcomes in assimilating physiology into the clinical evaluation of patients.

Methods

Our target cohort comprised first year medical students who had completed lectures and tutorials in Respiratory Physiology, as well as introductory lectures in Cardiovascular Physiology. The HPS was programmed to simulate acute respiratory conditions which highlight the interactions between Respiratory and Cardiovascular Physiology e.g. patients presenting with tension pneumothorax and pulmonary embolism. Clinical parameters (pulse and respiratory rate, blood pressure, oxygen saturation, central venous pressure) were displayed in real-time on clinical monitors linked to the HPS. Students were taken through progressively worsening parameters which reflected deteriorating clinical status. In addition, investigations e.g. arterial blood gases and chest X-ray were provided. The scenarios were paused at different stages to facilitate discussion on the physiological basis underlying the changes in clinical parameters and investigations. The influence of altered physiology on the effectiveness of interventions, such as oxygen administration, was also discussed. Finally, as appropriate interventions were instituted on the HPS, students observed the resultant improvement in clinical parameters as normal physiology gradually returned.

A questionnaire was administered to students immediately after the HPS session.

Results

60% (N=180) of first year medical students were included in the survey. More than 95% of students indicated that the simulation session helped not just in understanding and clarifying concepts in Respiratory Physiology, but also in appreciating the clinical significance of physiological principles. Qualitative review of students' comments revealed they were able to: 1) integrate the functions of different physiological systems (eg. Respiratory, Cardiovascular and Blood Physiology); 2) rationalise clinical signs to recognise progression and resolution of disease states; 3) identify medical emergencies through real-time changes in vital signs; 4) experience "a sense of reality" in the session.

Conclusion

Despite limited clinical exposure, pre-clinical students were able to reflect on the simulated clinical experience to identify gaps in their knowledge and develop a greater appreciation of applying physiological concepts in their approach to patient care.

Saturday 7th February 2015, 8.45am

Function Room 1, Level 1, University Cultural Centre

FREE COMMUNICATION 3 - ASSESSMENT

A Comparison Between Five Standard Setting Methods On A High-Stake Examination

Joseph Leung, Hong Kong S.A.R.

The Longitudinal Impact of Progress Testing On Medical Students' Approach To Learning

Yan Chen, New Zealand

Predictor Variables of Medical Students' Performance In The Exit Examination: What Is The Message for Medical Educators?

Joong Hiong Sim, Malaysia

Assessing Structure Identification Ability In Anatomy By Using Modified Extended Matching Question (EMQ): A Challenge for Lecturers And Medical Students

Fundhy Sinar Ikrar Prihatanto, Indonesia

Expert Clinical Reasoning Is Not Just Local But Hyperlocal Insights Into Context Specificity From A Multicentre Neurology Script Concordance Test

Nigel Tan, Singapore

How Does Early Medical School Achievement Affect Later Performance On A High-Stakes Clinical Skills Assessment?

Ming Lee, USA

A COMPARISON BETWEEN FIVE STANDARD SETTING METHODS ON A HIGH-STAKE EXAMINATION

Leung J, Kumta S, Jin Y, Yung A

Teaching and Learning Resource Centre, Faculty of Medicine, The Chinese University of Hong Kong, Hong Kong S.A.R.

Aims

Standard setting not only allows examiners to understand how well their examinations assessed examinees; it also ensures that only those who possess a satisfactory understanding of knowledge pass. As the Faculty of Medicine of The Chinese University of Hong Kong (CUHK) is undergoing a curriculum reform, one area that CUHK want to improve upon is its standard setting procedure.

CUHK has been using a standard setting method of an absolute cutoff at 50%. Although this absolute cutoff method is easy and cost effective to administer, it has major flaws in which that it is very difficult to justify the same absolute cutoff for all these different types of examinations; with all the different examiners and their own examination styles; this is an even greater concern when this absolute value is applied onto high-stake examinations.

Therefore, Teaching and Learning Resource Centre (TLRC) is evaluating different types of standard setting method with CUHK's final-year examination papers. TLRC wishes to look at what are the effects on the Pass Mark (PM) and the Failure Rate (FR) with various standard setting methods. The following methods were compared:

- CUHK cutoff at 50%
- Angoff method
- Mean minus one standard deviation (-1SD)
- Cohen method: $PM = C + 0.6(P - C)$ where C is the expected mark due to guessing (0.2 in CUHK's examinations); P is the percentage mark of the examinee at the 95th percentile
- Modified Cohen method that the Oxford University Medical School adopted: $PM = K * P$, where K, a calculated constant, is 0.72; P is the percentage mark of the examinee at the 95th percentile

Methods

TLRC reviewed a total of ten final-year examination papers and results from 2009 to 2013, one from the Department of Medicine and Therapeutics and one from the Department of Surgery for each of the five academic years. The numbers of examinees range from 130 to 166. The five methods were applied.

Results

	Average PM	Standard Deviation	Range (PM)	Average FR (%)	Standard Deviation	Range (FR)
CUHK PM	50	0.00	50	1.94	3.86	0-12.5
Angoff Method	60.90	2.18	57-64	13.72	11.37	1.5-39
-1SD Method	61.98	5.31	50.6-70	14.49	2.38	9.6-18.2
Cohen Method	55.22	1.90	51.7-58	4.46	5.63	0-18.4
Modified Cohen Method	56.67	2.29	52.4-60	5.8	5.94	0-19.1

Conclusion

The result showed that the CUHK PM has a low FR which may not be desirable; especially these are high-stake examinations where we wish to only pass the examinees that demonstrated a satisfactory level of knowledge understanding.

The Angoff method and the -1SD method give a very high FR which may not be desirable neither. The Angoff method is also difficult to arrange as the requirement of the panels is high and the concept of borderline students are hard to be agreed within the panels.

The Cohen and the modified Cohen methods offered a reasonable FR and a low standard deviation for the PM, they are also justifiable and easy to administer. Therefore, it is reasonable to adopt the Cohen method or the examination committee can find a justifiable constant (K) for its own curriculum and adopt the modified Cohen method.

THE LONGITUDINAL IMPACT OF PROGRESS TESTING ON MEDICAL STUDENTS' APPROACH TO LEARNING

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Aims

In the setting of undergraduate medical education, Progress Testing (PT) aims to produce benefits such as contextual understanding, integration of science and practice, and a deep approach to learning. The aim of this research was to investigate whether PT fosters a deeper approach to learning when compared to traditional end of year high-stakes exams.

Methods

In 2013, PT was introduced to two year groups of medical students (Years 2 and 4). In contrast, students in Years 3 and 5 were taking traditional end of semester assessments. PT was introduced to all year groups in 2014. In this study, students answered the Biggs' Revised Study Process Questionnaire (SPQ) after each PT (three per year). The SPQ generates a surface approach (SA) and a deep approach (DA) score. Students not involved in PT in 2013 also responded to the SPQ. Baseline measures were taken in 2013 after PT2 (i.e., 2nd Progress Test) and PT3, and data collection is ongoing until 2015.

Results

Students were divided into two cohorts: Cohort A (involved in PT at baseline) and Cohort B (not involved in PT at baseline). There were no between cohort differences in either SA or DA scores at baseline. Repeated measures ANCOVAs were conducted on DA and SA scores, with cohort (A and B) and gender as the between-subjects factors, while controlling for student age. There was a significant interaction between SA scores and cohort, $F(1, 195) = 7.32$, $p < .05$, $\eta^2 = .04$. Post-hoc t-tests showed a significant decrease in SA for Cohort B from baseline ($M = 12.34$, $SD = 5.86$) to PT4 - their first Progress Test ($M = 10.97$, $SD = 6.13$), $t(67) = 2.59$, $p < .05$. In contrast, SA did not change significantly during the same period for students who were assessed using PT throughout the study.

We also conducted Cluster Analysis to give each student an approach to learning profile based on their baseline DA and SA scores. Two clusters were identified as: 1) deep learners ($M^{\text{baseline}} \text{ SA} = 9.76$, $M^{\text{baseline}} \text{ DA} = 21.70$) and 2) surface learners ($M^{\text{baseline}} \text{ SA} = 15.84$, $M^{\text{baseline}} \text{ DA} = 13.55$). Again, repeated measures ANCOVAs were conducted on DA and SA scores, and there was a significant deep approach by learner profile interaction, $F(1, 195) = 5.24$, $p < .02$, $\eta^2 = .03$. A trend revealed that DA increased from baseline ($M = 13.55$, $SD = 3.83$) to PT4 ($M = 14.64$, $SD = 5.27$) for surface learners, $t(63) = 1.89$, $p = .06$. In contrast, the DA score did not change for those who were already identified as deep learners.

Conclusion

Medical undergraduates utilise both surface and deep approaches to learning. PT has the potential to reduce students' surface approach to learning, but it may not influence their deep approach to learning. Student characteristics such as their initial learning profile should be considered when investigating whether PT drives changes in approaches to learning.

PREDICTOR VARIABLES OF MEDICAL STUDENTS' PERFORMANCE IN THE EXIT EXAMINATION: WHAT IS THE MESSAGE FOR MEDICAL EDUCATORS?

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Aims

Integrating basic sciences and clinical concepts in undergraduate medical curriculum is a challenge for medical education. A major gap exists between the preclinical and clinical phase, and medical students are often ill-prepared for the clerkships. As a result, students experience the transition between preclinical and clinical training as a stressful period. Medical students at the University of Malaya (UM) sit for four professional examinations at the end of Phase 1, Phase 2, Phase 3A and Phase 3B. The purpose of this study was to examine if students' performance in the earlier professional examinations (Phase 1, Phase 2 and Phase 3A) could predict their performance in the Exit Examination (Phase 3B). The objectives were: (i) to explore relationship between students' performance in the Exit Examination with their performance in the earlier professional examinations, and (ii) to examine if students' performance in the earlier professional examination was/were significant predictor(s) of their performance in the Exit Examination.

Methods

The study population comprised 3 cohorts of medical undergraduates in UM: Cohort 2006/2011 (n=174), Cohort 2007/2012 (n=165) and Cohort 2008/2013 (n=174). Retrospective analyses of students' performance in the four examinations were conducted using IBM SPSS Statistics version 22. For each cohort, stepwise multiple regression analysis was conducted. The correlation matrix generated was used to examine correlations between the independent variables to detect multicollinearity. The regression model summary provided information on independent variables entered and removed, values of R, R², adjusted R², and change statistics. Information on regression coefficients, statistical difference, collinearity statistics of predictors in the model, as well as excluded variables were also provided. Assumptions that enabled multiple linear regression to be conducted such as multicollinearity, homoscedasticity, and normally distributed residuals were checked. In the regression analysis, students' Phase 3B score was the dependent/criterion variable while Phase 1, Phase 2 and Phase 3A scores were the independent/predictor variables. All the variables were continuous variables.

Results

For all the three cohorts, initial analysis of the correlation matrix found strong correlations between the independent variables and dependent variables, justifying the use of multiple regression analysis. Little or no violation was detected for assumptions of multiple linear regression. For Cohort 2006/2011, stepwise multiple regression gave a regression model with a good fit: R²=0.681, R²_{adjusted}=0.679, [F(1, 172)=367.355, p<0.001]. Phase 3A score, which accounted for 68.1% of the variance, was the only significant predictor of students' performance in the Exit Examination, at p<0.001. The regression models for Cohorts 2007/2012 and Cohort 2008/2013 were also good fit: R²=0.614, R²_{adjusted}=0.611, [F(1, 163)=258.875, p<0.001] and R²=0.572, R²_{adjusted}=0.570, [F(1, 172)=230.029, p<0.001] respectively. Phase 3A score was also the only significant predictor, at p<0.001, for these two cohorts.

Conclusion

For all the three cohorts, only Phase 3A score was a significant predictor of students' performance in the Exit Examination. Taking the leap from the preclinical phase (Phase 1 and Phase 2) to the clinical phase (Phase 3A and Phase 3B) of medical school appeared difficult for medical students. Preparing students for a smooth transition continues to challenge medical educators.

ASSESSING STRUCTURE IDENTIFICATION ABILITY IN ANATOMY BY USING MODIFIED EXTENDED MATCHING QUESTION (EMQ): A CHALLENGE FOR LECTURERS AND MEDICAL STUDENTS

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Aims

Assessment of identification skills by tag test which combined with short answer question (SAQ) was used as assessment method for years. This method produces difficulties in administration and evaluation of examination. In order to minimise the limitation of “one best answer MCQ” that is less construction ability to develop answers and more guessing, we selected extended matching question (EMQ) to assess identification skills. Furthermore, the implementation of EMQ needs to be evaluated.

Methods

We developed a modified EMQ for anatomy of extremities. We conducted 2 initial trials (a group of students and students from a year intake) for the developed system. Specific revisions were following up each trial. Students defined the marked structures by matching available options from a list of structures. Each structure has its code divided into 8 groups. The selected option as student's answer were filled on an answering sheet. A computerised scanning system of answering sheets was performed to harvests exam results. We compared 2 groups of students that are using SAQ and EMQ. We further evaluated the implementation by the frame of utility of assessment.

Results

A number of 546 students were participated in the exam. Analysis was conducted to 279 students of SAQ group and 266 students of EMQ group. Both exams were tag tests. Specific structures of cadaver were marked by paint, needles or ropes. SAQ group had better result (23.43±7.73) than EMQ group (19.42±6.02) significantly ($p<0.005$). We noted some significant errors due to human error from SAQ group. A number of 17 from 279 answering sheets had errors in score calculation, checking the right answers, and diverse perception between raters.

Conclusion

By EMQ, evaluation of reliability was conducted by item analysis (p-value and Difference Index) that could not conducted by SAQ. Content validity could also being assured by using EMQ. We found several advantages of tag test using EMQ than SAQ especially for a large number of students with limited resources. Comparison of related cost and consumed time showed that EMQ implementation was much more efficient. By a good communication, related staff could accept this as one of useful assessment method. EMQ could be used not only for assessing students but also for easy improvement of educational program by providing students' result for specific region of subject.

EXPERT CLINICAL REASONING IS NOT JUST LOCAL BUT HYPERLOCAL INSIGHTS INTO CONTEXT SPECIFICITY FROM A MULTICENTRE NEUROLOGY SCRIPT CONCORDANCE TEST

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Aims

The script concordance test (SCT) is a validated tool for assessing clinical reasoning (CR). SCTs require a scoring key; constructing this key requires a panel of 1015 experts to take the test. We have previously validated a 53 question SCT assessing CR in neurology. We have further validated our SCT in four related departments in two hospitals (Neurology in NUH and NNITSH; Emergency Medicine in NUH and TTSH) with acceptable reliability ($\alpha > 0.72$).

For each department, the validation process used experts from that department to construct four unique local expert keys. Our aims were to determine (a) if expert choices were similar or different across all four departments and (b) whether these similarities (if they existed) aligned to hospital affiliations or specialty expertise. We also aimed to determine (c) the score change for experts in each department and (d) the score agreement, using different keys if the scoring key from another department was transplanted and applied to the local department's experts.

Methods

We compared summated question choice distributions for the test between individual departments' experts using the WilcoxonMannWhitney and the generalised CochranMantelHaenzel test. Each department had a Local Key (LK) (experts from that department), a Sibling Key (SK) (experts in same specialty, different hospital) and a Cousin Key (CK) (experts in different specialty, same hospital). For each department, differences in expert mean scores using pairs of keys (LK vs SK, LK vs CK) were compared with the ttest; score agreement using pairs of keys (LK vs SK, LK vs CK) was assessed with BlandAltman plots and intraclass correlation (ICC).

Results

Choice distributions were not significantly different between departments ($p > 0.05$). However, for each department, score changes for experts were statistically significant when different keys were applied. Using LK as the comparison, when SK was applied in each department, scores dropped by a mean of 8.1% (range 5.311.4%, $p < 0.05$). When CK was applied, scores dropped by a mean of 13.5% (range 10.017.6%, $p < 0.05$). No department showed an increase in score when SK or CK was applied. BlandAltman plots for each department showed poor agreement between LK vs SK, and LK vs CK scores; ICC was poor throughout (range 0.6 to 0.5).

Conclusion

Transplanting and applying different external expert scoring keys to any group of local experts leads to significant reductions in neurology SCT scores. There is poor agreement in scores derived by applying different expert keys between local experts and external experts of the same specialty, or the same institutional affiliation. This suggests expert clinical reasoning in neurology is not just 'local' to a particular specialty or institution, but is 'hyperlocal' to a very specific specialty department in a specific hospital. This demonstrates context specificity in neurological CR, and has implications for the selection of expert panels and the conduct and usage of SCTs.

HOW DOES EARLY MEDICAL SCHOOL ACHIEVEMENT AFFECT LATER PERFORMANCE ON A HIGH-STAKES CLINICAL SKILLS ASSESSMENT?

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Aims

Medical students undergo multiple assessments at various intervals throughout the course of medical education. These assessments help inform educators about the effects of their teaching and curricula as well as provide guidelines for remediation and quality improvement. Detecting weak academic achievement in students at earlier stages may facilitate timely interventions and prevent further deficiency in later stages. The interventions, however, have to be tailored based on an understanding of the complex interrelationships among various assessments. This study examined causal relationships between prior academic achievement and performance on a high-stakes clinical skills examination.

Methods

Assessment data of a class of 175 medical students were retrieved from archived records. Six measures assessing prior academic achievement were used in the study, including two end-of-the-second year measures assessing basic science knowledge (the United States Medical Licensing Examination Step 1) and clinical skills (a 3-station Objective Structured Clinical Examination (OSCE)), and four third-year measures assessing clinical knowledge (National Board of Medical Examiner (NBME) subject exams on Internal Medicine (IM) and Family Medicine (FM)) and clinical performance (ratings on Inpatient IM and FM Clerkships). The outcome measure was an 8-station OSCE called Clinical Performance Examination (CPX) administered at the end of the third year. Structural equation modeling (SEM) technique was used for path analyses on causal relationships between the six prior assessments and the CPX. Several path models were proposed based on the sequential order in assessments administration and the hypothesis that CPX performance was associated with proficiency in clinical skills and levels of knowledge.

Results

The path model hypothesising causal relationships between CPX performance and clinical skills as assessed by the OSCE and IM and FM clerkship ratings showed better model fits ($X^2 = 2.05$, $p = 0.15$, Comparative Fit Index (CFI) = .97, Root Mean-Square Error of Approximation (RMSEA) = .09, total effect = .284) than the model hypothesising the relationships between the CPX and knowledge acquisition as assessed by the Step 1 and NBME IM and FM subject exams ($X^2 = 25.25$, $p < 0.01$, CFI = .88, RMSEA = .41, total effect = .269). The path coefficients associated with NBME FM exam (0.29), OSCE (0.26), and FM clerkship rating (0.20) demonstrated significant ($p < .05$) direct relationships with the CPX. When combining the two pathways into one model, the combined model failed to yield sound goodness-of-fit indices, indicating other factors not included in the model might affect CPX performance.

Conclusion

This study demonstrated stronger causal relationships between clinical skills, rather than basic and clinical science knowledge, and a high-stakes OSCE. Students' prior performances in a similar OSCE setting and an outpatient primary care clerkship were associated more significantly with the high-stakes OSCE than the other measures examined in this study. Medical educators may want to design relevant remediation activities for the students who show deficiency in those areas to improve the passing rate on the high-stakes exam. Knowing what past achievement is associated with what future performance is the key for targeted quality improvement and timely interventions.

Saturday 7th February 2015, 8.45am

Function Room 2, Level 2, University Cultural Centre

FREE COMMUNICATION 4 - GENERAL EDUCATION 1

What Influences Students To Pursue Research Activities During Their Undergraduate Medical Years? – A Saudi Arabian Perspective At Alfaisal University, Riyadh, KSA

Sowshan Mostafa, Saudi Arabia

Attitudes Toward Psychiatry Across The Globe: A Five-Country Comparison of Medical Students' Attitudes Following A Psychiatry Clerkship

Rathi Mahendran, Singapore

A Survey of Interprofessional Education In Japan: A Cross Sectional Study of Schools of Medicine And Other Related Health Care Services

Michiko Goto, Japan

Development And Early Experience of A Mindfulness Training Program for Medical Students

Venus P. Y. Wong, Hong Kong S.A.R.

Influence of Assessment Measures On Different Learning Approaches In Preclinical Phase of Integrated Curriculum At Universiti Putra Malaysia

Shahid Hassan, Malaysia

Supporting Clinical Teachers - Our Most Valuable Asset

Geneviève Moineau, Canada

WHAT INFLUENCES STUDENTS TO PURSUE RESEARCH ACTIVITIES DURING THEIR UNDERGRADUATE MEDICAL YEARS? - A SAUDI ARABIAN PERSPECTIVE AT ALFAISAL UNIVERSITY, RIYADH, KSA

¹Mostafa S, ¹AlBarqawi H, ¹Mina S, ¹AlNajjar A, ²Ahmad AZ

¹College of Medicine, Alfaisal University, Saudi Arabia, ²King Faisal Specialist Hospital and Research Center, Saudi Arabia

Aims

Scientific research has always been the forward thrust for advancing biomedical and clinical sciences. Coping with this trend, there is a rapidly mounting emphasis put towards formally integrating scientific research training into undergraduate medical curricula. Moreover, research knowledge and skills are becoming essential competencies for all medical graduates. To that end, it is very critical to drive undergraduate medical students to attain positive attitudes towards scientific research. However, little is known about what influences undergraduate medical students to pursue research activities, particularly from the perspectives of developing countries. The aim of this study was to explore factors that influence undergraduate medical students to participate in research activities at the College of Medicine, Alfaisal University, Saudi Arabia, as well as to explore if any differences exist across genders. Looking at these specific factors will also give educators worldwide an understanding of the research status among students in a prominent institution in the Kingdom of Saudi Arabia.

Methods

An online, anonymous, cross-sectional, self-rating survey was administered. All first, second and third year undergraduate medical students were eligible to take part in the study. The survey explored what factors influence undergraduate medical students to partake research activities. The factors were assessed by the participants' responses to typical 5-point Likert rating scale statements, as follows: (1-Strongly disagree, 2-Disagree, 3-Neutral, 4-Agree, and 5-Strongly agree). The average 5-point Likert scale responses were presented as means $\pm$ standard deviations (SD). A two-tailed Mann-Whitney U test was used to compare the average 5-point Likert scale responses between genders. Statistical significance was determined as a p value <0.05 .

Results

One-hundred and sixty-five students ($n=165/320$) participated in the survey with a 52 % response rate. Eighty-five participants (51.5%) were males and 80 participants were females (48.5%). The top 3 factors influencing undergraduate medical students to participate in research activities were: "facilitating entry into competitive residency/training programs in future" (91%), "interest in publishing in peer-reviewed journals" (86%), and "improving curriculum vitae" (83%). Across genders, there were no significant statistical differences in the means of factors influencing undergraduate medical students to participate in research activities. Demographic and other influential factors were noted as follows: 1) more students were likely to take up fewer projects than more, 2) male and female participation in research projects, irrespective of the type or number, were virtually equal, 3) a higher GPA was a strong positive determinant of involvement in research, and 4) participation in research activities increases as students progress through medical school years.

Conclusion

Awareness of research activities at our institution is fairly good. We suggest a 100% exposure via integrating a research experience as a core curricular competency. Faculty members willing to mentor students using their own research projects could look out for interest among higher achieving students. Improving the quality of available research experiences by further intensifying the content is likely to encourage further interest among students. Contradictory to most international studies, gender bias happens to be nil among Alfaisal University students.

ATTITUDES TOWARD PSYCHIATRY ACROSS THE GLOBE: A FIVE-COUNTRY COMPARISON OF MEDICAL STUDENTS' ATTITUDES FOLLOWING A PSYCHIATRY CLERKSHIP

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Aims

Many doctors' only exposure to psychiatry is a 4 to 6 week clerkship in medical school, and unless they choose to specialise in psychiatry or other related disciplines, the knowledge, interest, and attitudes formed in those weeks last throughout their medical careers. Attitudes to psychiatry affect personal and professional behaviors of clinicians; because of the important implications, this study examined and compared medical students' attitudes toward psychiatry following their psychiatry clerkship across various countries and medical schools.

Methods

781 medical students from 11 medical schools in five countries, two in Singapore (n=148), three in India (n=231), five in the United States (n=158), and one each in Ghana (n=94) and Spain (n=150) were included in this study. Students completed the modified Attitudes to Psychiatry Scale (mAPS),¹ a 16 item version of the original APS,² at the end of their psychiatry clerkship. This Likert-type self-report scale is clustered around four themes: (I) merits of psychiatry as scientific medicine, (II) effectiveness of treatment, (III) stigma of psychiatry, (IV) inspiration from medical school; higher scores reflect more positive attitudes towards psychiatry. Data were normal and significance levels were set at .05.

Results

Significant differences in mAPS Total Scores were found across countries ($F[4,780]=129.62$) with medical students in Singapore scoring the highest. Students in Spain and the U.S. scored similarly while students in Ghana and India had lower scores. There were significant differential patterns across mAPS Subscale Scores for items I-IV ($F_s[4,780]=29.38-307.09$) with medical students from Singapore, Spain, and the U.S. scoring higher than those from India and Ghana on all mAPS subscales scores. Amongst the first group (Singapore, Spain and US), Singapore students scored the highest for 'inspiration from medical school' (mAPS IV). In the second group (India and Ghana), the only difference was higher scores in Ghana on "merits of psychiatry as scientific medicine" (mAPS I). A significant finding was the consistently high scores for "stigma of psychiatry" (mAPS III) across countries and medical schools. There were no gender differences.

Conclusion

Medical students' attitudes change with their psychiatry clerkship and differences are not dissimilar across countries despite existing differences in socio-economic development, mental health resources and demographic and cultural heterogeneity. Although there are methodological limitations (sample size, sampling and selection bias), the findings reflect areas relevant for psychiatric education and teaching. While mental health literacy, socio-cultural beliefs and perceptions of mental illness are important factors, this study has identified shared factors in the physical, emotional and intellectual climate of the medical school environment, perceptions of psychiatry as a medical discipline and global issues of stigma and discrimination as important in the clerkship. The globalisation of medicine encourages the sharing of innovative practices in psychiatry education to advance psychiatric care and practice. Socio-cultural issues in developed and developing countries however require special attention as differences are noted along these lines. Negative attitudes toward psychiatry need to be addressed to prevent these from becoming obstacles to accessing appropriate and holistic care in countries that may already have limited psychosocial support and resources.

A SURVEY OF INTERPROFESSIONAL EDUCATION IN JAPAN: A CROSS SECTIONAL STUDY OF SCHOOLS OF MEDICINE AND OTHER RELATED HEALTH CARE SERVICES

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Aims

With the growing need for terminal care, medical safety systems and infection management, collaboration among the various medical professionals is becoming increasingly indispensable. In the recent “Basic Medical Education WFME Global Standards for Quality Improvement” guidelines, it is specified that professional skills training should include patient management skills, team-work/team-leadership skills and inter-professional training. In spite of this necessity, in Japan, no core curriculum for medical education includes inter-professional education (IPE), as of yet. As a result, the status of IPE training in Japan is unclear.

Methods

Following a thorough review of the relevant literature, our team decided to evaluate the status of IPE according to already-established international norms, and so chose to translate and adapt a 2010-2012 UK national survey on IPE for our purposes 1). We performed a pilot investigation using this translated and adapted questionnaire. Afterwards, we examined the results of the pilot investigation, and finalised and deployed the questionnaire accordingly. Overall, we sent 3,430 questionnaires to 13 schools of medicine and related health care services, professions represented included: medicine, nursing, physical therapy, registered dietitian, dentistry, dental hygiene, social welfare, pharmacy, occupational therapy, clinical psychology, medical administration, certified care worker, and speech therapy.

1) A Survey of Pre-registration Interprofessional Education in the United Kingdom 2010-2012 Hugh Barr, Marion Helme Lynda D’Avray and Jill Thistlethwaite

Results

3,430 surveys were distributed; of these, we collected 572 completed surveys (response rate 17%). Of these, only 493 were completed and qualified as valid, giving us a final response rate of 14%. Of these, only 19% (n=93) of medical educational institutions included IPE instruction in their curricula. Most of these institutions offered IPE training in a combination setting of group learning and lectures; only 2 offered online learning. Group learning mostly focused on practice based learning. Furthermore, 25 of these institutions (27%) have implemented IPE in collaboration with other institutions. 40 institutions (43%) have included patients, their families and care givers in their IPE curricula. In addition, more than half regularly evaluated their curricula.

Conclusion

We found that although there were quite a few educational institutions carrying out IPE lectures, there were many inter-institutional differences regarding attitudes towards IPE, learning methods, and evaluation methods employed. These findings confirm that there has been no clear direction regarding the implementation of IPE instruction in Japan. Therefore, we find it imperative to develop an IPE curriculum specific to the Japanese context. This sort of investigation involving 13 universities and professional schools is unprecedented; thus it should lay the groundwork for the development of any future IPE program in Japan.

DEVELOPMENT AND EARLY EXPERIENCE OF A MINDFULNESS TRAINING PROGRAM FOR MEDICAL STUDENTS

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¹Department of Social Work and Social Administration, Centre on Behavioral Health, The University of Hong Kong, Hong Kong S.A.R., ²Medical Ethics and Humanities Unit/ Department of Pathology, LKS Faculty of Medicine, The University of Hong Kong, Hong Kong S.A.R., ³Medical Ethics and Humanities Unit/ Department of Family Medicine and Primary Care, LKS Faculty of Medicine, The University of Hong Kong, Hong Kong S.A.R.

Aims

There is increasing awareness amongst medical educators of the benefits of mindfulness training for stress management and burnout prevention for the health care students and practicing physicians. Based on available studies, there is little information on how mindfulness training is best introduced to medical students and importantly how to sustain its beneficial effects on a longer term basis. We describe how mindfulness training initially offered on an elective basis was introduced as part of a core medical humanities program. We were also aware it was necessary to understand students' physical and psychological needs and explore how they can benefit from the mindfulness practice beyond stress management - this included cultivating qualities like clarity of purpose in life, as well as compassion and emotional stability which are deemed essential for resilience in medical practice.

Methods

In this presentation, the experience of introducing mindfulness training for medical students at The University of Hong Kong will be explained. From a small series of elective workshops it has developed into a compulsory component of the longitudinal medical humanities curriculum which stretches over the first 3 years of medical school.

In a pilot project started in 2011, 16 medical students who joined a 4-week elective mindfulness training module and 16 medical students who participated in an anatomy elective module were compared in terms of their psychological and mindfulness state before and after the elective. The instruments used to assess the outcomes were the Depression Anxiety Stress Scale (DASS), Mindful Attention Awareness Scale (MAAS) and Scales of Psychological Well Being (PWB).

With the introduction of the new mindful practice workshop offered as part of the medical humanities curriculum, a larger scale study was conducted in Oct 2013 involving all 210 Year 2 medical students who participated in the workshop. Students completed a written questionnaire survey at the beginning of the academic year and one-year after. Perceived stress, sense of coherence, mindfulness level and self-compassion were assessed. Individual interviews were conducted to supplement the quantitative findings.

Results

The results of the pilot project showed students from the intervention group had significant increase in their sense of autonomy, a sub-scale of PWB. Among other assessment items, their mindfulness level, personal growth, purpose in life and self-acceptance were also increased. Though these changes were not statistically significant, it helped inform the development of the mindfulness component in the core curriculum.

Preliminary research findings of the outcomes of the mindfulness training in the core curriculum will be presented together with a discussion on the lessons learned in constructing a longitudinal mindfulness programme in the medical curriculum.

Conclusion

The study provides a perspective on the development of mindfulness training in medical education, which addresses more precisely the needs of medical students, which can be quite different from the needs of practicing medical doctors or other clinical populations.

INFLUENCE OF ASSESSMENT MEASURES ON DIFFERENT LEARNING APPROACHES IN PRECLINICAL PHASE OF INTEGRATED CURRICULUM AT UNIVERSITI PUTRA MALAYSIA

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Aims

In medical education, type of assessment practiced by an institution might be a driving force for students to adopt certain learning approaches. three types of learning approaches surface: deep and strategic are commonly practiced by students. Assessment tools currently practiced in 1st Professional Examination in Faculty of Medicine and Health Sciences include MCQ, SAQ/MEQ and OSPE to assess learning delivered in an integrated curriculum. A relationship between these learning approaches and assessment tools used, could possibly be a driving force to characterise students learning towards memorisation of facts (surface learners) to construction of conceptual framework (deep learners). A blueprint of exam questions known to students' covers extensive content in assessment might be stressful to students. It was expected that deep learners will perform better in SAQ and MEQ compared to surface learners better in MCQ often with factual recall questions.

To determine the relationship between learning approaches and assessment tool used in preclinical phase of first Professional Examination in Faculty of Medicine at UPM.

Methods

Cross-sectional observational study to determine students learning approaches was conducted after administering 100 questionnaires to year 2 students preparing to take 1st professional examination in 2013. Approach and Study Skills Inventory (ASSIST) was employed. 70 students completed the questionnaire and were categorised into surface, strategic or deep learners. Students' performance as score was obtained from summative examination of preclinical phase at the end of 86 weeks of integrated teaching. Blue prints of exam questions to ensure relevance of assessment tool in terms of learning outcome and the formats of questions was used. A one-way ANOVA was used to analyse assessment scores of MCQ, SAQ, MEQ and OSPE among students adopting different approaches.

Results

70 students (70%) returned the questionnaire and all were included for further analysis. 20 students were identified predominantly practicing surface approach, 32 students practicing deep approach and 18 students practicing strategic approach. ANOVA revealed no significant difference ($P>0.05$) among the students with three learning approaches

Conclusion

Highest number of students practicing deep approach was a result of content provided in blueprint. Result revealed no significant difference ($P>0.05$) among the students with three learning approaches in each of the four assessment tools. Deep learners did not perform better in MEQ or SAQ, suggesting that assessment tools employed have not favored any of 3 learning approaches adopted by students.

SUPPORTING CLINICAL TEACHERS - OUR MOST VALUABLE ASSET

¹Moineau G, ²Roye C, ³Busing N

¹Association of Faculties of Medicine of Canada, Canada, ²CMA, Canada, ³Canada

Aims

The Future of Medical Education in Canada Postgraduate (FMEC PG) Project Recommendation 7 is to “develop, support, and recognise individual teachers” and to “support clinical teachers through faculty development and continuing professional development and recognise the value of their work”.

Methods

In April 2013 a National Symposium was held with leaders from our medical education community including deans, Continuing Professional Development, Postgraduate and Undergraduate Deans, faculty developers, and from key stakeholder and partner organisations including the Canadian Medical Association and the Association of Canadian Academic Healthcare Organisations to begin discussions regarding implementation of this key recommendation.

Results

The symposium led to consensus on a definition and value statement of the clinical teacher as well as the determination of key priority areas for future work: 1) create a national governance structure for Continuing Professional Development and faculty development; 2) articulate the core competencies to use within a national faculty development curriculum; 3) develop standards to be used for accreditation purposes and 4) develop an international repository of tools for all clinical teachers. The composition of a multi-stakeholder National Advisory Committee to lead this work was determined. Work continues at the level of this clinical teachers collaborative through the FMEC PG project.

Conclusion

Clinical teachers guide learners towards professional competence through teaching, assessing and role modelling and are essential to the training of our future physicians. This national initiative will be a significant step towards developing, supporting, and recognising clinical teachers, our most valuable asset.

Saturday 7th February 2015, 8.45am

VIP Lounge, Level 2, University Cultural Centre

SOCIAL RESPONSIBILITY: NURTURING FROM YOUNG- STUDENTS' PERSPECTIVES

Community Service In Medical School: A Qualitative Study On Students' Motivations And Outcomes

Alvona Loh Zi Hui, Singapore

Voluntary Aid for Impoverished Community of North Jakarta

Jean Valeria, Indonesia

Galvanizing Cambodian Students To Maintain Sustainable Healthcare Services In Cambodia

Sim Meng Ying, Singapore

Preventing Child Sexual Abuse With Community Primary School Program: "My Body Is Mine"

Farah Sabrina Abdullah, Malaysia

Camp Simba 2014

Lian Xueli Berenice, Singapore

Preparing And Operating A Safe And Effective Pharmacy – A Cambodian Medical Mission

Tan Xin Zhong Timothy, Singapore

COMMUNITY SERVICE IN MEDICAL SCHOOL: A QUALITATIVE STUDY ON STUDENTS' MOTIVATIONS AND OUTCOMES

¹Loh AZH, ¹Tan JSY, ²Lee JJ, ²Cheong AL, ²Koh GC

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Aims

Participation in community service within underprivileged communities among medical students is associated with numerous positive outcomes, such as increasing the levels of empathy, enhancing leadership qualities, and fostering civic and social responsibility. Singapore is a developed country which is surrounded by developing Asian countries. We conducted a qualitative study to understand the experiences, motivations and student-reported outcomes, when medical students in Singapore participate in local and overseas community service.

Methods

We recruited medical students from Yong Loo Lin School of Medicine, National University of Singapore, who are also leaders of a specific community service project done in medical school. 12 one-to-one interviews were held for the participants from 6 to 8 January 2013 in the premises of the university. Participants were led in a discussion based on a set of study-specific topics. The interviews were audio-recorded and transcribed into free-flow text. Subsequently, the transcripts were analysed independently by 3 researchers.

Results

Medical students participate in community service projects which serve both local and overseas communities. Local communities include: the financially disadvantaged, elderly residents, migrant workers in Singapore, palliative care patients etc. Overseas communities include: slum dwellers, orphans, scavengers and impoverished villagers in Cambodia, Myanmar, the Philippines and Thailand.

Students' motivations to participate in community service are varied. These include: having had past experience in community service, to increase knowledge of the underprivileged, to show compassion, to give back to the community, to remind themselves on why they chose to enter medicine, to contribute as a student when there is more time to commit, to experience a different culture and medical setting, and to experience self-discovery.

In terms of general outcomes, students reported higher levels of empathy, improved communication skills, improved organisational skills, higher levels of adaptability or flexibility, improved team dynamics and improved ability to motivate or inspire others.

In terms of leadership skills, students reported that community service allowed them to lead by being a role model, boost team morale, set direction and goals, promote teamwork, ensure sustainability of project, understand love and service through servant leadership, attain improved decision-making skills and interpersonal skills such as patience and humility.

Interestingly, several community service projects led to an inclination towards a particular residency that is related to the project, while others reported no influence in the choice of residency or career. Outcome on academic work is also divided, with medical students reporting negative, positive or no influence.

During community service participation, some medical students also found role models, such as doctors, local volunteers, seniors etc. Community service has allowed medical students to gain a better appreciation of issues faced by the underprivileged, and become a better person and future doctor.

Conclusion

Community service in medical school enriches medical students by bringing about improved general outcomes, leadership skills and interpersonal skills. It also has bearing on the choice of residency or career to some extent. However, a drawback is its potentially negative influence on academic work, which has been reported by some to be a problem when participating in community service.

VOLUNTARY AID FOR IMPOVERISHED COMMUNITY OF NORTH JAKARTA

Valeria J

Faculty of Medicine, Atmajaya Catholic University of Indonesia, Indonesia

Aims

North Jakarta is a two-sided place where prosperous and impoverished people are living side by side. There is a huge gap between them in terms of social living, especially in healthcare services. The impoverished were mostly treated improperly at the health services. Although the government has already launched The National Health Insurance, there are still many people who can't afford it. Bintang Laut Clinic owned by Nuns of Putri Kasih, was one of the healthcare services in Cilincing, North Jakarta. Doctors and medical students of Vincentian Marian Youth (VMY) voluntarily helped in this clinic. The goal of this healthcare service is to give people in that area a better health service with an affordable price and to encourage them to live a healthy life.

Methods

The clinic runs every Tuesday and Friday night from 6pm onwards. All the work was done by volunteers, consisting of at least 2 doctors, 5 medical students, and 2 nurses to handle 20-30 patients. The numbers of the volunteers and patients may differ each time. Two methods were used, the clinic and home-visit. The small clinic building is divided into 5 stations (registration, anamnesis, waiting room, examination room, pharmacy) to make sure the service works properly. The registration is handled by a nurse, and the anamnesis is handled by two medical students. In the waiting room there is a medical student assigned to call the patient to enter the examination room. Medical students help the doctors to do the procedure at the examination room. After the procedure is done, the patient moves to the pharmacy handled by two nurses and occasionally, medical students. The patient then pays the medication fees, without having to pay the doctor fees. The home-visit was intended for the housebound elderly patients who were unable to come to the clinic. When the service is over, we do evaluation by discussing today's service, cases, difficulties, and if any, suggestions for the next services.

Results

Both patients and medical students receive benefits of this health service. The patients were able to get an affordable health service to maintain their health status with less financial burden. The patients also show signs of increasing consciousness of healthy lifestyle. It is a good option to reach better community welfare and finally a better life. Regularly scheduled patient medical check-ups helped in controlling the health status of the patient time by time, giving them an education of a healthy life, and eventually controlling the spread of the infectious diseases. The medical students who participate in this service were able to develop their knowledge (basic wound treatment, general medication and dosing, blood pressure check, etc.) and communication skills while interacting with real patients. It is a good start to build up a strong base of team work and effective communications of the medical students.

Conclusion

This voluntary program needs to be continued to maintain an affordable health service, which plays important role in maintaining the community health status.

GALVANISING CAMBODIAN STUDENTS TO MAINTAIN SUSTAINABLE HEALTHCARE SERVICES IN CAMBODIA

Sim MY, Chen ZD, Chan CYJ

Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Aims

Project Battambang is an initiative launched in 2010 by the students of the Yong Loo Lin School of Medicine, National University of Singapore. We made annual trips to Poipet, Cambodia to provide healthcare, education and support for Cambodian students. Overseas community service projects provide health services on a yearly basis which may not be sustainable in the long run. Combining the need for healthcare and the desire of Cambodian students to serve their own community, Singaporean medical students collaborated with their Cambodian counterparts to run community clinic services. The aims of the collaboration are to reinforce the spirit of community service and to build up leadership skills among Singaporean and Cambodian medical students.

Methods

This was a retrospective qualitative study based on a series of informal interviews with Cambodian medical and dental students who took part in Project Battambang from 2012 to 2014. Cambodian students were involved in administrative aspects of the project, clinical management of patients whilst working closely with doctors, and daily debriefs to brainstorm on areas for improvement. Their knowledge, attitudes and practices were compared before and after the trip.

Results

A total of 30 Cambodian medical and dental students participated in this project over a period of 2 years. Factors for joining the community service trip included a need to serve others, experiencing something different and curiosity. Before the trip, some Cambodian students were not familiar with how a clinic service was run. Their personal involvement in the trip helped these students gain better comprehension of such community projects, and even inspired some to run similar initiatives. In addition, 3 medical students (10%) started organising their local community projects which included a donation drive for the homeless and movie-screening fundraiser. 2 dental students (6.7%) planned and executed a 1-day dental programme for children.

Conclusion

Community health projects that involve local Cambodian medical and dental students improved their understanding of running community projects and inspired some to run similar initiatives locally. Closer collaboration involving the Cambodian students more in the early planning stages may facilitate the transfer of both knowledge and skills, which could in turn enable them to be more confident and capable in organising their own community projects independently.

PREVENTING CHILD SEXUAL ABUSE WITH COMMUNITY PRIMARY SCHOOL PROGRAM: “MY BODY IS MINE”

Abdullah FS, Izham AM

Faculty of Medicine, Cyberjaya University College of Medical Sciences, Malaysia

Aims

Child sexual abuse has been referred to as an epidemic and a public health crisis (World Health Organisation, 2002). Many different programs have been developed all over the world as a means of prevention. However, such programs are not widely implemented in Malaysia.

Realising this, a group of medical and pharmacy students from Cyberjaya University College of Medical Sciences (CUCMS) has taken the initiative to develop a program called “My Body Is Mine” (MBIM) for primary school children aged 10-12. MBIM is a reproductive health education program focusing on physical and emotional changes in puberty, and how to recognise and prevent sexual assaults.

This program was initially started in 2009 as part of the Young Mercy (YM) student’s co-curricular program in CUCMS. Throughout the years, a student society is formed, and the MBIM program is now organised under its own varsity club, named the Reproductive Education and Awareness Programme Squad (REAP Squad).

Objectives

- To introduce to children about their body parts and changes in puberty.
- To help the students understand their emotions and feelings, in guiding them to recognise uncomfortable and dangerous situations.
- To educate about safe boundaries and safe touch.
- To demonstrate ways to protect oneself when their boundaries and rights have been abused.
- To provide a platform for competency amongst student volunteers and provide training on how to educate children about their rights over their body.

Methods

A group of facilitators are recruited amongst the students to be trained before each program, while the REAP Squad committee members are responsible to coordinate with interested participating schools for implementation of this program.

The contents of the program are divided into 4 modules, each given a 1.5-hour slot. Each module includes a short introductory presentation, followed by interactive small-group activities led by group facilitators.

Results

The committed members of REAP Squad has conducted seven MBIM events around the Klang Valley region as well as collaborated with psychology students from the Sultan Idris Education University, Perak. Over 50 university students have been trained with the MBIM guidebook as facilitators so far.

Analysis done from the programme feedback shows positive results towards the program.

Conclusion

The MBIM program should be continued as it is useful and beneficial as a preventive measure for primary school-aged children. This program is an opportunity not only for implementing specific reproductive health promotion strategies at the community level, but also exposes us to reality of the child physical and sexual abuse, and the role that we can play in its prevention.

CAMP SIMBA 2014

Lian B

Alice Lee Centre for Nursing Studies, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Aims

Camp Simba aims to give children (7 - 12 years old) whose close relative (parent or sibling) has cancer the support and opportunity to have fun. We aim to establish meaningful relationships between university students and participants and build a sustainable Simba community. The camp provides a platform for medical students from DUKE-NUS Medical Graduate School and NUS Yong Loo Ling School of Medicine (YLLSOM) to work and learn together.

Methods

Camp Simba consists of an annual camp of 3D2N in June followed by three reunions. Started in 2009, it is organised by a 12-member committee from both Duke-NUS and YLLSOM.

Each year we work closely with partners such as HCA Hospice Care, SingHealth, KKH, NUHS and Children's Cancer Foundation to recruit participants. The children are paired to a facilitator in a 2:1 ratio. Before the camp, facilitators undergo a training session on psychosocial needs of children by a child psychologist.

We are very grateful to our numerous sponsors who have made the camp possible. The camp's program follows a storyline and revolves around a new theme each year. "Superheroes - The Hero within" was the theme of 2014. With the help of 70 passionate medical student volunteers, participants engaged in station games, a carnival night, wet games and Sentosa attractions. On the second night, we invited past Camp Simba participants to join us in the activities. We encouraged older participants to return as volunteers. Through this new initiative we aimed to empower past participants and strengthen the Simba community. The camp concluded with a mass dance by the participants.

To ensure a long-lasting relationship, we also organise reunion sessions in September, November and March following the camp.

Camp Simba is unique in that we do not provide therapy. Our priority is to bond and engage the children through fun. Through this, the children do open up and look towards their facilitators for guidance.

Results

With our reach extending to Children's Cancer Foundation, 2014 saw 65 participants, an increase from 60 in 2013. Over the years, we have reached out to a total of 162 children.

We have also been featured in various sources of media such as The Straits Times, Lianhe Zao Bao, Berita Harian, Tamil Murasu and Class 93.8LIVE. With the help of sponsors we were able to raise a total of \$12,740 for the children this year.

While it is difficult to quantify the result of the camp, many treasured relationships have been forged. In the past, facilitators have given tuition to the children and have also been called upon during times of difficulty. Many friendships have also been established among the students from both medical universities.

Conclusion

Although the emotional strain of having a relative with cancer rages on, we hope that the children realise they will always have an entire community they can fall back on. It is hoped that through greater collaboration with our partners, we would be able to support our children more holistically and encompass their psychosocial needs beyond the camp.

PREPARING AND OPERATING A SAFE AND EFFECTIVE PHARMACY - A CAMBODIAN MEDICAL MISSION

Tan TXZ

Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Aims

Pharmacies deployed in any setting should aim to operate both safely and effectively. The factors to be considered however, are slightly different in the context of medical missions that operate in the rural areas. Such pharmacies are often faced with inadequacies in vital operational and environmental variables that present as unsafe and unfavourable obstacles. Examples of these include language barriers, the lack of reliable utilities, and the locals' inadequacy in health education resulting in preference for the use of scientifically unproven remedies. This abstract utilises Project Battambang as a case study where several methods had been implemented at its pharmacy to improve safety and efficiency standards. Project Battambang first started in 2010 and has been making biannual trips to Poipet, Cambodia to operate clinics for the villagers ever since.

Methods

These aforementioned measures have proven effective, and can be divided into the two main phases of pharmacy deployment - preparation and operation.

In the preparation phase, drugs were procured locally whenever possible as this meant that instructions were in the local language and that transport costs were reduced. Drug formularies were revised based on prescription data from past years, and by monitoring the regional prevalence of diseases and other medical conditions.

During operations, specially sourced collapsible shelves expanded our drug storage capacity and improved mobility. This, coupled with proper drug labelling and categorisation, minimised mistakes and simplified retrieval. The operations phase also included daily stocktakes of drugs and equipment, ensuring that our doctors knew what were available and how much of each, allowing them to prescribe appropriately. Insufficient medication would then be restocked at nearby pharmacies or from different cities. As an additional safety measure, nurses were also stationed at the post-packing stage to vet all drug packages before actual dispensation to patients.

Results

Further improvements to safety and efficiency are being considered, and implementable methods for subsequent missions include the usage of wordless sticker prescription slips in consideration of the illiterate, and thorough relevancy checks for the local students that will assist us with medication counselling at the pharmacy, emphasising on the dangers of polypharmacy, potential drug-drug interactions with traditional medicines, medication side-effects, and antibiotic use. As the locals have a "live by the day" mind-set, there is a strong tendency for them to discontinue antibiotic use upon symptom alleviation. Hence, more effort needs to be made to ensure proper antibiotic use.

Conclusion

Pharmaceutical safety is a crucial consideration in medical missions that is influenced by a multitude of factors. It is however, still possible to utilise Project Battambang as a case study, where the effectiveness of several implemented methods and practices can be ascertained and quantified. The resulting conclusions help to recommend similar practices in other medical missions, and propose a direction for future research in this field.

Saturday 7th February 2015, 10.45am
Hall, Level 1, University Cultural Centre

FACULTY DEVELOPMENT – DEFINITIONS, CULTURE AND CONTEXT

Yvonne Steinert

Director, Centre for Medical Education & Richard and Sylvia Cruess Chair in Medical Education, Faculty of Medicine, McGill University, Canada

Whereas faculty development, or staff development as it is often called, has become an increasingly important component of medical education, definitions vary and the notions of culture and context have rarely been explored. The goal of this presentation is to examine a broad array of faculty development goals and begin to understand the role that culture and context can play in faculty development programming. For the purpose of this presentation, culture can refer to individual cultural backgrounds, the culture of academic medicine, and/or the culture of different health professional groups. Each of these components can influence the design and delivery of faculty development offerings and should be carefully considered. Faculty development also has its own culture, often relying on workshops, short courses, and other formal activities to promote professional development. Following a brief overview of what we know about this topic, we will discuss how culture and context can influence faculty development, how faculty development can play a role in promoting inter-cultural competence and humility among faculty members, and how we can work to change the culture of faculty development, moving from workshops to the workplace.

Saturday 7th February 2015, 11.30am

Hall, Level 1, University Cultural Centre

FREE COMMUNICATION 5 - FACULTY DEVELOPMENT 2

How Does The 'Teaching On The Run' Program Affect Motivation, Confidence And Effectiveness of Staff Involved In Student Clinical Supervision?

Margaret Potter, Australia

Gender And Academic Leadership Development: Exploring The Landscape

Anne Wong, Canada

Students In Medical Interview Training Classes Prefer Teacher Feedback That Includes Clinical Experiences -Analysis of Feedback By Teachers In Medical Interview Training, And Creation of A Teacher's Manual

Yoshimi Harada, Japan

MedEd Core: Designing And Implementing An Interactive And Assessed, On-Line, Faculty Development Course In Teaching And Assessing for Medical Educators In The UK

Catherine Haines, United Kingdom

Identity Development of New Faculty Developers In An Area With Faculty Shortages

Patricia O'Sullivan, USA

The Impact of Faculty Development Activities On The Professional Work of Instructors

Gita Ashok Raj, UAE

HOW DOES THE 'TEACHING ON THE RUN' PROGRAM AFFECT MOTIVATION, CONFIDENCE AND EFFECTIVENESS OF STAFF INVOLVED IN STUDENT CLINICAL SUPERVISION?

Potter M, Mercer A, Lake F

School of Medicine & Pharmacology, Faculty of Medicine, Dentistry & Health Sciences, University of Western Australia, Australia

Aims

The Teaching on the Run (TOTR) program was developed in 2000 and involves a series of workshops that support health professionals involved in clinical teaching, supervision and assessment. It is designed to enable participants to build their confidence to apply teaching and learning principles in the clinical workplace setting with undergraduate and postgraduate students, as well as peers and colleagues from other professions.

The program consistently receives positive evaluation feedback and resonates with health professionals who work in multifaceted clinical settings where factors such as increasing numbers of learners from multiple training institutions, inexperienced staff being required to supervise, fast-paced environments and more complex patients make student clinical supervision very challenging. The aim of this study was to measure the impact of the TOTR program on the motivation, confidence and effectiveness of supervisors involved in workplace-based student clinical supervision.

Methods

As part of the TOTR evaluation survey, health professionals are asked to rate their overall reaction to the program, as well as their level of motivation, confidence and teaching effectiveness on a Likert scale using 1 (very poor), 2 (poor), 3 (fair) 4 (good) and 5 (excellent) both before and after training. Data from every workshop delivered from January 2012 to December 2013 (n=2666 respondents) were collected and analysed for overall reaction to the program and to compare differences in pre-and post-training levels of motivation, confidence and effectiveness.

Results

The mean overall reaction to the program was 4.30 (SD=0.63). Participants in TOTR workshops reported significantly higher levels of motivation (t=2.4; p=0.014) and confidence (t=2.1; p=0.034) at the 5% level after training, while differences in effectiveness (t=1.9; p=0.054) were not significant. In addition, when comparing medicine, nursing and midwifery, allied health and multidisciplinary workshop groups using analysis of variance (ANOVA) there were significant differences at the 5% level across professions. Specifically nurses and midwives, as well as those in multidisciplinary workshop groups reported significantly higher levels of motivation after attending TOTR (F=2.62; p=0.049) when compared to the other two groups. Changes in perceived levels of effectiveness were less for allied health groups when compared to the other groups (F=3.56; p=0.014) and confidence was highest for participants who attended TOTR in a multidisciplinary group.

Conclusion

Given that the demands on supervisory staff have increased and less experienced personnel are being enlisted to provide student clinical supervision, programs like TOTR have an important education and support role to play. The fact that TOTR is rated highly by participants and has been shown to have a significant positive impact on the confidence and motivation of student clinical supervisors from all professions affirms its value and explains why it is still in high demand nearly 15 years after it was first introduced.

GENDER AND ACADEMIC LEADERSHIP DEVELOPMENT: EXPLORING THE LANDSCAPE

¹Wong A, ²McKey C, ²Baxter P

¹Program for Faculty Development and ²School of Nursing, Faculty of Health Sciences, McMaster University, Canada

Aims

Leadership lies at the heart of an academic organisation's success. Despite women representing over 50% of the healthcare profession, only 12% are in the top leadership positions (Zhuge et al, 2011). These disparities mean that the leadership potential and contributions of a significant proportion of faculty are unrealised. Earlier research discount gender differences in leadership (Kanter, 1977) but more recently, small but significant gender differences with respect to "transformational" leadership styles have been demonstrated (Eagley et al, 2003). Men and women have also been found to differ in their responsiveness to leadership development interventions (Avolio et al, 2009). These findings suggest that gender needs to be considered when designing effective leadership development initiatives. The aim of this study is to explore the role of gender in academic leadership in order to better inform faculty development in leadership. We examine whether there are gender differences in perceptions, styles and approaches to leadership.

Methods

The study population are academic faculty leaders in the Faculty of Health Sciences at McMaster University. A mixed methods sequential research design is used. For the phase 1, participants complete the Leadership Practice Inventory® (LPI), a survey of approaches to transformational leadership practices. The years of leadership experience and LPI scores are compared between females and males using the t test. $P \leq 0.05$ will be considered statistically significant. For phase 2, a purposeful sample of the participants will be interviewed to further explore their motivations, perceptions and approaches to leadership practice. A thematic narrative analysis approach will be used to analyse the interviews. Integration of the two study components will provide a multidimensional approach to the phenomenon of gender and leadership.

Results

We report on our preliminary findings of the LPI survey. 65 (38 females; 27 males) out of 167 (38.9%) completed the survey. All of the schools in the Faculty of Health Sciences were represented. The mean age of females was 51.0(SD 7.7) and males 49.7(SD 9.0) were similar (mean difference (95% CI): 1.4 (-2.8, 5.6); $p=0.515$). The average years of leadership experience for females (9.6; SD8.9) and males (10.56; SD 7.14) were not statistically different. When the participants for the female-dominant schools (Nursing, Rehabilitation Sciences, Midwifery) were removed from analysis, interestingly, the magnitude of the difference in mean years of leadership experience between females and males increased (-2.56 (-6.06, 0.95), $p=0.149$). There were no significant statistical differences between females and males on the various components of the LPI scores.

Conclusion

In this preliminary analysis, there appears to be no significant gender differences in leadership approaches of our study population. This finding supports earlier studies in gender and leadership styles. It is possible that there are strong academic institutional cultural patterns and expectations of leadership practices which influence the way both men and women perceive leadership. We will further explore this finding through interviews in the qualitative component of this study.

STUDENTS IN MEDICAL INTERVIEW TRAINING CLASSES PREFER TEACHER FEEDBACK THAT INCLUDES CLINICAL EXPERIENCES - ANALYSIS OF FEEDBACK BY TEACHERS IN MEDICAL INTERVIEW TRAINING, AND CREATION OF A TEACHER'S MANUAL

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¹Department of General Medicine and Primary Care, Tokyo Medical University, Japan, ²Center for Medical Education, Graduate School of Medicine, Hokkaido University, Japan

Aims

Medical interview education is now performed at almost all medical schools in Japan as a form of communication skills education. Tokyo Medical University offers medical interview training classes for 4th year students with the participation of simulated patients (SPs). Teachers of various departments are in charge of the classes, but it is not clear whether there are differences in feedback (FB) among the teachers. We aim to train the teachers so that they can give effective FB to students in medical interview training classes.

To examine differences in FB among teachers, investigate effective FB methods, and evaluate the effect of a FB manual.

Methods

In the first year, we conducted a questionnaire survey of students about FB by teachers. In the meantime, we transcribed and analysed teachers' FB on the basis of video recordings. All FB was divided into "medical information" and "communication", and into "negative FB" and "positive FB" based on the contents. We created a teacher's manual for FB on the basis of these results, and carried out faculty development workshops with it. We conducted a similar survey the following year.

Results

The evaluations from SPs and students were generally favorable, and included many positive opinions, such as "we heard from the teachers about their clinical experiences" and "there were many discussions among the students". Analysis of the videos showed significant differences in the contents of FB among groups. The performance of the interview strongly influenced the content of the FB. Variations in each group tended to be reduced the following year.

Conclusion

As medical interview education is a comparatively new field, we created a FB manual for teachers. By using this manual, standardisation of training instruction was accomplished, and it was supposed that the educational technique improved not only for teachers in charge for the first time but also for experienced teachers. Introduction of the manual also reduced deflection of FB. It has been reported that early contact with patients stimulates clinical practice and improves student motivation. This study also revealed that FB connected to an actual clinical setting stimulated student motivation. FB that includes the clinical experiences of the teachers and discussion among students may enhance the learning effect.

- 1) There were significant differences of FB among teachers.
- 2) FB that includes the clinical experiences of the teacher and discussion among students may enhance the learning effect.
- 3) Introduction of the manual reduced deflection of FB.

MEDED CORE: DESIGNING AND IMPLEMENTING AN INTERACTIVE AND ASSESSED, ON-LINE, FACULTY DEVELOPMENT COURSE IN TEACHING AND ASSESSING FOR MEDICAL EDUCATORS IN THE UK

¹Haines C, ²Dennick R

¹Medical Education Centre, School of Nottingham, University of Nottingham, United Kingdom, ²Medical Education Centre, Medical School, University of Nottingham, United Kingdom

Aims

All staff who teach medical students from the University of Nottingham need access to timely and appropriate support for delivering the medical curriculum in the University and at our partner teaching hospital Trusts. A popular face-to-face two day course met some needs from 1994 onwards. A new online course offering an assessed and interactive learning environment has been created to ensure that basic support is available to all teachers in line with recommendations from the General Medical Council, the regulatory body in the UK.

Methods

Two medical educators and a learning technologist created MedEd Core on a Moodle platform; a suite of 9 assessed medical education topics on key areas such as educational supervision, questioning skills, small group teaching methods and assessment. MedEd Core presents information in a succinct and appealing way which also includes elements of interactivity. Active learning has been shown in a recent meta-study to be much more effective at creating learning and effective recall than passive methods - a common criticism of content-heavy online learning. Learners can assess their progress on each topic through MCQs which give feedback. A pass mark can be set, but multiple attempts can be allowed. This allows experienced staff to complete modules on an assessment-only basis or seek formative assessment, whilst maintaining an actual standard to be demonstrated before a certificate can be printed. Moodle reports completion and demonstrates engagement by teaching staff in teaching development activity, providing evidence for an individual's revalidation, CPD record, or monitoring for the GMC.

IDENTITY DEVELOPMENT OF NEW FACULTY DEVELOPERS IN AN AREA WITH FACULTY SHORTAGES

¹O'Sullivan P, ²Irby D, ³Beard J, ⁴Mkonyi C

¹Office of Medical Education, ²Research and Development in Medical Education and ³Department of Surgery, School of Medicine, University of California, San Francisco, USA, ⁴Department of Surgery, School of Medicine, Muhimbili University of Health and Allied Sciences, Tanzania

Aims

In many parts of the world, universities are unable to recruit, develop and retain adequate numbers of faculty members. Faculty development is a tool long-used by universities to improve academic skills of the faculty thus enhancing capacity. At Muhimbili University for Allied Health and Sciences (MUHAS), we prepared a cadre of faculty members to teach graduate students in a newly developed education course and to offer instructional improvement workshops to their peers. This implementation allowed us to examine how identity evolved in this new role of faculty developer. This study will:

- Describe the emergence of a faculty developer identity.
- Characterise what motivates them to become faculty developers.
- Examine how the new education skills and faculty development role influenced them.

Methods

This study used a content analysis of semi-structured interviews sensitised by identity formation and motivation themes from previous research. The participants in the study consisted of 16 faculty members from various health professions, called Health Professions Educator Group (HPEG), who were selected to participate in the faculty development offering (2010, 2011). At the time of the interviews, the HPEGs had succeeded in offering at least 7 workshops and had taught the 18 week post-graduate course twice. An individual uninvolved in the HPEG conducted the interviews of the HPEGs in fall 2012. Two researchers read the transcripts applying codes from previous studies.

Results

We present here the distilled themes derived from the analysis of 15 interviews. HPEG's described their identity development as becoming an educator. For some HPEGs, the faculty developer identity was completely separate from this educator identity or subordinate to another role such as clinician or researcher. Yet for others, the educator identity evolved to include that of the faculty developer. The HPEGs led faculty development, which included the post-graduate course as well as workshops, out of a sense of duty and purpose. However, they liked the mastery/learning of the new content. They found doing faculty development to be a satisfying experience and prized the relationships among the HPEGs. The HPEGs improved their own teaching, became a respected resource to their colleagues and perceived that they contributed to substantively changing the educational culture of the university community.

Conclusion

While teaching was a required role at MUHAS, faculty development evolved the identity of being an educator and a faculty developer within one to two years. This progression may reflect that HPEGs led instructional improvement by both teaching in a course and providing workshops. The sense of learning and mastering new content was a very strong motivator for these individuals as was their collegial relationships among the HPEGs. At MUHAS, prior to this experience there was very little collaboration across health professional schools. The HPEGs reported that being faculty developers elevated their stature and transformed the educational cultural at MUHAS. The significance of this work is that while the identity of a faculty developer does take time, novices can incorporate that identity fairly rapidly. Also, these findings attest to the importance of faculty development to creating a positive educational culture.

THE IMPACT OF FACULTY DEVELOPMENT ACTIVITIES ON THE PROFESSIONAL WORK OF INSTRUCTORS

Ashok Raj G

Gulf Medical University, United Arab Emirates

Aims

To study the impact of faculty development activities on the professional work of instructors

Methods

Questionnaires were administered three times over the past 12 years to obtain a feedback from the faculty to study the impact of the faculty development activities on their work as perceived by the participants. The lesson plans, instructional materials, test specifications, rubrics for grading, contained in the current course files were reviewed as evidence of professional work.

Results

Currently, 150 instructors representing diverse cultures and educational background from the Colleges of Medicine, Dentistry, Pharmacy and Allied Health Sciences participate in teaching at the Gulf Medical University. They have grown in strength not only in numbers but also professionally as educators. This has been made possible with the continuous and consistent efforts of the Medical Education Unit set up in 2001 at the university.

83% to 100% of 53 faculty 'benefitted by attending' and 66% to 100% were 'able to use what they had learned' from the 22 workshops, 6 conferences, 4 lecture series and 3 one-month courses held between 2001 and 2009.

All 29 faculty benefitted from the 9 workshops, 7 one-day courses, and 2 one-month courses held between 2010 and 2012. They ranked lesson planning, curriculum planning, constructing MCQs and writing learning objectives as areas in which they benefitted most.

A total of 54 faculty members have completed the Graduate Diploma course in Health Professionals Education have successfully completed the program.

Conclusion

Faculty development activities have led to improved ways of teaching and learning, assessment and evaluation that have largely contributed to enhancing the quality of all program offerings at the Gulf Medical University. It was found that those with formal education in health professions education did better than those without.

Saturday 7th February 2015, 11.30am

Theatre, Level 1, University Cultural Centre

FREE COMMUNICATION 6 - TEACHING & LEARNING 2

Web-Based Simulation for Developing Hospital Nurses' Clinical Competency: A Randomized Controlled Trial

Liaw Sok Ying, Singapore

A Randomized Controlled Trial Investigating The Effect of Peer Observation of Classroom Teaching In Medical Education

Katrina Calvert, Australia

Use of Film To Build Student Empathy And Enable Reflective Thought In A New Medical Humanities Programme Embedded Within The Undergraduate MBBS Curriculum

Julian Alexander Tanner, Hong Kong S.A.R.

The Effectiveness of Videography As An Adjunct In The Learning of Abdominal Examination In 2nd Year Medical Students – A Randomized Study

Soh Lip Min, Singapore

Calibration of Communication Skills Items According To The Maas-Global In Objective Structured Clinical Examinations: A Pilot Study

Winnie Setyonugroho, Indonesia

“Micro-Cex”: A Quick And Feasible Ophthalmology Assessment Tool In Medical Undergraduates With A New Entrusted Professional Activity (EPA) Based Curriculum

Yip Chee Chew, Singapore

WEB-BASED SIMULATION FOR DEVELOPING HOSPITAL NURSES' CLINICAL COMPETENCY: A RANDOMISED CONTROLLED TRIAL

¹Liaw SY, ¹Emily A, ²Ho JTY, ³Goh PS, ¹Wong LF

¹Alice Lee Centre for Nursing Studies, National University of Singapore, Singapore, ²Nursing Department and ³Department of Radiology, National University Hospital, National University Health System, Singapore

Aims

Web-based learning has been endorsed as an essential learning tool for developing life-long learning and professional development. With technological advancement, web-based simulation offers the opportunity for simulating authentic clinical experience. The aim of the study is to describe the development and evaluation of a web-based simulation for developing hospital nurses' competency in acute nursing care.

Methods

A variety of instructional activities that were drawn from learning theories including motivation, cognitive overload, multimedia learning and experiential learning were used in designing and developing the web-based simulation. These activities include: 1) animation video to stimulate the learners' motivation; 2) multimedia instructional material for the acquisition of knowledge; 3) virtual patient simulation for practice and feedback; 4) formative assessment through simulation-based assessment and online quizzes. A randomised controlled study was conducted to evaluate the outcomes of the 3-hr web-based simulation. 67 registered nurses were randomised into two groups. The intervention group received the 3-hr web-based simulation and the control group received no intervention. Pre and post-tests through simulation-based assessment and knowledge test were conducted immediately before and after the program.

Results

After the web-based simulation, the participants in the intervention group significantly improved their knowledge ($p < 0.0001$), and performances ($p < .0001$). The control group demonstrated no significant differences between pre-test and post-test scores in knowledge and performance. Between-group comparisons indicated that the intervention group performed significantly better than the control group in knowledge ($p < 0.0001$) and performances ($p < 0.0001$) post-tests.

Conclusion

The study provided evidence to support the effectiveness of a web-based simulation which incorporated a variety of instructional activities for developing hospital nurses' competency in acute nursing care. Given the resource-intensive nature of mannequin-based simulation, it appears to be more cost-effective to use web-based simulation for institutions where there is a need to train and re-train large group of hospital nurses. Future studies are needed to inform how to integrate the web-based simulation with mannequin-based simulation for optimal educational outcomes.

A RANDOMISED CONTROLLED TRIAL INVESTIGATING THE EFFECT OF PEER OBSERVATION OF CLASSROOM TEACHING IN MEDICAL EDUCATION.

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Aims

Effective learning starts with effective teaching. Peer observation of teaching is a faculty development tool which aims at improving the performance of teachers utilising feedback and reflection. The most frequent claim made for peer observation is that it enhances the skills of the participants, particularly the junior participant, but robust evidence to support this claim is lacking.

We performed a randomised controlled trial to assess the effects of peer observation with feedback on the teaching performance of junior doctors in a tertiary women's health hospital to provide more definitive evidence as to the utility of peer observation of teaching in medical education.

Methods

Institution ethics approval was obtained for a randomised controlled single blinded trial. Following a power calculation to determine sample size, thirty junior medical staff participants were recruited and randomised by sealed envelope into two groups: a study group who received feedback on their teaching performance, and a control group who did not receive feedback. The teaching performance of the junior doctors was assessed using a validated assessment tool, the Stanford Faculty Development Program (SFDP). Assessment and feedback were based on a triangulated methodology including self- assessment, assessment by the students and assessment by experienced peer observers.

Study participants were observed for two separate undergraduate case-based learning tutorials with targeted feedback on teaching performance being given to the study group but not to the control group between the two observed teaching events. The participants were observed a second time by a peer observer who was blinded as to their feedback status, and reassessed using the same triangulated approach.

Data from the evaluations were presented as median difference scores (post-pre intervention) and group comparisons within each teaching assessment area were made using the Mann-Whitney test. Total scores were normally distributed and compared pre and post intervention using the paired t-test. A linear regression analysis was conducted to assess for group differences in total scores while adjusting for the initial assessment score.

Results

Both the control and the study groups showed improvements in their self-assessment and student assessment scores between the first and the second observed tutorials. Notably only the study group showed improvement between the first and second tutorials based on the peer observer assessments.

When scores were collated (self, student and peer observer), there were no significant differences in the level of improvement between the control and study groups.

Conclusion

The provision of feedback following peer observation did not lead to significant improvements in the teaching performance of the participants in this study when compared to participants who had not received feedback. There was an improvement seen in both groups across the two observed tutorials. This implies that factors other than the provision of peer observed feedback, lead to the improvement of teaching skills in junior medical educators. Peer observation can improve teaching, but the results of this randomised study suggest that the focus of the process should be to encourage reflection rather than as a feedback exercise.

USE OF FILM TO BUILD STUDENT EMPATHY AND ENABLE REFLECTIVE THOUGHT IN A NEW MEDICAL HUMANITIES PROGRAMME EMBEDDED WITHIN THE UNDERGRADUATE MBBS CURRICULUM

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Aims

The Faculty of Medicine at the University of Hong Kong launched an innovative Medical Humanities programme in 2012 as a core component within a new undergraduate MBBS 6-year curriculum. The mission of the Medical Humanities programme that is longitudinally integrated within the curriculum is “to help nurture the development of medical students into caring physicians who are capable of a deeper understanding of the human condition and who are thus able to provide better care to the patients entrusted to their care as well as to themselves”. In the second year of the Medical Humanities programme, students engaged with a theme of Suffering and Healing using narrative, visual art, film, performance and mindful practice. Here, we present our experience of using the French language drama *Amour* (directed by Michael Haneke, 2012) which portrays suffering and decline after stroke in an elderly woman and the impact on her husband carer.

Methods

Within a workshop setting, students viewed the film, discussed critical issues in small groups and teachers led a discussion of particular clinical scenarios portrayed. Students wrote individual personal reflections which were assessed by the teachers. Quantitative and qualitative feedback provided by students elucidated how well the workshop met prescribed learning outcomes. Comparator questions also asked in other Medical Humanities units allowed some insight into student opinion of workshop content, instructional methods, and overall workshop rating.

Results

Data indicated that film can be effective in achieving Medical Humanities learning outcomes.

Conclusion

Given the relatively accessible nature of film as an artform, we argue that film can play an important role in undergraduate medical education.

THE EFFECTIVENESS OF VIDEOGRAPHY AS AN ADJUNCT IN THE LEARNING OF ABDOMINAL EXAMINATION IN 2ND YEAR MEDICAL STUDENTS - A RANDOMISED STUDY

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Aims

There is an increasing challenge to balance the educational needs of medical students with the clinical demands of commitment from physicians. This is likely to be exacerbated by an increase in the number of medical schools and student intake in the following few years. Video-recordings of students' performances have been used to aid learning, and may be useful for the teaching of physical examination. Its value may be enhanced if clinician tutors view these videos and provide feedback. This in turn may also reduce clinician manpower for teaching. We designed a study to evaluate the effectiveness of self-assessment and tutor feedback using videography on improving abdominal examination technique.

Methods

Forty-six second-year medical students were randomised into 3 groups: self-assessment (SA), tutor feedback (FB) and controls (C). All students underwent a 20-minute individual practice session on abdominal examination with a standardised patient (SP). These sessions were recorded on video. 4 internists were recruited as clinician tutors and randomly assigned to review the video-recordings to provide feedback and assessments. Students in groups SA and FB received their video recordings, with group FB receiving additional written feedback from a clinician tutor after 5 days. Students in group C did not receive any video-recordings. All students underwent a second video-recording for an assessment of their abdominal examination technique 2 weeks later. For standardisation, clinician tutors provided scores against an agreed checklist. 10 videos were selected for grading by all tutors to examine inter-examiner variability using 2-way mixed-effect intra-class correlation for absolute agreement. All analyses were performed using SPSS 21. The students were also surveyed on their opinion of the use of video-recording as a learning tool.

Results

There were 15 students in both groups SA and FB, and 16 in group C. Students in group FB had the highest mean score (82.50%), which showed a trend towards significance when compared with group C (71.88%) ($p=0.061$). There was no difference in scores between group SA (71.35%) and C ($p=1.000$). There was strong agreement between the scores given by the examiners, with an intra-class correlation coefficient of 0.749. 96% of students agreed that the practice session with the SP helped them to learn more effectively. 73% of those who performed self-assessment and 93% of those who received tutor feedback agreed that it was effective. 96% of students who participated in the study would recommend a similar program to their peers.

Conclusion

Our results suggest that videography with tutor feedback may serve as a useful adjunct in teaching physical examination techniques and is acceptable among medical students. The strong inter-examiner score agreement also suggests that this method of assessment is reliable and consistent. A potential reason that self-assessment had little impact may be related to the fact that at this point in their undergraduate education, these students do not possess enough knowledge for self-critique. Further evaluation is thus necessary to assess if this approach is effective in other aspects of medical education such as history-taking and communications skills, and if videography with self-assessment is suitable amongst senior medical students.

CALIBRATION OF COMMUNICATION SKILLS ITEMS ACCORDING TO THE MAAS-GLOBAL IN OBJECTIVE STRUCTURED CLINICAL EXAMINATIONS: A PILOT STUDY

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Aims

Although the OSCE is commonly used to assess communication skills in medical schools, there is a lack of consensus amongst researchers upon a universally accepted standard against which these skills should be measured. This absence of a universally accepted standard makes the comparison of outcomes across clinical communication skills assessments problematic. The aim of this study is to explore whether or not it is possible to reliably calibrate existing OSCE station checklists according to the Maas-Global, a measurement instrument originating from Maastricht University.

Methods

The term 'calibration' in this study is used to rate how close the items in existing station checklists correspond to Maas-Global items. Three raters independently compared all existing station checklist items with the 17 items checklist of the Maas-Global. The study included all OSCE checklists used to assess the learning objectives of the fourth year of an undergraduate medical programme. Four different departments (i.e. Obstetrics & Gynaecology, Paediatrics, Psychiatry, and General Practice) contribute to this assessment. Consensus between raters was calculated after the assessment forms from the four participating departments were compared against the Maas Global by independent raters. We used an online OSCE Management Information System (OMIS) for data retrieval and analysis. The reliability of the calibration procedure was analysed using Generalisability Theory of data from four recent academic terms.

Results

Overall, the Generalisability Kappa was found to be 0.8. Optimisation analysis (D Study) for two raters demonstrated a G-Kappa 0.72, whilst this fell to 0.57 when only one rater was included. When G Theory was applied to each individual participating department, the G-Kappa results for Obstetrics & Gynaecology, Paediatrics, General Practice, and Department of Psychiatry were 0.45, 0.79, 0.83, and 0.99 respectively. With respect to checklist items, 46% of the items were considered to correspond to section three of the Maas-Global (i.e. medical content of the consultation), whilst 12% were deemed to correspond to section two (i.e. general communication skills), and 8.2% to section one (i.e. communication skills for each separate phase of consultation). 34% of the checklist items were not considered to be communication skills.

Conclusion

This research confirms a reliable and valid procedure for calibrating OSCE CS item checklists using the Maas-Global as a standard measurement instrument. Such calibration will enable comparison of results of CS assessments between students and across different departmental learning outcomes. We strongly suggest that the Maas-Global more widely employed as a calibration tool. Future research should focus upon exploration of the progress of CS assessment and CS outcomes across an entire programme of study.

“MICRO-CEX”: A QUICK AND FEASIBLE OPHTHALMOLOGY ASSESSMENT TOOL IN MEDICAL UNDERGRADUATES WITH A NEW ENTRUSTED PROFESSIONAL ACTIVITY (EPA) BASED CURRICULUM

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Aims

The mini-CEX has been used for years as an undergraduate assessment test in Ophthalmology at National University of Singapore. However, it is limited by the constraints of difficult administration in a busy clinic, limited clinical cases, narrow, non-standardised scope of testing and being time-intensive.

We introduced “micro-CEX” to replace mini-CEX as the end of posting test. Micro-CEX involves more but significantly shorter sessions of standardised, focused assessments of important entrusted professional activities (EPA) and interactive feedback (using a modified Pendelton’s model). It is aligned to the learning outcomes to drive students’ learning as we move towards assessment for learning. The increased sessions enabled more student and tutor feedback opportunities.

Methods

Five micro-CEX were done in place of 2 mini-CEX. Micro-CEX involved the assessment of specific clinical tasks (eye examination technique and targeted history taking) by different tutors on patients with pathology or healthy volunteers (simulated case scenarios with slides showing clinical signs).

The 5 test tasks were selected from important EPA in the curriculum. Each task was graded objectively according to the number of completed milestones and correct answers to focused questions. Standardised case scenarios with respective questions sets were used by all tutors when a suitable clinical case was unavailable.

After implementation, the students (n=86) and tutors (n=38) participated in an anonymous survey to compare micro-CEX with mini-CEX. They graded various characteristics of micro-CEX on a Likert scale (LS) of 1-9 (1, strongly disagree to 9, strongly agree; 5, neutral). Their scores (mean LS score $\pm$ SD, students vs tutors) were computed with Minitab software. A score of more than 6 is considered favorable.

Results

Both groups gave favorable scores (>6) for all items. Micro-CEX was assessed to be a more standardised test (7.33 ± 2.60 vs. 7.05 ± 0.94) that enabled better understanding of curriculum for tutors (7.23 ± 2.62 vs. 7.11 ± 1.01) and students (7.00 ± 2.14 vs. 6.53 ± 0.85). It was operationally faster (7.00 ± 2.14 vs. 6.53 ± 0.85) and easier (7.00 ± 2.19 vs. 6.89 ± 0.88); a viable workplace assessment tool (8.27 ± 2.36 vs. 6.68 ± 0.94) that was more administrable in a busy clinic (7.26 ± 2.27 vs. 6.76 ± 0.89) to assess a broader EPA range (7.27 ± 2.74 vs. 6.39 ± 0.80). It is a better formative (7.15 ± 2.51 vs. 6.84 ± 1.01) and summative assessment tool (7.56 ± 2.52 vs. 7.13 ± 1.07) that was more preferred (7.06 ± 2.16 vs. 7.21 ± 1.01). It gave a clearer understanding of the testing process and marking system (7.23 ± 2.76 vs. 7.03 ± 0.83); and provided more feedback opportunities and more focused feedback (7.14 ± 2.37 vs. 6.97 ± 1.09). The students gave a higher overall mean score than the tutors (7.29 ± 1.09 vs. 6.89 ± 0.08 ; $p < 0.05$, t test).

Conclusion

Micro-CEX is a feasible undergraduate Ophthalmology assessment tool that is well received by both students and tutors and more favorably by the students.

Saturday 7th February 2015, 11.30am

Function Room 1, Level 1, University Cultural Centre

FREE COMMUNICATION 7 - CURRICULUM

An Analysis of The Effectiveness And Potential Impact of The Revised Competency-Based Training In Singapore General Hospital (SGH) On The Learning Experiences of Pre-Registration Pharmacists

Lim Paik Shia, Singapore

A Tale of Two Curricula: Students' Perceptions Regarding The Educational Environment While Following Traditional And Integrated Curricula

Amaya Ellawala, Sri Lanka

Outcomes-Based Curriculum And Entrustment At Yong Loo Lin School of Medicine, NUS – Through The Administrators' Looking Glass

Fong Chong Hui Ann, Singapore

What Can We Learn From Clinical Skills And Clinical Reasoning Assessments On Students' Future Clinical Abilities: Explaining The Variance In Clerkship Performance?

Ting Dong, USA

Top Down And Bottom Up Design Process In Curricular Planning - An Empirical Report

K. Anbarasi, India

The Role of Patient Safety In Medical Curricula: A Student Perspective

Fareeha Abdulwali, Saudi Arabia

AN ANALYSIS OF THE EFFECTIVENESS AND POTENTIAL IMPACT OF THE REVISED COMPETENCY-BASED TRAINING IN SINGAPORE GENERAL HOSPITAL (SGH) ON THE LEARNING EXPERIENCES OF PRE-REGISTRATION PHARMACISTS

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Aims

Singapore Pharmacy Council (SPC) has adopted a set of core competencies to be achieved upon completion of pre-registration pharmacists training in 2011. The 12-week rotational model comprised of core rotations of Acute Care and Community Care as well as elective rotations of Ambulatory Care and Indirect Patient Care. It will be implemented in 2017 and Singapore General Hospital (SGH) will be providing the Acute Care and Ambulatory Care training. We have started to model the new training programme for the cohort of 2013/2014 trainees. This study aims to (i) analyse the effectiveness and impact of the revised programme and (ii) describe the areas for improvement.

Methods

Kirkpatrick's four level of training evaluation was used to evaluate seventeen trainees who underwent the revised programme. Questionnaires were used to assess the reaction of trainees to the orientation programme and rotations. Learning experiences were measured with the fulfilment of competencies in the nine functional areas stipulated by SPC. Compounding pharmaceutical products, providing primary healthcare and managing drug distribution and supply were assessed in Laboratory, Retail and Store rotation, respectively. All other functional areas were rated at week 6 and week 12 of Acute and Ambulatory care rotations. Competency status for these two time points were compared using the McNemar test. Final viva was conducted to assess the application of knowledge, skills and attitude at the end of the training. The components analysed included patient care delivery, problem solving and professional competencies. SPC competency exam and preceptor evaluation summary were used to assess the readiness to practice.

Results

All aspects of the orientation programme were positively received by trainees. Approximately 97% of trainees reported that they gained new knowledge or skills and its application to their work. Post-rotation surveys were described as positive with 97.5% and 75% achieved for both acute and ambulatory care, respectively. Suggestions were provided for improvements. More than 70% of trainees were competent at week 6 for the five functional areas other than promoting optimal drug use in ambulatory care. There was a significant improvement in this functional area at week 12 compared to week 6 (94.1% versus 58.8%, $p=0.031$). Greater proportions of trainees (85%) were rated competent at week 6 in acute care. This was further improved and almost all trainees (94.1%) were deemed competent at week 12 for both rotations. Nevertheless, three functional areas were not assessed in these two rotations. In the final viva, 88.2% of trainees were competent in professional conduct and patient care delivery and 82.4% of trainees were competent in problem solving. Two trainees required re-viva. Most importantly, all trainees passed the SPC competency exam and were rated competent in all functional areas to be eligible for registration as a pharmacist.

Conclusion

The outcomes achieved and suggestions for improvements offer an insight into the revised programme. This programme is effective but requires additional components to ensure the coverage of all functional areas in 2017.

A TALE OF TWO CURRICULA: STUDENTS' PERCEPTIONS REGARDING THE EDUCATIONAL ENVIRONMENT WHILE FOLLOWING TRADITIONAL AND INTEGRATED CURRICULA

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Aims

The Faculty of Medical Sciences, revised its medical curriculum from a discipline-based, to an integrated, student-centred one in 2007. The educational environment was one aspect that was focused on in the evaluation of the revised curriculum. This study aimed to evaluate students' perceptions regarding the educational environment and compare them to similar evaluation results obtained prior to the curricular revision.

Methods

The Dundee Ready Educational Environment Measure (DREEM) questionnaire was administered to all volunteering students following the MBBS degree course at the time of the study (n= 595). Results were compared to DREEM scores obtained prior to the curricular revision.

Results

The overall DREEM score was 124.4, compared to a previous score of 108, both which fall into the category 'more positive than negative'. The mean scores for students of the pre-clinical, para-clinical and clinical phases were, 132, 120 and 125 respectively ($p < 0.05$). Each showed an improvement from previous scores of 107, 110 and 107.

The mean scores in the five domains were: Students' Perceptions of Learning (SPL) =31.1 (a more positive approach), Students' Perceptions of Teachers (SPT) =27.5 (moving in the right direction), Students' Academic Self Perceptions (SAP) =20 (feeling more on the positive side), Students' Perceptions of Atmosphere (SPA) =29 (a more positive atmosphere) and Students' Social Self Perceptions (SSP) =16.9 (not too bad). Scores prior to the curricular revision were: SPL=25.6, SPT=23.3, SAP=17.5, SPA=24.9 and SSP=15.2. All domains remain at the same level, except for SPA which has progressed to a level one higher than the previous.

All domains were rated lowest by para-clinical students and highest by pre-clinical students, in contrast to previous results, where such clustering was not observed. Para-clinical and clinical groups rated SPL and pre-clinical students, SPT as highest. The lowest rated domains in each subset were SPA in para-clinical and clinical groups and SSP in the pre-clinical group.

'The teachers are knowledgeable' was the highest rated item overall and in each student subset. It was also the highest rated item previously, but has progressed from a score of 3.26 to 3.52 and can therefore now be considered as a 'strength' of the institution. 'I am encouraged to participate in class' and 'I have good friends in this school' also received high ratings.

'The teaching overemphasises factual learning' was rated lowest overall. 'I am too tired to enjoy this course' was the lowest rated item in the past. The most poorly perceived elements have shifted from 'I am able to memorise all I need' and 'there is a good support system for students who get stressed' to items such as 'the teachers get angry in class' and 'I am too tired to enjoy this course'. 'The teaching is too teacher centred' was also among the lowest rated items at present.

Conclusion

Students' perceptions towards the educational environment, as a whole and the various domains of it are positive and have improved with the revision of the curriculum. However, certain negative areas were highlighted especially with regard to teaching/learning strategies, an aspect that requires further evaluation.

OUTCOMES-BASED CURRICULUM AND ENTRUSTMENT AT YONG LOO LIN SCHOOL OF MEDICINE, NUS - THROUGH THE ADMINISTRATORS' LOOKING GLASS

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Aims

Yong Loo Lin School of Medicine (YLLSoM) National University of Singapore set up a Task Force (TF) in June 2012 to review the undergraduate medical curriculum. The TF engaged multiple-stakeholders and perused specific documents to develop both the program exit and posting-specific outcomes for the five-year medical curriculum.

Methods

Administrative staff supported the efforts by helping in gathering the data and assisting in analysing. Sources of data - MOH healthcare statistics, emerging modalities, NUS graduation objectives, NUHS AMC objectives, International benchmarks e.g. Tomorrow's Doctors, NMUCC recommendations, GEQ results, IFOM results, HO posting logbook, and Focus Group Discussions organised according to the ACGME-i competency framework. Assisting in conducting Focus Group Discussions using Nominal Group Technique (NGT) - 10 focus group (7 to 10 participants) sessions were conducted to elicit the 'top 10' abilities desired in a young doctor in a variety of field of work. Participants were from Education and Healthcare. 469 Core problems and conditions - sources from existing curriculum and Singapore Ministry of Health statistics. Creating a framework to support the development of EPAs and assisting to conduct Content Expert workshops as well as to set up Systems-based and Competency-based workgroups

Results

Twenty-three Core Competency statements were developed - highlighting the Knowledge, Skills and Attitudes (KSA) expected of a Postgraduate Year 1 (PGY1) from YLLSoM. Based on these 23 core competency statements, the TF, together with the relevant stakeholders, derived 469 Core Problems and Conditions a PGY1 is expected to manage as a trainee doctor. With each Core Problem and Condition, posting-specific Entrustable Professional Activities (EPAs) were also developed with appropriate levels of entrustment for each year of study.

Conclusion

Below are the challenges and limitations faced:

- 1) Organising the sessions systematically with time efficiency involving multiple stakeholders.
- 2) Balancing conflicting responses and opinions e.g. content experts versus generalists; training to be GPs or PGY1s.
- 3) Managing and analysing the data collated and representing these meaningfully to the stakeholders for their decision making process as well as building the database along the way.

The presenters will share their experiences from a point of view of an administrator involved in education.

WHAT CAN WE LEARN FROM CLINICAL SKILLS AND CLINICAL REASONING ASSESSMENTS ON STUDENTS' FUTURE CLINICAL ABILITIES: EXPLAINING THE VARIANCE IN CLERKSHIP PERFORMANCE?

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Aims

The curriculum at many medical schools across the United States is moving towards shortened pre-clerkship periods leading to compressed clinical skills and clinical reasoning teaching before students enter the clerkships. Evidence has suggested that pre-clerkship courses in clinical skills and clinical reasoning can improve student performance on the clerkship. We hypothesised that a combination of outcome measures from pre-clerkship clinical skills and clinical reasoning courses (OSCE scores, preceptor evaluations, NBME subject exam scores, and small group participation grades) would be strongly correlated to clerkship outcome measures (clerkship grades and NBME subject exams), and would explain the variance in these clerkship outcomes beyond baseline academic ability.

Methods

As part of the Long-Term Career Outcome Study (LTCOS) at the Uniformed Services University of the Health Sciences, pre-clerkship and clerkship outcome measures from 514 medical students graduating between 2009 and 2011 were analysed in a multiple linear regression model.

Results

Pre-clerkship outcome measures were significant contributors to the linear regression model, and were able to explain 22% of the variance in average clerkship NBME subject exam scores and 20.2% of the variance in average clerkship grades above what was explained by first year medical school GPA.

Conclusion

Pre-clerkship outcome measures from clinical skills and clinical reasoning courses explained a significant amount of clerkship performance beyond baseline academic ability. These courses provide valuable information regarding student abilities before entering the clerkship, and integration of these courses may be an important aspect of ensuring the validity of this information as the pre-clerkship curriculum becomes compressed.

TOP DOWN AND BOTTOM UP DESIGN PROCESS IN CURRICULAR PLANNING- AN EMPIRICAL REPORT

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Aims

Background:

The assorted tasks played by a physician teacher allow only limited time to spend with their learners making it difficult to understand learners need and learning style. There is a growing dissatisfaction amongst stake holders about the quality of learning. An approach to teaching which lifts the heights of inspiration in one student may bore another student and reflects on his presence and performance. One size fits for all view of didactic lecture planning often de motivates and make students to skip the classes.

Hypothesis:

Educational programmes should choose morally right actions and maximise the value of educators' effort and effectively deal with the educational needs of individual learner.

Aim:

Comparing the empirical association between class attendance and performance to identify individual students learning preference and apply them diligently to the task.

Methods

Top down approach:

NEED ASSESSMENT: Analyse students overall attendance and preclinical theory performance to recognise their learning approach and develop mass customised instructional methods. Considering practical and ethical issues, we marked

Attendance: Good as $\geq 80\%$ and poor as $\leq 60\%$

Performance: Good as $\geq 70\%$, average as 50 - 70 and below average as $\leq 50\%$

Students with good attendance but unsatisfactory performance and poor attendance with average to good performance alarmed us that 49% of our students in the batch are not satisfied with the existing didactic lecture mode.

We segregated students into 3 clusters with consideration of their readiness and institutional culture and redesigned curriculum by synchronised implementation of:

- (i) Problem solving flipped classes for group II
- (ii) Programmed collaborative learning for groups III, IV, V and VI
- (iii) Active learning lectures for group I

Bottom up approach:

For the 3 methods, we developed specific,

Learning outcomes

Unambiguous instructions

Learner activities to manifest their differences in strategies and styles

Clearly defined set of mutual expectation between students and facilitator

For curriculum Design, six step model is followed for each instruction mode

Well organised contemporary teaching - learning plan

continue on next page

continue from previous page

Structured sequence of learning activities;
 Appropriate learning resources;
 Transparent assessment techniques;
 Determination of flexibility;
 Frequent and individualised feedback grid;

Results

Initial assessment revealed:

Students with

Good Performance, good attendance 28% group I

Good Performance, poor attendance 23% group II

Average performance, good attendance 13% group III

Average performance, poor attendance 17% group IV

Below average performance, good attendance 13% group V

Below average performance, poor attendance 6% group VI

Subsequent to our newer approach, Summative performance is:

Exceedingly improved for group III and IV with an average of 72%

Acceptably improved in group II and V with a range of 18 to 32% to previous scores

Noticeable in group I with a range of 7 to 13% increase

Attendance is:

Remarkably improved for group II and IV students with an average of 83%

No significant changes in:

Attendance of group I

Performance and attendance of group VI

Conclusion

There is a symbiotic rapport between learners learning style, performance and attending the class. Attendance is indirectly influencing the academic improvement and directly proportional to learners comfort with the system.

THE ROLE OF PATIENT SAFETY IN MEDICAL CURRICULA: A STUDENT PERSPECTIVE

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Aims

Patient safety is a corner stone concept in medical practice. To decrease harm caused to patients, being able to acknowledge medical errors and take necessary steps to avoid it in the future and to provide the best quality of medical care, all come under the term 'patient safety'. Considering the importance of patient safety and care in the 21st century, exploration of the current medical curriculum is required to analyse ways that encourage patient oriented care among medical students. We aim through this study to evaluate the current perspective and understanding of the concept of patient safety and its importance among medical students. This will be a first step towards evaluating its current status and understanding from where to start in integrating patient safety into modern curricula.

Methods

We carried out cross-sectional survey collecting data about the importance of patient safety among medical undergraduates and if it should be part of the curriculum and if so, when and how to best implement it.

It was an anonymous, online survey delivered to medical undergraduates at Alfaisal University in Riyadh, Saudi Arabia. Data was collected from students from both genders who completed at least one year of their educational journey. Students from all 6 years were surveyed (n=278).

Results

We received 87 complete responses representing a response rate of 31.29%. When asked about defining patient safety, 26.44% picked the most comprehensive definition (A concept which emphasises doctor-patient relationship and is central to the delivery of high quality medical care). Furthermore, 40.23% picked the second comprehensive definition (Reducing preventable harm from medical errors to lessen the suffering of patients and healthcare costs). Which indicates that almost half of the them appreciate that reducing error and patient suffering is part of the definition, but the majority don't appreciate the role of patient-physician relationship in improving patient. Interestingly, 94.25% believe patient safety is very important. 79.31% reported that the change in their perception was after joining medical school and was specifically respectively due to faculties' guidance (41.38%), reading in the literature about it (25.29%) and joining quality and patient safety programs (12.64%). Furthermore, 86.21 believe it should be part of the curriculum. Regarding the best delivery methods, simulation-based learning topped the rank, followed by interactive group discussions then educational campaigns while lectures ranked least effective. Despite the high value students gave to patient safety, only 26.44% of them believe it should be incorporated all throughout med-school. Actually, only 5.75% thinks it should even be introduced in the first 2 years. Finally, 59.77% believe patient safety concepts should be integrated into the curriculum through incorporation it into existing courses, 26.44% believe there should be mandatory separate patient safety course and only 13.79% think it should be as elective courses.

Conclusion

Students highly value the importance of patient safety to decrease medical errors and improve quality of health care. Thus, they support its integration into the medical curriculum by using more practical instructions method.

Saturday 7th February 2015, 11.30am

Function Room 2, Level 2, University Cultural Centre

FREE COMMUNICATION 8 - GENERAL EDUCATION 2

Interprofessional Lessons Learned: A Historical Interprofessional Education Case Study

Cynthia Whitehead, Canada

Relationship Between Nurses' "Social Skills" And The Degree of Knowledge Regarding The Professions of Other Co-Medicals, In Japan

Kazue Yoshida, Japan

Longitudinal Mentoring Program Is Effective In Improving Empathy Among Year 3 And 4 Medical Students

Lau Tang Ching, Singapore

Key Elements of The Inter Professional Education (IPE) Among Sri Lankan Health Professional Students (Clinical Situations, Skills Expected In IPE Teaching/Learning Methods)

Angage Dilani Priyashanthi Perera, Sri Lanka

Social Media And Medical Professionalism

Mohd Razeen Mohd Hassan, Malaysia

Evaluating The Quality of Postgraduate Medical Education: Does It Improve The Quality of Teaching? Results of A Longitudinal Study.

Cornelia Fluit, The Netherlands

INTERPROFESSIONAL LESSONS LEARNED: A HISTORICAL INTERPROFESSIONAL EDUCATION CASE STUDY

¹Whitehead C, ²Whyte S, ³Cartmill C, ³Hart C, ⁴Paradis E, ⁵Kuper A, ⁶Boon H

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Aims

Interprofessional education (IPE) is widely considered to be an ideal way to train various health professions students to work collaboratively. In Canada, an early and comprehensive IPE program was developed at the University of British Columbia (UBC) in the 1960s. As a research team, we undertook a critical discourse analysis of the documents related to this early IPE initiative. This work was undertaken as part of a larger research project to investigate historically how current concepts of IPE have emerged.

Methods

Using techniques of Foucauldian critical discourse analysis, we undertook a case study of the UBC IPE initiative in the 1960s and 1970s. We assembled an archive of relevant documents through systematic searches of academic literature, grey literature, national and international reports, government documents, and institutional archives. In our analysis of these texts we considered how IPE was characterised and justified; who was advocating for IPE (in what forms and contexts, and for what purposes); what objects, practices, institutions, or subject positions were supported or prevented by particular characterisations of IPE; and what areas of resonance or tension existed between different rationales of IPE.

Results

Our study revealed great enthusiasm for the development of the UBC IPE program with the medical school Dean being a significant champion. Concerted efforts were made to establish a new Health Sciences Centre, with a bold vision to bring together undergraduate students from different health professions to share common facilities and educational programmes. Arguments in support of the Centre were framed in terms of health care sustainability. From the inception of the program, tensions within and between particular framings of this IPE initiative were identified. Health professionals outside of medicine were cast in somewhat contradictory roles. On one hand, they were depicted as bringing skills and expertise that were considered complementary to medicine. However, at other times, these professions were positioned as “assistants” to physicians. Discourses of IPE emphasised difference in turn as something to be erased and then to be championed: on one hand, health professionals must bring their diverse perspectives and expertise to bear on complex problems; on the other, they may become interchangeable, providing equivalent services and expertise.

Conclusion

Several distinct rationales and framings for this early IPE initiative were identified. These rationales have many parallels to the current discursive tensions that exist within the language of IPE. By examining the historical emergence of the language of IPE, and understanding these discourses in the social and political context of the times in which they developed, we gain insight both into certain limitations and also various potential opportunities to improve current IPE offerings.

RELATIONSHIP BETWEEN NURSES' "SOCIAL SKILLS" AND THE DEGREE OF KNOWLEDGE REGARDING THE PROFESSIONS OF OTHER CO-MEDICALS, IN JAPAN

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¹Department of Adult Health and Psychiatric Nursing, Faculty of Medicine, School of Nursing, Mie University, Japan,

²Department of Internal Medicine, International Research Center for Medical Education, University of Tokyo, Japan,

³Division of Clinical Epidemiology, School of Medicine, Jikei University, Japan, ⁴Graduate School of Global Information and Telecommunication Studies, Waseda University, Japan, ⁵Education and Research in Family and Community Medicine, School of Medicine, Mie University, Japan, ⁶Education and Research in Family and Community Medicine, School of Medicine, University of Tsukuba, Japan

Aims

To clarify the relationship between nurses' social skills and the degree to which they understand the work of other medical professions, in Japan.

Methods

We distributed the questionnaires to nurses in 14 mid-to-large-sized hospitals (beds >100) in Mie Prefecture in Japan; in total, 1180 questionnaires were sent. The contents of the questionnaire were "social skills" (Kikuchi's Scale of Social Skills, containing 18 items in 6 domains: basic skills, advanced skills, emotional management skill, conflict management skill, stress management skill, planning skill), "interprofessional knowledge" (questions covering general knowledge regarding 12 medical occupations), and RIPLS (the Readiness for Interprofessional Learning Scale).

Results

We collected 724 completed questionnaires (response rate 61%). Overall, nurses scored lower than any of the other 11 occupations with respect to "social skills" (56.41 ± 10.44 versus 57.78 ± 10.64 , respectively). Moreover, a further examination found that nurses' "social skills" scores tended to be lower than the overall average for the general population. On the other hand, we found that most other health professions (with the exception of medical secretary and psychiatric social workers) indicated that they understood nurses well.

Conclusion

This time, we were able to show a relationship between "social skills" and the degree of interprofessional knowledge. The results of this study showed that self-esteem among nurses was lower compared to other co-medical. This may be a result of the natural hierarchy existing within the medical field, for example nurses received instructions from doctors. However, we also feel it is clear that, to deliver the best possible outcomes, nurses should be more proactive regarding cooperation with other co-medicals.

LONGITUDINAL MENTORING PROGRAM IS EFFECTIVE IN IMPROVING EMPATHY AMONG YEAR 3 AND 4 MEDICAL STUDENTS

¹Lau TC, ²Aw M

Departments of ¹Medicine and ²Paediatric, National University Hospital, National University Health System, Singapore

Aims

This pilot project of longitudinal mentoring for one year aim to enhance empathy in 3rd and 4th year medical students using a cross over design.

Methods

Informed consent was obtained from 8 Clinical Groups (CGs) of 3rd year students to participate in this pilot project. Each CG comprised of about 7 to 8 students. 4 CGs were divided into 2 groups and allocated two mentors per group. The mentors were paired, consisting of one physician and one ethicist. The remaining CGs were in a waiting group and participated in the program in their 4th year of medical study. All participating CGs were giving questionnaires (Jefferson Scale of Empathy) at 0, 6, 12, 18 and 24 months time points of the pilot project. Each group met with their mentors once a month in the evening for 2 hours, for a total of 8 sessions in 3rd year and 6 sessions in 4th year. Students were free to bring up topics that were relevant to their clinical posting for discussion. They were also given one relevant article to read prior to the session and provided with the following suggested topics as a guide: literacy and health, cross-cultural competency, medical error, professional boundaries in patient care, physician health, end- of-life care, medical ethics, the “difficult patient,” communicating bad news, etc. Time was given during the session for reflective discussion of various clinical encounters that might raise concerns with regard to empathy erosion, ethical and professional behaviour. Students were also encouraged to write a one page reflection piece after each session.

Results

Jefferson Scale of Empathy Score (max is 140, the higher the better).

	Mentor at year 3	Mentor at year 4
3rd year start	111.9	110.3
3rd year mid	120.8	112.3
4th year start	105.5	95.6
4th year mid	104	102.4
5th year start	104.2	99.2

There was a general decline in the empathy score of both cohorts of students over the two year period. However, year 3 and year 4 longitudinal mentoring for one year helped to improve empathy score (year 3 improve by 8.9 points, year 4 improved by 6.8 points). There is lost of empathy score when the year 3 students return from their holidays, even amongst those who are mentored in year 3. Year 4 mentoring helped to improve empathy score as well, but the students generally have lower scores compared to those who are mentored in year 3.

Conclusion

A program of longitudinal mentoring is effective in enhancing empathy in medical students in their 3rd and 4th year. The program is more effective when it is started in year 3 more than year 4. It may also be beneficial to continue the mentoring program beyond one year, as the effect may diminish over time when the mentoring is stopped.

KEY ELEMENTS OF THE INTER PROFESSIONAL EDUCATION (IPE) AMONG SRI LANKAN HEALTH PROFESSIONAL STUDENTS (CLINICAL SITUATIONS, SKILLS EXPECTED IN IPE, TEACHING/ LEARNING METHODS)

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¹Department of Basic Sciences, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka, ²Medical Education Development and Research Centre (MEDARC), Faculty of Medicine, University of Colombo, Sri Lanka

Aims

Interprofessional education (IPE) is important in developing good working relationships between different health professionals. Therefore introduction of IPE into healthcare professions' curricula has become an important aim globally. The key elements of the IPE are identified in my research study as clinical situations, skills expected in IPE and teaching / learning methods. Health professional students in Sri Lanka experience informal inter-professional learning opportunities during clinical years. Investigating the key elements of the IPE among different health professionals students will illuminate the needs and challenges of IPE in Sri Lanka.

Methods

A cross sectional study was conducted with the students who have had prior clinical training for a period of 1 year, from 8 health professional groups (Medical, Physiotherapy, Nursing, Nursing degree, MLS, Pharmacy, Audiology, speech & language therapy) at different health educational institution. A total of 686 students were invited to complete the self administered questionnaire. The data was entered and analysed in the SPSS. The part of the data was analysed using descriptive statistics. Analytical statistical methods will be used to compare responses of different groups. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Colombo.

Results

A total of 686 students were invited to complete the self administered questionnaire. The data was entered and analysed in the SPSS. The part of the data was analysed using descriptive statistics. Analytical statistical methods will be used to compare responses of different groups. The free comments were content analysed. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Colombo. The response rate for the survey was 84.83%. All health professionals' students showed higher mean score for the "Management of acute situations while lower mean scores for rehabilitative care and community based care. Respect for each other and communication skills" showed higher mean score by all the professions except MLS. Physiotherapy, Pharmacy, MLS and Nursing students believe that teaching skills, recognising limitation as a professional and leadership skills cannot be improved through IPE. Most students highly rated demonstration and work based tasks at wards are most important teaching methods can be used for IPE.

Conclusion

The findings suggest that key elements of the IPE are important to improve the aims of the IPE. Most health care students agree that management of acute situation is the most important clinical situation which can be used to work as a team for inter-professional learning. Community based care and rehabilitative care are less important to enhance team work for IPE. Respect for each other and communication skills are most imperative skills can be improved through inter-professional learning. Most students highly agree that demonstration and work based tasks at wards are key teaching methods for achieving the aims of IPE. This study suggests some focused approaches for IPE in Sri Lanka and students may need more clarity on the aim of IPE.

SOCIAL MEDIA AND MEDICAL PROFESSIONALISM

Mohd Hassan MR, Kirwan WO

Department of Surgery, Penang Medical College, Malaysia

Aims

Current medical council guidelines in Malaysia do not provide a clear indication of what is acceptable and what is not in the use of social media by medical professionals in keeping with the codes of the profession. The concept of medical professionalism too has also not been explored in the domains of social media in Malaysia.

We aimed to establish the following: 1 - Attitude and inappropriate behaviours of medical students in using social media, with regards to confidentiality. 2 - Define “professionalism” in social media within the medical student population.

Methods

A cross-sectional survey was carried out using a self-administered questionnaire which consisted of 31 quantitative and 2 qualitative questions. 110 Fourth Year medical students of Penang Medical College were approached and their informed consent was obtained.

Results

The response rate was 93.6%, with 99.0% of those admitted to using social media. Social media were also used in the professional capacity by 64.4% of respondents, of which 84.6% have experienced anxiety before posting contents at least a few times. 63.6% of the respondents have posted contents that they had worried about later and they were at 5 times the odds of having posted contents that they would not want a patient to view compared to those who have not posted such contents ($X^2 (1, n=99) = 5.751, p<0.05, OR = 5.585, CI [1.199, 26.024]$). 53.5% consider sharing interesting case notes findings on social media as appropriate, while 44.6% find that posting diagnostic imaging pictures is appropriate. 47.5% believe that contents posted on social media will affect them in the future. One-fifth of students have posted contents that they would not want their future employer to view. 72% of students claimed that there was no specific guideline prepared by the college regarding the use of social media but will adhere to the said guidelines if they were enforced by the college. Qualitatively, most respondents felt that their private life on social media is separate from their professional life, although 77% acknowledged that social media have professional value to them.

Conclusion

The use of social media has extended to the professional domain amongst the majority of medical students, albeit the prevalence of uncertainties and divide in opinions regarding the appropriateness of posting certain contents that are private to patients on social media, which raises issues pertaining to confidentiality. Students are concerned of having their future career affected by what they have posted on social media in the past. However, the nature of contents which were shared and evoked anxieties was not ascertained in this study. Professionalism in social media was defined in the social, professional and career domains. We recommend the development of an ethically reviewed documented advisory policy to define and maintain a degree of professionalism while being social online.

EVALUATING THE QUALITY OF POSTGRADUATE MEDICAL EDUCATION: DOES IT IMPROVE THE QUALITY OF TEACHING? RESULTS OF A LONGITUDINAL STUDY

Fluit C, Sander L

Academic Educational Institute, IWOO, Radboud University Medical Centre, The Netherlands

Aims

Residents in postgraduate medical education predominantly learn in the clinical practice from their experiences and social interaction. These learning processes happen largely without deliberate attention. Teachers can stimulate this learning more deliberately by explicit questioning, discussion and reflection, as advocated by the cognitive apprenticeship model. (Billet 2001) Providing clinical teachers with feedback about their teaching performance is a powerful tool to improve teaching. This requires instruments based on workplace learning, and an effective procedure to provide this feedback. (Nicol 2006) For this purpose the EFFECT questionnaire (Evaluation and Feedback For effective Clinical Teaching) was developed. (Fluit 2012) EFFECT incorporates characteristics of workplace learning and the teaching of CANMeds competencies. There is mixed evidence whether evaluations lead to more effective teaching and higher ratings.

This study aims to assess changes in resident ratings of their teachers, using EFFECT. We interviewed supervisors to understand what changes they plan to make, and how they realise them.

Methods

Supervisors of nine medical specialities were evaluated at two subsequent years, using EFFECT. Mean overall scores (MOS) and mean scale scores were calculated and compared using paired T-tests. Semi-structured interviews were conducted by two researchers, based on predefined topic lists. Interviews were transcribed and analysed in ATLAS-Ti.

Results

89 Supervisors were evaluated at two subsequent years. 12 out of 18 supervisors (67%) with a MOS <4.0 at year 1, demonstrated a relevant increase of their MOS (mean increase 0.4). 15 out of 71 supervisors (21%) with an MOS higher than 4.0 demonstrated an increase >0.2 in their MOS. Two researchers interviewed 12 supervisors. A first analysis shows that supervisors experience a high job autonomy concerning teaching, improve their teaching but are not aware of their strategies, and don't expect support from the head of the department. Supervisors rarely learn from their colleagues. Feedback from residents is useful.

Conclusion

Evaluating teachers with EFFECT is associated with a positive change in residents' ratings, predominantly in supervisors with low initial scores. Supervisors formulate intentions but do always not have clear strategies on how to realise them.

AMEE

Friday 6th February 2015, 11.00am

VIP Lounge, Level 2, University Cultural Centre

AMEE SYMPOSIUM: EXCELLENCE IN FACULTY DEVELOPMENT

¹**Trudie Roberts**, ²**Ronald Harden**, ³**David Irby**, ⁴**Yvonne Steinert**, ⁵**Dujeepa Samarasekera**, ⁶**Patricia O'Sullivan**

¹Professor of Medical Education, Director of the Leeds Institute of Medical Education, and Honorary Consultant Physician, Leeds Acute Hospital Trust, United Kingdom, ²Professor of Medical Education (Emeritus), University of Dundee, General Secretary of AMEE and Editor of Medical Teacher, United Kingdom, ³Professor, Department of Medicine, and Member, Office of Medical Education, School of Medicine, University of California, USA, ⁴Director, Centre for Medical Education & Richard and Sylvia Cruess Chair in Medical Education, Faculty of Medicine, McGill University, Canada, ⁵Director, Centre for Medical Education, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore, and ⁶Director, Office of Research and Development in Medical Education, School of Medicine, University of California, USA

The symposium will examine the concept of excellence and in particular excellence in medical, dental and veterinary education. The recognition of excellence in Faculty Development in a medical school will be explored and criteria for the assessment of excellence will be presented for discussion.

This symposium will be of interest to all teachers, administrators and researchers and will be particularly relevant to anyone engaged with or responsible for faculty development in their institution.

Saturday 7th February 2015, 2.15pm

Hall, Level 1, University Cultural Centre

SYMPOSIUM 10 – FACULTY DEVELOPMENT IN THE ASIA-PACIFIC REGION

Faculty Development of Medical Schools in Philippines

Nomar Alviar, Philippines

Twelve Tricks in Successful Training Program for the New Faculties

Pongsak Wannakrairot Thailand

Current Status of Faculty Development in Medical Schools of Taiwan

Jen-Hung Yang, Taiwan

Setting up a Culture of Teaching and Learning at NUS: The Work of CDTL

Lakshminarayanan Samavedham, Singapore

S10

Saturday 7th February 2015, 2.15pm

Hall, Level 1, University Cultural Centre

FACULTY DEVELOPMENT OF MEDICAL SCHOOLS IN PHILIPPINES

Nomar Alviar

Senior Lecturer, University of the Philippines, National Teacher Training Center for the Health Professions, Philippines

The Philippines is currently redesigning all levels of its education system in order to better equip its graduates to participate in the integrated global professional and vocational community of the twenty-first century. As part of this revision, the post-secondary education sector has been mandated to restructure higher education curricula according to the Outcome-Based Education (OBE) model. Consequently, OBE has become the de facto framework for faculty development in health sciences degree programs in the past two years. OBE-themed faculty development activities have concurrently addressed three needs: firstly, by helping health professions educators decide on exit outcomes; next, by assisting the faculty in designing student learning experiences and assessments that are aligned with the outcomes; and finally, by equipping these teachers with the essential skills for implementing their respective outcome-based health professions curricula. These comprehensive retooling efforts have reinvigorated faculty development as a whole and have revitalized reflection on the roles of the health professions teacher and the practice of health professions education in the Philippines.

S10

Saturday 7th February 2015, 2.15pm
Hall, Level 1, University Cultural Centre

TWELVE TRICKS IN SUCCESSFUL TRAINING PROGRAM FOR THE NEW FACULTIES

Pongsak Wannakrairot

Professor, Faculty of Medicine, Chulalongkorn University, Thailand

Faculty development program for the new faculties is essential and is a compulsory program in many institutions. The program may mainly comprise theoretical components of teaching and learning and some exercises. Most of the new faculties are specialists or superspecialists. Some of them do not have interests in educational training. Faculty of Medicine and Chulalongkorn University has conducted new approaches in training program for the new faculties. The feedback from the faculties reveals high satisfaction. The twelve key success factors are 1) program leadership, 2) minimize lectures, 3) diversified activities, 4) diverse resource person, 5) role model, 6) microteaching, 7) stay close, 8) leisure time, 9) visit of administrative team, 10) attractive venue, 11) full support of facilities, and 12) Our University. These twelve tricks should be done with the right force, at the right time by the right person.

S10

Saturday 7th February 2015, 2.15pm
Hall, Level 1, University Cultural Centre

CURRENT STATUS OF FACULTY DEVELOPMENT IN MEDICAL SCHOOLS OF TAIWAN

Jen-Hung Yang

Dean, Tzu Chi University (TCU) College of Medicine, and Professor, Taiwan

Medical faculty, either PhD or MD, are usually lacking of pedagogical training; however, they teach medical students and young physicians or other medical professionals. Faculty development plays a critical role in promoting academic excellence and innovation. As McLean et al. stated in AMEE Guide No 33, 'with demands on medical faculties to be socially responsible and accountable, there is increasing pressure for the professionalization of teaching practice'.

TMAC (Taiwan Medical Accreditation Council) launched medical school's accreditation since 1999, and encouraged all medical schools to provide opportunities of enhancing the teaching performance of faculty, subsequently faculty development was introduced into all medical schools of Taiwan. The programmes can be divided in four categories: (1) theory/pedagogy, (2) curriculum/teaching, (3) evaluation/feedback, and (4) outcomes. The initiatives started from lectures to workshops and seminars, and had modifications of the programs or other new initiatives according to needs assessment from our faculty. We evaluate the effectiveness of the programmes with Kirkpatrick 4-level method; however, the "result"(impact) of the programmes with a formal structured or systemic evaluation has not yet been implemented in our medical school. I will provide examples of faculty development to review what we have done (e.g., PBL, OSCE, humanities) and to demonstrate the impact of the interventions in our medical school.

Saturday 7th February 2015, 2.15pm
Hall, Level 1, University Cultural Centre

SETTING UP A CULTURE OF TEACHING AND LEARNING AT NUS: THE WORK OF CDTL

Lakshminarayanan Samavedham

Director, Centre for Development of Teaching and Learning, National University of Singapore, Singapore

There has perhaps never been a more interesting passage of time to be teaching at a University and that too at a research intensive University! The advent of MOOCs, Blended Learning and other innovations (e.g. living learning programmes, creation of personalized learning pathways) have put higher education in the limelight and has forced educators to ask some very tough and fundamental questions regarding teaching and learning. Are we ready to cope with the challenges and leverage on the available opportunities to prepare students for an uncertain and complex future that awaits them? What does it mean to teach and learn in an environment where content is highly commoditized? How should faculty members and institutions respond to this evolving scenario?

The work of Boice (2000) has demonstrated that, with proper guidance and mentoring, it is possible to get new faculty members meet or exceed expectations of their institutions for both research and teaching within their first two years. Without such guidance, faculty members take anywhere up to 5 years to reach such levels of productivity and performance and in the process may be causing a disservice to several cohorts of students. The work of Centre for Development of Teaching and Learning (CDTL) at NUS is directed at catalyzing the transition of new faculty hires from graduate researchers to Assistant Professors by helping them develop technological, pedagogical content knowledge (TPACK, see Harris et al., 2009) so that they may attain increased productivity, creativity, and publishability throughout their careers. Intensive professional development programmes, workshops/seminars and mentoring activities form the backbone of the Centre's flagship Professional Development Programme-Teaching (PDP-T) for new faculty hires. Teaching at a research intensive university such as NUS is characterized by research-infused teaching, research-led teaching and research-like teaching. Through its continuing professional development programme (CPDP) and informal discussion sessions involving faculty members and academic leaders on campus, a culture that encourages a strong research teaching nexus is being cultivated. Teaching Assistants (TAs) serve a very important purpose as learning resource multipliers at NUS and CDTL prepares graduate students to serve effectively as TAs.

At the conference presentation, the evolution of CDTL in response to (and in anticipation of) changes in higher education landscape will be highlighted. A glimpse into the comprehensive nature of work done by our Centre will also be described.

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Saturday 7th February 2015, 2.15pm

Theatre, Level 1, University Cultural Centre

SYMPOSIUM 11 – CARING FOR STUDENTS, TRAINEES AND TEACHERS

Wellness of Trainees, Preventing Burnout

See Kay Chong, Singapore

Faculty Development Holds the Key to Prevent Burnout in Medical Schools

T.Thirumoorthy, Singapore

Enhancing Your Teaching

Ivan Silver, Canada

Hugging or Helping: The Importance of Resilience in Personal Development

Trudie Roberts, United Kingdom

S11

Saturday 7th February 2015, 2.15pm
Theatre, Level 1, University Cultural Centre

WELLNESS OF TRAINEES, PREVENTING BURNOUT

See Kay Choong

Consultant, Department of Respiratory & Critical Care Medicine, National University Hospital, National University Health System, Singapore

Psychological burnout (emotional exhaustion, cynicism, diminished sense of personal accomplishment) and stress affect the health and performance of medical professionals. Patient care and safety are therefore indirectly affected. Multiple studies have shown that burnout and stress are prevalent in the West, and we will review recent information for the Asian context. We will also discuss the contributory factors for burnout and stress, and seek solutions to mitigate these problems.

S11

Saturday 7th February 2015, 2.15pm
Theatre, Level 1, University Cultural Centre

FACULTY DEVELOPMENT HOLDS THE KEY TO PREVENT BURNOUT IN MEDICAL SCHOOLS

T.Thirumoorthy

Associate Professor, Duke-NUS Graduate Medical School, Singapore

Burnout, described as a syndrome of emotional exhaustion, depersonalization, and perceived low personal accomplishment, is common work related condition among healthcare professionals. Surveys among medical students estimate that approximately 68% of medical students experience emotional distress and 50% burnout.

The burnout syndrome is characterized by losing enthusiasm for work (emotional exhaustion), treating people without consideration (depersonalization), and having a sense of low self-efficacy and that work is no longer meaningful (low personal accomplishment). In medical students this has been associated with Unprofessional behaviour such as academic and clinical dishonesty; Lack of altruism; Serious thoughts of dropping out; Suicidal ideation; Poor mental health and depression.

Factors that determine whether medical students are vulnerable or resilient to burnout include: Personality traits, Personal health and wellness and Performance in academic and clinical arenas.

Major problems with not dealing appropriately with medical student burnout is the fear of seeking help for fear of stigmatisation and risk of maladaptive strategies including unprofessional behaviour, self-medication and substance abuse. There are concerns that unresolved issues related to burnout in students would lead to unprofessional behaviour and sub-optimal care of patients when they graduate to being as physicians.

Faculty working together with students, in a collaborative educational environment can be empowered to take on the roles as counsellors, skills- coaches, mentors and exhibit positive role models so as to detect and manage problems of burnout and build resilience to stress among medical students.

S11

Saturday 7th February 2015, 2.15pm
Theatre, Level 1, University Cultural Centre

ENHANCING YOUR TEACHING

Ivan Silver

Vice-President, Education, Centre for Addiction and Mental Health; and Professor, Department of Psychiatry, Faculty of Medicine, University of Toronto, Canada

Faculty developers at medical schools have a responsibility to provide sufficient support to teachers to enable them to fulfill their teaching mission. This responsibility is growing as new paradigms for conceptualizing teaching such as competency and milestones based education and new teaching methods such as flipped classrooms, simulation and virtual environments are rapidly evolving. Failing to meet the teaching needs of faculty can lead to demoralization of both front-line teachers and faculty developers. The use of learning theories such as social constructivism and situated learning can help faculty developers appropriately plan and implement timely teaching support programs, and lead to efficiencies within environments with scarce faculty development resources and limited availability of faculty to engage in faculty development. The use of faculty development methods such as communities of practice, tacit knowledge sharing within groups, work-based learning and individual mentorship can all contribute to the effective delivery of teacher training and contribute to morale building, increased self-efficacy and an esprit de corps for the teaching mission at medical schools.

S11

Saturday 7th February 2015, 2.15pm
Theatre, Level 1, University Cultural Centre

HUGGING OR HELPING: THE IMPORTANCE OF RESILIENCE IN PERSONAL DEVELOPMENT

Trudie Roberts

Professor of Medical Education, Director of the Leeds Institute of Medical Education, and Honorary Consultant Physician, Leeds Acute Hospital Trust, United Kingdom

'People are always blaming circumstances for what they are. I don't believe in circumstances. The people who get ahead in this world are the people who get up and look for the circumstances they want and if they can't find them, make them.'

- George Bernard Shaw

When I ask colleagues what characteristics are most important for future doctors the vast majority include resilience in their list (in the UK they usually also include a sense of humour but that is probably related to working in the NHS). When psychologist Angela Duckworth studied people in various challenging situations, she found:

One characteristic emerged as a significant predictor of success. And it wasn't social intelligence. It wasn't good looks, physical health, and it wasn't IQ. It was grit.

So how important is resilience to success in medicine? If it is important, how do we support our students in developing resilience and how useful or otherwise are current student support programmes?

Saturday 7th February 2015, 2.15pm

Function Room 2, Level 2, University Cultural Centre

**SYMPOSIUM 13 – STANDARDIZING SIMULATION PROGRAMES &
THE USE OF STANDARDIZED PATIENTS TO ACHIEVE THIS**

An Overview of Accreditation Standards for Simulation Centres

Suresh Pillai, Singapore

The Potential for Standardized Programming across Simulation Centres and National Boundaries

C. Donald Combs, USA

Proficiency Based Progression Using Standardised Patients

George Shorten, Ireland

**Use of Standardised Patients in Simulation Training Programs of a Regional Acute Hospital in Hong Kong:
Cost-Effectiveness and Future Development**

Eric So, Hong Kong S.A.R.

S13

Saturday 7th February 2015, 2.15pm

Function Room 2, Level 2, University Cultural Centre

AN OVERVIEW OF ACCREDITATION STANDARDS FOR SIMULATION CENTRES**Suresh Pillai**

Associate Professor and Senior Consultant, Emergency Medicine Department, National University Hospital, National University Health System, and Director, Centre for Healthcare Simulation, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

The need to ensure standardization of Simulation Centers and simulation curricula is borne out of the fact that the educational outcomes of any simulation program share a common vision in improving patient outcomes. How this is achieved will be dependent on the type of simulation modality we use; whether it is a task-trainer, high-fidelity simulation manikin, standardized or simulated patient, computer-based simulation or even virtual reality. Through standardization in simulation technology, simulation methodologies and assessment we can collectively ensure measurable items that would lead to constant quality improvement processes ultimately resulting in improved patient safety. The current accreditation standards for simulation centers are presented here with reference to recognized standards and what each standard entails.

S13

Saturday 7th February 2015, 2.15pm

Function Room 2, Level 2, University Cultural Centre

THE POTENTIAL FOR STANDARDIZED PROGRAMMING ACROSS SIMULATION CENTRES AND NATIONAL BOUNDARIES

C. Donald Combs

Vice President and Dean, School of Health Professions, Eastern Virginia Medical School, USA

The number of simulation centres worldwide continues to grow, as does the demand for both human and computer-based simulation in medical and health professions education. Yet, the current mode of operation of each simulation centre and among networks of centres remain largely idiosyncratic, that is – each centre develops, implements and evaluates simulation training events in its own way. That is admirable in terms of customization to client needs that is achieved. However, it is costly and not linked to objective standards or standards agreed to by multiple organizations that share a common interest – such as CPR training, ATLS training, and Fundamentals of Laparoscopic Surgery are examples outside of the simulation world. This panel discusses the potential benefits of collaboration through networks of simulation centres with common interests and training/assessment needs as well as steps that could be taken to achieve a reasonable level of standardization-in delivery, in implementation, and in evaluation. The concept is not that all programs delivered by a simulation center should be standardized, but that a set of core programs could be standardized, thus facilitating assessment research, return on investment, and program quality.

S13

Saturday 7th February 2015, 2.15pm

Function Room 2, Level 2, University Cultural Centre

PROFICIENCY BASED PROGRESSION USING STANDARDISED PATIENTS

George Shorten

Director, the ASSERT for Health Centre, University College Cork, Ireland

It is proposed that standardised patients can provide a valuable resource to developing and implementing proficiency-based progression (PBP) 1 for simulation based training of health professionals. Current methodologies entail definition of a proficiency standard for a task or skill using objective and validated “metrics”. Learning, training and assessment are based thereafter entirely of a precise definition of proficiency and an objectively established standard. This represents a paradigm shift to the training practices of the past century. Such changes are not just desirable but necessary and acknowledged as such by training bodies, learned societies and governments around the world. In 2014, the “why” is beyond dispute; the question to be addressed is “how”.

Many simulation training centres around the world provide a complete set of education and training resources including internal and external high fidelity simulation suites (including operating theatres, mock ward and standardised patients), e-learning laboratories and multifunctional laboratories suitable for cadaveric and part task training.

One of the implementation challenges is the deficit in the evidence base necessary to inform and improve the training delivered.²

It is proposed that standardised patients may contribute to addressing this deficit and the implementation gap (for proficiency based progression) which exists by:

1. Extending the range of PBP to nuanced and subtle interpersonal skills (vs technical skills)
2. Rendering more complex and adaptive scenarios relevant to higher functioning doctors and to “clinical wisdom”
3. Participating in the development of metrics as researchers and stress testers of operational definitions.

References.

1. Gallagher AG, Satava RM, Shorten GD. Measuring surgical skill: a rapidly evolving scientific methodology. *Surg Endosc.* 2013 May 27(5):1451-5.
2. Institute of Medicine. *Graduate Medical Education That Meets the Nation's Health Needs* 29 July 2014.

S13

Saturday 7th February 2015, 2.15pm

Function Room 2, Level 2, University Cultural Centre

USE OF STANDARDISED PATIENTS IN SIMULATION TRAINING PROGRAMS OF A REGIONAL ACUTE HOSPITAL IN HONG KONG: COST-EFFECTIVENESS AND FUTURE DEVELOPMENT

Eric So

Associate Director, Multidisciplinary Simulation & Skills Centre (MDSSC), Queen Elizabeth Hospital, Hong Kong S.A.R.

In Hong Kong, standardised/simulated patients (SPs) have been involved in College OSCE examinations for almost 20 years. Its use in simulation training program has a much shorter history. With a history of less than 4 years, Multidisciplinary Simulation and Skills Centre (MDSSC) of Queen Elizabeth Hospital (Hong Kong) is heavily involved in simulation based training programs for interns, residents, other healthcare professionals and multidisciplinary teams.

One of the commonest contributory factors of critical incidents in our hospitals is communication errors. A lot of complaints made are against the attitudes and communication style of healthcare workers. To enhance the understanding and empathy of healthcare workers with patients during the reflective process of experiential learning in simulation training, we have employed professional actors in our simulation programs. We believe feedbacks from medical experts and SPs are complementary, comprehensive and more effective. While the medical expert feedback focus on clinical decision, skills and technical performance, the SP feedback is important to provide powerful information on impression left with SP by the participant which is related to interpersonal and affective domains.

After the programs have run for a few years, time has come for the center to evaluate the type of cooperation with this category of SPs to optimize cost-effectiveness and its development potential in the programs.

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Hans M. Bosse, Jobst-Hendrik Schultz, Martin Nickel, Thomas Lutz, Andreas Moltner, Jana Junger, Soren Huwendiek, Christoph Nikendei. The effect of using standardized patients or peer role play on ratings of undergraduate communication Training: A randomized controlled trial. Patient Education and Counselling 2012 (87): 300-306.

Saturday 7th February 2015, 2.15pm

VIP Lounge, Level 2, University Cultural Centre

SYMPOSIUM 14 – DEVELOPING AND NURTURING CLINICIAN SCIENTIST

Stimulating Students to Become Clinical Scientist

Albert Scherpbier, The Netherlands

How I Became a Clinician Scientist and Why You Should Too

Dan Yock Young, Singapore

Developing and Nurturing Clinician Scientists: The Singapore Way

Allen Eng Juh Yeoh, Singapore

S14

Saturday 7th February 2015, 2.15pm

VIP Lounge, Level 2, University Cultural Centre

STIMULATING STUDENTS TO BECOME CLINICAL SCIENTIST

Albert Scherpbier

Professor of Quality Promotion in Medical Education; and Dean of the Faculty of Health, Medicine and Life Sciences, Maastricht University, The Netherlands

Shortage

All over the world people have expressed their concerns about the shortage of clinical scientists. This development can have influence on the whole research chain “from molecule to patient” and for translational research. There are several reasons for this development and –of course– they are different in different countries and cultures:

- Perception about career possibilities;
- Research is perceived as not attractive;
- Limited working hours and time for family;
- Competition in research;
- Medicine is not perceived as scientific study.

Solutions

In medical programmes we should pay enough attention to research and students need to meet researchers early in the programme to have role models and to get the right perspective on future possibilities. That means also that it should be attractive for researchers to teach and to have contact with students.

In Maastricht University we experienced 10 years ago that there was a tendency that researchers felt them self too important to teach or did not have time to teach. We changed our career policy and made clearer what we expect from our staff. We also extended the time for research in the 6 year programme. The other thing we did is that we explained that the more students we have, the more money there is for research. Nowadays the issue is gone and researchers also found out, how attractive is to meet students at young age and to spot talents early.

We also developed a new “graduate entry “programme (4 year) for which we select nonmedical bachelor students. In this programme much more time is devoted to research then in a traditional medical programme. Staff and students are very enthusiastic about this programme. The different background from the students works out very well in the PBL system we have. More the half of these students go into research after the programme.

S14

Saturday 7th February 2015, 2.15pm

VIP Lounge, Level 2, University Cultural Centre

HOW I BECAME A CLINICIAN SCIENTIST AND WHY YOU SHOULD TOO

Dan Yock Young

Head, Department of Medicine, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

There is no formal definition to the term clinician scientist. It generally refers to a career track where a clinically trained healthcare professional undertakes some degree of research work to translate science into clinical practice and thereby, advance the frontiers of medicine. It has been argued that research has always been an integral part of medicine and in fact, the search to understand disease better, treating illness more effectively and constantly striving to improve one's provision of care is a fundamental part of a doctors calling.

Human civilisation is at a transformative stage where the availability of information has far exceeded our capability to understand, utilise and apply this knowledge. In this rapidly changing world driven by advances in technology, clinicians need to have a mindset change and a paradigm shift in embracing the opportunities that are available to transform healthcare. I will share my journey of how I became a clinician scientist and argue that the art and science of asking questions and attempting to answer them should be integral to medical training.

S14

*Saturday 7th February 2015, 2.15pm**VIP Lounge, Level 2, University Cultural Centre***DEVELOPING AND NURTURING CLINICIAN SCIENTISTS: THE SINGAPORE WAY*****Allen Eng Juh Yeoh****Viva-Goh Foundation Associate Professor in Paediatric Oncology, and Chairman, Clinician Scientist Unit, National University Health System, Singapore*

Clinician Scientists are the elusive beings that many programmes try to develop and nurture with variable success. As biomedical research progress to be increasingly complex, Clinician Scientists form the important bridge that links bench to the bedside and vice versa. Clinician Scientists form the backbone of the highly successful research models in US and Europe.

Medicine is an excellent breeding ground for scientific discovery. Firstly doctors are constantly faced with medical problems that always in need of better ways to treat them. For example although coronary stenting can improve reperfusion, it is still prone to restenosis that demands for better stents. Secondly medical practice is always investigative: a patient presents with a series of signs and symptoms that require a doctor to synthesise a differential diagnosis and order a series of investigations to test the hypothesis. This is then reiterated until the diagnosis is arrived and treatment is given. Even then a patient may respond better to one drug compared to an alternative. That also requires thoughts and resynthesis.

Singapore has been investing intensively in biomedical research since the year 2000. Talent development programmes to develop and nurture clinician scientists have been steadily increasing both at the hospital and national levels. As an academic health system, NUHS has been investing heavily in Clinician Scientists. The Clinician Scientist Unit helps to organize hands-on-workshops to help introduce clinicians to important and new research tools. Its “pitch-for-funds” programme help junior doctors with interesting ideas pitch for small start-up grants to prove their hypotheses. NUHS Clinician Scientist Programme helps budding clinician scientists to build their research to pitch for national programmes.

SingHealth cluster together with the Duke-NUS Graduate Medical School has the Khoo's Scholar Programme. Funded by a philanthropic grant from Khoo Teck Puat Foundation, the Khoo's Scholar programme brings clinicians interested in research through fortnightly meetings to develop their ideas, provide seed funding and protected time to carry out their investigation. The NHG cluster has the Clinician Leadership in Research training where a series of courses help equip clinicians with skills for research.

At the national level, National Medical Research Council (Singapore) funds training of clinicians through the Masters in Clinical Investigation course. Clinician scientist with established track record in research will be funded through the NMRC Talent Development programme to provide both protected time to do research and funds in 3 or 5 year tranches. Through these efforts, Singapore is witnessing a surge in Clinician Scientists numbers. The speaker will share ways how Singapore achieves this milestone.

Saturday 7th February 2015, 5.00pm

Hall, Level 1, University Cultural Centre

INNOVATIONS IN CONTINUOUS PROFESSIONAL DEVELOPMENT

Lawrence Sherman

Senior Vice President, Educational Strategy, Prova Education, USA

CPD and CME provide medical educators with opportunities to impact the longest portion of the professional careers of their learners - the time following formal training. A scan of the available options for CME and CPD demonstrate that whilst opportunities for incorporation of innovative learning strategies, enhancing and developing personal learning networks and incorporating technology, team-based learning and global best practices, they are not often utilized. And when they are attempted, they do not always succeed. This plenary presentation will provoke thought and discussion regarding where we are, where we should be and where we are heading in not only physician CPD, but in the interprofessional educational space as well.

C31

Sunday 8th February 2015, 9.00am – 12.30pm

Learning Room #03-04, Level 3, MD6

National University of Singapore

MOBILE LEARNING FOR HEALTHCARE EDUCATORS

Vaikunthan Rajaratnam, Chaoyan Dong and Elise Lee

Singapore

Workshop Description

A hands-on workshop that will help you design a mobile learning course using current technology and platforms to be delivered on various devices to facilitate mobile learning among your learners. This workshop will be facilitated by medical professionals and educators familiar with mobile technology. At the end of this workshop you will have the skills to design, develop and deploy a learning program on mobile devices in a cost effective manner.

IF you are looking to find opportunities for mobile learning in your workplace OR Understand the functionalities of a mobile web and mobile app OR Create a basic mobile learning program and deploy it for your learners, then this is for you.

Technical Requirements: Participants will need to bring a laptop (PC or Mac) and a mobile device (Android phone, iPhone, or any tablet) to the workshop. It is critical to have the most up-to-date browser on your laptop. Google Chrome, Firefox, or Internet Explorer 9 are all recommended.

A31

Sunday 8th February 2015, 8.00am – 10.00am

Learning Room #03-07, Level 3, MD6

National University of Singapore

LEARNING TEAMWORK IN THE CLINICAL SETTING: DEVELOPING EPAS, MILESTONES AND ASSESSMENT TOOLS

¹Peter Harris, ²Asela Olupeliyawa

¹Australia, ²Sri Lanka

Workshop Description

Working effectively with the health care team has been recognised as a key exit outcome for medical students. Several educational strategies including collaborative learning, interprofessional education, and simulation-based education have been used in the development of this outcome. Situated learning through work-based activities in particular has much potential to overcome the challenges of opportunistic teaching and assessment. However, there has not been much focus on how this outcome can be systematically learnt and assessed in the clinical setting. A recent approach to the development of outcomes in clinical education has been the framework of EPAs and milestones (ten Cate & Scheele, 2007). Workplace-based assessment (WBA) has been recognised as an important approach to achieve EPAs and milestones. Recent WBAs have focused on the outcome of teamwork as well (Whitehouse et al, 2007; Olupeliyawa et al, 2014). Identifying milestones and appropriate WBAs on the outcome of teamwork for medical students' curricula would be useful to medical educators.

This workshop will introduce the participants to the principles of EPAs, milestones, and workplace-based assessment with emphasis on the outcome of teamwork. It will take participants through the steps of systematically developing EPAs and milestones for medical students for the outcome of teamwork. Participants will then review the usefulness of different WBAs for these EPAs and milestones in diverse clinical settings including in-ward care, emergency care, and primary care. Finally they will practice assessor training activities including calibration exercises.

Workshop outcomes

At the end of the workshop participants would be able to:

- Recognise the concept of EPAs and milestones in medical student education
- Identifying relevant milestones in the outcome of teamwork
- Explore various workplace-based assessment tools focusing on the outcome of teamwork
- Evaluate how and when to use these assessment tools for the identified EPAs/ milestones
- Practice calibration exercises and other faculty development initiatives for these WBAs

Who should attend

This workshop will be useful for health care professions teachers and administrators. In particular, this workshop targets those who are involved in or are planning to be involved in clinical education and student assessment.

References

ten Cate, O., & Scheele, F. (2007). Viewpoint: Competency-Based Postgraduate Training: Can We Bridge the Gap between Theory and Clinical Practice?. *Academic Medicine*, 82(6), 542-547.

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Olupeliyawa, A. M., O'Sullivan, A. J., Hughes, C., & Balasooriya, C. D. (2014). The Teamwork Mini-Clinical Evaluation Exercise (T-MEX): A Workplace-Based Assessment Focusing on Collaborative Competencies in Health Care. *Academic Medicine*, 89(2), 359-365.

A32

Sunday 8th February 2015, 8.00am – 10.00am

Learning Room #03-01P, Level 3, MD6

National University of Singapore

FLIP YOUR CLASS. WHAT WORKS BEST?

Satya Gollamudi, Reshma Merchant

Singapore

Workshop Description

This workshop is about empowering faculty to utilize technology to ‘flip’ their classroom to allow more contact time in classroom facilitating discussion amongst students rather than delivering the traditional lecture. In the flipped classroom model, videos and assessment created using various different platforms can be sent to students or residents prior to lessons. In the classroom, students can spend more time solving problems and doing group work with greater peer to peer interaction. In this workshop participants will learn the concept of flipped classroom model and how it can be used to teach medicine. This workshop also facilitates the participants to have hands on experience to make videos and learn what best suits our current Gen Y students. The apps that are available to create videos for this model will be discussed and participants can try a few apps during this workshop. The workshop will be divided into 4 sessions.

Session – 1: In this session, the practical aspects of flipped classroom model will be presented to the participants. This will be in the form of presentation, feedback on various different type of video’s used and active interaction with the participants. All the participants will be trained briefly to use a simple app to create a video on a topic. Different type of e-assessment mode will also be discussed.

Session – 2: Participants will be divided into groups. Each group will choose a topic that they are comfortable with to make videos and will plan on facilitating the classroom session on the same topic. Facilitators will provide materials for the topics. All groups will be trained on how to use the various assessment tool and will be required to create assessment for their session.

Session – 3: All groups present their videos and feedback will be provided. Brain storming with question and answer session on flipped classroom model will be done. A sample video topic and classroom session done by the facilitators will be shared with the participants.

Session – 4: Some of the apps that are available to make the videos will be shown and participants can try these simple apps during this session.

Workshop outcomes

At the end of the workshop participants would be able to:

- To make simple videos for the flipped classroom model.
- Facilitate the classroom session after students watch these videos
- Learn about some of the apps that are available to make the videos.
- Develop different types of assessment tools that can be implemented during the classroom session for this model.

Who should attend

Any health care professional who is involved in teaching medical students, residents and fellows/senior residents can attend this workshop.

Friday 6th February 2015

Foyer, Level 2, University Cultural Centre

12.30pm – 3.00pm (Poster Judging)

BEST ABSTRACT FOR POSTER PRESENTATION FINALISTS

- BP01** **Interprofessional Collaboration: Effects On Interprofessional Education Development**
Alvin Lum Wai Mun, Singapore
- BP02** **What Kind of Temperament Do Medical Students Have?**
Yera Hur, South Korea
- BP03** **Introduction of A Half-Day First Aid Course Into The Phase I Curriculum of Yong Loo Lin School of Medicine, NUS In Academic Year 13/14**
Ang Shu Shing, Singapore
- BP04** **Diversity In Medicine And Health (DIMAH): Supporting Teachers And Faculty**
Nisha Dogra, United Kingdom
- BP05** **Structured Teaching of Geriatric Medicine For Final Year Medical Students In A Student Internship Program In Singapore: Results of Qualitative Self-Assessment Questionnaires On The Competency Levels Before And After Undergoing The Teaching Program**
Chew Teong Huang, Singapore
- BP06** **Recall of Pharmacology Knowledge By Graduates of Three Medical Schools In Riyadh, Saudi Arabia**
Ali Ahmed Mustafa Ali, Saudi Arabia
- BP07** **A Survey For Improving Medical Humanities - Taking Cathay General Hospital In Taipei As An Example**
Chen Shu-Chen, Taiwan
- BP08** **Feasibility of Student-Generated E-Learning Content Authoring As And For Learning In Medical Education**
Raoul Breugelmans, Japan
- BP09** **Changes In The Staff Development Model of The 'Teaching On The Run' Program Improves Access And Sustainability**
Fiona Lake, Australia
- BP10** **Interprofessional Collaboration: What Matters More - Shared Leadership Or Shared Memory System?**
Lim Wee Shiong, Singapore
- BP11** **Cross-Cultural Inter-Professional Faculty Development In Japan: Results of An Integrated Workshop For Clinical Teachers**
Jeffery Wong, USA
- BP12** **Using Engagement Survey Data To Identify Faculty Needs And Drive Workplace Decision-Making**
Valerie Dandar, USA
- BP13** **Validation of The Clinical Shared Leadership Scale For Interprofessional Team Meetings In Geriatrics Care**
Ong Yu Han, Singapore
- BP14** **The Use of Social Media In Education Among Medical Students, Saudi Arabia**
Anas Khaleel Alsuraihi, Saudi Arabia
- BP15** **Effect of Post Graduate Paediatric Training From A Newly Developed Preparatory Course For A High Stake Intermediate Examination**
Rebecca David, Singapore

- BP16** **Role Play Or Standardised Patients In Communications Training? - Attitudes And Perceptions of Dental Undergraduates**
Wong Mun Loke, Singapore
- BP17** **Are The Swans Still Exhausted? Change Process Adds Additional Stress To Faculty Whilst Students' Shine. Lessons Learned During The Introduction of A "Flipped Classroom" Approach To Clinical Skills Teaching.**
Kathy Brotchie, Australia
- BP18** **Implementing Standard Setting Into A Postgraduate Family Medicine Examination – Process & Issues**
Chan Sook Ching, Malaysia
- BP19** **Intern To Fully Licensed Medical Practitioner: A Teaching Intervention To Improve Perceived Readiness For Transition**
Thomas Kilner, United Kingdom
- BP20** **Self-Assessment By Residents Using The R-I-M-E Evaluation Framework**
Teoh Chia Meng, Singapore

BP01

INTERPROFESSIONAL COLLABORATION: EFFECTS ON INTERPROFESSIONAL EDUCATION DEVELOPMENT

¹Lum AWM, ²Goh YL, ³Wee JMBJ, ⁴Tan CSM, ⁵Hendriks MM, ⁶Chiam PC, ⁴Ong HBC, ⁵Huang HH, ³Tan DPT

¹MH-GP Partnership Programme, Graduate Diploma in Mental Health, Institute of Mental Health, Singapore, ²Department of General Psychiatry, Graduate Diploma in Mental Health, Institute of Mental Health, Singapore, ³MH-GP Partnership Programme, Institute of Mental Health, Singapore, ⁴Education Office, Institute of Mental Health, Singapore, ⁵Case Management Unit, Institute of Mental Health, Singapore, ⁶Education Director's Office, Graduate Diploma in Mental Health, Institute of Mental Health, Singapore

Aims

Interprofessional collaboration (IPC) in healthcare has increasingly been advocated as a means of improving patient outcomes and effectiveness of care (Chan A. K., BPharm and Wood V. 2010; McPherson K, Headrick I, Moss F. 2001). However as such collaboration was usually complex, there was an intuitive assumption that interprofessional education (IPE) would help to enable effective collaboration as it provides a platform for individuals from different professions to "learn about, from and with each other" (WHO, 2010). This led to a plethora of studies on IPE but none managed to conclude that IPE had resulted in effective IPC and improved patient outcomes. Therefore the team embarked on a research study aimed at evaluating if the successes of IPC in the GP-Partnership Programme (GPPP) could contribute to the development of relevant IPE training programmes or IPE modules to enhance current training programmes. The study's hypothesis was that just as the intent for IPE is to foster improved IPC, likewise the success of existing IPC can contribute to the development of a relevant IPE.

Methods

The study employed a mixed methods evaluation approach. A Questionnaire was sent to the GPPP's GP Partners, two focus group discussions (FGDs) were conducted, and a plot of correspondence between GP Partners and mental health professionals in the GPPP was done.

Results

From the study, four broad themes were identified as contributing factors to IPC within the GPPP. The themes were "Mutual Benefit", "Support Network", "Communication" and "Understanding Different Roles and Limitations". The study also identified specific patterns of communication between the mental health professionals and the GPs, during the referral process and follow-up of patients in the community. More specifically, the team identified possibilities that could be developed for IPE within the Graduate Diploma in Mental Health (GDMH) Programme

These possibilities were:

1. A large number of GPs who undertake the GDMH join the GPPP as GP Partners upon their graduation. Therefore as future partners, it may be useful to introduce these GPs to the various mental health professionals within the GPPP, while they are undertaking GDMH. This would provide the GPs with a better understanding of the different roles and limitations of the mental health professionals in GPPP in managing care in the community, as well as allow for face-to-face engagement among them.
2. Many GPs take up the GDMH as they have an interest in psychiatry and are keen to be part of the community mental health care network. Furthermore, the participants of the FGDs have also shared that it would be beneficial to have an understanding of the resources available for them as they treat patients with mental health. Therefore, in addition to the academic lectures, it may be useful to include professional networking opportunities and learning sessions to update on resources available to GPs managing patients with mental illness in the community as part of post-graduate training.

Conclusion

The study has identified some components that have possibly contributed to the positive IPC within the GPPP and these findings appear to prove the study's hypothesis.

BP02

WHAT KIND OF TEMPERAMENT DO MEDICAL STUDENTS HAVE?¹Hur Y, ²Kim S, ²Cho AR, ³Park JH

¹Department of Medical Education, College of Medicine, Konyang University, Korea, South, ²Department of Medical Education, College of Medicine, The Catholic University, Korea, South, ³Department of Medical Education, College of Medicine, Ulsan University, Korea, South

Aims

1) What are the distribution of types of main temperament in medical students and ordinary people? 2) Is there any difference in main temperament by gender? 3) Does the main temperament of medical students differ from that of ordinary people?

Methods

A total of 232 students in a medical college (from 2011 to 2013) and 1170 people who attended the Geometry Psychology Workshop in Korea (from 2010 to 2014) took the Korean version of the Geometry Psychology Assessment (GPA). The GPA is based on the Hippocrates temperament theory and geometry psychology theory and analyses 4 types of temperament types (circle, triangle, square, and curve, denoted "S"). GPA consists of 48 objective items, and from projective drawings of the subjects, we can interpret the types of GP that tell us how we feel at present and specific psychological characteristics.

Results

1) With regard to main temperament in medical students, 127 were circle type, 69 were S, 21 were triangle, and 15 were square type. of general people, 681 were circle type, 202 were triangle, 188 were S, and 99 were square type. 2) There was no difference in main temperament between medical students and general people by gender. 3) Differences were observed in the distribution of types between medical students and ordinary people (Pearson $\chi^2=29.31$, $p<.001$). In particular, the ratio of triangle type (characteristics: leadership, energy, initiative) was high in general people compared with students (Pearson $\chi^2=9.76$, $p<.01$), and that of S type (characteristics: artistic, flexible, sensitive) was high in medical students (Pearson $\chi^2=24.18$, $p<.001$).

Conclusion

Many medical students tend to be triangle type, possessing leadership and initiative, and are sensitive and artistic people, as well. Individual temperaments can be useful in understanding medical students and used in student counselling or for developing mentoring programs.

BP03**INTRODUCTION OF A HALF-DAY FIRST AID COURSE INTO THE PHASE I CURRICULUM OF YONG LOO LIN SCHOOL OF MEDICINE, NUS IN ACADEMIC YEAR 13/14.**

¹Ang SS, ¹Ahmad M, ¹Wong N, ²Pillai S

¹Centre for Healthcare Simulation, Yong Loo Lin School of Medicine, National University of Singapore, Singapore,

²Department of Emergency Medicine, National University Hospital, National University Health System, Singapore

Aims

Phase I students from previous years provided feedback that they did not receive any first aid training and felt inadequate as medical students to help should they encounter situations where someone require first aid. The school introduced a half-day First Aid Course in Academic Year 13/14 and this study is to analyse students' perception regarding the value of such training in the first year of their medical undergraduate curriculum.

Methods

The students underwent a 2-hour didactic session covering introduction of First Aid, disorders of the respiratory, circulatory systems, unconsciousness, bones, joints and muscles injuries, burns and scalds, foreign bodies, bites and stings. Subsequently, they spent another 2 hours of practical session on wound care, bandaging of different injuries, handling and transportation of casualties. The trainer-student ratio is 1:7. The training was held at Centre for Healthcare Simulation, NUS and conducted by certified First Aid trainers, many of whom are nurses.

A Kirkpatrick level one evaluation was done to obtain student perceptions on their learning. A 5-item questionnaire was developed and administered at the end of the course. The questionnaire included questions on effectiveness of the teaching and their confidence level in providing first aid after completion of the course. The survey consists of 5 questions with a 4-point Likert scale (from strongly agree to strongly disagree). 275 out of 300 students (response rate: 92%) participated in the survey.

Results

All the students agreed or strongly agreed that the learning objectives of the course were met and 99.6% of them agreed or strongly agreed that the practical sessions are useful in augmenting their learning of first aid. 98.6% of the students felt more competent and confident in providing first aid after completing the course. 98.9% of the students rated 3 or above that the course is essential in their training to be a healthcare provider. The 3 most commonly received qualitative feedback were:

1. More hands-on or interactive session, less lectures
2. Provide pre-course reading materials or lecture slides
3. Explanation on the rationale for the different steps taken in providing first aid

Conclusion

Students found the course to be critical especially in the earlier years of their undergraduate education to becoming a healthcare provider. After the course, they feel more confident in providing first aid to anyone who needs it. Taking into consideration that there may be too much time spent on lectures, the format of the course may be adjusted next year to further enhance and optimise students' learning.

BP04

DIVERSITY IN MEDICINE AND HEALTH (DIMAH): SUPPORTING TEACHERS AND FACULTY**¹Dogra N, ²Turner M, ³Kelly M, ³Rowlands A, ⁴Leftwick P, ⁵Ertubey C, ⁶Singh D**

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Aims

By 2010 little progress had been made in the UK with respect to the development of diversity teaching in the medical undergraduate curriculum. Barriers included the lack of clarity about what diversity teaching actually is, problems with engaging students in learning related to diversity, assessment of diversity, the lack of faculty buy in for diversity education and those with the responsibility for teaching diversity feeling isolated (Dogra, 2012).

Methods

A national working group, Diversity in Medicine and Health (DIMAH), was established with the following remit:

- Clearly define diversity and what diversity education is and also what it is not
- Curriculum Design - Identify aims and learning outcomes for diversity education, and how these will be delivered and assessed.
- Developing some resources for students and teachers which would include an outline “curriculum” (including a guide for aims and Learning outcomes)
- Identifying ways of gaining Institutional Support
- Developing and sharing materials to support staff and faculty development
- Develop opportunities for inter-professional learning

Membership

There is currently representation either directly by attendance or through being part of the group of 17 medical schools, three health faculties at universities without medical schools and an additional member all within the UK.

Results

The following outputs from DIMAH offer support for faculty development

1. Consensus achieved regarding the definition of diversity, the remit of diversity education and suggested minimum outcomes.
2. Consensus on overarching principles to support curricula and faculty development
3. Summary table which provides guidance as to how the learning outcomes might be taught and assessed as well as the faculty development that might be needed with the following headings: Outcome, Where in curriculum to deliver?, How to deliver?, Assessment, Faculty issues, Notes/comments and reflections
4. Guidance on how diversity guidance can be integrated into the curriculum (both vertically and horizontally)
5. Range of examples of practice
6. A website has been developed www.dimah.org.uk to facilitate collaborative working and dissemination of practice and encourage evaluation and research
7. The group is currently working on the production of an Association of Medical Education in Europe guide to support teachers
8. Liaison with key stakeholders in medical education (GMC, Council of Deans of Medical Schools)

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9. The group is also involved in a European wide initiative C2ME.

Conclusion

In sensitive or complex areas a national network may be even more necessary to ensure good practice and implementation of policy. Specific guidance by governance bodies may also be helpful. There is yet no clarity on the importance of significant variation in the learning opportunities on diversity issues offered to medical and healthcare students in the UK that is still present. DIMAH as a group working in collaboration has been successful in developing guidance in key areas of diversity education such as curriculum development and evaluation that in turn has supported both teachers of diversity and wider faculty. We look forward to developing international links to further expand this work.

Reference:

Dogra N (2012) Cultural diversity teaching in the UK - update and ways forward. Learning in teaching medicine, dentistry and veterinary medicine, Spring, 01.23; 4-6

BP05

STRUCTURED TEACHING OF GERIATRIC MEDICINE FOR FINAL YEAR MEDICAL STUDENTS IN A STUDENT INTERNSHIP PROGRAM IN SINGAPORE: RESULTS OF QUALITATIVE SELF-ASSESSMENT QUESTIONNAIRES ON THE COMPETENCY LEVELS BEFORE AND AFTER UNDERGOING THE TEACHING PROGRAM

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Aims

The aim of the study was to assess the effectiveness of a structured teaching program in Geriatric Medicine for final year medical students in a teaching hospital in Singapore, which includes embedding of the student with ward-based teams, case-based tutorials, bed-side teaching, ambulatory care, geriatric day hospital and transitional care teaching sessions.

Methods

The study was carried out in Changi General Hospital, a 800 bedded teaching hospital in the East of Singapore. It is one of the 7 teaching hospitals partnered with Yong Loo Lin School of Medicine, NUS.

We administered a anonymous structured qualitative self-assessment questionnaire at the beginning and at the end of their 3 weeks clinical attachment, based on the 8 domains of the declared target competencies to be achieved by the final year medical students at the end of their Student Internship Program in Geriatric Medicine. These 8 domains are further sub-divided into a further 27 sub-domains. The students are then asked to assess their own competency levels for each of this sub-domains based on 3 levels: Nil, Some and Competent.

We then compared the "Before" and "After" groups in their self-rated scores (Nil/Some/Competent) overall and also in each of the 27 sub-domains using the χ^2 - square test. Null hypothesis is: "There is no difference in self-rated competencies before and after the Geriatric Medicine teaching program". The study was conducted in the academic year 2013-2014. A total of 9 Clinical Groups of final year medical students making up 58 individual students were surveyed.

The 8 domains assessed are as follows:

1. State how Frail, Older Patients differ from the Non-frail Middle-aged Patients
2. Describe the process of "Comprehensive Geriatric Assessment"
3. Perform a "Comprehensive Geriatric Assessment"
4. Describe the Principles Involved in the Management of Frail Older Patients
5. How to approach Geriatric Syndromes
6. Describe the Network of Community Services for Older Persons in Singapore
7. Identify Potential Hazards of Hospitalisation, Why They Happen and Strategies to Avoid Them
8. Appreciate Importance of Health Promotion, Successful Ageing and Screening

Results

Out of a total of 58 students, there was a response rate of 87.93% (51 students) for the "Before" study, and a 91.38% (53 students) for the "After" study. A total of 1376 and 1431 data items were collected respectively. There was only 1 data item which was unanswered in the "Before" study group (1376/1377).

Percentage responses collected at the start of the program are as follows:

23.33% (Nil), 73.40% (Some), 3.27% (Competent).

Percentage responses collected at the end of the program are as follows:

0.21% (Nil), 25.72% (Some), 74.07% (Competent).

Calculated p-values are < 0.05 for change from the baseline for each individual sub-domains and overall in total.

Conclusion

A 3 weeks structured teaching program in Geriatric Medicine, in the form of a Student Internship Program, can lead to measurable changes in the self-assessed competency levels in final year medical students in all domains. The processed data can then be used to further develop the teaching curriculum, methods and faculty.

BP06**RECALL OF PHARMACOLOGY KNOWLEDGE BY GRADUATES OF THREE MEDICAL SCHOOLS IN RIYADH, SAUDI ARABIA**

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Aims

A cross sectional study was performed for students who graduated from 3 medical Colleges in Riyadh, Saudi Arabia.

The aim of the study was to evaluate the recall of the basic pharmacology knowledge of the students who graduated from 3 different medical schools in Saudi Arabia.

Methods

A total of 70 students were recruited to the study after they signed an informed consent. All students filled in the forms of the study questionnaire. The questionnaire consisted of 10 multiple choice questions (MCQs) on basic knowledge of pharmacology. The students were required to recall right answers for the MCQs. Additionally; information about gender, medical school attended, year of graduation, training hospital or preparation for Board examinations such as USMLE or PLAB of the students was noted.

Results

Results showed that out of the 70 students, 10 were females and the rest were males. 41.6% of the participants graduated from traditional medical school whereas 58.4% had graduated from medical schools adopting the PBL curriculum. 28.9% of the participants scored less than 4 correct answers out of 10, 47.3% of them obtained a correct score of 4 to 6 out of 10 whereas 23.7% of the participants scored more or equal to 7 of the basic pharmacology questions. When the scores were correlated with other variables of the questionnaire, interesting findings were revealed. Genders, time since graduation, training rotation, type of college attended showed no significant correlation with the score. However, preparations for examination revealed a significant correlation with the score with a P value of 0.02.

Conclusion

The findings of the present study suggest that basic pharmacology knowledge is perceived as difficult subject and reforms are needed in the way basic pharmacology is taught to undergraduate medical students. Furthermore, students can only score (on recall) when they are preparing for an examination.

BP07

A SURVEY FOR IMPROVING MEDICAL HUMANITIES--- TAKING CATHAY GENERAL HOSPITAL IN TAIPEI AS AN EXAMPLE

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Aims

In Taiwan, Medical humanities education is valued in every medical school. But this curriculum is usually set up for junior medical students in the school. When senior medical students enter the hospital for clinical training, they mainly focus on patient care. With increasing seniority, they gradually become unconcerned from pressure. Therefore, their original enthusiasm has burnt out to be a doctor. Sometimes they even lose their ability to judge ethics. This aim of this study was to create empathy and Humanism for medical students.

Methods

Cathay General Hospital and Museum of Medical Humanities of National Taiwan University cooperated to design a medical humanities curriculum since August 2013. Once a month, Cathay General Hospital will send one team member to attend the medical humanities curriculum in Museum of Medical Humanities.

The curriculum comprises two parts, one is human evolution and health plans for aging society, the other is humanistic issue seminars in medical practice through role presentation. When the two parts finished, the teacher discussed with participants. The participants included clerk, intern and postgraduate year physicians (PGY).

The measurement was a structural questionnaire, and five-point Likert scales were used for assessment. We sent one questionnaire to 100 participants and the response rate was 73%.

Results

The results showed that the overall satisfaction score for the participants is satisfied (4 out of 5). Male and female was not significantly different in satisfaction.

Clerk, intern and PGY showed significant difference in satisfaction.

Participant's age was not significantly different in satisfaction.

Visiting museum time was not significantly different in satisfaction.

Conclusion

Medical humanities is important, for a doctor in addition to professional skills and knowledge. Museum of Medical Humanities is unique in Taiwan, it routinely holds special medical and cultural exhibitions and provides some medical humanities information for education.

This short-term curriculum let participants deeply impressed and feel satisfied, it will stimulate their awareness of humanities and promote their qualities of humanities.

BP08

FEASIBILITY OF STUDENT-GENERATED E-LEARNING CONTENT AUTHORIZING AS AND FOR LEARNING IN MEDICAL EDUCATION

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Aims

The advent of Web 2.0 presents opportunities for novel student-centred approaches to education. One such approach is to actively involve the student in the generation of e-learning content, on the basis of the rationale that the process of authoring constitutes a high level of active learning (“authoring as learning”), while the resulting product is a shareable and reusable resource for use by other students (“authoring for learning”). We set out to assess the feasibility of such approach through a small-scale pilot project.

Methods

Four 3rd-year medical students were given the task to produce 2 online learning objects (LOs) and to evaluate their effectiveness, as a 3-week group-based independent study project. The students were provided with the necessary tools and environment, consisting of a collaborative e-learning content authoring tool, graphics and video editing software, and a camera. A shared e-portfolio was used for project management, collaboration, reflection and feedback. We, the medical education faculty, mainly played the role of facilitator, giving clear instructions on the assignment, and providing overall guidance, assistance and feedback, but intervening as little as possible in the actual authoring. A subject expert was identified by the students as subject matter advisor for each LO. The students each kept a daily journal in the e-portfolio in which they reflected on the day's progress and the project overall. The students conducted a questionnaire survey of other students and faculty to evaluate the LOs.

Results

The students reported increased engagement and satisfaction. They indicated that if there were an extracurricular club for producing e-learning contents, they would be interested in joining. They also reported improved learning effectiveness, indicating that they felt confident they would obtain excellent scores on the final examinations of the subject matter of their LOs. The project resulted in products of lasting value. The subject experts who advised the students both expressed the intention of using the student-generated LOs in their courses.

The two LOs were evaluated for effectiveness by 11 teachers, and by 20 and 25 students, respectively. The LOs were given high scores on ease of understanding, usefulness, ease of use, and level of interest, and the majority of users found the amount of material and time required to complete it to be just right. Several respondents indicated the need to optimise the materials for use on smart phones.

Conclusion

In their daily journals, the students repeatedly expressed a sense of achievement and pride in having produced content that was recognised by faculty to be of high quality and by fellow students as effective learning resources. Provided students are given the appropriate environment and tools along with well-balanced mentoring and facilitation by faculty, the production of e-learning contents by students “as and for” learning is a feasible approach, resulting in both a motivating and effective learning experience, as well as a means of generating shareable and reusable content.

BP09

CHANGES IN THE STAFF DEVELOPMENT MODEL OF THE 'TEACHING ON THE RUN' PROGRAM IMPROVES ACCESS AND SUSTAINABILITY***Lake F, Potter M, Lindley A****School of Medicine and Pharmacology, Faculty of Medicine, Dentistry and Health Sciences, University of Western Australia, Australia***Aims**

Staff development for clinicians focusing on their role as teachers and supervisors is viewed as important, is popular among clinicians but competes for their limited time. Efficient delivery is therefore important. In Australia, the Teaching on the Run (TOTR) program was established with the aim of reaching a large group of clinicians on a sustainable basis. The training of facilitators and format of delivery has evolved over the years. The impact of these changes on participant and facilitator satisfaction has been measured.

Methods

In the TOTR evaluation survey, participants in both the facilitator Training program (FTP) and workshops are asked to rate various aspects of the program on a Likert scale as follows: 1 (very poor), 2 (poor), 3 (fair) 4 (good) and 5 (excellent).

Data selected from three representative periods have been compared. The first period was between 2000-2004, when face to face workshops (6 X 3 hours) were run in medicine by the developers (n=523), secondly in late 2000 when face to face workshops (6 X 3 hours) were run for all health professions in single or mixed professional groups by trained facilitators (n =998) and thirdly when blended (on-line component and 6 X 1.5 hours) workshops were run by trained facilitators (n=1679). In addition, a two day facilitator training program, incorporating on-line learning was evaluated.

Results

The evaluation in terms of overall reaction, presentation of the program and provision of useful information was >4.30/5 for all measures across all periods, with no differences across profession, type of facilitator or format (face to face or blended). The on-line component was rated highly. Comments indicated the face to face component remained essential. Similarly the FTP was highly rated with >50% of participants going on to become active facilitators within one year. The training of facilitators and blended format has allowed significant increase in capacity, with a rise in workshops run to current levels of 50 per month.

Conclusion

The transition of the program widening the number of facilitators and reducing face to face time through blended delivery has not reduced participant satisfaction but allowed access to a greater number of participants, making TOTR sustainable.

BP10

INTERPROFESSIONAL COLLABORATION: WHAT MATTERS MORE - SHARED LEADERSHIP OR SHARED MEMORY SYSTEM?

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Aims

High-functioning interprofessional teams are characterised by shared decision making and lack of hierarchical structures. They also tap upon a “group mind” or transactive memory system (TMS) during team exchanges such that there is clarity of mutual roles and expertise which can be brought to bear to solve a common task. It is surprising that the shared leadership (SL) and TMS frameworks have hitherto not been studied in concert despite their emergence as important prerequisites for effective interprofessional collaboration. We therefore aim to study the relationship between SL and TMS, as well as their relative influence on satisfaction outcomes in an interprofessional geriatrics team.

Methods

We studied 115 members (32% doctors, 42% nurses, 26% allied health professionals) who regularly participated in interprofessional team meetings (IPTM) in a geriatrics subacute ward to harmonise discharge planning for complex cases. We measured the following: 1) quality of TMS using the 11-item Faraj and Sproull (2000) scale, which comprise two subcomponents of team dynamics and knowledge of team expertise in a local validation study (Tan et al., 2014); 2) SL via the modified Woods (2005) 14-item scale, comprising three subcomponents of joint involvement, social cohesion and decentralised interprofessional interaction; and 3) satisfaction with working in interprofessional teams and satisfaction with IPTM experience. We conducted hierarchical binary logistic regression with satisfaction outcomes as the dependent variable, entering TMS in the first step, covariates of age, gender, interprofessional role, clinical experience, and number of IPTM attended in step 2, and SL in step 3.

Results

TMS and SL are moderately correlated ($r: 0.620, p < 0.01$). Among the TMS subcomponents, team dynamics are more highly correlated with SL total score than team knowledge ($r: 0.560$ vs $0.364, p < 0.01$). For the SL subcomponents, joint involvement ($r: 0.547$) and social cohesion ($r: 0.423$) have higher correlation with TMS total score than decentralised interprofessional interaction ($r: 0.329$, all $p < 0.01$). In hierarchical logistic regression, a higher TMS score explains a smaller proportion of variance for satisfaction working in interprofessional teams (unadjusted $p = 0.046$, R-square 9.7%; adjusted $p = 0.041$, R-square 17.7%) relative to satisfaction with IPTM experience (unadjusted $p = 0.001$, R-square 27.4%; adjusted $p = 0.009$, R-square 36.6%). Adjusting for SL scores in step 3 significantly predicted team satisfaction ($p = 0.005$), explained an additional 15% variance and rendered TMS insignificant ($p = 0.973$, R-square 32.8%). In contrast, SL scores did not predict IPTM experience satisfaction ($p = 0.09$), and accounted for only a further 4% variance ($p = 0.199$, R-square 40.8%). There is good correlation between the 2 satisfaction outcomes ($r: 0.633, p < 0.001$).

Conclusion

Our results explicate the relative contribution of TMS and SL as inter-related yet distinct aspects of interprofessional collaboration in a geriatrics team. Relative to TMS, SL has a greater influence on satisfaction with working in interprofessional teams than on satisfaction with IPTM experience. This suggests a curious dissociation in how SL exerts a confounding relationship between TMS and the two satisfaction outcomes, despite the good correlation in the latter. Further studies in different settings and healthcare teams are needed to understand this interesting phenomenon as well as the implications for continuing interprofessional education.

BP11

CROSS-CULTURAL INTER-PROFESSIONAL FACULTY DEVELOPMENT IN JAPAN: RESULTS OF AN INTEGRATED WORKSHOP FOR CLINICAL TEACHERS¹Wong J, ²Son D, ²Miura W¹Department of Internal Medicine, College of Medicine, Medical University of South Carolina, USA, ²International Research Center for Medical Education, School of Medicine, University of Tokyo, Japan**Aims**

Faculty development programs have proven useful for improving the clinical teaching skills of clinicians within medicine. One particular faculty development program, created at the Stanford Faculty Development Center (SFDC), has been successfully implemented in some foreign cultures, but has not been studied in Japan. Furthermore, joint inter-professional faculty development activities are less commonly reported and are infrequently studied. We wondered whether the SFDC faculty development program could be used to improve the clinical teaching of Japanese physician and nurse educators in a joint faculty development workshop series.

Methods

A series of 7 small group interactive workshops, based on the SFDC model, were presented to 19 educators at the University of Tokyo-School of Medicine. Each seminar was 120 minutes long and was presented in English by one author (JGW) who is a trained SFDC facilitator. The seminars consisted of a mini-lecture introducing the educational topic, video-taped reviews of actual clinical teaching scenarios, interactive role-playing performed by the workshop participants, and the formulation of personal learning goals by each participant. The written seminar materials were translated into Japanese and the video-tape scenarios were over-dubbed into Japanese by two of the authors (DS and WM). The role plays were also performed in Japanese and the commentary was translated into English as necessary by one of the authors (DS). There were three main outcome measures: 1) the seminar participants' satisfaction with the workshops; 2) their self-reported teaching abilities assessed through the use of a well-studied retrospective pre- post-questionnaire administered at 2 different times (1 month and at 12 months after the workshops); and 3) whether or not the participants were successful in completing "commitment to change (CTC)" statements at one year's time. Statistically, the numerical mean scores from each of the two sections of the questionnaire ("Global Assessment" and "Specific Teaching Behaviors") were compared using the two-tailed student t-test and standard deviation of mean scores were calculated. The actual percentage of successfully incorporated CTC statements was also reported.

Results

There were 12 physicians, 6 nurses and 1 English-language teacher who participated (10 men and 9 women - 2 physicians, all of the nurses and the English teacher were women). All participants valued the seminars and the inter-professional aspects of the sessions. Summative mean self-reported ratings of Global Assessment improved between retrospective pre- and post- test scores at 1 month and at 12 months (pre=27.3, post(1)=36.8, $p<0.001$, post(12)=34.9, $p<0.001$) and for specific teaching behaviors (pre=82.1, post(1)=111.1, $p<0.001$, post(12)=104.3, $p<0.001$). There was non-significant degradation of improvement between the 1month and 12month values. In total, 24/39 CTC statements were successfully achieved at one year (61.5%).

Conclusion

While limited to a single institution of clinical educators, we were able to demonstrate self-reported improvement in clinical teaching skills for both medicine and nursing faculty teachers that endured at least one year after the educational intervention. Inter-professional faculty development across both cultures and health profession disciplines can be achieved.

BP12**USING ENGAGEMENT SURVEY DATA TO IDENTIFY FACULTY NEEDS AND DRIVE WORKPLACE DECISION-MAKING**

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Aims

Session attendees will learn about key issues in U.S. medical school faculty engagement, develop an understanding of a model for making data-driven institutional decisions, and practice application of engagement data through small group discussion. Data will be used to drive discussion around: Department chair and leadership performance; Workplace diversity; Development of faculty policies; Retention and workforce planning; Strategic planning; Faculty development needs.

Prior research has established empirical relationships between job satisfaction and engagement and increased organisational performance and faculty retention. The research and data we will present adds nuance to our understanding of faculty satisfaction, which is important for medical school leaders to use as they make changes to improve the workplace, ultimately leading to positive organisational outcomes.

Methods

The Association of American Medical Colleges (AAMC) offers the Faculty Forward Engagement Survey (FFES) to U.S. medical schools accredited by the Liaison Committee on Medical Education. Institutions self-select to participate in this survey, which is designed to encourage an evidence-based approach to improving faculty workplace environments. Since 2011, over 20,000 faculty from 25 U.S. medical schools have completed the web-based survey. The survey assesses faculty satisfaction, intent to leave, and workplace factors related to overall engagement, and has achieved an average response rate of 61%.

The FFES instrument was meticulously developed and has been rigorously tested since it was first administered in 2007 to ensure its content and construct validity. The AAMC's human subjects research protection program and affiliated independent review board (the American Institutes for Research, Washington, DC) approves the collection and use of this data for research.

Descriptive statistics and chi-square analyses to assess significant differences between groups comprise the analysis for our work. We also highlight effective practices for translating data into workplace decision-making, stemming from our work with these 25 institutions.

Results

This presentation will focus on 1) highlighting national-level survey results, and 2) describing a process for translating the results into decision-making and action. Select findings include: My supervisor actively encourages my career development (66% agree); Do you receive formal mentoring? (30% agree); My institution has clear expectations for part-time faculty (47% agree); At my medical school the criteria for promotion are consistently applied to faculty across comparable positions (49% agree); My department is successful in recruiting racial/ethnic minority faculty (62% agree).

Results such as these prompt the following courses of action:

Department chair and supervisor training in performance management and employee coaching; Development of institution-wide and department-wide mentoring programs; Formalising institutional policies for PT faculty; Creation of new faculty appointment tracks (e.g. clinical educator); Strategic plans to enhance faculty diversity.

Conclusion

U.S. medical schools have used the FFES data and accompanying benchmarks to create positive changes in their workplace environment to enhance faculty engagement and retention. Using faculty engagement surveys allows schools to receive real-time data to prioritise what faculty need to be more engaged and, therefore, successful. These results allow for a data-driven approach to decision-making about institutional priorities, policies development, leadership appointments, and resource allocation.

BP13

VALIDATION OF THE CLINICAL SHARED LEADERSHIP SCALE FOR INTERPROFESSIONAL TEAM MEETINGS IN GERIATRICS CARE¹Ong YH, ¹Lim I, ²Tan KT, ³Chan M, ³Lim WS¹Health Outcomes and Medical Education Research (HOMER), National Healthcare Group, Singapore, ²Pharmacy Department and ³Department of Geriatric Medicine, Tan Tock Seng Hospital, Singapore**Aims**

Shared leadership refers to a team property whereby leadership is distributed among team members, in contrast to “vertical leadership” which emphasises the role of the hierarchically designated leader. While extensively studied in management and organisational literature, this concept is relatively new in healthcare. With the recent emphasis on interprofessional team-based care, shared leadership has become increasingly salient due to the need to work collaboratively tapping on each professional group’s unique expertise for the achievement of team goals. There is currently no validated scale to measure the property of shared leadership in healthcare teams. In this study, we aim to validate the Clinical Shared Leadership Scale (CSLS) in an interprofessional team meeting (IPTM) of a subacute geriatrics ward.

Methods

We adapted the CSLS from the Woods (2005) scale which was originally used in management teams. Because items for the domain of “emotional support” were inappropriate for the healthcare setting, these were substituted by questions from the domain of social support from the Carson (2007) scale. We studied 115 healthcare professionals who attended IPTM in two geriatrics subacute wards. We analysed internal consistency using Cronbach’s α . Construct validity was determined via exploratory factor analysis (EFA) to determine the factor structure; convergent validity via correlation with internal team environment (ITE) and transactive memory system (TMS) scores; divergent validity via correlation with task complexity; and concurrent validity by comparison of mean scores across number of IPTM attended, ITE and TMS scores. ITE has been shown to be an important antecedent of shared leadership, whereas TMS is a validated measure of interprofessional collaborative practice. We also ascertained predictive validity of CSLS via logistic regression to determine the impact on satisfaction of working in IPTM teams adjusted for covariates.

Results

The mean score of CSLS was 38.32 ± 4.86 (range 0-56). The 14-item CSLS scale exhibited a high degree of internal reliability (Cronbach’s α : 0.76). Using EFA, we identified an optimal three-factor structure that accounted for 51.14% of the total variance: 1) «Social cohesion» (6 items) analyses social and emotional bonds linking healthcare professionals to one another and to the team as a whole; 2) «Joint involvement» (5 items) explores healthcare professionals’ commitment and togetherness in teams; 3) «Decentralised interprofessional interaction» (3 items) assesses non-hierarchical interaction, regardless of job titles. The good correlation of CSLS total score with ITE ($r=0.78$, $p<.01$) and TMS ($r=0.65$, $p<.01$) supports convergent validity, whereas poor correlation with task complexity ($r<.20$, $p>.01$) corroborates divergent validity. CSLS total and factor scores show a significant increase with increasing number of IPTM attended, higher ITE and higher TMS scores (all $p<.05$), indicating concurrent validity. CSLS is able to predict satisfaction among interprofessional members of working in IPTM teams (OR=1.23, $p<.05$).

Conclusion

Our study demonstrated the reliability and validity of CSLS as a measure of shared leadership for geriatrics IPTM. With this scale, we can now explicate the leadership dynamics within interprofessional healthcare teams to further facilitate interprofessional education and collaborative practice. Follow-up studies are planned to examine CSLS’s generalisability and applicability to other interprofessional healthcare team settings.

BP14**THE USE OF SOCIAL MEDIA IN EDUCATION AMONG MEDICAL STUDENTS, SAUDI ARABIA**

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Aims

This study aims to explore the usage of SM by medical students in Saudi Arabia and to find out the most common resources used in medical education. Furthermore, it aims to illustrate the impact of SM on students' learning from their own perception.

Methods

This is a cross-sectional study where pretested questionnaire was distributed to medical students from different universities in Saudi Arabia, during the period June - August 2013, via emails, Twitter, Facebook and SMS. Statistical analysis was done using SPSS V21. We used Chi-square, t test, and Mann-Whitney U when appropriate.

Results

The total respondents were 657 students, from 23 different medical schools in Saudi Arabia. 437 participants were included in the final analysis. Females represented 60.5% (n=397) of the overall participants. Most of the participants 60.8% (n=265) acknowledged using SM on a daily basis in their learning. YouTube, Facebook, and Twitter were among the most commonly used resources. The most common site used by both gender was YouTube 42.3% (n=185), however, males preferred using Twitter and Wikis (P=.001). In regards to utilising SM for learning, 95.8% (n= 419) of the students believed that it is beneficial. Forty percent (n=175) thought using SM might be distracting. Females appreciated more communicating with their tutor through SM (p = 0.04). The utilisation of SM by medical institutions in education was reported by 74.4% (n=325) of the students. The study showed clinical year students think that their tutors do not use SM effectively (p < 0.01). SM facilitates communication among students with their colleagues in the same college as well as students from other universities especially among female (p = 0.001). SM helped the students to have a deeper understanding about the topic and correlate basic to clinical science. Majority of females students stated that SM helped them to focus studying for their exams (p = 0.007).

Conclusion

The use of SM among medical students in medical education is markedly increasing. However, medical schools need to improve the utilisation of SM, by faculty and students to develop activities and encourage the usage of SM in education. Institutions should also guide the students how to get the maximum benefit of SM and to evade the drawbacks such as distractibility. Therefore, it is essential to establish an ethical guidance to ensure the appropriate use.

Recommendations:

The presence of policies to guide the usage of SM is crucial to deliver valuable information, maintain the professional atmosphere, and ensure privacy. Educational organisations have to orient their tutors about the importance of SM since it saves time and simplifies instant group interaction.

BP15

EFFECT OF POST GRADUATE PAEDIATRIC TRAINING FROM A NEWLY DEVELOPED PREPARATORY COURSE FOR A HIGH STAKE INTERMEDIATE EXAMINATION**¹David R, ²Chay OM, ³Phua KB, ⁴Krishnaswamy G, ⁵Subramania K, ⁶Rao R, ⁷Ong J, ⁸Lim D**

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Aims

Our goal was to help KKH candidates at the preparatory course consolidate their medical knowledge, refine their clinical skills and be acquainted to the time sensitive examination format, for a better learning experience on the actual examination day. Our post-survey results evaluated the hypothesis of:

- relationship 1: candidates evaluated the effectiveness of their experience with four clinical stations at the preparatory course with the refinement of their overall clinical skills and examination techniques and if this was useful for them at the MRCPCH exam.
- relationship 2: candidates evaluated the effectiveness of their experience to discuss and interpret their findings effectively with the examiners, development of active listening skills and confidence at the preparatory course and if this was useful for them at the MRCPCH exam.
- relationship 3: candidates evaluated the effectiveness of their experience in a time sensitive format examination and seven stations set at the preparatory course and if this was useful for them at the MRCPCH exam.

Methods

A cross-sectional survey design was used to collect research data from a group of 16 local KKH participants who attended the preparatory course and the same 15 out of 16 local KKH participants who took the MRCPCH exam. The candidates responded to a two-page questionnaire consisting of 16 questions. The close-ended questions relied on a 5point Likert-type rating scale: Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D) and Strongly Disagree (SD). A convenience sampling procedure was used and data collected from this post-survey questionnaire evaluated the effectiveness of the preparatory course.

Results

The response return rate was 100% from the preparatory course and 94% because one candidate chose not to take the MRCPCH exam. Particularly, 100% of the candidates who attended the preparatory course and the MRCPCH exam gave positive ratings on their overall experience of preparatory course. The cardiovascular station explained by overall refinement of clinical skills & examination techniques had the highest percentage variance which proved to be useful for them at the actual MRCPCH exam. [Preparatory course: ($r = 0.66$, $r^2 = 0.43$) 43% and MRCPCH exam: ($r = 0.70$, $r^2 = 0.49$) 49%]. The development of active listening skills attributed by the examiners showed a 49% increase at the actual MRCPCH exam [Preparatory course: ($r = 0.71$, $r^2 = 0.51$) 51% and MRCPCH exam: ($r = 1.000$, $r^2 = 1.000$) 100%]. 15% ($r = 0.39$, $r^2 = 0.15$) of the candidates confidence attributed by the examiners at the actual MRCPCH exam compared to 69% ($r = 0.83$, $r^2 = 0.69$) obtained from the preparatory course. Three [focused history taking & management planning ($r = 0.82$, $r^2 = 0.67$), clinical video scenario ($r = 0.37$, $r^2 = 0.32$) and developmental assessment stations ($r = 0.47$, $r^2 = 0.22$)] out of seven stations showed a percentage increase in improved time management skills at the MRCPCH exam.

Conclusion

Overall, the course was well received and positively rated by the candidates as a good training and learning activity which helped them at the actual MRCPCH exam.

BP16**ROLE PLAY OR STANDARDISED PATIENTS IN COMMUNICATIONS TRAINING? - ATTITUDES AND PERCEPTIONS OF DENTAL UNDERGRADUATES**

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Aims

Communication skills constitute an integral part of patient care. This is no different in dentistry, where professional clinical skills need to be complemented with effective communication skills. The Faculty of Dentistry (FoD), NUS, introduced a revised communications training programme as part of its pre-clinical undergraduate training. It aimed to develop the undergraduates' competencies in dentist-patient communications through the use of role play and standardised patient interactions.

This study evaluates the programme's effectiveness in building the undergraduates' confidence in communicating with patients. It also assesses their perceptions towards the use of role play and standardised patients as pedagogical methods to cultivate dentist-patient communication skills.

Methods

All second-year undergraduates (n = 53) enrolled in FoD, NUS in AY 2013/2014 were required to attend the communications training programme. A cross-sectional survey using a self-administered anonymous questionnaire was conducted among the undergraduates at the end of the programme.

The Kirkpatrick model of evaluation was adapted to assess the impact of the programme as follows:

- Reaction - assesses how the undergraduates responded to the programme in terms of its method of delivery and implementation
- Learning - assesses the effect of the programme on deepening the undergraduates' understanding and appreciation of the importance of dentist-patient communications and key communication skills
- Behaviour - assesses the likelihood that the students will use the dentist-patient communication skills learned during the programme
- Results - assesses the confidence of the students in using the dentist-patient communication skills

The return of the completed questionnaires implied their consent to take part in the study.

All data were entered into SPSS (version 21) and analysed. Descriptive statistics, and cross-tabulations using McNemar tests were used in the data analyses. The level of statistical significance was set at $p < 0.05$.

Results

The survey received a 73.5% response rate. The majority of the respondents ($\geq 97\%$) felt that the programme increased their appreciation of the relevance of communications in clinical practice and agreed that the programme had imparted effective dentist-patient communication skills to them. The respondents also rated the programme with a mean score of 8.5 on a scale of 0 - 10 where 10 reflects an extremely useful programme. Only 8 of the respondents were confident or somewhat confident of effective patient communication before attending the programme while 27 of the respondents reported that they were somewhat confident/very confident after attending the programme (McNemar $p < 0.001$). Close to 95% of the respondents felt that the SPs portrayed real-life scenarios for them to apply their dentist-patient communication skills. The majority of the respondents also indicated that the SPs were more effective in helping them achieve their learning objectives. About a third of the respondents suggested an increase in engagement and interaction with the SPs as a means of enhancing the programme.

Conclusion

The blended use of role play and standardised patients in communications training needs to be calibrated to ensure that the value of each can be harnessed to build the communicative competencies of the undergraduates. This study also highlights how similar programmes can be developed and enhanced for the future.

BP17

ARE THE SWANS STILL EXHAUSTED? CHANGE PROCESS ADDS ADDITIONAL STRESS TO FACULTY WHILST STUDENTS' SHINE. LESSONS LEARNED DURING THE INTRODUCTION OF A "FLIPPED CLASSROOM" APPROACH TO CLINICAL SKILLS TEACHING

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¹School of Rural Health, Churchill (formerly Gippsland Medical School), Faculty of Medicine, Nursing & Health Sciences, Monash University, Australia, ²School of Nursing and Midwifery, Faculty of Medicine, Nursing and Health Sciences, Flinders University, Australia

Aims

Clinical skills teaching in the pre-clinical environment has been criticised for placing additional burden onto clinicians who balance clinical patient loads with medical education work (R.M. Harden, 1999). The introduction of new teaching methods to encourage hands-on participation from students was met with resistance from some faculty. Measures to motivate active clinical skills learning from students who may prefer to remain "passengers" included moving to a "flipped classroom" approach to clinical skills teaching in July 2012. Our graduate entry program covers the equivalent of two years of clinical skills teaching of the direct entry undergraduate MBBS program at Monash University in eighteen weeks. Limited face-to-face teaching time required adherence to "guide by the side" facilitation" not "sage on the stage" behaviours from faculty (R. M. Harden & Laidlaw, 2013; King, 1993). Evaluation of this program was undertaken in November 2013.

Methods

A questionnaire was administered to students following the formative OSCE in semester two 2013 to evaluate the effect of the clinical skills "flipped classroom" approach on students' behaviours and attitudes. The survey explored levels of preparation and confidence levels following a full year of the program. Additionally faculty feedback was obtained through review of email exchange and debriefing sessions with clinical skills teaching staff.

Results

Students' perceptions of clinical skills taught through the flipped classroom were explored, with an excellent response rate (88%). Results demonstrated student acceptance of the program and high levels of confidence in all aspects of clinical skills. Some members of the clinical skills faculty indicated significant angst at times through emails and post teaching day debriefing sessions. Active resistance to program changes were observed in some sessions. Supportive strategies were employed to assist faculty with adherence to the changed pedagogy.

Conclusion

Use of a flipped classroom approach to teaching clinical skills produces confident pre-clinical skills development in undergraduate students. Students were highly satisfied with the quality of teaching using this method. However, some faculty members found the change process very stressful. Strategies were required to manage resistance and support faculty until we achieved acceptance of the pedagogical changes.

References

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- King, A. (1993). *From Sage on the Stage to Guide on the Side.* *College Teaching*, 41(No. 1 (Winter, 1993)), 30-35.

BP18**IMPLEMENTING STANDARD SETTING INTO A POSTGRADUATE FAMILY MEDICINE EXAMINATION - PROCESS & ISSUES**

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Aims

Standard setting is a process to determine the pass mark for an examination. In high stakes examination, it is important to ensure that those who pass are competent enough to practice in their discipline. Traditional fixed pass marks do not take into account the level of difficulty in an examination. This paper aims to describe the process and issues in implementing standard setting using the modified Angoff method, in a postgraduate Family Medicine examination i.e. the Conjoint MAFP/FRACGP Part 1 examination.

Methods

In December 2011, a standard setting workshop was held in Kuala Lumpur for the Board of Examiners (BOE), Academy of Family Physicians of Malaysia. In May 2012, a second workshop was held concentrating on using modified Angoff method on a past year Applied Knowledge Test paper (AKT), consisting of Extended Matching and Single Best Answer Items. A third two-day workshop was held in October 2013. The participants were selected from BOE members as potential judges for the real examination. The judges were a mixture of young and older examiners, both genders, different ethnic groups and different backgrounds (private general practice, public sector and academic). After a briefing on the modified Angoff method and characteristics of a borderline candidate, they independently standard set the past year Part 1 papers consisting of AKT and Key Feature Problems (KFP). A group discussion was then held whereby the ones with lowest and highest scores presented their views. Other judges joined in the discussion and were allowed to change their scores. The mean of their final revised scores was taken as the cut score (passing mark) for that question. On 7th-8th December 2013 the same group of judges standard set the actual Part 1 Conjoint MAFP/FRACGP examination. This session ran concurrently with the Part 1 examination to minimise any possible leakage of questions and answers.

Results

In the first two workshops, the main issues were judges' lack of experience in standard setting with some having difficulty grasping the concept and process in the modified Angoff method. In the third workshop, the main issue was that some judges had difficulty visualising a borderline or minimally competent candidate. Subsequently from discussions among the judges via emails, a detailed guideline was produced on the characteristics of a borderline (minimally competent) candidate and on how to score based on the guideline. This was circulated among the judges. Sixteen judges participated in the standard setting session on the Part 1 Conjoint examinations in December 2013. Discussion among the judges after scoring independently narrowed the variability between judges' scores from 14% to 11% (AKT) and 24% to 10% (KFP) and resulted in high inter rater reliability with Cronbach's alpha of 0.926 (AKT paper) and 0.921 for KFP paper.

Conclusion

Standard setting has been successfully implemented into the Part 1 Conjoint MAFP/FRACGP examination. More judges will be trained to join the panel of judges. Implementing standard setting in Part 2 Conjoint examinations is also in progress.

BP19

INTERN TO FULLY LICENSED MEDICAL PRACTITIONER: A TEACHING INTERVENTION TO IMPROVE PERCEIVED READINESS FOR TRANSITION**¹Kilner T, ²Nobar N, ¹ Lisk C**

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Aims

UK medical graduates spend one year as interns (FY1s) with provisional medical registration, before becoming fully licensed medical practitioners (FY2s) with an enhanced level of clinical responsibility and the expectation of discharging patients independently. It was noticed by hospital faculty members that many FY1 doctors felt uncomfortable with the transition to FY2. We aimed to determine whether a focused half day teaching intervention at the end of the FY1 year would improve perceptions of self-readiness.

Methods

A half day teaching intervention was established in a north London district general hospital. Interactive lectures on crisis resource management, clinical pitfalls in the emergency department, decisions in unfamiliar specialties, and clinical guidelines and decision rules were conducted. A quantitative questionnaire on self-rated preparedness, anxiety, and confidence was conducted before and after the teaching intervention. Perceptions of the usefulness of FY1 jobs and FY1 teaching on preparedness for FY2 were collected quantitatively in the pre-intervention questionnaire. Concerns regarding FY2 transition were recorded as free text on the pre-intervention questionnaire. Paired continuous data were analysed using the Wilcoxon signed- rank test. Qualitative responses were used to triangulate statistical data

Results

The median pre-test perceived preparedness, anxiety, and confidence scores were 5 (IQR 1), 7 (IQR 1), and 5 (IQR 2) out of 10 respectively. The median score for FY1s perceptions of the usefulness of FY1 jobs for preparation for FY2 was 7 (IQR 1.5) out of 10. The mode score for FY1s perceptions of the usefulness of FY1 teaching for preparation for FY2 was 3 (IQR 2) out of 10. Post intervention there was a significant increase in perceived preparedness ($p=0.005$) and a significant decrease in anxiety ($p=0.012$). There was no statistical change in confidence scores. Concerns regarding the increase in responsibility and independence associated with the FY2 role, appeared to influence FY1s' self-perceptions of their readiness for the FY2 transition.

Conclusion

Our teaching intervention improved FY1's perceived preparedness, and decreased anxiety towards the FY2 transition, but did not improve confidence. In view of these findings this intervention will be scaled up and further evaluated to ensure that this intervention's benefit is maximised. Further work should be conducted to discern how scheduled teaching and additional interventions might improve FY1 confidence in the FY2 transition.

BP20**SELF-ASSESSMENT BY RESIDENTS USING THE R-I-M-E EVALUATION FRAMEWORK****Teoh CM, Lim TK***Department of Medicine, National University Hospital, National University Health System, Singapore***Aims**

The R-I-M-E (Reporter-Interpreter-Manager-Educator) evaluation framework is a simple and intuitive tool that can be used to externally assess the progression of a resident's medical knowledge and clinical reasoning skills through four developmental stages. Our hypothesis is that increased awareness of the RIME vocabulary amongst our internal medicine residents will motivate RIME behaviour and progression to the next developmental level.

Methods

Residents were invited to complete a questionnaire at the beginning and end of their one-month posting to Respiratory Medicine. The survey consisted of a total of 12 questions subdivided into 3 questions per RIME category. Responses were recorded using a 5-point Likert scale. The individual scores were summated to give a composite score for each RIME category. The maximum possible score was 15 points. The results were analysed using the Mann-Whitney U test and Wilcoxon-Signed rank test.

Results

A total of 56 residents completed the questionnaire of whom 30 were postgraduate year (PGY) one, 9 PGY2 and 17 PGY $\geq$ 3. The median scores across the RIME domain categories between PGY1, PGY 2 and PGY $\geq$ 3 are as follows: Reporter 12, 12, 12 ($p=0.26$ vs PGY1); Interpreter 10, 11, 12 ($p<0.001$ vs PGY1); Manager 10, 10, 12 ($p<0.001$ vs PGY1); Educator 7, 7, 9 ($p<0.001$ vs PGY1). Paired data was available for 15 residents. The pre and post score for each of the RIME categories are as follows: Reporter 12, 12 ($p=0.832$); Interpreter 11, 12 ($p=0.28$); Manager 8, 10 ($p=0.033$); Educator 6, 9 ($p=0.004$). The greatest improvements in ratings were in the following areas: providing patients customised diagnostic and management options (93% of residents), negotiating difficult patient encounters (73% of residents), taking an active role in educating colleagues/patients (67% of residents) and self-evaluation of gaps in knowledge (60% of residents).

Conclusion

Resident seniority was associated with higher self-assessed scores in the Interpreter, Manager and Educator categories. Increased awareness of the RIME vocabulary was associated with an improvement in the pre and post scores in the Manager and Educator categories though confounding factors such as the quality of the teaching faculty may have had a relative contribution. Resident awareness of the RIME model through self-assessment may encourage and enhance their professional development.

Friday 6th February 2015

Foyer, Level 2, University Cultural Centre

11.00am – 12.00pm

POSTER PRESENTATION – SESSION 1

GROUP 1

- D1001 Quantifying A Culture of Respect: Prevalence And Impact of Negative Experiences In An Academic Medicine Department**
See Kay Choong, Singapore
- D1002 The Imperial College Mobile Medical Education Pilot Project**
Maria Toro-Troconis, United Kingdom
- D1003 Critically Investigating Problem-Based Learning's Innovative Promises In The Global South**
Maikutlo Kebaetse, Botswana
- D1004 Implementation of An Effective And Efficient Triage System In Clinic Sessions of Medical Missions – A Cambodian Case-Study**
Sim Meng Ying, Singapore
- D1005 Development And Initial Validation of A Program Director's Evaluation Form For Medical School Graduates**
Ting Dong, USA
- D1006 The Hidden Curriculum In Anesthesiology**
Harivelle Charmaine Hernando, Philippines
- D1007 Moulage: Removal of Cyst**
Goh Hwee Choon Carol, Singapore
- D1008 Community Service In Medical School: A Qualitative Study On Students' Obstacles Faced And Potential Solutions**
Loh Zi Hui Alvona, Singapore

GROUP 2

- D1009 Research Excellence In Undergraduate Environment - Process And Impact Evaluation Report**
K Anbarasi, India
- D1010 Students' Perspectives On The Educational Environment, Bsc Physiotherapy Undergraduate Students In Sri Lanka**
Angage Dilani Priyashanthi Perera, Sri Lanka
- D1011 Fostering Leadership Development: Shaping Our Future Medical Leaders**
Geneviève Moineau, Canada
- D1012 Use of Item Analysis To Improve The Quality of Single Best Answer Multiple Choice Question In Summative Assessment of Undergraduate Medical Students In Malaysia**
Shahid Hassan, Malaysia
- D1013 Residents Provide Their Clinical Teachers With Feedback About Their Teaching Competencies: How Does It Work?**
Cornelia Fluit, The Netherlands
- D1014 Reforming The Master of Medicine (Family Medicine) Examination In Singapore: A Practical Approach To Continuous Quality Improvement In Assessment.**
Ruth Lim, Singapore
- D1015 Finding The Missing Pieces of The Puzzle: Identifying Barriers Perceived By Staff To Recording Low-Level Medical Student Concerns**
Claire Vogan, United Kingdom

D1016 **Conduction of A Multiple Mini Educational Program In Service Learning**
Sy-Yu Yen, Taiwan

GROUP 3

D1017 **Pediatric Physician And Medical Student Perceptions Towards The Medical School Pediatric Clerkship: Qatar Experience**
Ahmed Alhammadi, Qatar

D1018 **Cultivating Skills in Medical Treatment For Distant Villages That Lack Medical Care**
Chi-Chu Lo, Taiwan

D1019 **Inpatient Pediatric Clerkship: An Educational Experience**
Ahmed Alhammadi, Qatar

D1020 **Evaluating The Effectiveness of Current Medical Textbooks As Undergraduate Learning Recourse- A Student Perspective**
Ahmed Eldeib, Saudi Arabia

D1021 **Preliminary Study On The Effectiveness of Problem--Based Learning Based On A Patient-Simulated Videotape**
Akiko Ikegami, Japan

D1022 **A Pedagogical Clinic For Teachers – A Strategic Faculty Development Initiative To Facilitate Change**
Anita Iversen, Norway

D1023 **A Comparison of Two Different Skill Teaching Methods Investigating Resuscitation Skill Acquisition By Undergraduate Students**
Amy Seymour-Walsh, Australia

D1024 **Building Communities of Practice Among Clinical Practice Tutors – A Faculty Development Initiative Across Organizational Borders**
Anita Iversen, Norway

GROUP 4

D1025 **Enhance Care Delivery On Activities of Daily Living By Occupational Therapists For Patients Undergoing Rehabilitation In A Community Hospital In Singapore**
Anna Lee, Singapore

D1026 **Enhance Students Learning By Blended Problem Based Learning : A Mixed Methods Study From Qassim Medical School**
Ahmad Alamro, Saudi Arabia

D1027 **Enhance The Well Being of Patients In A New Dementia Set Up Ward In Saint Andrew's Community Hospital**
Anna Lee, Singapore

D1028 **Understanding Post Graduate 'Exam Smartness': The Non-Academic Attributes & Predictability of Exam Success**
Ashokka Balakrishnan, Singapore

D1029 **Stress And Self-Regulation In Medical Students**
Monika Bullinger, Germany

D1030 **A Needs Analysis For Faculty Development At The Faculty of Dental Sciences, Sri Lanka**
Eluwane Arachchige Athulya Priyadharshani Amaratunga, Sri Lanka

D1031 **Teaching Communication Skills Supported By Simulation Patients**
Monika Bullinger, Germany

D1032 **Medical Education In The Era of Genomic Medicine: Integrating Translational Bioinformatics Into The Medical Curriculum**
Kenneth Ban, Singapore

GROUP 5

- D1033** **The Use of The Biomedical Admissions Test (BMAT) As An Admissions Selection Criterion At The Lee Kong Chian School of Medicine (LKCMedicine)**
Ruth Choe, Singapore
- D1034** **Aligning The Expectations of Diagnostic Radiography Staff And Students About Clinical Placement In A Pre-Professional Learning Environment In Singapore**
Charmaine Krishnasamy, Singapore
- D1035** **Does Team-Based Learning Improve Clinical Reasoning In Neurology?**
Cherie Ng, Singapore
- D1036** **Classification of Outcomes-Based Medical Education Research Using A Translational Paradigm**
Charmaine Krishnasamy, Singapore
- D1037** **Designing Effective Training For Qualitative Research Methods Based On Adult Teaching Theory**
Chia Chee Fen, Malaysia
- D1038** **Building An Interprofessional Education Simulation Module: A Suggested Template Based On Real Adverse Events**
Chong Choon Seng, Singapore
- D1039** **Assessment of Evidence- Based Medicine: Global And Domain- Specific Comparison of The Fresno Test And Berlin Questionnaire**
Choo Chuan Gee, Singapore
- D1040** **Different Perception Between Trainees And Raters In Formative Objective Structured Clinical Examination (OSCE)**
Chen Tan Hsia, Taiwan

GROUP 6

- D1041** **How Long Will Medical Students Use The Medical Electrical Database After They Learned From E-Library Training**
Chen Cheng Yu, Taiwan
- D1042** **Predicting Academic Performance From Behaviours Exhibited In PBL Tutorials**
Carmel Tepper, Australia
- D1043** **E-Learning Help Teacher Care Individual Student's Need During Heart Sounds Learning**
Chen Cheng Yu, Taiwan
- D1044** **E-Blackboard: For Better Or Worse?**
Denzil Sandeep Dominic Berchmans, Singapore
- D1045** **Computer Based Test (CBT) Multiple Choice Question (MCQ) For Anatomy: Creating An Efficient Tool In Examination**
Desy Purwidyastuti, Indonesia
- D1046** **Exploring Perceptions of Medical Professionals On Continuing Professional Development (CPD) In Sri Lanka**
Dilmini Karunaratne, Sri Lanka
- D1047** **Foundation Year Medical Student Perspectives of A New Basic Sciences Teaching Approach Called POGIL (Process Oriented Guided Inquiry Learning)**
Declan Gaynor, Bahrain
- D1048** **Encouraging Reflective Practice Among Medical Undergraduates: Lessons Learnt**
Dilmini Karunaratne, Sri Lanka

D1001

QUANTIFYING A CULTURE OF RESPECT: PREVALENCE AND IMPACT OF NEGATIVE EXPERIENCES IN AN ACADEMIC MEDICINE DEPARTMENT

See KC, Lim TK, Phua J, Dan YY, Ho KY

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Aims

A culture of respect is a pre-requisite for the changes needed to make health care safe. However, little quantitative information exists to monitor such a culture and its relation to physician well-being. We thus studied the prevalence of disrespect, which we term negative experiences (NegExp), and the impact on physician stress and burnout.

Methods

We surveyed trainees (junior & senior residents) and attendings from a university medicine department for information about five types of NegExp: disruptive, demeaning, passive-aggressive, passive and systemic, and analysed for differences between the two groups. Sources of NegExp included seniors, juniors, peers, nurses, allied health, non-clinical staff, patients and family members. Prevalence was quantified as the proportion of physicians experiencing at least one type of NegExp at least weekly (on a six-point Likert scale ranging from “never” to “almost everyday” for each type of NegExp). For each type of NegExp, pairwise Spearman correlations were done between the frequency of NegExp from different sources. Impact of NegExp on stress or burnout was regarded as important if the NegExp affected stress or burnout at least moderately (on a four-point Likert scale ranging from “no effect” to “severe effect”). We further investigated the prevalence of the extreme scenario of daily NegExp. Incomplete items were coded as null responses.

Results

284 physicians were surveyed from 23 June 2014 to 23 July 2014, with 171 (60.2%) responding. Completion rates for individual items ranged from 90.1%-100%. Median age was 33 years (interquartile range 28-38), 76 (44.4%) were female, and median duration post-graduation was eight years (interquartile range 3-13). Overall, 103 (60.2%) physicians experienced NegExp at least weekly, with no significant difference between trainees and attendings. Each type of NegExp, including passive-aggressive and systemic forms, was experienced by about one-third of physicians at least weekly. Trainees were significantly more likely than attendings to experience disruptive NegExp from nurses, demeaning NegExp from seniors, demeaning NegExp from juniors, demeaning NegExp from nurses, demeaning NegExp from family members and passive-aggressive NegExp from nurses. For each type of NegExp, the frequency of NegExp from different sources were correlated (ρ ranging 0.326-0.931, P-values all <0.001). All types of NegExp had at least a moderate impact on stress for 31.0-53.8% of physicians, and on burnout for 33.9-49.1% of physicians, with no significant differences between attendings and trainees. The extreme situation of daily NegExp was experienced by 17 (9.9%) physicians, also without significant difference between trainees and attendings.

Conclusion

NegExp was prevalent, and trainees were more likely to experience certain forms of NegExp than attendings. All forms of NegExp had similar impact and could contribute to on physician stress and burnout for both attendings and trainees. There is thus a need to build a culture of respect and to monitor its improvement.

D1002**THE IMPERIAL COLLEGE MOBILE MEDICAL EDUCATION PILOT PROJECT**

Toro-Troconis M, Hemani A, Bennie T, Harris C, Ratcliffe P, English S, Lupton M

Faculty Education Office, School of Medicine, Imperial College London, United Kingdom

Aims

The School of Medicine at Imperial College London introduced a Mobile Medical Education Pilot Project to over 750 students in years 5 and 6 of the Imperial MBBS course in June 2013. A large number of academics, and members of staff led several Work Packages (WPs) in order to investigate and assess all the different areas concerning the feasibility of the project. The WPs focused on the following areas: Apps and interactive tools, roll out strategy, promoting feedback, iBooks and eBooks, iPads procurement and deployment strategy and maintenance and on-going resources.

A Decision Matrix Analysis was put together taking into account some of the main tablet devices available in the market at the time: iPad Mini, iPad II, Samsung Galaxy Tab, Google Nexus 7 and Windows Surface. Eight different variables of importance to this project were identified. The final scores obtained positioned the iPad Mini at the top of the list, therefore being the Tablet selected for the project.

Methods

The main learning and teaching activities already implemented as part of this project are:

- All the electronic sign-offs in Year 6 and some in Year 5 are recorded and submitted via the iPad.
- Students participate during lectures using virtual clickers hosted on their iPads.
- Information and learning resources for different clinical attachments have been designed and delivered in iBooks format
- The paid App iAnnotate has been given to the students so they can annotate their learning materials on the iPad and keep a backup on the cloud.
- iCalendars have been deployed for different clinical attachments.
- Students can access eBooks available from the library as well as the full version of the BMJ Best Practice App.

The iPad Student Champions Group was setup to channel feedback and suggestions from students.

Results

A survey was conducted after the Pathology course in Year 5 with 128 responses. In general the feedback was very positive with over 80% of the students agreeing the iPads have been helpful or very helpful supporting their learning. The feedback suggests that the iPads have been popular, and have been valuable in students accessing information, particularly whilst on clinical placements. The students had mixed opinions regarding the use of electronic sign-off forms with general tendency to still prefer paper based forms.

Conclusion

The different learning and teaching activities developed as part of this project will be demonstrated providing further insight into the challenges, lessons learned and successes during the development and deployment of the Imperial College Mobile Medical Education Pilot Project.

More information about the project can be accessed at:

<http://www1.imperial.ac.uk/medicine/elearning/ipadsupport/>

#iPadImperialFoM

D1003

CRITICALLY INVESTIGATING PROBLEM-BASED LEARNING'S INNOVATIVE PROMISES IN THE GLOBAL SOUTH

¹*Bryant K*, ²*Kebaetse M*

¹*Botswana-UPenn Partnership, Botswana*, ²*Department of Biomedical Sciences, Faculty of Medicine, University of Botswana, Botswana*

Aims

It has been suggested that medical education researchers need to critically examine rather than simply accept and implement new medical education innovations that are typically designed in the global North and implemented at newly emerging medical schools in the global South^{1, 2}. Problem-based learning (PBL) and the pedagogic theory of learner-centred learning that informs this method can be seen as examples of such innovations^{1, 2}. There is the possibility that such a teaching method and its theory of learner-centred learning make it difficult for students based at medical schools in the global South, as they have had long educational histories of learning in more teacher/lecturer-centred educational contexts². As more medical schools continue to emerge in the global South, both in the Asia-Pacific and African contexts, typically with funding and through partnerships with medical schools based in the global North, it is only inevitable that these schools' pedagogic innovations will be borrowed and implemented. Yet, faculty members teaching in these newly emerging medical schools need to reflect on the learning and teaching challenges both their students and they may encounter because of the incongruence between students' prior learning histories in teacher/lecturer-centred contexts and their current learning contexts in much more student-centred ones.

Methods

The purpose of this proposed presentation is to share findings from a medical education study that sought to respond to the above mentioned calls to critically investigate medical education innovations developed in the global North and implemented at medical schools in the global South. The study, based at the University of Botswana's recently opened School of Medicine, in Gaborone, Botswana investigated the learning-related challenges year one medical students tend to experience transitioning from their previous, often teacher/lecturer-centred learning contexts of secondary and first-year university to the student-centred, self-directed learning context of a PBL medical school curriculum.

Results

The presentation will report on key findings from a qualitative grounded theory study that was done to investigate the challenges emerging from this transitions as well as the learning support interventions and programme that were designed, informed by this study's findings, to address these challenges.

Conclusion

Although obvious differences exist between medical schools in African and Asian-Pacific contexts, there may also be ways in which learnings from this study can be used to inform the teaching component of faculty development programmes for those teaching at medical schools where students are making similar learning transitions.

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D1004**IMPLEMENTATION OF AN EFFECTIVE AND EFFICIENT TRIAGE SYSTEM IN CLINIC SESSIONS OF MEDICAL MISSIONS - A CAMBODIAN CASE-STUDY*****Sim MY, Ang QJ****Yong Loo Lin School of Medicine, National University of Singapore, Singapore***Aims**

This study serves to explore how a triage system can be successfully implemented in clinic sessions during medical missions using Project Battambang as a case-study. Project Battambang is an initiative launched in 2010 by a group of doctors and medical students from the Yong Loo Lin School of Medicine, National University of Singapore. It runs health clinics in December for up to two schools, three villages and a jail during the trip. A clinic session often attracts a multitude of villagers, many of whom have forgone a day of work and travelled for hours to seek medical attention. There arises a need to effectively and efficiently handle this huge patient load, reaching up to 330 a day, such that critical cases are picked up. Over the years, a triage system was developed and implemented to maximise the limited manpower and resources available. Ideally, the triage should be run by fully-trained medical personnel, preferably experienced doctors with good clinical acumen. However, every doctor placed there is another doctor lost from the consultation station. Yet, stationing non-doctors at the triage may not be as effective or efficient. Thus, there is a need to develop an efficient triage system to balance both considerations and achieve the best outcomes.

Methods

Method: The triage system developed over the past 3 years involves only doctors in the first year, Singaporean nurses and senior medical students in the second year before reaching the latest system of multiple triage stations manned by senior Cambodian medical students from International University, Phnom Penh and overseen by a Singaporean doctor. After clerking, the medical students will present their cases to the doctor who then decides whether the patient requires a full consultation or is discharged at the pharmacy station with basic medications.

Results

Outcomes: Efficient and effective allocation of resources and screening has been achieved. Translators were no longer needed for triage and a desirable level of medical competence was provided by an overseeing doctor. The number of villagers screened also increased quantitatively by 59.5% over the past three years from 1000 to 1595 as the triage system was tweaked, while waiting time was observed qualitatively to be shorter as well.

Limitations: There exists confounders that may contribute to the increase in numbers screened, including the local situation and varying profile of villages. However, others such as number of doctors, villages, season and length of screening remained the same.

Conclusion

In conclusion, an effective and efficient triage was achieved.

D1005**DEVELOPMENT AND INITIAL VALIDATION OF A PROGRAM DIRECTOR'S EVALUATION FORM FOR MEDICAL SCHOOL GRADUATES****¹Dong T, ²Artino A, ³Gilliland W, ⁴Swygert K, ¹Durning S**

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Aims

In the early 1990, our group of interdepartmental academicians at the Uniformed Services University developed a PGY-1 program director evaluation form. Recently, we have revised it to better align with the core competencies established by the Accreditation Council for Graduate Medical Education (ACGME). We also included items that reflected USU's military-unique context. The purpose of the present study was to collect feasibility, reliability, and validity evidence for our revised survey.

Methods

We collected PGY-1 data from program directors (PD) who oversee the training of military medical trainees. The cohort of the present study consisted of USU students graduating in 2010 and 2011. We performed exploratory factor analysis (EFA) to examine the factorial validity of the survey and subjected each of the factors identified in the EFA to an internal consistency reliability analysis. We then performed correlation analysis to examine the relationship between PD ratings and students' medical school GPAs and performance on United States Medical Licensing Examinations (USMLE) Step assessments.

Results

Five factors emerged from the exploratory factor analysis -- Medical Expertise, Military-Unique Practice, Professionalism, System-based Practice, and Communication and Interpersonal Skills. The evaluation form also showed good reliability and feasibility. All five factors were more strongly associated with students' GPA in the initial clerkship year than the first two years. Further, these factors showed stronger correlations with students' performance on Step 3 than other Step Examinations.

Conclusion

The revised PD evaluation form seemed to be a valid and reliable tool to gauge medical graduates' first-year internship performance.

D1006

THE HIDDEN CURRICULUM IN ANESTHESIOLOGY

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Aims

The moulding of well trained anesthesia residents has been a challenge for many training medical institutions for decades. The hidden curriculum refers to the processes, pressures and constraints which fall outside the formal curriculum, often unarticulated or unexplored. This study aims to review and reveal the messages, ideals and attitudes that Anesthesiology consultants transmit to their trainees unknowingly. The general objective is to present the views of resident physician trainees in Anesthesiology about the quality of education they receive during their training especially in terms of the hidden curriculum. The specific objectives are: 1) To describe the different attitudes and beliefs of resident physician trainees in Anesthesiology regarding survival during their training. 2) To determine if the constant exposure to an individual (consultant) or a group (Anesthesia department: consultants, staff, co-residents, other hospital personnel) has impact on the anesthesia residents' own attitude and beliefs.

Methods

After approval by the UPHDMC Ethics Committee, a cross sectional-analytical study was conducted using a piloted questionnaire. Modifications and revisions applicable to the teaching and training of Anesthesiology in medical centres in the National Capital Region were carried out on the questionnaires. Data was gathered from August-September 2009. The study was conducted out in 8 hospitals within the National Capital Region. These hospitals are accredited centres for Anesthesia training by the Philippine Board of Anesthesia. A total of 88 doctors currently taking their Residency Training in Anesthesiology in these 8 Medical Centres was the study population with the breakdown: 36 first year residents, 28 second year residents and 24 third year residents.

Results

Four main themes emerged from the analysis of data: hierarchy, establishing relationships, role modeling and professionalism.

Hierarchy: Lower year residents (first and second year) are neophytes experiencing uncertainties and difficulties in adapting to the culture of the residency training program. This fostered an environment where students were afraid to ask questions and clarify issues that they did not understand. **Establishing relationships:** The learning interaction can lead to growth for both learner and teacher, also known as reciprocal influence. This study reveals that relationships does exist in the realm of anesthesia training no matter how superficial it may be.

Role modeling: Role modeling is an important aspect of helping trainees acquire the values, attitudes and behaviour associated with professionalism, humanism and ethical practice. **Professionalism:** As revealed in this study, a common bond still exists among consultants and fellow trainees. The realm of training in anesthesia is embodied in the direct supervision of consultants or seniors.

Conclusion

The respondents agree that the presence of the hidden curriculum has augmented the knowledge, skills and attitude required of them for future practice. They also admit that the constant exposure to the hidden curriculum has changed their perceptions attitudes as a trainee. There are no established norms in which to categorise and document the components of the hidden curriculum and how to asses it.

D1007**MOULAGE : REMOVAL OF CYST****Goh HC, Ocampo J, Ang SS, Wong N***Centre for Healthcare Simulation, Dean's Office, Yong Loo Lin School of Medicine, National University of Singapore, Singapore***Aims**

In this module, students are taught on the role of scrub nurses in OT such as scrubbing, gowning, draping of patient, preparation of surgical instruments and related consumables. They are also taught the importance and principles in maintaining sterility in the OT. In Academic Year 13/14, we created a moulage to mimic the removal of cyst to amplify the realism of the teaching and enhance the learning environment for students' to learn these important concepts.

Methods

The materials required to create the moulage include a suture pad, sponge, packet of simulated blood, silicone gel and seeds. For a detailed description on the creation of this moulage, please visit <http://www.youtube.com/watch?v=Psl0Z5zsmYQ>

During the 2.5 hours session, real surgical instruments were used, students were in proper OT attire and it was conducted in a simulated OT in Centre for Healthcare Simulation, NUS. The scenario for the session is removal of cyst and students were assigned different roles such as nurses, patient and surgeon. The surgeon will incise onto the suture pad and retractors were used to keep the incision open while the surgeon removes the cyst. The nurses' role includes handling of surgical instruments and related consumables, holding the retractors and preparing the specimen for investigations. The students gain a deeper understanding on the role of a nurse in assisting surgical procedures and to observe teamwork during a surgical procedure. At the end of the session, the students were surveyed.

The survey comprises 5 questions and a 5-point Likert scale was used: 5-strongly agree, 4-agree, 3-neutral, 2-disagree and 1-strongly disagree. Students were surveyed on the importance of the OT skills session, authenticity of the moulage and its effectiveness in helping the students to acquire the needed knowledge. Response rate is 92.5%.

Results

87.3% of the students rated 4 and above that going through this session with the moulage improves their confidence before entering a real OT. 87.4% agreed or strongly agreed that the use of moulage is essential while 86.2% agreed or strongly agreed that the moulage created for the removal of cyst training is authentic. 87.4% rated 4 and above that the use of moulage in the skill session has improved their learning experience. 91.9% of them agreed or strongly agreed that the use of such moulage should be extended to other skills sessions. The 3 most common qualitative feedback are:

1. Moulage is realistic
2. Innovative use of raw materials to create the moulage
3. The introduction of the moulage helped to create an interesting learning experience which aided them in their learning.

Conclusion

The use of this moulage has significantly enhanced the realism of teaching and learning experience of the students. Having gone through this session, students feel more confident before they enter a real OT. The Centre will be exploring if there are other sessions where similar innovation may be introduced to improve students' learning.

D1008

COMMUNITY SERVICE IN MEDICAL SCHOOL: A QUALITATIVE STUDY ON STUDENTS' OBSTACLES FACED AND POTENTIAL SOLUTIONS**¹Loh AZH, ¹Tan JSY, ²Lee JJ, ²Cheong AL, ²Koh GC***¹Yong Loo Lin School of Medicine, National University of Singapore, Singapore, ²Saw Swee Hock School of Public Health, National University of Singapore, Singapore***Aims**

In medical school, students may participate in various community service projects which serve disadvantaged communities. However, several obstacles may arise during community service involvement, such as time constraints, bureaucratic problems, and lack of necessary contacts or relationships with appropriate personnel. We conducted a qualitative study to understand the obstacles and corresponding potential solutions when medical students in Singapore participate in local and overseas community service.

Methods

We recruited medical students from Yong Loo Lin School of Medicine, National University of Singapore, who are also leaders of a specific community service project done in medical school. 12 one-to-one interviews were held for the participants from 6 to 8 January 2013 in the premises of the university. Participants were led in a discussion based on a set of study-specific topics. The interviews were audio-recorded and transcribed into free-flow text. Subsequently, the transcripts were analysed independently by 3 researchers.

Results

Obstacles faced by medical students during community service are common to many projects. These obstacles include difficulties in: recruiting and managing volunteers, ensuring commitment to the project, attaining recognition or credibility for the project to acquire funding and resources, adjusting to a different culture or language, setting specific goals, managing logistics, ensuring safety when carrying out the project, forming partnerships with organisations, and ensuring sustainability of the project in the long run.

Potential solutions have been offered for some obstacles by medical students. Several potential solutions include: building a strong executive committee for the project, grooming the successive batches, and improving the project's public image.

Notably, mentorship may potentially solve many of the obstacles encountered, as it is reported that a mentor can: give advice on starting up a project, share specialised knowledge, guide the project through other knowledge like commercial practices, provide opinion, vet proposals, and propose new ideas etc.

Also, students stated that setting aside time for reflection after a community service project, allows the participants to: reflect on how practical aspects of the project can be improved, understand the ground situation and sentiments, uncover underlying problems, re-evaluate goals of the project, and tailor and fine-tune the plans to meet the needs of the beneficiaries. Furthermore, reflection has the added benefits of promoting: personal growth and team bonding, as well as public outreach when reflections are placed on social media platforms.

In terms of ensuring sustainability, students reported that: planning for the future, learning from past events, having proper leadership succession, ensuring self-sufficiency among the beneficiaries, having dedicated past volunteers who return and offer their services, securing a constant source of funding or recuperation of funds, and incorporating technological advancements into their plans, would help to maintain the project.

Conclusion

Various potential solutions have been proposed to tackle the obstacles faced during community service participation in medical school. However, there may still be difficulty in solving some of the problems even after these measures are put into practice. More research should be conducted after the proposed solutions have been implemented, in order to evaluate the effectiveness of these suggested solutions in real life.

D1009

RESEARCH EXCELLENCE IN UNDERGRADUATE ENVIRONMENT - PROCESS AND IMPACT EVALUATION REPORT

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Aims

Introduction: Cognitive and subject-specific skills are increasingly emphasised in learning outcomes and progression of undergraduate health education. Implementation of research activities provides opportunities to develop higher cognitive capabilities and intellectual engagement by its nature in real work ground.

Hypothesis: Genuine research processes are good learning processes that have a more general application in profession.

Aim: Motivate undergraduate dental students to undertake research projects both as curricular and co - curricular components in order to nurture growth in research and extension capacities among students in our research institute.

Objectives:

Create a user friendly research promoting ambience, resources and practices that infuse research aptitude.
Provide financial and administrative support to explore traditional and untraditional areas with courage and creativity.
Remove the conventional bureaucratic hurdles in practicality of undergraduates' entry to research activities.

Methods

Process plan:

a: Induction of research in BDS curriculum through,

1. Training in epidemiology and statistical tools.
2. Hands on workshops for research proposal writing.
3. Seminars on research project development and publication writing.
4. Modules on Research methodology, biostatistics.
5. Research ethics education online courses.

b: Secretarial support:

1. Intra institutional collaboration in interdisciplinary and multidisciplinary research projects.
2. University has subscribed to National knowledge Network Connectivity which facilitated national mission on education and research through Web - based resources.
3. Bio dental engineering committee - engineering dental education.

c: Research grants - paving the way.

1. Student research starter grants.
2. Chancellors summer research fellowship grants.
3. GATE project funds (Growth and Advancement through Excellence).
4. ICMR (Indian Council for Medical Research) - short funded projects

d: Governance and Quality sustenance.

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1. Research management information software system (R - MIS) to facilitate seamless flow of administrative and financial governance of research.
2. IQAC (Internal Quality Assessment Cell) - analysis of research standards
3. Publication oversight committee to ensure software check for plagiarism.
4. Display the research work done by students in relevant work fields.

We implemented our value added program in 2012 academic year.

Based on interest, attitude towards research and academic level, undergraduates are assigned role of either Observer, Research assistant, Co - investigator or Primary investigator

Results

Impact evaluation:

1. Gradual increase in the number of undergraduates enrolled for various training program as 33%, 45.2% and 59% in the 3 consecutive years.
2. Total number of research projects submitted in the duration of 2012 - 14 is 232 (46.4% of undergraduate strength)
3. 119 (41% of total projects) projects were supported by various funding agencies whereas 108 projects were self funded. (37% of total projects).
4. Presentation of research reports in various scientific conferences at International (18), national (33) and state level (59) in 2013 and 2014.
5. From 2013, till date the research articles published by our UG students in peer - reviewed, indexed journal is 4.

Conclusion

Our unique plan and implementation with global vision made students to experience higher level adaptive learning. Students' own perceptions, interpretations and ideas are explored, and evidenced for future learning hence justified the hypothesis.

D1010**STUDENTS' PERSPECTIVES ON THE EDUCATIONAL ENVIRONMENT, BSC PHYSIOTHERAPY UNDERGRADUATE STUDENTS IN SRI LANKA****Perera ADP***Department of Basic Sciences, Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Sri Lanka***Aims**

Learning environment in any degree program is found to be important in determining students' academic success. It has been suggested that a positive learning environment as a student can lead to increase satisfaction, achievement and success as a practitioner post-graduation. In Sri Lanka, the Allied Health Sciences degree courses are still in the development phase. The purpose of this cross sectional study is to investigate student perceptions of learning environment among Bsc Physiotherapy undergraduate students in Sri Lanka. Various aspects of environments are compared between year of levels and gender.

Methods

The Dundee Ready Educational Environment Measure (DREEM) and demographic questionnaire were completed by 104 undergraduate students enrolled in Bsc Physiotherapy degree program, Allied Health Sciences Unit, Faculty of Medicine, Colombo. The students enrolled in different year of level from first year to fourth year. Convenience sampling was used and scores were compared across different grouping variable identified in demographic information. The data analysed using SPSS. The data will be initially analysed using descriptive statistics.

Results

Total DREEM scores across the sample were fairly high ($M = 140.02$; $SD = 46.86$), indicating an overall perception of learning environment among students. Total scores were higher for males ($M = 137.16$; $SD = 47.63$) than females ($M = 136.09$; $SD = 43.89$). Perception of environment significantly varied between year-level of enrolment, with second and fourth year students producing more positive DREEM scores than fourth year students. Both male and female students of fourth year showed higher ratings for DREEM while first year male and female students showed the lowest ratings.

Conclusion

This study suggested that students enrolled in Bsc Physiotherapy degree program generally hold positive perceptions toward their course environment while males held superior perceptions than females for overall DREEM scores. All the students produced higher ratings for their atmosphere than the other environmental perceptions and finding was similar across gender and year of enrolment. This suggests that the educational atmosphere or background may lead to positive outcomes for the students.

D1011

FOSTERING LEADERSHIP DEVELOPMENT: SHAPING OUR FUTURE MEDICAL LEADERS

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Aims

An Association of Faculties of Medicine of Canada, College of Family Physicians of Canada, Collège des médecins du Québec and Royal College of Physicians and Surgeons of Canada consortium developed recommendations on the Future of Medical Education in Canada - Postgraduate one of which is to “Foster the development of collaborative leadership skills in future physicians, so they can work effectively with other stakeholders to help shape our healthcare system to better serve society.” The transformative action is to “Develop, in close collaboration with Undergraduate Medical Education programs, a national core leadership curriculum for all residents that is focused on professional responsibilities, self-awareness, providing and receiving feedback, conflict resolution, change management and working as part of a team as a leader, facilitator or team member”.

Methods

A National Leadership Curriculum Development Day was held that included the consortium partners and representatives from the Canadian Association for Medical Education, the Canadian Medical Association and learner organisations. The objectives were to review any current leadership competencies, appreciate existing models and tools to develop leadership curriculum, and determine learner assessment and program evaluation methods.

Results

Key priority next steps included 1) the development of leadership competencies and their inclusion in current medical education frameworks, 2) development of a curriculum design and delivery repository, and 3) development of accreditation standards to ensure the integration of leadership curriculum and learner leadership assessment modalities such as multisource feedback and portfolios.

Conclusion

Based on the recommendations discussions have begun with the CanMEDS 2015 leaders. A repository of the leadership current resources and curriculum models developed will be created and made widely available. The recommended accreditation standards will be presented to the appropriate accreditation committees for consideration.

D1012

USE OF ITEM ANALYSIS TO IMPROVE THE QUALITY OF SINGLE BEST ANSWER MULTIPLE CHOICE QUESTION IN SUMMATIVE ASSESSMENT OF UNDERGRADUATE MEDICAL STUDENTS IN MALAYSIA

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Aims

Single best answer (SBA) as multiple-choice items are often advantageous to use for its reliability and validity. Although less susceptible to guessing, SBA requires a good number of plausible distractors to achieve reliability. Apart from psychometrics of assessment it is important to perform item analysis to provide valuable feedback to faculty. A good method to decide on quality of SBA items is to analyse each item for its difficulty index (DIF I), discrimination index (DI) and distractor efficiency (DE) based on number of non-functional distractors (NFD).

To evaluate the quality of SBA items administered in professional examination for subsequent feedback to faculty and to apply corrective measures determined by DIF I, DI and DE of instrument's performance in assessment.

Methods

An evaluation of post summative assessment (professional examination) of SBA items as part of psychometric assessment is performed after 86 weeks of teaching in preclinical phase of MD program. 40 SBA items and 160 distractors inclusive of key were assessed using item analysis. 136 students' score of SBA was analysed for mean and standard deviation, DIF I, DI and DE using MS Excel 2007. Unpaired t-test was applied to determine DE in relation to DIF I and DI with level of significance. Item-total correlation (r) and internal consistency by Cronbach's alpha and constancy by parallel-form method was also computed.

Results

15 items had DIF I = .31-.61 and 25 items had DIF I $\leq .30$ or ≥ 0.61 . 26 items had DI = 0.15 - $\geq .25$ compared to 14 items with DI (≤ 0.15). There were 26 (65%) items with 1-3 NFD and 14 (35%) items without any NFD. 39 (32.50%) distractors were with choice frequency=0. Overall mean DE was 65.8% and NFD was 49 (40.5%). DE in relation to DIF I and DI were statistically significant with p = .010 and .020 respectively. Item-total correlation for most items was $< .3$. Internal consistency by Cronbach's alpha in SBA test 1 and 2 was .51 and .41 respectively and constancy by parallel-form method was .57 between SBA test 1 and 2.

Conclusion

The high frequency of difficult or easy items and moderate to poor discrimination suggest the need of items corrective measure. Increased number of NFD and low DE in this study indicates difficulty of teaching faculty in developing plausible distractors for SBA questions. This has been reflected in poor reliability established by alpha. Item analysis result emphasises the need of evaluation to provide feedback and to improve quality of SBA items in assessment.

D1013

RESIDENTS PROVIDE THEIR CLINICAL TEACHERS WITH FEEDBACK ABOUT THEIR TEACHING COMPETENCIES: HOW DOES IT WORK?**Fluit C, Klaassen T, Bolhuis S, De Visser M, Laan R, Wensing M, Grol R***Academic Educational Institute, IWO, Radboud University Medical Centre, Netherlands, The***Aims**

Residents in postgraduate medical education predominantly learn in the clinical practice from their experiences and social interaction. These learning processes happen largely without deliberate attention. Teachers can stimulate this learning more deliberately by explicit questioning, discussion and reflection as advocated by the cognitive apprenticeship model.(Billet 2001) Providing clinical teachers with feedback about their teaching performance is a powerful tool to improve teaching. This requires instruments based on workplace learning, and an effective procedure to provide this feedback.(Nicol 2006) For this purpose the EFFECT questionnaire (Evaluation and Feedback For effective Clinical Teaching) was developed.(Fluit 2012) EFFECT incorporates characteristics of workplace learning and the teaching of CANMeds competencies. We developed a system (called EFFECT-S) for providing feedback to clinical teachers. EFFECT-S contains: (1) creating commitment in the department; (2) filling in questionnaires; (3) producing a feedback rapport; (4) a dialogue between a staff member and two residents to discuss the data, guided by a facilitator. Our research goal was how EFFECT-S, including the dialogue, was perceived by both clinical teachers and residents.

Methods

Clinical teachers from pediatrics, pulmonary diseases, radiology and orthopedic surgery of 4 teaching hospitals, and who were evaluated by EFFECT-S, participated in this study. We interviewed clinical teachers (n=32) and residents (n=11). Transcripts of the interviews were analysed by three researchers, using ATLAS Ti.

Results

EFFECT-S, including face to face meetings between the clinical teacher and two residents was highly appreciated. The dialogue was constructive, it gave meaning to the data and teachers received useful tips and suggestions. The facilitator helped creating a safe environment. The self-assessment forced teachers to reflect on their teaching behaviour. EFFECT covered all important aspects of clinical teaching. Residents learned how to provide feedback, and learned from their teachers how to receive feedback. A safe evaluation environment and honest feedback were important conditions. Anonymous rating creates a safe evaluation environment for residents, but it impairs safety for teachers. Both residents and teachers proposed to have a team session after the feedback interviews to share experiences and to make agreements with the whole group to make further change.

Conclusion

Residents providing feedback to their teachers is feasible, highly appreciated, and perceived essential in the evaluation procedure. Feedback was accepted easily and residents too learned a lot from these sessions. The dialogue between residents and their teacher stimulates the co-creation of shared knowledge on what the profession is about, a shared understanding of learning in practice and how to optimise this workplace learning in their communities of practice.(Wenger 1998). An extra step was added to the EFFECT-system, that is a team session after the feedback interviews.

D1014

REFORMING THE MASTER OF MEDICINE (FAMILY MEDICINE) EXAMINATION IN SINGAPORE: A PRACTICAL APPROACH TO CONTINUOUS QUALITY IMPROVEMENT IN ASSESSMENT

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Aims

As part of Continuous Quality Improvement (CQI) in postgraduate specialist training and introduction of ACGME (I) residency training programme in Singapore in 2011, the Master of Medicine (Family Medicine) examination underwent modification. The changes were phased in over a period of 3 years with the new format taking effect in 2015. This paper will highlight the rationale for change and summarise the development and implementation process.

Methods

A key step in the examination reform was the formation of the Family Medicine Examination Committee, which worked collaboratively with the Medical Education Unit. The committee developed the examination blueprint and station attributes which involved consensus building amongst the stakeholders and extensive literature review. Considerations for change included both internal and external drivers. Factors evaluated included: the advantages and limitations of each examination method, the current evidence based literature on testing methods and also a comprehensive review of how the examination process can help in the testing of skills necessary for producing proficient family physicians who will be able to take on the role of future leaders in Family Medicine.

Results

The new examination will have 2 parts: Part 1 consists of a 250 MCQ question paper, Part 2 consists of a multi-station clinical examination (MSE), which comprises a viva station, slides-based station and clinical stations involving both standardised and real patients. The MSE will replace the traditional long and short cases. A key change in the new format was the use of both real patients with clinical signs, who received no training, and the trained simulated patient. It was also recognised that the reliability of the clinical examination needed consistent marking by trained examiners and considerable effort was spent in developing an examiner training module. This included developing the scoring rubric and the use of criterion-based standard setting methods.

Conclusion

With the changes and the CQI process in place, it is hoped that the new assessment process will drive trainee behaviours to develop relevant competencies for their future practice.

D1015**FINDING THE MISSING PIECES OF THE PUZZLE: IDENTIFYING BARRIERS PERCEIVED BY STAFF TO RECORDING LOW-LEVEL MEDICAL STUDENT CONCERNS*****Vogan C, Da Silva AL, Mckimm J, Philips H, Brown M****College of Medicine, Swansea University, United Kingdom***Aims**

Early identification of under-performing or struggling students allows medical schools to implement timely support provisions, reducing risks of non-progression and dropout (Yates (2011) BMC Med. Educ. 11(1):95). Furthermore, evidence suggests that poorly performing students may subsequently become poorly performing doctors, failing to attain the necessary competencies to thrive professionally (Papadakis et al (2004) Acad. Med. 79(3):244-249; Murden et al (2004) Acad. Med. 79(10):S46-S48; Yates & James (2010) BMJ 340). Whilst identifying serious concerns (e.g. exam failure, sickness) is relatively straightforward, low-level concerns (e.g. missing appointments, being rude to staff or colleagues) are a key part of the 'puzzle'. When multiple instances occur, this can indicate that a student requires additional support or that a professional behaviour issue needs to be addressed (Yates (2011) BMC Med. Educ. 11(1):95). However, members of staff can be reticent to be seen to fail students and record such concerns formally using institutional systems (e.g. meeting records with tutees) (Dudek et al (2005) Acad. Med. 80(10):S84-S87; Cleland et al (2008) Med. Educ. 42(8):800-809). Without finding these pieces of the puzzle, early identification can be difficult and students who would benefit from early support or remediation may remain undetected until they fail to progress or fitness to practice concerns arise.

Methods

The Swansea Graduate Entry Medicine programme has an early flagging system, linked to our support structure, which identifies students displaying multiple low level concerns and other risk factors for non-progression. Using an exploratory mixed-methods design, combining questionnaires and focus groups, we are evaluating the effectiveness of this system from both staff and student perspectives. We are specifically investigating whether any barriers exist that prevent staff engaging with the system and recording low-level concerns they have about students.

Results

The results from this study will be presented and discussed in the context of relevant literature. Strategies to overcome any identified barriers will be suggested, both from a faculty development and an organisational/system perspective

Conclusion

Systematic recording of low-level concerns about individual students is important to ensure that timely support and advice can be provided to those in the early stages of difficulty. However systems must also ensure appropriate disclosure, privacy and confidentiality for both students and staff. Understanding the barriers perceived by staff allows the development of effective strategies to ensure concerns are identified, recorded and acted upon appropriately.

D1016

CONDUCTION OF A MULTIPLE MINI EDUCATIONAL PROGRAM IN SERVICE LEARNING

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Aims

Generate a multiple mini educational program for children's knowledge and skills of dental health care.

Methods

Service partners were grouped through Facebook. We contacted the community and identified their health care problems. Resources included materials; stakeholders were identified and then led to generation of the administrative network. A 15 minute multiple mini educational program (MMEP) was decided through group discussion and brain storming, including recognising the structure of oral cavity, protective and harmful factors for dental caries, technique of using dental floss, Bass method for brushing teeth, thematic picture books reading focus on dental health care. Educational effectiveness was determined by a survey through a questionnaire.

Results

22 medical students were recruited. Every medical student was required to role play as a caregiver and friend, as well as their professional role. The service location is set at a holiday school named Hai-Tsu, 30 kilometer away from Hualien city at Eastern Taiwan. The need was focused on dental health care education program after discussion with the school teacher and according to the whole school health survey results conducted by a regional medical centre. Up to 97 % children was found to have dental caries and related issues of dental health. By using computer power point presentation, picture card, and games, a half day service educational activity was conducted. About 50 children were divided into 8 groups and run through five mini-educational stations. The written questionnaires were given to the community centre as data. As more questionnaires will be filled in the future, the effectiveness of our MMEP will be identified.

Conclusion

Service learning is becoming an essential activity to enhance medical student's professional development. Designing and conducting a service learning project connecting both medical students' learning objectives and needs oriented from the community. In the process from designing programs to carrying it out, medical students developed abilities to create effective educational programs to suit community needs.

D1017

PEDIATRIC PHYSICIAN AND MEDICAL STUDENT PERCEPTIONS TOWARDS THE MEDICAL SCHOOL PEDIATRIC CLERKSHIP: QATAR EXPERIENCE**¹Hendaus M, ¹Alhammadi A, ¹Khan S, ¹Osman S, ²Alsammam Y, ²Khanna T**¹General Pediatrics Division, Hamad Medical Corporation, Qatar, ²Weill Cornell Medical College, Qatar**Aims**

The experience during the 3rd year clerkship can impact a student's decision to pursue a career in pediatrics. It is also often the students' first impression of pediatrics. Compared to the internal medicine and surgery clerkships, only 6 weeks are allotted to the pediatrics clerkship, of those only 3 weeks are in the inpatient wards. It is therefore essential that this time be used effectively. Our study compares the views of the different members of the inpatient team responsible for medical student education including the pediatric attendings, fellows, residents, and medical students.

Methods

An anonymous survey was distributed in November 2013 to all general pediatric attending's, pediatric academic fellows and postgraduate year 1-4 pediatric residents at Hamad Medical Corporation and to medical students from Weill-Cornell Medical College in Qatar that rotated in the general pediatric ward. The majority of the questions offered objective answers utilising the 5-point Likert scale that can be used to perform statistical analysis. In addition, we incorporated some questions in the survey that allow participants to write comments.

Results

Feedback was obtained from 8 attending pediatricians (100% response rate), 8 academic pediatric fellows (100% response rate), 19 pediatric residents (48 % response rate) and 31 medical students (52% response rate). Agreement was high among faculty, fellows, students, and residents that the current clerkship duration is not enough to be acquainted to the inpatient team (83% of physicians vs 87 % of students). In addition, only 12% of physicians and 29% of medical students believed that three weeks of inpatient pediatric exposure is enough.

On the other hand, 35% of medical students disagree that they receive enough bedside teaching compared to 47.7% of physicians. Medical students believe that sit down rounds are the most effective mode of teaching (48.4) compared to 11.4% of physicians

Conclusion

Appreciable variations occur between pediatric attending, fellow, resident and medical student's perceptions and expectations towards the medical pediatric clerkship. Extending the pediatric rotation two additional weeks might close the gap between pediatric physicians and medical students. Further and larger studies are recommended.

D1018

CULTIVATING SKILLS IN MEDICAL TREATMENT FOR DISTANT VILLAGES THAT LACK MEDICAL CARE

Lo C

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Aims

Background:

Service learning is significantly essential in the education of medical students. With the participation in volunteer clinic, medical students may gain great enhancement in clinical ability, especially skills and knowledge. Additionally, how the medical appliances, drugs and human resources are used most efficiently could be observed clearly.

Aim:

By interacting with the patients and learning beside the volunteer doctors, medical students may develop great clinical ability and understand more about distant villagers' needs and their difficulties living in straitened circumstances. Moreover, we have to see if the patients agree on the advantages we bring for them by some simple interviews.

Methods

There will be a leader on behalf of the student team to contact with three systems including the medical department office, students association and TIMA (Tzu Chi International Medical Association) for the schedule and the list of the staff. Commonly, about ten students will join in the team of the volunteer clinic and upon arriving at the village, the student team will be separated into five groups. Each group will join one of the sections including the sign-in desk, the regular physical check-up point, receptionists at the waiting area, the clinic room, the dispensary and will shift hourly. We will do post-surveys for the students to know what have they gained during the volunteer clinic, including skills and knowledge. The survey mainly will have two aspects of question including what is the difficulty they faced during the activity, how will they solve the problem, and what knowledge they learnt from the activity. Moreover, we will randomly pick patients from different clinic rooms to do simple interviews on them to see if our treatments actually worked.

Results

All the medical students involved in the volunteer clinic may role play as all different kinds of medical personnel, which can upgrade student's knowledge in the system of medical organisation. As the goal is to offer medical care for the people who are in difficulty to reach medical services in remote villages, students have to cultivate the skills of taking care of people with distinct life styles and culture issues. For example, we are learning some common words from different aboriginal tribes so that we would be able to communicate better with them and we will realise more about the health problems that they are usually faced with. Moreover, we could even inform them of the importance to ingest the more nutritious food items from their staple meal.

The service spots are usually located in eastern Taiwan where local villages are distant from the very few main hospitals and we can get around a hundred to a hundred and fifty people at a time. According to the medical records, we found out that about two-thirds of the patients had records of involving in the past medical consultations, and through simple interviews we also discovered that they generally believed the activity could provide them with convenient access to medical care, and that even if they were faced with severe clinical conditions, they would be transferred to hospitals for further treatments.

Conclusion

The survey revealed that the patients thought the volunteer medical consultations not only brought them instant treatment, but also provided them basic healthcare knowledge, allowing them to better look after their own health. On the other hand, the post survey for students have shown great improvement on skills and knowledge after participating in the volunteer activity. However, this survey may have to be revised as how good the improvement is judged by the designated staff subjectively.

D1019

INPATIENT PEDIATRIC CLERKSHIP: AN EDUCATIONAL EXPERIENCE**¹Alhammadi A, ²Hendaus M, ²Khan S, ²Osman S, ³Alsammam Y, ³Khanna T**

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Aims

The academic pediatric ward is usually characterised by having a special set up where medical students interact with teachers of different academic levels. However, there is always a challenge to provide the best quality of education and training to students in an era with busy pediatric service, administrative obligations and tedious documentation. Compared to the internal medicine and surgery clerkships, only 6 weeks are allotted to the pediatrics clerkship, of those only 3 weeks are in the inpatient wards. It is therefore essential that this time be used effectively. The aim of our study is to determine and compare the perceptions of physicians and students towards the effectiveness of teaching during inpatients pediatrics clerkship and to explore potential recommendations that can improve program content

Methods

A cross sectional study using an anonymous survey was conducted among 31 medical students from Weill-Cornell Medical College in Qatar that rotated in the general pediatric ward, and 35 pediatric physicians (attending, fellows, and residents), at Hamad Medical Corporation, the main tertiary teaching hospital in Qatar

Results

The response rate was (100 %) for attending, fellows and (50%) for medical students, pediatric residents. Medical students rated rounds as the most effective mode of teaching (90%) compared to (50%) of physicians. Nearly (90%) of physicians felt that pediatric inpatient environment is safe and friendly as to (60%) of students. Agreement was around (50%) among all groups that quality of bed side teaching requires improvement. In addition, physicians believe that supervision and frequent feedback needs improvement (47%) in comparison to (30%) of students. Finally, there was an appreciable difference in the belief that physicians (81%) provide and encourage the practice of evidence based medicine; however, only (35%) of students agreed

Conclusion

Pediatric inpatient rotation offers an opportunity to acquire knowledge and to enhance the students and trainees thinking process. The medical student perception towards the pediatric clerkship educational experience is usually related to the attending and resident attitude. Our findings will assist in the design and implementation of different models for managing the learning experience in the wards

D1020

EVALUATING THE EFFECTIVENESS OF CURRENT MEDICAL TEXTBOOKS AS UNDERGRADUATE LEARNING RECURSE- A STUDENT PERSPECTIVE

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Aims

Both basic and clinical medical textbooks rank amongst the important recourses from which students grasp knowledge and acquire relevant skills. From our observations and experience as students, we noticed that students are shying away from textbooks and relying more on other alternative sources. Furthermore, current textbooks fall behind in fulfilling the goals of modern curricula trends such as integration.

We hypothesize that current medical textbooks suffer important deficiencies because they do not take into account the students perspectives, usage of textbooks, and their needs. Thus, students find them less effective as compared to other sources.

Our aim was to explore, for the first time, the perspective of students on medical textbooks through, 1- describing the students primary uses of Textbooks and underlying reasons making the students repulse using textbooks; 2- evaluating the effectiveness of current explanation-aiding tools used in textbooks; 3- evaluating the effectiveness of textbooks in the development of students abilities in the different cognitive domain outcomes.

Methods

We conducted a cross sectional study in which we collected the data through an anonymous, self-rating online survey administered to medical students studying at Alfaisal University in Riyadh, Saudi Arabia who at least finished one year of college study, from both genders from all college levels spanning from first year to internship year (n=278). The survey assessed student usage of textbooks, their evaluation of the explanation tools currently used and their evaluation of textbooks coverage of cognitive outcomes through responding to typical 5-point Likert scale statements.

Results

197 students completed the survey (70.86% response rate). In terms of student usage of textbooks, the results showed that 88.3% of students use textbooks in studying for at least one discipline. Only 52.3% use these textbooks frequently. Only 18.3% use them a primary source to study all required material from, while 30.5% use them as a reference just to ascertain information and 39.6% use textbooks only as an aiding tool to clarify specific unclear concepts or topics. Students reported that in 27.9% of the time they don't find the information they are looking for. 34.5% report that textbooks don't help them improve their examinations performance. In regards to information presentation, only 63.5% find the used text to be clear while only 42.6% found the text to be direct. Regarding used explanation tools, diagrams and tables scored 84.3% and 80.2 respectively to rank the highest in effectiveness. While 33% and 39.6% reported ineffective usage of clinical integration and multidisciplinary integration tools respectively. Furthermore, 47.7% find the usage of current information linking tools ineffective. In regards to effectiveness in developing cognitive domain outcomes, comprehension and recall scored the highest with an effectiveness of 79.7% and 72.1% respectively, while application ranked the lowest with an effectiveness of 47.7% only.

Conclusion

Improvements need to be introduced to current medical textbooks to develop their value as learning resources. The importance of this study extends to aiding faculty when deciding on which textbooks to recommend and to publishers to modify textbooks to fit the student perspective and needs.

D1021

PRELIMINARY STUDY ON THE EFFECTIVENESS OF PROBLEM-BASED LEARNING BASED ON A PATIENT-SIMULATED VIDEOTAPE*Ikegami A, Ikusaka M, Ohira Y, Shikino K, Kajiwara H, Kondo T, Suzuki S, Noda K, Uehara T**Department of General Medicine, Chiba University Hospital, Chiba University, Japan***Aims**

Problem-based learning (PBL) is a method for obtaining knowledge applicable to clinical practice and for developing self-learning capacity. It is unclear whether PBL can be expanded beyond biological aspects to inference training in broader areas, including the psychosocial aspects of clinical practice. This study compared simulated patient videotapes prepared for TV programs and paper-based PBL to assess whether PBL could be expanded to include psychosocial aspects.

Methods

Students undergoing clinical training in the 5th year of medical school were recruited to perform two case studies by traditional paper-based PBL (Paper method) and simulated video-based PBL (Video method) during a 2-week rotation. After finishing each PBL method, a questionnaire based on the Likert scale was completed to evaluate the target achievement rate. In addition, a questionnaire on effectiveness was completed in Week 2 to compare the Video and Paper methods. Moreover, the differential diagnoses were coded using the International Classification of Primary Care Second Edition (ICPC-2), and the diversity of diagnoses was compared between the two methods.

Results

When both methods were compared, more than half of the participants preferred the Video method. The most common reason was that viewing images of the patient made assessment easier. With regard to the target achievement rate for an item incorporating a multi-dimensional approach (including the patient's psychosocial aspects), the Video method was significantly better ($P < 0.01$). On the other hand, when diversity of diagnosis was assessed, psychological illnesses accounted for 5.5% with the Video method versus 12.4% with the Paper method. Among the ICPC-2 codes, the P codes (psychological) accounted for 4.9% with the Video method versus 13.6% with the Paper method. In both of these categories, the Paper method achieved significantly higher rates ($P = 0.02$ and $P < 0.01$, respectively). However, the number of diagnoses ($P = 0.55$), number of ICPC-2 codes ($P = 0.84$), and number of ICPC-2 code types ($P = 0.84$) were not significantly different between the two methods.

Conclusion

Although the rates were low, both methods of PBL included psychosocial aspects. When the two methods were compared, only the Video method provided images of the patient and students considered it to be a multi-faceted approach. However, diagnoses were constrained by the video images and it was considered that the Video method resulted in narrower assessment of psychosocial aspects compared with the Paper method.

D1022

A PEDAGOGICAL CLINIC FOR TEACHERS - A STRATEGIC FACULTY DEVELOPMENT INITIATIVE TO FACILITATE CHANGE

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Aims

A constantly changing world causes multiple challenges and need for innovation and changes in higher education. The unique context and complexity of higher education institutions, however, may challenge the efficacy of faculty initiatives to promote change. Our main goal with this initiative was to facilitate development and individual, inter-individual and organisational changes regarding educational practice to ensure relevant learning activities of high quality.

Methods

A pedagogical clinic was established as a voluntarily offer for faculty members at all career levels. A web based booking system made it possible for individual faculty members or teams to schedule a visit in the clinic to discuss ideas, challenges, projects or needs related to their role as teachers and educators. The clinic also offers workplace visits (i.e classrooms, laboratories, clinical settings etc) to oblige the needs of our faculty and to better understand how faculty development activities may be designed to impact quality and change in higher education in the future.

STUDY SITE: Faculty of Health Sciences at UiT The arctic university of Norway is a result of a merger between the former University of Tromsø and the University College of- Tromsø (2009) and -Finnmark (2013). The faculty has eight departments, with more than 1000 employees, about 3000 undergraduate students and 300 phd students. Each year we admit > 650 students within 10 health care study programmes: biomedical laboratory scientist, dental hygienist, medicine, nursing, occupational therapy, odontology, pharmacy, physiotherapy, psychology and radiography, in addition to several postgraduate specialties. Since the merger the faculty adopted a strong commitment to high quality in education, reflected in our strategy for education (from 2010-2013, 2014-2020). A Centre for innovative pedagogical and ICT-based education in health sciences was established in 2012, and several strategic faculty development initiatives including the pedagogical clinic has been realised.

Results

The pedagogical clinic was formally opened spring 2014 and has had a number of visits already. At the 3rd ICFDHP conference data on visits including characteristics of visitors, subjects of consultations and outcome in relation to educational practice will be described and reflected upon.

Conclusion

A pedagogical clinic seems like a valuable initiative to address some of the needs of the faculty in order to enable educational development as well as organisational change. Further conclusions will be drawn at the 3rd ICFDHP conference.

D1023

A COMPARISON OF TWO DIFFERENT SKILL TEACHING METHODS INVESTIGATING RESUSCITATION SKILL ACQUISITION BY UNDERGRADUATE STUDENTS

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Aims

Walker and Peyton's Four Stage Approach (4SA) for teaching clinical skills has been growing in popularity since its initial description in 1998 but is not routinely used in clinical skill instruction. This study aims to compare the effectiveness of 4SA with the more traditional approach of "See one, Do one" (SODO). Outcomes were measured in compliance to the skill process as initially taught. Secondary outcomes will inform a cost-analysis of both teaching models in terms of time to teach and resources required.

Methods

Undergraduate students were recruited based on their enrollment in specified clinical degrees at Flinders University. Participants were sorted into groups of 6 based on their availability, and then randomly allocated a teaching intervention. They performed the skill prior to the teaching session, and again following the teaching session. The skill performances were video recorded from two angles, and assessed by experienced Emergency Paramedics who were blinded to both the participants' allocations to teaching methods, and the sequence of the performance videos. Performance times were recorded by the chief researcher from the video recording. Teaching sessions were also video-recorded to audit compliance to the teaching methods. The skills for this study were selected from the resuscitation skills taught in Advanced Life Support (ALS) courses.

Results

Preliminary results indicate that shorter skill performance times correlate with lower adherence to the skill as initially taught. Educator feedback supports a hypothesis that 4SA results in superior skill acquisition when compared to SODO. Performance data is currently being collected and analysed, with more definitive results to follow.

Conclusion

This study helps inform clinical education organisations in selecting skill teaching methodologies based on a comparison of effectiveness on both skill learning and cost to deliver. This relates widely to clinical learning environments, particularly where resources such as time, funding and training equipment are limited. A further stage of this project will analyse skill retention 6 months following the teaching session as a measure of teaching method effectiveness.

D1024

BUILDING COMMUNITIES OF PRACTICE AMONG CLINICAL PRACTICE TUTORS - A FACULTY DEVELOPMENT INITIATIVE ACROSS ORGANISATIONAL BOARDERS

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Aims

Northern Norway is facing specific regional challenges regarding delivery of health services. About 470,000 people populate 1/3 of the area of Norway. Urban centres and hospitals are few, and 56 out of the 88 municipalities have less than 3,000 inhabitants. Also, the historical lack of an educated workforce is not yet eliminated. The University of Tromsø and its clinical placement partners has a special obligation to educate health personnel for North Norway. Since all study programs include training in clinical placements (between 10-50 % depending on study program), the quality of the clinical instruction is fundamental to the overall quality of the study program, and for student learning. Our main goal with these initiatives was to expand the focus from individual faculty development activities to the organisation and build communities of practice between the clinical practice tutors across health professions in and between different organisations. At the same time we wanted to address the needs for a more flexible way of learning for this group of tutors.

Methods

A three steps educational development program was offered to specific groups of clinical practice tutors in which all three modules were performed with interprofessional groups of tutors. The three modules in the program focused on different perspectives in the role of being a clinical tutor; 1) a basic module mainly with theoretical introduction, and interactive exercises with reflection, dialogue and discussions, 2) a second module focusing on skills and practical training in tutoring, and 3) a third module focusing on sharing experiences of best practice in clinical tutoring. The third module was performed in groups of 60 clinical tutors, whereas the former two with 30 tutors. For continuous faculty development and further development of communities of practice, workplace visits with adapted faculty development activities was offered. A online basic course made it possible for individual clinical practice tutors or teams to learn the basic knowledge for clinical practice tutoring in a more flexible way.

Results

The basic module has been a successful faculty development initiative for some years. The extension of the formal development program with two modules, the web-based module and the workplace initiative is systematically introduced to the tutors this semester and we will be happy to share our experiences at the 3rd ICFDHP.

Conclusion

A close collaboration between the faculty and the clinical placement partners seems fundamental in order to be successful in building communities of practice among clinical practice tutors.

D1025

ENHANCE CARE DELIVERY ON ACTIVITIES OF DAILY LIVING BY OCCUPATIONAL THERAPISTS FOR PATIENTS UNDERGOING REHABILITATION IN A COMMUNITY HOSPITAL IN SINGAPORE

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Aims

Evidence has shown that a patient's abilities to perform Activities of Daily Livings (ADLs) can be enhanced when he received targeted ADL care delivery by the Occupational Therapist (Legg, Drummond & Langhorne, 2006; Hagsten, Svensson & Gardulf, 2004). Retrospective data on 206 patients discharged in June, July and August 2012 demonstrated that only 8.9% of the patients have OT's documentation on care delivery (dressing, showering, transfer, functional mobility).

The aim of this project is to ensure that patients who has a Abbreviated Mental Test Score > 7 and who requires moderate to standby assistance during their admission will have their Occupational Therapist's (OT) care delivery which denotes dressing, showering, transfer, functional mobility done within 2 weeks of hospitalisation in 6 months.

Methods

Using Clinical Practice Improvement Programme methodology, the team drew the processes' flow chart, brainstormed and identified main causes with a Pareto chart. The root causes cited for lack of OT care delivery were the lack of standardised ADL OT's training, concentration on patients' physical impairments, lack of emphasis on care delivery and patients viewed rehabilitation as exercising on equipment to regain functional status. Interventions included the development of structured training for OTs, guidelines on care delivery. Selection criteria defining 'appropriate' patients was set up and informed to all OTs. Guidelines on OT-care delivery were also set up. Feedback and concerns of rendering actual care such as dressing, showering, transfer technique based on the guidelines and selection criteria was also collated from the OTs. With the aim to educate patient and caregivers, slogans and posters on self care were designed and displayed in strategic areas in the wards and Outpatient Clinic. An assessment tool, Goal Attainment Scale (GAS), to score the extent to which patient's individual goals were achieved during their stay in St. Andrew's Community Hospital.

Results

Feedback on the OTs' training and patients' survey on the education posters were positive. The OTs also verbalised that the selection criteria and guidelines were easy to follow. The number of patients who received targeted care delivery increased from 8.9% to 100% within 6 months. This targeted OT- interventions care delivery was rendered within 2 weeks of hospitalisation. All the patients showed improvement and attained their expected outcome in their self-care as evidence by the GAS score. The emphasis on self care during patients' hospitalisation resulted in improvement and focus in their functional goals and physical rehabilitation. This is because care delivery is more holistic and client centred approach is adopted. With the OT's interventions on care delivery, the patients benefited by receiving targeted care to equip them for independent living.

Conclusion

The team has met their goals in rendering OT's care delivery (dressing, showering, transfer, functional mobility) for all appropriate patients within 2 weeks of hospitalisation. The project is sustained by regular case discussions, training updates, sharing sessions as well as obtaining feedback from the ward staff regularly.

D1026

ENHANCE STUDENTS LEARNING BY BLENDED PROBLEM BASED LEARNING: A MIXED METHODS STUDY FROM QASSIM MEDICAL SCHOOL

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Aims

Problem-based learning (PBL) is widely used but previous research has shown that often there is little sharing of knowledge between the sessions. Student evaluation has highlighted inadequate feedback and lack of student-student and student-tutor interactions. Integration of facilitated online discussion forum between PBL sessions is proposed to alleviate the current issues and it is expected to enhance knowledge construction and advance different skills.

Methods

A facilitated online discussion forum was integrated between PBL sessions on a four-week traditional PBL course at Qassim Medical School, Saudi Arabia. Fifteen tutors (5 females and 10 males) and 145 students were included in the study. A mixed methods approach was conducted using questionnaires and interviews to evaluate perceived usefulness (knowledge sharing/ learning) and an objective (quantitative content analysis) measure of knowledge sharing and elaboration using a validated tool that evaluated the online discussions.

Results

The objective measure of knowledge construction in the online discussions showed that knowledge was shared and elaborated, consistent with an active learning process. Students and tutors considered that the intervention improved student's understanding of PBL in a collaborative environment and it was enjoyable experience. Students found the intervention as a tool to enhance their English writing and confidence.

Conclusion

An integrated and facilitated online discussion forum between PBL sessions has the exciting potential to improve knowledge construction and in advance different skills.

D1027

ENHANCE THE WELL BEING OF PATIENTS IN A NEW DEMENTIA SET UP WARD IN SAINT ANDREW'S COMMUNITY HOSPITAL

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Aims

Monitoring well-being is of limited value unless followed up with appropriate action. (Well being Profile (2008) University of Bradford)

Therefore, the aim is to improve the wellbeing score of patients who require standby to moderate assistance and have stayed for more than 21 days in a new dementia set up ward in St. Andrew's Community Hospital to 70% with appropriate interventions compared to the 50% to the retrospective data collected in Nov - Dec 2013.

Methods

Using Quality Improvement (QI) methodology, the team drew the processes' flow chart, brainstormed and identified the main causes with a Pareto chart.

The root causes cited include a lack of understanding of patients' life history and their diagnosis of dementia, lack of relaxed pace when seeing too many patients, risk of fall and high caregiver's stress.

Interventions include making the Inpatient Personal History more concise and more relevant to each profession. Occupational Therapists conduct Life History sessions with patients to better understand patients. These life history sessions are done with personalised photos and family members are also involved to create bonding and provide a more meaningful discussion with the therapist. Neuropsychiatric Inventory Questionnaire is done for each new admission with behavioural symptoms to substantiate the teams' clinical observations. Work processes were also modified to create a more relaxed pace when seeing patients with behavioural issues. In addition, volunteers were also enlisted to assist in the ward. Sensory aprons for each gender were designed and fabricated in collaboration with Occupational Therapists and linen staff.

Fortnightly ward round are conducted to discuss patients who have high risk of falls. These patients are identified by a guideline discussed and agreed upon by different professions. Such patients with high fall risks are subsequently identified through pasting an enlarged star with a black exclamation mark imprinted on it. These stars are hanged on the wheelchair and pasted on their bedside to increase the alertness of the staff.

Education materials are given to caregivers of patients with dementia upon admission and discharge. These include updated booklets from Health Promotion Board on dementia care in the various local languages such as English, Mandarin, Malay and Tamil. Moreover, brochures for foreign domestic helpers are created by Occupational Therapists and Physiotherapists in the common foreign languages (Burmese/Tagalog and Bahasa Melayu). In-services are also given to provide support to ward staff. Upon the patient's discharge, family members and caregivers are also given the option to purchase simple cognitive activities that the Occupational Therapists provide for patients. This allowed a follow through for the caregivers after discharge from St. Andrew's Community Hospital. Various gradations of the activity are done to tailor to the cognitive need of various patients.

Infection control staff is consulted and measures implemented to have a more inclusive group for MRSA patients.

Results

The number of patients who received targeted care delivery increased from 50% to at least 70% in subsequent months for their Well-Being Profile.

Conclusion

The team was able to achieve the intended outcome.

D1028

UNDERSTANDING POST GRADUATE 'EXAM SMARTNESS': THE NON-ACADEMIC ATTRIBUTES & PREDICTABILITY OF EXAM SUCCESS

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Aims

It is clear that GPA and IQ have a strong correlation with academic performance, but there are other factors that are not well studied in the post graduate medical education context. The study was designed to explore the concept of 'exam smartness' that concerns other proven predictors of academic success such as metacognition, self-regulation, conscientiousness and self-efficacy.

The Aims of the study were:

1. To understand 'exam smartness' and the predictability of passing post graduate examinations
2. Exploring the non-academic predictors for passing and relating the perceptions of the actual passers to those attributes

Methods

The study involved a mixed methods research design. Data (n=30) was obtained by a questionnaire assessing pre-examination attributes and compared with the students' reflections through focus group discussions (FGD) after the formal declaration of results. The exam had over all pass rate of 42.9% (18 out of 42) and the questionnaire data was compared between the pass and fail groups and among the sub groups of passers- namely first time passers (acers) and those who passed after previous attempt(s) (non-acers). The reflections of the candidates were solicited in the focus group discussions to improve the understanding of predictors of exam success.

Results

The study showed that there were similarities in aspects that characterise passing such as time scheduling, plan of study, group and peer support, goal-oriented selective mastery learning, effort regulation to task difficulty. The two groups of passers also identified the chief cause of failure to be 'gross lack of knowledge' and 'unpreparedness'. The candidates who had failed earlier (non-acers) seemed to have higher self-regulation, conscientiousness and tend to regulate more time on task and have a time table based study strategy. 'Acers', who always stayed in groups could 'self and cross regulate through peer support' and could predict the task difficulty well resulting in passing the first time they appeared for the exams.

Candidates who spent >2 hours on weekdays, >6-10 hours on weekends, practice vivas >2 full sets before theory exams, being in groups and cross monitoring, self & effort regulation, time-table based study plan & execution tend to succeed. Acers felt the factors that are to be modified are internal such as self-regulation, effort regulation, goal orientation, metacognition and conscientiousness. Non-acers felt external factors such as structure in syllabus, exam support system, peer & senior guidance and calibration of examiners played a significant role in exam success.

Conclusion

1. The study showed that there are non-academic predictors of exam success at the post graduate medical education level. Passing in exams required a set of traits or attributes that is proposed as 'exam smartness'.
2. Validating the questionnaire that we developed and consolidating on the 'construct validity' of a composite scale for 'exam smartness' will be a promising area for future research.

D1029

STRESS AND SELF-REGULATION IN MEDICAL STUDENTS**Bullinger M, Heinen I, Kocalevent R***Institute for Medical Psychology, Medical Faculty, University of Hamburg, Germany***Aims**

Medical students have been found to report high levels of stress, yet little research has been conducted regarding stress and self-regulation during medical school. This cross-sectional study is the first to examine a stress-model, developed for and applied to the general population, in medical students. The aim was to identify the association between stress perception and health related quality of life (HrQoL), taking into account use of self-regulation through the activation of personal resources and resilient coping.

Methods

323 medical students in their first year of medical school (age 22 ± 4 yrs., 39.3% men) completed the Perceived Stress Questionnaire (PSQ-20), the Brief Resilient Coping Scale (BRCS), the Self-Efficacy and Optimism Scale (SWOP) as well as the 8-item Short Form HrQoL scale (SF-8). Regression analysis was used to identify the proportion of SF-8 score variance explained by predictors and to examine the contribution of mediators (BRCS and SWOP) to the association between perceived stress and HrQoL.

Results

Medical students assessed their resilient coping more positively than the general population. Stress perception explained 40% of the total variance of mental health. The regression analysis showed ($R^2_{\text{corr}} = .45$, $p < .001$) that the SF-8 mental health summary score is associated with SF-8 physical health summary score ($= .22$) and with self-efficacy ($= .11$). Mediation analysis indicated a contribution of resilient coping and personal resources to the association of perceived stress and HrQoL.

Conclusion

The general population-based stress model was supported also in medical students. Stress perception is significantly and negatively associated with quality of life in terms of mental health. In medical students self-regulation via the use of resilient coping strategies and personal resources is positively related to mental HrQoL in the presence of stress. These findings suggest a potential benefit of interventions oriented at strengthening self-regulation in medical students.

D1030

A NEEDS ANALYSIS FOR FACULTY DEVELOPMENT AT THE FACULTY OF DENTAL SCIENCES, SRI LANKA

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Aims

It is well acknowledged that faculty development programs should be designed to specifically address the identified needs of staff in individual training institutions. The main objective of this study was to analyse the self-perceived needs for faculty development among the staff of the Faculty of Dental sciences, University of Peradeniya, Sri Lanka, which is the only dental undergraduate training institution in the country. The study is an initial step of a multi-method needs analysis for a faculty development program.

Methods

All academic staff members attached to the faculty of dental sciences inclusive of temporary staff were included in the study. The study utilised the Delphi technique and was carried out in two stages. The first stage involved collection of data by mixed methods; a semi-structured 34-item questionnaire posted to all staff of the institution, followed by a semi-structured face to face interview. The questionnaire consisted of both open-ended and close-ended questions. In the second stage, the participants were distributed a second questionnaire (B) containing a list of faculty development areas, formulated utilising the results of stage one. They were requested to prioritise these areas of faculty development and to rate the importance of each item on an ordinal scale from one to ten, with 'one' denoting least importance and 'ten' denoting greatest importance. Analysis was done using SPSS-16 software.

Results

The response rate to the questionnaire was 92% (56/61). Of the respondents, 43% (24/56) were male and 75% (42/56) were senior staff members. Areas for faculty development activities as prioritised by the staff in general include; training in teaching skills (95%), research methodology and publication (85%), communication skills (73%), professionalism (62%), implementing a faculty reward system (61%) and stress management (54%). Of these, 'training in teaching skills' was the most frequently identified item by both junior and senior staff (95%). The junior staff showed more interest towards receiving training in scholarly skills, statistical methods and guidance with career development. The senior staff showed greater interest in training in administrative and management skills. In addition, 76% (32/42) of the staff in clinical departments identified difficulties with balancing clinical and teaching time as one of their main concerns.

Conclusion

The faculty development needs vary according to the department or field of study and seniority of the staff. Therefore, development programs should cater for the needs of specific faculty groups. Comparison of trends in faculty development needs with that of international research and implications of the results is discussed.

D1031**TEACHING COMMUNICATION SKILLS SUPPORTED BY SIMULATION PATIENTS*****Bullinger M, Lehrkommission M****Institute for Medical Psychology, Medical Faculty, University of Hamburg, Germany***Aims**

Teaching communication skills is an important crosscutting goal in the education of medical students. Pursuing this goal is one of the essential pillars of patient centred medicine. Within the novel integrated medical curriculum (iMed) at Hamburg University Medical Faculty, teaching communication skills occurs each of three learning levels along the 10 semesters of medical education. It relies on using well described clinical situations and trained simulation patients within small student groups, assisted by medical and psychological staff. Each course is evaluated and provides information on experience, benefit and potentials of the training unit.

Methods

A total of 400 students per semester participate in the communication courses. Topics of the three learning levels include basic communication skills (e.g. paraphrasing, active listening), participative decision making (in defined decision situations, e.g. hypertension) and communication in difficult situations (eg. breaking bad news). Each 150 minutes teaching unit consists of subsequent role plays and interactions between one student and the trained simulation patient in a small group of 10 students. After the 10 minute interaction, experiences of the student physicians and patients are collected and feedback by student observers and teachers is provided. Courses are evaluated with an objective structured clinical examination (OSCE) as well as via a written exam using a filmed interaction sequence with open questions.

Results

Evaluation results via questionnaires with descriptive items in 2 student cohorts of the first learning level shows good mean ratings of 4-5 on a scale of 0-6, indicating positive reception of the teaching unit by students. Detailed documentation of each course shows highlights and improvement potentials in terms of role playing and clinical cases. Similarly, positive evaluations were found for the second learning level. Both OSCE and film exam yielded positive results.

Conclusion

Teaching communication skills is a challenge in terms of choosing adequate tasks, settings, approaches and examinations. The concept developed by the department of medical psychology within the Hamburg iMED curriculum provides a way forward. Positive evaluation of the coursework and the results of the examination suggest that this approach may be helpful to train such communication skills. Communication skills tested at a later timepoint in the curriculum as well as during the subsequent medical career will provide further evidence of the usefulness of the experiential learning approach chosen

D1032

MEDICAL EDUCATION IN THE ERA OF GENOMIC MEDICINE: INTEGRATING TRANSLATIONAL BIOINFORMATICS INTO THE MEDICAL CURRICULUM

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Aims

The emergence of genomic medicine in the clinics presents a new challenge for physicians who need to be able to understand and interpret genomic and other high-throughput 'omics data for patient care. Given the complexity of the data, it is important that physicians be conversant with its analysis and interpretation to translate the data into a clinical decision. These concepts and skills are embodied in the emerging field of translational bioinformatics.

Methods

To illustrate the need for increasing the genomic literacy in medical education, we describe several clinical scenarios where translational bioinformatics would play a role in patient management. In addition, we review the current landscape of teaching of bioinformatics and national initiatives in medical education.

Results

In response to this future need for training physicians who will increasingly encounter the use of 'omics in clinical practice, we propose a core set of concepts and skills that can be incorporated into the medical curriculum, through teaching of core concepts, reinforced by practical hands-on sessions using representative case-based scenarios.

Conclusion

We believe that incorporating translational bioinformatics in the medical curriculum will provide a strong foundation for the future practice of modern medicine.

D1033**THE USE OF THE BIOMEDICAL ADMISSIONS TEST (BMAT) AS AN ADMISSIONS SELECTION CRITERION AT THE LEE KONG CHIAN SCHOOL OF MEDICINE (LKC MEDICINE)*****Choe R, Ho C****Academic Affairs, Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore***Aims**

To ascertain the predictive utility of the Biomedical Admissions Test (BMAT) as an admissions selection criterion for the Bachelor of Medicine and Bachelor of Surgery programme at the Lee Kong Chian School of Medicine (LKC Medicine)

Methods

As LKC Medicine has adopted BMAT as an admissions test prior to Multiple Mini Interviews (MMI) for two years since 2012, all LKC Medicine applicants must furnish BMAT scores. The majority of the student cohort is made up of Singaporean students from the local education system, providing entrance qualifications either as GCE A Levels, International Baccalaureate (IB), NUS High School Diploma (NUSH) or Polytechnic Diploma (Poly). Thus, BMAT serves as a common academic test measurement system across all applicants. Students who meet the cut off scores for all BMAT sections and academic scores will be shortlisted for the Multiple Mini Interviews (MMI) which consider primarily non-academic factors. At the end of the interview process, the BMAT scores across all sections are computed as a composite score which are then used, together with the MMI scores and other admissions criteria, to rank the top candidates to whom offers of admission are made.

Results

There are positive correlations between BMAT scores and all local entrance qualifications. The A levels qualification group comprised of more than 60% of the total applications in both academic years. There are positive correlations between BMAT scores and all local entrance qualifications. The A levels qualification group comprised more than 60% of the total applications in both academic years.

For the first cohort of medical students (2013 entry) at the end of their initial year of study, there are positive correlations between the BMAT scores and summative examinations scores. More research is required to draw firmer conclusions on the predictive utility of BMAT for the different qualification groups over subsequent years of training.

Conclusion

The BMAT appears to positively predict the summative on-course assessment at LKC Medicine. LKC Medicine will continue to use BMAT as an admissions test as it serves as a useful and fair criterion for admissions selection for the different qualification groups.

D1034**ALIGNING THE EXPECTATIONS OF DIAGNOSTIC RADIOGRAPHY STAFF AND STUDENTS ABOUT CLINICAL PLACEMENT IN A PRE-PROFESSIONAL LEARNING ENVIRONMENT IN SINGAPORE****¹Krishnasamy C, ¹Ali N, ²Chong CM, ¹Lim I***¹Health Outcomes & Medical Education Research (HOMER), NHG Education Development Office, National Healthcare Group, Singapore, ²Department of Diagnostic Radiology, Tan Tock Seng Hospital, Singapore***Aims**

Students attend clinical placements for professional development, and to develop knowledge and skills. Clinical placements allow contextual learning, and opportunities to integrate theory with practice. It is assumed that students benefit from the clinical placement, and that staff accommodate students' curricular and learning needs. However, there is no clear evidence that the clinical placement arrangements are conducive for students to learn, and for staff to benefit from teaching and supervising them.

Methods

Six focus groups with 17 Year 2 and Year 3 diagnostic radiography students and 15 diagnostic radiography staff of all levels of seniority (Junior, Senior and Principal Radiographers and Managers) were conducted to collect information on the perspectives of staff and students about clinical placement in a pre-professional learning environment in an acute hospital in Singapore. Grounded theory analysis was used. Open coding was applied and thematic categories were identified.

Results

Four themes emerged from the data, highlighting misalignments in perceptions of expectations and actual expectations of staff and students in terms of extent of involvement in teaching; coverage during placement; role of radiographer; and requirements of the school. Staff perceived the students to have expectations on them pertaining to teaching and supervision in the clinical environment, and students perceived staff to have expectations on their learning and performance during placement. However, the perceptions articulated did not reflect the actual expectations that students had on their preceptors, and the actual expectations that staff had for students. This mismatch created a lack of empathy and understanding of what each group wants in a clinical environment thereby impacting on teaching and supervision of diagnostic radiography in the hospital.

Conclusion

This study highlighted the need for staff and students to understand each other's perspective, and also raises awareness of the dynamic nature of clinical placements. Information uncovered during this study can be used to guide development of teaching programmes and education related workplans. Future research should consider developing collaboration and communication between staff and students as well as the school. Resource allocation and faculty development programs can also be considered to enhance clinical placements in Singapore.

D1035**DOES TEAM-BASED LEARNING IMPROVE CLINICAL REASONING IN NEUROLOGY?****Ng C, Tan N, Tan K***Department of Neurology, National Neuroscience Institute, Singapore***Aims**

Clinical reasoning (CR) is the ability to weigh clinical information and make decisions under conditions of uncertainty. Team-Based Learning (TBL), an active learning method, has been shown to improve knowledge in neurology; however, improvement in CR has not been demonstrated. We have developed and validated a Script Concordance Test (SCT), assessing CR in two key neurology topics - neurological localisation (NL) and neurological emergencies (NE). We aimed to determine if TBL improves CR in medical undergraduates in these two topics using our SCT as an outcome measure.

Methods

We conducted a modified crossover study involving 179 third and fifth year undergraduates from the Yong Loo Lin School of Medicine posted to NNI for neurology teaching. We compared TBL to interactive lectures. Each student group was randomly assigned to TBL in either NE or NL, and interactive lectures in the other topic. Groups were randomised in a 1:1 ratio. TBL and interactive lectures occurred in the same 2½-hour session. For example, 3rd year group 1 received TBL in NE and interactive lectures in NL; group 2 received TBL in NL and interactive lectures in NE. The SCT was done immediately after the session. We analysed the differences in SCT scores between groups using the unpaired T-test.

Results

Mean SCT scores in NL for students receiving TBL were higher compared to interactive lectures (64.8% vs 61.7%, mean difference 3.1%, 95% CI 0.7-5.5%, $p=0.013$). Effect size was 0.37. Mean SCT scores in NE, however, were not significantly different between groups (66.6% vs 67.0%, mean difference 0.4%, 95% CI -2.3%-3.1%, $p=0.75$).

Conclusion

TBL was superior to interactive lectures in improving clinical reasoning in neurological localisation. For neurological emergencies however, TBL and interactive lectures were equally effective. This differential effect may be due to contextual factors such as nature of topic or lecturer expertise.

D1036

CLASSIFICATION OF OUTCOMES-BASED MEDICAL EDUCATION RESEARCH USING A TRANSLATIONAL PARADIGM

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Aims

Similar to how clinical research has been translated from the bench to bedside, and from bedside to wider implementation in patient care to realise its potential impact, medical educational research must have a translational impact on practice and outcomes. In light of this, McGaghie (2010) adapted the biomedical framework of translational science for simulation research: basic sciences controlled educational setting discoveries (T1); research in patient care settings (T2); and improved patient care practices and outcomes (T3). Another framework commonly used in medical education research is Kirkpatrick's hierarchy which consists of four descriptors. A limitation, however, is that educational research without learner outcomes, or that aim to broaden the scientific base of education research through non-experimental designs such as qualitative or psychometric study designs for example, are excluded from this classification. Hence, this study compares between Kirkpatrick hierarchy and McGaghie framework in classifying outcomes-based medical education research. We propose a modification of the McGaghie framework to include studies without clear outcomes but are important to the translation of outcomes-based medical education research.

Methods

A random sample of 281 abstracts from the AMEE 2012 conference proceedings was studied. The abstracts included (1) all PhD/ research papers (n=43); (2) 20% randomly selected short communication abstracts (n=86); and (3) 20% randomly selected poster abstracts (n=152). T1 studies were classified as educational setting with learner outcomes corresponding to Kirkpatrick's hierarchy (T1a), educational setting with other outcomes (T1b) and no learner outcomes but aims to broaden the scientific base of education research (T1c). The results and outcomes were summarised, and differences in classifications using the Kirkpatrick hierarchy and McGaghie framework were investigated.

Results

The majority of the studies that were coded on the Kirkpatrick's hierarchy as participation or modification of attitudes, perceptions, knowledge or skills, were classified as T1a studies on the modified McGaghie framework. A small number of studies measured useful "non-traditional" outcomes that were outside of the Kirkpatrick framework, for example, social networks that alluded to the impact of an educational intervention. Around half of the studies were coded as not applicable on Kirkpatrick learner outcomes, but contributed to the scientific base of medical education research through qualitative, observational, psychometric, and translational approaches which are often underpinned by a conceptual theoretical framework.

Conclusion

The majority of the studies reviewed were classified as T1. Compared with the Kirkpatrick's hierarchy classification of outcomes-based research, the modified McGaghie framework has the advantage of incorporating a broader perspective that includes non-traditional outcomes and non-experimental study designs to widen the knowledge base for T2/3 translation. We believe a translational paradigm towards outcomes-based medical education research would foster greater synergism across the T1-T3 spectrum and align educational research with the ultimate aim of impacting patient outcomes.

D1037

DESIGNING EFFECTIVE TRAINING FOR QUALITATIVE RESEARCH METHODS BASED ON ADULT TEACHING THEORY

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Aims

Health professions educators are not always familiar with qualitative research methodology because they rely on positivist approach engaging objective evidence. This study sought to obtain evidence for effectiveness of their training in qualitative research methods based on criteria from adult learning theory.

Methods

Participants are 20 health professions educators from the International Medical University, Kuala Lumpur who have signed up for the training programme in qualitative research. The effectiveness of the training programme is obtained from a comparison of the pre and post test on their knowledge of research methodology in general and qualitative research during a two full day workshop.

Results

The training programme begins with (1) participants preparing a draft proposal of the qualitative research before the training. Participants attend the training programme which is (2) organised as a retreat in an off-site venue. During the training, (3) instruction to qualitative research methodology was given by an expert trainer. Participants then (4) analyse or review a scientific papers for their research methodology. Next participants (5) refined their proposals based on qualitative research methodology that has been highlighted. Participants present their proposal and (6) feedback is given by their peers and the expert trainers. At the end of the training programme, participants (7) critically reviewed their proposal and reflect on the feedback and after the training, make changes to meet the standards of the IMU Research Vetting Committee. The proposal is submitted to the IMU Research Vetting Committee for (8) final review by a panel of research experts. The training plan can be mapped to the principles of adult learning where each of the processes as numbered can be mapped as follows based on the principles of adult learning: mapping (1) to involving learners mutually in the planning of learning; (2) to providing a positive learning climate; (3) providing opportunity for meaningful learning; (4) evaluating their own learning in self-directed learning; (5) constructive learning or experiential learning; (6) reinforcement and assessment of learning; (7) reflection and implementation of their learning and finally (8) evaluation of their learning.

Conclusion

A structured training programme design that is based on adult learning theory is generalisable and transferable to similar training programmes for faculty development.

D1038

BUILDING AN INTERPROFESSIONAL EDUCATION SIMULATION MODULE: A SUGGESTED TEMPLATE BASED ON REAL ADVERSE EVENTS

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Aims

The primary aim was to devise an IPE course template that can be adapted by clinicians to conduct situated IPE for their staff in their specific clinical situation. The secondary aim was to implore the feasibility of the entire process by this de-novo multidisciplinary team.

Methods

An interprofessional team consisting of physicians, a radiographer, a nurse, a pharmacist and therapists was gathered. The following steps were undertaken by all member of the study group:

1. Reviewing and analysing OCG data on real adverse clinical events and extract specific learning points for IPE
2. Learn how to use simulation as an educational format
3. To explore different pedagogy to deliver the content,
4. Translating real clinical scenarios into teaching content.

Results

The learning points that could be drawn from these 2 cases were:

1. Closing the loop

Healthcare professionals need to understand their individual roles as a service provider as well as their duties within a team. The processes/ link bridges between different providers should be clearly highlighted to allow team members to understand how their service fit into the overall scheme of healthcare provision. This process can be facilitated with the use of administrative tools such as checklist or protocols.

2. Responsibility to follow up

It is dutiful for individuals of a team to follow up their actions and patients' outcome. This achieves a tightening of workflow delineated in aforementioned point where miscommunications or lapses in timely delivery of healthcare services could be promptly identified.

3. Professional Attitude and Engagement

An effective communication needs to be based on cohesive bonds between team members. Important patient centred values and teambuilding activities should be incorporated in the IPE module to facilitate the assurance of seamless healthcare provision across professions.

Conclusion

The Key lessons learnt from

Process of OCG data to Course Template

1. Effective IPE course needs content expert and a situated IP team to formulate details of the course.
2. Real life scenarios may not be easily translated into simulation teaching especially scenarios that spans days as opposed to scenarios that spans a shorter time frame like in a resuscitation situation.
3. The yield from studying OCG data is small (2 out of 82 cases) for IPE related material.
4. Much dedicated time and effort are pre-requisites for the entire process to devise a IPE course from OCG data by a non-associated team of IP clinicians.

Observations of forming de-novo IP team to develop IPE

1. Our de-novo IP team is only effective to boundary of creating a generic template, but the actual application of the course should be conducted by the field specialty.
2. A de-novo team of IP clinicians without common clinical interaction will encounter difficulties in finding situated scenarios which stimulates common motivation.

D1039

ASSESSMENT OF EVIDENCE- BASED MEDICINE: GLOBAL AND DOMAIN- SPECIFIC COMPARISON OF THE FRESNO TEST AND BERLIN QUESTIONNAIRE

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Aims

Evidence based medicine (EBM) is a central approach to healthcare decision making. Numerous test tools have been developed to measure competence in various domains of EBM, although none of the tools is recognised as reference standard.

Fresno test and Berlin Questionnaire are two EBM assessment tools which have been validated to measure a comprehensive range of EBM knowledge objectively. The Berlin Questionnaire comprises 15 scenario-based multiple-choice questions which involves more extensive arithmetic skills. On the other hand, the Fresno test comprises of 12 short-answer questions included open-ended free-text questions and covers a broader range of EBM knowledge domains. It is scored against a standardised grading rubric that includes examples of acceptable answers. The aims of this study is to investigate (1) if Fresno test and Berlin Questionnaire can be used interchangeably and (2) which EBM domains contribute to either of the EBM test instruments among our postgraduate medical trainees.

Methods

Both the test instruments were combined as an exam paper to be used for the pulmonology fellow exam for the 3 ACGME-I accredited respiratory and critical care medicine training institutions (Singapore General Hospital, Tan Tock Seng Hospital and National University Hospital). In addition, the exam paper was used as an assessment tool for the medical residents attending the EBM workshop at the National University Hospital. The duration of the examination was 1 hour. The exam was scored by 2 assessors independently. The correlation between the two test instruments global score and domain- specific were determined by Spearman correlation.

Results

A total of 32 postgraduate medical trainees sat for the exam. Median age is 29 years and the median postgraduate year is 4.5 years. More than 65% of medical trainees have had prior EBM teaching or research experience. The correlation between independent scorers for the Fresno test was strong ($r = 0.77$, $p < 0.001$), hence subsequent score analysis was based on scorer 1's results alone. The global score correlation between the Fresno Test and Berlin questionnaire was moderate ($r = 0.59$, $p < 0.001$). However, the 2 test instrument's domain- specific correlation was variable and weak ($r = -0.03$ - 0.46)

The correlation between the domain- specific and the global score of Fresno test were variable ($r = 0.27$ - 0.84). On the other hand, the Berlin questionnaire showed strong correlation consistently between the domain- specific and global score ($r = 0.60$ - 0.70).

Conclusion

Based on our result analysis, this study reaffirm that the inter-rater reliability for the Fresno test is strong. The variable correlation between the domain-specific and global score of Fresno test suggested that each domains should be individually considered for learner's feedback purpose to enhance learning experience.

Lastly, we conclude that the two test instruments are complementary and are not to be used interchangeably.

D1040

DIFFERENT PERCEPTION BETWEEN TRAINEES AND RATERS IN FORMATIVE OBJECTIVE STRUCTURED CLINICAL EXAMINATION (OSCE)

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Aims

OSCE was incorporated into the Taiwan National Medical licensure examination. The pass marks were set by the statistic method of borderline group method with regression. It evaluated the trainees by ordinary checklist and global rating score. The scores of global rating made by the raters were more subjective. Medical students received formative OSCE every year before graduating from medical school. In our formative OSCE, the raters gave feedback and tried to help trainees improving their skill. We want to analyse the trainees self-evaluation of performance just after the formative OSCE to check if trainees can realise rater's feedback.

Methods

Medical students received formative OSCE training (8 minutes examination and 2 minutes feedback) in CSMUH between 2012-10 and 2013-5. We arranged raters to fill a second checklist just before raters gave feedback to the trainees. The second checklist included five items (time arrangement during test/ explanation and usage of language/ confidence/ the method of correcting mistake/ global rating score), what we would assess during evaluation and feedback. After the trainees completed the process of feedback, the trainees were asked to evaluate their own performance by the same checklist. The scores evaluated by the raters and the trainees in the checklist were analysed.

Results

Similar scores were found in four items of the checklist (time arrangement/ confidence/ correcting mistake/ global rating score) evaluated by the raters and trainees. Another item evaluated the ability of explanation and usage of language was different between the raters and trainees. The trainees gave themselves higher scores.

Conclusion

The trainees showed more confident about their ability to explain and their usage of language although they received negative feedback from the raters. This finding helps us modify our feedback method when we found the trainees performed inadequately in communication skills.

D1041**HOW LONG WILL MEDICAL STUDENTS USE THE MEDICAL ELECTRICAL DATABASE AFTER THEY LEARNED FROM E-LIBRARY TRAINING****¹Chen CY, ²Chen TH***Departments of ¹Medical Education and ²Internal Medicine, Chung Shan Medical University, Chung Shan Medical University Hospital, Taiwan***Aims**

The problem-based learning (PBL) is an ideal environment for development of skill of information literacy. E-learning can provide a multimedia-content of teaching material. We combined these two components to facilitate medical students' learning of the skill of information literacy. We also introduced medical electrical databases based on what students didn't know according to the questionnaires performed before PBL discussion. We want to realise how long will medical students will use the medical electrical databases after what they learned during the PBL discussion.

Methods

PBL was conducted to medical students via web-based case discussion in Chung Shang Medical University Hospital between 2012-2 and 2013-1. The information of log-in and the usage of e-library medical databases was gathered from our library. The usage rates of different medical electrical databases according to time and different grade of medical students were analysed. We observed how long medical students will continue using the new learned medical databases.

Results

Several medical databases (Access medicine online, ACP medicine, Clinical Key, Best Practice, UpToDate, Unbound Medicine) were introduced to medical students during the PBL discussion. During the following time, medical students decreased their usage of the new medical databases they had learnt 4-5 weeks later. In subgroups analysis, we found some variations in usage of different medical databases according to the grade of medical students.

Conclusion

Medical students tend to use the new medical electrical databases they learned during PBL for 4-5 weeks. The causes of this decreased usage of databases needs further study.

D1042

PREDICTING ACADEMIC PERFORMANCE FROM BEHAVIOURS EXHIBITED IN PBL TUTORIALS

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Aims

A range of cognitive and non-cognitive behaviours exhibited by medical students have been found to predict future behaviours, including professional conduct and academic success. Many of these academic and professional behaviours are promoted and exhibited in Problem-based Learning (PBL) tutorials and it is thought that the PBL facilitator is an excellent candidate to identify and make quality judgements on observed student behaviours. Early identification of the low-achieving student, also known as a borderline (BL) student, is found to have many benefits, particularly to facilitate the personalised remediation that will maximise academic success and provide evidence of support for appeals against academic dismissal. Despite these benefits and the prevalence of PBL as a pedagogic approach to learning worldwide, there is very limited evidence in the literature PBL facilitators can predict academic performance on the basis of behaviour observed in PBL tutorials. Our aim was to investigate if PBL facilitators can accurately identify the BL student and to identify what these behaviours might be.

Methods

Eleven PBL facilitators of Year 2 and 3 medical students were asked to rank their students in order of academic ability and specifically identify if any were considered BL, being at risk of just passing or just failing their end of semester assessment. Facilitator rankings were correlated with actual student assessment results using Spearman's rank order correlation coefficient in SPSS. Facilitators also participated in an online survey to identify behaviours that would most strongly indicate to them that a student was BL.

Results

Results indicated that PBL facilitators were able to predict their student's academic ability, with seven out of ten participating facilitators having a strong positive and significant correlation between predicted academic ability and actual assessment results across their two PBL groups. Facilitators were particularly strong in Year 3, with 75% of facilitators (six out of eight) having a Spearman's rho (rs) > 0.50, significant at the 0.05 level, with a shared variance of > 52%. In Year 2 data, 56% of facilitators (five out of nine) had a strong positive (rs > 0.50) correlation with a shared variance > 33%. Only 2 facilitator's correlation reached significance in Year 2 data. Evidence did not support the premise that facilitators can accurately identify the BL student, with only 10% of BL student correctly identified in Year 2 and 21% identified in Year 3. Missing student cohort data significantly hindered these results, as consent in each cohort was only 67% and 62% respectively.

Conclusion

In contrast to the existing body of evidence, this research provides strong supportive evidence that PBL facilitators can predict student academic performance from observed behaviours in PBL tutorials, but does not support the notion that facilitators can identify the BL student. There are implications for the ongoing training of facilitators in identifying students who are struggling academically, particularly in the early years of learning. The early detection of BL students will improve personalised remediation, enhance academic success and create a more positive student experience.

D1043**E-LEARNING HELP TEACHER CARE INDIVIDUAL STUDENT'S NEED DURING HEART SOUNDS LEARNING****¹Chen CY, ²Chen TH**

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Aims

It is difficult to identify students' need during the introduction course of heart sounds. E-learning is the use of internet to enhance knowledge and performance. Using multiple-choice questions in E-learning also can observe student's individualised need.

Methods

In the introduction course of heart sounds, the basic component of heart sounds (S1, S2, S3, S4, systolic and diastolic phase, split of sounds, murmur, rhythm) must be learned. We use web-based environment and multiple-choice question to synchronise the pace of learning and check the results of learning step by step. Supplemental teaching material also is supplied if students didn't reach the goal of learning. If students failed in recognising heart sounds adequately, teachers can slow down in the pace of teaching or discuss with individualised students by supplemental E-learning teaching materials immediately.

Results

Analysing the data gathered during heart sounds learning, most students reach the goal of learning after short-term self-study in E-learning teaching material. In the introduction course of heart sounds learning, students need more time to learn the skill of identifying systolic and diastolic phase.

Conclusion

Combining E-learning and lecture in classroom can care individuals' need and facilitate students followed the pace of learning.

D1044**E-BLACKBOARD: FOR BETTER OR WORSE?*****Berchmans DSD****Children's Emergency Department, KK Women's & Children's Hospital, Singapore***Aims**

We set out to find out if the system was effective as a learning tool for residents during their posting in the Children's Emergency Department, by improving their clinical knowledge and skills.

Methods

We compared the results of the departmental multiple choice questions based competency assessment and overall posting marks from 2 periods May 2012 to May 2013(pre-period)), which is 1 year prior to the introduction of E-Blackboard, and the results from June 2013 to June 2014(post-period), which is a 1 year period during which the E-Blackboard system has been in place. We took the average marks of the competency tests and overall posting marks to compare. We divided the marks based on the specialty the junior doctor came from.

Results

For the duration of "pre-period", there were 25 Medical Officers and they scored an average of 6.63 marks in the competency assessment and 78 in their overall posting marks. There were 10 Emergency Medicine residents, who scored an average of 7.34 in the competency assessment and 80 in their overall posting marks. The 15 Family Medicine residents scored an average of 5.93 in the competency test and 74 in the overall posting marks. There were 9 Paediatric Medicine residents and they scored an average of 7.47 in the competency tests and 80 in the overall posting marks. For the "post-period", there were 35 Medical officers and they scored an average of 7.41 marks in the competency test and 77 in their overall posting marks. There were 21 Emergency Medicine residents, and they scored an average of 7.38 in the competency test and 78 in their overall posting marks. The 19 Family Medicine residents scored an average of 5.85 in the competency test and 73 in the overall posting marks. There were 15 Paediatric Medicine residents and they scored an average of 7.4 in the competency tests and 77 in the overall posting marks.

There is an improvement in the medical officers' competency assessment scores of about 0.78 (11.76%) and 0.04 (0.54%) marks amongst the Emergency Medicine residents. We do see a drop in scores amongst the Family Medicine residents of about 0.08(1.35%) marks while the scores of the Paediatric medicine residents are comparable.

Conclusion

Although there is an improvement in the assessment marks of non-trainee medical officers, this is not reflected in the marks of residents. There was also no significant change in the final posting marks of all junior doctors. While the overall results may seem equivocal, based on the general improvement seen in the assessment marks of non-trainee medical officers, there is still a role for continued use of the E Blackboard system as a learning tool for residents in the ED and further objective assessments of the E Blackboard system needs to be done to determine its true effectiveness for the future teaching and learning purposes.

D1045

COMPUTER BASED TEST (CBT) MULTIPLE CHOICE QUESTION (MCQ) FOR ANATOMY: CREATING AN EFFICIENT TOOL IN EXAMINATION*Purwidyastuti D, Sakina S, Sinar Ikrar Prihatanto F, Alimsardjono H**Department of Anatomy and Histology, Faculty of Medicine, Airlangga University, Indonesia***Aims**

The use of Multiple Choice Question (MCQ) is widely used in many subjects. Paper based test (PBT) for MCQ was used as a method of assessment for years. We faced some problems related to the implementation of PBT. Two stages process (sheet filling by the students and scanning by staff) brings time delay. On the other hand, a number of faculties need to be play the role as exam inspectors. The advancement of information technology has promised to solve these problems. The subject of anatomy could take advantages of CBT implementation as its capacity to accommodate visual objects appearance. This CBT method also helps and gives extra protection to the exam confidentiality. As the use of CBT is a new method, we further examined the implementation.

Methods

We developed a 60 item CBT using 1 best answer MCQ using the Moodle ver 2.7 as compared to PBT using computerised scanning system. We used the content blueprint of anatomy of extremities to develop the items. Same protocol of item development for PBT and CBT was aimed to standardise the selected items. In CBT, each student was assigned to answer random items in terms of item number and its options. The exam was conducted a minute per item. Analysis was conducted to assess students and items, and in the aspect of exam implementation. We compared 2 groups of CBT and PBT groups.

Results

A number of 546 students were participated in the exam and analysed in PBT group (n=279) and CBT group (n=267). We found the results of examination as follow: mean value of the CBT (37.86+10.87) is significantly (p=0.000) higher than the PBT (32.25+11.13). Item quality as assessed by item analysis showed ranges of p value are comparable both in CBT and PBT groups. Overall students and teachers comments were positive regarding implementation in the aspect of easiness to use, efficient process, security issues, and usage of required resources.

Conclusion

A different results of each method should get careful attention before implementing CBT. We proposed that CBT could be utilised in anatomy exam by considering other related factors as it needed a big support from institution to implement, due to its feasibility. A positive perception from both students and teachers promises hope for further development.

D1046

EXPLORING PERCEPTIONS OF MEDICAL PROFESSIONALS ON CONTINUING PROFESSIONAL DEVELOPMENT (CPD) IN SRI LANKA

¹*Karunaratne D*, ¹*Chandratilake M*, ²*Wijayaweera K*

¹*Medical Education Centre, Faculty of Medicine, University of Kelaniya, Sri Lanka*, ²*Medical Services II, Ministry of Health, Sri Lanka*

Aims

Continuing Professional Development (CPD) is a necessity and a responsibility of all health care professionals. In Sri Lanka, reflecting the international trend, there is much enthusiasm in conducting CPD programmes by different authoring bodies. Most of the CPD programmes are conducted as isolated programmes by different organisations without a proper coordinated national level framework. The ability of these limited number of CPD programmes to cater the diverse learning needs of local doctors is yet to be established. Furthermore is the CPD participation, which is voluntary and not recognised in career development pathways in the health care sector.

The general objective of this study is to explore perceptions of medical professionals on Continuing Professional Development (CPD) in Sri Lanka. It includes exploring the importance of CPD, establishing the satisfaction with the current CPD programmes and the CPD delivery system, identifying what promotes and inhibits CPD participation, recognising measures to facilitate CPD participation and identifying strategies to establish a successful CPD programme in Sri Lanka.

Methods

This report is on data obtained from the first stage of a mixed method research. During this phase, in-depth interviews were conducted in a teaching and a rural hospital in one district (Gampaha district) of the country. Medical officers and postgraduate trainees were enrolled to the study as possible candidates of CPD following informed written consent. Semi-structured Interviews were conducted and tape recorded until saturation of data (n=12). The interviews were transcribed for content analysis.

The second stage of the study will be a quantitative mini study where a questionnaire will be used to obtain the views of practicing medical doctors on the same topic. It will be developed with the light of ideas generated from the in-depth interviews conducted for this study.

Results

Several key themes and sub-themes were identified during content analysis. They are as follows; The benefits of CPD which includes opportunity to become updated on changing knowledge and current practices, to improve skills, to function confidently as a good practicing doctor. Barriers for CPD participation which include limited CPD opportunities, lack of CPD awareness, limited CPD opportunities for doctors in peripheral hospitals, limited accessibility, limited staff in wards, workload in the ward, personal commitments after working hours, low salary. How to overcome barriers which include improving CPD programme awareness, improving accessibility, official leave on rotation to participate CPD activities, timely topics, important topics for general practitioners.

Suggestions for CPD delivery include monthly clinical meetings at hospital level organised by a clinical society, clinical meetings organised in wards, mobile programmes, in-service programmes and sub-divisions of a central organisation conducting CPD at district level.

Conclusion

Despite much interest and attempts at CPD in the local setting, the study highlights the presence of significant barriers for harnessing the benefits of CPD. Therefore the authoring bodies need to play a pivotal role in developing a formal, feasible framework for conducting CPD programmes to cater the needs of practicing doctors in the country.

D1047**FOUNDATION YEAR MEDICAL STUDENT PERSPECTIVES OF A NEW BASIC SCIENCES TEACHING APPROACH CALLED POGIL (PROCESS ORIENTED GUIDED INQUIRY LEARNING)****Gaynor D***Department of Biomedical Science, School of Medicine, Royal College of Surgeons In Ireland- Medical University of Bahrain, Bahrain***Aims**

Identify factors that determined student motivation to participate in a voluntary pre-lecture chemistry POGIL programme. Identify perceived benefits and areas of strength and weakness in the voluntary pre-lecture chemistry POGIL programme and its activities.

Methods

At the end of the voluntary POGIL programme a 26 item online questionnaire, containing Likert-type and free text items, was administered to the foundation year class capturing responses from 3 student groups (POGIL participants, students eliminated from POGIL programme and non participants).

Results

From a class of 140 foundation year students, 100 responses to the questionnaire were recorded. Student perceptions of the POGIL programme, its benefits, areas of strength and weakness were presented. The most common benefit associated with the POGIL activities, as identified by students, was 'increased understanding of learning material'. 'Lack of perceived benefits' and 'time constraints' were commonly cited by the non participant group as reasons for not participating in the programme. The participant group had the highest levels of agreement with items indicating the activities increased deeper understanding of concepts and development of teamwork skills. Areas of weakness identified by all groups were the timing of the events, workload and their duration. The scarcity of live feedback during the activities was frequently cited by the participant group.

Conclusion

Student perceptions indicate that POGIL is an effective student centred learning approach which has been successfully applied in a voluntary foundation year chemistry course in a medical programme. Its application in the subject areas of chemistry that require deeper understanding of basic chemical concepts is appropriate and it is expected to be more effective as an integrated component of the chemistry course as opposed to being a supplementary programme. Improved participation may be achieved by more suitable timing of activities, reduction in workload and duration of activities in addition to improved mechanism for delivery of live feedback.

D1048

ENCOURAGING REFLECTIVE PRACTICE AMONG MEDICAL UNDERGRADUATES: LESSONS LEARNT

Karunaratne D*Medical Education Centre, Faculty of Medicine, University of Kelaniya, Sri Lanka*

Aims

The concept of reflective practice as a topic of educational importance is acknowledged by educators as an effective strategy towards professional excellence. Therefore, there is a worldwide trend on introducing activities which promote reflection into undergraduate as well as postgraduate medical education curricular.

The Faculty of Medicine, University of Kelaniya, Sri Lanka has also made an attempt to introduce reflective practice for undergraduate medical students. It was introduced for a community attachment under the community sciences stream. The initial portfolio which was maintained with evidence of learning was revised to include reflective writings accounts on their learning. The portfolio is to be assessed and marks taken for summative purposes.

Methods

38 reflective accounts written on the community attachment were assessed and feedback documented in a separate sheet. The feedback highlighted the strengths and weaknesses in reflective writing and suggestions to improve. This was further followed by an interview with each student. Following the encounter a questionnaire with few open ended questions on the usefulness of the feedback and how to improve it was given to each student. Students were requested to hand it over to the medical education centre within 2 days.

Results

Personal reflections on assessment of reflective accounts:

It was clearly seen that students struggle in writing reflective accounts despite the fact several lectures have been conducted on reflective practice. Most of the students did not follow a formal structure for reflective writing hence the account did not have a rational flow of ideas but isolated thoughts and descriptions. Most of the reflective writings described the situation and the interventions and was not focused on self assessment. Very few students critically analysed the situation and identified learning needs.

Results of reflective writing accounts:

The average score for reflective accounts was 53.8. There were 16 students above average and 22 students below average showing the limited competence in reflective practice.

Results of questionnaire analysis:

31 questionnaires were returned. All students found feedback to be very useful. Students were very positive on having the opportunity to get individual appointments to discuss their performance and get personalised feedback. Written reflections were valued as it allowed students to go through the feedback and improve their mistakes. Students requested for feedback early in the appointment. Continued support and assistance was requested for writing reflective accounts. They also requested for model reflective accounts to read and understand the process of reflective writing.

Conclusion

The difficulties students encounter when writing reflective accounts were clearly identified through this effort.

It was also understood that as novice learners new to the concept of reflective practice, medical students need continuing support and feedback on reflective writing. Early introduction to reflective practice in medical training and formative assessment on the same prior to summative may prepare them well in reflection writing. This will give more opportunity for the students to practice and improve themselves in reflective thinking and writing. Introducing a formal structure for reflective writing could also be beneficial.

Friday 6th February 2015

Foyer, Level 2, University Cultural Centre

2.00pm – 3.00pm

POSTER PRESENTATION – SESSION 2

GROUP 7

- D1049** **Foundation Doctors' Experiences of Teaching In The Clinical Environment**
Di Liang, United Kingdom
- D1050** **Teaching Pediatric Interventional Radiology To Pediatric Residents: Tips For Creating A Successful Elective In New Sub-Specialties.**
Dimitri Parra, Canada
- D1051** **Examiners' Perception of Using Case Analysis As An Undergraduate Clinical Assessment Tool In Orthopaedics**
Naresh Kumar, Singapore
- D1052** **Keys For A Successful Design And Implementation of An Ultrasound Guided Vascular Access Workshop For Non-Radiologist**
Dimitri Parra, Canada
- D1053** **The Difference of Learning Impact In Written And Oral Assessment**
Sylvia Mustika Sari, Indonesia
- D1054** **Faculty Enhancement Program King Saud Bin Abdul-Aziz University For Health Sciences. College of Medicine - Jeddah**
Nisreen Jastaniah, Saudi Arabia
- D1055** **Indian Students' Willingness To Accept E-Learning In Undergraduate Medical Curriculum: A Preliminary Study**
Manivel Rajajeyakumar, India
- D1056** **Retention of Knowledge In Preclinical Disciplines By Clinical Students In The IIUM Medical Programme**
Taufiq Hidayat Hasan, Malaysia

GROUP 8

- D1057** **Initiating User-Focused Trainings In Teaching And Learning Strategies**
Elisabeth Rukmini, Indonesia
- D1058** **Acquiring Teaching Competency Process By Iranian Nursing Faculties**
Hormat Sadat Emamzadeh Ghasemi, Iran
- D1059** **A Study of Formal Assessment By Non-Clinician Graders Using Videography of Medical Students Performing Physical Examination And History Taking**
Khoo Yin Hao Eric, Singapore
- D1060** **Parental Perception of Medical Student Interaction In A Paediatrics Tertiary Hospital In Singapore**
Ting Fang Ni, Singapore
- D1061** **Isolated Clinical Skills Examinations In Medical School : Are They Predictors For National Comprehensive OSCE?**
Felicia Chandra, Indonesia
- D1062** **Resident-Authored Multiple Choice Questions On A Web-Based Repository As A Tool For Encouraging Problem-Based Learning In An Otolaryngology Residency Programme**
Goh Xueying, Singapore
- D1063** **Medical Students' Communication Skills Awareness And Performance In Clinical Education**
Woo Jeong Kim, South Korea

D1064 Allied Health Professions In China: Current State And Outlook
He Qingjun, China

GROUP 9

D1065 Promoting Global Health Education: Review For Tips And Challenges.
Harumi Gomi, Japan

D1066 Social Skills of Specialists Currently Involved In Interprofessional Collaboration In Japan
Hisashi Yoshimoto, Japan

D1067 Effectiveness of Mobile Elearning Ecosystem On Academic Performance of Medical Student's Self-Directed Learning
Hong Huaqing, Singapore

D1068 Understanding Core Competencies From The Patients' Perspective
Khoo Hwee Sing, Singapore

D1069 Stress, Anxiety, Depression And Blood Pressure of Medical Students Aheading Examination.
Yon Chul Park, South Korea

D1070 Case-Based Learning & Simple Virtual Microscopic Slides In Teaching Histology To First Year Medical Students
Ika Fidiansih, Indonesia

D1071 Assessing Research Competencies Needed For Undergraduate Medical Students, Its Delivery And Assessment; Mentor's Perspective
Ibrahim Muhsen, Saudi Arabia

D1072 A Course-Oriented Mobile Learning Application (HSApp: HS(a)App And HS(b)App) For Health Sciences Education In The Medical Faculty Package
Isabel Hwang, Hong Kong S.A.R.

GROUP 10

D1073 Prolonged Impact of Fear of Failure On Academic Performance In Medical Students: An fMRI Study of Clinical Reasoning Process
Hyung-Joo Chang, South Korea

D1074 Should Digital Verification of Laboratory Investigations Be Incorporated In Phase V Curriculum As A Component of System Based Practice?
D'Souza Jared Louis Andre, Singapore

D1075 Implementation of Student Subinternship: Response of Participants And Performance Improvement
Song Joon Ho, South Korea

D1076 Simulation-Based Training For The Teaching of ACGME Core Competencies In An Internal Medicine Residency Program In Singapore
D'Souza Jared Louis Andre, Singapore

D1077 Voice-Over Lectures: A Flipped Classroom Model In Delivery of Undergraduate Ophthalmology Lectures
Tan Johnson, Singapore

D1078 How Do Healthcare Professionals And Lay People In A Community Learn Interactively? A Case of Trans-Professional Education
Junji Haruta, Japan

D1079 Educational Innovations To Enhance The Transition of Junior Medical Students Into General Medicine Ward Teams: Development, Rationale And Lessons Learnt
Wong Jonathan Jia Jun, Singapore

D1080 Physician's Recognition For And From The Other Professionals
Junji Haruta, Japan

GROUP 11

- D1081 Elderly Care For All Residents: A Dutch Approach**
Karsten Van Loon, The Netherlands
- D1082 Development of A New Graduate Course: Faculty Development In The Health Professions**
Karen Leslie, Canada
- D1083 Spending SDL In Practicing Simulated Model And Procedural Skill Performance Outcome In Surgical Medical Student**
Kalyanee Asanasak, Thailand
- D1084 Defining Competence For Faculty Developers**
Karen Leslie, Canada
- D1085 Using Virtual Breakout Rooms To Enhance An Online Undergraduate Human Anatomy Laboratory: Does It Optimize Student-Teacher Communication?**
Kem Rogers, Canada
- D1086 To Promote Inter-Professional Learning And Standardized Trainings For Tracheostomy Management**
Tng Kuan Chen, Singapore
- D1087 Career Choice And Its Influencing Factors: Perception of Senior Medical Students**
Lamyaa Abouzaid, Saudi Arabia
- D1088 A Study To Explore Flipped Learning Method In Comparison To Traditional Didactic Lecture In Medical Undergraduates**
Lakshmi Naik, Malaysia

GROUP 12

- D1089 A System Created Model of Teaching Excellence For Health Professions Education**
Latika Nirula, Canada
- D1090 Provision of Immediate Verbal Feedback To Year Two Undergraduate Medical Students During The Formative Objective Structured Clinical Examination At Monash University, Malaysia**
Lau Wee Ming, Malaysia
- D1091 Fostering Continuing Professional Development In The Workplace: TESCoP (Teaching And Education Scholarship Community of Practice)**
Latika Nirula, Canada
- D1092 A Pilot Study Using Entrustable Professional Activities To Achieve Proficiency In Tasks That Facilitate Continuity of Care In A Family Medicine Department In A Tertiary Hospital**
Tay Wei Yi, Singapore
- D1093 The Study On The Attitude of Counseling For Medical Student**
Su Hyun Lee, Korea, South
- D1094 Faculty And Medical Students Perception On The Roles of Standardized Patients In The Undergraduate Medical Education**
Soh Lip Min, Singapore
- D1095 Exploring Community Faculty Engagement In Education Scholarship**
Marcus Law, Canada
- D1096 An Evidence Based Approach To Teaching Diagnostic Reasoning**
Lim T. K., Singapore

D1049

FOUNDATION DOCTORS' EXPERIENCES OF TEACHING IN THE CLINICAL ENVIRONMENT

¹Townsend T, ¹Newton A, ²Liang D, ³Guha A

¹Royal Liverpool and Broadgreen University Hospitals Trust, United Kingdom, ²Education Department, Royal Liverpool and Broadgreen University Hospitals Trust, United Kingdom, ³Medical Education, Critical Care, Royal Liverpool and Broadgreen University Hospitals Trust, United Kingdom

Aims

In the United Kingdom, the General Medical Council (GMC) mandates teaching and training roles as part of Good Medical Practice. It has adopted the Academy of Medical Educators (AoME) Professional Standards Framework domains as guidelines for teaching and training quality. This study aims to evaluate teaching in the clinical environment linked to these domains.

Methods

A validated questionnaire concerning teaching by senior clinicians was sent to all Foundation doctors in a National Health Service (NHS) teaching hospital trust. Over 6,000 points of data were collected. Closed questions consisted of ordinal scale Likert items, assessing teaching quality and behaviours for different seniorities of clinician. These were converted to numerical scales for quantitative comparison. Open question responses were coded into categories. Common themes were then analysed and interpreted.

Results

Response rate was 41% (n=129). Regarding closed questions, encouragingly 72% reported seniors (core/speciality trainees, consultants) were interested in teaching, whilst 74% had good teaching skills. Negative points included just 54% reporting teaching was integrated well with clinical duties. 30% thought teaching was high priority compared to other clinical duties. 38% indicated teaching from seniors suffers because of the physical environment and 29% reported deficiency in promoting a safe psychosocial environment. Only 49% had seniors who always or often gave feedback, 43% felt seniors never sought feedback themselves and just 40% felt able to give their seniors feedback. Overall, 72-88% responded positively to teaching quality, amount and level, senior commitment and overall training experience. 12-28% reported 'poor' or 'terrible' ratings in these areas. Consultant teaching attributes were not significantly different from core/specialist trainees in 21 out of 25 parameters. Consultant generic teaching quality was reported as significantly better compared to core trainees, but not significantly better than specialist trainees. Regarding open questions and thematic analysis, systems and organisational elements were most often cited considering negative factors for teaching. This included pressures of clinical commitments, interruptions, team/job structure incompatibility with clinical teaching, lack of organised clinical teaching and teaching being low priority. Considering positive factors for teaching, teacher attributes and systems were most often cited. This included senior enthusiasm and positive teaching behaviours, integration of teaching with routine clinical practice and increased presence of seniors for supervised clinical experiences.

Conclusion

These data indicate significant deficiencies across all domains of teaching quality endorsed by the GMC. If these results concerned patient care, this would be unacceptable; excellence should be expected in training future generations of physicians. Worryingly, teaching quality does not improve with seniority. Given their clinical expertise and also that evidence of teaching forms part of revalidation and continuing professional development, one might expect consultants to be the best teachers. Thematic analysis illustrates what practices might be addressed to improve teaching in the clinical environment. In an increasingly busy NHS, a culture of teaching must be integrated within routine practice. Failure to do so will seriously affect teaching and the quality of future doctors. This appears to be the first such study mapped to AoME domains and may represent a model to evaluate teaching in the clinical environment.

D1050**TEACHING PEDIATRIC INTERVENTIONAL RADIOLOGY TO PEDIATRIC RESIDENTS: TIPS FOR CREATING A SUCCESSFUL ELECTIVE IN NEW SUB-SPECIALTIES****¹Parra D, ²Mahant S***¹Departments of Diagnostic Imaging and ²Pediatrics, University of Toronto, The Hospital for Sick Children, Canada***Aims**

Pediatric Residents (PR) request procedures in Pediatric Interventional Radiology (PIR) and are exposed to managing different PIR devices. Interest about getting more knowledge about this field was perceived. The idea of creating an elective was raised and later developed. The aim of this poster is to show key elements needed in the development of a successful elective in a new sub-specialty.

Methods

Clear objectives and contents of the elective were defined by the two supervisors (SM/DP). A 2 or 4 weeks elective was offered, which was advertised in the PR program. Five PGY2 and 3 were enrolled as the pilot group.

The experience was assessed by getting direct feedback from the trainees and using reflective portfolios.

Results

Objectives and activities were clearly explained prior to the elective by the supervisors in a dedicated meeting. Pre-elective reading material was delivered. The PRs were involved in: PIR ward rounds, observing/assisting procedures, didactic lectures, journal club and simulation sessions. In a post elective meeting feedback was provided and received. The feedback was excellent and PRs had high levels of satisfaction, feeling that the knowledge gained will be useful for future practice. The PRs performance evaluation was satisfactory.

Conclusion

Create electives in specialties that are new and not well known can be challenging. Pediatrics and PIR have an excellent collaboration in our institution which allowed us to create an elective in which PRs became familiar with PIR procedures and devices. It was fundamental to set clear goals and objectives. The meetings with the supervisors and active feedback were extremely valuable. In summary, a successful elective was created based in setting clear goals and objective and active engagement and involvement of the supervisors.

D1051

EXAMINERS' PERCEPTION OF USING CASE ANALYSIS AS AN UNDERGRADUATE CLINICAL ASSESSMENT TOOL IN ORTHOPAEDICS

Kumar N, Chong S, Chee YH, Das De S

Department of Orthopaedic Surgery, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

Aims

Case Analysis (CA) is a summative assessment tool used for assessing clinical competency. Similar to the Objective Structured Long Examination Record (OSLER), CA is designed as a test method that features structured record of test items with improved objectivity, reliability and validity superior to the previous Long Case examination format. In contrast to the Long Case format, CA involves observation of candidate's performance throughout from history taking to physical examination, during which professionalism and communication skills can be assessed. This study is done to determine examiners' perception towards various aspects in the conduct of Orthopaedics CA.

Methods

Orthopaedics CA was conducted concurrently with the Objective Structured Clinical Examination (OSCE) in a Final MBBS Surgery Exam. All candidates are assessed over a fixed duration of 20 minutes on history taking, physical examination and discussion on investigation and treatment plan. Prior to the examination, examiners are given a case summary of their respective real patient. A generic structured scoring sheet is used for marking and grading, which is broadly categorised into 5 aspects, namely history taking, clinical examination, followed by discussion of diagnosis, investigation and management. At the end of the examination, examiners' feedback is collected using a 20-item questionnaire scored on a 5-point Likert scale with qualitative comments for each item. Examiners were given option to submit their responses either via an online feedback portal or manually on paper form. Both quantitative scoring of each item and qualitative comments were collated and analysed.

Results

From the total of 28 examiners, 24 (85.7%) responded within the given timeframe. Most examiners felt that the cases recruited were appropriate (66.7%) and duration given was sufficient (70.8%). About 83% of examiners agreed with having observed history taking and physical examination for a more accurate and reliable assessment. Approximately 60% of examiners believe that assessing competency in focused history taking is superior in diagnostic accuracy, reflecting higher cognitive and psychomotor skills. Generally, 70.8% of examiners preferred the CA format compared to the Long Case format. Logistic wise, most (66.7-70.8%) preferred centralising the conduct of CA, running it concurrently with OSCE on a single day. However, there were as many examiners (29%) who felt that patient and examiner fatiguability may affect consistency of the assessment as those who believes otherwise. Assessment using CA has given a greater insight to most examiners (75-83.3%) on students' core knowledge and its clinical application, clinical examination skill, professionalism and communication skills. (Refer to table of results for summary of quantitative data and qualitative comments)

continue on next page

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Summary Table of Result (Quantitative & Qualitative)

No.	Questionnaire items	Quantitative (N=24)			Summary of Quotes
		Agree/ Strongly agree	Neutral (%)	Strongly disagree (%)	
1	Sufficient time allocated	16 (66.6)	4 (16.7)	4 (16.7)	Time allocation - Sufficiency, time-keeping assistance, guidance required
2	Appropriate case selection	17 (70.8)	2 (8.4)	5 (20.8)	Case selection - Language barrier, complicated/difficult, calibration required
3	Observed history taking & PE improves assessment reliability and accuracy	20 (83.3)	0 (0)	4 (16.7)	Observed history & PE - Insufficient time for meaningful assessment
4	(a) Focused history taking & PE assesses diagnostic accuracy	15 (62.5)	4 (16.7)	5 (20.8)	Focused history & PE - Organ-centric thinking
	(b) Focused history taking & PE reflects higher cognitive skill	16 (66.7)	5 (20.8)	3 (12.5)	
	(c) Focused history taking & PE reflects psychomotor skill	15 (62.5)	6 (25.0)	3 (12.5)	
5	CA format preferred over Long case	17 (70.8)	2 (8.4)	5 (20.8)	
6	(a) Having 2 examiners is preferred	13 (54.2)	4 (16.7)	7 (29.1)	Logistics - Multiple examiners to reduce subjectivity, Combined OSCE/CA leads to over-running, Single day involves huge administrative task
	(b) Combining CA with OSCE on a single day is preferred	17 (70.8)	4 (16.7)	3 (12.5)	
	(c) Centralising CA is preferred over multiple site	16 (66.7)	5 (20.8)	3 (12.5)	
	(d) Patient & examiner fatiguability affected consistency of assessment	7 (29.2)	10 (41.6)	7 (29.2)	Fatiguability -Examiner experience, both examiner and patient fatigue
7	(a) Well-distributed mark allocation	19 (79.2)	3 (12.5)	2 (8.3)	Scoring/Marking -Mark allocation, assessor standardization, adequacy & quality of case summary
	(b) Clear layout of marking template	18 (75.0)	5 (20.8)	1 (4.2)	
	(c) Sufficient and comprehensive	17 (70.8)	7 (29.2)	0 (0)	
	(d) Case summary provided adequate content as assessment guideline	19 (79.2)	3 (12.5)	2 (8.3)	
8	(a) CA gives greater insight on core knowledge and clinical application	18 (75.0)	5 (20.8)	1 (4.2)	
	(b) CA gives greater insight on clinical examination skill	20 (83.3)	3 (12.5)	1 (4.2)	
	(c) CA gives greater insight on professionalism and communication skills	20 (83.3)	4 (16.7)	0 (0)	
9	Pleasant/enjoyable being a CA examiner	16 (66.7)	7 (29.2)	1 (4.1)	
10	Happy to be examiner for future CA	18 (75.0)	5 (20.8)	1 (4.2)	

Conclusion

Utilising CA as an assessment tool for clinical competency is well-perceived by a great majority of Orthopaedics examiner. However, a significant number of examiners feel that having co-examiner would be ideal to reduce subjectivity. This conforms to the style of OSLERs featuring use of co-examiners to address drawbacks of ambiguity. As complexity of cases vary, it is also vital that examiners establish relative difficulty for each cases and practice standardisation process to further improve objectivity, reliability and validity of the test.

D1052

KEYS FOR A SUCCESSFUL DESIGN AND IMPLEMENTATION OF AN ULTRASOUND GUIDED VASCULAR ACCESS WORKSHOP FOR NON-RADIOLOGIST

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Aims

Different health care professionals are interested in learning ultrasound (US) guided vascular access. US can be challenging to perform and understand for those without a formal training. The aim of this poster is to illustrate in detail the different steps needed in the development of a successful workshop to teach this technique to non-radiologists.

Methods

A half day workshop was developed. A pilot group of 12 participants was selected, followed by a regular course offered in our organisation (24 participants in total). Completion of a detailed on-line teaching module and pre course reading material were considered as a pre-requisite for the course. During the workshop didactic lectures were given by an ultrasound technologist, an interventional radiologist and a vascular access nurse. This was followed by simulation based learning in task trainers. Time was given for deliberate practice. A final debriefing and course evaluation were performed.

Results

The workshops were very successful with an active engagement of the learners. They were very involved in the different activities and positive feedback was obtained.

The course evaluation was positive and the course designers met regularly to incorporate the suggestions obtained to the future workshops. Advanced courses and dedicated electives will be offered to improve the skills of the participants.

Conclusion

Interventional Radiologists traditionally perform and teach ultrasound guided interventions. It can be difficult for these specialists to teach non-imaging related health care professionals. We were able to create a successful half day workshop targeted to this group. The creation of an online teaching module, careful selection of pre-course reading material, clear didactic lecture and adequate simulation environment were key elements for the success of this course. We believe that following these steps, having an inter-professional approach and different teaching modalities was fundamental for this initiative. Showing our work may help other organisations to implement similar projects.

D1053**THE DIFFERENCE OF LEARNING IMPACT IN WRITTEN AND ORAL ASSESSMENT*****Mustikasari S, Ratwita W****Medical Education, Faculty of Medicine, Jenderal Achmad Yani University, Indonesia***Aims**

Assessment is a process to evaluate the achievement of student's learning. The ideal method of assessment should drive student's learning based on the results and experience of assessment methods. Therefore, different methods of assessment allows students to create different learning strategies. The purpose of this study was to determine the difference of learning impact in MCQ (written assessment) and OSOCA (oral assessment).

Methods

This research was an analytical cross sectional comparative study on 270 medical students Unjani with probability simple random sampling method. The research instrument was adapted from the Assessment Experience Questionnaire (AEQ). Data were analysed using independent t-test.

Results

The results showed that the average of learning impact in OSOCA was higher than MCQ. The results based on independent t-test showed that the P-value learning impact, exam preparation, feedback and self evaluation assessment methods MCQ and OSOCA was 0,000 ($p < 0,05$), 0,034 ($p < 0,05$), and 0,000 ($p < 0,05$).

Conclusion

There was a significance difference of learning impact, exam preparation, feedback and self evaluation between MCQ and OSOCA. Learning impact, exam preparation, feedback and self evaluation in OSOCA was higher than MCQ.

D1054

FACULTY ENHANCEMENT PROGRAM KING SAUD BIN ABDUL-AZIZ UNIVERSITY FOR HEALTH SCIENCES. COLLEGE OF MEDICINE – JEDDAH

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Aims

Program goal:

The goal of the program is to deliver a purposefully structured faculty enhancement experience around issues of teaching and learning, and to provide them with needed skills to execute KSAU-HS COM curriculum.

Program key principles:

Faculty Enhancement Program educational interventions are designed following principles of:

- Adult learning principles that promote effective learning and skill acquisition.
- Experiential learning that includes the importance of applying what had been learned, practicing skills, reflection and receiving feedback.
- Effective peer and colleague in learning that includes the value of peers as role models, the mutual exchange of information and ideas, and the importance of collegial support to encourage and maintain change.
- Social learning theory.

Methods

Schema of the Program:

This is a mind map for the proposed Faculty Enhancement Program COM-J.

Program implementation is putting the officially approved courses of study and, other activities into practice. This can be achieved by considering and appropriate planning for Time, Organisation and, Personnel.

Evaluation of the program:

Program evaluation is the identification, clarification, and application of the criteria of the program to determine the merit or the value of what is being evaluated. Evaluation is used to provide appraisal or judgment on the quality of the program and its continuity. One of the best evaluation methods for appraising learning processes is Kirkpatrick's.

Results

Program monitoring:

Methods suggested to monitor the program including; monitoring faculty attendance to activities monitoring tool, six monthly progress and, post activity reports. The overall evaluation report will be sent to the chairman of medical education to be discussed in the faculty enhancement committee for recommendation and actions.

The Program Maintenance:

In order to maintain the Faculty Enhancement Program, there are some sockets that need to be taken into consideration – involve stakeholders in planning and implementing the program, incorporate flexible scheduling and various delivery options. Thus the proposed program has scheduled activities not more than two days and with different method, Providing access to resources such as online resource and establishing relationship with international expertise and secure funding for all faculty enhancement activities.

Conclusion

Faculty development has been defined as that broad range of activities that institutions use to renew or assist faculty in their roles. It should address both individual and organisational needs. This faculty enhancement program is designed based on needs assessment of faculty and King Saud Bin-Abdulaziz College of Medicine curriculum.

It is designed to prepare faculty members for their academic roles, including teaching and learning, leadership in education, research, and career management.

D1055

INDIAN STUDENTS' WILLINGNESS TO ACCEPT E-LEARNING IN UNDERGRADUATE MEDICAL CURRICULUM: A PRELIMINARY STUDY

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Aims

The undergraduate medical curriculum in India as designed by the medical council of India (MCI) currently does not include e-learning as part of its program. Although students seem to be quite comfortable with the use of computers and internet, their perception about e-learning per se needs to be addressed. Moreover, before introduction of specific technology opinion of the user must be investigated. Hence, this study was designed with an aim to find out the Indian students willingness to accept e-learning as a part of undergraduate medical curriculum.

Methods

Undergraduate 1st and 2nd semester medical students were recruited for the study from 4 medical colleges from different regions of India. A self-administered questionnaire was initially designed and given to the students. Their responses were collected and data was analysed to determine frequencies. A preliminary comparison of males vs females was also done.

Results

Out of 245 students (103 males and 142 females), the majority (61% males and 83% females) had been using the computer for more than 5 years. Overall males and female students gave similar responses to the questions. The majority believed that e-learning methods would be easy to use (78.6%M and 81.6%F) and would save time (70% students). They also believed that e-learning would make learning easier, more efficient and would make the course content easier to understand. More than half the students thought it would help them to be more independent. An important observation was a good number (46.6%M and 41.5%F) of students agreed that they would feel isolated, and lose contact with the faculty. Though more than 1/3rd of the students (42%males, 41% females) disagreed that technology would interfere with the learning process, others were divided between agreeing and being neutral. We received a similar response for whether e-learning process would be distracting. However, the vast majority felt that it should be incorporated into the curriculum (74.7% M and 71% F). Only few (6%M and 4% F) felt no need for its incorporation into the curriculum. 27% males and 37% females felt that 40-60% of the curriculum should be covered by e-learning. The rest were divided in their opinions. 61% males and 59% females felt that was "web supplemented mode should be used.

Conclusion

Overall Indian students' males and females seem comfortable with computer use and most students perceive e-learning as a helpful tool in their learning process. A good number of students have expressed concern about losing contact with the faculty. Most are willing to have it incorporated into the curriculum, and were in favor of "web supplemented mode". This reflects the fact that students want e-learning only as an aid to traditional teaching and value personal interactions with the teacher.

D1056

RETENTION OF KNOWLEDGE IN PRECLINICAL DISCIPLINES BY CLINICAL STUDENTS IN THE IIUM MEDICAL PROGRAMME

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Aims

To examine the retention of basic medical sciences knowledge by clinical students in the Medical Programme of International Islamic University Malaysia (IIUM).

Methods

Sixty-seven Year 3 and 64 Year 5 students undergoing the Paediatric posting rotation of the academic sessions 2011/2012 were included into this study. Open-ended, short-answer questions of the completion type in the disciplines of anatomy, physiology, biochemistry and general pathology constructed by experts were used. These questions were used to test the retention of the above stated knowledge. Self-administered questionnaire was also designed to obtain the perceptions of students on the learning of basic medical sciences.

Results

A significant difference was seen between the mean total scores for the Year 3 and Year 5 students in the basic medical sciences knowledge tests (31.9% vs. 37.7%; $p = 0.002$). Year 5 students showed significantly higher retention of knowledge on anatomy and biochemistry ($p < 0.001$ and $p = 0.021$). Overall in approximately 50% of the questions students indicated that they knew the answers but could not recall. Seventy percent of students stated that they only attempted to retain facts that they perceived as important. Almost all the students (96.2%) agreed that they remembered information better due to vertical integration in the curriculum.

Conclusion

This study did not see deterioration in the retention of knowledge in basic medical sciences as the clinical students progress through clinical years. Students stated that the integration of knowledge in basic medical sciences disciplines into the clinical sciences during the preclinical years helped them remember facts better.

D1057

INITIATING USER-FOCUSED TRAININGS IN TEACHING AND LEARNING STRATEGIES**Rukmini E, Juliawati DJ***Medical Education Unit, School of Medicine, Atma Jaya Catholic University of Indonesia, Indonesia***Aims**

The training sub unit (TSU) is part of our Medical Education Unit (MEU) that is responsible for the faculty development in medical education aspects. TSU were asked to focus on the students-centred learning (SCL) and students' assessment methods. Since its establishment in 2011, TSU has been implementing several strategies to achieve its goals. The aim of this presentation was to share the strategy development in the faculty development training of SCL and assessment.

Methods

From December 2011 to July 2014, TSU and MEU have designed, evaluated, and rearranged seven strategies on development in teaching and learning. The strategies were developed to accommodate more faculty members' involvement within the trainings and to produce more innovation in teaching and learning, especially in SCL and students' assessment.

Results

TSU designed one-day SCL training in Dec 2011. In the morning, there were 18 faculty members but by the afternoon only 12 members stayed. We then rearranged 10 topics within the SCL Series Training (Jan-April 2012) and 13 topics in the Students' Assessment Series Training (Jan-Jul 2012). Most of the trainees had not yet implemented the methods. From the evaluation, it was recognised that faculty members understand about the methods, however they feel reluctant to start to implement the methods. Therefore, we designed the "SCL Clinic" (Oct-Nov 2012) to facilitate individuals in SCL implementation. There were 7 topics with 14 facilitators in the SCL Clinic. Unfortunately, there was only one faculty member came into the clinic. TSU then designed one-day e-learning Clinic (Dec 2012) to produce a Moodle™ project for each of the participants. We rewarded the members who finished their Moodle™ projects with door prizes. Eight faculty members came to the Clinic but only three were able to finish their projects. Five of the participants decided not to continue the project on that day; they were overwhelmed with the information. They promised to finish the projects at home. We decided to redesign the training by having a SCL Clinic with 11 topics and a Students' Assessments Clinic with 14 topics (Jan-May 2013). Each topic will consist of a two hour meeting and a two hour independent working. Faculty members who can fulfill the 30-hour training will be given a certificate that worth for their scholarship assessment and a prize. There were 5-10 faculty members came to the clinic, however none of them were awarded any certificate. In May to November 2013, MEU through a teaching grant designed an e-Learning Community whose members were voluntary students to facilitate faculty members training in e-learning. There were 38 faculty members were benefited through the activities. In 2014, TSU designed series of workshops with 12 topics related to SCL and 8 topics related to the assessment. The dean of our school invited the faculty members to attend the workshops through formal letters. MEU produced a list of targeted faculty members to especially be invited to the workshops. Several faculty members implemented one of the SCL methods after the training. A team utilised one of the trained assessment methods. Although the SCL Clinic was not as expected, it brought us to a training modification. The e-learning Clinic produced three projects. In January to May 2013, through the Clinic, a group of doctors could design a new method using case-based learning. This method was then followed by at least three other groups of doctors.

Conclusion

TSU redesigned the training method based on experiences which implied our reflective and active thoughts.

D1058**ACQUIRING TEACHING COMPETENCY PROCESS BY IRANIAN NURSING FACULTIES****¹Emamzadeh Ghasemi HS, ²A. Farahani M, ²Rafii F**

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Aims

Acquiring teaching competency by nurse faculties has a dynamic process that depends on variety of socio-cultural contexts. Understanding this process in Iranian nurse faculties could be helpful to plan effective nursing faculty development and get improvement quality of nursing care. So, the aim of the study was to explore the acquiring of teaching competency process in Iranian nurse teachers.

Methods

This study has a qualitative design with grounded theory approach that was conducted from 2010-2013. 11 nurse faculties from three nursing schools in Tehran were selected with purposeful sampling. According to data and emerged theory, purposeful sampling continued by theoretical sampling and theoretical saturation as established by the logics of the grounded theory analysis was achieved. Major source of data collection was in-depth semi-structured interviews that were conducted by the researcher and analysed by constant comparative method. Finally, 16 interviews were conducted with participants. Data were analysed by Strauss and Corbin (2008) approach.

Results

Five main categories emerged from the data including: qualified nursing, effective teaching, faculty caring, excellent in nursing teaching and structural/contextual factors. Qualified nursing, effective teaching, faculty caring and excellent in nursing teaching represented process of acquiring teaching competency, and structural/contextual factors including "individual characteristics", "organisational factors" and "socio-cultural factors". The data revealed that the nurse teachers who deal peacefully with the nursing profession and colleagues were responsible and committed to acquiring teaching competency. Hence, the central category, "Being at Peace" represented the main theme of the research, and all major categories have been related to it.

Conclusion

Findings of this study revealed that acquiring teaching competency has a dynamic and sequential nature which depends on peaceful dealing of nurse teachers to organisational and socio-cultural factors in Iran. Also, the results disclose that individual factors of nursing faculty have important roles in get competency which should of concern for nursing faculty development programs.

D1059

A STUDY OF FORMAL ASSESSMENT BY NON-CLINICIAN GRADERS USING VIDEOGRAPHY OF MEDICAL STUDENTS PERFORMING PHYSICAL EXAMINATION AND HISTORY TAKING

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Aims

Medical students undergo a multi-station examination (MSE) at the end of their second year. This comprises of physical examination, procedural skills and communications stations. Traditionally, this has been assessed by on-site clinician examiners (CE) on the day of the MSE. With the expectant rise in the number of medical students and a greater demand and scarcity of CE, conducting examinations in future using the MSE format will be challenging. We evaluated the feasibility of using a combination of videography and assessment by non-clinician graders (NCG) as an alternative assessment modality and compared their scores with the on-site CE.

Methods

All second year students undergoing the MSE were invited to take part in the study. Three stations from the MSE (the cardiovascular (CV), gastrointestinal (GI) examination and history taking (HX) stations) were studied. We recorded videos of the participants' performance at these stations. We recruited three NCG per station (nine in total). They received a one-day training using the same set of guidelines, checklist and grading as per the CE. Video recordings of participants were viewed by the NCG and the scores were compared with that of the CE. A two-way random effects intra-class correlation for the absolute agreement of scores was performed to compare between NCG; a two-way mixed effects intra-class correlation for the absolute agreement and a Bland-Altman analysis was performed to compare between CE and NCG scores. All analysis were performed using SPSS 21. All p-values <0.05 were considered statistically significant. The study was approved by the University ethics committee and consent was sought from all participants.

Results

We enrolled 55 second year medical students who contributed 165 videos. Each NCG reviewed 25 videos, of which 10 were reviewed by all 3 NCG for inter-grader variability evaluation. The correlation coefficient between NCG and CE for each station (CV, GI, HX) was 0.251 (p=0.011), 0.332 (p=0.007) and 0.347 (p<0.001) respectively. The inter-grader correlation coefficient amongst NCG for each station was 0.323 (p=0.027), 0.490 (p=0.008) and 0.717 (p<0.001) respectively. A Bland-Altman plot for the HX station showed that NCG tended to under-estimate the score compared to CE.

Conclusion

In this study, there was poor correlation of scores between NCG using videography and on-site CE in the cardiovascular, gastrointestinal and history taking stations. Furthermore, NCG tended to give lower scores compared to CE. These findings are contrary to previous studies examining these modalities of assessment (videography and NCG) albeit separately. It is recognised that inter-grader variability exists and this was not accounted for in the CE score. Amongst NCG, there was better correlation with the history taking station compared to the other physical examination stations. This suggests that this modality of assessment may be more suitable for communications related stations. Nonetheless, in the examination setting, further refinement, standardisation and re-evaluation are required before this modality can be utilised confidently.

D1060

PARENTAL PERCEPTION OF MEDICAL STUDENT INTERACTION IN A PAEDIATRICS TERTIARY HOSPITAL IN SINGAPORE

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Aims

Practical clinical experience is an integral part of medical school training. There is a constant demand for more medical personnel to cater to the local needs and therefore, there is a need to accommodate more medical students for training at teaching hospitals. Our aim was to understand parental perceptions of the nature and extent of medical student involvement during their child's stay in the hospital and in their medical care. The relationships between demographic variables with parental perceptions were analysed and this in turn can help to identify factors that may influence their acceptance of medical student interaction.

Methods

This is the first study of its kind, conducted in a tertiary Paediatrics hospital in Singapore. Data on various aspects of parental perceptions and demographic details were obtained via a written survey form from 155 parents whose children were admitted into 5 different wards from May to June 2014. Demographic variables including gender and age of the child, parental age, highest level of education obtained by parent, combined annual family income and satisfaction with previous experiences were studied for any changes in parental acceptance of medical students, utilising the correlation analysis in StatPlus. The correlation coefficient or r-value was used to determine the strength of the positive linear relationship between demographic variables and parental acceptance of medical students.

Results

111 parents (86.5%) were agreeable for medical student interaction during their child's admission, of which 53.1% allowed students to take both a history and perform a physical examination of their child. Correlation analysis showed a strong association between the highest level of education obtained by parents and their acceptance of medical students ($r = 0.953$). Parents in the higher income group, had significantly higher acceptance rates of student involvement (90% to 96%) and were more agreeable for student interactions when their admitted child was of comparatively older age group ($r = 0.599$). Parental acceptance of medical students was not significantly influenced by the gender of their child. 94 parents (87.9%) preferred a maximum of only 1 to 2 medical students per interaction. 60 parents (56%) preferred a maximum time of less than 15 minutes per interaction and 93 parents (82.3%) preferred that a qualified doctor be present during medical student interactions with their child.

Conclusion

There is generally a strong parental acceptance for medical students, with the understanding that this would be beneficial for students' learning and is essential for training the next generation of doctors. We found from our analysis, that limiting the number of medical students and the time of their interaction with the child, in the presence of a supervising doctor would encourage greater parental assent. This may ensure that valuable clinical experience is available to medical students to enhance their training.

D1061

ISOLATED CLINICAL SKILLS EXAMINATIONS IN MEDICAL SCHOOL: ARE THEY PREDICTORS FOR NATIONAL COMPREHENSIVE OSCE?

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Aims

According to Indonesian Doctors Competency Standards defined by Indonesian Medical Council, one of the areas of competence expected is clinical skills. To assess medical students' clinical skills competence at the end of their education period, medical students in Indonesia will have a National Objective Structured Clinical Examination (OSCE), an exam to assess their clinical skills competency. Therefore, at the Faculty of Medicine Airlangga University there are four modules of clinical skills that have been given to undergraduate students from the second to the fifth semester. At the end of each module, students will be given a clinical skills examination to assess their ability and introduce the clinical skills competency standard that must be achieved when they graduate to become a doctor. The first three modules of clinical skills are examined with procedural skills examination, only the fourth examination is done with OSCE method. So, with clinical skills examination since the beginning of the education, students not only find out their strengths and weaknesses in clinical skills, but medical faculty expect to predict their students' clinical skills competence at the end of their education period. So, the purpose of this study is to assess the relationship between students' scores on clinical skills examinations given during their medical school as a predictor for their National OSCE's score and to assess which module is the best predictor for National OSCE's score at Faculty of Medicine Airlangga University.

Methods

This study was a cross sectional study. Participants were 143 medical students at Faculty of Medicine Airlangga University who will take the National OSCE. The study used secondary data from students' scores on clinical skills examinations given during their medical school and National OSCE's score. Four clinical skills examinations' scores were categorised into five categories to assess the relation of all four scores and their OSCE's score. Bivariate correlations were performed for categorised scores and OSCE's score also for each score from clinical skills examination and OSCE's score.

Results

Categorisation of four clinical skills examinations scores given during medical school was positively correlated with OSCE's score ($r = 0.189$, $P < 0.05$). For each clinical skills examination score, only one positive correlation was found between fourth clinical skills examination's score and OSCE's score ($r = 0.207$, $P < 0.05$). The other three scores of clinical skills examinations showed no significant association with OSCE's score (all $P > 0.05$).

Conclusion

Clinical skills examinations early in medical school is a predictor for clinical skills competence at the end of education period for students in Faculty of Medicine Airlangga University. This correlation found especially with the fourth clinical skills module examination where the examination system was also an OSCE.

D1062**RESIDENT-AUTHORED MULTIPLE CHOICE QUESTIONS ON A WEB-BASED REPOSITORY AS A TOOL FOR ENCOURAGING PROBLEM-BASED LEARNING IN AN OTOLARYNGOLOGY RESIDENCY PROGRAMME*****Goh X, Ngo R****Department of Otolaryngology (ENT) - Head & Neck Surgery, National University Hospital, National University Health System, Singapore***Aims**

Practice-based learning (PBL) is an important key competency in the ACGME and American Board of Medical Specialties (ABMS) guidelines for instruction and assessment. ACGME defines PBL as the ability of the resident to identify strengths and deficiencies in practice, set learning goals, perform learning activities, assimilate evidence and subsequently improve practice. It also encourages the resident to use IT to optimise learning and participate in the education of patients, students and residents. Due to its inherent self-directed nature, most lessons learnt in this process are not shared. To encourage PBL, our Otolaryngology Residency programme has adopted the participatory-learning approach to PBL, with the aid of Peerwise, a free web-based system that allows multiple users to contribute questions, complete with answers and explanations, into a repository of MCQs (multiple-choice questions), from which others can attempt in their own time. When a learning opportunity arises during daily clinical practice, the resident is told by the faculty member to read up on the topic in question and subsequently author 2-3 MCQ questions around the topic and enter them into the shared repository. This allows other residents to also partake in this learning. Through this practice, the resident also gains a better understanding of the process of authoring MCQs. We also hope that this continual process of authoring and attempting MCQs would help improve In-service Otolaryngology training examination (OTE) scores.

Methods

To survey residents' attitudes and receptiveness to this form of learning, an online survey was formulated. The survey addresses both the receptibility of this method of learning as well as the ease of using the online system for his purpose. The responses were graded on a likert scale. All 10 active Otolaryngology residents in our department were polled during the period of the month of July 2014. The individual survey responses are blinded to the investigators and faculty.

Results

All residents completed the survey. All residents agree that PBL is an important learning tool in a residency setting. 70% of residents agree that the process of formulating MCQs helps with identifying key points when reading up on a topic, while 90% residents feel that the need to formulate MCQs gives them the impetus to read up on a topic better. Majority (70%) of residents found the process of uploading and attempting questions in Peerwise easy and quick to do. None found the process of uploading and doing questions on Peerwise difficult. Most (60%) of the residents agreed that doing resident authored MCQs and reading the explanations given is a quick and effective way to learn. On the other hand, most (70%) of the residents felt that knowing that these questions are based on real patient encounters in clinic did not make them pay more attention to these resident-authored questions.

Conclusion

Resident-authored MCQ questions are a feasible way to encourage PBL and this online repository allows learnt lessons to be shared easily and quickly. This form of learning could be attempted on a larger scale to fully understand its impact on residency learning. We await the next OTE sitting to observe for improvement.

D1063**MEDICAL STUDENTS' COMMUNICATION SKILLS AWARENESS AND PERFORMANCE IN CLINICAL EDUCATION****¹Kim WJ, ²Kim MY**

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Aims

The purpose of this study was to identify the correlation between medical students' communication skills awareness and performance in clinical education and to determine means to improve communication.

Methods

A total of 36 fourth-year medical students were enrolled in this study and were surveyed concerning communication skills during two clinical performance examinations. The survey included 20 items in four categories: beginning an interview (greeting, identification, introduction, attention, and chief complaint), gathering information (open question, reflection, facilitation, clarification, and summarising), giving information (discovering the patient's understanding, empathy, easy terms, checking of understanding, and giving opportunities), and non-verbal communication (neat features, listening, eye contact, nodding, and silence). The students were educated repeatedly about their communication skills for 8 months in a clinical clerkship between two examinations.

Results

All items showed the significant correlations between communication skills awareness and performance, except for greeting and summarising in the first examination and neat feature and silence in the second. Communication skills awareness and performance were significantly improved in terms of attention, reflection, summarising, discovering the patient's understanding, empathy, checking understanding, and silence.

Conclusion

This study demonstrated that medical students' awareness of communication skills was mostly correlated with performance and communication awareness and performance had improved following clinical education.

D1064**ALLIED HEALTH PROFESSIONS IN CHINA: CURRENT STATE AND OUTLOOK****¹He Q, ²Wan X**

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Aims

This paper aims to investigate and evaluate Allied Health Professions (AHPs) education, workforce, and career development in China, analyse the gap between China and the developed countries, identify the existing problems, and propose constructive development suggestions.

Methods

The author of this paper collected the materials from various sources, such as literature search, questionnaire surveys, and expert interviews. This study was supported by the China Medical Board of New York (CMB).

Results

The higher vocational education in Allied Health Professions (AHPs) is of considerable scale in China. However, the current state of undergraduate and graduate education of AHPs is far from satisfactory. Firstly, the number of AHP practitioners is far smaller than that of medical and nursing personnel, up to 78.9% are graduates from vocational colleges (19.4%), technical secondary schools (39.6%), high schools or even lower (4.9%). Secondly, statistics from various sources have shown that there is a huge gap in AHP workforce. Due to inadequate AHP education, lots of the positions which are already in place, are either left unfilled or taken by doctors, nurses or untrained personnel from other professions. Thirdly, numerous problems related to the career development of AHPs have emerged. For example, in 2001, China had launched the National Examination for Junior and Intermediate Medical Professional Qualification Entitlement. However, some new specialties are still not yet included, which prevents the specialists from taking exams to gain professional qualifications and entitlement. Fourthly, not being able to gain adequate education, many AHP graduates choose to change professions, which results in serious loss of human resource, and leads to lack of AHP education and disciplinary development, creating a vicious circle. Fifthly, an AHP professional accreditation and quality assurance system is not in place, and so is licensing examination system that directly poses more difficulties for practitioners to gain more AHP training.

Conclusion

According to the problems above, the author of this paper recommended some relevant suggestions. First of all, higher AHP education in China should be scaled up in a planned controlled fashion, where the number and quality of professionals will be elevated and the medical nursing and AHP personnel at different levels in various specialties will grow coordinately. And then, China should actively establish a multi-level, multi-specialty AHP education system, scale up undergraduate and graduate education, so as to ensure the overall development of AHP higher education, prevent loss of talents and provide high-end talents for professional development, discipline construction as well as clinical services. Thirdly, AHP education accreditation and profession licensing and registration system should be established and improved gradually. Lastly, Chinese education, personnel and health authorities should work closely to coordinate duties - the education institutions offer AHP education, while the health and personnel authorities determine appropriate professional positions and titles according to market demand.

D1065**PROMOTING GLOBAL HEALTH EDUCATION: REVIEW FOR TIPS AND CHALLENGES****Gomi H***Center for Global Health, Mito Kyodo Hospital, Tsukuba University, Japan***Aims**

Global health education has been advocated for the last decade. It has been implemented for students and postgraduate trainees to manage patients with diverse background in international settings. It has been expected to be educationally valuable. However, it is still unknown how extensively it has been implemented worldwide, what the tips and challenges are, and what kind of educational outcomes have been demonstrated. This is an exploratory literature review to answer these research questions.

Methods

Literature was searched using PubMed with the key words of “Global health” and “medical education” and “electives.” There were a total of 39 articles. Abstracts of all the 39 articles were reviewed for screening, and the main findings were extracted.

Results

All the 39 articles were included for the review after screening. There were studies mainly from North America, the United Kingdom, and the Netherlands. The main findings were categorised as subjects of the programs, pre-departure preparations, mentorship, post-program sessions or debriefing, tips for successful programs, and barriers for implementation. Structured pre-departure training, post-briefing, opportunities for reflection, and mentoring were successful tips for the program. Financial funds, ethical aspects, and occupational blood borne infections (postexposure prophylaxis) were noted as major challenges.

Conclusion

International health electives have become popular and a lot of students and postgraduates demonstrated interest. There were, however, limited programs that could offer formal international health electives. Pre- and post-structured follow up sessions and mentoring were found to be tips for successful program. There were still challenges to implement the international electives as part of the formal curriculum. Financial limitations were the major challenges for further implementation.

D1066

SOCIAL SKILLS OF SPECIALISTS CURRENTLY INVOLVED IN INTERPROFESSIONAL COLLABORATION IN JAPAN

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Aims

Social skills enable effective relation-building and interaction with others. It is considered that these skills are critical in interprofessional collaboration. In this study, we conducted a survey of social skills of specialists who are currently involved in interprofessional collaboration in Japan.

Methods

We conducted an anonymous self-administered survey of healthcare providers in 11 different professions by sending a questionnaire by post or via online. The healthcare professions surveyed were physicians, medical clerks/medical secretaries, managerial dietitians, care workers, nurses/assistant nurses, occupational therapists, dentists, dental hygienists, social workers, psychiatric social workers, pharmacists, and physiotherapists. The survey was conducted from December 2013 to February 2014, with the cooperation of professional organisations, academic societies, and Japan Association for Development of Community Medicine. Kikuchi's Scale of Social Skills: 18 items (KiSS-18), which have been proven to be valid and reliable, were partly modified and used as a questionnaire. Social skills were assessed based on the total score as well as on the scores on six subscales; beginning social skills, advanced social skills, dealing with feelings, alternatives to aggression, dealing with stress, and planning skills. The questionnaire was used with the permission of the author of KiSS-18 and with the approval of School of Medicine Ethics Committee in Mie University. We conducted an analysis of variance (ANOVA) on the total score of social skills of each profession as well as on the difference in average scores on each subscale, with a 95% confidence interval.

Results

The total number of responses were 3845. The number of responses by profession varied between 22 and 724. The average score of social skills was 57.78. Those with scores above the average were physicians, dentists, physiotherapists, case workers, social workers, managerial dietitians, psychiatric social workers, and medical clerks and secretaries. Those with scores below the average were nurses/assistant nurses, pharmacists, physiotherapists, and occupational therapists. Although a slight variance was found in the scores on each subscale, there was no considerable difference in the total score as well as in the scores on each subscale among professions. There was a significant difference in the average total score and the average scores on each subscale among professions at 1% level.

Conclusion

The study showed the difference in social skills among different professions, which suggests a possible impact on interprofessional collaboration. Generalisation of the results has its limitations as the study population differs from profession to profession. Consideration should be given to interpreting the results as social skills in this study were self-assessed. Further study should be conducted on generalisation as well as on occupational factors affecting social skills.

D1067

EFFECTIVENESS OF MOBILE ELEARNING ECOSYSTEM ON ACADEMIC PERFORMANCE OF MEDICAL STUDENT'S SELF-DIRECTED LEARNING

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Aims

This paper presents an investigation of the effectiveness and impact of the mobile eLearning ecosystem on students' academic performance by means of longitudinal monitoring and evaluation of LKCMedicine students' Self-directed Learning (SDL) in various academic activities. SDL has been identified as a critical life skill for medical graduates as it enables a person to be highly adaptive to new situations and environments, to gather resources, and to learn quickly so as to solve new problems or handle any new situations they encounter. There is concrete evidence from different discipline areas, and with medical students, that being able to direct one's own learning in a flexible manner is valued by students and educators. This is also consistent with the medical education community's move towards student-centred approaches to teaching and learning. Motivated with the hypothesis that the mobile eLearning ecosystems implemented in the new medical school creates a better environment for the development of SDL, this study expects to identify the ecosystems' effectiveness and impact in relation to students learning behaviors and academic achievements.

Methods

The development of the new medical school offers a unique opportunity to fully integrate the use of innovative educational technologies to support the design, development and delivery of medical curriculum, as well as allow for a mobile technology experience, specifically customised and adapted to support a paperless pedagogy. This enables the creation of a technology-rich learning ecosystem to foster conditions for transformative approaches to the development of SDL. This tailor-made sophisticated ecosystem is expected to enable three important SDL aspects of "learning to learn": a) ownership of learning; b) self-management and monitoring; and c) extension of learning. In line with the three aspects, both quantitative and qualitative statistical techniques are adopted to explore implicit correlation patterns between learning behaviors captured in the ecosystems and academic achievements in TBL and continual assessments.

Results

The present study analyses the data collected from three major sources during the first two academic semesters of the inaugural cohort of 54 students in LKCMEDICINE. Specifically, the analysis focusses on: 1) the system log data of learning behaviors captured from student interactions within the four major integrated systems which form the eLearning ecosystem, comprising iLKC, iLecture, iFolio and iLAMS; 2) survey and student 'pulse' feedback data from a questionnaire and interviews; and 3) TBL and assessment data from the learning management system. These data are processed using Business Intelligence (BI) analytics and the reporting tool QlikView. The analysis identifies interesting correlation patterns between the students' learning behaviours (i.e., time on task) and their learning outcomes (i.e., TBL and course performance).

Conclusion

The findings of this exploratory empirical study further supports that (i) SDL is, on the one hand, a very attractive aspect of technology-enhanced learning ecosystems for instructors, and on the other, a carefully-designed learning ecosystem can effectively help to inculcate self-directedness into learners. Such a richly enabled mobile ecosystem facilitates pace of learning and self-management, triggers interaction, extends learning scope, and fosters various types of thinking which promotes engagement, satisfaction and academic achievement.

D1068**UNDERSTANDING CORE COMPETENCIES FROM THE PATIENTS' PERSPECTIVE****¹Khoo HS, ²Lim YW***¹HOMER, National Healthcare Group, Singapore, ²Saw Swee Hock School of Public Health, National University of Singapore, Singapore***Aims**

The aim of this study was to explore and understand core competencies from what patients consider as good and bad quality of healthcare during the patient-doctor interaction process from their primary healthcare experiences. The issues identified by the patients are relevant to the core competencies recommended by the ACGME (Accreditation Council for Graduate Medical Education), especially the interpersonal and communication skills competency, in family medicine. Lurie et al. (2008) concluded after their systematic review that the competencies should be used to guide evaluation exercises, instead of trying to develop instruments for direct measurement of the competencies. Most studies also rely mainly on expert or clinician perceptions of the competencies. With patient expectations constantly evolving these days now that information can be easily attained online, there is a need for a clearer and updated understanding of what these competencies encompass, from the patients' perspective. Our findings will assist in the development of the residents, and the teaching curriculum.

Methods

A qualitative research methodology was employed for this study. Four focus groups and six group interviews were conducted in English and Mandarin over seven months from August 2013 to February 2014. A total of 27 participants took part in the focus groups and group interviews. Participants were recruited through organisations, as well as through brochures that were distributed to the public. We asked patients about their perceptions about the quality of care they received during their patient-doctor interactions, and what they would consider their ideal quality of care. Audio recordings of the discussions were translated and transcribed, and the content analysis methodology was used to examine the transcripts. We used the Atlas.ti 7 software to assist us in this analysis.

Results

The main themes that emerged from the focus-group and interview discussions were: 1) Attitudinal (attentiveness, detailed answers to questions), 2) Emotional (the display of empathy, compassion and concern), and 3) Mentality (impatient, dismissive). Other areas that affect the quality of healthcare according to patients include having continuity of care (long term relationship with the same doctor), the skill of the doctor, and the prescription of correct and effective medication.

Conclusion

Patient perspectives provided useful insights into the desired behaviours of the healthcare practitioner based on the patient-doctor interaction experience, in the family medicine setting. Our findings provided an illustration of the related behaviours both desired and undesired for the interpersonal and communication skills competency. It is important for clinician educators as well as residents to understand the components of the core competencies from the perspective of the patient. This would assist residents as they transit from learners to practicing and subsequently clinician educators.

D1069

STRESS, ANXIETY, DEPRESSION AND BLOOD PRESSURE OF MEDICAL STUDENTS AHEADING EXAMINATION**Park YC***Medical Education Unit, College of Medicine, Yonsei University, Korea, South***Aims**

It is a well known fact that physiological stimuli and psychological stimuli, like stress, is concerned with increasing blood pressure. Examination is the complicated psychological event where not only stress is concerned, but also anxiety and depression. Although, there had been no research for revising each stress, anxiety, and depression factors.

Methods

Prospective observational study of 48 male and 14 female freshman students at Yonsei university majoring in medicine. Blood pressure was measured with standard mercury sphygmomanometer (Erkameter 3000; Erka, Bad Tölz, Germany) by medical doctors. It was measured more than two times for each subjects each time and mean value was used in analysis. At the same time, a survey was done to check stress, anxiety, depressive scale and family history. Systolic, diastolic blood pressure and heart rate difference between both experiment and each scale was compared by multiple regression.

Results

For males, diastolic blood pressure increased as stress increased with statistical confidence ($p < 0.001$), but no relation was found in the female case. Pulse was proportion to anxiety ($p = 0.031$) and inversely proportion to depression ($p = 0.022$) in males with statistical confidence, but not concerned with females.

Conclusion

Relation between blood pressure, heart rate and stress, anxiety, depression concerned with examination were more significant with males. For males, diastolic pressure is related with stress not with depression and anxiety. On the contrary, heart rate was concerned with anxiety and depression during exams.

Restriction: Low number of participants are one of the main restrictions of our study, despite considering subject's scarcity. Large population studies are needed in the future.

D1070

CASE-BASED LEARNING & SIMPLE VIRTUAL MICROSCOPIC SLIDES IN TEACHING HISTOLOGY TO FIRST YEAR MEDICAL STUDENTS

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Aims

To find out and compare the learning outcome between case-based learning (CBL) & simple virtual microscopic slide (SVM) and light microscopy (LM) without case in histology practicum of first year medical student.

Methods

The pre test-post test with control group and cross over design was conducted in this study. We divided two groups in a total population of 113 first year medical students. In the first time, group 1 performing practical histology with CBL & SVM versus group 2 performing with LM. In the second time, research subjects switched conditions. Preferences of CBL & SVM and were assessed using questionnaires.

Results

There were significant differences between the pre-and post-tests values for students after CBL & SVM ($p=0.000$). However, the changes in the value of post test and pre test scores between two groups were not significant differences ($p=0.201$ in the first time and $p=0.144$ in the second time). CBL & SVM were useful to enhance the learning of histology expressed by 49.46% of students. In addition, a total of 46.24% of students have increased motivation to learn histology using this method. Overall, 82.8% student said they like the combination methods of SVM & CBL and LM.

Conclusion

CBL and SVM can be used as an alternative method of teaching histology to first-year medical students

D1071

ASSESSING RESEARCH COMPETENCIES NEEDED FOR UNDERGRADUATE MEDICAL STUDENTS, ITS DELIVERY AND ASSESSMENT; MENTOR'S PERSPECTIVE

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Aims

Without systematic exposure to research concepts, undergraduate medical students may be under-prepared to capably and successfully conduct research due to limited comprehension of research concepts. We believe that medical education systems and curricula should consider equipping all medical students with essential research competencies, and support research educational activities. This study aims to evaluate mentors' perspectives about the need, delivery, and assessment regarding the research competencies in order to promote the research skills of medical students via the integration of well-structured research components into the medical curricula.

Methods

We performed a multi-institutional cross-sectional study where we surveyed research mentors (academicians, basic, and clinical researchers) in universities, teaching hospitals and research centres in the Kingdom of Saudi Arabia. The mentors were given a self-administered questionnaire to rate the importance of a set of competencies covering areas of basic, clinical, epidemiological, general research skills and biostatistics. Mentors were asked to state the level of importance of each competency using a 5-point Likert scale; determine the best training style for different research fields; recommend the best delivery mode to learn those competencies and how to assess them.

Results

Twenty eight research mentors (n=28) from 4 different institutes in Riyadh were surveyed initially (the target is to survey 320 mentors). 42.9% were basic science researchers, 32.1% were clinical/epidemiological researchers, and 25% were doing both types of research.

The preliminary data has shown that mentors believe that the two most important competencies were "Literature search in databases" and "components of manuscripts and grant proposals" in the domain of general research skills. Secondly, "normal probability distribution" and "using statistical programs" were selected in the domain of biostatistics; "Use of basic laboratory instruments" and "Basic lab calculations" were chosen in the domain of basic science research; and "the importance, scope and use of epidemiology" and "defining and calculating major terms in epidemiology" were preferred for both clinical/epidemiological research.

Results also showed that compulsory courses are the preferred learning style for general research skills and biostatistics, Whereas elective courses were the desired learning style for delivering basic science research skills. However, conducting a series of workshops was the favored learning style for delivering clinical & epidemiological research skills.

The majority of mentors recommended combining different modes of delivery (passive, active and practical) in training for general research skills (35.7%), biostatistics (41.2%), and basic sciences research (39.7%). On the other hand, 33.3 % of mentors preferred active learning in delivering skills recommended for clinical and epidemiological research.

Mentors recommended using performance-based methods to assess both active and practical learning. Combining both performance and knowledge-based assessment was recommended for assessing passive learning of research skills.

Conclusion

Our study ascertains that diverse competencies in all four research domains are required and essential, with different learning styles and combining modes of delivery, which will enhance the integration of research components within the medical curricula.

D1072

A COURSE-ORIENTED MOBILE LEARNING APPLICATION (HSAPP: HS(A)APP AND HS(B)APP) FOR HEALTH SCIENCES EDUCATION IN THE MEDICAL FACULTY PACKAGE

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Aims

The introduction and implementation of a four-year curriculum has posed great challenges, not only for the University, but also for teachers of different faculties. The Health Science Course (four-year curriculum), which forms part of the Faculty Package, was introduced to first year students in September 2012. The course aimed to teach students some basic physical and chemical science in the areas of chemistry, physics, organic chemistry and cell biology, with some orientation to human physiology, enabling them to understand and explain the natural physiological processes that occur in the human body when they proceeded to the second year.

Students from Medicine, Pharmacy, Nursing, Chinese Medicine and Public Health were required to study the course in the first term. However, a number of study and learning issues were identified by these students. There was a lack of suitable textbooks covering the particular topics taught. Students requested the provision of a platform for self-administered quizzes or exercises. The poor physical and chemical background of some students was also identified.

Methods

In view of the varied difficulties, we maximised the use of technological advances by developing the HSApp in October 2013. This application has two variations in terms of difficulty of content, HS(a)App and HS(b)App, which are targeted to each group of students. The applications were optimised for iOS devices and were distributed to students via the Blackboard Learn Platform in mid-November 2013.

Results

In June 2014, group interviews were conducted with students who had used the HSApp. Our evaluation results, using Likert scales, demonstrated that most of the students interviewed agreed that the HSApp had helped them to clarify concepts and identify misunderstandings in their learning. They also learnt more due to the convenience and flexibility of the application. Open ended questions were increased by adding more questions to the question bank and requesting android versions of the application.

Conclusion

In summary, there are multiple benefits of a locally run web-based packaged mobile learning application. As e-learning courseware is multimedia intensive, acquiring content instantly from the web requires a certain bandwidth that might reduce the quality of the user experience. Consequently, a local application, with all of the content packaged within the device, provides a better user experience for students. It can run without an internet connection and, thus, the content is more accessible to students without concern over network issues and location.

D1073

PROLONGED IMPACT OF FEAR OF FAILURE ON ACADEMIC PERFORMANCE IN MEDICAL STUDENTS: AN FMRI STUDY OF CLINICAL REASONING PROCESS***Chang H, Lee Y****Medical Education, Medical College, Korea University, South Korea***Aims**

Most of Korean medical schools are running a flunk system that students who failed a single subject are not able to promote to the next grade. Although this system has a positive effect boosting learning performance, it causes extreme distress to medical students. Learning based on fear and anxiety could have a long-term adverse effect that causes a repulsion toward learning, which is critical in medical education regarding the necessity of doctor's lifelong self-improvement. The purpose of this study is to explore the prolonged impact of fear of failure on clinical reasoning task in medical students.

Methods

- **Participants:** Students in 3rd and 4th grade, who failed or took re-examination in more than one subject of clinical medicine at 2nd grade and eventually passed the subject, are recruited at the Korea University College of Medicine. Students conduct a questionnaire asking the impression of every subject and the reason of it. Students expressing negative emotion about a specific subject because of previous fear of failure are finally selected as participants.
- **Clinical reasoning task and fMRI measurement:** Participants answer validated multiple-choice questions (MCQ) via handheld buttons while in the fMRI scanner. The MCQs are appropriate for assessment of clinical reasoning performance and are collected from diverse subjects of clinical medicine. The task is consisted with a total of 15 MCQs including 3 MCQs from the subject which the participant pointed out(fearful stimuli) and randomly selected 12 MCQs from resting subjects(neutral stimuli). Participants are given 60s to read an MCQ followed by 7s to choose an answer option.
- **Data analysis:** The activation analysis is performed using images of the most activated 5s for each MCQ. Although the whole brain analysis is conducted, the primary regions of interest are medial prefrontal cortex, anterior cingulate cortex, and amygdala. The result reflects a repeated-measures ANOVA comparing brain activities while fearful stimuli and neutral stimuli.

Results

(Provisional) Anterior cingulate cortex and medial prefrontal cortex are significantly less activated during fearful stimuli compared to neutral stimuli, whereas amygdala is significantly activated with fearful stimuli.

Conclusion

(Provisional) The fear of failure has prolonged impact on academic performance in medical students. It causes fearful emotion even several years later and possibly results in repulsion toward learning. Thus, the current flunk system has a negative aspect that hinders continuous medical education.

D1074

SHOULD DIGITAL VERIFICATION OF LABORATORY INVESTIGATIONS BE INCORPORATED IN PHASE V CURRICULUM AS A COMPONENT OF SYSTEM BASED PRACTICE?

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Aims

Phase V Medicine curriculum and assessment has been organised according to six competencies of ACGME which include Systems Based Practice (SBP). Demonstrating competency in SBP requires the physician to understand how patient care relates to the health care system and how to utilise this system to improve the quality and safety of care. It becomes increasingly important to recognise the contribution of the system as one transitions from a medical student to a resident and finally a practicing physician. Upon graduating, residents are involved in the assessment, management and safety of the patients.

With an increasing trend towards electronic medical records (EMRs) for efficient and high quality healthcare, electronic signatures aside from identification, provide confirmation that the signer approved the content and guards the integrity of the document against repudiation. Hence, digitally signing laboratory investigations is an important process in ensuring the safety of patients as it enables doctors to acknowledge abnormal investigations and to act upon them in a timely manner.

Methods

In a tertiary care hospital in Singapore, junior doctors (residents) were asked to anonymously indicate their perceptions towards the act of digitally signing results as an indication of their acknowledgement of the aforementioned results via an online survey sent to all the residents rotating through Medicine

Results

The survey was completed by 54 residents. 96% of the respondents indicated they were aware of the process of electronically signing results.

Despite the above, 90% said they acted upon results without electronically signing them with 61% saying they do so all the time. Only 57% said electronically signing results has a direct effect on patient care.

None of the residents voted themselves as the doctor directly responsible for the results and instead nominated it as everyone's responsibility (85%).

Conclusion

It is well known that the most important barrier towards patient safety is a lack of awareness. Yet despite the awareness of the process (96%), only 57% are aware of its impact on patient care. In addition to understanding how the system works using it, it is also important to be aware of how systems can contribute to or compromise patient outcomes.

As a follow up from this survey, the significance of results verification and subsequent follow up will be emphasised to every resident during their orientation programme. This component will also be included in their monthly assessment.

To ensure consistency at national level, it may be worthwhile to include this aspect as part of patient safety in undergraduate curriculum.

D1075

IMPLEMENTATION OF STUDENT SUBINTERNSHIP: RESPONSE OF PARTICIPANTS AND PERFORMANCE IMPROVEMENT

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Aims

The subinternship for undergraduate student has been experimental in South Korea due to the various legal or social obstacles. Recent national debate on the abolition of internship in the graduate training program is urging the implementation of subinternship program in the routine medical school curriculum. The aim of the study is to investigate the response of the participants to the first across-the-board implementation of subinternship program and its impact on students' skill performance at single medical school.

Methods

The subinternship program was designed for students to carry out the task requiring near intern-level responsibility and the manager level performance (adopted from RIME model). All 4th-year students were assigned into two 2-week courses consisted of one among 4 major and another among 15 minor departments. After the completion, we surveyed three focus groups of students (n=80), faculties (n=21), and teaching residents (n=13) for the evaluation of the program using 5-point Likert scale questionnaires. CPX performance score was compared with historical control (n=80) to find out the impact of the program on the students' skill performance.

Results

Most of the students answered the program was satisfactory (mean $3.20 \pm \text{SD } 0.80$). All three groups answered the program was distinct compared to the traditional clerkship (3.26 ± 0.71 , 3.00 ± 0.63 , 3.42 ± 0.67 , students, faculties, teaching residents respectively). The achievement of performance goal was answered satisfactory in all groups (3.20 ± 0.81 , 3.15 ± 0.91 , 3.12 ± 0.69 , respectively). The achievement of team work was answered more satisfactory in teaching residents (3.00 ± 0.85) and faculties (3.10 ± 0.79) than students (2.85 ± 0.77). The necessity of the program was agreed relatively low in all groups (2.95 ± 0.87 , 2.95 ± 0.61 , 2.83 ± 0.84 , respectively). The students' performance measured by CPX score was higher after the implementation of subinternship as compared with historical control (89.1 ± 2.4 vs 81.2 ± 2.1 , $P < 0.05$).

Conclusion

In spite of various obstacles, subinternship program was a motivating and performance-improving way of clinical education as in other countries. We suggest that systemic improvements continue for the establishment of such program in Korea. Also further studies should be carried out to prove the long-term efficacy.

D1076

SIMULATION-BASED TRAINING FOR THE TEACHING OF ACGME CORE COMPETENCIES IN AN INTERNAL MEDICINE RESIDENCY PROGRAM IN SINGAPORE

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Aims

Simulation-based training is an instructional method that has been successfully and widely applied in medical education. This study aimed to evaluate the utility and feasibility of simulation in the teaching of ACGME core competencies in an Internal Medicine Residency Program.

Methods

Nine simulation-based training sessions were conducted over a period of three months and cycled twice for residents in the Internal Medicine Residency Program at the National University Hospital, Singapore (NUHS). The simulation scenarios were constructed by integrating multiple ACGME core competencies into various clinical scenarios. The sessions were conducted in the hospital simulation laboratory by instructors who were also responsible for the design of the scenarios. Nurses from the medical wards also participated in the simulation sessions.

At the end of the simulation cycles, the learners completed an online survey, which consisted of multiple-choice questions as well free text comments. They were asked to evaluate the effectiveness of the experience in their learning of the core competencies.

Results

38 residents completed the survey. Majority (80%) had graduated in the last two years from NUS-YLLSoM. A total of 86 % had commenced practice in Singapore in the last two years 79% of the respondents had encountered simulation-based training as part of their medical school training and 94% had attended at least one session with half of them (51.2%) attending more than 5 sessions.

Eighty-nine percent (89%) of the residents felt that the simulation session had helped them identify and fill in the gaps in their medical knowledge. 81.6% of the residents felt that the sessions helped improve their learning in systems based practice (SBP) and 76.3% agreed that it improved their inter-disciplinary communication and interaction.

Residents were also very positive about the ability of the sessions to help reduce errors (86.8%) but did not feel as strongly about the sessions with regards to ability to improve error reporting (63.2%).

Majority of the respondents felt that the sessions improved their confidence to function as a resident in the program (92%) and as doctor overall (89%).

Residents voted that the frequency of sessions (78.9%), volume of information covered (84.2%), variety of scenarios (84.2%) and diversity of tutors (89.4%) were appropriate.

More respondents voted for the inclusion of this method of teaching to be present during all 3 years of residency (58%), for the inclusion of more hands-on exposure (61%) and more evidence based teaching (61%) whereas only 36% favoured a more didactic approach.

Conclusion

Residents' response to the use of simulation-based training for the teaching of ACGME core competencies were very positive. The use of simulation sessions that integrates the ACGME core competencies into clinical scenarios in residency is feasible and highly-valued by the residents.

D1077

VOICE-OVER LECTURES: A FLIPPED CLASSROOM MODEL IN DELIVERY OF UNDERGRADUATE OPHTHALMOLOGY LECTURES

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Aims

Fourth-year medical students at Yong Loo Lin School of Medicine, National University of Singapore, undergo a 2-week ophthalmology posting as part of their undergraduate curriculum. An Entrusted Professional Activity (EPA) based curriculum has been introduced with learning objectives to prepare them as competent doctors in Post-Graduate Year 1 or General Practitioner in Primary Health Care setting.

Didactic lectures (DL) are part of conventional teaching. However, with the time and manpower constraints in the classroom setting and differing students' learning capabilities, DL may not deliver the desired learning outcomes.

We introduced online voice-over lectures (VOL) for students to access before and during the posting to allow them to learn at their own pace followed by interactive learning and feedback with the tutors. This is based on the model of the Flipped Classroom.

Methods

8 core lectures (previously DL) were audio-recorded and synchronised to the respective slide presentations into VOL. The VOL and a single-best answer multiple choice questions test (MCQT) were uploaded onto the student's med-space online system.

The MCQT was set based on the undergraduate EPA to augment learning. It consisted of scenario-based questions, derived from VOL, to test core knowledge and its clinical application. The MCQT served as a formative evaluation tool to assess the Miller's pyramid "know" (knowledge) and "know how" (competence) levels.

The student may access VOL and MCQT more than once up before and during the 2-week Ophthalmology posting at his/her learning pace. A feedback and review session for VOL & MCQT was allocated in the second week. The student was also informed to consult the tutor during the posting and give feedback if necessary.

After implementation, the students (n=86) and tutors (n=37) participated in an anonymous survey to compare VOL with CL. They graded their perceptions on various characteristics of VOL on a Likert scale (LS) of 1-9 (1, strongly disagree to 9, strongly agree; 5, neutral). Their scores (mean LS score $\pm$ SD, students vs. tutors) were computed. A score of more than 6 is considered favourable.

Results

As compared to CL, both groups perceived VOL positively as a focused learning tool on the areas of interest (7.35 ± 2.74 vs. 7.30 ± 1.39). VOL was gauged as a test of clinical knowledge application on case scenarios rather than of knowledge recall (7.754 ± 2.83 vs. 7.30 ± 1.29). It provided standardisation in the teaching of the undergraduate curriculum (7.34 ± 2.32 vs. 6.95 ± 1.15). It enabled the student more flexibility to learn at his/her pace (7.31 ± 2.33 vs. 7.14 ± 1.08). With feedback provision, VOL might be better than DL (6.07 ± 1.64 vs. 6.05 ± 1.08). The tutors and students had similar favorable overall mean scores (6.95 ± 0.06 vs. 6.23 ± 0.13 ; $p = 0.57$, t test).

Conclusion

Online VOL with MCQT, using a flipped classroom model, is a feasible method of teaching undergraduate Ophthalmology. It is well received and perceived more favorably than DL by both students and tutors.

D1078**HOW DO HEALTHCARE PROFESSIONALS AND LAY PEOPLE IN A COMMUNITY LEARN INTERACTIVELY? A CASE OF TRANS-PROFESSIONAL EDUCATION****¹Haruta J, ²Nishigori H***¹Medical Education, International Research Center for Medical Education, The University of Tokyo, Japan, ²Center for Medical Education, Faculty of Medicine, Kyoto University, Japan***Aims**

Transprofessional education (TPE) is beginning to be perceived as an important extension of interprofessional education (IPE). (Frenk MD et al., 2010) However, there are few studies about TPE. In order to explore this subject further, a TPE programme was developed for health professionals and lay people in a particular community in Japan. The research question of this study was 'How do lay people and health professionals learn with, from and about each other in a TPE program'.

Methods

The study was conducted in a community-based hospital in Tokyo, and in the local community within visiting distance of the hospital. Ethnography was the methodology used and the study participants were 70-80 year-old six lay individuals from the community and 24-30 year-old five professionals (physician, nurse, pharmacist, dietician, and physical therapist). During the health education sessions, staff meetings and the series of focus groups sessions, the author acted as a participant observer. The interview data and field notes were analysed using a thematic analysis approach.

Results

The findings showed that the learning of both lay and healthcare professionals went through four stages, identified here as: uniprofessional, interprofessional, transprofessional and transformation stage. In uniprofessional stage, in-group favouritism and prejudices were observed in both lay and healthcare professional participants. In interprofessional stage, both participants learned interactively, so that they came to understand both mutual professional roles and own professional identity. In transprofessional stage, they crossed lay / healthcare professional boundaries and acquired a sense of belonging to the local community as "our community". Lastly, an accumulation of TPE activity transformed both lay and professional communities.

Conclusion

Using activity theory (Y Engeström, 1993), both groups of participants gradually shared their background and expanded "object". Subsequently they crossed border between lay and professional participants, and "object" were changing. By reflecting on the new "object", they transformed their organisation, resulting in expansive learning. We hope this study helps all the healthcare professions involved in IPE and TPE to reflect on the process of learning in their program.

D1079

EDUCATIONAL INNOVATIONS TO ENHANCE THE TRANSITION OF JUNIOR MEDICAL STUDENTS INTO GENERAL MEDICINE WARD TEAMS: DEVELOPMENT, RATIONALE AND LESSONS LEARNT

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Aims

Recent advances in medical simulation have led to novel learning methods to better transit students into incumbent ward teams. This study compares two recent educational innovations: 1) Embedding (2010-2011) and 2) Simrounds (2013-2014). By examining the data and learning theories underpinning each method, specifically Situated Learning Theory and Cognitive Load Theory, we aim to determine how Simrounds has complemented embedding in enhancing the transition of junior medical students into general medicine ward teams.

Methods

We used mixed methods to analyse qualitative and quantitative data from both Embedding (n=35) and Simrounds (n=72) based on survey responses from third-year students doing their medical clerkship in Tan Tock Seng Hospital. With the data from Embedding, we did an Exploratory Factor Analysis (EFA) to identify themes, and then performed thematic analyses of open ended responses to corroborate themes identified from explorative factor analysis. In Simround, we performed descriptive statistics on quantitative data, and a thematic analysis of the qualitative data. The themes derived from both Embedding and Simround were compared to determine program effectiveness.

Results

In Embedding, 3 themes were identified from the EFA, Integration, Staff Factor and Relevance to Learning. Comparison of means via a paired T-test showed that integration was lacking with respect to the other 2 factors ($p > 0.05$). Thematic analysis revealed that students were unsure of their role, and felt overwhelmed and unable to cope.

In the Simround data, student quantitative feedback on the program was generally positive, whilst the thematic analysis revealed that students felt that Simround was authentic and realistic, allowing for the formation of a community of practice. They also felt that it helped bridge the skills and knowledge deficit that they had to better understand the ward team. Hence, Simround enables deliberate learning in a controlled and authentic setting with interprofessional participation with a reduction of cognitive load enabling students to assimilate the necessary knowledge and skills that they can apply to the ward round setting.

Conclusion

By reducing the cognitive load through deliberate practice in a secure and authentic environment, Simrounds complement embedding and facilitate the integration of junior students into the community of practice of incumbent ward teams.

D1080

PHYSICIAN'S RECOGNITION FOR AND FROM THE OTHER PROFESSIONALS

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Aims

The knowledge of professional roles is identified as one of the key competencies in interprofessional practice (Macdonald et al., 2010). However, there are few studies for the analysis of the recognition of professional roles. This study aims to clarify how much and how differently physicians think other professions recognise physicians' roles and physicians recognise other professions' roles.

Methods

1. Questionnaire

We developed a questionnaire consisting of two items, each of which was rated for 16 different professions on a Likert scale of 1 to 7 with 1 to 3 as negative range (do not understand) and 5 to 7 as positive range (understand). The two items were 1) how much do you understand the roles of the following professions? and 2) how much do you think that the following professions understand your roles? The professions included in this questionnaire were nurse, pharmacist, public health nurse, physical therapist, occupational therapist, speech therapist, dentist, dental hygienist, dietician, (medical) social worker, care worker, psychiatric social worker, medical clerk, medical secretary, psychologist and care manager.

2. Data collection and participants

Data was collected through mailed questionnaire and online survey. The questionnaire was sent to 2,000 primary care physicians randomly selected from Japan Primary Care Association (JPCA) members, and the online survey was conducted with the cooperation of Japan Association for Development of Community Medicine (JADECOM).

3. Analysis

We developed a scatter diagram with physicians' perception of their roles being recognised by other professions on the vertical axis and physicians' recognition of other professions' roles on the horizontal axis. An average score of recognition was calculated for 16 professions and plotted in the diagram to obtain a linear approximating curve.

Results

The response rate from the JPCA was 21% (n=425), and 20 JADECOM physicians answered the online survey. There was no profession by whom physicians thought that physicians' roles were not recognised. The only profession with average score of recognition by physicians being in the negative range was psychiatric social worker. Nurse and pharmacist had the higher recognition score of and by physicians. Psychiatric social worker and psychologist had the lower recognition score of and by physicians. The coefficient of determination of the linear approximating curve was 0.87.

Conclusion

The data suggested that the difference between physicians' recognition of and by other professions may be affected by opportunities to work together. The relatively reliable linear approximating curve showed that the recognition degree by other professions tends to be higher than that of other professions. This means that physicians think their roles are recognised by other professions more than physicians recognise the roles of other professions. We interpreted this as a hierarchy of recognition, which may have an impact on the practice of interprofessional collaboration.

D1081**ELDERLY CARE FOR ALL RESIDENTS: A DUTCH APPROACH*****Van Loon K, Den Rooyen C****KNMG, The Netherlands***Aims**

The aim of our national project is attention for elderly care in all the postgraduate medical training programmes.

In the Netherlands the aging of patients is becoming a growing concern for medical specialist since they are not well prepared for this specific group of patients. In the training programmes there is little to no attention for this growing group and their specific treatment needs. Therefore, the Royal Dutch Medical Association regarded the elderly care as an important subject for all medical specialist training programmes (with the exclusion of paediatrics and geriatrics).

Methods

In 2013 a nationwide project was started with the main goal: attention for elderly care in all the postgraduate training programs. National Specialty Societies were contacted and enthusiastic specialist of different medical specialties became the front leaders of this reform. Together with elderly care specialist they created a document with the most important interdisciplinary subjects. Shared decision making with elderly patients and family was an example of one of those subjects which they selected as relevant for all the specialties. The created document is not intended as a regulation, instead it is used as a background manuscript and every medical specialty selects the most relevant themes out of it for their own training program.

The first group of specialty societies have formulated relevant aspects regarding elderly care for their own specialty and updated their curriculum plan accordingly. These societies are important examples for other societies which learn from the experiences of the first group. Learning from each other and exchanging experiences in building a new national curriculum plan is part of a successful faculty development.

Results

The aimed result is that all residents will be trained in working with the specific group of elderly patients. This should be visible in the training program blueprint as well as in the daily training practice.

Some tools are developed during the project which are used to train faculty and residents. These products differ from easy to use tests to elaborate e-learning and training modules. The different tools contribute in their own way to the project goal, though all help to increase the 'snowball effect'.

Conclusion

The project based intervention to create a reform in post graduate medical education remains a good bottom-up approach that motivates medical specialist to work on their own training program. Medical specialist make good use of the possibilities to use their autonomy in creating a revised national curriculum plan which greatens the direct connection with the daily practice.

Another conclusion of this project is that focusing on the resident training alone to initiate a reform in the way medical specialist work is only partly effective. During the reform thorough faculty development is needed as well to get perceived effects in the daily medical practice.

D1082

DEVELOPMENT OF A NEW GRADUATE COURSE: FACULTY DEVELOPMENT IN THE HEALTH PROFESSIONS

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Aims

The value of Faculty Development as a fundamental aspect of health professions teaching and learning has been clearly acknowledged across the global health sciences community. Faculty development programs offer workshops and other educational offerings to promote core faculty skills for their various academic roles. However, to date there has been little attention paid teaching about the field and practices of Faculty Development itself.

The aim of this presentation will be to describe the development, delivery and evaluation of a new full-credit higher education course on Faculty Development in the Health Professions as a component of the Masters of Science (Health Practitioner Teacher Education) at the University of Toronto. This course forms the first part of a 2 course series with the goal of part 1 of the series being an introduction to the field and practice of Faculty Development.

Methods

As co-instructors and experienced faculty developers, we surveyed the literature for existing courses of which there were none. We then reviewed the faculty development literature to identify key themes and concepts which were then utilised to inform the development of the course.

We identified four areas of focus for this course: 1) the background and development of the field, drawing from higher education and informed by the research literature in this field, 2) the scope and practice of faculty development, 3) underlying theories and core concepts, and 4) contemporary issues and emerging innovations.

Participants were engaged in a variety of interactive learning activities that will build on their prior learning and experiences as health professionals working in academic contexts. Course curriculum will model best practices in faculty development.

Learners were assessed through their participation in each class, reflections on course readings, in class group presentations and a final scholarly paper.

Results

Participants successfully achieved the course objectives which were to:

- 1) Describe fundamental principles and core concepts of faculty development
- 2) Identify the scope of faculty development within the academic health professional context
- 3) Apply theories and core concepts of faculty development to health professions education and
- 4) Identify and discuss contemporary issues and emerging innovations in faculty development

This presentation will describe the co-instructor experiences, participants' experiences and lessons learned from this first iteration of the course. In addition, insights gained about the field and practice of Faculty Development, and areas for further development of this field will be described and discussed.

Conclusion

There is a need for higher education courses that contribute to capacity building, and challenge us to define the scope of knowledge and practice, along with key concepts that form the field of Faculty Development.

D1083**SPENDING SDL IN PRACTICING SIMULATED MODEL AND PROCEDURAL SKILL PERFORMANCE OUTCOME IN SURGICAL MEDICAL STUDENT*****Asanasak K****Songkhla Medical Center, Thailand***Aims**

In the era of overwhelming technology, include high technology simulation which was introduced to modern medical education training. This study aims to determine the activity 4th and 5th year medical students spend during their SDL (self-directed learning) among higher OSCE score in Surgical rotation.

Methods

48 students were asked to estimate their times spent on their individual activity during SDL which included review and complete medical knowledge according to lecture, complete writing patient report, complete ward work, practicing skill with simulation model. At the end of Surgical rotation, OSCE exam was performed and the scores were compared with preferable academic activity, spent during SDL, that surgical student stated beforehand.

Results

43 returned questionnaire were interpreted 10 (20%) students spend their majority SDL time in order to complete their lecture, 9 (17%) spend their majority SDL in complete writing their patient reports, another 9 (17%) spend their majority SDL in complete ward work and 16 (33%) spend their majority SDL in practice their skills with various simulations model the last 4 (10%) spent their major SDL in their own interest. After the OSCE scores at the end of rotation exam were matched, the result show that the total students in the group that spend most of their SDL time completing their ward work show highest number (score more than 70 marks) 10 students. Students in skill practicing group was 8, review and complete according to lecture was 8, complete writing patient report was 7, none of the students spending time in their own interests showed high scores.

Conclusion

SDL seems to be the time students can design their study according to their own interest. Designing one's own SDL seems to make higher outcome. Helping medical student design their SDL might help improve their learning outcome. Especially during the medical student learning rotation in Surgical department where practicing procedural skill seem to be the most importance aspect which can be measured by OSCE. Planning SDL with traditional ward-work still show the most influence learning method for procedural skill. The high-end practicing with simulated model might seem to be effective in some region but cannot substitute conventional ward-work. So in developing country where simulated medical skill model still be high cost, its true benefit have to be carefully clarify in order to make the real benefit for medical education training.

D1084

DEFINING COMPETENCE FOR FACULTY DEVELOPERS

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Aims

Faculty Development (FD) has been identified as one of the key enablers to support the changing needs of faculty. However evidence exploring competence in faculty developers is lacking. Using an ethnographic approach, this multi-site study explored the nature and construction of competence within the FD community.

Methods

31 faculty developers participated in this ethnography. Data included over 70 hours of observations and 21 interviews. Observations were selected to explore the role context and learner population play in the activities of faculty developers. Interviews facilitated deeper exploration of the processes observed. Data were analysed inductively; the research team met frequently to refine, challenge and elaborate the developing coding structure. Through an iterative process of relating and grouping of codes, a thematic structure was identified and applied to the dataset.

Results

Participants engaged in three inter-connected processes during FD facilitation: (1) attuning their knowledge and skills to the learners; (2) constructing an ideal environment for performance of their knowledge and skills, and (3) negotiating program factors beyond their control.

Conclusion

There is a situated and distributed nature of competence in FD. This shifts from one setting to another as faculty developers integrate their knowledge and skills with their context. Dynamic, flexible enactment of knowledge and skills appears to be a core competency of FD facilitation. Faculty developer training must move beyond the acquisition of best practices in adult education towards the inclusion of training for the flexible use of knowledge and skills in context. This work will inform practices within the changing landscape of medical education.

D1085

USING VIRTUAL BREAKOUT ROOMS TO ENHANCE AN ONLINE UNDERGRADUATE HUMAN ANATOMY LABORATORY: DOES IT OPTIMIZE STUDENT-TEACHER COMMUNICATION?

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Aims

An online section of an undergraduate Human Anatomy course with a laboratory component was offered in 2012/13. Lectures for face-to-face (F2F) students (n=365) were broadcast in live and archived format to online students (n=40) using virtual classroom software (Blackboard Collaborate). Labs were delivered online by a teaching assistant (TA) who manipulated 3D computer models in the virtual classroom. Student performance measures (4 term tests, 24 weekly lab quizzes) were compared between the sections. Preliminary data suggested that prior academic performance, and not course delivery format, predicted performance in anatomy. Survey results indicated that while students preferred online lectures (52%), F2F labs were preferred (85%). Online lectures gave students the benefit of reviewing archived sessions, while F2F labs allowed for better student-teacher communication. The aims of this study were to 1. enhance the online laboratory component using virtual breakout rooms 2. determine the strengths and weaknesses of breakout rooms through student feedback 3. reassess whether prior academic grades and course delivery format predict performance in anatomy

Methods

The course was offered again in 2013/14 in F2F (n = 354) and online (n = 138) formats. Weekly lab quizzes were replaced by quarterly lab exams to increase lab demonstration time. Each lab was presented online by three TAs. Content for each lab was divided into two smaller lessons (stations) which ran simultaneously in two virtual classrooms (Blackboard Collaborate breakout rooms) with a TA facilitating each. Students were divided into two groups and rotated through the breakout rooms. The third TA was logged into both breakout rooms to help participants address technical issues unrelated to course content. This format allowed the students to learn in smaller groups, and gave students the opportunity to interact with three TAs in a lab session. The effectiveness of the intervention was assessed using a mixed methods approach. Survey participants (103 online; 280 F2F) were asked about their perceptions of learning in the online or F2F lab. Measures of student performance (4 term tests, 4 lab exams) were compared between the sections. Incoming grades were correlated with final anatomy grades to determine if prior academic grades predict performance in anatomy.

Results

One statistically significant difference was found between the sections on Lab Exam 1 (Mann-Whitney U test, $p < 0.001$) with a mean of $72.77 \pm 11.87\%$ for online students and $67.67 \pm 13.29\%$ for F2F students. The mean incoming grade average for the online students was $79.09 \pm 9.15\%$, which was significantly higher (independent samples t-test, $p = 0.014$) than the F2F students at $76.75 \pm 9.18\%$; however, there was no difference in final anatomy grades between the sections. There was a strong, positive correlation (Pearson) between incoming grade average and final anatomy grade in both the F2F ($r = 0.71$, $p < 0.01$) and online ($r = 0.70$, $p < 0.01$) sections. Survey data will determine if using virtual breakout rooms improved student-teacher communication.

Conclusion

Online student performance suggests that virtual breakout rooms were effective. Student perceptions of learning in the online laboratory will be presented.

D1086

TO PROMOTE INTER-PROFESSIONAL LEARNING AND STANDARDISED TRAININGS FOR TRACHEOSTOMY MANAGEMENT

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Aims

In Tan Tock Seng Hospital, tracheostomy trainings are conducted for different professions by their respective department. A lack of standardised training and practice among multi-professionals may contribute to reduced efficiency and poor tracheostomy care. This study aims to identify participants' knowledge and guide us in leaning needs analysis and development of a training curriculum.

Methods

Doctors and nurses from 2 general wards, 4 ICUs and 3 allied health departments were surveyed using convenience sampling. Participants completed a 22-question pre-course survey pertaining to their demography, confidence level and related knowledge-(A) indication, (B) parts of tracheostomy tubes, (C) cleansing, (D) emergency care, (E) speech and swallowing, (F) humidification, (G) weaning and (H) monitoring.

Results

143 participants participated in the survey. There were doctors 20% (n=28), nurses 44% (n=63), speech therapists (ST) 3% (n=5), physiotherapists (PT) 20% (n=28) and respiratory therapists (RT) 13% (n=19).

Knowledge related to :

(A) indication

Doctors and RT achieved average score of >90% while others scored <90%.

(B) parts of tracheostomy tubes

Nurses, RT and ST scored >80% whereas doctors and PT scored <70%.

(C) cleansing

ST scored the lowest 60% and others scored >80%.

(D) emergency care

Both nurses and PT scored >85% whereas doctors scored 67.48%.

(E) speech and swallowing

ST scored 86.67% whereas others scored <60%.

(F) humidification

RT and nurses scored >75% while others scored ≤60%.

(G) weaning

PT and ST scored >80%, nurses and RT scored <70% while doctors scored 57.47%.

(H) monitoring

RT scored 73.68% while others scored ≤40%.

Lastly, 17% rated their knowledge as good, 52% rated as average and 29% as poor.

Conclusion

Nurses scored averagely for all aspects of tracheostomy care which is expected from their job scopes. Most of the allied health professionals scored higher in the areas of their specialties. Doctors scored the lowest in 4 areas including emergency care likely because of their limited exposure to tracheostomy caseloads (most of them only had 1-2 year experience in medical field). Findings from the study have highlighted that there are knowledge gaps among the multi-professionals groups. This has supported us to develop a standardized inter-professional tracheostomy training to improve patient care outcome.

D1087

CAREER CHOICE AND ITS INFLUENCING FACTORS: PERCEPTION OF SENIOR MEDICAL STUDENTS

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Aims

To investigate the career preferences of senior medical students, and to identify the least preferred specialties, this may be an indicator of future shortage in manpower in those fields. In addition, we aim to rank the factors affecting career choice in order to identify different motivators that could be re-enforced in medical schools to enhance pursuing those least popular specialties.

Methods

This is a cross-sectional study including 116 senior medical students from two consecutive cohorts, 5th and 6th years during the academic year 2012-2013 at the Faculty of Medicine- King Fahad Medical City. Data was collected using a self-administered questionnaire.

Results

66.7% and 60% of the male students have already decided regarding their preferred future specialties. Out of the total male students who have decided their first choice, 23 (35.4%) students have selected surgical specialties, 12 (18.5%) preferred medical specialties, only three (4.6%) students chose family medicine, and one (1.5%) student chose pediatrics. For females, out of the total students who have decided their first choice, 16 (31.4%) students chose medical specialties, 15 (29.4%) chose surgical specialties, three (5.9%) selected pediatrics, and no one had chosen family medicine. Regarding the ranking of factors influencing career choices; "Personal interest" ranked first for all students and the second rank was for "previous positive experience at the same specialty"

Conclusion

Attending educational activities and orientation sessions were significantly associated with career choice decision. The highest percentages of both male and female students had selected surgical and medical specialties and the lowest percentages had preferred pediatrics and family medicine. From all our study subjects, no one had chosen Ob/Gyn or basic medical sciences as preferred future careers. The significant predictors of career choice include grade point average, advice from others and attending orientation sessions.

D1088

A STUDY TO EXPLORE FLIPPED LEARNING METHOD IN COMPARISON TO TRADITIONAL DIDACTIC LECTURE IN MEDICAL UNDERGRADUATES

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Aims

Introduction: Flipped learning concept is fast spreading. The attributes of flipped learning strategy include active, deep learning, being interactive, engaging and a prelude to lifelong learning. A pilot study was conducted on flipped learning in fourth year medical students in department of Internal medicine at MMMC, Malacca, Malaysia.

Aims: To compare the flipped learning technique with traditional didactic lecture in large group teaching of medical undergraduates.

Methods

131 participants were briefed and a written consent was taken and further divided into ten subgroups. The lecture materials were provided prior to the flipped class. Pre-tests and post-tests were administered. Both quantitative and qualitative feedbacks were collected

Results

The pre and post tests were analysed. P value for the post test component of flipped class was significant [of 0.003] when compared to didactic lecture [0.566] The analysis using Likert scale revealed that 75% of them agreed they were more engaged in flipped learning, 68% recommended flipped class learning for other subjects, 65% were more motivated, and 60% felt they were made self-learners. However only 36% of students were agreeable for reading the materials before the lecture class and 21% preferred didactic lectures

Conclusion

This innovative methodology of teaching large groups has shown a positive result with a significant p value [of 0.003] in comparison to didactic lecture as a tool . We intend to validate further and establish flipped class learning as a new tool of large group learning in undergraduate medicine to foster deep learning and the ability to solve clinical problems.

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D1089

A SYSTEM CREATED MODEL OF TEACHING EXCELLENCE FOR HEALTH PROFESSIONS EDUCATION

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Aims

In Toronto, Canada, a collaborative network called the 'Toronto Academic Health Science Network (TAHSN)' exists among academic hospitals affiliated with the University of Toronto. Each hospital has a mandate to develop its healthcare professionals not only as clinicians, but as teachers. Many TAHSN hospitals have been grappling with describing not only foundational teaching competencies, but what is required to be an excellent clinical teacher. A system-wide venture was therefore initiated to collaboratively develop an actionable model of teaching excellence.

These efforts were led by the Centre for Faculty Development (CFD), which supports and promotes excellence in teaching, research, education and scholarship, and serves as an international leader in creating health professions development programs. The CFD, leveraging the energy, thinking and resources already generated by the TAHSN hospitals, worked with a Steering Committee comprised of leaders in hospital education and faculty development from four TAHSN hospitals. The goal was to develop a model of teaching excellence of relevance to all clinical teachers (i.e., not profession-specific), and to identify an actionable set of relational competencies that describes an excellent clinical teacher (as opposed to a minimally competent educator).

It is anticipated that a common and co-created model will enhance clinical teaching excellence by:

- Aligning focus across the system
- Supporting the development of a shared language
- Enabling development of common resources and tools
- Facilitating evaluation and planning for faculty development of health professionals

Methods

The development process was designed to be rigorous and consultative, and to elicit meaningful engagement and input from stakeholders across the TAHSN system. Model development included six phases:

Phase 1: Identify and select source material (environmental scan)

Phase 2: Develop comprehensive long list of competencies (systematic review and synthesis)

Phase 3: Consult system stakeholders to gain insight (Priority Sort ranking methodology)

Phase 4: Develop draft model of teaching excellence (Steering Committee)

Phase 5: Share model to solicit system feedback

Phase 6: Finalise and disseminate model

Results

From Phase 3, the following 4 relational competencies were identified as most critical to excellent teaching: 1) takes action to improve own practice in response to feedback and reflection; 2) role models professional behaviours for learners, and creates opportunities for learners to do the same; 3) collaboratively [with learner(s)] identifies and prioritises educational needs and learning objectives; 4) provides timely, constructive, and thoughtful feedback to learners

An integrative model was developed by the Steering Committee, then shared and refined based on system stakeholder input. This version will be made available for use across the system, and further research will elucidate how different hospitals used it to support and promote teaching excellence.

Conclusion

The priority sort process clearly identified key relational competencies essential in describing excellent clinical teaching. This work moves away from traditional teaching competency frameworks which describe foundational teaching competencies. It describes an aspirational model of teaching excellence which we anticipate will promote alignment of resources, tools, professional development and evaluation within the system, and provide a tool educators and faculty developers can use to inform their work.

D1090

PROVISION OF IMMEDIATE VERBAL FEEDBACK TO YEAR TWO UNDERGRADUATE MEDICAL STUDENTS DURING THE FORMATIVE OBJECTIVE STRUCTURED CLINICAL EXAMINATION AT MONASH UNIVERSITY, MALAYSIA

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Aims

The aims are to determine:

- 1) Feasibility of providing useful verbal feedback within one-minute duration in the fOSCE to year two medical undergraduates.
- 2) The value of immediate verbal feedback in the fOSCE perceived by students.
- 3) The differences, if any, in the comments from students versus teachers on various aspects (i.e. value, process) of the verbal feedback activity in the fOSCE.
- 4) Whether students apply the feedback on their learning in clinical skills.

Methods

A cross-sectional study on the provision of one-minute immediate verbal feedback in the fOSCE was conducted on campus-based year two medical students.

The inclusive criterion was that students must have participated in the fOSCE held on 17th June and consented to the survey. Two exchange students from Australia were excluded from the year two group as they were in MUM for only one semester. I have also included all clinical teachers who were involved as examiners in the fOSCE. All were involved with teaching and had past experience as examiners in the OSCE.

I conducted two different surveys within the student group. The first survey was conducted using a modified Dipstick format where students were encouraged to write free comments on the one-minute immediate verbal feedback. The forms in the first survey were distributed by an Administrative staff at the end of the exams and students completed them anonymously. Completed forms were then collected by the same staff for analysis. The teachers were also invited to provide immediate comments (free text) on the one-minute verbal feedback activity at the completion of the OSCE. The second survey consisted of a nine statement items on a 5 point Likert scale and distributed to students in the second semester. These were analysed to determine the success of the immediate verbal feedback, in particular, whether students used it in their learning on a longer term. Success was 'measured' by looking at the various learning activities such as further reading (study guide, prescribed text or other recommended reading) and/or further discussion (peers or teachers), further hands on practice of skills (self or group) to act upon their deficiencies as indicators of students' application of the feedback to learning.

Results

Eighty-eight (86%) out of 102 students and 20 clinical teachers (examiners) participated in the fOSCE. There was a high response rate from both students (over 85%) and examiners (88%) to the post activity surveys. All (100%) students and 59% examiners perceived the feedback positively. More than 90% of students showed intent and action in the application of the feedback to their learning.

Conclusion

Provision of immediate verbal feedback is feasible in the fOSCE and is highly beneficial to students' learning. There were different perspectives on verbal feedback in the fOSCE from both students and examiners. There was evidence of intent and action by students on the application of the feedback to their learning, thereby sustaining the feedback process and making them active learners (Boud & Molloy 2013 pp.703).

D1091

FOSTERING CONTINUING PROFESSIONAL DEVELOPMENT IN THE WORKPLACE: TESCoP (TEACHING AND EDUCATION SCHOLARSHIP COMMUNITY OF PRACTICE)¹Nirula L, ²Kwan D, ³Ng S, ²Richardson D, ²Lowe M¹Faculty of Medicine, University of Toronto, Canada, ²Faculty of Medicine, University of Toronto, University Health Network, Canada, ³Faculty of Medicine, University of Toronto, St. Michael's Hospital, Canada**Aims**

Faculty development (FD) has become an increasingly essential component of health professionals' education. FD programs and workshops are typically offered in a central location and focus on developing the teaching abilities of health professional educators. While FD attendees often report an improvement in knowledge, skills and attitudes, many struggle to integrate these educational developments into their practice. Attendees emphasise the need for access to a broader academic community in order to exchange ideas and promote positive change in the workplace. A recent systematic review (Leslie et al., 2013) calls for exploration of how communities of practice (CoPs) can be used to support scholarly education efforts within local practice contexts.

To address this challenge, we have developed a novel approach to FD that attends to context and the distributed nature of health professional teaching and education. The Teaching and Education Scholarship Community of Practice (TESCoP) provides continued support to teachers to facilitate the mobilisation of knowledge into practice, engages participants in education scholarship within their teaching practice and encourages knowledge exchange within a broader community. This research aims to explore the potential of CoPs as a sustainable approach to distributed faculty development.

Methods

Using a multiple case study methodology we will explore the processes involved in developing and fostering a CoP for health sciences educators across different academic settings. Our sites include: a) a specialty hospital; b) a tertiary care institution and, c) a community hospital. A TESCoP group at each site consists of voluntary members that meet 5-6 times over the year. Qualitative data collection will include participant observations and summary notes from each site meeting and semi-structured interviews with TESCoP participants. Data will be analysed using a grounded theory approach to explore contextual influences, nuanced benefits and challenges in the development of a CoP to gain in-depth theoretical insights into the processes involved within and across sites.

Results

We are in the initial stages of our research study. To date, a Steering Committee for TESCoP has been struck to serve as a common point of contact for the TESCoP sites. Facilitators for each TESCoP group have been recruited. All sites were brought together for an introductory workshop on CoPs where they had the opportunity to discuss how to create communities of practice at their sites and to develop an action plan. Initial planning and engagement meetings are underway at each site.

Conclusion

TESCoP has gained momentum and holds promise to enrich the field of workplace-based health professions faculty development. CoPs have the potential to translate collaborative learning to the clinical workplace, facilitate knowledge mobilisation, and contribute toward evidence-informed and high quality teaching of health professionals

D1092

A PILOT STUDY USING ENTRUSTABLE PROFESSIONAL ACTIVITIES TO ACHIEVE PROFICIENCY IN TASKS THAT FACILITATE CONTINUITY OF CARE IN A FAMILY MEDICINE DEPARTMENT IN A TERTIARY HOSPITAL

Tay WY, Ng LB, Ng MJM, Low LL, Tan SY

Department of Family Medicine and Continuing Care, Singapore General Hospital, Singapore

Aims

Background: The use of Entrustable Professional Activities (EPAs) has been proposed to bridge the gap between the theory of competency-based postgraduate medical training and clinical practice. We propose a training curriculum using identified EPAs as a means for junior physicians to acquire proficiency in tasks that facilitate continuity of care.

Hypothesis: A formal training curriculum using defined EPAs is effective in junior physicians achieving proficiency in tasks that facilitate continuity of care.

Specific Aim: The specific aim is to study the effectiveness of a curriculum featuring five identified EPAs (namely: comprehensive discharge planning, formulating a comprehensive care plan for patients with multiple co-morbidities, chairing a multidisciplinary round, holding a family conference and executing advance care planning), which are deemed essential to continuity of care.

Methods

Methods/Setting/Study population: The programme was rolled out at the beginning of a six month rotation of junior physicians to the department. The study population are 10 junior physicians, aged 25 to 33, both male and female. They have prior post graduate clinical experience, between 6 months to 4 years, and are from medical schools recognised by the Singapore Medical Council. The faculty comprise senior doctors (registrars and above) of the department. There was prior faculty training and calibration of assessment standards.

The junior doctors perform a self assessment survey of their confidence and competency levels at baseline, and a retrospective pre- and post- training survey at the end of 6 months. Training comprised of group mentoring sessions with the faculty EPA champion, and observation of faculty carrying out the EPA. The primary outcome was faculty assessment of the doctors' proficiency at baseline, 3rd and 6th month. Mutually agreed action plans were discussed after each assessment.

Results

So far the results are promising. There was steady increase in the level of proficiency in all the junior physicians. The secondary outcomes were the results of participants' self assessment of their confidence and competency levels in the six EPAs at baseline, and retrospective pre- and post- training confidence and competency levels at the end of 6 months. Further analysis will correlate the secondary outcomes with the primary outcomes.

Conclusion

A formal training curriculum using defined EPAs is effective in junior physicians achieving proficiency in tasks that facilitate continuity of care.

D1093**THE STUDY ON THE ATTITUDE OF COUNSELING FOR MEDICAL STUDENT****Lee SH***Medical Education, College of Medicine, Yonsei University, Korea, South***Aims**

The purpose of this study was to find ways in order to activate the counseling through the search for medical students perception and attitude of counseling. In this study, students asked the reason for not using the student counseling centre (multiple-choice question: 1) I didn't know that our medical school had a counseling centre. 2) I think that it's possible to solve by myself. 3) I am afraid of being stigmatised as a person who has problems. 4) I think that someone will be helped me because I am dependent or weak. 5) Reluctant exposure problem(Issue of confidentiality) 6) the others

Methods

This study was conducted through surveys. 2nd and 3rd 227 were surveyed and questionnaire took about 2-3minutes (average). Students had to write multiple-choice questionnaire and were asked why you think about it through interviews. The interviews were limited to 2-3 minutes on average per student. We confirmed the gender difference and grade level difference.

Results

The results are as follows. Total of 227 students, the highest response rate showed the item 'because it alone can be solved'(36%). Next, 24.6% of the students responses that as a matter of confidentiality does not use the counseling centre. As a result, we confirm a difference between undergraduate and graduate students about the reasons why they not using the counseling centre. In the case of undergraduates, the response sequence was as follows: can resolve by themselves> confidentiality issues. For graduate students, the response rate was as follows: confidentiality issues > I think that it can be solved by themselves. Also we confirm the gender difference. In the case of male students, the reason why they do not use counseling centre is the following. The highest response rate (44%) was 'it can be resolved by themselves' and secondly response rate was confidentiality (21.4%). In the case of female students, according to the order of the issue of confidentiality (43%)> and then they can be solved by themselves (23%).

Conclusion

This study investigate the reason why medical students do not use the counseling centre and to look for ways to improve it. As a result, most of the students thought the problem can be solved by themselves. These results are be positive in that most students can solve their own problems. However, they need to determine whether or not a problem to get help. Otherwise they miss a good chance to solve the problem in current. In both men and women of college/graduate medical students, they did not use the counseling centre because they were concerned about the issue of confidentiality. Female graduate students showed the most worries about issues of confidentiality. Counseling centre more carefully strives to protect the confidentiality and the therapist must try to reduce students' anxiety of information leakage.

D1094

FACULTY AND MEDICAL STUDENTS PERCEPTION ON THE ROLES OF STANDARDISED PATIENTS IN THE UNDERGRADUATE MEDICAL EDUCATION

¹Soh LM, ¹Chong HW, ²Tan CS, ³Poh KK, ⁴Ngiam N, ⁵Kao SL, ⁵Khoo EYH

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Aims

Standardised patients (SP) have become an integral part of medical education worldwide and the SP roles have expanded from being a patient, to trainer and to an examiner. There is however, a paucity of information locally on the readiness for these changes in particular in the setting of formal examinations. We surveyed the perception of faculty and medical students on the roles of standardised patients in the undergraduate medical education.

Methods

All second year medical students and faculty who were examiners in the year end clinical examinations were invited to participate in the survey comprising of the following: "1.Trained SPS can be used for teaching phase II and III students for the following: 1A.history taking, 1B.physical examination, 1C.procedural skills, 1D.communication skills", "2.Trained SPs can provide feedback on the following: 2A.history taking, 2B.physical examination, 2C.procedural skills, 2D.communication skills", "3.In a low stakes assessment, the trained SP's assessment of the candidate's communication skills without the presence of a faculty member is adequate", "4.In a low stakes assessment, the trained SP's assessment of the candidate's physical examination without the presence of a faculty member is adequate", "5.In a high stakes assessment, the trained SP's assessment of the candidate's communication skills without the presence of a faculty member is adequate", "6.In a high stakes assessment, the trained SP's assessment of the candidate's physical examination without the presence of a faculty member is adequate". These were marked using a Likert Scale (1= Strongly Agree; 2= Agree; 3=Neutral; 4=Disagree; 5= Strongly Disagree); and was collapsed into two categories denoting agree (i.e. "Strongly agree" and "Agree") and disagree (i.e. "Neutral", "Disagree" and "Strongly disagree") and a logistic regression with student status as a predictor variable to test for association was performed. We estimated the odds ratio (OR) and reported the corresponding 95% confidence interval. The analyses were performed with the statistical program R, version 3.0.1. All p-values <0.05 were considered statistically significant. The study was approved by the University ethics committee.

Results

The response rate was 260 out of 302 (86.1%) and 49 out of 115 (42.6%) for students and faculty respectively. There was a significant difference with students tending to agree with statements 1B, 1C, 2B, 2C, 3 and 4 as compared with faculty (OR ranging from 2.1-7.4). Both groups did not have differing views with statements 1A, 1D, 2A and 2D. Students and faculty tended to agree that communications skills can be assessed by SP in low stakes compared with high stakes examination (OR 14, 12 respectively), but only students tended to agree that physical examination can be assessed by SP in low stakes compared with high stakes examination (OR 13.4).

Conclusion

This survey demonstrates that there is general agreement from both students and faculty that SP have a training and assessment role in communications related topics. For clinical examination and skills, this remains discordant and the perception appears to be that this should remain in the domain of the clinician.

D1095

EXPLORING COMMUNITY FACULTY ENGAGEMENT IN EDUCATION SCHOLARSHIP¹Law M, ²Mylopoulos M*Departments of ¹Family & Community Medicine and ²Pediatrics, Faculty of Medicine, University of Toronto, Canada***Aims**

Increasingly, medical schools are developing models of distributed or integrated medical education, and recruiting faculty from the community. Scholarship in teaching - being public, open to critique and evaluation, and in a form upon which others can build - potentially poses a particular challenge for these community faculty. To engage them as scholars as well as teachers, it is necessary to understand their interests in and attitudes towards educational scholarship.

Methods

Using a grounded theory approach, semi-structured interviews were conducted with a purposive, theoretical sample of 8 physician faculty at the University of Toronto. All individual in-depth interviews were transcribed verbatim. Emergent themes were identified by the research team through a process of constant comparative analysis. Ethics approval was obtained from the University of Toronto research ethics board.

Results

Community faculty identified themselves professionally as clinicians and teachers, however, they did not see themselves as scholars in medical education. While they believed that educational scholarship is important for the field more broadly, they did not see the personal or professional value of being involved. They understood scholarly activity as an academic game, related to career advancement rather than practice improvement. Furthermore, they equated educational scholarship with 'clinical research', thereby excluding themselves from participation in scholarly activities.

Conclusion

While they believed that educational scholarship is important, they did not see the personal or professional value of being involved. They also have an attitude which stemmed from the perception that there was not a direct link between educational scholarly activity and improvement in teaching or patient care.

This research highlights the importance of considering the implications of faculty professional identity as well as implicit models of scholarship when developing strategies to engage community faculty in producing educational scholarship.

D1096

AN EVIDENCE BASED APPROACH TO TEACHING DIAGNOSTIC REASONING

Lim TK

Department of Medicine, Yong Loo Lin School Of Medicine, National University of Singapore, Singapore

Aims

There is no agreement on the best method/s of teaching diagnostic reasoning. Training to avoid bias thinking has been advocated. However a growing body of evidence from quantitative and qualitative studies is beginning to shed some light on this important question. The aim of this study is, thus, to perform a narrative review of the literature on teaching diagnostic reasoning with a view to defining potentially effective interventions.

Methods

This is a synthetic “critical-realistic” review (Norman G & Eva KW 2008 and Pawson Ret al 2005) of the papers on pubmed from 1990 - 2014 (~120 articles) on teaching diagnostic reasoning to medical students and residents with emphasis on controlled interventional studies and perceptions of renowned experts. Consensus was also elicited from globally recognised educational researchers and clinical experts.

Results

Teaching methods which have been shown to improve diagnostic performance in medical students include practice with (1) illness scripts in parallel with basic science knowledge in an integrated, simulated case based environment, (2) abstract semantic qualifiers, (3) physical examination schema, (4) structured reflective steps, (5) checklists of key differentiating features and (6) retrospective reflection on diagnostic justifications. By contrast, recent experimental studies do not support training methods designed to deliberately understand, recognise, categorise and avoid diagnostic errors due to cognitive bias.

Conclusion

To improve diagnostic expertise students need early, direct and frequent practice with case based material to focus on key differentiating diagnostic features. Teaching students to understand and avoid cognitive bias may be less effective.

Saturday 7th February 2015

Foyer, Level 2, University Cultural Centre

8.00am – 8.45am

POSTER PRESENTATION – SESSION 3

GROUP 13

- D2001** **Enhancing Feedback During Resident Assessments Using A Relative Ranking Scale**
Andrew Sparrow, Canada
- D2002** **Systematising Patient Centred Learning: Response To A Major Australian Review of Medical Education Programs**
Anthony Llewellyn, Australia
- D2003** **The Arab Medical Aspirations League (AMAL) : An Innovative Student Initiative In Research Education**
Ayman M Awad, Saudi Arabia
- D2004** **Is One Month Enough For A Palliative Medicine Posting?**
Yang Grace Meijuan, Singapore
- D2005** **Sustaining Deep Learning In First Year Biomedical Sciences Courses – A Quantitative Comparative Study Provides Evidence For The Benefits of Diverse Assessment And Active Student Engagement**
Julian Alexander Tanner, Hong Kong S.A.R.
- D2006** **Do More Experienced Doctors Know More Than Newly Qualified Doctors?**
Yang Grace Meijuan, Singapore

GROUP 14

- D2007** **What Does Changing Clinical Education Mean?**
Julie Ash, Australia
- D2008** **Narratives of Psychotic Spectrum Disorders In The Psychiatry Teaching of Medical Undergraduates: Impact On Learning**
Sim Kang, Singapore
- D2009** **Advanced Specialty Training: Teaching Critical Clinical Decision Making With Novel Use of Coroner's Report**
Koh Kwong Fah, Singapore
- D2010** **How Healthcare Professionals Assimilate Ethical Principles**
Radha Krishna Lalit Kumar, Singapore
- D2011** **What Do Simulation-Educators Find Valuable In A National Faculty Development Program? A Preliminary Qualitative Analysis**
Margaret Bearman, Australia
- D2012** **Reverse Questioning In A Multi-Source Feedback Program For Family Medicine Residents In Singapore**
Ali Naslooon, Singapore

GROUP 15

- D2013** **Formation of Ethics Schemas In Students**
Peh Tan Ying, Singapore
- D2014** **Simulation In The ED – All Play And No Gain?**
Ganapathy Sashikumar, Singapore
- D2015** **Medical Student First Author Publications: Medical Student Learning Through Close Supervision And Reflective Learning**
Ho Shirlynn, Singapore

- D2016** **Simulated Eye Evaluation System (SEES): The Flipped Classroom For Teaching Undergraduate Clinical Ophthalmology**
Yip Chee Chew, Singapore
- D2017** **Implementation of A Clinical Supervisor Workshop Across Countries: Shared Relevance of Content And Delivery Method.**
Fiona Lake, Australia
- D2018** **Embedding Rural Health Experience And Language Awareness Into Medical Education**
Judy Mckimm, United Kingdom

GROUP 16

- D2019** **Paediatric Milestones - Setting Faculty Expectations of Standards**
Aw Marion, Singapore
- D2020** **Impact of A Workshop On Graduate Supervision Using Simulation**
Miriam Boillat, Canada
- D2021** **Training Faculty Staff And Medical Teachers To Teach Diversity And Integrate It Into All Aspects of The Curriculum**
Nisha Dogra, United Kingdom
- D2022** **Learner Centred Feedback Technique: Ensuring Commitment To Change.**
Steve Trumble, Australia
- D2023** **Video Based Teaching. What Have We Learned?**
Satya Gollamudi Pavan Kumar, Singapore
- D2024** **Differences In Faculty Access To Opportunities For Growth And Development Across U.S. Medical Schools**
Valerie Dandar, USA

GROUP 17

- D2025** **Comparison of Research Purpose Prevalence Between AMEE And Asia Pacific Medical Education Conference (APMEC): A Systematic Review**
Lim Wee Shiong, Singapore
- D2026** **Unethical And Unprofessional Behaviors Experienced By Residents During Their Training**
Hyojin Kwon, South Korea
- D2027** **Evaluation of E-Learning Initiatives Among Outpatient Pharmacists In Singapore General Hospital**
Chow Mee Yin Melissa, Singapore
- D2028** **Enhanced Elective Experience (E3) Programme For Medical Students In Singhealth OBGYN ACP**
Lim Melissa, Singapore
- D2029** **The African Dream of Medical And Nursing Students - A Pilot Study From A Medical Volunteer Team To Tanzania**
Ping-Keung Yip, Taiwan
- D2030** **Medical Professional Identity Formation: A 360 Degree Perspective**
Michelle Mclean, Australia

GROUP 18

- D2031** **Faculty Education Program (FEP): Overcoming Barriers To Engagement In Online Activities**
Miriam Uhlmann, Switzerland
- D2032** **A Model Training Program To Learn Essentials of Pediatric Emergency For Primary Care Physician**
Tsunetoshi Mogi, Japan
- D2033** **Comparison of Simulation Effects On Knowledge of Advanced Cardiac Life Support In Nursing Students And Nurses**
Min Young Kim, South Korea

- D2034 Research-Oriented Series: A Portal Into The Culture of Biomedical Research For Junior Medical Students At Alfaisal University**
Nawaf Albali, Saudi Arabia
- D2035 Educating The Anaesthetist On The Awareness, Concerns, And Expectations of Singaporean Patients Regarding Anaesthesia And Their Sociodemographic Correlates**
Pillay Nanthini, Singapore
- D2036 Why Surgeons Volunteer In Medical Education—Retention And Reinforcement of Faculty Motivation**
Nathalie Rutz, Switzerland

GROUP 19

- D2037 Breathing Life Into Basic Sciences– Integrating Basic Sciences With Clinical Science In An Undergraduate Medical Curriculum At Bond University, Gold Coast, Australia**
Neelam Doshi, Australia
- D2038 Benefits Associated With Receiving High Quality Mentorship In An Academic Family Medicine Department**
Nicole Ryan, Canada
- D2039 Students' And Preceptors' Perspectives On Clinical Assessment Practices And Tools In Undergraduate Nursing Education**
Wu Xi Vivien, Singapore
- D2040 Development of An E-Learning Research Module: The Journey Continues**
Kowitlawakul Yanika, Singapore
- D2041 Assessment Criteria For Skills Assessment With A Fundus Simulator On The Basis of Receiver Operating Characteristic Curves**
Yu Akaishi, Japan
- D2042 Impact of Accreditation To Development of Higher Educational Institutions**
Oyuntsetseg Sandag, Mongolia

GROUP 20

- D2043 Interprofessional Collaboration Between Cardiology And Psychiatry: Learning With, From And About Each Other**
Lai Yew Min, Singapore
- D2044 Depth of Reflectivity Achieved In The Reflections of Paediatric Residents**
Lau Perry Yew Weng, Singapore
- D2045 Learning Style Preferences of Undergraduate Pharmacy Students In The National University of Singapore**
Wong Lilian, Singapore
- D2046 The Study of The Relationship Between Academic Results In Surgery Subjects And Activities Done During The SDL Period**
Pongsatorn Asanasak, Thailand
- D2047 Making Team-Based Learning (TBL) More Effective- The 'Team Teaching' Approach**
Rajalingam Preman, Singapore
- D2048 The Effect of Level of Student Interaction In Small-Group Tutorials On Student Achievement**
Paul Wimmers, USA

D2001

ENHANCING FEEDBACK DURING RESIDENT ASSESSMENTS USING A RELATIVE RANKING SCALE

Sparrow A, Carroll J, Feldman P, Forte M

Department of Family & Community Medicine, Faculty of Medicine, University of Toronto, Canada

Aims

The Relative Ranking Scale (RRS) uses a defined set of skills deemed important for family medicine and asks postgraduate learners to rank themselves with respect to these specific skills. This ranking is done in a relative manner and is then cross-checked with expert preceptor opinion. Learners are not asked to gauge their overall level of competency, but provide a rank order of their skills needing least improvement to those needing most improvement. We studied whether use of the RRS 1) impacts quality and dynamic of feedback as compared to traditional evaluation forms 2) impacts the creation and implementation of educational action plans.

Methods

Family medicine residents and teachers at academic and community sites completed the RRS at regular evaluation meetings in addition to their usual feedback forms. Several focus groups were conducted to explore the experience of using the RRS. Focus groups were transcribed and analysed using the constant comparative method and thematic analysis.

Results

The RRS changed the dynamic of the feedback interaction for both teachers and residents. The feedback encounter became a feedback conversation with much more two-way communication than traditional evaluations. Residents felt their opinion was more welcomed and teachers felt they could deliver critical feedback more easily as the form requires listing skills that are deemed to need improvement.

Conclusion

The focus of the feedback changed to 1) emphasise the identification of strengths and areas of needed improvement and 2) to define learning priorities and develop common goals (considering both the residents' and teachers' agendas). The form did not seem to impact on the development of an action plan to achieve these goals. This may be due to the lack of specific resources targeted to improve identified areas.

D2002

SYSTEMATISING PATIENT CENTRED LEARNING: RESPONSE TO A MAJOR AUSTRALIAN REVIEW OF MEDICAL EDUCATION PROGRAMS

Llewellyn A

Medical Portfolio, Health Education & Training Institute of NSW, Australia

Aims

In 2012 the Chief Executive of the New South Wales Health Education & Training Institute (HETI) commissioned a major external review into NSW's medical training programs. The aim of the review was to investigate the purpose, goals governance and structure of all HETI medical programs and ensure that this program components of which are now over 25-years-old was 'fit for purpose'. The NSW public health system is the biggest public health system in Australia with approximately 5,000 medical trainees and working at more than 220 public hospitals across a large geographical area of 810,000 km².

Methods

Professor John Collins (past author of the Foundation for Excellence: An Evaluation of the Foundation Programme in the United Kingdom) led the review over approximately 18 months assisted by a Senior Project Officer and a Governance Committee. A comprehensive review of HETI's Medical Portfolio and 12 associated training programs was conducted, including reviewing background documents, selected international literature, 180 written submissions, and oral evidence from 125 face-to-face and teleconference sessions with around 800 individuals.

Results

The final report provided 39 recommendations to HETI. The title of the report, Equipping NSW Doctors for Patient Centred Care, was influenced by engagement with consumer representatives as well as also evidence given by trainees & trainers. Key recommendations have encouraged HETI to concentrate much more heavily on the prevocational training period, a key transition period in Australia between medical school and vocational training and, as a consequence of this, focus less on the vocational training period, where various Colleges already provide training. Other significant recommendations include: supporting trainees to pursue generalist career paths, a focus on faculty development; and support for developing improved supervisory skills.

Conclusion

HETI is now considering its response to these recommendations. The report is significant in that it comes at a time when the prevocational phase of the Australian medical system lags behind comparable international systems which are moving to competency-based approaches as well as a trend towards recalibrating vocational training programs away from subspecialisation to more generalist training to provide consultant doctors with the flexibility to care for a range of conditions. We will take the opportunity to present to an international audience HETI's response to the report and demonstrate:

1. our new approach to faculty development, including incorporating new models of supervisor training and drawing upon expertise and experience from other jurisdictions and the psychology, education and health education literature
2. present a new model of streams of generalist training to addresses the challenge of preparing medical graduates for a modern health care system and choosing more senior hospital based or traditional vocational careers that are sustainable and useful for both trainee and the patients and community in the long term.

D2003

THE ARAB MEDICAL ASPIRATIONS LEAGUE (AMAL) : AN INNOVATIVE STUDENT INITIATIVE IN RESEARCH EDUCATION

¹Awad AM, ²Barakat A, ²Ahmed E, ²Khalaf MQ, ²Abdulbaki A, ²Alsheikh A, ²Obidat A

¹Alfaisal University, Saudi Arabia, ²College of Medicine, Alfaisal University, Saudi Arabia

Aims

Research is an important aspect in the lives of today's doctors as it's evolving into one of this century's modern roles of physicians. Many enthusiastic students are willing to actively explore research and undertake its path but don't know where or how to start. Likewise, many faculty and clinicians are interested in conducting research but due to their clinical duties have not much time to conduct research. Therefore, from our observation of this situation, we undertook the responsibility to innovate an initiative that can fill this gap through establishing the Arab Medical Aspiration League (AMAL). AMAL is an ambitious student initiative wishing to establish the Middle East's first self-sustaining, student driven and organisational research group, following a social enterprise model. This group is active in studying medical education and health problems that are of concern to Saudi Arabia and the Middle East, mainly Oncology, Neurosciences, Cardiovascular and Metabolic Diseases.

Methods

AMAL's consists of five main components: 1- The research teams working on conducting research in the areas of interest to AMAL. These teams constitute students from different years who are supervised by a keen faculty member or clinician. AMAL's research committee collects the students' interest, then identifies faculty in collaborating hospitals or institutes willing to conduct research in these interest areas, then matches them together. Our role doesn't end here. We provide intensive research training programs to those students to qualify them to conduct research. We also developed a systematic mentorship program that accompanies the students as they progress in their projects. Thus, conducting an active follow-up with all teams to assure the gradual development of our students and assuring all projects are on track. This elevates pressure off the shoulders of the supervising clinicians and faculty. 2- The group's unique "Annual Conference" that provides an opportunity for special training programs, networking and launching of innovative student initiatives. In addition, it will provide an effective platform for promoting AMAL and its members. 3- AMAL's "Unique Journal". This bench-marked journal will not only publish student work but also introduce, for the first time, several innovative services that enhance the quality and promotion of research among medical trainees. 4- The first "Annual International Prize" for excellence in student research and its promotion. 5- The regional branches in selected Middle Eastern countries that will work closely with our local teams to conduct multiregional studies.

Results

We launched AMAL in 2013 and now more than 60 students train under its umbrella. Currently students are working on 18 research projects, 9 in medical education, 5 in oncology, 2 in cardiovascular and 2 in neurosciences. Furthermore, 3 extensive basic research training courses were delivered. The conference and journals are in their final preparation phases and are planned to launch this year. The prize and international branches are scheduled next year.

Conclusion

AMAL is a powerful example of how fruitful the partnership between students, faculty and administrators can be once the efforts are supported and conducted in an institutional fashion. Thus, it presents an innovative model for practical research education.

D2004**IS ONE MONTH ENOUGH FOR A PALLIATIVE MEDICINE POSTING?**

Watkinson D, Yang GM, Yee A

Department of Palliative Medicine, National Cancer Centre, Singapore

Aims

Junior doctors (residents and medical officers) undertake a posting in the Division of Palliative Medicine for a period of 1 month or 3 to 6 months. Most doctors come from Internal Medicine residency with some from Family Medicine residency. During their posting, the doctors review acute hospital inpatients referred to the palliative medicine consult service and co-manage them with the primary team, under the supervision of a palliative care specialist. They also attend weekly tutorials and journal clubs. The aims of this project were to determine the self-assessed palliative care competence level of junior doctors at the start of the posting and at the end of the posting.

Methods

A survey of the competence level in various aspects of palliative care was administered to all junior doctors at the start and at the end of their posting. The survey included 19 questions on pain and physical symptom management and communication skills such as giving bad news and eliciting a patient's goals for the end of life. Junior doctors self-rated their level of competence on a scale of 1 (not competent) to 4 (very competent).

Results

There were 39 doctors posted to the Division of Palliative Medicine from May 2012 to June 2014 - 21 were posted for 1 month and 18 were posted for 3-6 months. The baseline total competence score was 38.81 ± 7.33 for 1-month postings and 39.39 ± 8.89 for 3 to 6-month postings (total score 76); there was no significant difference between the two groups ($p=0.82$). The total score at the end of the posting was 59.81 ± 4.80 for 1-month postings and 65.72 ± 5.82 for 3 to 6-month postings; both groups improved significantly from baseline but those in 3 to 6-month postings improved significantly more ($p=0.001$).

There was a significant improvement in all the individual items in the survey for all doctors. The end of posting scores for items relating to management of pain and other physical symptoms were not significantly different between the groups. However, end of posting scores were significantly higher in the 3 to 6-month posting group for items relating to communication skills and management of end of life symptoms. The largest difference was for arranging a discharge home at the end of life - 1-month posting: 2.81 ± 0.60 vs 3 to 6-month posting: 3.56 ± 0.51 ($p<0.001$).

Conclusion

Self-rated competence improved significantly in all aspects of palliative care. Further improvement in the skills relating to the management of pain and other physical symptoms was not seen in doctors who undertook a longer posting. However, they did show significantly greater improvement in the areas of communication with patients and families and management of the patient at the end of life. This being a self-rated survey, it is uncertain if doctors' own perceptions of their competencies were accurate. The results relating to physical symptom management correlate with those from a multiple-choice test that assessed palliative medicine knowledge improvement during the posting. Further studies assessing actual competencies in communication skills are needed to see if the same correlation applies to this aspect of palliative care.

D2005

SUSTAINING DEEP LEARNING IN FIRST YEAR BIOMEDICAL SCIENCES COURSES - A QUANTITATIVE COMPARATIVE STUDY PROVIDES EVIDENCE FOR THE BENEFITS OF DIVERSE ASSESSMENT AND ACTIVE STUDENT ENGAGEMENT

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Aims

Tertiary education in Hong Kong has recently undergone radical transition from three year to four year undergraduate degrees with the first entry cohort starting in 2012. The LKS Faculty of Medicine at the University of Hong Kong established a new four year Bachelor of Biomedical Sciences (BBiomedSc) degree programme. During the first semester students take a course entitled "Perspectives in Biochemistry" which emphasises student enquiry, multiple context assessment and innovative approaches for development of biomedical science communication. Here, we performed a quantitative study to evaluate the benefits of taking such approaches within a first year course.

Methods

Taking advantage of the double student entry of 2012 (another cohort were on the old 3 year degrees), we were able to use a more traditional lecture/examination biochemistry course as a control cohort to investigate the efficacy of these approaches. We used a study process questionnaire previously proven to be capable of quantitatively measuring surface and deep learning.

Results

At the start of the semester both student cohorts showed similar balances of deep and surface learning approaches. However, the questionnaire for the traditional course showed a radical shift from deep to surface learning approaches as examinations approached - a previously reported consequence of high-stakes examination assessment after passive lecture attendance. Questionnaires taken by students on the new course that emphasised active learning showed that deep learning was sustained through the semester.

Conclusion

This study provides quantitative evidence of the benefits of diverse assessment and active student engagement in first year biomedical sciences education.

D2006

DO MORE EXPERIENCED DOCTORS KNOW MORE THAN NEWLY QUALIFIED DOCTORS?

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Aims

Palliative medicine encompasses the care of patients with a life-limiting illness and the medical aspect is focused on pain and symptom management as well as end of life care. As part of their medical training, junior doctors with varying years of experience are posted to the Division of Palliative Medicine, during which time they review acute hospital inpatients referred to the consult service and co-manage them with primary teams, under the supervision of a palliative medicine specialist. They also attend weekly tutorials and journal clubs. The aims of this project were to assess the baseline palliative medicine knowledge in these doctors as well as quantify the improvement of this knowledge.

Methods

A test comprising 30 multiple-choice questions (MCQ) was administered to all junior doctors at the start of the posting and 4 to 6 weeks into the posting to assess their palliative medicine knowledge in the domains of pain and symptom assessment as well as the use of drugs for the management of these symptoms. The MCQs aimed to be clinically based and not just factual recall.

Results

41 doctors were posted to our Division over the period of January 2012 to June 2014. There was no significant difference in the baseline palliative medicine knowledge of newly qualified doctors in their first year post-graduation ($n=11$, MCQ score $55.1\pm12.8\%$) and more experienced doctors who had worked for more than 1 year post-graduation ($n=30$, MCQ score $57.9\pm10.6\%$) ($p=0.51$).

The 2nd MCQ was not administered for 2 doctors. For the remaining 39 doctors, the mean MCQ score at the start of the posting was $57.3\pm11.3\%$ and this improved to $84.5\pm6.8\%$ 4-6 weeks into the posting. The improvement of $27.2\pm10.2\%$ was statistically significant ($p<0.01$).

However, there was no significant difference in the improvement of knowledge between the 2 groups of doctors - improvement in newly qualified doctors was $27.8\pm13.5\%$ and improvement in more experienced doctors was $27.0\pm9.3\%$ ($p=0.58$).

Conclusion

There was no significant difference in baseline palliative medicine knowledge of newly qualified doctors versus those with more years of experience, even though the latter would have higher chances of managing patients with life-limiting illnesses in previous medical postings and thereby had opportunities to acquire palliative medicine knowledge "on the job". Yet they did not know more than newly qualified doctors who did not have this experience, suggesting the necessity of a formal palliative medicine posting to acquire this knowledge or changes to the teaching and training within medical postings.

There was a significant improvement in palliative medicine knowledge after 4-6 weeks of working in palliative medicine. Further follow up studies will be needed to ascertain if the knowledge gained is applied in subsequent medical postings and sustained into specialist training.

In addition, the improvement in MCQ scores were not significantly different between newly qualified doctors and more experienced doctors, suggesting that the timing of the palliative medicine posting in the internal medicine training may not be important.

D2007**WHAT DOES CHANGING CLINICAL EDUCATION MEAN?****¹Ash J, ²Prideaux D**

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Aims

This case study aims to better understand the meaning, process and consequence of change in clinical education. Medical education is in an era of change driven by social, financial and educational forces. The drive for change is particularly fraught in the clinical education setting of rapidly changing health care systems. With the purpose of providing optimal clinical learning for the next generation of doctors, clinician teachers find themselves caught between changing health service demands and, from medical schools, pressure for educational change. Understanding how to adapt or change in the clinical education context for the purpose of better clinical education is therefore essential. It has been argued by Michael Fullan (1993) that the moral purpose of educational change is for better student learning and educational outcomes. Since educational change theory positions the social purpose for change as central to achieving coherent change it provides an apt theoretical basis for examining change in clinical education.

(Fullan, Michael. (1993). *Change Forces. Probing the Depths of Educational Reform*. London: The Falmer Press.)

Methods

A model of educational change based on the works of Michael Fullan provided the theoretical framework for a case study of change in clinical education. The case study focused on a department of surgery tasked with introducing PBL tutorials to its clinical rotations as part of a wider whole of curriculum reform. Case study data included a history constructed from a review of school documents, interviews with surgeons and others, and a field diary. The change model was used to compare change factors operating in this clinical department, with change factors operating in the broader school context, during extensive curriculum change.

Results

Using the educational change model, analysis of the case study data demonstrates that, within the same school, factors favourable for curriculum change in the broader academic context were significantly different in the clinical context of this case study. As a result the meaning, process and outcomes of curriculum change were significantly different. The results give insight to the importance of context and the existing realities of clinical teachers when planning change in clinical education.

Conclusion

The results presented demonstrate that as an explanatory model, educational change theory is relevant to understanding and planning change in clinical education, that understanding the context is essential, that a clear agreed purpose is central if clinical teachers are to make sense of change, that change plans should address important needs in the clinical education context and that medical schools provide a rich and complex context for studying educational change.

D2008

NARRATIVES OF PSYCHOTIC SPECTRUM DISORDERS IN THE PSYCHIATRY TEACHING OF MEDICAL UNDERGRADUATES: IMPACT ON LEARNING¹Sim K, ²Sum MY, ³Chiam PC¹Adult Psychiatry, Institute of Mental Health, Singapore, ²Research, Institute of Mental Health, Singapore, ³Department of Geriatric Psychiatry, Institute of Mental Health, Singapore**Aims**

Psychotic spectrum disorders are major psychiatric conditions which can exact a toll on the psychosocial functioning of sufferers and caregivers. Whilst the desired goals for the psychiatry teaching of these conditions to medical undergraduates include understanding of the clinical manifestations, underpinning neurobiology and current treatment modalities, there are observations of disengagement of students within didactic classroom sessions. In the context of scant empirical data, we hypothesised that motivation theory factors underlie these observations (discrepancy and path-goal components) and that impact on learning (engagement) and of learning (content) and can be enhanced through the use of narratives of persons with psychotic spectrum disorders.

Methods

Intra-session narratives from the psychiatric humanities literature (such as story of John Nash, Elyn Sacks, Annika's poem) were utilised. Overall, 332 medical undergraduates provided feedback through an anonymised, semi-structured questionnaire on their learning session and environment. An outcomes logic model was used for assessment with focus on immediate outcomes (engagement, motivation, equipping).

Results

Compared to before the session, 64.5% of the students ranked the use of personal narratives as most helpful in appreciating the context of psychotic spectrum conditions covered. The majority (all more than 50%) felt engaged, more motivated to learn and better equipped about the subject matter. Better appreciation of the topic, engagement, equipping were strongly correlated with promotion of reflective, self-directed learning, effectiveness of teaching, promotion of critical thinking and overall positive rating of teaching session (all $p < 0.001$). Using Multivariate analyses revealed that the use of narratives of persons with psychotic spectrum conditions, interaction with presenter regarding the narratives, and own reflection about these narratives were found to be significantly associated with overall positive rating of teaching session, promotion of critical thinking, better equipping and higher motivation about the learning (all $p < 0.01$).

Conclusion

Our results revealed that the use of narratives can enhance appreciation of psychotic spectrum disorders, engagement, and address motivational factors underlying the learning of the topic. Psychiatric narratives can complement extant efforts to encourage adult learning paradigms and improvement of topic understanding within medical undergraduate psychiatry training.

D2009**ADVANCED SPECIALTY TRAINING: TEACHING CRITICAL CLINICAL DECISION MAKING WITH NOVEL USE OF CORONER'S REPORT*****Koh KF, Chen XY, Teoh PF, Seet EC, Shibli K****Department of Anaesthesia, Khoo Teck Puat Hospital, Singapore***Aims**

Transferring learning from guidelines and protocols to application settings has always been a challenge. Finding the right content, instructional design and mode of delivery to reflect decision making in critical clinical situation is difficult. While high fidelity human patient simulators have been used to good success, the barrier to entry can be high for resource limited organisations. The scripting of good scenarios required expertise which might not be readily available.

We designed a teaching session for Advanced Specialty Trainees (AST) in Anaesthesia to facilitate trainees to move from being competent in knowledge and skills to be able to perform more effectively in clinical situations.

Methods

We used a coroner's report "Fatal Accident Inquiry into the Death of Gordon Ewing" to construct a case based discussion (<https://www.scotcourts.gov.uk/search-judgments/judgment?id=328e86a6-8980-69d2-b500-ff0000d74aa7>).

This was a case of a 45 year old man who died during induction of anaesthesia for a minor operation on his finger due to a series of airway management decisions.

From the coroner's report, we extracted clinical details, description of the environment, interactions between team members and outcome at each period leading to the final outcome. In a case based discussion manner, 15 trainees participated in the teaching session lasting 75 minutes.

After presentation of each clinical scenario, participants were invited to share their response and clinical reasoning. The actions of the original team was then shared and an attempt was made to analyse why these decisions were made.

When appropriate, we showed standard protocols and algorithms on airway management and how these could have been applied in the situation.

After the session, the participants were asked to give feedback on specific areas of the session using a 5 point scale (strongly agree: 5, strongly disagree: 1)

Results

The participants like the use of a medicolegal case for discussion (4.6)

They felt the objective was clear (4.4), flow of the discussion was logical and sequential (4.4) and encouraged participation in discussion (4.3)

They found the format useful in clarifying concepts (4.2), evaluating decision making process (4.3)

and illustrating cognitive errors (4.4). They felt it will help them to perform better in the future (4.1). Though they gain much knowledge (4.2), the format was less useful in gaining experience (3.9)

Conclusion

The use of a coroner's report to design a case base discussion is useful in teaching AST to progress from competency to performance. It is helpful in reviewing clinical decision making process and cognitive errors in a safe and unhindered environment.

D2010**HOW HEALTHCARE PROFESSIONALS ASSIMILATE ETHICAL PRINCIPLES****¹Radha Krishna LK, ²Sim SW**¹*Department of Palliative Medicine, Duke-NUS Graduate Medical School, National Cancer Centre, Singapore,*²*Department of Internal Medicine, Singhealth, Singapore***Aims**

Close supervision of learners led ethics publications is a new initiative by the Division of Palliative Care at the National Cancer Centre Singapore (NCCS) focused upon increasing understanding and interest in palliative care and ethics at the end of life. This process has led to the publication of 13 learner led manuscripts pertaining to the ethics of palliative care, personhood at the end of life and amongst palliative care patients undergoing rehabilitation by various health care professionals (HCP)s. Given the number of HCPs involved in this process, five consultants in palliative care were also involved in this process to supervise the HCPs.

Methods

To be clear unlike other subjects, introduction to ethical principles are often novel to most HCPs and require careful assimilation and reflection on the parts of the HCPs as well as the consultants who were tasked with supervising them. This raises the question as to how this new information is learned. To answer this we reviewed the manner that HCPs and consultants assimilated their new experiences.

Results

Based upon discussions with the medical students and medical officers on their respective experiences we worked on the premise that a schema-based learning process underpinned the process, particularly a Neo-Kohlbergian approach as described by Rest et al (1999). This assumption is backed by studies by Greenwood et al (2000), Murray- Garcia (2005), Auclair (2007), Hren et al (2011), Chalmers et al (2011) and Edwards et al (2012) which described similar instances.

Conclusion

As a result of the initial information garnered we plan to interview all the HCPs and palliative care consultants in the ethics studies. The objectives are to understand how ethics information is assimilated by HCPs. We are also keen to see how the schema formed evolved in the face of new information and experiences, and how these changes have affected the HCPs beyond the studies they were involved in.

D2011

WHAT DO SIMULATION-EDUCATORS FIND VALUABLE IN A NATIONAL FACULTY DEVELOPMENT PROGRAM? A PRELIMINARY QUALITATIVE ANALYSIS

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Aims

In 2012, Health Workforce Australia funded the National Health Education and Training in Simulation program (NHET-Sim), which aims to introduce the fundamentals of simulation to educators across Australia (Nestel et al, 2013). Since November 2012, over 2500 faculty have completed the program. NHET-Sim consists of two core modules, with eleven online elective modules covering a range of modalities and topics. Participants complete online modules and the majority attend workshops.

This paper aims to provide a preliminary qualitative description of the value of this national simulation faculty development program.

Methods

At time of writing, thirty participants in the NHET-Sim program were interviewed in 2013 and 2014. They were purposively sampled, with considerations such as interviewee jurisdiction and profession. This paper reports on the preliminary analysis of questions and/or responses describing the value of the NHET-Sim program to participants. Analytical methods draw from the tradition of 'qualitative description', which seeks to present the participants' perceptions of their experiences (Sandelowski 2010, Neergard 2009).

Results

There were five major themes arising from the data. Aspects of NHET-Sim which interviewees found valuable, are described as:

- 1) learning aspects of debriefing and briefing
- 2) how to structure a simulation-based education sessions
- 3) broadening horizons, such as learning the 'terminology' of simulation, where to find resources, the value of different simulation modalities
- 4) how to plan a simulation-based education session, including how to create documentation
- 5) how to work with simulated patients.

There was an acknowledgement by both novices and experienced simulation educators, that the program was designed for entry level.

Conclusion

NHET-Sim was perceived as being valuable to participants. The major themes describing this value appear to be drawn from materials covered in the two core modules. This indicates that understanding the fundamentals of simulation may be the most important part of any entry-level simulation program.

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D2012

REVERSE QUESTIONING IN A MULTI-SOURCE FEEDBACK PROGRAM FOR FAMILY MEDICINE RESIDENTS IN SINGAPORE

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Aims

Questionnaires often obtain self-reports of behaviours, asking respondents to report on process and outcome-relevant behaviours. Unfortunately, reporting on one's perceptions on another's behaviour poses a difficult cognitive task, and responses can be profoundly influenced by question wording, format, and context. To discriminate against response bias, surveys often have reverse questions. We aimed to understand if reverse questions created bias to a multi-source feedback (MSF) tool.

Methods

There were 10 final year Family Medicine residents involved in the study. Two questionnaires were developed pertaining to patients and peers respectively. Patients attending the Resident Continuity Clinic (RCC) at NHGP as well as staff nominated by the residents were asked to answer the questionnaires. Residents also completed a self-assessment based on the peer scale. The patients, peers and residents were asked to rate their degree of agreement based on a 5-point Likert scale ranging from strongly agree to strongly disagree with an unable to assess option. Feasibility was assessed by rating profiles with the percentage of participants unable to assess the physician for each item. Cronbach's alpha analyses assessed reliability. Descriptive statistics were used to understand the behaviour of respondents with regards to reverse questions.

Results

168 peers and 400 patients participated in the study. The mean ratings ranged from four (Agree) to five (Strongly Agree) for each item on each scale. There were relatively few items with high percentages of 'unable to assess' with the highest percentage being 15.5%. These percentages increased significantly for reversed questions suggesting low feasibility for these questions in both instruments. Cronbach's alpha increased slightly (0.6-2.6%) when reverse questions were removed from each instrument. 60%-100% of respondents gave a score which did not agree to their responses for other non-reversed questions.

Conclusion

Despite not decreasing the reliability of the instruments in terms of Cronbach's alpha, a very high percentage of respondents were answering reverse questions contrary to their other responses. This indicates a haphazard form of responsiveness by both peers and patients when using MSF forms.

D2013**FORMATION OF ETHICS SCHEMAS IN STUDENTS****¹Radna Krishna, ²Yee CP, ²Neo SHP, ²Yang G, ²Peh TY**¹*Department of Palliative Medicine, Duke-NUS Graduate Medical School, National Cancer Centre, Singapore,*²*Department of Palliative Medicine, National Cancer Centre, Singapore***Aims**

Close supervision of medical student-, allied health care professional- and resident- led ethics publications is a new initiative by the department of palliative care at the National Cancer Centre Singapore focused upon increasing understanding and interest in palliative care and ethics at the end of life. The process of supervision of these learners has also led to insights into the manner that multi-professional learners learn new ethical concepts. Here we focus upon the learning experiences of the medical students who participated in the project.

Methods

Interviews of supervisors of the 8 medical students involved in the publication of the 5 peer reviewed journal articles on the concept of personhood at the end of life were combined with analysis of the debrief notes of each medical student taken by their supervisors. The Grounded Theory was employed to identify themes in the learning and experiences of the medical students.

Results

Our analysis showed that the students tried to draw upon their limited insights upon related topics to form a preliminary framework to begin to assimilate the information. As their knowledge grew through reading around the topic they gradually assimilated, their confidence grew bringing with it growing abilities to scrutinise prevailing data and to forward their own views on the subject. 3 students even began to proffer their own theories regarding the subject combining related ethical, philosophical and clinical theories with their own experiences.

Emboldened by one to one and group discussions during the designing of the study, the students began to actively participate in the design process and took on the role of interviewing patients and caregivers. Some of the data collected and experiences made the students re-evaluate their understanding and beliefs on the subject.

Careful supervision and discussion with tutors and further study allowed the students to redevelop their concept and trial them during further interactions with patients. This made for a more robust conceptual framework.

Analysis and writing up the paper saw further evolutions in their ideas.

Conclusion

In keeping with Taylor and Hamdy's adult learning theory, our experience suggests that adult learning draws upon the formation, evolution and refinement of schema and is heavily dependent upon the role of the supervisor in ensuring a safe learning environment.

D2014

SIMULATION IN THE ED - ALL PLAY AND NO GAIN?**¹Ganapathy S, ²Berchmans DSD**¹Department of Emergency Medicine, Associate Dean's Office, KK Women's & Children's Hospital, Singapore,²Children's Emergency, KK Women's & Children's Hospital, Singapore**Aims**

Simulation based medical education is defined as any educational activity that utilises simulation aides to replicate clinical scenarios. Although medical simulation is relatively new, simulation has been used for a long time in other high risk professions such as aviation. Medical simulation allows the acquisition of clinical skills through deliberate practice rather than an apprentice style of learning [1]. The modalities of simulation-based learning used in our emergency department include, Simulation-based Trauma workshop, Simulation-based Airway workshop, Simulation-based Mock Codes and E-blackboard.

We set out to discover if the present program has been helpful to the residents and to see if there are any improvements to be made to the program.

Methods

We conducted an e-mail based survey of residents who trained in the department from June 2013 to June 2014. They were contacted by email and sent their survey responses back to the principal investigator. Respondents were given 2 weeks to reply. The questions were designed to assess the efficiency of the current program, and evaluate the need for change in the future.

Results

We received an 89% (40/45) response rate for the surveys that were sent out. Majority of residents, 92.5% (37/40) had previous exposure to simulation based learning before attending our programme. 95% (38/40) felt that the simulations based programmes helped improve their clinical skills (likert scale 4&5) while 87.5% (35/40) of respondents felt that the programme helped them improve their clinical and medical knowledge. 75% (30/40) felt that these programmes helped them deal with the paediatric patient in the ED. 52.5% (21/40) felt that the programmes helped with their procedural skills while 35% (14/40) disagreed.

55% responded that simulated mock code scenarios were the most beneficial while 40% voted for the E-Blackboard. A total of 70% (28/40) wanted more sessions, but shorter in duration while a minority, 15% wanted longer sessions.

Conclusion

The results from this survey is certainly encouraging. It shows a general positive response towards the use of simulations based learning in the Paediatric ED. We also see that some modalities such Mock Codes and E-blackboard, appeal more to the residents than the rest. The key to success in simulation training is integrating it into traditional education programmes [2]. It may be worth investigating if any further improvements can be made, not only to the Trauma and Airway workshops, but to all modalities in order to better equip out residents with the knowledge and skill sets required to handle our younger patients, not only during their paediatric rotation in our Children's Emergency Department but more importantly when they go out into their own practice either in other ED's, medical units or primary healthcare practices.

D2015

MEDICAL STUDENT FIRST AUTHOR PUBLICATIONS: MEDICAL STUDENT LEARNING THROUGH CLOSE SUPERVISION AND REFLECTIVE LEARNING

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Aims

Medical students are constantly faced with new information, which they are expected to assimilate and apply. Yet the breadth, depth and nature of this information and the manner that it is assimilated and applied varies significantly.

Methods

We focus upon the learning of medical students who were part of a niche palliative care program offered to specifically selected final year medical students from a cohort of medical students undertaking their palliative care attachments at a tertiary palliative care centre in Singapore. Selected students are invited to participate in either clinical or ethics studies that are ongoing work within the department. Selected students are guided in the process of manuscript production and mentored on a face-to-face, phone and emails with the hope of a student first author publications at least once a week and an informal response time by the tutors of 3 days

Results

We note that close supervision of student learning and reflection during the production of a clinical manuscript does aid significant and deep learning, and maintain interest in the subject matter. In the preparation of ethics based manuscripts we note that close supervision by tutors facilitates the formation of more flexible and robust frameworks amongst students towards addressing ethical issues.

Conclusion

Critically our experiences echo the findings of Taylor and Hamdy's multi-theories model that modern medical education does encapsulate the full breadth of adult learning theories. Quite simply the carrot of having a publication in their name was a positive reinforcement to commit to the project, as was the opportunity to enhance their chances of getting a place in the residency programme.

Experiential learning did move beyond individual knowledge and the need to develop individual skills and competencies to encompass the social context. Modelling by tutors allowed students to equip themselves and practice the skills required to analyse their reading, carry out the surveys and evaluate their findings.

There was significant self-directed learning and students were committed to the project whose importance was clear to them. Further students did retain control of the timelines and contents of their publications enhancing their motivation to remain involved.

Particularly with the ethics based studies there was a significant amount of reflection required as students had to review the many factors involved as well as confront their own beliefs and values. Further in order to remain at the forefront of the studies, students were aware that they had to bring original ideas and theories to the table. This required re-examination and review of data and to refresh the approach taken and provide a new perspective to what has already been done.

Working with colleagues and tutors on the impact of the study and understanding the implications upon practice highlighted the contextual and social elements of the process. In tandem with the use of feedback and multidimensional assessments, the social and contextual considerations of the learning process are also clear.

D2016

SIMULATED EYE EVALUATION SYSTEM (SEES): THE FLIPPED CLASSROOM FOR TEACHING UNDERGRADUATE CLINICAL OPHTHALMOLOGY

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Aims

Simulated Pathological Eye Case Scenarios (SPECS) is a novel, integrated teaching model that utilises clinical case-centred learning, patient simulation, structured viva & mind mapping. It has been positively received and preferred by medical undergraduates for learning Ophthalmology based on our pilot study data. However, the process is resource intensive, each session takes 2 to 2.5 hours and requires an experienced, senior clinical tutor. To circumvent the limitations of SPECS a new online learning tool was devised.

SEES is a pilot, e-learning tool developed by Ophthalmology Department and a consultant in instructional design and educational technology on the Articulate™ Storyline windows platform to teach SPECS. It is developed to enable standardisation in SPECS teaching and to reduce manpower need. It uses the flipped classroom model to promote student-centred learning through technology.

Methods

The algorithm and sequence of a topic were storyboarded and an instructional design process was applied during the process. Outcome-centred, media rich and engaging SCORM compliant learning objects were developed using the Articulate™ Storyline software.

Each module includes: introductory videos of a particular eye case scenario, matching multiple choice questions, structured viva questions (of specified clinical vignettes) eye examination findings, clinical pathology slides and investigation results. The design process was guided by Gagne's 9 steps of instruction: gaining attention, elucidating the learning objectives, stimulating recall of prior learning, presenting the stimulus, providing learning guidance, eliciting the performance, providing feedback, assessing the performance and enhancing retention and transference to other context. The case is constructed to train clinical judgment and stimulate mind mapping to basic science and other clinical disciplines to aid understanding and holistic management of an ophthalmic case

Results

The cues presented at various sections of a "learning block" guide the student to the appropriate diagnosis and management of the case. If the student encounters difficulty, a retracing method will be used to provide hints for the person to proceed and thus function as an e-teacher.

The student is directed towards various stages of the case management from targeted history taking, focused eye examination, clinical diagnosis, ordering and interpretation of relevant investigations to treatment within this interactive model. Hyperlinks to resource materials or evidence based references are available in SEES to provide timely explanation and education. If the student fails to achieve the pre-set minimal standard or competence such as missing key pointers in history taking, the model will digress towards another link to educate the student on the knowledge gaps, which is guided by the mastery learning principle. After attaining the required standard/competence, the student will be re-directed back on track to complete the next stage.

This interactive module is deployed onto a public learning management system for students to use and their effectiveness is then measured using validated usability and learning outcome tools.

Conclusion

SEES is a feasible e-learning platform that enables flexibility, on demand self-paced, learning of clinical Ophthalmology in medical undergraduates.

D2017

IMPLEMENTATION OF A CLINICAL SUPERVISOR WORKSHOP ACROSS COUNTRIES: SHARED RELEVANCE OF CONTENT AND DELIVERY METHOD

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Aims

Medical workplace based learning remains a key component of undergraduate and postgraduate training across the world. For best outcomes staff development programs to help clinicians to improve their ability to teach, supervise and assess are required. In Australia the Teaching on the Run (TOTR) program is widely available and has helped meet this need. The program has been run, with appropriate modifications including language of presentation, in other countries including Vietnam, Myanmar, Africa (Ethiopia and Somaliland), Taiwan and Saudi Arabia. The evaluation of the program and relevance of the material in settings other than Australia was studied.

Methods

The TOTR workshops, were modified according to the health system, model of supervision and local issues. The main modification was of the case studies, to match organisation of learning attachments, problems students faced and assessment tools used. They were translated during presentation in Vietnam and presented in Mandarin in Taiwan by trained local facilitators. In the post workshop TOTR evaluation survey, participants were asked to rate various aspects of the program and to highlight the most useful aspects of the program through written comments.

Results

The audience was senior clinicians in most countries, but more junior clinicians in Africa. Evaluation of the workshops in terms of overall reaction, presentation of the program and provision of useful information was high for all measures in all countries. Verbal and written comments valued the format of the workshops, namely their clinical relevance, interactive nature, opportunity for practice with microteaching and usable ideas. Important take home messages related to the models of constructive feedback, the 4 step approach to skills and teaching with patients, including types of questions used. The workshops were highly valued for networking and sharing ideas and enthusiasm for teaching with colleagues.

Conclusion

Core principles around teaching, interaction with learners and provision of feedback are valued by clinical teachers around the world. With minor modifications, staff development programs can be shared across countries, with maintenance of impact and participant satisfaction.

D2018

EMBEDDING RURAL HEALTH EXPERIENCE AND LANGUAGE AWARENESS INTO MEDICAL EDUCATION

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Aims

In the healthcare sector, rural settings are often perceived as particularly challenging clinical environments, resulting in a shortage of qualified doctors (and other health professionals) being recruited to and retained in these areas. This is particularly relevant to Wales, with the vast majority of its landmass being classed as rural, and around 1 in 3 of its population living within these rural areas. Wales is suffering from a longstanding and ongoing shortage of doctors - now having one of the lowest doctor:patient ratios in Europe.

International research indicates that early and immersive exposure to clinical experience in a rural environment may be a contributing factor in the retention of medics to rural areas (e.g. Walker et al., 2012). This has been acknowledged in Wales. The 'Rural Health Plan for improving integrated service delivery across Wales' (2011) recommends:

- "...rural medicine forming part of the medical undergraduate curriculum and the foundation programme..."
- "...the location of careers and training posts for medical students and post-graduate levels in rural areas..."

Methods

In response, Swansea University's College of Medicine has developed a unique opportunity for its graduate entry medical students. A select number of students are given the opportunity to focus elements of their studies on Rural and Remote Health in Medical Education (RRHIME): a track clearly defined yet embedded throughout the whole curriculum.

When considering rural areas in Wales, there must also be reference to the increased percentage of Welsh-speakers within these areas and we are also embedding Welsh language and culture into the medical programme.

Results

RRHIME aims to raise students' awareness of the benefits and realities of living and working in rural and remote areas. The University's proximity to many rural areas provides ample and varied opportunities for students to experience consistent and embedded opportunities in a wide range of clinical placements in rural areas, learning about rural services and practices.

Fluent Welsh speakers can complete parts of their course in Welsh and are encouraged to view their bilingualism as additional ability that may be exploited to provide a better quality of service to Welsh-speaking patients. Non Welsh-speakers receive support and guidance to build confidence and familiarity with Welsh language and culture as they train and work in Wales. This approach aims to increase awareness of the linguistic needs and barriers faced by health services world-wide, with recognition and respect for language as a healthcare need not novelty.

Conclusion

Through embedding rural health education alongside Welsh language and culture, the College of Medicine intends that medical students' are given enhanced opportunities to experience medicine in these areas, gaining increased knowledge and awareness of the needs of Welsh rural populations as well as further afield. This in turn will feed back to enhanced recruitment and retention of more doctors in the localities that need them most.

D2019**PAEDIATRIC MILESTONES - SETTING FACULTY EXPECTATIONS OF STANDARDS*****Aw M, Lau P****Department of Paediatrics, National University Hospital, National University Health System, Singapore***Aims**

Since formal ACGME-I accreditation in Oct 2010, our paediatric program has been assessing residency competency using a comprehensive evaluation form. This assesses the 6 core competencies of medical knowledge, patient care, interpersonal communication skills, professionalism, practice based learning and improvement (PBLI) and systems-based practice (SBP). Each of the 6 domains has subcategories with a total of 31 separate behaviours. Each subcategory is scored on a 9-point Likert scale with descriptive anchors for 5 of the 9 points.

We aimed to determine faculty expectations of residents in each of the six domains (and respective subcategories) at the end of each training year, thereby setting standards for the expected milestones in each domain for each level of paediatric training.

Methods

This process was carried out in 2 parts. In the first, a written faculty survey was performed. Faculty were asked to individually indicate the level of competency expected of residents in each of the six domains (and subcategories) at the end of each training year. In the second, 2 workshops were held. Faculty were divided into focus groups (4-5 faculty in each) to discuss each competency and decide on expected milestones for each subcategory within that domain. Faculty at these focus group sessions were unaware of the results of the individual faculty survey. Focus groups presented their decisions to the whole group and a final consensus was reached as to the expected milestones to be achieved at the end of each training year.

Results

Eighteen faculty completed the individual faculty survey. Twenty faculty (including the program director, associate program director, and all 5 core faculty) took part in the focus group workshops. Results from individual faculty survey showed wide variation and overlap in expected standards across all three years. Following focus group discussions, the expected milestones to be achieved in each of the subcategories were fairly similar to the mode of faculty expectations in each subcategory from the individual survey, with some exceptions. In general, focus group discussion resulted in slightly higher expectations for target milestones at the end of R1. Focus group discussions resulted in lower expectations in most subcategories in PBLI and SBP.

Conclusion

Results from this work is important. It has helped standardise expectations for target milestones to be achieved by paediatric residents at the end of each training year. This makes for fair and consistent faculty evaluation. At the same time, it allows residents to know milestone targets as they progress through training. These would also be useful for remediation of trainees not achieving required milestones

D2020

IMPACT OF A WORKSHOP ON GRADUATE SUPERVISION USING SIMULATION**Boillat M, Ragsdale D, Trottier C***Centre for Medical Education, Faculty of Medicine, McGill University, Canada***Aims**

Our aim is to describe a workshop on graduate supervision using simulation as a faculty development approach. Supervising graduate students is a complex pedagogical activity. Despite a growing literature on best practices in graduate supervision, faculty often receive little formal training. The Faculty Development Office of McGill's Faculty of Medicine introduced a half-day workshop for graduate supervisors. The workshop provided hands-on experience dealing with the typical challenges that graduate supervisors face. It is to our knowledge the first time simulation has been used to support learning in the area of graduate supervision.

Methods

Participants at the workshop were principle investigators (PIs) engaged in graduate supervision in biomedical research. Actors played the roles of graduate students, colleagues and lab personnel in scenarios that illustrated common problems in graduate supervision. Examples include a student who is not meeting expectations, a conflict between a student and a lab technician and the unique challenge of supervising international students. Participants were able to try out strategies in a simulated environment. Subsequent debriefing sessions in small groups enabled the participants to discuss the scenarios and learn from each other. Measurement tools included a pre-workshop knowledge and confidence questionnaire, a retrospective pre-post survey immediately following the workshop, a workshop program evaluation, a personal action plan, and a six and twelve month post-workshop survey looking at participants' comfort in their abilities as supervisors, impact of the workshop on their practices and barriers in achieving their goals as defined in the personal action plan.

Results

The workshop was attended by 33 participants, 26 of whom agreed to participate in the study. Participants found the workshop useful (Likert 4.6 on a 5 point scale), enjoyed the simulations (Likert 4.2) and the discussions with colleagues (Likert 4.6). There was a significant gain of knowledge when comparing participants' knowledge prior to the workshop (Likert 3.01) to their knowledge immediately after the workshop (Likert 3.827, $p \leq 0.0001$). We also found an overall gain in perceived confidence when comparing responses before (Likert 3.172) to after the workshop (Likert 3.854, $p \leq 0.0001$). Both novice and experienced PI's reported significant gain in knowledge, with the novice PI's starting out with less reported knowledge. We conducted a six and twelve month follow-up (6MFU and 12MFU) to assess the long-term impact of the workshop on the confidence of PI's in their supervisory practice. We obtained a 50% response rate (13/26) to the 6MFU and a 65% response rate (17/26) to the 12MFU. The mean Likert responses to all eight confidence questions were higher in the 6MFU and in the 12MFU than in the pre-workshop questionnaire, suggesting that the gains in confidence were maintained over time. The majority of participants indicated that the workshop had a positive impact on their supervisory relationships and that their practices had changed in the way they intended in their personal action plan.

Conclusion

Our study examined the impact of a faculty development workshop on graduate supervisors. The workshop produced gains in the participants' reported knowledge and confidence which was maintained over time at 6 and 12 months.

D2021

TRAINING FACULTY STAFF AND MEDICAL TEACHERS TO TEACH DIVERSITY AND INTEGRATE IT INTO ALL ASPECTS OF THE CURRICULUM

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Aims

Migration especially across Europe but also more widely has led to increasing ethnic diversity within populations across many countries. There is also now greater recognition that diversity encompasses more than just ethnic background and may include religion, age, gender, disability, sexuality, social class and a range of many other factors. The evidence indicates that the medical workforce is largely unprepared to teach about diversity to medical students and the responsibility often being to enthusiastic individuals who often feel unsupported and isolated. This has also meant that there has been little buy in across the organisation to incorporate diversity into all aspects of the functioning of the school including teaching. Whilst there has been an increased focus on ensuring medical schools teach cultural diversity to ensure that future doctors are prepared for the diversity they will face in practice, medical teachers are themselves insufficiently trained as there has usually been no parallel strand to develop their skills. Challenges include helping them overcome learner resistance, sustainably integrating diversity throughout the curriculum and to foster students' awareness of their own culture without promoting cultural stereotypes.

To meet this need the C2ME project, a European Union funded Erasmus Long Life Learning Programme project, was established. This project aims to develop competence in medical teachers to teach diversity by developing an overarching teacher development programme. This will enable them to ensure more effective implementation of cultural competence in medical curricula. Medical teachers and medical school leadership are the main target group of C2ME.

Methods

First, we will investigate the training needs of medical teachers if they are to teach about diversity effectively to medical students and how diversity can be integrated both horizontally and vertically throughout the curriculum. Specific training modules to address these needs will be developed and piloted between schools across Europe. Furthermore, an online teach-the-teacher course will also be developed and piloted. A website will provide training materials and teaching strategies. Second, a policy assessment tool is to be developed and used to assess how culturally competent the school is, in order to come up with recommendations. Teach-the-teacher modules will be integrated in teacher professionalisation programmes.

Results

A Delphi study among 32 European experts has been undertaken to establish the competencies teachers should have to be able to teach diversity. Essential competencies for all medical teachers are considered to be: competencies related to (1) Basic content (e.g. knowledge of the ethnic and social determinants of the health of migrants); (2) Coaching role and an awareness that teachers are role models in the way they talk about patients from different backgrounds); (3) Clinical teaching (e.g. ability to reflect with students how to take into account the cultural and social context of patients); (4) Development of teaching (e.g. knowledge about how to develop exercises about 'everyday discrimination'); (5) Reflect on their own role including their values and beliefs).

Conclusion

There is still considerable work to be done in preparing teachers to teach diversity.

D2022

LEARNER CENTRED FEEDBACK TECHNIQUE: ENSURING COMMITMENT TO CHANGE

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Aims

Effective feedback is the mainstay of excellent clinical supervision. This project aims to improve feedback technique used by the University of Melbourne's clinical teachers by training them in a model that encourages personal responsibility from the learner for their performance and structures feedback to create an empathic connection between supervisor and learner.

Methods

Although not strictly a research study, this project describes a method of feedback on clinical performance that begins by requesting an affective self-appraisal from the learner, progresses to focusing on the effectiveness of the performance, then encourages reflection on areas for improvement before moving to the supervisor's own suggestions for future action. As such, it encompasses elements of many of the familiar methods for the provision of effective clinical supervision in a concise, intuitive framework.

Results

Research data have not been collected as yet. This paper is descriptive of the technique and the theoretical foundations that underpin it.

Conclusion

Faculty development programs for those who teach health professional learners abound with strategies for the provision of feedback on observed clinical performance or practice. No other part of clinical teaching is as important and yet as ineffectively undertaken. This paper provides an opportunity for those with an interest in the provision of feedback to consider and discuss a new approach that puts the learner first and focuses on their needs.

D2023**VIDEO BASED TEACHING. WHAT HAVE WE LEARNED?*****Gollamudi SPK, Merchant R****Department of Medicine, National University Hospital, National University Health System, Singapore***Aims**

Division of General Medicine has newly introduced a half day workshop in Acute Medicine for final year medical students with the aim of making transition to residency program easier. Video based teaching was implemented as a part of flipped classroom model used to conduct this workshop. The objective is to evaluate student's experience, perception and acceptance of Video based teaching to learn Acute Medicine.

Methods

Videos were prepared on Acute Medicine topics using apps and were sent to the medical students a few days before the workshop. When they attend the workshop, feedback was taken from the students regarding the videos on Acute Medicine topics. After collecting the feedback from few students during different sessions of the workshop, videos were modified and redeveloped based on the feedback and were sent to the students who will be attending the subsequent sessions. Feedback was also taken from these students who saw the redeveloped videos.

Results

Feedback from 35 students who saw the original videos without their input showed that 40% of the students thought that video based teaching is same as traditional teaching and another 40% students thought that it is worse than traditional teaching.

After this feedback, videos were redeveloped based on student's inputs and was shown to 40 students who will be attending the subsequent sessions. We collected feedback from all of them and it showed that 73% thought that it is better and 7% thought that it is much better than traditional teaching.

In total feedback was collected from 75 students including all the students who saw the original videos and redeveloped videos. Out of the 75 students 56% thought that it is easy to understand the difficult concepts by seeing the video than the traditional teaching. 73% of the students thought that each video should not be more than 10 minutes in duration. We experimented by creating some self explanatory videos with background music but 52% of the students thought that they need explanation and only 28% thought that music was better.

Conclusion

Overall majority of the students thought that video based teaching is better than traditional teaching after videos are redeveloped based on their input. We learned that student's role is important in developing the videos for teaching. We also learned that the students prefer videos to be less than 10 minutes in duration and most of the students prefer explanation along with visuals in the videos. Based on our experience we realised that videos need to be simple but captivating. We also understood that the content is the most important thing that they look for in the videos.

D2024

DIFFERENCES IN FACULTY ACCESS TO OPPORTUNITIES FOR GROWTH AND DEVELOPMENT ACROSS U.S. MEDICAL SCHOOLS

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Aims

Faculty development programs in the United States have a history of proven success in enhancing faculty productivity, satisfaction, and retention. Further, opportunities for professional advancement are important in encouraging faculty to build long-term careers at their institutions and across academic medicine. This poster uses data from the AAMC Faculty Forward Engagement Survey (FFES) to understand 1) faculty members' perceptions of opportunities for growth and development at their institutions and 2) investigate if differences exist between and among demographic groups to ensure equal access and maximise the potential impact of development opportunities for all faculty.

Methods

The FFES is a web-based survey designed to encourage an evidence-based approach to improving the faculty workplace across U.S. LCME-accredited medical schools. The survey has 14 domains that contain questions that are conceptually and empirically associated with measures of employee engagement, satisfaction, and retention, including items that evaluating access to and perceptions of opportunities for development and growth. Between October 2011 and June 2014, 22 U.S. medical schools administered the FFES to their full and part-time faculty, with 61% of faculty responding (n = 13,279/ 21,811). Nine survey items related to assessment of opportunities for growth and development were analysed using descriptive and χ^2 statistics across gender, rank, race, age, and appointment type variables.

Results

Significant findings include:

- Women faculty were less likely to report: feeling supported by their supervisor in their career development, that they receive feedback from their unit head, and are satisfied with their pace of advancement or opportunities for development.
- Minority faculty were less likely to report: that they receive feedback from their unit head are satisfied with the pace of their advancement.
- Across all items analysed, more junior faculty reported positive feelings about their opportunities for growth and development. Similarly, faculty aged 45 and under reported more positive perceptions than their older counterparts.
- Full time faculty were more likely to report that their supervisor supports their development, that mentoring was important to them, and that advancement at their medical school was important to them. They also reported higher rates of receiving mentoring and performance feedback.

Conclusion

Results from this faculty engagement survey can help schools prioritise the allocation of institutional faculty development resources. Findings demonstrate that while more women and minority faculty report that receiving feedback is important to them, fewer report that they actually receive such feedback. Fewer senior rank and faculty aged 46 and older reporting receiving mentoring or feedback, nor clear paths for advancement. Given these findings, institutions may consider allocating resources to train supervisors and enhance performance management systems, as well as create targeted development programs for faculty aged 46 or older and/or of senior rank. Enhancing performance feedback mechanisms throughout faculty careers may impact the success and retention of a diverse workforce. Lastly, supporting mid- and late-career faculty may help schools retain key sources of institutional knowledge and develop pipelines for institutional leadership positions.

D2025

COMPARISON OF RESEARCH PURPOSE PREVALENCE BETWEEN AMEE AND ASIA PACIFIC MEDICAL EDUCATION CONFERENCE (APMEC): A SYSTEMATIC REVIEW

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Aims

Clarification studies situated within a strong conceptual framework advances the field of medical education research through “How or why does it work?” research purpose. This is in contrast to descriptive (“What was done?”) and justification (“Did it work?”) research purposes (Cook et. al., 2008). This systematic review aims to compare the prevalence of clarification studies as opposed to description and justification research purposes between 2 medical education conferences at different developmental stages. The AMEE is a key international meeting inaugurated in 1973, whereas the APMEC is now an established regional conference since its inception in 2004. We hypothesize that the prevalence of clarification studies will be higher in AMEE compared with APMEC abstracts.

Methods

We compared the following 3 categories: a) all eligible original research abstracts presented at APMEC 2012; b) equal number of randomly selected AMEE 2012 general abstracts (poster, e-poster and oral communication categories) matched for ratio of poster-to-oral presentations (38/148); and c) all AMEE 2012 PhD/research papers. Abstracts were coded as descriptive, justification or clarification using Cook’s framework. We also collected data on the research approach (Ringsted et. al., 2011), Kirkpatrick’s learner outcomes, statement of study intent, presentation category, topic of study, professional group, and number of institutions involved. All abstracts were reviewed by two researchers, with disagreement resolved by consensus. We conducted trended Chi-square tests followed by logistic regression adjusted for significant co-variables, to determine if there is a difference in prevalence of clarification studies between the 3 categories.

Results

Our sample of 415 original research abstracts comprised 43 (10.4%) AMEE PhD/research papers, 186 (44.8%) AMEE general abstracts, and 186 (44.8%) APMEC abstracts. Description research purpose was the most common (61.0%), followed by justification (17.8%) and clarification (21.2%). The prevalence of clarification studies was highest in AMEE PhD/research papers, compared to AMEE general abstracts and APMEC abstracts (86.0% vs 14.5% vs 12.9%; $p=.001$). There was no difference in distribution of type of conceptual framework (models, theories or hypothesis) between the 3 categories ($p=.57$). When adjusted for country of study, presence of clear study aims, non-descriptive research approach, and non-experimental study design in multivariate analysis, AMEE PhD/research papers were significantly more likely than APMEC abstracts to have a clarification research purpose (OR 10.20, 95% CI 3.18-32.74); in contrast, there was no difference between APMEC and AMEE general abstracts (OR 0.91, 95% CI 0.40-2.08).

Conclusion

There is a significantly increased rigor of research purpose in PhD/research papers compared with the other 2 categories. The lack of difference between AMEE general abstracts and APMEC abstracts persisted even after adjusting for covariates. While likely to be multi-factorial, this result nonetheless indirectly affirms the results of an earlier systematic review that documented progress made in the quality of medical education research in the Asia-Pacific region in the last 5 years (Lim et al., 2014). Despite these promising results, we should clearly aspire towards the benchmark set by PhD/research papers in promoting the widespread adoption of research with a clarification research purpose that is undergirded in a conceptual theoretical framework.

D2026

UNETHICAL AND UNPROFESSIONAL BEHAVIORS EXPERIENCED BY RESIDENTS DURING THEIR TRAINING

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Aims

Medical doctors are expected to attain higher ethical standards as professions. Though medical ethics and professionalism should be promoted throughout their lives, the residency period is critical for doctors to establish ethical standards. This study sought to identify unprofessional behaviours of residents, and assess their needs for ethics education.

Methods

Twenty residents from seventeen clinical departments were recruited at the K University Hospital, Seoul, Korea, and semi-structured interviews were conducted in person from April to July 2013. Participants were asked to describe their experiences and perceptions of unprofessional behaviours during residency training. All interviews were recorded and transcribed, and a thematic analysis was conducted by four researchers.

Results

- A total of 49 descriptors representing 9 broad categories of unprofessional behaviours were abstracted from the transcripts: 1) Standard practice, 2) Best practice, 3) Work ethics, 4) Managing conflict of interest, 5) Honesty with patients, 6) Patient confidentiality, 7) Respect for patients, 8) Respect for medical colleagues, 9) Research ethics.
- The frequently occurring behaviours without awareness of ethical problems were 'Discussing patients' medical conditions with colleagues in open places', 'Taking money or gift from patient', and 'Forcing junior doctors into drinking'. The causes of unawareness were described as 'Customary practice' and 'Stress from excessive workload'.
- Participants perceived the cause of unprofessional behaviours differently according to the types of behaviours. They put emphasis on systematic causes when dealing with 'Clinical procedures by unskilled residents' and 'Charging patients for unused medical materials', while put emphasis on lack of individual sense of ethics when dealing with 'Discriminating patients in grounds of age, sex, or socioeconomic status' and 'Not reporting colleague's medical error'.
- Most residents felt the necessity of practical ethics education with instructions on how to cope with real-world situations.

Conclusion

Residents reported diverse unethical and unprofessional behaviours, and tended to overlook ethical problems. A practical code of conduct should be provided to help trainees in resolving ethical conflicts. Also, ethics and professionalism ought to be strengthened in the postgraduate medical education.

D2027**EVALUATION OF E-LEARNING INITIATIVES AMONG OUTPATIENT PHARMACISTS IN SINGAPORE GENERAL HOSPITAL*****Chow MYM, Wan CN, Lim CYL, Nallappen S, Chen LL, Chan S, Ng V****Pharmacy Department, Singapore General Hospital, Singapore***Aims**

This study aimed to (i) identify barriers among outpatient pharmacists in Electronic (E)-Learning, and (ii) evaluate the effectiveness of initiatives to improve traffic flow into BlackBoard™

Methods

This study involved several stages of implementation from September 2013 to March 2014 at an academic medical centre in Singapore. BlackBoard™, which is the online E-learning platform among the outpatient pharmacists in Singapore General Hospital, had recorded poor usage over time. A team of pharmacists consisted of eight pharmacists with varied experiences was formed to identify its possible causes. Subsequently, an online survey was administered to the outpatient pharmacists. From this survey results, initiatives were implemented to improve the access rate. Summary statistics were used to describe the results from the focus group discussion and survey, types of activities implemented and traffic flow into BlackBoard™. Access rate, which is defined as number of entries into blackboard per pharmacist per month were captured at baseline and for 6 months after initiatives were implemented.

Results

Four main categories of causes for low access to BlackBoard™ were identified, namely, (i)staff, (ii)procedure, (iii) culture and (iv)tools. Forty-four (88%) out of 50 outpatient pharmacists completed the survey. The three main barriers identified were the lack of driving force or incentive (21%), lack of announcements for newly uploaded content (18%) and low priority in using BlackBoard™ (17%). To resolve these barriers, the implemented action plans included advertisement of new content on BlackBoard™ using emails, educate staff to access and download content from BlackBoard™ into their smart phones, upload summarised clinical lectures in 'clinical pearls' and announcement of 'hot' topics in BlackBoard™ forum for open discussion. These initiatives contributed to a gradual improvement of the access rate, from 8% to 18% in this six-month period.

Conclusion

The E-Learning could be a potential platform to promote mobile learning among the pharmacists in our fast pace era. Nonetheless, frequent initiatives to enhance the content are definitely required to sustain the learning ongoing and informative.

D2028

ENHANCED ELECTIVE EXPERIENCE (E3) PROGRAMME FOR MEDICAL STUDENTS IN SINGHEALTH OBGYN ACP

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Aims

Medical students in SingHealth who are considering OBGYN residency may want to increase his/her clinical learning experiences in OBGYN by going to clinical areas at his/her own time over a few weekends or off peak weekdays. A semi-structured voluntary program for committed learners and keen teachers would thus be useful to facilitate this. Our objectives were as follows: 1) Capitalise on the spare time, capacity and resources of doctors and hospitals for learning & teaching on off-peak weekdays and weekends 2) Enhance student's OBGYN clinical experience on an elective voluntary basis beyond usual formal school posting attachment, providing more opportunities for student to better engage ACP Faculty and OBGYN Residents so as to assess their aptitude for OBGYN residency 3) Facilitate keen faculty who want to contribute more to teaching in a more conducive setting when they are less busy during off-peak weekends and weekdays.

Methods

2 keen students who could afford the time commitment were selected for the pilot batch and a total of 9 faculty and resident doctors participated. A semi-structured interview was conducted prior to elective commencement to elicit their ideal programme schedule to address their areas of focus or concern. They could choose to have more practices at a specific station to enhance their specific clinical skill-sets. Structured questionnaires where they assigned a score from a Likert scale on their experience and gave open ended feedback were disseminated. Structured questionnaires for faculty members to rate the success of programme's fulfillment of key objectives based on scoring from a Likert scale were carried out.

Results

The students rated the OBGYN enhanced elective experience favourably with full 5 marks awarded for questions on alignment of posting objectives with learning activities and how the customised timetable allowed them to engage the faculty and residents better. They appreciated the well-organised, time-sensitive and personalised timetable. Faculty rated the voluntary programme positively as well as they had more time to teach the student during less busy workdays and this was an optimal scenario where spare capacity and resources of the hospital were tapped on for benefit of both students and teachers alike.

Conclusion

The program has potential to capitalise on the spare time, capacity and resources of doctors and hospitals for learning and teaching on off-peak weekdays and weekends with improved flexibility of schedule for both learners and teachers. This is essentially tailored for committed student to learn and keen faculty to teach. It can enable OBGYN ACP & Residency Faculty to spot and nurture students keen for residency while allowing committed and hardworking students to enhance their clinical experiences by making special efforts to learn in their own spare time. This can improve their chances in Residency. The program can also facilitate keen faculty who want to contribute more to teaching in a more conducive setting when they are less busy. Faculty and students alike hope the programme would continue for future batches of students.

D2029

THE AFRICAN DREAM OF MEDICAL AND NURSING STUDENTS – A PILOT STUDY FROM A MEDICAL VOLUNTEER TEAM TO TANZANIA

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Aims

Following the footstep of Dr. Albert Schweitzer, most of the medical and nursing students in Taiwan would have “The African Dream”, i.e., the chance to have medical service in remote areas, especially some remote areas in African countries. This pilot study is to investigate the impact and effectiveness of a medical volunteer team from a medical college in Taiwan to a Maasai tribe in Engaruka, Tanzania, East Africa. The medical volunteer team started from 2011 which comprised mainly of medical and nursing students from Fu-Jen Catholic University, through the linkage of the local catholic missionary in eastern Tanzania. The rationales of this volunteer team are to enhance integration of learning and identity formation through service-learning activities. The team focus on the following objectives: (1) health education to high school students in Engaruka village; (2) health education to local village people in order to improve maternal health, reduce child mortality and combat HIV/AIDS, malaria and other diseases; (3) in collaboration to local governmental clinic to improve health and medical supplies.

Methods

The complete work of each year comprised of 3 phases, (1) The pre-service preparatory phase, include planning of service objectives in the new team, training of new members, fund and stuff raisings which lasted for about 8-9 months; (2) The actual service phase in Engaruka, Tanzania which lasted for about 2-3 weeks; (3) The post-service ending phase, include writing up of the report and presentation in selected occasions, and finally to help the recruitment of next team members which lasted for about 2 months. The complete cycle lasted for about 1 year.

From 2011 to 2014, a total of 4 teams have finished the whole complete service cycle. An average of 9 student members and 2 supervisors were included in each team. Among these 4 teams, a total of 15 medical students, 17 nursing students and 3 from other specialties (some students may participate for more than 1 cycle).

All the students who participated before 2014 were follow-up using descriptive and qualitative measures to investigate for the impact and effectiveness of such medical volunteer team. Starting from 2014 team, a comprehensive quantitative questionnaire called “Self-concept and service-learning form” was used to evaluate the value of such service-learning activity.

Results

The complete results of evaluation will be presented in the up-coming conference.

Conclusion

The foundation principles of professional identity in medical education broadly included (1) altruism, (2) commitment to service and (3) sensitivity to improve human health. It is difficult to compare such overseas to conventional local medical service-learning activities in the impact of basic concepts of medical education, but the value of such a financial, time and man-power consuming medical volunteer team deserve in depth study.

D2030

MEDICAL PROFESSIONAL IDENTITY FORMATION: A 360 DEGREE PERSPECTIVE**McLean M, Johnson P, Sargeant S, Green P***Medicine, Faculty of Health Sciences & Medicine, Bond University, Australia***Aims**

While there is a reasonable body of literature on medical students' professional identity formation, the focus has been largely from their perspective. On their journey to "becoming" doctors, medical students interact with teachers and trainers from varying professions, all of whom will perceive their professional development from different standpoints. The purpose of this qualitative study was to gain an insight of professional identity formation from different teachers and trainers with whom students interact at different times of their medical studies.

Methods

This phenomenological study was conducted at an Australian university offering an undergraduate medical programme. Professional identity formation was explored from the perspective of students across the five-year curriculum as well as from the perspective of their teachers and trainers, who included registered nurses, clinical tutors, academic faculty, problem-based learning facilitators and simulated patients (SPs). Semi-structured interviews and a follow-up focus group in one instance (SPs) were framed around questions such as: Do demographic factors such as age, gender, prior educational experience or having a prior health professional identity impact on professional identity formation? Are being a doctor and feeling like a doctor the same? What changes most over time? Transcribed interviews were analysed using template analysis, with a set of a priori themes. Each researcher independently analysed two transcripts from the different participants groups. After considerable discussion, the template was finalised.

Results

Based on the different perspectives of medical students' professional identity formation (students, teachers and trainers), a framework has emerged. The framework incorporates key issues, factors and events that may contribute to or impact on students' socialisation into the medical profession. Even at the start of their medical studies, teachers and trainers were of the opinion that demographic factors influenced how students perceived themselves. To this end, having a parent who was a doctor meant that these students had some knowledge of the medical profession, while being a school-leaving student (17 or 18 years old) generally equated to having less life experiences and poorly developed social skills. Exposure to real patients emerged as an important transition for learners to move from being a student to being medical student. Having a prior health care background was seen as either assisting professional identity formation (e.g. good interpersonal skills) or being a hindrance (e.g. thinking in a particular way). "Being" a doctor appears to be related to taking responsibility for patients, which, for some, may only happen after several years in practice.

Conclusion

This study provided a 360 degree perspective of professional identity formation. While the journey of each medical student is unique and personal, starting at a very different place, teachers and trainers are witness to individual student's professional development, manifested as behavioural and attitudinal changes and skills development. With many teachers and trainers being health professionals, they are potential contributors to students' identity formation through, e.g. role modelling and story-telling.

D2031

FACULTY EDUCATION PROGRAM (FEP): OVERCOMING BARRIERS TO ENGAGEMENT IN ONLINE ACTIVITIES

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Aims

Integration of technology in teaching is identified as one of the competencies for teaching in medicine (Srinivasan et al, 2011). Blended learning that combines the live and online modalities is a “value add” that enables the learner to not only comprehend the concepts (online), but also apply it in practice by participating in hands-on activities and small group discussions (live events). In addition, online engagement promotes the concept of a “community of learners” working towards a common purpose and a goal. It builds camaraderie and a sense of belonging to the learner as well. New concepts in teaching like the “flipped classroom” and much of research evidence around the need for increased engagement of learners online to achieve higher levels of learning, necessitates all education providers to evaluate this aspect.

The AO Foundation provides education activities annually to 25,000 trauma surgeons in 86 countries. Teaching is provided by over 2,500 experienced surgeons with demonstrated potential to be effective as faculty. The AO has developed a competency-based Faculty Education Program (FEP) to develop surgeons into successful faculty. The FEP is a blended program; 450 participants from 68 countries have completed the program.

Analysis of the online activities showed regional differences in participant online engagement. Overall, there is a need to foster increased engagement in the FEP online activities. The research question that evolved from this exercise and gap identified was “what are the main factors that influence participation in online activities in the targeted surgeon population?”

Methods

Evaluation data was collected from 450 participants from 68 countries. Emerging data showed culture, efficacy in the online environment, user interface, time, method acceptances, and goals as indicators for successful online engagement. This quantitative data informed questions developed for qualitative interviews. Focus group interviews are ongoing (to be complete 2015) to explore the emerging themes related to participation barriers. The resultant data will be analysed; themes operationalised; compared by parameters such as countries/culture, experience, work setting, support system, and demographic data.

Results

Barriers to online facilitation and learner engagement are generalisable across the entire population or specific to certain segments. Understanding these barriers will result in specific, implementable strategies to overcome these barriers and increase surgeon online engagement and therefore increasing learning. The results from the focus groups conducted so far show that

Conclusion

Online activities are critical to developing the appropriate teaching competencies in surgeons and ultimately the effectiveness of AO’s global education programs. Strategies to increase online engagement need to be implemented and the tactics should be based on the behaviors of targeted populations. We believe that increased engagement can foster the building of a community that learns and teaches together, working collaboratively towards a common goal. Successful strategies and tactics on how to overcome barriers may be applicable to faculty development programs in general.

D2032

A MODEL TRAINING PROGRAM TO LEARN ESSENTIALS OF PEDIATRIC EMERGENCY FOR PRIMARY CARE PHYSICIAN

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Aims

In Japan, 58% of physicians seeing children are non-pediatricians. Especially in rural areas, we have issues of shortage of pediatricians. By informal interviews, we found needs from these doctors who see children but have not got training in pediatrics to learn its essentials, especially in emergency situations. In 2009, we developed an off-the-job pediatric emergency training program for non-pediatricians and have implemented it for over 50 times in various institutes with modifications. The aim of this study is to clarify the process of development of this training program.

Methods

This is a descriptive study defined by Cook (2008) with program evaluation. We conducted two focus groups for 10 facilitators in January and 8 in June in 2014. All discussions were audio-recorded and transcribed verbatim. Data were read iteratively by the first author (TM) and analysed thematically. The last author (HN) read the transcripts separately and discussed the identified themes with TM. Ethical approval was granted by the Institutional Review Board at Kyoto University.

Results

This is basically a half-day program. In the first version, the target participants were residents, the setting was emergency department in hospitals, the contents included the 7 themes (how to perform triage in general; how to manage patients with fever, febrile convulsion, wheezing, abdominal pain, nausea/vomiting, and rash), the learning objectives were not to miss critical diseases, and the learning strategies were mainly simulation with mannequins and simulated patients. Based on the program evaluations and reflections each time, we argued that the target participants could be beyond residents, the setting can be primary care, “rash” as content is not essential in terms of emergency, and etc. In the latest version, the target participants were primary care physicians in addition to residents, the setting was clinics and hospitals, the contents reduced to the 6 themes (we omitted “rash”), the learning objectives were to learn when and how to consult pediatricians in addition to not to miss critical diseases, and the learning strategies were simulations with a variety of items (like iPads and movies). Furthermore, we found we needed more quality assured facilitators as the program expanded. Recently the Japan Primary Care Association have approved it as a semi-formal program and supported our activities.

Conclusion

We developed a model training program to learn essentials of pediatric emergency for primary care physician in Japanese context. Training of facilitators is one of our next steps to improve this program. We hope we will have responses from international audiences (especially primary care physicians) about its utility, usefulness or interest.

D2033

COMPARISON OF SIMULATION EFFECTS ON KNOWLEDGE OF ADVANCED CARDIAC LIFE SUPPORT IN NURSING STUDENTS AND NURSES

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Aims

This study was designed to compare the effects of simulation-based education on knowledge of advanced cardiac life support (ACLS) in nursing students and nurses.

Methods

The participants included 51 nursing students and 15 nurses. All participants were educated for three days using the study's ACLS protocol, which is based on the ACLS program of the American Heart Association (AHA), and had been modified according to the education schedule. On the first day, manual self-learning was performed, including cardiac arrest algorithm, immediate post-cardiac arrest care algorithm, bradycardia with a pulse algorithm, tachycardia with a pulse algorithm, major electrocardiograms, drugs of ACLS, defibrillation and synchronised cardioversion. On the second day, pre-test for the knowledge on ACLS was undertaken prior to the ACLS simulation program. After the pre-test, all participants underwent simulation practice using a scheduled role within one team according to the four simulation scenarios of real clinical situations based on cardiac arrest rhythms. On the last day, another simulation practice was performed before the post-test. A post-test was also performed to measure ACLS knowledge, which was a modified version of the pre-test. The Pre-test and post-test for ACLS knowledge consisted of fifteen questions across four topics: team concepts, ACLS algorithms, major electrocardiograms (ECGs), and defibrillation. The scores and differences between pre- and post-simulation scores in nursing students and nurses were compared.

Results

The nurses' group showed significantly higher scores than nursing students did in both pre- and post-tests on ACLS algorithm and major electrocardiogram. The total score change of the nursing students between the pre- and post-simulation measurement was 0.75 ± 2.43 , significantly larger than that of the nurses ($p=0.032$).

Conclusion

This result showed that the effect of simulation on knowledge of ACLS could be different according to the participants of the program, even if the same simulation-based education program is administrated. Therefore, to ensure appropriate impact of simulation-based education, it is necessary to select the target group according to the program.

D2034**RESEARCH-ORIENTED SERIES: A PORTAL INTO THE CULTURE OF BIOMEDICAL RESEARCH FOR JUNIOR MEDICAL STUDENTS AT ALFAISAL UNIVERSITY**

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Aims

Students' contribution to research has been shown to effectively reflect on their communication and critical thinking skills. Short-term research courses offer opportunities for medical students to excel at their research skills and advance their research experience in subsequent high demanding long-term research opportunities. Purpose: to describe the development, implementation and evaluation of the Research-Oriented Series (ROS) at Alfaisal University.

Methods

ROS was designed comprising 8 sessions. Each session addressed core principles and practice of research concepts and was based on theoretical morning sessions supplemented by afternoon practical sessions delivered by experienced senior medical students and faculty members. Students were assessed comprehensively by the end of the ROS. The series was conducted twice where thirty-five students were involved each time. A total of 70 enrolled students, half of whom were male and half female, with Grade Point Averages greater and less than 3.5, were asked to fill an anonymous, online, self-administered questionnaire assessing their perception of knowledge, skills and confidence post attending the ROS, and evaluating their senior peers.

Results

90% of medical students responded to the online survey rating the Research-Oriented Series highly in improving their research knowledge, skills, and confidence. Male students reported significant gain in comparison to their female peers ($P < .05$). The Grade Point Average does not seem to play a role in students' gains post attending the ROS. Qualitative responses were in support of three recurring themes favoring the unique learning environment in the ROS.

Conclusion

ROS offers a short term systematic approach to fundamental steps and concepts of biomedical research. Alfaisal University Junior medical students perceived it as a beneficial pedagogy to improve their knowledge, skills and confidence in research. Such courses could be implemented in institutes which support dynamic undergraduate research environment.

D2035

EDUCATING THE ANAESTHETIST ON THE AWARENESS, CONCERNS, AND EXPECTATIONS OF SINGAPOREAN PATIENTS REGARDING ANAESTHESIA AND THEIR SOCIODEMOGRAPHIC CORRELATES

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Aims

The effectiveness of the pre-operative consultation in alleviating anxiety and thereby reducing post-operative complications has been well demonstrated. However, studies demonstrate anaesthetists to be poor predictors of their patient's concerns and the amount of preparatory information they desire, such that anxiety might not be allayed. Patients have also shown a poor understanding of the role of an anaesthetist, which makes the anaesthetist's task more challenging.

Educating the anaesthetist on how to alleviate anxiety requires accurate knowledge of the patient population. Hence our study aimed to evaluate the level of awareness of the role of the anaesthetist amongst local patients, and identify common concerns and information desired regarding anaesthesia, together with sociodemographic correlations.

Methods

A cross sectional study was conducted over a 2 month period. 465 patients undergoing elective surgery at Singapore General Hospital participated in a questionnaire survey within the pre-operative evaluation clinic.

Results

The majority (77.9%) of patients correctly identified anaesthetists as doctors and most patients correctly identified their intra-operative roles. However, fewer patients were aware of their post-operative roles such as supervising the recovery room (32.8%) and post-operative pain management (49%).

Patients were most concerned about minor complications such as post-operative pain (85.4%), feeling cold (81.6%), and feeling nervous (77.8%). Fewer patients were concerned about major complications e.g. awareness (69.9%) and stroke or heart attack (69.0%). Females and more highly educated respondents expressed higher concern.

The majority of patients desired information about post-operative recovery such as the ability to ambulate (89%), eat and drink (88.1%), and post-operative pain (80.5%). Information about dangerous (81.8%) and common anaesthetic complications (81%) was also highly desired. Patients showed less interest in intra-operative care such as details of needles and drips used (58.8%). Respondents who were non-Chinese, younger than 50, and who have had a previous unpleasant recovery from surgery, expressed more desire for information.

Conclusion

Although awareness of the qualifications and intra-operative role of an anaesthetist is good, few patients understand that anaesthetists are involved in post-operative care. This could reflect a misconception that post-operative complications such as pain are unavoidable and do not require medical attention. Educating anaesthetists on this lack of awareness amongst patients will translate into better patient education and better post-operative care. Anaesthetists should address the common concerns of local patients identified, especially in female and more highly educated patients. When educating the patient, information pertaining to post-operative recovery should be emphasized, especially in non-Chinese patients, younger patients, and patients who have had a previous unpleasant recovery from surgery.

D2036

WHY SURGEONS VOLUNTEER IN MEDICAL EDUCATION-RETENTION AND REINFORCEMENT OF FACULTY MOTIVATION

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Aims

This study aims at examining the underlying motives, level of satisfaction, current and future commitment as well as the preference of incentives of surgeons who volunteer as faculty members for the AO Foundation (Switzerland). The AO is a medically guided nonprofit organisation that aims at improving patient care through its educational activities in the field of musculoskeletal trauma. The largest clinical division AOTrauma in 2013 ran 386 courses with 5,693 involved faculty members. It is the ultimate goal of this study to find new ways for the AO to enhance the motivation of its faculty members and secure the succession of the key-players among them.

Methods

In order to get a general grasp of the motivational state amongst faculty members, sixteen qualitative pre-study interviews were conducted in 2013. Based on the content analysis of those interviews and the following literature research, a quantitative online survey was designed. The survey was administered to all of the 4,661 registered faculty members of AOTrauma. The results were then thoroughly analysed using the statistics tool spss.

Results

With a total of 740 valid responses the online survey yielded a response rate of 16%. The results of the analysis showed that most volunteering faculty members are motivated by superior motives such as improving patient care, giving back some of the education they received and learning new skills themselves to improve their practice. Generally the faculty members reported high satisfaction levels. The majority of the faculty members were especially satisfied with the social aspects of being an AOTrauma faculty member as well as with the learning opportunities it provided them. Some faculty members reported that the financial remuneration, the number of teaching and faculty training opportunities should be increased. In regards to incentives, educational resources together with faculty training and regular performance feedback received the highest appreciation scores.

Conclusion

Roughly three quarters of the faculty members that participated in the survey responded that their motivation has increased since they joined the AO and the same amount of surgeons indicated that they would like to increase their current commitment. Therefore it can be concluded that with the right strategies the AO should be able to secure the succession of the key-players among its faculty members. The following are some of the measures to enhance the motivation of the faculty members: introduce a performance measurement system that is linked to the faculty selection process, expand the faculty trainings where most needed, support the creation of new educational resources and faculty support materials, attend to differences in motivation and satisfaction of faculty members from different regions and age groups.

As the survey questionnaire used for this study is based on validated questions those results might also be of interest to similar organisations working with volunteer faculty members.

D2037

BREATHING LIFE INTO BASIC SCIENCES- INTEGRATING BASIC SCIENCES WITH CLINICAL SCIENCE IN AN UNDERGRADUATE MEDICAL CURRICULUM AT BOND UNIVERSITY ,GOLD COAST ,AUSTRALIA

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Aims

Medical students find the transition from preclinical learning to clinical rotations quite stressful. Using Case Based Learning in a bond virtual hospital (BVH) learning setting in our revised undergraduate medical program has enabled a smoother transition - in part through explicit correlation between basic science and clinical applications. This process requires team work between multidisciplinary clinical /para clinical skilled educators. This will also highlight the effective usage of mobile app in student's learning.

Methods

We wish to share this integrated teaching approach wherein the audience will experience a Bond virtual hospital ward round and student's feedback on it, through video clippings. This will follow a faculty led 'debrief' of the BVH who will also share their personal experience on this 'virtual teaching app'. Participants can reflect on the experience of students integrating the scholar and scientist, practitioner and professional themes of the curriculum. Finally, participants will consider the qualities and training required for effective teachers, delivering this holistic learning.

Results

Issues for exploration or ideas for discussion will be:

- a. What linkages can be made from foundational year basic sciences knowledge into clinical areas while taking care of patients?
- b. Does this improves the student's clinical reasoning and makes them feel more confident at the wards?
- c. How can practising clinicians teach basic sciences effectively?
- d. How effective multi-speciality educators/facilitators should be selected and prepared for this role.
- e. Is the use of mobile app conducive in students learning?
- f. How do/can we measure the efficacy of this approach? Interim feedback of medical students on the following three major questions has scored an average of 4 out of 5. Details will be shared during the presentation.
 1. Students view on BVH/CBL process.
 2. Impact on students integrated learning and clinical reasoning skills
 3. Teamwork

Conclusion

The presentation will consider how CBL can be used to encourage students to apply foundation science knowledge into clinical relevance using virtual ward rounds. It will also explore whether the usage of mobile app is helpful in students learning in this modern age of technology. Interim feedback of medical students and facilitators looks good.

D2038

BENEFITS ASSOCIATED WITH RECEIVING HIGH QUALITY MENTORSHIP IN AN ACADEMIC FAMILY MEDICINE DEPARTMENT**Stubbs B, Meaney C, Krueger P, Antao V, White D, Kwong J, Zhang S, Ryan N, Kim F***Department of Family and Community Medicine, Faculty of Medicine, University of Toronto, Canada***Aims**

Mentorship is a fundamental component of successful professional development of faculty. To date there has been a paucity of literature about mentorship experiences in academic family medicine.

To examine faculty perceptions of mentorship and identify potential benefits associated with high quality experiences across the domains of clinical, teaching, leadership, research and work life balance mentoring.

Methods

A comprehensive quantitative on-line work life and leadership survey.

Participants: Faculty members of the Department of Family and Community Medicine at the University of Toronto.

Intervention: A survey of faculty perceptions regarding overall quality of mentorship received.

Results

Outcome Measures: Health status, job satisfaction, perceptions about the academic environment, professional development and leadership opportunities.

687 of 1029 faculty responded (67% response). Information on perceptions of the overall quality of mentorship received was obtained for 597 faculty members. 84% rated mentorship quality as good or better and 58% rated the quality as very good or excellent. Perceptions of clinical mentorship experiences were rated highest, followed by teaching, career, leadership, work-life balance and research.

Higher quality mentorship experiences (i.e. very good/excellent) were statistically associated with faculty perceptions of a positive and supportive academic environment, less stress and burnout for the mentee, and greater job satisfaction. Faculty members who perceived high quality mentorship were also more likely to value the importance of their ability to pursue both professional development and leadership training opportunities. Those who reported higher quality mentorship were younger and received more frequent mentoring. No association was found between the rating of mentorship quality and gender or ethnicity.

Conclusion

This study provides information about the mentorship experiences of academic family medicine faculty. High quality mentorship is associated with multiple domains, and this reflects on the value of a positive, supportive academic culture.

D2039

STUDENTS' AND PRECEPTORS' PERSPECTIVES ON CLINICAL ASSESSMENT PRACTICES AND TOOLS IN UNDERGRADUATE NURSING EDUCATION

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Aims

A major focus in nursing education is on the judgement of clinical performance, and it is a complex process due to the diverse nature of nursing practice. Difficulties in the development of valid and reliable assessment measures in nursing competency are acknowledged by many nurse educators. A holistic approach in assessment of competency is advocated which combines the knowledge, skills, attitudes and professional judgement in clinical situations. In fact, assessment of clinical competence requires explicitly defined standards meeting national standards of the nursing profession. Meanwhile, the standards should be easily understood and interpreted in the same manner by the preceptors, provide a guideline for the nursing students, and practically applied in the clinical setting. Therefore, it is essential to develop a holistic assessment tool to meet the needs of our local situation. Transition to practice is a consolidated clinical practicum for pre-registration nursing students. In order to be able to function as beginning practitioners on registration and employment, students need a period of consolidated clinical experience to develop the required level of competency. The unaccustomed, uncontrollable clinical environment has created a stressful situation for students. Besides the dynamic clinical situations, the approach and teaching experience of the preceptor also play an important part on the learning experiences of the students.

This study aims to explore the views of students and preceptors on assessment practices and tools for nursing undergraduates in transition to practice.

Methods

An explorative qualitative approach using focus group discussion was adopted. A purposive sample was used to justify the inclusion of rich sources of data. A total of 24 final-year undergraduate nursing students and 17 preceptors from two local tertiary hospitals participated in the focus group discussions. Six focus group discussions were facilitated by the researcher in May 2014. Audio-taped focus group discussions were transcribed verbatim. The transcripts were read numerous times to enable key themes to be identified. The study engaged member checking to ensure the dependability of the results.

Results

During the focus group discussions, students acknowledged that they achieved better understanding of the workflow, consolidation of nursing skills, and working collaboratively with other healthcare professionals. Working alongside with preceptors boosts the students' confidence to function as a registered nurse. However, students shared concerns that preceptors were occupied with patient care, and left limited time to guide the students. There were inconsistencies in the interpretation of assessment tool among preceptors. Preceptors reported that students were lacking in psychomotor skills, critical thinking, time management, communication and teamwork. They felt that the hospital and university could provide stronger support to enhance their understanding and interpretation of the assessment system.

Conclusion

The current trend of moving from generic to holistic model of clinical assessment, leads to nurturing and development of competent nursing professionals. Nevertheless, preparation for use of tools and support system must be established for both preceptors and students. This collaborative approach is valuable to enhance the learning experiences of the students, professional development for preceptors in terms of pedagogical approaches and competency as assessors, and clinical credibility for academics.

D2040

DEVELOPMENT OF AN E-LEARNING RESEARCH MODULE: THE JOURNEY CONTINUES

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Aims

One of the key outcomes of research modules in both Honours and Master of Nursing (MN) program at Alice Lee Centre for Nursing Studies, National University of Singapore, is that the students are able to demonstrate ability to critique, synthesise, evaluate research literature, and conduct a research study within one year. Based on faculty observation and students' feedback, the students were very keen to learn and work on their project, but they were struggling on how to start and became apprehensive in conducting a research study. The students lack of motivation and basic research knowledge background prior to the enrollment of research course was obvious. According to the evidence, the teaching team has decided to revise the design and structure of the research course. An e-learning research module was developed as a self-directed learning tool to foster learning and student engagement in research study. The aim of this study was to develop an e-learning research module and explore the experiences and perceptions of students and discipline experts using the module in the pilot phase.

Methods

E-learning research module includes interactive multimedia, such as audio-visual presentation, graphical theme, animation, case based learning, and pre-test and post-test for each topic-area, to engage and motivate students. The module focuses on three main topic areas; 1) basic research principles, 2) quantitative method, and 3) qualitative method. To evaluate the usability of the e-learning research module, the exploratory qualitative study was conducted using focus group interviews for students and individual interview for faculty members. Eight students and two faculty members participated in the pilot testing. Content analysis will be used to analyse the data.

Results

Pilot testing was conducted on 30 July 2014, which included gaining the perspectives of discipline experts and students. The qualitative data is in the process of transcribing. The presentation will discuss the detail of the development process and preliminary results of the pilot study.

Conclusion

This e-learning project is an innovative use of information and communication technology for student engagement and learning. It has been expected that the e-learning research module can be used for the blended learning or flipped classroom, and would be useful for the Master of Science and PhD students who have spent many years away from the academic environment. In addition, this e-learning research module might be a good resource for professional development for faculty members and healthcare educators/staff. The access of the e-learning research module will be opened to students, faculty members, and all staff at National University of Singapore in mid-August 2014.

D2041

ASSESSMENT CRITERIA FOR SKILLS ASSESSMENT WITH A FUNDUS SIMULATOR ON THE BASIS OF RECEIVER OPERATING CHARACTERISTIC CURVES

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Aims

Direct ophthalmoscopy (DO) fundus simulators have been used not only as learning tools but also as assessment tools in practical examinations such as the Objective Structured Clinical Examination (OSCE). We previously revealed that the simulator is useful for assessing DO skills in the OSCE when pupil size is set at 2.0 or 3.5 mm. However, to the best of our knowledge, there are no reports on clear assessment criteria for DO skills on skills assessment tests using fundus simulators, and it has not been clarified how to distinguish candidates with high-level DO skills (successful candidates). In this study, we set out to determine appropriate assessment criteria for DO skills on the basis of subgroup analysis of the data of our previous study.

Methods

The total number of participants was 73 (medical students, residents, and attending physicians.) We selected the following 3 factors that may indicate the ability to perform non-mydratic DO: (1) Experience: total number of cases examined (without mydriasis), (2) Frequency: number of cases examined during the previous month, and (3) Range: viewable fundus field range. We used a fundus simulator with three-level adjustable pupil sizes (2, 3.5, and 5 mm) and created original test slides for use in the simulator. We counted the number of correct answers of each participant for each pupil size using the simulator and test slides (maximum score: 6). We presumed that candidates with high-level DO skills (successful candidates) are characterised by the following three indicators: "Experience; more than 99 cases examined by DO", "Frequency; more than 9 cases examined during the previous month" and "Range; can see almost the entire field". Receiver operating characteristic (ROC) curves were created for each pupil size based on these three high-value indicators. We determined the optimal cut-off point for high area under the curve (AUC).

Results

Cut-off points of 5 and 6 for pupil sizes of 2 mm and 3.5 mm, respectively, showed the best characteristics for distinguishing candidates with high-level DO skills. For "Experience", at 2 and 3.5 mm, the AUC was 0.898 and 0.884, and the optimal cut off-point 5 and 6, respectively. For "Range", at 2 and 3.5 mm, the AUC was 0.915 and 0.913, and the optimal cut off-point 5 and 6, respectively. There were no significant differences for "Frequency" or pupil size of 5 mm.

Conclusion

Passing scores of 5 and 6 for pupil sizes of 2 mm and 3.5 mm, respectively, are appropriate criteria for distinguishing candidates with high-level DO skills (successful candidates) on skills assessment tests, such as the OSCE, using a fundus simulator.

D2042

IMPACT OF ACCREDITATION TO DEVELOPMENT OF HIGHER EDUCATIONAL INSTITUTIONS

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Aims

Background: Advantages of Accreditation process assessing the institution as well as its staff are essential for maintaining quality of learning program. This study focuses on how the voluntary audits affect development, quality and efficiency of higher educational institution and the individual development.

Objective: Accreditation processes to study the influence on the institution and individual development.

Methods

Survey was conducted as a cross-sectional study. A total of 446 participants were given a questionnaire, 21 responses were excluded as they were incomplete, and 407 participants were involved.

Results and Conclusion

From 260 participants in national accreditation process 71.9 - 92.3% of them responded that there are influencing factors before, during and after accreditation. According to 10 criteria to evaluate institutional and individual changes, there were more individual changes than institutional. From evaluation by interval method shows that index of the influences for institution and individual is 3.5:3.6 and it means the accreditation influences more for the institutional development. Regarding interval evaluation it is possible "to reach more opportunity based on strengths", and need to follow strategy "to strengthen advantages utilising opportunity". As a result of document review, questionnaire and interview 103 opportunities, 50 threats, 77 advantages and 23 disadvantages were determined at the macro and micro level of environment. SWOT analysis shows that there are possibilities to achieve more opportunities by using institutional and individual advantages and keep strategy to strengthening advantages by using opportunities. Accreditation process affects more for institutional development.

D2043

INTERPROFESSIONAL COLLABORATION BETWEEN CARDIOLOGY AND PSYCHIATRY: LEARNING WITH, FROM AND ABOUT EACH OTHER

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Aims

It is not uncommon for anxiety and depression to present as cardiac symptoms. Also, psychological symptoms are prevalent among cardiac patients. An in-house liaison psychiatry clinic was started at the National University Heart Centre, Singapore. A teaching initiative was carried out by the in-house psychiatrist to help cardiologists to learn to recognise psychological symptoms in cardiac patients. In this paper, we describe how the principles of learning were used to develop an interprofessional education initiative that was authentic, customised and well received.

Methods

The teacher started with this question first, "Why is psychiatry difficult for non-psychiatrists?" The answer from a peer, a non-psychiatrist, was, "It's nebulous with no hard signs." The next important question was, "What helps the learner to overcome this difficult aspect?" The teaching initiative was based on these principles of learning: 1) relevance, 2) sequencing the content, 3) progression, 4) building learning around problems and clinical presentations to develop usable integrated knowledge, 5) reflection and feedback in work-based learning. Twenty cases from the psychocardiology clinic were chosen and presented in a lecture to the cardiologists. The content moved from simple to complex, and from basic principles to applications in practice with the iterative revisiting of themes and re-emphasising of topics. The breadth and difficulty of cases increased as the lecture progressed. A questionnaire was used to obtain feedback from the learners to ascertain the value of the presentation to them. Additional insight was gained from reflection based on the data collected from the referrals to the psychocardiology clinic.

Results

Twenty cardiologists attended the lecture. The referral rate to the psychocardiology clinic increased from one case per two weeks before the lecture to two cases per week after the lecture. The cases referred showed that the learners had learnt to recognise somatic presentations of depression and anxiety. The feedback from the learners included the following themes: 1) all (n=20) felt that the lecture had increased their awareness of psychological symptoms 2) all (n=20) felt that they had an understanding of the type of cases seen in the psychocardiology clinic 3) 75% (n=15) felt that they could identify signs and symptoms of depression 4) 80% (n=16) felt that they could characterise the anxious thoughts that accompanied cardiac symptoms and identify the catastrophic interpretation of heart-focused sensations.

Conclusion

Healthcare is moving from linear - physical care and psychosocial healthcare are separate - to integrated. In order to effectively intervene when cardiac patients have anxiety or depression, the anxiety or depression must first be recognised. We believe that inter-professional learning is a key factor in successful interprofessional collaboration. We hope that our description of the meaningful use of the principles of learning in interprofessional education will be helpful to healthcare teams that wish to integrate physical and psychosocial healthcare.

D2044

DEPTH OF REFLECTIVITY ACHIEVED IN THE REFLECTIONS OF PAEDIATRIC RESIDENTS

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Aims

Paediatric residents are required to write 2 Reflective Entries (RE) in each of their 3-years of clinical training. They can use a structured reflective portfolio (Form A), a generic learning document (Form B) or un-guided freestyle writing (Form C). We aimed to determine what issues paediatric residents chose to reflect upon, the depth of reflection demonstrated, and if these varied with the type of form used or year of training (R1, R2, R3).

Methods

With consent from the residents, their RE (2010-2013) were retrospectively analysed. Two assessors, blinded to resident names and year of training, independently reviewed these RE. Assessors determined the types of issues covered and scored reflections based on Mezirow (1989) six levels of reflectivity (1: reflectivity; 2: affective reflectivity; 3: discriminant reflectivity; 4: judgemental reflectivity; 5: conceptual reflectivity; 6: theoretical reflectivity). Any differences in scoring were subsequently resolved by consensus.

Results

Eighty-eight RE were analysed (59% R1, 28% R2, 13% R3). Issues residents reflected on include: encounters with difficult parents or patients (22%), patient management (21%), their training experience (15%), end-of-life issues (10%), interactions with colleagues (8%), medical error (7%), systems-based issues (7%), resuscitation (6%), breaking bad news (3%) and ethics in decision-making (1%). 40% of the RE were about "moments of frustration", 20% about "moments of brilliance" while 11% on "moments of regret". 50% used Form A, 36% Form B and 14% Form C. 75% of RE went beyond level 1, achieving a depth of reflectivity considered as "consciousness" (level 2, 3 or 4), whilst 72% were able to demonstrate a deeper level known as 'critical consciousness' (level 5 or 6). Residents were more likely to demonstrate a deeper level of reflectivity if they used the structured form (77% vs 72% vs 50% for Form A, B and C respectively; $p=0.178$) regardless of year of training. Senior residents were not more likely to demonstrate a deeper level of reflectivity compared to junior residents ($p=0.064$).

Conclusion

Paediatric residents tend to reflect more about difficult situations. Almost three-quarters of the RE demonstrated a deeper level of reflection. A structured RE was useful in helping residents to achieve deeper levels of reflection. More senior residents were not able to demonstrate deeper reflection despite their increased time in training.

D2045**LEARNING STYLE PREFERENCES OF UNDERGRADUATE PHARMACY STUDENTS IN THE NATIONAL UNIVERSITY OF SINGAPORE*****Wong L, Yap KZ, Gan BS****Department of Pharmacy, Faculty of Science, National University of Singapore, Singapore***Aims**

Today's pharmacy students represent a varied spectrum in learning styles and approaches. While this diversity is welcomed, it poses a challenge for instructors to fulfil the educational needs of all students. Furthermore, there is a considerable challenge of instructing a large volume of knowledge within a limited time period. By understanding the learning preferences of students, teaching approaches can be tailored to accommodate the diversity in their learning preferences.

The primary objective is to investigate learning style preferences of students of National University of Singapore (NUS), specifically, sensory learning preferences and approaches towards learning. The secondary objective is to identify the associations between gender, year of study, and pre-university qualifications with the reported style and approaches of study.

Methods

This is a cross-sectional study involving all NUS Pharmacy Undergraduates, for the Academic Year 2013/2014. The validated VARK learning questionnaire and the revised Two-factor Study Process Questionnaire were used in this study.

Results

524 of 672 students (78.0%) participated: The majority (61.8%) has multimodal learning styles, while read/write learning style is most preferred among unimodal learners. Among all the four years of study, it is observed that the Year 1s' approach to learning is significantly less surface strategic than the other years of study. Furthermore, males are observed to be significantly more surface motive in their learning approach than females. ($p < 0.05$)

Conclusion

Learning styles and approaches differ among pharmacy undergraduates. Knowing this difference allows educators to create an effective learning environment, and enriching the students' learning experience.

D2046**THE STUDY OF THE RELATIONSHIP BETWEEN ACADEMIC RESULTS IN SURGERY SUBJECTS AND ACTIVITIES DONE DURING THE SDL PERIOD****Asanasak P***Surgery Department, Songkhla Medical Center, Songkhla Hospital /Songkhla Medical Center, Thailand***Aims**

Learning management during the SDL period crucially improve students' academic performance. This study purposes to explain a relationship between activities during the SDL period, planned and actually done by medical students in the 4th and 5th year, and the students' academic results.

Methods

This study employed a survey study as the main data collecting method. The students had to answer questions regarding a percentage of how much time they spend on the learning activities during SDL period. The questions are divided into two parts; planned activities and done activities. The information from the survey will be compared with the students' average academic scores

Results

No relationship between the percentage of time spent in lesson -revision, completing reports or homework and ward activity during the SDL period and the academic score .But there is a potential relationship between the gap in the percentage of time spent in planned and done lesson-revision and the gap in the percentage of time spent in planned and done completing reports or homework during the SDL period and the academic score in both 4th and 5th year students. The students with a small gap tend to achieve higher scores than the students with a bigger gap

Conclusion

Students with higher responsibility to do their planned activities during the SDL period seem to have a higher academic scores than students with less responsibility. Allowing students to independently choose their learning activities during the SDL period and encouraging them to be responsible can increase their academic scores

D2047**MAKING TEAM-BASED LEARNING (TBL) MORE EFFECTIVE- THE 'TEAM TEACHING' APPROACH*****Rajalingam P, Gullo C****Educational Development, Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore***Aims**

The Lee Kong Chian School of medicine (LKCMedicine), a new partnership between Nanyang Technological University (Singapore) and Imperial College London (United Kingdom) uses Team-Based Learning (TBL) as its pedagogical platform for the teaching of biomedical sciences. The development of application exercises (AE) is one of the most challenging aspects of TBL implementation for the following reasons: 1) AE development requires a significant time commitment, 2) for those more familiar with traditional lecture-based teaching, the amount of work appears to be more complex, 3) TBL-to-TBL consistency is often problematic because most medical and graduate school courses are taught by a large number of instructors, 4) team discussions during AE sessions are designed to be more open-ended and thus potentially more difficult to manage by instructors who are used to closed-ended types of sessions, and 5) TBL sessions are student-centric which can be challenging for instructors more accustomed to a 'teacher-centric' environment. This presentation describes a framework and approach to faculty development that address these issues.

Methods

Detailed description of this framework and how it guided the faculty development process at LKCMedicine.

Qualitative data generated from interviews with key faculty will be used to illustrate the outcomes of the faculty development process.

Data will be coded and presented in thematic form.

Results

In order to reduce the burden for any one individual and address the above-mentioned challenges, we have instituted a team-teaching approach. Brief description of the framework as follows: At LKCMedicine each TBL session is developed and taught by a multidisciplinary faculty team, with each team member having a distinct responsibility. In each team there is (1) a course lead who is responsible for the quality and continuity of the entire course, (2) a content expert who thoroughly understands the content being taught in the session and assists develops the curriculum and, (3) a TBL Facilitator who manages productive student discussions during TBL sessions and provides pedagogical expertise before and during the educational sessions. While these roles may be distinct our team approach ensures significant collaboration between the team members such that learning enhanced.

Conclusion

Team-teaching facilitates shared decision making and if transparent, shows students that instructors can also work together in teams to promote a student-centric learning environment. An added benefit of implementing this type of team taught TBL process is that it prevents instructors from working in silos. When implemented effectively, members of this teaching team work together to overcome many of the roadblocks that make the development and execution of TBL session challenging.

D2048

THE EFFECT OF LEVEL OF STUDENT INTERACTION IN SMALL-GROUP TUTORIALS ON STUDENT ACHIEVEMENT

Wimmers P, Lee M

Dean's Office / Educational Development & Research (ED&R), UCLA School of Medicine, USA

Aims

The key feature distinguishing cooperative settings from other learning settings is interaction among students and most educators would agree that the group process is fundamental to the Problem-based Learning (PBL) tutorial. Previous studies in the effect of group processes suggest that neither the group nor the individual setting is best for everyone; the benefits of a particular setting depend upon the experiences of the learner within that setting (See for example, Webb, 1982; 2007). Active participation in the group process is more beneficial for learning of the individual members of the group than a lack of any discernible involvement. The question we seek to answer was: What is the longitudinal relationship between level of group participation in PBL and achievement? It is expected to see a cumulative advantage for active participation of students over time in contrast to inert students.

Methods

Data used in this study were collected from UCLA medical school 1st and 2nd year students from class of 2013 and 2014 (n=316). The PBL tutor/facilitator in each block observes and scores student participation levels or "Group Process" on a 7-point Likert scale of the PBL-evaluation form used in all 9 blocks. We divided the cohorts in a low and high performers group based on their initial Block 1 "Group Process" performance and looked at their future growth trajectories as a function of initial Group Process. MCAT scores were used as a measure of their initial ability and USMLE Step I scores were used as a measure of achievement. Linear Growth Modeling using Structural Equations Modeling was used to analyse growth curves, and SPSS was used to analyse the relationships between variables.

Results

SEM analysis revealed that the intercepts of the low and high Group Process groups were 5.16 and 5.39, respectively. The mean increments of the slopes of the growth curves of the low and high group process groups were .04 and .06 for each block, respectively, and no interaction between the growth curves of the two groups is found. MCAT and Step I scores were both significantly different between the groups ($F=8.073$ and 16.275 , $p<.005$, respectively), with a greater effect size for Step I (.052 vs. .100). ANCOVA analysis revealed a significant effect for Group Process on Step I after controlling for preexisting differences in MCAT scores, $F=59.828$, $p<.0005$.

Conclusion

The data shows a continuous relationship between initial ability, group process, and achievement. Active group participation has no cumulative advantage; students who participate actively do not tend to improve at a higher rate in contrast to inactive students. The mean cumulative increase (slope) in group process is similar for each individual student and directly related to their initial level of participation (intercept) when they started medical school. Our results seem to indicate that competent students tend to engage more actively in group settings, which may subsequently contribute to the sustainability of their high achievement status.

Saturday 7th February 2015

Foyer, Level 2, University Cultural Centre

1.00pm – 2.00pm

POSTER PRESENTATION – SESSION 4

GROUP 21

- D2049** **How Do Japanese Unmarried Female Physicians Value Their Work And Private Life?**
Hiroshi Nishigori, Japan
- D2050** **Simulation Training of Medical Emergencies In Dentistry**
Wong Raymond, Chung Wen, Singapore
- D2051** **Relating Teaching Qualifications And Basic Need Satisfaction In Teaching**
Rik Engbers, The Netherlands
- D2052** **Evaluation of An On-Line Learning Module To Improve Prescribing In Primary Care**
Richard Knox, United Kingdom
- D2053** **Relations Between Policy For Medical Teaching And Basic Need Satisfaction In Teaching**
Rik Engbers, The Netherlands
- D2054** **Continuous Professional Development; What Is The Preferable Method?**
Abdulkader Al Juhani, Saudi Arabia
- D2055** **Faculty Evaluation By Chief Resident: What Role Is Missing In Faculties of FMUI (Faculty of Medicine Universitas Indonesia) Residency Program?**
Rita Mustika, Indonesia
- D2056** **Analysis of Influence of Students Perception On Adopting Integrated Curriculums**
Rukia Kafaji, Saudi Arabia

GROUP 22

- D2057** **Pain Recognition And Management In The Cognitively-Impaired: Are We Teaching Enough?**
Tan Rou An, Singapore
- D2058** **Flipped Classroom For Medical Teacher Training: Turning Faculty Development Upside Down**
Sabine Schmidt, Germany
- D2059** **A Short Intensive Combined Course For Doctors Planning To Conduct Ward Round Teachings In A Foreign Language**
Sima Sarvari, China
- D2060** **Development of Competencies of Public Health Inspectors In Northern And Eastern Provinces of Sri Lanka In Order To Improve Their Public Health Practice**
Saliya Chandra Kumara De Silva, Sri Lanka
- D2061** **Predicting Junior Doctor's Performance In Workplace Based Assessment**
Sandra Carr, Australia
- D2062** **Students' Experiences of Integration of Learning In An Undergraduate Medical Programme: A Phenomenographic Study**
Shalote Rudo Chipamaunga, South Africa
- D2063** **Promoting Gender Awareness In Post-Graduate Medical Education**
Shio-Jean Lin, Taiwan
- D2064** **An Emergency Department's Experience of Using "Shift Cards" As A Form of Feedback**
Lee Shu Woan, Singapore

GROUP 23

- D2065 Relationship Among Interpersonal Needs, Stress, And Depression of Freshmen Students In A Medical School**
Yera Hur, South Korea
- D2066 A 360-Degree Appraisal of Close Working Between Students And Physicians Towards Learner-Led Ethics Publications**
Sim Shin Wei, Singapore
- D2067 Clinical Pharmacist Preparatory Programme In Singapore**
Lim Siew Woon, Singapore
- D2068 Challenging Longstanding Conceptions Through The Imputation of New Data**
Sim Shin Wei, Singapore
- D2069 Teaching The Intricacies of Managing Critically Ill Patients To Undergraduates In An Interprofessional Manner**
Siddiqui Shahla, Singapore
- D2070 When Motivation And Competence Act Together To Influence Academics' Research Output, Staff Development Alone May Not Work**
Sisira Dharmaratne, Sri Lanka
- D2071 Undergraduate Medical Research: Evaluation of Research-Specific Competencies**
Shouq Kherallah, Saudi Arabia
- D2072 The Learning Approaches of Medical Students**
Chonkar Sonali Prashant, Singapore

GROUP 24

- D2073 Application of Social Networking In The Preclinical Year Course of PBL Curriculum**
Sophapun Ekarattanawong, Thailand
- D2074 Meeting Criteria of Experiential Learning - A Review Method of The Medical Curriculum**
Stefan Kutzsche, Malaysia
- D2075 The Effect of A Simulator-Based Orientation On Confidence In Managing Intraoperative Emergencies Among Second-Year Anesthesia Residents**
Steven Green, Canada
- D2076 Characteristics of Communication In Breaking Bad News By Medical Students With Little Clinical Experiences**
Akiko Sugawara, Japan
- D2077 The Clinical Skills & Simulation Center (CSSC): Is Assisting In Conducting Assessment of Clinical Skills Through OSCE (The Objective Structured Clinical Examination) For Undergraduate Fifth Year Medical Students With Limitation In The Organizations**
Sumaiah Abdulwahab, Saudi Arabia
- D2078 Accuracy And Inter-Rater Reliability In The Auscultation of Lung Sounds Among Final Year Physiotherapy Students In Singapore: A Cohort Study**
Ong Sze Pheng Christel, Singapore
- D2079 Designing A Systematic Approach To Undergraduates Training For The 3 Medical Schools: Paediatrics Core Curriculum**
Tan Winny, Singapore
- D2080 Faculty Development In Resilience: A Keyhole View of The State of Readiness And An Opportunity To Develop Adaptive Capacity In Pediatricians.**
Tan Shu Zhen Teresa, Singapore

GROUP 25

- D2081** **Use of Cadaveric Cross Sections In Undergraduate Anatomy Teaching...Does It Improve The Understanding of Topographical Anatomy And Ability To Interpret Clinical Imaging?**
Lasitha Samarakoon, Sri Lanka
- D2082** **A Pilot Study Into The Construction of A Check List To Assess A Difficult Situation In Health Professional Education**
Chihiro Kawakami, Japan
- D2083** **Effectiveness of Skeleton Hand-Outs During Ophthalmology Theory Lectures For Undergraduate Medical Students**
Prabhu Venkatesan, Malaysia
- D2084** **Implementation of Clinical Videos To Demonstate Clinical Anatomy Based Topics In Dissection Theatre For I Year Medical Students**
Vidya CS, India
- D2085** **Perceptonal Changes On Graduate Entry Medical Education In Japan: A Case Study On A Series of Political Seminars For Non-Medicals Towards National Consensus**
Masako Sugihara, Japan
- D2086** **Guideline To Implement Continuing Professional Development (CPD) Activities Among Sri Lankan Grade Medical Officers - Views of CPD Leads**
Y.G.S.W. Jayarathne, Sri Lanka

GROUP 26

- D2087** **Singapore Neonatal Resuscitation Program : Experience And Lessons Learnt**
Yeo Cheo Lian, Singapore
- D2088** **Preliminary Evaluation of A Pilot Structured Inter-Professional Training Programme For Emerging Clinical Educators In Tan Tock Seng Hospital, Allied Health Services (Occupational Therapy, Physiotherapy, Podiatry)**
Tay Yi Chin, Singapore
- D2089** **Using Technology To Integrate Holistic Patient Restorative Management In An Undergraduate Dental School Setting**
Yu Peter, Singapore
- D2090** **Stress Among Medical Students During Clinical Years**
Ova Emilia, Indonesia
- D2091** **How To Do Effective Feedback For Residents In Emergency Settings**
Takahiro Matsuguchi, Japan
- D2092** **Assessing Professionalism, Communication, And Collaboration In Clerkship Year By Implementing A 360-Degree Evaluation**
Rashed Najeeb AlAamer, Bahrain
- D2093** **Faculty Empowerment As A Strategy For Curriculum Change**
Anna Tereza Soares de Moura, Brazil
- D2094** **The Myringotomy Ear Simulation Model**
Ker Liang, Singapore

D2049

HOW DO JAPANESE UNMARRIED FEMALE PHYSICIANS VALUE THEIR WORK AND PRIVATE LIFE?

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Aims

Recently in Japan, the number of female physicians has been increasing, consisting of approximately 20% of all the doctors. However, many tend to leave medicine or give up full-time work because they feel it is difficult to have a good balance between work and private life. Though a lot of studies have clarified working environment of female physicians (especially in child rearing) so far, we know little about how female physicians perceive their work, through the conceptual framework of “work value”. Our research question is “How do Japanese unmarried female physicians value their work and private life?”

Methods

In 2014, we recruited purposive samples of 10 unmarried female physicians (PGY6~PGY13) in Japan and conducted semi-structured individual interviews. All discussions were audio-recorded and transcribed verbatim. Data was read iteratively by the first author (TM) and analysed thematically, identifying, analysing and reporting patterns (themes) within the data and developing an interpretive synthesis of the topic. The second (YK) and the third author (HN) read the transcripts separately and discussed the identified themes with TM. Ethical approval was granted by the Institutional Review Board at Nagoya University Hospital.

Results

In the early stage of their career, unmarried female physicians tended to give high priority to their work, resulting in feeling of self-efficacy and getting social approval through working as a doctor, saying “I felt happy when I supported a successful delivery (as a doctor)”. They successfully formed professional identity by playing a “doctor role” with little care about private life in this stage, saying “When I was a resident, I really enjoyed my work and was not interested in marrying very much...”. However, they valued private life more in the following stage when they completed specialty training at the age of around 30, saying “I feel I am irreplaceable in my family, (so it is important)”. This was because they noticed the fact that they valued their professional role more but little on their family role in their identity formation, or they were enslaved by a traditional idea that women must play a “wife role” and/or a “mother role”. In addition, interestingly, unmarried female physicians felt superiority to married physicians in terms of “doctor role”, saying, “I think we (unmarried full-time female physicians) work differently from married part-time female physicians.” This may make discussion of work-life balance for female physicians more complex.

Conclusion

We clarified the process of values of Japanese female physicians for both work and private life by describing their narratives. Further research should look for why they concentrate heavily on developing professional identity.

D2050

SIMULATION TRAINING OF MEDICAL EMERGENCIES IN DENTISTRY

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Aims

Anecdotal feedback from previous graduates of the Dentistry undergraduate program showed many were not confident in the management of medical emergencies that may occur. Evidence has shown that a simulation hands-on type of training aids in showing students how to integrate what they have learnt into practice and also aids in retention of knowledge.

Objective: 1) Provide hands-on simulation training to undergraduate dental students in managing common medical emergencies; 2) Familiarise them to the set-up of the emergency trolley and the minimum standards for equipment and drugs; 3) Expose them to the activation of emergency services and 4) Provide a format for the reporting of medical emergencies and the conveying of information for further referral.

Methods

The entire cohort of Final Year Dental undergraduates underwent a pilot project during the General Practice Module of the undergraduate dental curriculum. The training was conducted over a half-day session at the Faculty of Dentistry, NUS. A Pre-course MCQ (20 questions) and survey about the management of common medical emergencies that may present in dental practice was conducted. The students were then taken through four stations covering 1) the layout of the emergency trolley emphasising minimum standards for the components of the trolley as stipulated by the Ministry of Health, Singapore; 2) a refresher on intravenous and intramuscular access, including administration of drugs and drug dilution; 3) procedure for patient transfer and 4) basic airway management with an Ambu-Bag.

The second half of the session consisted of four scenarios 1) Acute Myocardial Infarction (using a jointed mannequin in a dental chair setting), 2) diabetic coma (using a Standardised Patient actor), 3) anaphylaxis shock and 4) cerebrovascular stroke. A Post-course MCQ was administered using the repeated Pre-course questions in a different sequence and a feedback survey was then administered.

Results

There was a marked improvement in the pre- and post-course MCQ scores. (pre-course MCQ score 10-16, mean 13.4; post-course MCQ score 11-19, mean 16). The difference was highly statistically significant ($P < 0.001$). Students unanimously gave positive feedback. Most generally agreed that the training should be performed during the General Practice Module and the time allocated for the training was adequate. They were also surveyed on their confidence level in managing the 4 medical emergency scenarios. Before the training, the mean self-reported confidence (Likert Scale 0-10) for acute myocardial infarction, diabetic coma, anaphylaxis shock and stroke were 4.52, 5.05, 4.95 and 4.61 and 7.07, 7.52, 7.32 and 7.32, after the training respectively. The overall confidence level was 4.78 and 7.31 before and after the training. The improvement in confidence was again highly significant ($P < 0.001$).

Conclusion

Simulation-based training greatly improves the understanding and management of medical emergencies, crystalizes the steps to be taken and aids in knowledge retention beyond conventional lectures and tutorials for Final Year Dentistry Undergraduates.

D2051

RELATING TEACHING QUALIFICATIONS AND BASIC NEED SATISFACTION IN TEACHING

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Aims

To explore relations between the system of Teaching Qualifications at the RUMC and motivation in terms of feelings of autonomy, competence and relatedness in medical teaching.

Methods

An online questionnaire was used to collect data about medical teaching in the setting of a university hospital. We adapted the Work-related Basic Need Satisfaction scale (W-BNS), in order to measure feelings of autonomy, competence, and relatedness in teaching. We applied multivariate OLS regression analysis to examine the relations between the system of Teaching Qualifications and the satisfaction of three basic psychological needs. Using propensity score matching, we also analysed the variables as a robustness check.

Results

A total of 767 medical teachers participated. Teaching Qualifications appear to be primarily related to beneficial outcomes on feelings of competence in medical teaching. Propensity score matching yielded similar results.

Conclusion

Teaching Qualifications appear to be primarily related to increased feelings of competence in teaching. This means either Teaching Qualifications are obtained by teachers who feel competent in teaching, or obtaining a Teaching Qualification makes teachers feel more competent in teaching. Additional research needs to scrutinise the causal relations further and to determine optimal conditions for this policy initiative more specifically.

D2052

EVALUATION OF AN ON-LINE LEARNING MODULE TO IMPROVE PRESCRIBING IN PRIMARY CARE

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Aims

To evaluate the effectiveness of an on-line learning module for family practitioners.

Methods

The PRACTICE study found that prescribing errors in UK family practices occur in around one in 20 prescriptions and that many factors increase the risk of error. (Avery AJ et al. Investigating the prevalence and causes of prescribing errors in General Practice: The PRACTICE Study. A Report for the General Medical Council. 2012, University of Nottingham: Nottingham, UK). One of the recommendations from the report was to produce educational materials to help enhance the knowledge and skills of family practitioners with respect to safe prescribing.

Based on the findings of the study we have developed the “Safer Prescribing” e-learning course, which was launched on the Royal College of General Practitioner’s e-learning platform in January 2014. Participants have to complete pre- and post-course multiple choice assessment questions based on the material covered in the e-learning package. Comparisons will be made between pre and post course assessment scores. Participants are also invited to complete an on-line evaluation survey, and to take part in a telephone interview one to three months following their completion of the on-line learning.

Results

So far, more than 1100 people have accessed the e-learning module, and the detailed on-line survey has been completed by more than 200 people. The survey will continue to run for the next few months. The process of follow-up telephone interviews has just commenced.

Preliminary evaluation has demonstrated that the average score of the assessment taken before the e-learning module was 59%; the average score after completing the module was 78% (an increase of 19%). Of those completing the detailed feedback questionnaire, 99% (n=202) either agreed or strongly agreed that the module had increased their knowledge of prescribing. 99% (n=202) of participants either agreed or strongly agreed that the e-learning course had been a useful part of their continuing professional development (CPD). Participants were also invited to outline aspects of their prescribing that they would like to change (or had changed) as a result of completing the module. Such changes included spending more time with patients to ensure understanding of dosage instructions, and enhancing the role of pharmacists within their practice.

Conducting telephone follow-up interviews has permitted more detailed interrogation of practices that have been changed as a result of completing the module.

Conclusion

Prescribing is an important aspect of a family practitioner’s work. The PRACTICE study highlighted aspects of prescribing that can be particularly challenging and more likely to be associated with an error. We have developed the e-learning package based on information gained from the PRACTICE study.

Robust evaluation of the e-learning package will help inform its future development and plan for implementation of further educational interventions to improve prescribing in primary care and enhance patient safety. By conducting detailed telephone interviews, we hope to highlight specific areas of practice that have been changed as a direct result of completing the on-line module. Such changes in practice are important outcomes of any continuing professional development, but are usually difficult to prove.

D2053

RELATIONS BETWEEN POLICY FOR MEDICAL TEACHING AND BASIC NEED SATISFACTION IN TEACHING

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Aims

Policy initiatives that aim to elevate the position of medical teaching to that of medical research could influence the satisfaction of three basic psychological needs related to motivation for medical teaching. We aim to explore relations between the satisfaction of three basic psychological needs towards medical teaching and two policy initiatives for medical teaching: (Junior) Principal Lecturer statuses ((J)PL statuses) and Subsidised Innovation and Research Projects in Medical Education (SIRPMEs).

Methods

An online questionnaire was used to collect data about medical teaching in the setting of a university hospital. We adapted the Work-related Basic Need Satisfaction scale (W-BNS) (Van den Broeck et al., 2010), in order to measure feelings of autonomy, competence, and relatedness in teaching. We examined the relations between (J)PL statuses and SIRPMEs and the satisfaction of three basic psychological needs, and studied the causality of the relations.

Results

A total of 767 medical teachers participated. The initiatives appear to be related to different beneficial outcomes on feelings of autonomy, competence, and relatedness in medical teaching. Both initiatives trigger the interest of colleagues in medical teaching.

Conclusion

The two policy initiatives under study appear to be related to increased feelings of autonomy, competence, and relatedness in teaching. Additional research needs to scrutinise the causal relations further and to determine optimal conditions for policy initiatives more specifically.

D2054

CONTINUOUS PROFESSIONAL DEVELOPMENT; WHAT IS THE PREFERABLE METHOD?

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Aims

Continuous professional development (CPD) is the way professionals continue to learn and develop throughout their careers so they keep their skills and knowledge up to date and are able to work safely, legally and effectively (health & care professions council).

In a world changing every day with new innovations in medical education field and the increase of work load among health care providers as a result of global shortage, CPD becoming more challenging leading to the need to choose the best method which can have the equilibrium between the pressure of workforce and the requirement of CPD.

The aim was to find out what health care providers' opinion about the preferable method for CPD activities?

Methods

A questionnaire was developed trying to find out what is the preferable method for CPD activities among health care providers.

It was sent by E-mail to all the hospital health care staff and the same form was printed and distributed in 3 other hospitals.

Results

The results were collected through on-line form, and the printed forms were entered manually to the same form and showed:

35% of the participants preferred on-job training as the best way for CPD, 26% thought of short courses as the best method, followed by 14% for conferences.

Morning Meeting, ward round and Internet browsing were almost similar and were chosen by 7% for each of them as a method for CPD.

Interestingly, only 2% have chosen the books and journals as their preferred method for CPD.

Conclusion

On-Job training defined as; training at the place of work while doing the actual job was the preferred method for a good percentage of the participants reflecting the importance of this type of training as well as the need for it due to the shortage of time available for health care provider, which also reflected on the second preferable method i.e. short courses.

Although ward rounds, morning meeting are important part of activities, an efforts to be made to have them as educational resources for CPD as well as junior staff education.

With the new development in media, educational resources; the classical methods as books and journals as becoming less preferable, specially to the new generations of health care providers reflecting the importance of resources allocation and efforts to make these resources appealing.

D2055

FACULTY EVALUATION BY CHIEF RESIDENT: WHAT ROLE IS MISSING IN FACULTIES OF FMUI (FACULTY OF MEDICINE UNIVERSITAS INDONESIA) RESIDENCY PROGRAM?¹*Mustika R, ²Sungkar S*¹*Medical Education, Faculty of Medicine, University of Indonesia, Indonesia, ²Faculty of Medicine, Universitas Indonesia, Indonesia***Aims**

Clinical teacher is an essential component of teaching and learning in clinical setting especially in residency program. An excellent residency program depends on the quality of clinical teachers available in the program. Studies have shown that an excellent clinical teacher is one that could act as an excellent teacher, role model and mentor. FMUI has provided some faculty development training for clinical teacher since 2008. Training materials include teaching, role modelling and mentoring skill. Most of faculties have already undergone these training. The purpose of this study is to evaluate faculties in FMUI residency program. Percentages of excellence clinical teacher were sought and role that needed improvement was identified.

Methods

This study used cross-sectional survey design by distributing questionnaire with closed and open-ended question. The questionnaire was developed and validated elsewhere. Scope of questions are performance of faculties in teaching, role modelling and mentoring roles. Respondent are chief resident (end year resident) from 27 residency program in FMUI. They were asked to anonymously evaluate faculties who supervise them during at least 1 year period, and every faculty was evaluated by 6-8 resident. In total, there were 644 faculties evaluated, with average 24 faculties in each residency program. Survey were done in June-July 2014.

Results

Result showed that percentage of faculties perceived as an excellent clinical teacher by chief resident from 27 residency program in FMUI varied from 30.43% - 100% (average 74%). Eighty-five percent of residency program (23 out of 27) have more than 50% excellent clinical teacher as evaluated by chief resident. Moreover, orthopedic, oncologic radiation, forensic and urologic were residency program that 100% of faculties were evaluated as excellent. While chief resident from surgery, clinical pathology, radiology and cardiology perceived that less than 50% of their clinical teacher were excellent. Among Non-excellence, chief resident perceived that mentor is a role that need improvement most (6.19%). Chief resident mentions that need more time for discussion and interact with resident were the most frequent answer for open-ended question about aspect that need improvement. This answer could be a reason for lack of mentoring role. Chief residents deem the strength of faculties is knowledge and the ability to transfer knowledge well.

Conclusion

Percentage of excellent clinical teachers in FMUI were quite high (74%). The strength of faculties were having good knowledge and ability to teach. Although they have good evaluation on teaching and role modelling role, faculties still have to improve their performance on mentoring role. Need further study to investigate causal relationship between mentoring role and time management or communication with resident to clarify the cause of lower score of mentoring role.

D2056

ANALYSIS OF INFLUENCE OF STUDENTS PERCEPTION ON ADOPTING INTEGRATED CURRICULUMS

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Aims

Conventionally, the traditional curriculum approach is implemented to teach the medical curriculum. This type of curricula consists of two years pre-clinical followed by three years of clinical studies. As medicine is developing with creation of massive knowledge base, it became impractical for medical undergraduates to master all these sciences. Therefore, during the past decade, the integrated curriculum has become the norm in North American medical schools, and is being widely adopted worldwide.

Despite growing interests in integrated curriculums, no standard definition of an integrated curriculum has been published. Furthermore, integration has been limited to either basic or clinical years with rare or almost no models where the curriculum is completely integrated both vertically and horizontally. In addition, little attention has been dedicated to understand the perceptions of students regarding the actual meaning and benefits of adopting such a curricula.

This study explores the students' perspectives on integrated curriculum and the key success factors for its implementation. Thus helping the development of completely integrated curriculums.

Methods

We conducted a cross sectional study in which we collected the data through an anonymous, online survey administered to medical students of Alfaisal University in Riyadh, Saudi Arabia who studied for at least one year in a SPIRIL, hybrid-PBL integrated curriculum. We administered the survey to males and females from all college levels from first year to internship year (n=278).

Results

103 students replied (37.05% response rate), out of which 30.1% reported not knowing what was meant by complete curricular integration. Furthermore, despite that the remaining 69.9% claiming to know what curriculum integration was, only 44.66% of them were able to correctly identify the correct definition outlining all the major reported components of complete curricular integration in following questions. Furthermore, when asked if they believe they study in an integrated curriculum or not, 19.43% reported that they don't know while 16.5% reported that they don't agree to considering the current hybrid-PBL a completely integrated curriculum model. Interestingly, when asked about their perception about the effectiveness of curriculum integration on their learning, 68.94% reported it to be effective. In regards to evaluating integration benefits, 43.69% reported that it helped them retain more knowledge and to have a deeper understanding of concepts thus ranking it first among all reported benefits. Furthermore, 48.54% reported that they prefer if complete integration took place between all phases of medical school and wasn't limited to specific phases, including integration of post-graduate phases of medical education. Furthermore, Problem Based Learning (PBL) followed by Large Group Discussions (LGD) were ranked as the top methods of delivery of integrated curricula scoring 49.69% and 26.21% respectively.

Conclusion

Students find integration of basic and clinical concepts and integration across different study disciplines effective and important to their development. Therefore, more effort needed to be devoted to the development of effective complete trans-disciplinary integration models where the curriculum is completely both vertically and horizontally integrated all throughout the student's medical education journey.

D2057

PAIN RECOGNITION AND MANAGEMENT IN THE COGNITIVELY-IMPAIRED: ARE WE TEACHING ENOUGH?

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Aims

Pain is the fifth vital sign. Chronic pain occurs, and is unrecognised, in a large proportion (58%-70%) of elderly, especially in the institutional setting. Patients who experience difficulties in communication are particularly at risk for untreated pain.

Unrecognised, uncontrolled pain leads to adverse deconditioning-related (contractures, decreased mobility) neuropsychiatric (depression, accelerated multi-domain cognitive decline) and hormonal (glucocorticoid suppression, excess sympathetic drive, insulin-lipid abnormalities) complications. This is especially important in our rapidly ageing society.

We aimed to see if pain in our cognitively-impaired patients was well-identified and well-treated.

Methods

We conducted casenote and chart review together with independent pain assessment using a validated scoring system for cognitively-impaired patients (PAINAD) in an NUH General Medicine ward.

We also conducted surveys of healthcare staff in order to assess confidence in pain recognition and management and look for potential barriers in timely analgesia delivery.

Results

Out of 44 patients in a General Medicine ward, 27 (61.3%) were cognitively-impaired. In the cognitively-impaired, 19 (70.3%) were assessed to have pain using the PAINAD. However, 16 (84% of patients in pain) had discrepancies between pain scores charted and recorded pain using the validated tool - either unrecorded, or underestimated.

In our survey of 43 nurses and 37 doctors, most (Doctors: 58.5%; Nurses: 54.0%) felt analgesia was delayed more than 50% of the time. Most nurses (38.0%) and doctors (45.0%) felt this delay was unnecessary or preventable more than half the time.

Difficulty in assessing pain due to communication barriers was highlighted as the main reason for delayed analgesia delivery (Doctors: 21.2%; Nurses: 24.1%)

When doctors were shown a validated assessment tool for pain currently in use in our institution (PAINAD), 64.7% of doctors had never heard of it before. 89.2% had never used it before.

Only 32.6% of nurses felt confident enough to make an independent pain assessment and communicate consistently with other healthcare staff. Most (62.8%) still rated themselves as "fairly-confident", whereas 4.6% were not confident, and would prefer the reassurance of a doctor's assessment.

Conclusion

Most nurses and doctors felt medication is not delivered fast enough to patients in pain. A communication barrier between healthcare staff and patients was perceived to be the main reason for delayed analgesia delivery.

This is consistent with our data, which shows:

1. Significant discrepancies between pain charting and assessed pain score.
2. Significant proportions of demented patients experiencing unrecorded, untreated pain.

Also,

3. A large proportion of nurses do not feel confident enough to consistently independently assess pain.
4. Doctors are also still largely-unaware of formal methods of pain assessment in uncommunicative or demented patients.

There is certainly a role for further education of healthcare staff in:

- A. Recognising and assessing pain in the elderly; both to improve recognition of pain among patients by doctors, and to increase confidence among nursing.
- B. Encouraging healthcare staff to provide anticipatory care for elderly in pain.

D2058

FLIPPED CLASSROOM FOR MEDICAL TEACHER TRAINING: TURNING FACULTY DEVELOPMENT UPSIDE DOWN

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Aims

The implementation of the Flipped or Inverted Classroom represents a form of Blended Learning and has increasingly and primarily been used in elementary and undergraduate education. The evidence with a Flipped Classroom concept for faculty development (FD) in medical education is limited although participants of FD activities could benefit from it as working schedules of medical teachers is generally overloaded and daily challenges like varying practical and theoretical teaching experiences of medical teachers occur. This paper aims on generating an overview about how the Flipped Classroom is used in the context of undergraduate and postgraduate education. It summarizes the current state of research of the Flipped Classroom concept in the context of universities. It also aims on providing hints and tips for using Flipped Classroom in medical teacher trainings.

Methods

A systematic literature search was performed in June 2014 to identify published full-text research articles documenting the implementation of Flipped Classroom in an academic context. Relevant scientific online databases (CINAHL, ERIC, MEDLINE, PsycINFO, Teacher Reference Center) were searched for Flipped Classroom as well as Inverted Classroom and their related root words. Following initial screening a methodological screening was compiled using a mixed method approach. A quantitative summary was conducted on the areas of use and measurable outcomes followed by a qualitative synthesis on the motivation of flipping the classroom and experiences with it.

Results

After the initial screening 49 publications were included in the final analysis (undergraduate n=42, postgraduate n=6). There were diverse approaches towards the topic (e.g. review, original research, "how we..."). A variety of academic disciplines implemented the Flipped Classroom. Health professions were identified as the main area (n=13). Twelve publications reported on studies where diverse study designs were used. Evaluation outcomes (e.g. learner performance and perceptions of Flipped Classroom) were analyzed and aggregated. Given reasons for implementing the Flipped Classroom concept were often economic- or service-oriented.

Conclusion

This systematic literature search indicates that implementation of Flipped Classroom in the context of universities is fairly new and more frequently reported on in undergraduate compared to postgraduate education. In undergraduate education, it was shown that learners benefit from this concept, while the evidence on outcomes and perceptions are limited for its use in postgraduate education. There was surprisingly no evidence reported on the use of a Flipped Classroom concept in faculty development programs for medical teachers.

D2059

A SHORT INTENSIVE COMBINED COURSE FOR DOCTORS PLANNING TO CONDUCT WARD ROUND TEACHINGS IN A FOREIGN LANGUAGE

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Aims

As internationalisation in the medical field is increasing, there is a great need for doctors to be able to communicate and use medical language correctly to interact with visiting scholars and Medical personnel. With this in mind, a voluntary course in 'Improving Communication and Teaching Skills in English for Medical Professionals' was offered by SUMC to doctors at the First Affiliated Hospital of the city. This short intensive course was intended to prepare the participants for conducting hospital teaching rounds in English and gradually being able to present at international scientific meetings; in addition to igniting a 'self-study' approach in the participants to continue the methods they had acquired long after the termination of the short intensive course.

Methods

Departments of the affiliated hospital were informed to register staff members interested in the short intensive training course, with departments of ER, ICU, Hematology, Gastroenterology, Nephrology, and Pediatrics registering participants after which a pre-course analysis of the needs of the doctors was carried out. A pre-course modified language test comprising of oral, written and spoken items was conducted, in addition to a short questionnaire-style Medical Language knowledge test. The same tests were retaken again at the end of the short intensive course, with comparison being carried out between pre- and post-learning results. To facilitate the learning process, a combined learner-centred and skilled-centred approach was adopted with the course being divided into two parts; the first section emphasising on everyday language, and the second part focusing on Medical History taking with participants watching hospital related case scenario clips and role-playing to reinforce the language and communication styles. In addition, the doctors received several lessons in Latin and Greek Medical Terminology and were required to complete home assigned terminology related worksheets; watch one episode of a pre-defined TV series each week and write a short synopsis of the plot.

Results

By the final accounts of the medical doctors themselves and the comparison of their pre- and post-course results, the participants had made significant improvements during the short period. Analysis of data collected show doctors (n=9) from all of the above mentioned departments (n=6) achieved significantly higher results in their post-testing session as compared to the pre-course results. The participants felt more at ease communicating in English and expressed less anxiety in applying the language to communicate with foreign medical students and visiting scholars.

Conclusion

Despite the course being run for a short period (n=12 weeks), the doctors expressed satisfaction in having attended the course, with considerable improvement in hospital related vocabulary, communication and communication skills, not to mention, self-confidence. This course ran parallel with a case-study course and the participants noted ease in expression, and a better understanding of the case discussions after attending this short training session. It is hoped that the course will be held several more times during the year, with more doctors participating. However, the few number of participants makes it possible to tailor specific lessons for the attending physicians, and provide a more personal and private approach.

D2060

DEVELOPMENT OF COMPETENCIES OF PUBLIC HEALTH INSPECTORS IN NORTHERN AND EASTERN PROVINCES OF SRI LANKA IN ORDER TO IMPROVE THEIR PUBLIC HEALTH PRACTICE

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Aims

To develop and conduct an effective in-service training programme for the Public Health Inspectors in the Northern and Eastern Provinces of Sri Lanka. During the conflict situation that existed three decades in the Northern and Eastern provinces of Sri Lanka, the normalcy of all services delivered by both the state and private sectors was disturbed where health services were no exception. In the aforesaid provinces, most of the Public Health Inspectors (PHII) were working with very few opportunities to update their knowledge and professional skills. Moreover, there is no standard professional development pathway laid out to develop the Public Health Inspectors in facing the current public health challenges. To develop and conduct an effective in-service training programme for the Public Health Inspectors in the Northern and Eastern Provinces of Sri Lanka.

Methods

Need assessment was conducted by the key staff of the School of Public Health Inspectors, National Institute of Health Sciences, visiting the Regional Health Training Centres in the Northern and Eastern provinces of Sri Lanka. Self administered questionnaire was used to get information from PHII and focus group discussions were conducted with Supervising Public Health Inspectors (SPHII) to assess the gaps of knowledge and skills that required urgent updating to enhance their competency. Key informant interviews were held with the Senior Tutors in Public Health and Tutors in Public Health, higher officials in health administration and community leaders with a view to identifying the prevailing situation. Having understood the dimensions of the situation and urgency for remedial action, discussions were held at the School of Public Health, NIHS regarding the measures to be taken to uplift their capacity and working environments.

Results

From the information gathered it was understood that the following key areas need to be strengthened: Provision of Safe Food; Promoting Environmental Health and Enforcing Public Health Legislation. A two week programme was planned and undertaken using different types of teaching methods giving more emphasis on practical training. Practical training included site visits to places where public health programs are effectively implemented in the country such as the Sustainable Urban Solid Waste Management Project at Urban Council, Balangoda and Municipal Council, Nuwaraeliya; taking part in a moot court where simulated court proceedings are undertaken; food raids during the nights with the assistance of the Supervising Public Health Inspector (Divisional),SPHII and field Public Health Inspectors; first-hand experience on taking samples on food and water for chemical and microbiological analysis; field visits to food production sites etc. Tamil translations and handouts were provided during the training period as necessary. The training programme was evaluated by the trainees as a very good and a needy one. They pointed out that there should be a regular in-service training programme for the Public Health Inspectors especially those from Northern and Eastern provinces in Sri Lanka.

Conclusion

Regular in-service training programmes for PHII are needed. A two-week programme could incorporate many practical learning experiences and this could be the minimum for a group who have had no in-service training for a long period.

D2061

PREDICTING JUNIOR DOCTOR'S PERFORMANCE IN WORKPLACE BASED ASSESSMENT

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Aims

Understanding the nature of variables which correlate with success in the workplace in junior doctors, and how they potentially interact, is difficult. This study explored the effect of demographic variables, selection scores for entry into a medical course, a measure of emotional intelligence and undergraduate academic performance to determine intellectual abilities and other factors as predictors of workplace based performance in junior doctors during the first postgraduate year.

Methods

Two cohorts of medical graduates from one university (n= 200) in Western Australia participated in the study. Summary statistics were compared, Pearson correlation coefficients calculated and multivariate analyses utilised linear regression to assess the relationships of the Junior Doctor Assessment Tool (JDAT) and each of its sub-components with potential predictor variables.

Results

Increased age was found to be a predictor for junior doctor performance on the Clinical management subscale and understanding emotion was found to be a predictor for the JDAT Communication subscale with Grade Point Average (GPA) at the completion of undergraduate studies found to predict performance on the overall JDAT and each subscale. Tertiary Entry Rank on entry to medical school score predicted GPA.

Conclusion

The GPA as a composite measure of ability and performance in medical school can be predicted by selection scores and predictive of junior doctor assessment. This study supports the movement towards programmatic assessment for medical education. The challenge for implementing this approach is to determine how performance on assessments can be aggregated for higher stakes, pass/fail and remediation decisions.

D2062

STUDENTS' EXPERIENCES OF INTEGRATION OF LEARNING IN AN UNDERGRADUATE MEDICAL PROGRAMME: A PHENOMENOGRAPHIC STUDY

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Aims

One of the cornerstones of current medical programme reform in the world is 'integration': the horizontal and vertical integration of content from relevant basic science, pathological, humanistic and clinical disciplines. There is evidence that this assists students to assimilate and apply what they have learnt more effectively, and thus enhances the goal of achieving professional competence. The past hundred years have seen many reforms in programme and curriculum development in medical education. Many of these reforms have suggested innovative approaches to expressing beliefs and orientations that shape the curriculum. One of the key concepts underpinning the reformed curricula has therefore been to apply the principles of integration as a strategy to enhance learning. Both horizontal and vertical integration have proved beneficial to student learning in modern curricula. The aim of the study is to reveal the qualitatively different ways in which students experience integration of learning in an undergraduate medical programme.

Methods

From 2012 to 2014, the researcher used phenomenographic research methods to conduct in depth interviews and focus group discussions to collect data from a sample of 25 students pursuing a six year medical degree programme. For triangulation, 10 staff members who were involved in teaching and curriculum review were also interviewed. Data were analysed using MAXQDA, qualitative data analysis software. The data were coded and categories emerged describing the students' experiences.

Results

Using the anatomy of awareness framework, the following three categories of description emerged forming the outcome space of the students' experiences of integration of learning: conceptions on meaning and processes of integration of learning; conceptions on integration ability; conceptions on the impact of educational experiences on ability to integrate learning. The experiences are hierarchical with increasing perceptions of value. As students think about the act of learning necessary for integration, categories of description of conceptions of the learning start from a quantitative increase in knowledge which is the least sophisticated conception, then memorising, then getting knowledge that can be applied, then learning for meaning. Learning for life is a most sophisticated conception which extends to complexity science. High achievers discern their ability to integrate more easily than other students who need more probing to elucidate their awareness of integration. Similarly, students and teachers are of the view that high achievers find it easier to integrate learning than those students who are struggling. Integration of learning is seen as a process which is time consuming and the ability to integrate takes long to develop. In the learning environment are factors like the programme structure, the role of the teacher and assessments that facilitate and also impede integration of learning.

Conclusion

The use of phenomenography has facilitated the analysis of students' experiences in health education. Students experience integration in varied ways and this may have impact on curricular planning and delivery of instruction. Paying attention to factors in the external horizon of the phenomenon to be learnt is important for the ability to acquire the intended learning.

D2063**PROMOTING GENDER AWARENESS IN POST-GRADUATE MEDICAL EDUCATION*****Lin S****Genetic Center, Department of Pediatrics, Chi-Mei Medical Center Tainan, Taiwan***Aims**

The aim of this study is to explore topics of interest and perception of gender issues from trainees' perspectives. Gender is an important determinant of health outcome. By promoting awareness of gender differences and gender inequalities as determinants of illness can make a difference in medical practice. Gender issues need to be addressed in all level of health care and training systems. In Taiwan, incorporating gender issues in continuing medical education have been mandated for licensing renewal. Education on gender issues is also required since the establishment of post-graduate training year program in 2004.

Methods

A total of 80 residents in their PGY training from our hospital were enrolled in this project. Opportunities to discuss gender issues of importance to themselves were provided in each session of small group discussion. A semi-structured questionnaire was administered to the participants. Participants were requested to rate importance of gender health issues according to their own opinion.

Results

Among 10 frequently raised gender issues, such as gender inequality in health care, family dynamics, homosexuality, AIDS, abortion, STD, domestic violence, sexual harassment and rape, the first three topics were mostly rated as important. Case based discussion on these topics also attracted trainees interest. Such kind of sensitising program results in positive attitude of the trainees.

Conclusion

Validating trainees' own experiences of their patients and their own observations of the processes happening in practice, their "subjective" knowledge is relevant to the understanding of real situation. In this way, the trainees have initiated the gender-sensitive practice, based on the development of the new skills and new areas of knowledge. In addition, these gender issues are often interdisciplinary, therefore, faculties from various disciplines will provide more comprehensive education.

D2064

AN EMERGENCY DEPARTMENT'S EXPERIENCE OF USING "SHIFT CARDS" AS A FORM OF FEEDBACK

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Aims

At the 4th year of running the Emergency Medicine Residency Program, the faculty in Changi General Hospital decided to explore other forms of feedback because of a perceived deficiency of the current system. A "shift card system" was adopted. This is a combination of written and verbal feedback.

Methods

All senior residents posted to CGH ED from February 2013-August 2013 were required to fill up minimum 2 shift cards per month (refer to figure 1 below). Residents were asked specifically what went well during the shift and what could be improved upon. After that faculty were asked to complete the shift card and this feedback would then be discussed with the resident.

After 7 months of piloting the use of shift cards, a simple feedback was solicited from both the trainers/ faculties and the trainees/ residents using an anonymous survey hosted by google

Figure 1: A Shift Card

Date	
Registrar	
Faculty	
Registrar Self evaluation	
What went well today?	
What can I improve?	
Faculty Evaluation	
Please discuss with the resident your impression of the strengths of their performance in the ED today and areas for improvement. Do you agree with their self-evaluation?	
One specific learning issue or suggestion for improvement	
Other comments	

Registrar signature: _____

Faculty signature: _____

Results

All 7 senior residents present in the department during that period of time responded to the survey. Of the 19 faculty present in the department, 11 completed the survey, 2 declined to do and 6 did not respond.

From the residents' point of view, 86% felt shift cards help to point out deficits and help in identifying and building on their strengths. Majority agreed minimum 2 shift cards per month were adequate, however views were split on shift card being a good learning tool overall, citing difficulty implementing on the ground. From the faculty's point of view: 72.7% felt shift cards point out deficit while 63.6% felt that it helped in identifying and building on the strengths.

Conclusion

We present the use of shift card as a more meaningful and effective way of soliciting and providing feedback to the residents. More education/awareness perhaps, could have been given to the trainers, to enhance usage of this tool.

D2065

RELATIONSHIP AMONG INTERPERSONAL NEEDS, STRESS, AND DEPRESSION OF FRESHMEN STUDENTS IN A MEDICAL SCHOOL

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Aims

This study examined 4 overarching topics; 1) What are medical students' fundamental interpersonal relations orientation-behaviour (FIRO-B) results? 2) What are medical students' perceived stress scale (PSS) results? 3) What are medical students' self-rating depression scale (SDS) results? 4) Do the interpersonal needs correlate with the perceived stress, and depression?

Methods

FIRO-B, Cohen et al.'s PSS-10, Zung's SDS was used by 82 freshmen students from C medical school in 2014. The data were analysed by descriptive statistics, frequency, 2-way ANOVA, independent t-test and Pearson correlation analysis using IBM SPSS 21 Statistical Program.

Results

(1) The level of interpersonal needs were medium range that was affection (mean=8.72), control (mean=8.16), inclusion (mean=7.65), wanted behaviour (mean=13.07), expressed behaviour (mean=11.45), and overall interpersonal needs (mean=24.52). Wanted and expressed behaviour differed significantly with regard to behaviour needs ($p=0.012$). (2) The mean score of perceived stress was 18.6. There were 59.8% and 40.2% students with normal range (<20) and high stress (≥ 20). (3) The mean score of depression for the medical students was 36.3. There were 97.6% and 2.4% students with normal range (≤ 49) and mid range (≤ 59). (4) The eA (expressed Affection) is the degree of intimacy in interpersonal relations, whereas eC (expressed Control) is the degree of one's effort to take control in the relationship and situation. The eA, stress, and depression showed negative correlation ($r=-.233$, $p<0.05$; $r=-.253$, $p<0.05$), and eI (expressed Inclusion) showed negative correlation with depression ($r=-.231$, $p<0.05$). And eC also showed negative correlation with depression ($r=-.234$, $p<0.05$).

Conclusion

Medical students' interpersonal needs are related to the stress and depression. These results can be effectively used in counseling or mentoring programs for medical students to improve their quality of life.

D2066

A 360-DEGREE APPRAISAL OF CLOSE WORKING BETWEEN STUDENTS AND PHYSICIANS TOWARDS LEARNER-LED ETHICS PUBLICATIONS

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Aims

Close support and supervision leading to learner-led ethics publications is a new initiative by the Division of Palliative Medicine at the National Cancer Centre Singapore focused upon increasing understanding and interest in palliative care and ethics at the end of life.

Methods

Critical to enabling this were the close one-to-one supervision sessions. These being run in a safe non-judgemental manner meant that students felt listened to and respected, and felt that their opinions were considered and given acknowledgement, particularly when they were incorporated into the study design and or added to the body of the manuscript. Such validation built confidence and ushered further involvement.

Results

Under close mentorship by the consultant, this process has led to the publication of 13 ethics and clinical-related papers by medical students, medical officers, registrars, nurses, and social workers. This process has also seen the increased participation of allied health professionals in a research initiative that has included studies on personhood, palliative sedation, opioid use at the end of life and rehabilitation amongst palliative care patients through out our campus.

Focusing upon the learning of medical students in the program, students noted that integration of new ethics and philosophy-based information pertaining to the practices of end-of-life care required significant amount of attention and reflection, given that for many of the students, these concepts were new and relatively unknown.

Students reflected that as a result of the close mentorship that accompanied this program, they were able to clarify and discuss their concerns very early on in the learning process. This allowed for deeper understanding and lessons leaving a lasting impression upon the student's thinking. Additionally, it inspired within the student a curiosity to delve deeper into the material, sometimes to a far wider and nuanced manner than was required for the construct of the manuscript. Students reported that expanding knowledge coupled with nurturing support built confidence and allowed self-expression of ideas.

For tutors, the experience was useful in determining the manner, and frequency and duration of face-to-face sessions and indeed in their duration. Here the optimal was found to be once a week lasting about an hour supplemented by email communication. It is interesting that text messaging added a further level of contact and informal support for the students to communicate their particular angst as they progressed. It allowed tutors to be aware of how students were coping and determine if face-to-face sessions were needed to be re-scheduled to meet the students' needs.

Conclusion

Overall the process allowed tutors the chance not only to actively shape the learning of students through regular formal and informal interactions but also to chivvy the students on when the need arose. Overall tutors benefited from the chance to hone their own skills at mentoring.

The end result has been the successful collaboration of physicians and students on a number of ethics articles being published.

D2067**CLINICAL PHARMACIST PREPARATORY PROGRAMME IN SINGAPORE****¹Lim SW, ²Chan SC**

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Aims

To develop a structured development programme to help existing pharmacists meet the required minimum competency standards for clinical pharmacists.

Methods

Clinical pharmacy leaders from four public institutions (National Healthcare Group, National University Hospital, Alexandra Hospital/Khoo Teck Puat Hospital and Institute of Mental Health) formed the Pharmacy Competency Development and Evaluation workgroup. This workgroup designed the Clinical Pharmacist Preparatory Programme (CPPP) with the aim to develop pharmacists with sufficient body of knowledge and clinical practice skills to provide evidence-based, patient-centred medication therapy management in an interdisciplinary team.

CPPP is a 9-month programme comprising self-study pharmacotherapy modules and a minimum of 160 contact hours in direct patient care clinical rotations. The self-study component utilises preparatory course materials from Board Certification for Pharmacotherapy. A pass grade is required for each module assessment. Core topics include cardiology, endocrinology, gastroenterology, infectious disease, nephrology, neurology, respiratory medicine and pharmacotherapy in special populations. Pharmacists are required to make patient case reviews and therapeutic interventions during clinical rotations. Formal case presentations and viva voce are conducted by the Assessment Board at mid-point and end of programme to determine the competency of the pharmacists.

Clinical supervisors and clinical tutors are assigned to the pharmacists to guide them during the programme.

A certificate of completion will be awarded to pharmacists who have successfully completed all requirements of the programme.

Results

Four cohorts, a total of 16 pharmacists, have graduated from CPPP since its inception in 2010.

Surveys were done at the completion of each cohort. Graduates from CPPP have found the experience rigorous, useful and practical to their current work. They were able to build up their knowledge base and apply skills learnt to their patient work immediately. The clinical rotations with tutors stimulated the pharmacists to think deeper when encountered with clinical dilemma and refine their clinical reasoning skills.

More than 80% of pharmacists were promoted to the next higher designation in the pharmacy career track post-CPPP. Sixty percent became pharmacy preceptors to junior pharmacists, pre-registration pharmacists and pharmacy undergraduates. Two pharmacists in subsequent years achieved Board Certification in Pharmacotherapy and one pharmacist in Board Certification in Oncology. Three pharmacists went on to pursue formal post-graduate education in clinical pharmacy.

Conclusion

CPPP allows pharmacists a means to up-skill their clinical pharmacy practice and make progression in their career paths with minimal disruption to their work responsibilities. Heads of pharmacy from participating institutions have been supportive of this. This programme also serves as a clinical competency assessment for employers to formally recognise these pharmacists and admit them into the clinical career tracks.

We foresee CPPP will continue to serve the post-graduate educational needs of our pharmacists and a means of competency assessment for entry into clinical track in Singapore for the next decade.

D2068

CHALLENGING LONGSTANDING CONCEPTIONS THROUGH THE IMPUTATION OF NEW DATA

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Aims

We all hold our particular view of food - be it the means of life or a manner of comfort, a sign of love or some other esoteric view. These views 'harden' when we consider the issues of providing food to the dying. Many students see it as a sign of affection, filial duty and a basic right. Here we seek to understand the intricacies and processes of thinking, reflections and learning of medical students through the use of case studies. Medical students' responses to case reports of patients on their conceptions of food at the end of life were studied.

Methods

Students were asked to reflect upon a case report centring on the role of the recipient of a filial action in the provision of food, where a husband, feeling duty-bound, had consumed up to 100 tablets and food supplements a day provided by his wife following a visit to a local traditional Chinese practitioner. This was followed by close-supervision sessions that initially took the form of de-brief sessions, where the student 'vented their spleen' at the situation they felt was unacceptable.

Results

Students struggled with comprehending the fact that the weight-providing food and potentially treatment was seen to trump patient comfort and other considerations. As closely-supervised discussions progressed, students began to see things from a wider perspective. Their own beliefs and values began to evolve to accept that there were opposing views to the role of food and the obligations that came with them.

Students also struggled to accept the fact that feeding was sometimes stopped at the end of life. Justification beyond clinical evidence took longer to assimilate. It was here in the grey area beyond the black and white of clinical facts that students struggled to accept there was an ethical basis for withholding treatment and the determinations of futility that students required significant attention and support.

This new understanding was slow in coming and was not solid as students vacillated between received wisdom that questioned their belief in the data presented and their adherence to conventional wisdom and the need to comply with the tenets of EBM.

Conclusion

The use of case studies provides an interesting opportunity to understand the thinking, reflections and learning of students. This new conception owes much to the increased oversight and interaction with the multidisciplinary team, which engages students in the decision making process and providing them with a holistic and context rich appreciation of the interests of the parties involved.

D2069

“TEACHING THE INTRICACIES OF MANAGING CRITICALLY ILL PATIENTS TO UNDERGRADUATES IN AN INTERPROFESSIONAL MANNER**¹Siddiqui S, ²Samarasekera D, ²Dong C***¹Khoo Teck Puat Hospital, Singapore, ²Centre for Medical Education, Yong Loo Lin School of Medicine, National University of Singapore, Singapore***Aims**

Our Medical graduates after leaving medical school are required to master taking care of real patients and dealing with acute care situations, communicating with families and other nuances of patient care in the acute setting in the wards, A and E and ICU without learning the basic aspects of such care. From personal experience, I remember this leap from Medical school to Internship terrifying with many pitfalls and learning on the job after many stumbles. My one year of research and clinical attachments (externships) in the US helped me transition into the role of an intern (or house officer), but others may not be so lucky. In fact the breaking point in ones trainee years often comes whilst rotating in the ICU!! In 1992 this void in the US system was felt and Dellinger et al published a questionnaire in Critical Care Medicine that demonstrated that critical care professionals believed a critical care core curriculum should be established and its completion made a requirement for graduation from medical school.

Methods

We wish to introduce the participants to concepts of bridging the gap of communication amongst different professions and teams in the ICU. We wish to carry out an educational, observational study to assess the effectiveness of a new acute care IPE curriculum in the ICU. This will be a quasi experimental model using a clinician as a medical teacher.

Results

Our Research question, therefore, is that ‘what is the effectiveness of the new curriculum model - Introduction to acute care in ICU, multidisciplinary team work, communication and professionalism in an IPE format?’. From an educational perspective this is the first time that such an activity is being organised by a clinician (non educationist) to teach such values in a small peripheral centre in small focus groups and to share personal ideals.

Conclusion

Apart from an introduction to the most stressful of all experiences as a trainee, application of physiology and pharmacology principles can be learnt in no better place than a critical care environment, where today’s technology has advanced more than anywhere else in Medicine.

D2070

WHEN MOTIVATION AND COMPETENCE ACT TOGETHER TO INFLUENCE ACADEMICS' RESEARCH OUTPUT, STAFF DEVELOPMENT ALONE MAY NOT WORK

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Aims

Universities today are geared towards maintaining a good research output as a rich institutional research culture is recognised as a vital part of a high quality educational environment. As such, university academics are required not only to facilitate learning but also to maintain a reasonable individual research output. With greater emphasis and scrutiny being placed on this latter task in recent years, a variation in the performance of academics in terms of research output was observed. The authors conducted a survey among the academic staff members of a state medical school in Sri Lanka to identify factors related to their individual research output.

Methods

An anonymous survey was administered among the academics of the medical school using the MOODLE platform. Research output of an academic was measured by the number of full paper publications in peer reviewed journals during last 5 years as reported by responding academics. An 18 item survey tool was developed by a group of academics and then pilot tested. Factor analysis of survey responses was carried out using Minitab 14.1 software. Factor loadings and communalities were used to describe the factors based on contributing variables and factor scores were calculated for each staff member.

Results

Sixty academics out of 96 (response rate 57.6%) responded to the survey. Thirteen (21.7%) out of them belonged to the category of associate professor or above, 28 (46.7%) to senior lecturer and 21 (35%) to lecturer or probationary lecturer categories. During the last five years, 6 (10%) of responding academics had 20 or more peer reviewed full paper publications, 5 (8.3%) academics had 10 to 19 publications, 15 (25%) academics had 5-to 9 publications, 18 (30%) academics had 1 to 4 publications and 16 (26.7%) academics had no publications. Factor analysis identified 5 independent factors that together, account for 60% of the variability seen in the responses to 18 questions. Based on the calculated scores most staff members had a 'positive attitude towards research as a part of their career' (factor 1). Despite the common perceptions of having a 'conducive environment for research within the faculty' (factor 3) and a positive 'research culture' (factor 4), most staff members felt that there were a lot of 'barriers to engage in research' (factor 5). This may be explained by the moderate score of most academics 'motivation and competence to engage in research' (factor 2). There was also a significant positive correlation between the individual scores for the factor 2 and the number of full papers published during last five years by the staff members (Pearson correlation 0.484, $p=0.000$).

Conclusion

This study identifies 'motivation and competence to engage in research' among academics as a factor which is correlated with individual research output, within the context of the medical school that we studied. The importance of faculty development in research competencies is thus highlighted. Since individual motivation has become an integral part of this factor, influence of recruitment and remuneration policies of the university on outcomes of such staff development initiatives can be vital.

D2071

UNDERGRADUATE MEDICAL RESEARCH: EVALUATION OF RESEARCH-SPECIFIC COMPETENCIES

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Aims

The Kingdom of Saudi Arabia is heavily investing in different areas of research, more specifically in medical research. Several medical schools in the kingdom have already integrated research into their curricula. Studies have shown that medical students in the kingdom are lacking certain research-specific competencies impeding them from efficiently participating in research, however, there's not much literature evaluating the current training. This study aims to evaluate the research training methods incorporated into the medical curricula, and to provide means of improvement in that field by highlighting mentors' observation of the deficiencies that undergraduates show during their current involvement in research within the kingdom of Saudi Arabia.

Methods

We performed a multi-institutional cross-sectional study where we surveyed research mentors (academicians, basic, and clinical researchers) in universities, teaching hospitals, and research centres in the Kingdom of Saudi Arabia. The mentors were given a self-administered questionnaire to evaluate how competent they think medical students are in a set of competencies covering areas of basic, clinical, epidemiological, general research, and biostatistics skills using a 5-point Likert scale.

Results

Eighteen research mentors (n=18) from 4 different institutes in Riyadh were initially surveyed (Target: 320 mentors). Those mentors have been mentoring undergraduate medical students in KSA in basic and clinical/epidemiological research over a number of years. 61% of those mentors have mentored 1st to 3rd year undergraduate medical students, 77.8% have mentored 4th to 5th year students, and 22.2% have mentored interns. The preliminary data has shown that mentors believe that the highest deficiencies in the domain of "general skills for research" are related to "referencing methods and management" along with their ability to write and understand the scientific language. On the other hand, mentors reported that they have observed that students were competent in the areas pertaining to "Components of a manuscript" and "Literature search". In the biostatistics domain: mentors believed that students were mainly deficient in "basics of sampling and bias", "the use of statistical tests to compare means", and in analysing results using basic statistical measurements. However, results showed that students are less deficient in areas of "statistical inference" and "normal probability distribution". In the domain of basic science research: mentors reported that students were less competent in "the basics of the use of humans' sample in basic research" and "basic lab calculations", whereas they believed that the students excelled in using basic lab instrument, such as: pipets and microscopes. In the domain of clinical/epidemiological research; results have shown that students were more deficient at "basics of placebo use" and "formulation of clinical questions" than other competencies such as "importance and scope of epidemiology" and "concept of bias and confounding".

Conclusion

Our study shows that improvement should be applied on a diverse set of competencies involving all four research domains, which would help to create a more research oriented medical educational environment in Saudi Arabia.

D2072

THE LEARNING APPROACHES OF MEDICAL STUDENTS

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Aims

Medical students often have to memorise and assimilate vast amounts of information in a limited amount of time. In order to optimise their learning experience by understanding the patterns of learning approaches of the students, we undertook this study to examine factors that may affect a student's learning approach.

Methods

The Approaches and Study Skills Inventory for Students (ASSIST) questionnaire was applied to 160 medical students on obstetrics and gynaecology clinical attachment at KK Women's and Children's Hospital. It comprises of 52 questions, each scored on a Likert scale of 1(low)- 5(high). The scores for sets of 4 were combined into 13 subscales and further grouped to give each respondent a score each for deep, strategic and surface approach. The predominant learning approach is defined as the approach which has the highest score amongst the three approaches.

Deep and strategic approaches are regarded as positive approaches where deep approach connotes an interest in relating to ideas while strategic approach revolves around good time management and organised studying to achieve good grades. The surface apathetic approach is deemed as a negative approach due to routine memorising and minimal coping with course requirements. Comparisons were made using t test. SPSS v15 was used for analysis.

Results

Of 160 students surveyed, 67 in local university had A levels; 62 in local university had a degree; 21 in overseas universities had A levels; and 10 in overseas universities had degree as the highest attained qualification. The dominant approach for 87 (54%) students was the deep approach, 66 (41%) utilised strategic approach and 16 (10%) used surface approach. Older male students had a significantly higher deep learning approach score (76.6+9.0 p=0.015) while female students had an almost significantly higher strategic approach score (74.3 +8.9 p=0.056). Students with degree as highest attained qualification had a significantly higher deep learning approach score (76.3+8.8) compared to students with A levels as highest attained qualification (73.2+9.1 p=0.032).

Amongst local universities, postgraduate students (n=62) had an almost significant higher deep learning mean score (76.6+8.7) than undergraduate students (n=67) (73.3+9.5 p= 0.065). This is consistent with findings that older students tend to have a higher deeper approach mean score.

Conclusion

In general, students scored higher on the deep and strategic learning approach compared to surface approach and the dominant learning approach of students was the deep approach. Degree-holders scored higher on the deep learning approach compared to non-degree holders. Gender was also a factor as male students tended to favor deep learning compared to female students who preferred strategic learning, and perhaps this explains why more male students favor problem-based learning.

D2073

APPLICATION OF SOCIAL NETWORKING IN THE PRECLINICAL YEAR COURSE OF PBL CURRICULUM

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Aims

The use of social networking in all levels of medical teaching as a communication tool between instructors and students has drawn much interest and increased usage. As Facebook is the most popular social networking site among students, Facebook pages had been used to facilitate the Genitourinary System problem-based learning (PBL) course at the Faculty of Medicine, Thammasat University in the year 2014. Hence, the aim of this work was to study effectiveness of using a Facebook page to facilitate PBL in an integrated preclinical year course.

Methods

The Genitourinary System course committee introduced Facebook page to 2nd year medical students who enrolled and instructors who involved the course. At the beginning of the course, the objectives of Facebook page setting were informed as the following 1) public relations 2) channel for questions and responses to address curiosities between students and instructors 3) learning stimulation and 4) supporting good relationship between course coordinators and students. At the end of the course, the total of 177 students had voluntarily allowed their opinion to be used in analysis and dissemination after completing questionnaire about using Facebook page in PBL. The questionnaire gauged five levels of satisfaction (most satisfied = 5, least satisfied = 1), which then compare differences of the mean satisfaction score for each question of students with different academic performances (great, good, fine, weak).

Results

The students liked a Facebook page (averaged satisfaction score 4.64) and wanted it to continue to be used in coursework (4.63), especially for students with mid-level when compared to students with great performances ($p < 0.05$). Because it was beneficial in allowing questions to be directed to instructors, both in lecture learning (4.54) and SDL (4.35), and was able to lessen the time it took to understand content in SDL (4.03). Meanwhile, it did not create stress (2.10), but students had not made use of it as much as they could (3.25) as they had not studied all posts in detail (3.68). Therefore, if the Facebook page was developed for students to study in more detail, it would enhance its benefits as SDL stimulus (4.09).

Conclusion

Using social networking, particularly Facebook page, achieved all the four objectives of setting. In addition, since this is the first time for social networking application, some of faculty members had be concern their personal information to be disseminated to the public. Moreover, there was still minimal knowledge sharing among students. The Facebook "closed group" with good protective system may be an interesting option to enhance effectiveness in integrated PBL-styled courses.

D2074

MEETING CRITERIA OF EXPERIENTIAL LEARNING - A REVIEW METHOD OF THE MEDICAL CURRICULUM

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Aims

To study what features in experience-based learning are recognised within the first five semesters (2½ years) of medical sciences undertaken at the University's campus in Bukit Jalil, International Medical University, Kuala Lumpur.

Methods

The IMU medical curriculum was analysed to find characteristics of experiential learning (ExL) to distinguish it from other approaches using the following criteria (Boud, Cohen and Walker, 1993).

1. Learning by a holistic approach
2. Learners actively construct their own experience
3. Continued reflection upon earlier experiences
4. Learning is socially and culturally constructed
5. Learning is influenced by the socio-emotional context in which it occurs

Results

1. A variety of approaches to teaching and learning activities in order to add to and transform them into deeper understanding.
2. Not found.
3. An early exposure of students to clinical experiences emphasises the importance of the basic sciences to its clinical application and serves to stimulate students' interest in their medical studies.
4. Students obtain experience in the common presentation of diseases in Malaysian patients. This is important for their practice of medicine in Malaysia.
5. Rarely found. Currently, teachers, leaders, coaches, and therapists with specific ExL skills are yet not involved.

The university has taken steps into planning for an integrated ExL curriculum design, but still lacks faculty training in this area. Students rely very much on a simulated environment due to limited exposure to activities in the unprepared authentic environment.

Conclusion

The University provides the opportunity for a holistic 360-degree learning experience, which allows students to become caring doctors and reflective medical practitioners. However, learners currently cannot benefit from their potential in actively constructing their own experience or learning from a real socio-emotional context.

D2075**THE EFFECT OF A SIMULATOR-BASED ORIENTATION ON CONFIDENCE IN MANAGING INTRAOPERATIVE EMERGENCIES AMONG SECOND-YEAR ANESTHESIA RESIDENTS*****Green S, Bosma L****Department of Anesthesiology, Pharmacology, and Therapeutics, Faculty of Medicine, University of British Columbia, Canada***Aims**

To judge the effects of a simulation based program on Anesthesia residents' confidence in managing perioperative emergencies.

Methods

A total of 11 participants, all with minimal previous anesthesia experience, were given 4 days of seminars on a list of 10 emergencies (hypoxia, anesthetic machine failure, etc.), and then were exposed to 1 day of high-fidelity simulation of all 10 emergencies. A survey of their confidence (scale of 1-10) in managing these emergencies was given prior to any intervention, after the didactic seminars, after the simulation, and again 6 months later.

Results

Median confidence measure across all scenarios was 3 (range 1-7) in the baseline survey, 6 (range 1-9) after the seminars, 7 (range 4-9) after simulation, and 7 (range 4-9) at six months. Using a Wilcoxon signed-rank test, the first three surveys were found to be different from each other, while the six month followup was not significantly different from the survey given after simulation.

Conclusion

Simulation may provide an added benefit to didactic teaching in preparing new anesthesia trainees for perioperative emergencies.

D2076

CHARACTERISTICS OF COMMUNICATION IN BREAKING BAD NEWS BY MEDICAL STUDENTS WITH LITTLE CLINICAL EXPERIENCES

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Aims

Physician's communication skills in breaking bad news are essential for patient's QOL and clinical outcome. Such training opportunities for medical students are limited in current Japanese medical school. To improve these conditions, we have introduced a training program with simulated patient (SP) for fifth-year medical students during clinical clerkship. With a scenario of a patient notified end-stage lung cancer, we analysed characteristics of their communication context using the Roter Interaction Analysis System (RIAS) (Roter D and Larson S, 2002).

Methods

Twenty-eight medical students (male 15, female 13) were assigned a cancer notification scenario during clinical clerkship in 2012. Each student was required to notify the diagnosis of end-stage lung cancer to a SP. The interviews were video-recorded. Two raters coded the context according to the method of RIAS. Forty-four components of communication were categorised into five main groups: 'Relationship building (15)', 'Information exchange (16)', 'Patient education and counseling (2)', 'Activating and partnering (9)' and 'Other (2)'. We measured the time to deliver the diagnosis of "cancer". We also checked whether students gave a warning shot before delivering the diagnosis.

Results

The mean length of interview was 670.5 ± 34.4 (S.D.) sec. We observed similar total number of utterances spoken by medical students (122 ± 22) and SPs (119 ± 34). The ratio of medical students' utterances assigned to 'Relationship building', 'Information exchange', 'Patient education and counseling', 'Activating and partnering' and 'Other' was $24.9 \pm 5.6\%$, $28.4 \pm 5.7\%$, $2.1 \pm 1.6\%$, $31.6 \pm 7.8\%$ and $13.0 \pm 5.0\%$, respectively. More than 50% in utterances of 'Relationship building' were positive talk such as showing agreement or understanding. Most utterances of 'Activating and partnering' were facilitation such as back-channel. More than 90% in utterances of 'Information exchange' were information-giving about medical condition and therapeutic regimen, however, question-asking about patient's lifestyle and psychosocial topics accounted for less than 5%. Average time to deliver the diagnosis "cancer" was 94.6 ± 30.9 sec. Thirteen (46%) students gave a warning shot before delivering the diagnosis.

Conclusion

In this study, we observed that medical students successfully communicated in building a relationship, exchanging information and facilitating communication. However, they were mostly interested in providing medical information than acquiring patient's lifestyle and psychosocial information in information exchange aspect. These results suggest that medical students need to have training opportunities for delivering bad news to fulfill patient-centred approach.

D2077

THE CLINICAL SKILLS & SIMULATION CENTER (CSSC): IS ASSISTING IN CONDUCTING ASSESSMENT OF CLINICAL SKILLS THROUGH OSCE (THE OBJECTIVE STRUCTURED CLINICAL EXAMINATION) FOR UNDERGRADUATE FIFTH YEAR MEDICAL STUDENTS WITH LIMITATION IN THE ORGANISATIONS**Abdulwahab S***Clinical Skills & Simulation Center, Faculty of Medicine, King AbdulAziz University (KAAU), Saudi Arabia***Aims**

Introduction: The Faculty of Medicine at King Abdulaziz University, is committed to providing high-quality educational program to both female and male undergraduate students, and had introduced the assessment of clinical skills by conducting the OSCE (the Objective Structured Clinical Examination) in the clinical skills & simulation center (CSSC) since 2008. Aim: The aim of this study is to find out if the OSCE was an effective method for assessment for the undergraduate medical students and to find out the limitations in order to improve the quality of assessment in the faculty of medicine.

Methods

A survey was developed which consisted of seven questions and were distributed to both male and female fifth year medical students on their rotation in the family medicine. Each rotation consist of five (5) weeks and at the end of their rotation clinical assessments, (OSCE) is performed at CSSC. These surveys were given to 80 medical students immediately after their OSCE. The questions were about the clinical stations and if they were similar to material covered in the clinical teaching sessions. Another question was if the instructions in each station were very clear and if time allowed to clinical stations was adequate. Since all these medical students had received prior instructions, we were keen to know how well these instructions were delivered to them, so we included these three questions: The exam process was well explained to me before, the exam process was well organised, and this exam format is fair and I prefer this format more than oral exam.

Results

After analysing the data collected from medical students who had their OSCE in the Clinical Skills Center, 81% of them had reported that most of the clinical station were not similar to the material covered during clinical teaching sessions although on each rotation of five weeks, medical students visit the clinical skills & simulation once at the end of their rotation to recap their clinical skills before the OSCE. 79% of them had declared that instructions in each station were misleading and confusing especially scenario of the clinical cases portrayed by Standardised Patients (SP). 75% of them stated that there wasn't enough time. The time allocated for each station was five minutes only. 90%- 93% of these medical students who had participated felt that OSCE is a fair format of Exam and prefer it than the oral traditional exam. 95% of them had stated that having their OSCE at CSSC is organised with Audio/Visual (A/V) technology controlling the flow and organising the OSCE.

Conclusion

The CSSC is an important asset to the medical education department at faculty of medicine (FOM). It helps students to make up for non-encountered assigned clinical cases. FOM must form curriculum committee to develop a mechanism for structured remedial actions for the optimum structured utilisation of CSSC it must review the OSCE and introduce formative OSCE for all undergraduates to improve the outcomes and provides development of faculty members by peer to peer training to validate the clinical cases in the OSCE.

D2078

ACCURACY AND INTER-RATER RELIABILITY IN THE AUSCULTATION OF LUNG SOUNDS AMONG FINAL YEAR PHYSIOTHERAPY STUDENTS IN SINGAPORE: A COHORT STUDY

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Aims

Auscultation is a common and essential tool used by healthcare professionals. Physiotherapists are part of this multi-disciplinary team that utilises auscultation in important clinical decision making processes. Despite being used frequently, the ability of physiotherapists to accurately interpret and document lung sounds has been questioned. One solution to this issue is to improve auscultation skills in school in order to build a good foundation before students enter the workforce as physiotherapists. However, to date, no published study has shown the effect of clinical experience on accuracy and inter-rater reliability among physiotherapy students. Thus, the aim of our study is to investigate the effect of clinical experience on accuracy and inter-rater reliability among final year physiotherapy students in Singapore.

Methods

48 subjects were identified in this study. Subjects were asked to undergo two rounds of data collection, one before and after their five weeks of advanced cardiopulmonary placement. During data collection, subjects were required to interpret a total of six lung sounds.

Results

The overall results show insignificant improvements in accuracy and inter-rater reliability with clinical experience. This may be accounted for by insufficient time during placement, lack of reinforcement of auscultation findings by clinical educators and lack of exposure to tutorials on auscultation during placement. Inferences of the relationship between accuracy and inter-rater reliability for wheezes, fine and coarse crackles were also made.

Conclusion

The results showed that the levels of accuracy and inter-rater reliability in the interpretation of lung sounds, among final year physiotherapy students in Singapore, are not significantly affected by clinical experience.

D2079

DESIGNING A SYSTEMATIC APPROACH TO UNDERGRADUATES TRAINING FOR THE 3 MEDICAL SCHOOLS: PAEDIATRICS CORE CURRICULUM¹Tan W, ¹Ong J, ²Loh TF¹Division of Medicine and ²Department of Paediatrics, SingHealth Duke-NUS Paediatrics Academic Clinical Program, KK Women's & Children's Hospital, Singapore**Aims**

To describe the stages in the development of a new Paediatric undergraduate training core curriculum (PCC) within Paeds ACP to meet the fast growing needs of undergraduate training in the 3 medical schools.

KK Women and Children Hospital (KKH) being the main Paediatric academic centre within the SingHealth medical cluster. The Paediatrics Academic Clinical Program (Paeds ACP) is responsible for undergraduate training of Paediatric Medicine within SingHealth Cluster of medical institution

Methods

Paeds ACP initiated a taskforce to look into ways to meet the needs of undergraduate training in the 3 medical schools. The taskforce deliberated and recommended the formulation of a unifying curriculum guide for faculty within the Paeds ACP.

Phase I: Stakeholders within the Paeds ACP that included representatives from 3 medical schools was invited to form the PCC team. The team performed needs assessments on training objectives from the 3 schools.

Phase II: The PCC crafted a paediatric training guide for the faculty within the Paeds ACP detailing learning objectives, teaching methodology, key concepts, suggested and alternative teaching means and assessment guides.

Phase III: Roadshows and consensus meetings were held within the Paeds ACP to gather feedback and suggestions for improving the PCC. Discussions were also held to suggest models and means to pilot and roll out the PCC.

Phase IV: Pilot programs involving both faculties as well as residents within the Paeds ACP were implemented to test run the program and gather feedback from the students on the usefulness of the new program.

Results

A unifying paediatric undergraduate program was formulated in Paeds ACP at KKH to meet the growing needs of Paediatric undergraduate training and to ensure a structured delivery of good quality training for medical students from medical schools within SingHealth cluster.

Further plans for the PCC include creation of an educational dashboard teaching to allow faculty to monitor and plan teaching assignments for students.

Conclusion

A clear structure and framework to aid the growing needs and at the same time ensuring a sustainable excellence in medical education of undergraduates. This initiative was strongly endorsed by SingHealth Academic Medicine Advisory Council (AMAC) and presented as a recommendation for the harmonisation of curriculum for the teaching of medical students during their recent review on academic clinical programs.

D2080

FACULTY DEVELOPMENT IN RESILIENCE: A KEYHOLE VIEW OF THE STATE OF READINESS AND AN OPPORTUNITY TO DEVELOP ADAPTIVE CAPACITY IN PEDIATRICIANS

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Aims

BACKGROUND: Resilience, the ability to rebound from adversity is essential in the professional development of physicians. The 'Resistance, Resilience, Recovery' model pioneered by John Hopkins Centre for Public Health Preparedness is a useful model to adopt in faculty development programs.

PURPOSE: We describe the process and analysis of a daylong workshop ('Building resilience: strength for life to empower lives') for physicians in our department on 29 March 2014 to assess the level of 'resistance' and to enhance 'resilience'.

Methods

The experiential workshop, focused on attitudes towards death as surrogate for adversity in life, was instructed by 2 experienced medical social workers. Activities included mini-lectures, videos, group discussions/ role-play, personal eulogy and clay exercises. Assessment of baseline and post-workshop attributes were with surveys including Professional Quality of Life Scale on Compassion Satisfaction and Fatigue (ProQOL v5) and Death Attitude Profile-Revised (DAP-R). The ProQOL survey is a measure of the effects of helping others who experience suffering/ trauma; with 3 sub-scales for compassion satisfaction, burnout and secondary traumatic stress. The DAP-R4 survey measures respondents' attitudes toward death. The 5 sub-scales determine respondents' feelings towards death: (a) fear of death (negative thoughts/ feelings about death) (b) death avoidance (avoidance of thoughts of death) (c) neutral acceptance (neither welcome nor fear death) (d) approach acceptance (death as a passageway to a happy afterlife) (e) escape acceptance (death as an escape from painful existence). A higher score in the sub-scale indicates a stronger tendency to identify with that specific attitude.

Results

18 physicians (7 residents/ registrars, 8 consultants, 3 senior consultants) participated. All enjoyed the experiential nature of the workshop and would like to participate in similar workshops. Senior physicians tended to appreciate the contextual focus on death in building resilience more than junior physicians. Analysis of the baseline ProQOL surveys showed that all evaluable participants (n=17) had satisfactory compassion satisfaction, burnout and secondary traumatic stress levels. Younger physicians tended to have better scores. Post-workshop ProQOL showed significant improvement in the scores across all ranks. The DAP-R survey analysed as a group showed a stronger tendency to identify with death avoidance (Score 5.85) and least affiliation with neutral acceptance (score-2.20). We observed similar trend across seniority levels and gender (5M, 12F).

Conclusion

The ProQOL survey provided a cross-sectional view of the general well-being of these physicians at baseline; suggesting good reserve in adaptive capacity. The improvement in ProQOL post-workshop implies changes in perception could be effectively influenced by positive experiences. The DAP-R scores are interesting in providing a keyhole view into how pediatricians view death related to their work. Pediatricians are trained to protect lives of their patients, to avoid death. This may reiterate a potentially irreconcilable difference in the perspectives of physicians managing end-of-life issues in children versus adults. The experience with this workshop is encouraging. Creating appropriate forum through thematic faculty development workshops facilitated by experienced instructors may sustain a healthy level of resistance and resilience.

D2081

USE OF CADAVERIC CROSS SECTIONS IN UNDERGRADUATE ANATOMY TEACHING... DOES IT IMPROVE THE UNDERSTANDING OF TOPOGRAPHICAL ANATOMY AND ABILITY TO INTERPRET CLINICAL IMAGING?

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Aims

Cadaveric dissections and prosections have traditionally been part of undergraduate medical teaching in the disciplines of anatomy. However with the advent of imaging modalities like Computed Tomography (CT) and Magnetic Resonance Imaging (MRI), clinicians are increasingly encountering anatomy in a cross sectional basis. Sound understanding of spatial relationships of organs to each other is vital to interpret these imaging modalities. Is this need addressed properly by conventional prosected specimens? Or can we improve spatial understanding of anatomy by exposing students to cadaveric cross sectional specimens in addition to conventional specimens? We attempted to answer these questions in a carefully designed case control study using conventional and cross sectional cadaveric prosections.

Methods

159 (Male n =84, 52.8% Female n=75, 47.2%) first year students in the faculty of medicine, University of Colombo were invited to participate in the above study. Students were randomly allocated to two age and gender matched groups. Both groups were exposed to identical series of lectures regarding anatomy of the abdomen and conventional cadaveric prosections of the abdomen. The test group (n=77, 48.4%) was also exposed to cadaveric cross sectional slices of the abdomen to which the control group (n=82, 51.6%) was blinded. At the end of the teaching session understanding of the spatial anatomy of the abdomen among both groups was assessed by using their performance in a timed multiple choice question paper as well as ability to identify structures in a abdominal CT films. Individual marks of each component were added to arrive at the final cumulative mark.

Ethical clearance for the study was obtained from the Ethics committee of faculty of medicine, University of Colombo.

Results

59 (Male n =84, 52.8% Female n=75, 47.2%) first year medical students participated in the study. Male female distribution and mean age was nearly equal in both control and test groups (Test M 48.8%, F 51.2%, Age 21.3 Y; Control M 57.1% F 42.9%, Age 20.9 Y). Scores for Spatial anatomy (SA) and radiological anatomy (RA) as well as the cumulative scores (CS) were higher among the test group when compared with the control group (Control-SA 33.40 [SD= 7.35], RA 25.85 [SD=11.05] CS 58.89 [SD= 13.55]; Test SA 37.59 [SD=4.43], RA 42.01 [SD=3.99], CS 79.29 [SD=6.54]). Difference observed among the scores were statistically significant (P<0.05, CI 95%). When inquired about their perception, majority of the students in both control and test groups agreed that cadaveric cross section may be useful for them to understand spatial and radiological anatomy (97.6% and 98.7% respectively). Similarly vast majority in both groups (Control 97.6% Test 97.4%) also thought that radiological imaging should be used more often as adjunct to teaching anatomy.

Conclusion

Introduction of cadaveric cross sectional prosections may help students to understand spatial anatomical relationships better. It also helps them to interpret the modern radiological imaging which relies heavily on understanding topographical anatomy. We recommend more routine and liberal use of cadaveric cross sections and radiological imaging for teaching anatomy to undergraduates as well as development of curricula.

D2082

A PILOT STUDY INTO THE CONSTRUCTION OF A CHECK LIST TO ASSESS A DIFFICULT SITUATION IN HEALTH PROFESSIONAL EDUCATION

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Aims

Dealing with difficult learners and difficult teaching situations has been a universal challenge in health professional education. Early detection of such problems and precise analysis of the complicated problems are said to be one of the effective approach to solve the problem. However, it is often difficult for novice teachers to deal with such issues due to emotional and physical stress. The objective of this pilot study is to construct a valid check list of difficult learning situation in health professional education to support health professional teachers.

Methods

A literature review was conducted to survey the domains and content of the factor related to such difficult learning situation. Pubmed, ERIC, Google Scholar were searched with the following keywords such as “difficult learner”, “learning disorder”, “unprofessional behavior” and “health professions education” or “higher education”. Hand searching was also conducted to find relevant materials. After detecting the factors influencing the difficult learning situation, group discussion with the health professional teachers and students were repeated to reorganise those factors and construct the check list of an assessment sheet of difficult situation in health professional education.

Results

48 relevant literatures were identified. Factors affecting to a problem situation were extracted from the several keywords such as “Learning disability”, “Learning disorders”, “Learners at-risk”, “Difficult learners”, “Problem learners”, “Struggling learners”, “Underperforming student”, “Unprofessional behavior”, “Unsafe students”, “Gifted learners” and “Outstanding learners”. The extracted factors (e.g. deficit of knowledge, mental disease, drug addiction, a lack of communication skills, the physically challenged, social background, and learning environment etc.) could be categorised based on the taxonomy and origin of the problem. Finally a check list for assessing a difficult situation in health professional education was developed according to the extracted factors and group discussion.

Conclusion

Initial version of a check list for assessing a difficult situation in health professional education was demonstrated. Further validation study should be addressed to develop a more valid and reliable inventory.

D2083**EFFECTIVENESS OF SKELETON HAND-OUTS DURING OPHTHALMOLOGY THEORY LECTURES FOR UNDERGRADUATE MEDICAL STUDENTS*****Venkatesan P, Sahoo S****Department of Ophthalmology, Melaka Manipal Medical College, Malaysia***Aims**

To find out the effectiveness of skeletal handouts against a full lecture handouts during the ophthalmology theory lecture.

Methods

This was a pre- and post-test based experimental study involving 6th semester medical students. In our syllabus, the Ophthalmology theory lectures are covered during 6th semester of medical training while the clinical posting in Ophthalmology takes place during 7th & 8th semester. The interventions were done in the same cohort. The topics of nearly equal difficulty level were identified with lecture gap of around 1 month. During the first intervention, the full lecture hand-outs were distributed to each member of the class four days prior to the concerned lecture. On the day of lecture pre-test in form of MCQs were conducted in the whole class and the post-test having same questions were conducted soon after the lecture. The same type of intervention was done for Skeleton hand-outs as well after a gap of one month. One lecturer (SS) took the class during both the setting. One hundred eight students participated during intervention with full hand-out whereas hundred four students participated for skeleton hand-out intervention. The skeleton hand-out used to include some illustrations but required substantial annotation by the students. Students feedback on their preference for either types of hand-outs were taken.

Results

There was significant difference of mean change score of pre- and post-test between skeletal hand-out and full hand-out (P value <0.001). However the students' responses to questionnaires indicated a strong preference for much detained hand-outs as essential to preparation for examinations.

Conclusion

The student can improve their performance while working on skeletal hand-outs during theory lectures.

D2084

IMPLEMENTATION OF CLINICAL VIDEOS TO DEMONSTRATE CLINICAL ANATOMY BASED TOPICS IN DISSECTION THEATRE FOR 1 YEAR MEDICAL STUDENTS

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Aims

Despite the range of different methods used in medical education, students are still required to memorise much of what they are taught, especially for the basic sciences. Subject like anatomy carry a high intrinsic cognitive load mainly because of the large volume of information that must be retained. Multimedia learning has been shown effective in clinical anatomy teaching. Yet, use of technology presents both opportunities and challenges to learners.

To make it simpler and easier use of internet videos of clinical skills will be able to learn clinical anatomy effectively.

Computer-based video training provides flexible opportunities for medicos to help learn fundamental clinical anatomy.

To prepare the students for OSPE to understand and analyse the questions in an effective manner.

Our ultimate goal is to provide effective clinical instruction and improved patient care.

Methods

180 first year medical students of JSS Medical College were included for the study. Preliminarily OSPE questions were given to the students and they were assessed without the aid of internet demonstration. Later for the same students same OSPE questions with relevant videos were demonstrated in dissection theatre and they were assessed. The data were collected from written responses of the students. Student t-test and anova were conducted for comparison of responses of two different methods.

Results

180 students who underwent the use of internet based clinical videos returned the questionnaires. A majority of them found OSPE videos effective for their learning of clinical anatomy and prepare for OSPE. The details of the study report and analyses will be discussed during presentation.

Conclusion

Innovative technology affords us the opportunity to offer peer-reviewed educational videos that capitalise on the ability of moving images to teach clinical based topics.

The present study confirms positive impact of OSPE videos on student for learning clinical anatomy.

D2085

PERCEPTIONAL CHANGES ON GRADUATE ENTRY MEDICAL EDUCATION IN JAPAN: A CASE STUDY ON A SERIES OF POLITICAL SEMINARS FOR NON-MEDICALS TOWARDS NATIONAL CONSENSUS***Sugihara M****Department of Neuropsychiatry, Keio University School of Medicine, Japan***Aims**

We have only six-year undergraduate programs for medical education in Japan. To accept diversity of medical staffs and services in the face of aging society, graduate entry programs (GEP) in medical education could be one of the solutions. A couple of seminars mostly for non-medicals on this have been held in spring in 2014, following the series of symposiums on introduction of GEP since 2012, where major stakeholders including medical professionals, policy makers, and general public met together to discuss this in Japan. This study aimed to investigate any changes of perceptions or opinions about GEP after the two seminars.

Methods

Paper-based surveys were administered after each seminar on the participants' changes of understanding of and opinions about GEP before and after the each symposium. We also compared the results with those of the preceding symposiums where medical professionals prevailed more.

Results

43 in total responded to the surveys. 16 (37%) had previous knowledge about GEP, 27 (63%) reported their understanding of GEP changed. In addition, 17 (40%) changed their opinion about introduction of GEP after the symposium. In the preceding symposiums where 84 responded, the results were 35 (36%), 66 (67%), and 27 (32%) respectively. As post-seminar opinions, creating new schools with GEP was chosen by 21 (49%) out of 43, followed by creating GEPs in existing schools chosen by 10 (23%). In the preceding symposiums with much more medical professionals, the two also prevailed but in opposite order, where creating GEPs in existing schools was chosen by 20 (24%), followed by creating new schools with GEP chosen by 17 (20%).

Conclusion

The couple of seminars as well as the preceding symposiums had an impact on the participants' perceptions on GEP. The results corresponded to those of the preceding symposiums, in which the perceptions of non-medical individuals changed positively. Further efforts are needed to provide information and occasions for discussion among stakeholders on creating GEP in Japan towards national consensus.

D2086

GUIDELINE TO IMPLEMENT CONTINUING PROFESSIONAL DEVELOPMENT (CPD) ACTIVITIES AMONG SRI LANKAN GRADE MEDICAL OFFICERS - VIEWS OF CPD LEADS

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Aims

CPD needs assessment along with multiple learning activities which are focused towards the CPD needs are important considerations for changing behaviour and performance of doctors. Aim of this project was to provide guidance for CPD leaders on provision of CPD activities which ultimately ensures good medical practice.

Methods

The project consisted of three phases. During phase one, data on learning preferences, CPD needs, current CPD experiences, motivating factors and inhibitory factors were collected from grade medical officers in the Central province, through a self administered questionnaire. The second phase involved an island wide interview study with CPD leaders of CPD organising bodies such as clinical societies, associations and training units to identify how they arrange CPD activities and contribution of these organisations towards promotion of CPD. Subsequently, an extensive literature survey enabled the identification of CPD provision guidelines in different countries for medical officers at different levels of their careers. A 15 item guideline (draft version), was developed based on results of above studies. The views of six out of eight selected CPD leaders from three provinces in Sri Lanka were sought on the draft guideline by means of a pre scheduled interview.

Results

The draft guideline addressed the areas of CPD competencies, approach to designing content, planning of CPD activities annually, CPD organising structure, CPD delivery and appraisal of CPD activities and evaluation of CPD activities.

All fifteen items were felt to be appropriate. The general view was that it would be feasible to implement 30 - 40% of the guidelines in the current Sri Lankan setting. Most of CPD leaders expressed the willingness to initiate case based interactive sessions. All the CPD leaders stated that Ministry of Health should take responsibility for implementing CPD activities among doctors and there should be a national programme for provision of CPD activities. The common inhibitory factors identified were limited funds and logistic problems. Interestingly, all the CPD leaders endorsed the need to educate doctors about the importance of CPD and hence regular participation, as well as the necessity to offer incentives which should be spearheaded by the Ministry of health.

Conclusion

The draft version of the CPD guidelines received high acceptance. Educating the doctors on CPD activities is a priority. The ministry of health should take the lead in regularising CPD among doctors. Incentives are imperative to promote CPD practice among Sri Lankan grade medical officers.

D2087

SINGAPORE NEONATAL RESUSCITATION PROGRAM: EXPERIENCE AND LESSONS LEARNT

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Aims

This report describes the experience of participants and identifies areas for improvement. Feedback was obtained from course participants upon completion of training program through the use of self-administered questionnaire.

Methods

Training workshop was conducted over 2 half days in group size of 16 to 24 participants per course; each of which was supported by 4-6 trainers. Medical nurses or allied health staff who work with newborns are eligible to participate at these training program. Participants received the course materials 1 to 2 weeks before scheduled NRP workshop.

On the first day, all participants attended two 1-hour lectures with accompanying slide presentation to reinforce core knowledge. Didactic lectures were interspersed with an hour of practical hands-on demonstrations to address the technical skills of resuscitation. The session ended with the conduct of scenarios designed to consolidate the knowledge, technical skill and to reinforce the demand on complex behavioural skills required during neonatal resuscitation.

On the second half day, participants practiced at 2 standard scenarios in team of 3 to 4 participants. All participants complete the knowledge assessment through completion of 60 MCQs with pass marks set at 80% for medical doctors and 60% for the other participants. Practical test comprising of 2 standard case scenarios involving the resuscitation of term and preterm newborns was conducted in groups of 3 to 4 participants. Written consent to video tape the practical test session was obtained and taped video was used at debrief conducted in large groups at the end of each workshop. Participants completed a questionnaire which details their experiences of the learning encounter. Feedback on lecture class, scenarios and practical tests were compiled and analysed to identify areas of strength and gaps in the program.

Results

Over September 2008 to Dec 2012, a total of 228 participants completed the provider training program. Two hundred and seven (90.8%) completed the questionnaire. Of the respondents, 89.2% rated training as good to excellent. Training program met the learning objectives of participants in 87.4% of the respondents and 87.8% responded favourably to the clinical applicability of the learning program. Of the teaching methodology used, practical test (86%) was rated as the most appropriate and effective way of learning followed by scenario teaching (84%) and lastly didactic lectures (77%). Time allocated for practical tests and scenarios was reported to be insufficient in 13% and 16% of responders respectively.

Conclusion

The training program met the learning goal of more than 80% of responders, however, contact time was reported to be insufficient by 20% of them. To enhance the complex behavioural skills required of neonatal resuscitation, the following initiatives were introduced:

1. e-lessons and online assessment of content knowledge prior to attendance at practical training,
2. fifty percent increase in contact time for hands-on training and practical tests, and
3. debrief in small groups to improve reflective learning.

D2088

PRELIMINARY EVALUATION OF A PILOT STRUCTURED INTER-PROFESSIONAL TRAINING PROGRAMME FOR EMERGING CLINICAL EDUCATORS IN TAN TOCK SENG HOSPITAL, ALLIED HEALTH SERVICES (OCCUPATIONAL THERAPY, PHYSIOTHERAPY, PODIATRY)

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Aims

Clinical education involves a more experienced Allied Health Profession (AHP) guiding a junior AHP to develop skills and knowledge in their respective field of clinical competency. The roles of a clinical educator can include providing constructive feedback, facilitating clinical reasoning, teaching clinical procedural skills and providing emotional support. Currently, there is no structured training provided for clinical educators in Tan Tock Seng Hospital (TTSH), Allied Health Services (AHS).

With the growth in numbers of AHPs and the introduction of Allied Health Professional Act in 2011, there is a need to develop and evaluate a structured training programme in providing clinical education in AHS.

Methods

Needs analysis survey of 37 junior AHPs and 30 clinical educators from Occupational Therapy, Physiotherapy and Podiatry departments was conducted. Two half day workshops were developed and conducted with 5 emerging clinical educators from the 3 departments, each with less than 1 year of teaching experience. The participants, each completed pre- and post-workshop assessments, which include self-rating Questionnaire (self-confidence as an educator) and Clinical Teaching Observation Checklist (teaching skills and strategies). At the end of the workshop, a content-based Post Workshop Multiple Choice Quiz and Participant Feedback Survey (learning environment and course contents) were administered.

Results

There was an overall improvement in the participants' self-rating of the pre- and post- self-rating Questionnaire (Likert scale). Average score of the Clinical Teaching Observation Checklist increased from 64.7% (pre-workshop) to 89.2% (post-workshop). Average score of the Post Workshop Quiz was 9 out of 10. The average overall rating from the Participant Feedback Survey was 4.65 out of 5.

Conclusion

The AHS Clinical Educators Workshop has potential to equip emerging clinical educators with the skills and knowledge to provide standardised quality of teaching to their junior AHPs. Due to the small sample size, this result cannot be generalised. Further developments include enhancing the rigor of the assessment plans, extending the training to other AHS departments and further programme evaluation.

D2089

USING TECHNOLOGY TO INTEGRATE HOLISTIC PATIENT RESTORATIVE MANAGEMENT IN AN UNDERGRADUATE DENTAL SCHOOL SETTING

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Aims

Dental undergraduate training has rigid requirements for completion of specific dental procedures. A candidate must fulfill these to be eligible to sit for the final professional exam.

In the Restorative Discipline, these procedures include:

- Direct restorations -- 5 anterior and 5 posterior teeth
- Indirect restorations -- 5 Crowns and 2 Bridges
- Dentures -- 5 partial and 6 complete dentures
- Endodontics -- 5 canals in 3 or more teeth

These include clinical competencies in each of the respective domains.

Due to these requirements for completion of schedule, past trends have established a tendency for candidates to cherry-pick selected dental indications and transfer the patient to a junior for completion of other indications.

The aims of this project were:

1. Reduce the incidence of patient transfer from one student operator to another.
2. Reward students who manage a patient holistically.
3. Provide more patient-centred environment of clinical management.

Methods

In addition to fulfilment of previous minimum requirements, candidates were given an additional requirement of earning a minimum total credit score to qualify for the final exams.

Credits were allocated for all restorative work performed with substantial additional "credit bonus" awarded if the case was completed and all restorative procedures finished for a particular patient. The bonus was calculated as a fixed percentage of total work done for each patient.

The minimum total credit requirement was drawn up from records of past cohorts and computer-based protocols and procedures were developed to enable credit tracking for candidates relative to work performed with added bonus incentive for completion of all patient care needs by the student operator.

Results

The system has just been implemented and will continue to be fine-tuned to confirm that it provides an adequate reflection of work performed and promotes good holistic patient management.

It will also contribute to objective evaluation of the best performing clinical student/s for each cohort.

Faculty are adapting to form patient-based rather than procedure-based management attitudes.

Conclusion

In addition to our educational desire for comprehensive of training and standardisation the educational experiences of our candidates, it is good at this formative juncture to give live demonstration of the need to view the patient as a whole person, not as a carrier of specific procedures. Directing focus to overall outcome rather than a curriculum-determined schedule will help contribute to this goal - in the minds of our future practicing clinicians.

D2090**STRESS AMONG MEDICAL STUDENTS DURING CLINICAL YEARS****Emilia O**

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Aims

Stress during undergraduate medical training is widely recognised. However, studies about the topic during clinical placement are lacking in Indonesian medical schools. The objectives of our study were to assess the level of stress and sources of stress during clinical training period.

Methods

A cross-sectional, questionnaire-based survey was carried out among clinical phase medical students of Universitas Gadjah Mada, Indonesia. The stress level was assessed using a 20-item questionnaire. Stress items were scored with Likert scale (0 for no stress to 3 for severe stress).

Results

Little or no stress was felt by more than 60% of students on most items. Two main sources of severe stress, although to a small proportion of students, were lack of clinical skills (17.2%) and facing life and death situations (20.6%). Over 30% students found 13 of the 20 stressors were at a moderate or severe level: insufficient orientation, lack of clinical skills, fear of making mistake, conflict with doctors/nurses, too much work, crowded learning environment, lack of resources, time pressure and deadlines, life and death situation, unclear role of responsibility, lack of time for social life, financial problems and authoritative rules. Students found that overload of information (46.4%), developing relationships with patients (48.3%) and lack of personal recognition (43.5%) did not cause stress during the attachment. On average, the student stress level score was 23.46 ± 1.39 . Although stress levels were fairly low, senior stress levels were higher. Senior students have been described as developing an increasingly cynical attitude towards the course as it progresses. Stress levels were related to year of clerkship, GPA and departments but not gender.

Conclusion

Students in this study generally suffered little stress. The stress that was experienced was mainly due to academic pressure and much less due to personal/financial stressors. Senior students and low achieving students had higher levels of stress.

D2091**HOW TO DO EFFECTIVE FEEDBACK FOR RESIDENTS IN EMERGENCY SETTINGS*****Matsuguchi T****Lizuka Hospital, Japan***Aims**

Emergency medicine is an essential component in Japanese residency training program. Residents learn essential knowledge and skills of doctors from their supervisors mainly by receiving feedback. Previous literature describes how to do effective feedback to residents and medical students in general (Krackov 2013). There are, however, situational differences in emergency settings, because patients are often too many and too critical, so that we have to prioritize clinical practice over training residents. We felt that some principles for effective feedback in general did not work well in this setting. Therefore, as an explorative study, we studied how to do effective feedback in emergency settings, which is our research question.

Methods

This study was done in Lizuka Hospital, a community-based big-size teaching hospital located in Kyushu, Japan. We conducted two focus groups for 5 residents in March and 4 in May in 2014. All discussions were audio-recorded and transcribed verbatim. Data were read iteratively by the first author (TM) and analyzed thematically. The last two authors (TM/HN) read the transcripts separately and discussed the identified themes with the first author. Ethical approval was granted by the Institutional Review Board at Lizuka Hospital.

Results

Eleven themes on effective feedback for resident in the emergency settings were identified. We found that feedback should be done “in learner’s context”, “in a safe environment”, “immediate”, “in working time”, “selectively”, “interactively”, “based on evidences”, “to promote reflection”, “focusing on behavior”, “considering learner’s levels”, “with critical comments”. Comparing with the principles of effective feedback described in the medical education textbooks, many results are compatible with what is already known about how to give effective feedback, like “selectively”. However, we found it interesting that some residents sought “critical feedback” in a certain setting, which is usually not described in the previous literature.

Conclusion

Even in emergency settings, the principles of effective feedback are almost the same as in other settings. We argue that residents seeking critical feedback might have higher learning objectives than supervisors. It may be Japanese culture, which influences this style, as we do not know very much on how culture influences styles of feedback. We hope we will have responses from international (especially Asian) audiences to discuss further in this topic.

D2092

ASSESSING PROFESSIONALISM, COMMUNICATION, AND COLLABORATION IN CLERKSHIP YEAR BY IMPLEMENTING A 360-DEGREE EVALUATION

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Aims

Multisource feedback (MSF), also called the 360-Degree evaluation is an evaluation process by which questionnaires are distributed amongst medical peers and colleagues to assess physician performance from different sources other than the attending or the supervising physicians. The aim of this study was to design, implement, and evaluate a 360-Degree process in assessing clerkship year trainee in the Kingdom of Bahrain.

Methods

The study was undertaken in Bahrain Defense Force Hospital which is a military teaching hospital in the Kingdom of Bahrain. Twenty one interns (representing the total population of the interns for this year) who finished their medical schools and started their one year clerkship rotation in our military teaching hospital were assessed in this study. We developed an instrument modified from the Physician Achievement Review instrument (PAR) which was used to assess Physicians in Alberta (1). Our instrument assessed professionalism, communication skills and collaboration only. To achieve face and content validity, a table of specification was constructed and a working group was involved in constructing the instrument. Expert opinion was considered as well. The instrument consisted of 39 items; were 15 items to assess professionalism, 13 items to assess communication skills, and 11 items to assess collaboration. Each intern was evaluated with 3 groups of raters, 8 Medical colleague Interns, 8 senior medical colleague, and 8 Coworkers from different departments. We decide in this study to select raters randomly for each Intern. The basic criterion is that each intern should know and work with the raters for at least of two months. Independent administrative team was formed to carry on the responsibility of distributing the instruments and collecting them in closed envelopes. Each envelope consisted of the instrument and a guide for the implementation of the MSF and the purpose of the study.

Results

A total of 21 interns 9 males and 12 females who represent the total number of the interns rotating in our hospital for this year were assessed. Sixteen interns graduated from the Royal College of Surgeons of Ireland (RCSI) in Bahrain, two from medical schools in Egypt, one from Sudan, one from Saudi Arabia, and one from Yemen. The total forms collected is 314; 105 surveys from coworkers, 93 surveys from medical colleague Intern, and 116 surveys from senior medical colleague (chief residents/consultants). The total mean response rates were 62.3%. Most of the questions were answered by the respondents. There were only 4 questions (Q27, 28, 36, and 38) that exceeded 20 % of unable to assess by the raters. Those questions may need to be reviewed or revised or deleted in future implementation. The whole instrument was found to be suitable for factor analysis (KMO = 0.953; Bartlett test significant, $p < 0.00$). Factor analysis showed that the data on the questionnaire decomposed into three factors which counted for 76.4% of the total variance: professionalism, collaboration and communication. Reliability analysis indicated that the instrument full scale had high internal consistency (Cronbach's α 0.98). The reliability for the factors (subscales) within the questionnaire had high internal consistency reliability, nothing less than (Cronbach's $\alpha \geq 0.91$). The generalizability coefficients (Ep2) were 0.78 for the surveys.

Conclusion

Based on the present results, the current instruments and procedures have high reliability, validity, and feasibility in assessing interns during the clerkship year.

Reference:

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D2093

FACULTY EMPOWERMENT AS A STRATEGY FOR CURRICULUM CHANGE

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Aims

The Faculty of Medical Sciences (FCM) at State University of Rio de Janeiro has a traditional model of education and a history of few curricular modifications, with little impact. This relates to the well-established academic culture which values post-graduate teaching, research, and administrative positions which give institutional recognition and prestige. Consequently, the curriculum has not yet been aligned with the Brazilian guidelines for medical education approved since 2001.

The aims of these work were to developed faculty development as the main strategy to progressively implement curricular changes.

Methods

A series of seven structured meetings was conducted on topics of interest in medical education from June 2012 to June 2014. The discussions included students, members of the external community, and in several occasions, guest speakers were invited to lead the sessions.

Six task forces were created to start the pedagogical project review addressing: integration between basic and clinical areas, integration to community and to the national health system, learning principles and teaching-learning strategies, student assessment methods, Internship reform, strategies for student engagement and motivation. Task force coordinators meet fortnightly and use the Moodle platform as a repository of their work. Student participation is ensured in all initiatives.

One of the main needs identified was for improvement in assessment strategies, especially for graduating students, and addressing in addition to cognitive knowledge, skills and attitudes expected to be present in health care workers. The first module of the faculty development program focused on OSCE and clinical skills assessment.

Results

Twenty percent of faculty (out of 270) consistently attended the meetings showing a clear indication for a faculty development program.

Program focused on assessment with OSCE involved 52 participants.

Two pilot formative evaluation was applied to final year Interns. The internship is also been remodel, in order to promote integration with community and primary care training.

An Institutional Evaluation Commission was also organized.

Conclusion

There is an apparent distance of faculties and undergraduate teaching. The lack of clear landmarks for academic meritocracy seems to be limiting mobilization and participation of these professionals in the necessary transformations. The literature points to the possibility of achieving curricular reform from faculty development programs.

To redeem the process of curriculum improvement, institutional manager developed activities to mobilize faculties, assessing that without legitimacy of this group any initiative would not be achieved.

The successful pilot was a milestone for this faculty development program which was entirely designed by the school faculty from what they identified as their main needs.

Curricular change actions that specifically address faculty can lead to faculty motivation and commitment through their awareness, ownership and engagement process such as the one that resulted from structured meetings. The positive and collaborative environment stimulated faculty through initiatives that facilitated professional growth, enhanced professional relationships and engendered movement to collectively respond to institutional challenges.

D2094**THE MYRINGOTOMY EAR SIMULATION MODEL*****Ker L, Ngo R***

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Aims

Myringotomy and ventilation tube insertion is a common otolaryngologic surgical procedure. It has a steep learning curve for residents. Incorrect placement of incisions, external ear canal trauma are common complications when residents begin learning the procedure. With increasing conservative guidelines on indications of myringotomy tubes, residents have less opportunities to refine this skill on real patients. The objective is to create a learner centric myringotomy simulator.

Methods

Although the concept of simulation training in myringotomy is not new, we aim to reduce the learning curve by introducing learner guided features on a simulation model. Some of these includes landmarks such as the handle of malleus, the anterior inferior quadrant guide, and modified instruments as part of the simulation. Working with the National University of Singapore, Division of Industrial Design team, a 3D library of different variants of ear models, including modified ear canals for teaching was created. We created a platform to house the different components including an auricle, an external ear canal and a disposable tympanic membrane with landmarks.

Results

The model is accurate with realistic consistency to mimic soft tissues encountered in the myringotomy procedure. The simulator allows for variance in anatomy between the side of the ear and also between adult and pediatric sizes.

Conclusion

It can be used for the training of Otolaryngology residents and will be employed as a proof-of-concept model for the purpose of simulation training.



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