Academic Medicine on Outram Campus
Who, What, Why and How

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Academic Medicine as the defining model for SingHealth

- What is Academic Medicine?
- Why is SingHealth embracing academic medicine?
- Going beyond rhetoric- who and how
- Collaboration with other stakeholders
- Conclusion

What is Academic Medicine?

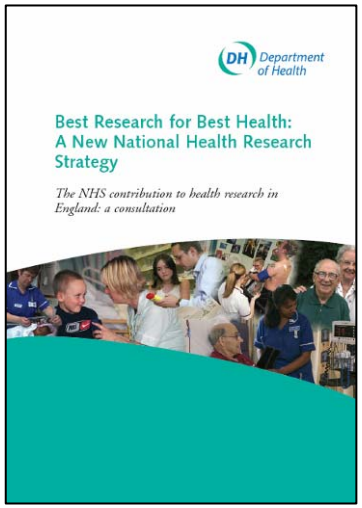
Abraham Flexner

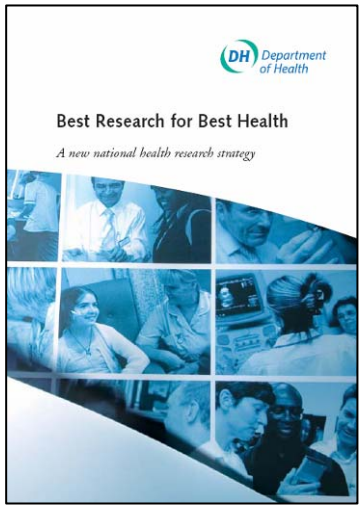
"…in addition to a scientific foundation for medical education,… thoughtful clinicians would pursue research stimulated by the questions that arose in the course of patient care and teach their students to do the same.

To Flexner, research was not an end in its own right; it was important because it led to better patient care and teaching."

Source: Molly Cooke, M.D., David M. Irby, Ph.D., William Sullivan, Ph.D., and Kenneth M. Ludmerer, M.D., "American Medical Education 100 Years after the Flexner Report", New England Journal of Medicine, Volume 355:1339-1344, Sep 28, 2006

The UK Best Research for Best Health strategy papers (2005-2006) defined 5 attributes of AMCs





Source: Dept of Health, UK, "Best Research for Best Health: A New National Health Research Strategy: The NHS Contribution to Health Research in England: A Consultation", pp 30-31, July 2005

Dept of Health, UK, "Best Research for Best Health: A New National Health Research Strategy: The NHS Contribution to Health Research in England: A Consultation", p 26, January 2006

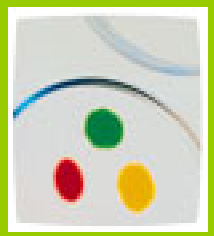
Attributes of AMCs*

- World class strengths across a broad range of clinical specialties or specific clinical specialty
- Leaders of scientific translation
- Early adopters of new insights in technologies and techniques for improving health and social care
- Environments where scientific endeavour can thrive
- Talent magnets, producing world-class outputs

*** Benchmark institutions cited in the consultation paper are: Mass-General Hospital, Dutch University Medical Centres and the Karolinkska Institute**

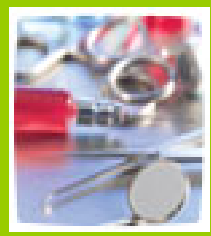
SingHealth's Definition of AMC

"A vibrant **Eco-System of excellent Healthcare Services**,
that keeps improving by reinventing itself with
new knowledge generated by Research,
led by succeeding generations of Healthcare Professionals
who are **committed to learning, innovating** and
pushing the frontiers of Medicine."









Academic Medicine as the defining model for SingHealth

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- Going beyond rhetoric- who and how
- Collaboration with other stakeholders
- Conclusion

The current emphasis is on developing 2 academic centres: Outram Campus and Kent Ridge Campus

- MOH sees AMCs as receptacles to translate inventions from basic BMS research into clinical applications that advance care as well as a means to position and move up the value chain for SingMed

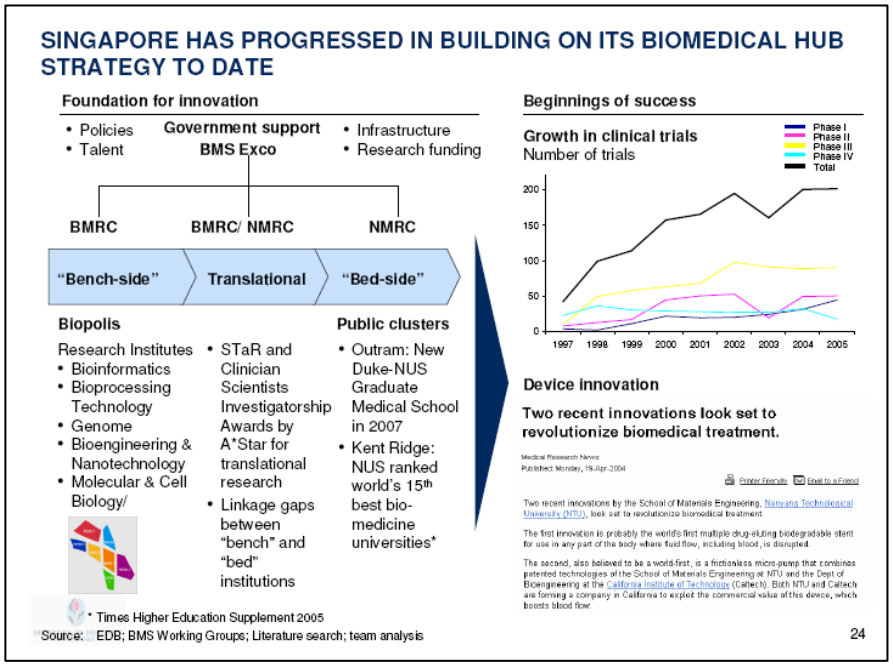
CONFIDENTIAL

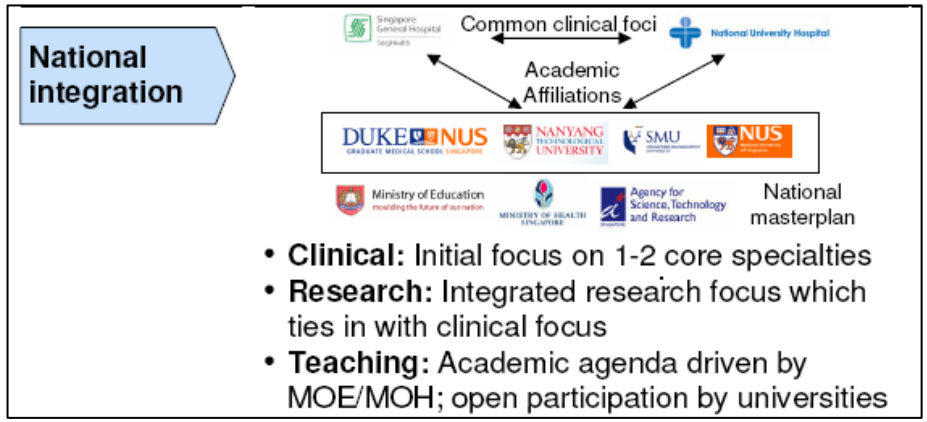
Turbocharging Singapore Medicine:
Building top-tier AMCs

MINISTRY OF HEALTH
SINGAPORE

5th December 2006

MOH commissioned McKinsey to carry out an analysis of Singapore's prospects for academic medicine and the way forward





Academic practice is SingHealth's value proposition to staff

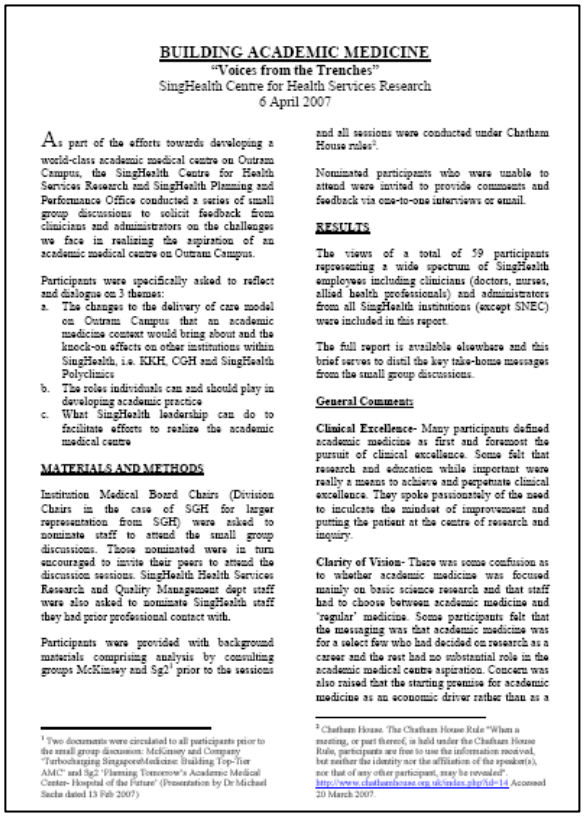
- Public sector salaries do not, can not and should not match private sector salaries
- Value proposition to staff must instead focus on
  - Remuneration as a high hygiene factor
  - Opportunities to do world-class, cutting edge research
  - Ability to shape and influence practices and values of the next generation of healthcare professionals
  - Deep sense of mission and job satisfaction
  - Minimal push factors such as poor leadership, bureaucracy

What Managers are Looking For (McKinsey & Company War for Talent Survey 2000)	
Interesting, Challenging Work	59%
Company is well-managed	48%
Work I feel passionate about	45%
Good relations with my boss	43%
I like the culture and values	39%
Recognised, rewarded for my individual contribution	39%

Academic Medicine as the defining model for SingHealth

- What is Academic Medicine?
- Why is SingHealth embracing academic medicine?
- Going beyond rhetoric- who and how
  - Engaging Clinicians
  - Prioritization
  - Road Map Moving Forward
- Collaboration with other stakeholders
- Conclusion

Small group discussions garnered much useful opinions and ideas



BUILDING ACADEMIC MEDICINE
"Voices from the Trenches"
SingHealth Centre for Health Services Research
6 April 2007

As part of the efforts towards developing a world-class academic medical centre on Outram Campus, the SingHealth Centre for Health Services Research and SingHealth Planning and Performance Office conducted a series of small group discussions to solicit feedback from clinicians and administrators on the challenges we face in realizing the aspiration of an academic medical centre on Outram Campus.

Participants were specifically asked to reflect and dialogue on 3 themes:
a. The changes to the delivery of care model on Outram Campus that an academic medicine context would bring about and the knock-on effects on other institutions within SingHealth, i.e. KKH, CGH and SingHealth Polyclinics
b. The roles individuals can and should play in developing academic practice
c. What SingHealth leadership can do to facilitate efforts to realize the academic medical centre

MATERIALS AND METHODS

Institution Medical Board Chairs (Division Chairs in the case of SGH for larger representation from SGH) were asked to nominate staff to attend the small group discussions. Those nominated were in turn encouraged to invite their peers to attend the discussion sessions. SingHealth Health Services Research and Quality Management dept staff were also asked to nominate SingHealth staff they had prior professional contact with.

Participants were provided with background materials comprising analysis by consulting groups McKinsey and Sg2[1] prior to the sessions and all sessions were conducted under Chatham House rules[2].

Nominated participants who were unable to attend were invited to provide comments and feedback via one-to-one interviews or email.

RESULTS

The views of a total of 59 participants representing a wide spectrum of SingHealth employees including clinicians (doctors, nurses, allied health professionals) and administrators from all SingHealth institutions (except SNEC) were included in this report.

The full report is available elsewhere and this brief serves to distil the key take-home messages from the small group discussions.

General Comments

Clinical Excellence- Many participants defined academic medicine as first and foremost the pursuit of clinical excellence. Some felt that research and education while important were really a means to achieve and perpetuate clinical excellence. They spoke passionately of the need to inculcate the mindset of improvement and putting the patient at the centre of research and inquiry.

Clarity of Vision- There was some confusion as to whether academic medicine was focused mainly on basic science research and that staff had to choose between academic medicine and 'regular' medicine. Some participants felt that the messaging was that academic medicine was for a select few who had decided on research as a career and the rest had no substantial role in the academic medical centre aspiration. Concern was also raised that the starting premise for academic medicine as an economic driver rather than as a

[1] Two documents were circulated to all participants prior to the small group discussion: McKinsey and Company "Turbocharging Singapore's Medicine: Building Top-Tier AMC" and Sg2 'Planning Tomorrow's Academic Medical Center- Hospital of the Future' (Presentation by Dr Michael Sachs dated 13 Feb 2007)

[2] Chatham House. The Chatham House Rule "When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed". http://www.chathamhouse.org.uk/index.php?id=14 Accessed 20 March 2007.

- **Clinical Excellence-** "academic medicine as first and foremost the pursuit of clinical excellence"
- **Prospective Data Collection-** "every patient is a dot on someone's graph"
- **Access to 'Standard' Treatments regardless of Ability to Pay**
- **Importance of Scientific Curiosity-** "the best clinicians are also the best researchers"
- **Manpower Shortage and Need for Freed Up Protected Time**
- **Emphasize academic practice at department and not individual level**
- **Incentivizing Research and Education**

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Funding is limited and MOH has asked for prioritization of initial focus areas

RECOMMENDATIONS FROM…

BSRC

- Cardiology
- Oncology
- Ophthalmology
- Neurosciences
- Infectious diseases

SingMed

- Cardiology
- Oncology
- Ophthalmology
- Neurosciences
- Orthopaedics

FEW SPECIALTIES TO FOCUS FOR A START…

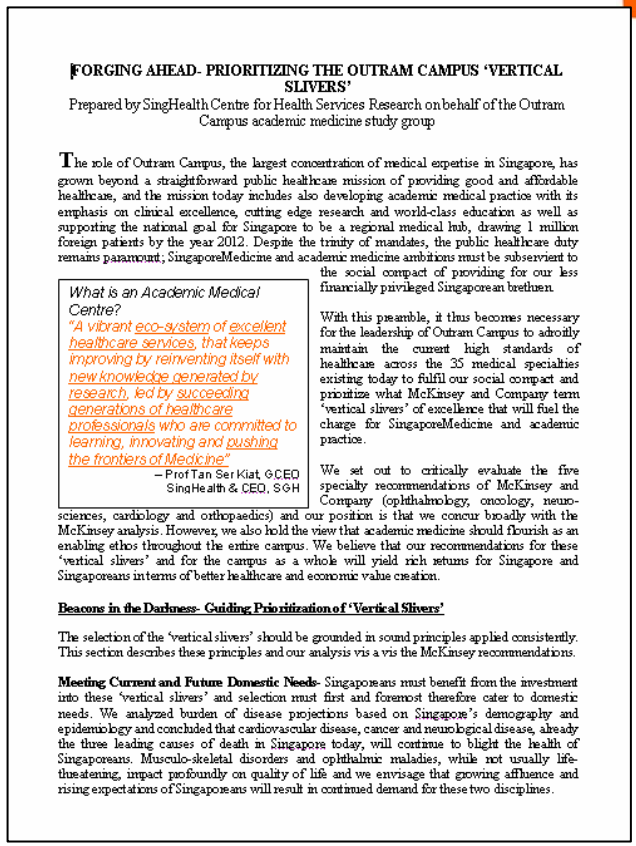
- **Cardiology**
- **Oncology**
- **Ophthalmology**
- **Neurosciences**
- **Musculo-skeletal**
  (Includes orthopaedics, plastics, rheumatology)

The intent is to build common core infrastructure that supports academic medicine for all specialties and grow the other specialties organically

Sources: "Biomedical Sciences Initiative Phase 2 (Year 2006 - 2010) – Strengthening Translational and Clinical Research in Singapore", *NRF Board Paper,* Oct 2007
"Turbocharging SingaporeMedicine", McKinsey SingMed Strategy, Feb 2007

Who should lead the charge?

- Prioritization necessary in view of limited resources (finances, space, management band width)
- Need for common metrics to objectively appraise each potential AMC focused specialty for further development



FORGING AHEAD- PRIORITIZING THE OUTRAM CAMPUS 'VERTICAL SLIVERS'

Prepared by SingHealth Centre for Health Services Research on behalf of the Outram Campus academic medicine study group

The role of Outram Campus, the largest concentration of medical expertise in Singapore, has grown beyond a straightforward public healthcare mission of providing good and affordable healthcare, and the mission today includes also developing academic medical practice with its emphasis on clinical excellence, cutting edge research and world-class education as well as supporting the national goal for Singapore to be a regional medical hub, drawing 1 million foreign patients by the year 2012. Despite the trinity of mandates, the public healthcare duty remains paramount; SingaporeMedicine and academic medicine ambitions must be subservient to the social compact of providing for our less financially privileged Singaporean brethren.

What is an Academic Medical Centre?
"A vibrant eco-system of excellent healthcare services, that keeps improving by reinventing itself with new knowledge generated by research, led by succeeding generations of healthcare professionals who are committed to learning, innovating and pushing the frontiers of Medicine"
– Prof Tan Ser Kiat, GCEO SingHealth & CEO, SGH

With this preamble, it thus becomes necessary for the leadership of Outram Campus to adroitly maintain the current high standards of healthcare across the 35 medical specialties existing today to fulfil our social compact and prioritize what McKinsey and Company term 'vertical slivers' of excellence that will fuel the charge for SingaporeMedicine and academic practice.

We set out to critically evaluate the five specialty recommendations of McKinsey and Company (ophthalmology, oncology, neuro-sciences, cardiology and orthopaedics) and our position is that we concur broadly with the McKinsey analysis. However, we also hold the view that academic medicine should flourish as an enabling ethos throughout the entire campus. We believe that our recommendations for these 'vertical slivers' and for the campus as a whole will yield rich returns for Singapore and Singaporeans in terms of better healthcare and economic value creation.

Beacons in the Darkness- Guiding Prioritization of 'Vertical Slivers'

The selection of the 'vertical slivers' should be grounded in sound principles applied consistently. This section describes these principles and our analysis vis a vis the McKinsey recommendations.

Meeting Current and Future Domestic Needs- Singaporeans must benefit from the investment into these 'vertical slivers' and selection must first and foremost therefore cater to domestic needs. We analyzed burden of disease projections based on Singapore's demography and epidemiology and concluded that cardiovascular disease, cancer and neurological disease, already the three leading causes of death in Singapore today, will continue to blight the health of Singaporeans. Musculo-skeletal disorders and ophthalmic maladies, while not usually life-threatening, impact profoundly on quality of life and we envisage that growing affluence and rising expectations of Singaporeans will result in continued demand for these two disciplines.

7 Based on the above considerations, we agree with McKinsey that **oncology, cardiology, ophthalmology, neurology** and **orthopaedics** could be our Tier 1 clinical areas of focus. In particular, oncology and cardiology align strongly with all the above criteria and could be two clinical areas that we can focus on initially.

Memo from Perm Sec MOH to SingHealth Board of Directors dated 13 Feb 2007

We critically appraised the McKinsey recommendations using the following dimensions for analysis

1. Clinical Volume

   Market share analyzed by

   a) Inpatient discharges/ Inpatient surgeries/ SOC attendances/ Day surgeries
   b) Volume of procedures/ specific DRG

2. Research

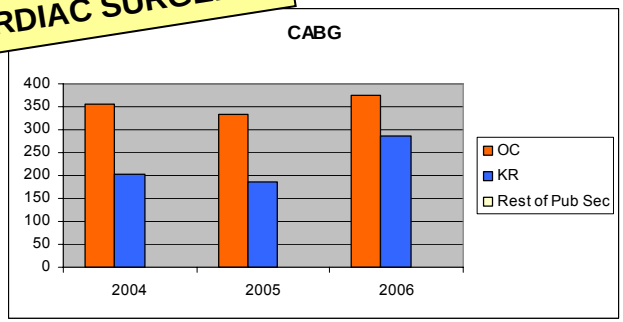
   Analyzed by

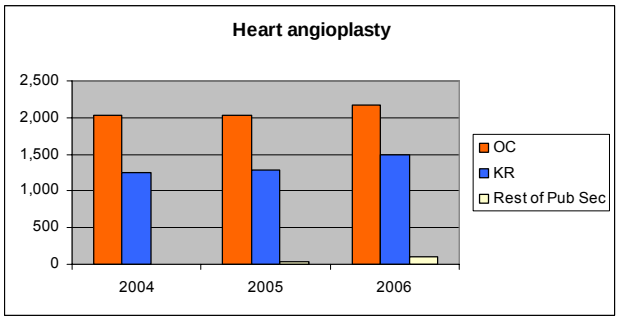
   a) Publications
   b) Journal Impact Factor
   c) Clinical Trials

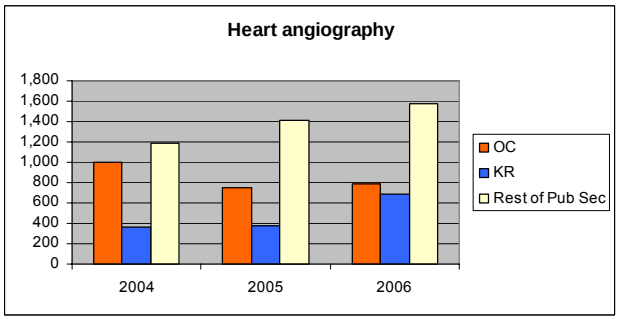
3. Domestic and International Demand
4. Manpower
5. Education
6. Technology

CLINICAL VOLUME

CARDIOLOGY AND CARDIAC SURGERY

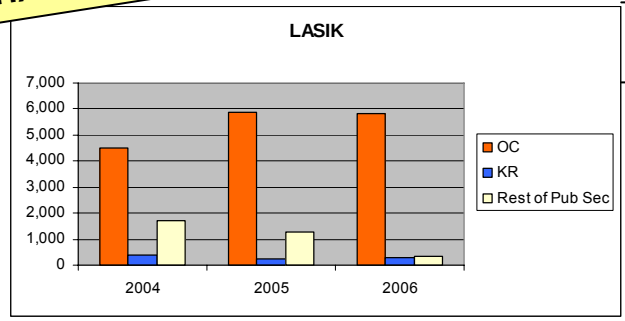


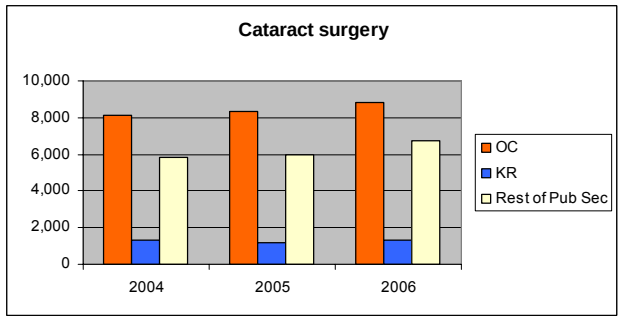


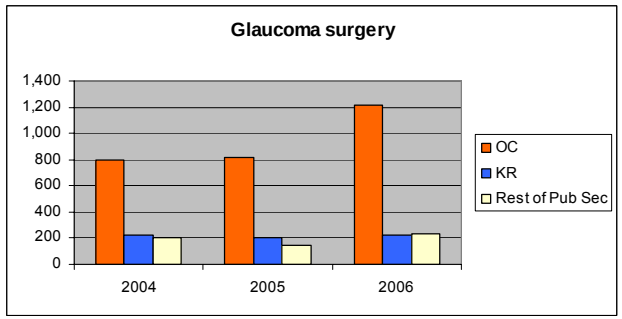


NHC sees 80,000 outpatients yearly, performs 2,000 angioplasties annually. It carried out it s15,000 cardiac surgery in 2002. – From NHC website*

OPHTHALMOLOGY







"…annual workload of 14,000 major eye surgeries and 13,000 laser procedures" - SNEC website

ILLUSTRATIVE

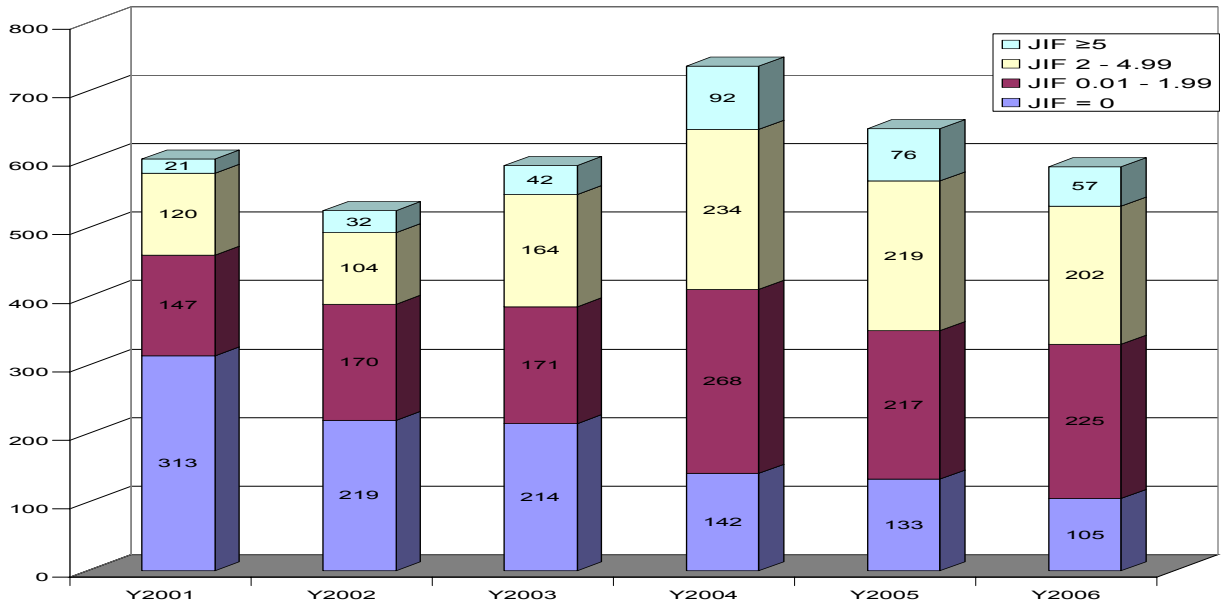
*CGH and TTSH carry out a substantial number of coronary angiographies also

Singhealth Research Output (2001-2006)

ILLUSTRATIVE

- Number of research publications rose from 2001 to 2004 and then fell
  - SARS-related publications hardly affected volume (17 out of 736 in 2004)
  - SARS-related publications slightly boosted JIF (average JIF of 5.07, cumulative JIF of 86.3 compared to average 2004 JIF of 2.41)

Average JIF in 2004 without SARs: 2.35



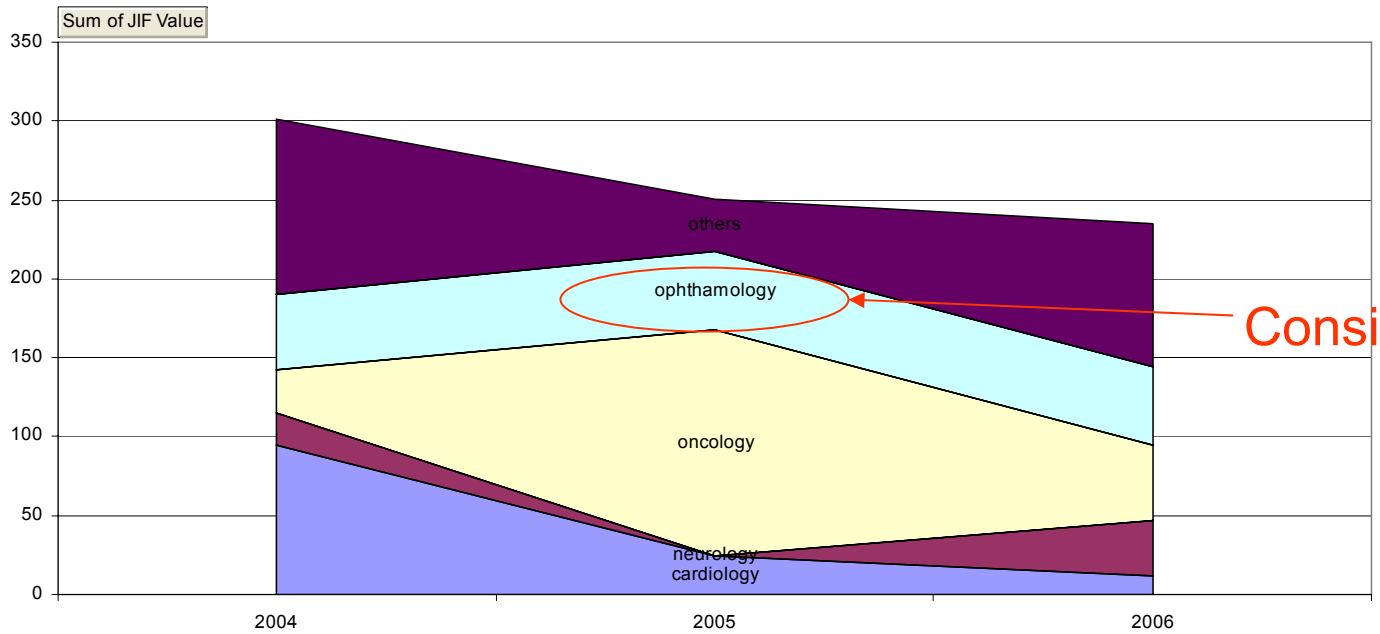
- Average JIF rose from 2001 to 2006 levelling off at ~2.4

	Y2001	Y2002	Y2003	Y2004	Y2005	Y2006
Grand total no. of publications	601	525	591	736	645	589
Cumulative JIF value	701	763	1053	1777	1591	1428
Average JIF value	1.17	1.45	1.78	2.41	2.47	2.42

Specialties contributing to high impact journals (JIF>10)

ILLUSTRATIVE

- Cumulative JIF in ophthalmology held steady from 2004 to 2006
- Cumulative JIF in cardiology dropped
- Cumulative JIF in oncology peaked in 2005 and then returned to 2004 levels in 2006
- Reverse seen for neurology: dip in 2005 and and then returned to 2004 levels in 2006



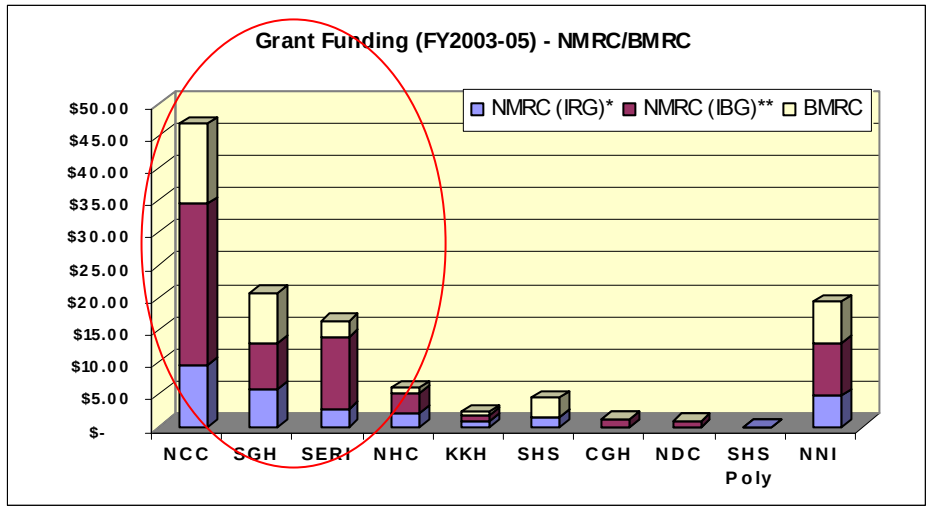
- Of the 50 Singapore-led clinical trials registered with www.clinicaltrials.gov, almost half were in ophthalmology, 1/3 in oncology

SingHealth Research Resources

ILLUSTRATIVE

- Among SingHealth institutions, Outram campus (SGH, NCC, SERI, NHC) leads in lab floor area, research manpower and funding
  - Year by year data not available for analysis

II. Research Lab - Total Floor Area Sqm (2006)		
Instn	**No. of Research Labs**	**Total Floor area sqm**
SGH	36	3,286.53
NCC	19	1,476.16
SERI	11	2,308.00
NHC	5	280.00
KKH	3	70.00
CGH	2	219.85
NDC	0	0.00
SHS	4	605.01
NNI	12	2,100.00
SHPOLY	0	0.00
TOTAL	**92**	**10,345.55**

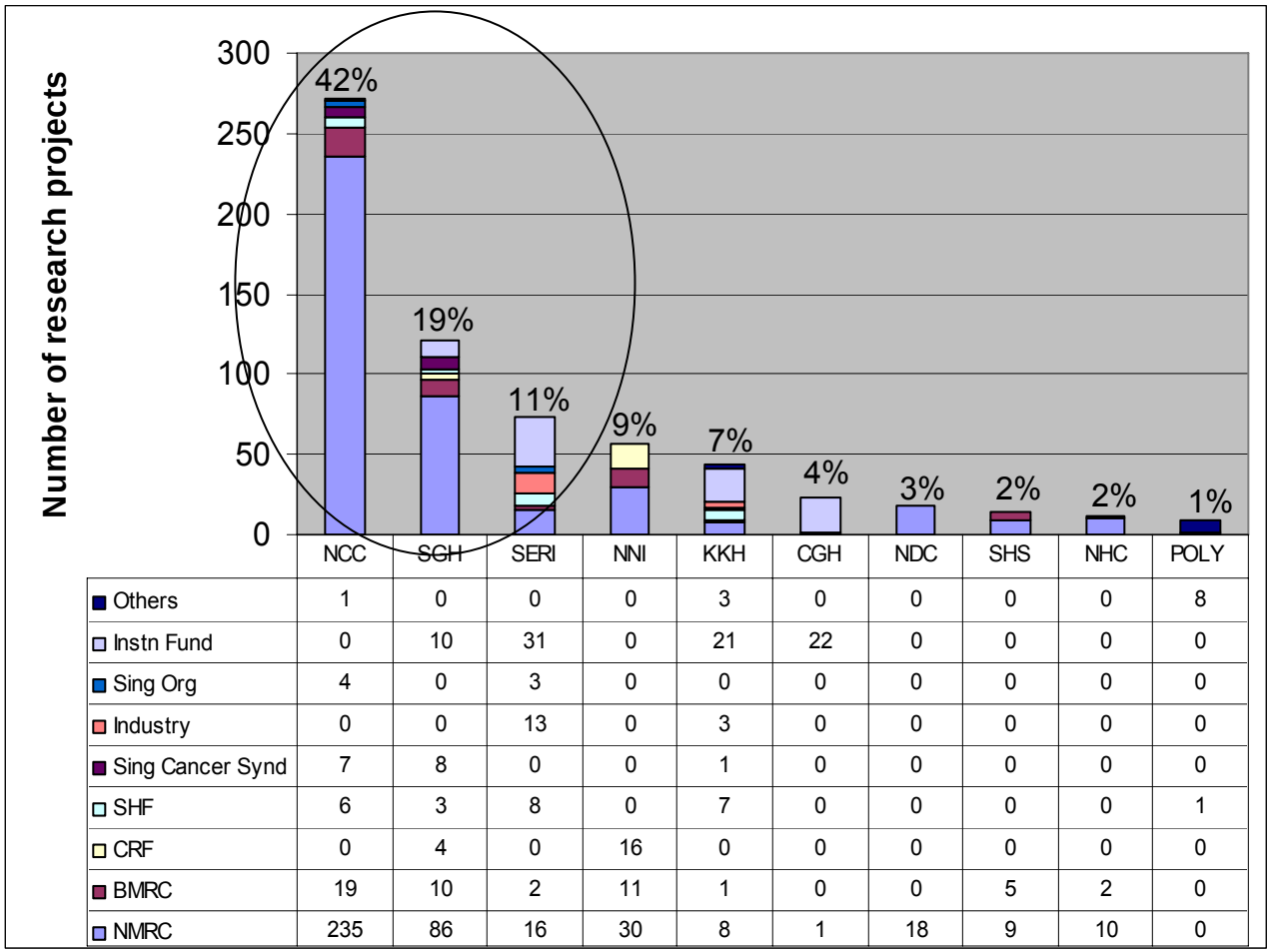


Research Headcounts by FTE (FY2004)						
	Researchers				Technical Staff (+ support staff)	TOTAL
	Degree			Non-Degree		
Institution	PhD	Master	Bachelor			
NCC	29.5	20.9	57.9	6.3	31.5	**146.1**
SGH	10	11	8	0	93.5	**122.5**
SERI	9.25	8	5	1	30	**53.25**
NHC	8	6	11.3	9	2	**36.3**
KKH	1	0	4	4	4	**13**
SHS	3	7.4	2	0	16.8	**29.2**
CGH	1	0	1	0	8	**10**
NDC	0	2.46	0.81	0	3	**6.27**
SHS POLY	0	0	0	0	1	**1**
NNI	20	1	1.5	0	55	**77.5**
Sub-Total	**81.75**	**56.76**	**91.51**	**20.3**	**244.8**	**495.12**
TOTAL	**81.75**	**413.37**				**495.12**

Singhealth Research Output (as of March 2006)

72% of SingHealth research projects are also conducted on Outram campus (NCC, SGH, SERI)

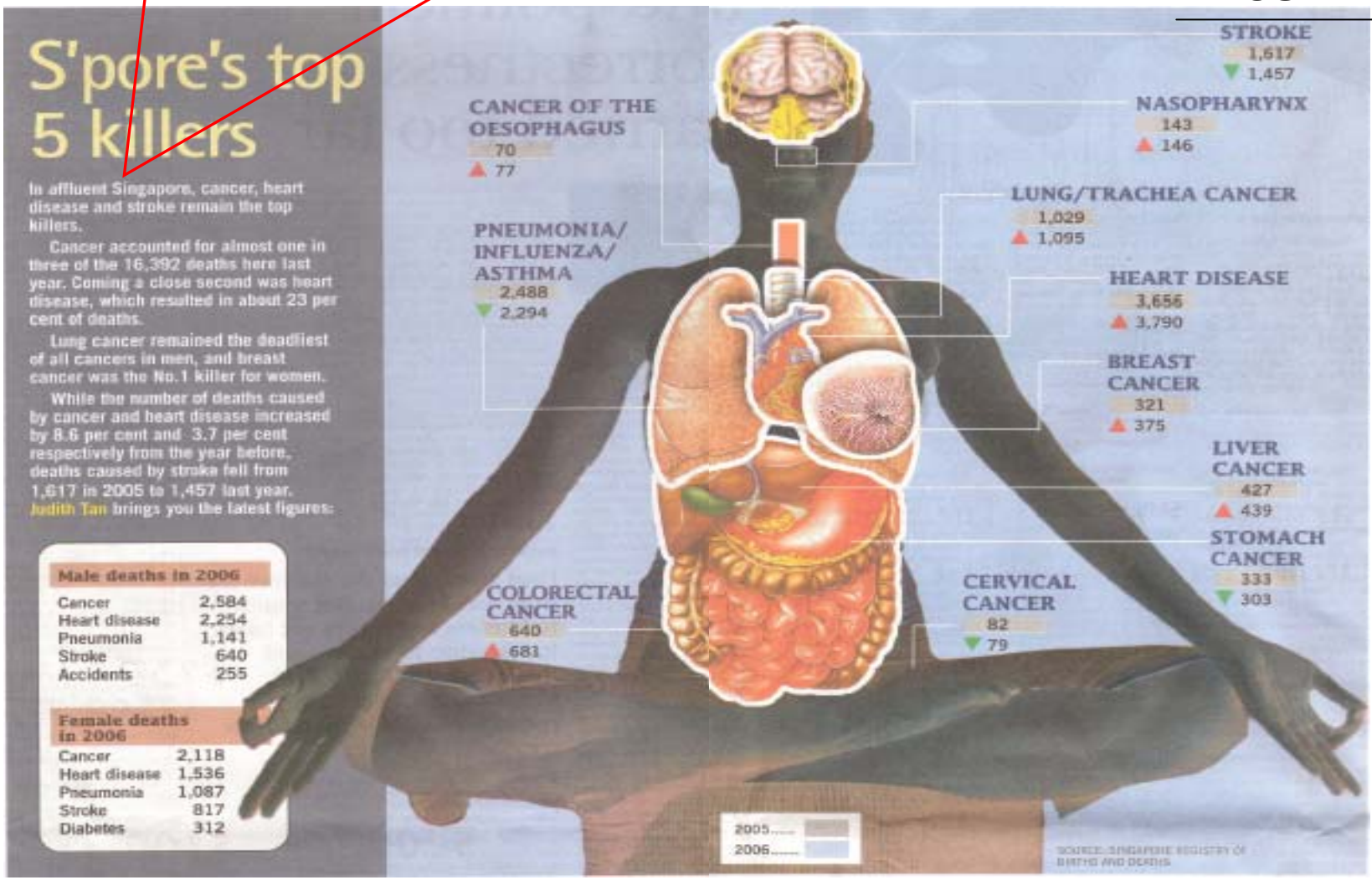
ILLUSTRATIVE



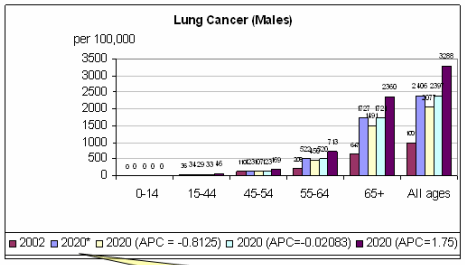
	NCC	SGH	SERI	NNI	KKH	CGH	NDC	SHS	NHC	POLY
Others	1	0	0	0	3	0	0	0	0	8
Instn Fund	0	10	31	0	21	22	0	0	0	0
Sing Org	4	0	3	0	0	0	0	0	0	0
Industry	0	0	13	0	3	0	0	0	0	0
Sing Cancer Synd	7	8	0	0	1	0	0	0	0	0
SHF	6	3	8	0	7	0	0	0	0	1
CRF	0	4	0	16	0	0	0	0	0	0
BMRC	19	10	2	11	1	0	0	5	2	0
NMRC	235	86	16	30	8	1	18	9	10	0

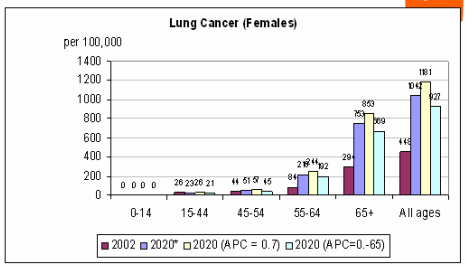
“In affluent Singapore, cancer, heart disease and stroke remain the top killers.”

ILLUSTRATIVE



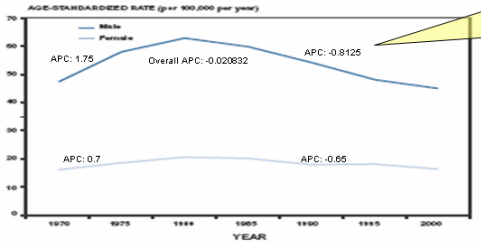
Lung cancers in Singapore in 2020





APC assumed zero. Forecast based on demographic changes alone

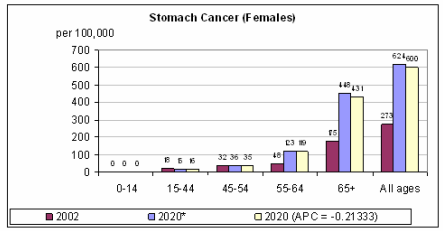
APC = Change in age standardised incidence / Change in years = slope of ASR charts

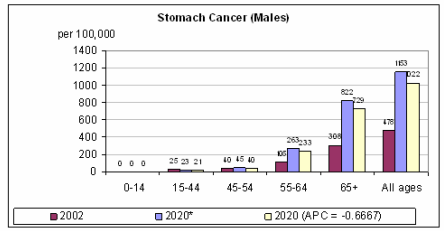


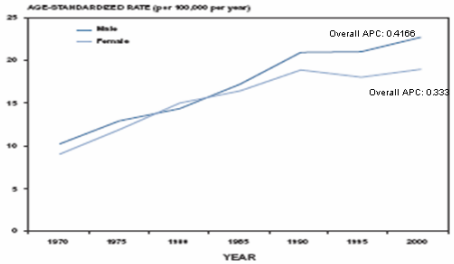
LUNG: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2002

- Projected incidence look to exceed 2000 per 100,000 males for all 3 APCs.
- Incidence of 2020 lung cancer at least double that of 2002 for both males and females.

Colorectum cancer in Singapore, 2020







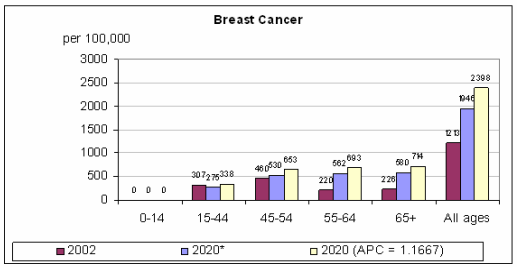
COLON: AGE-STANDARDIZED INCIDENCE BY SEX, 1968-2002

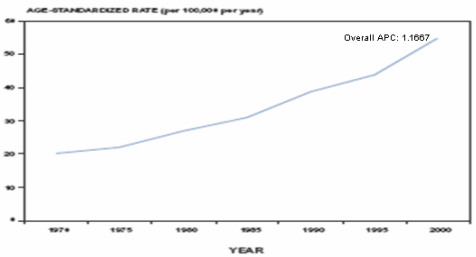
Source: A Seow, WP Koh, KS Chia, LM Shi, HP Lee, K Shanmugaratnam, Trends in Cancer Incidence in Singapore 1968-2002, Singapore Cancer Registry (2004)

- Incidence of colorectum cancer will accelerate
  - Positive APCs
- 2020 incidence of colorectum cancer will double that in 2002

ILLUSTRATIVE

Breast cancer in Singapore, 2020





FEMALE BREAST: AGE-STANDARDIZED INCIDENCE, 1968-2002

Source: A Seow, WP Koh, KS Chia, LM Shi, HP Lee, K Shanmugaratnam, Trends in Cancer Incidence in Singapore 1968-2002, Singapore Cancer Registry (2004)

- Incidence of breast cancer will accelerate
  - Positive APC
- 2020 incidence of breast cancer may be 1.5 – 2 times that in 2002

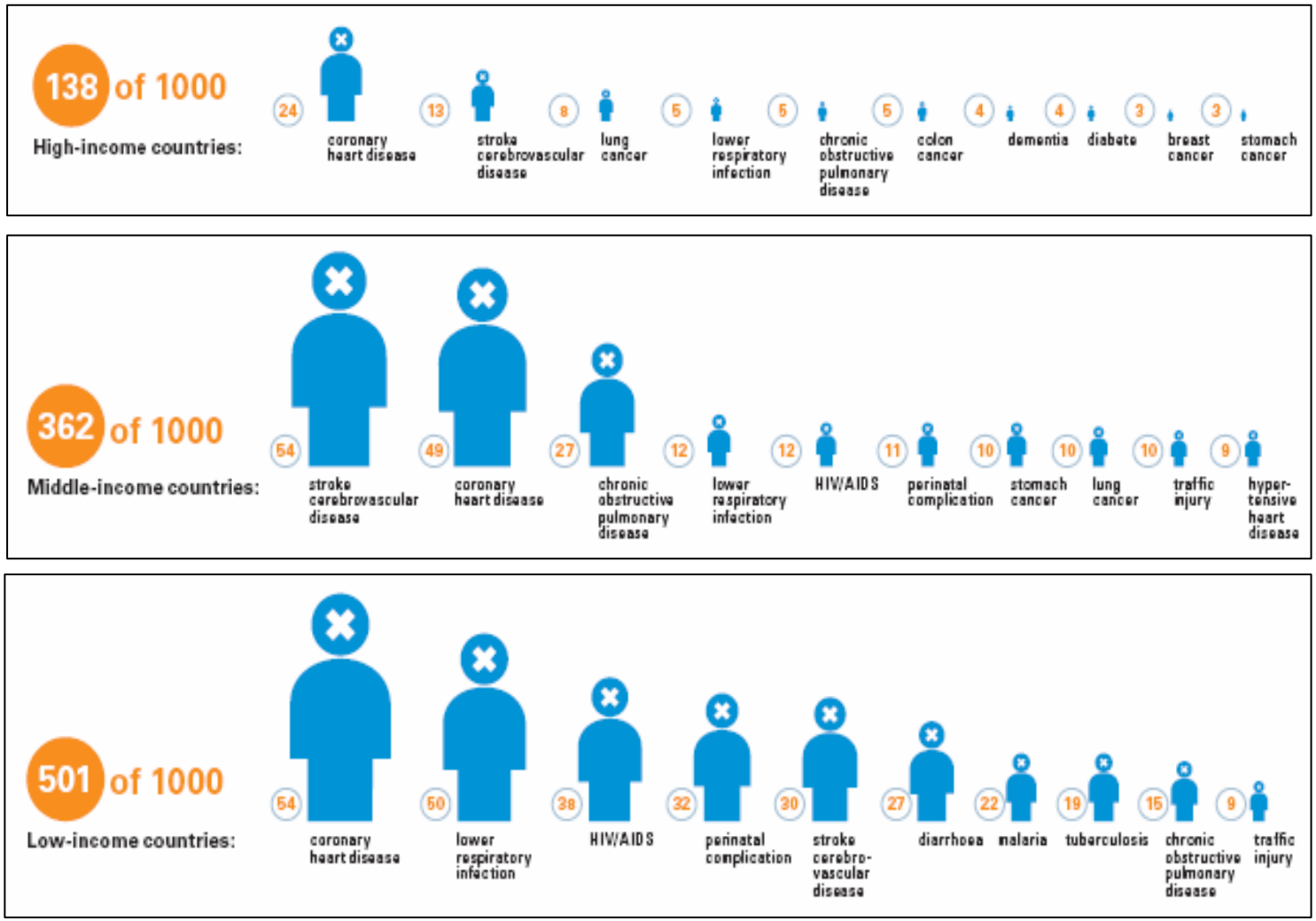
Disease burden due to cancer is set to increase markedly in the next decade.

SingHealth Centre for Health Services Research, Forecast for Cancer Burden in 2020 (Preliminary analysis)

Globally, cardiac, neurological disease and cancer will continue to be important healthcare challenges regardless of income

ILLUSTRATIVE

WHAT WOULD BE THE TOP TEN CAUSES OF THEIR DEATHS?



World Health Organization Website

1 in 5 Singaporeans will be >65 years in two decades

ILLUSTRATIVE

- **Wong Yoke Wai et al.**

Number and Proportion of Elderly for 2025 *[Resident population]*

Number of elderly aged 65+ (in thousands)	710
▪ **Male**	322
▪ **Female**	388
Proportion of elderly aged 65+	19.6
Dependency ratio (retirement age 65)	0.550

- **Report of IMC on the Ageing Population (1999)**

Number and Proportion of Elderly for 2030

Number of elderly aged 65+ (in thousands)	796
Proportion of elderly aged 65+ *[of total population]*	18.9
Dependency ratio *[residents]*	0.564
• **Old (65+ years)**	0.295

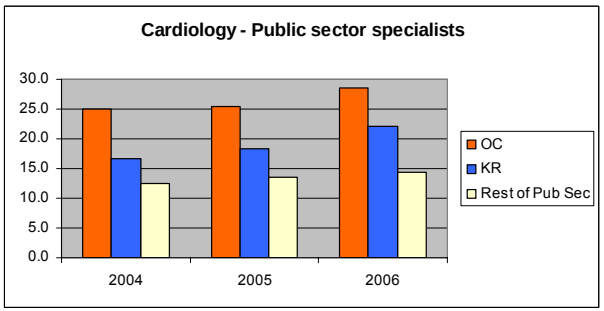
Therefore, 19-20% of the population in 2025-2030 are estimated to be more than 65 years old with a dependency ratio of 0.55-0.56.

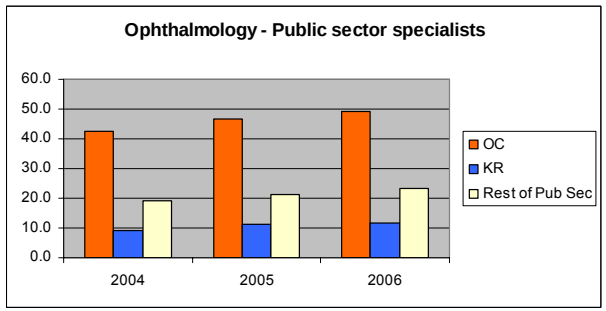
All specialties are losing manpower share to the private sector except for ophthalmology; Outram Campus has more specialists in the McKinsey identified areas compared to Kent Ridge Campus.

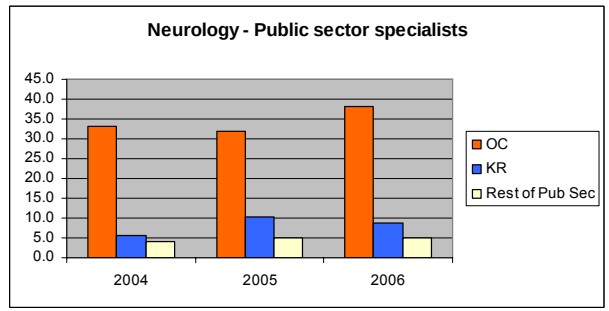
ILLUSTRATIVE

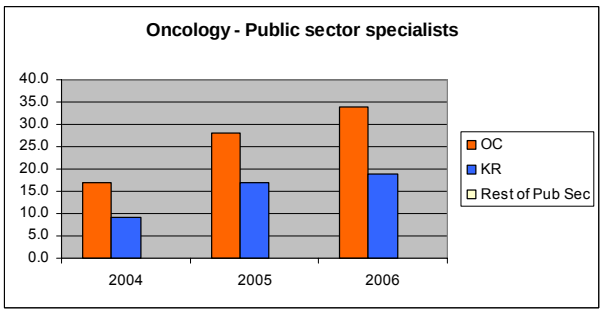
% of registered specialist in the public sector

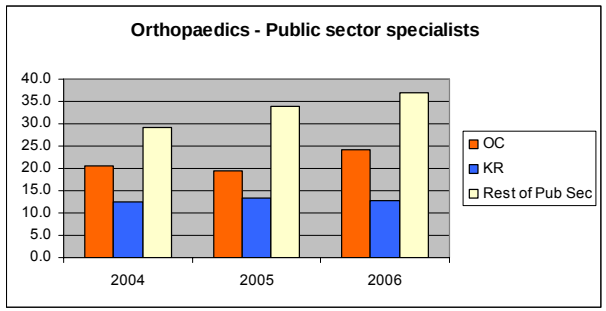
	Ophthalmology	Orthopaedics	Neurology	Cardiology	Oncology
2003	60.2%	64.1%	70.0%	56.9%	76.4%
2004	62.4%	64.0%	69.4%	53.9%	74.6%
2005	64.8%	63.9%	68.4%	53.6%	72.1%
Growth rate	4.6%	-0.2%	-1.6%	-3.3%	-4.3%







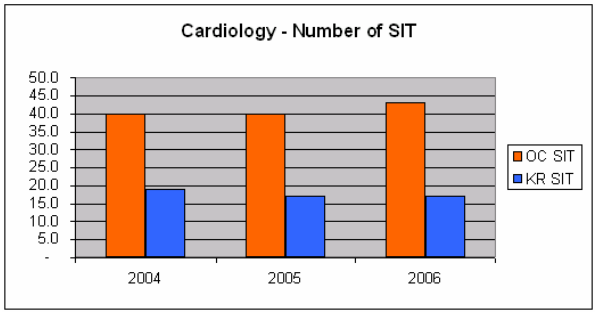


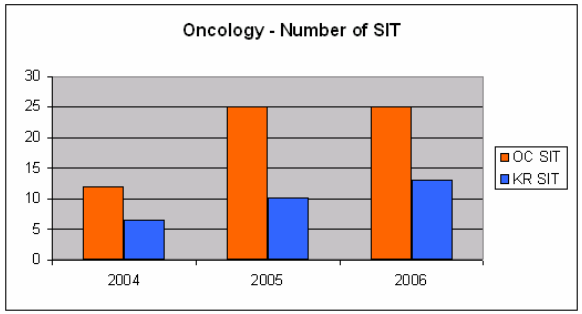


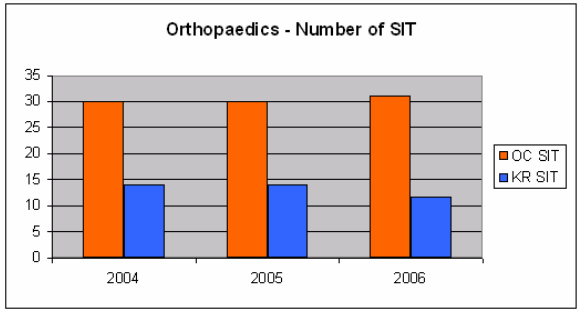
- Oncology includes medical oncologists and radiation oncologists
- Neurology includes neurosurgeons and assumes movement of neurology to Outram Campus following completion of neuro-navigation suite

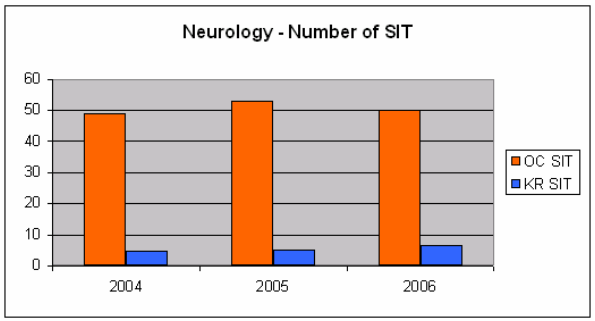
The specialist pipeline is a factor to consider for sustainability.

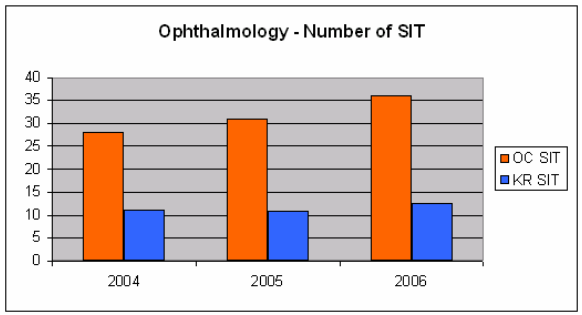
ILLUSTRATIVE





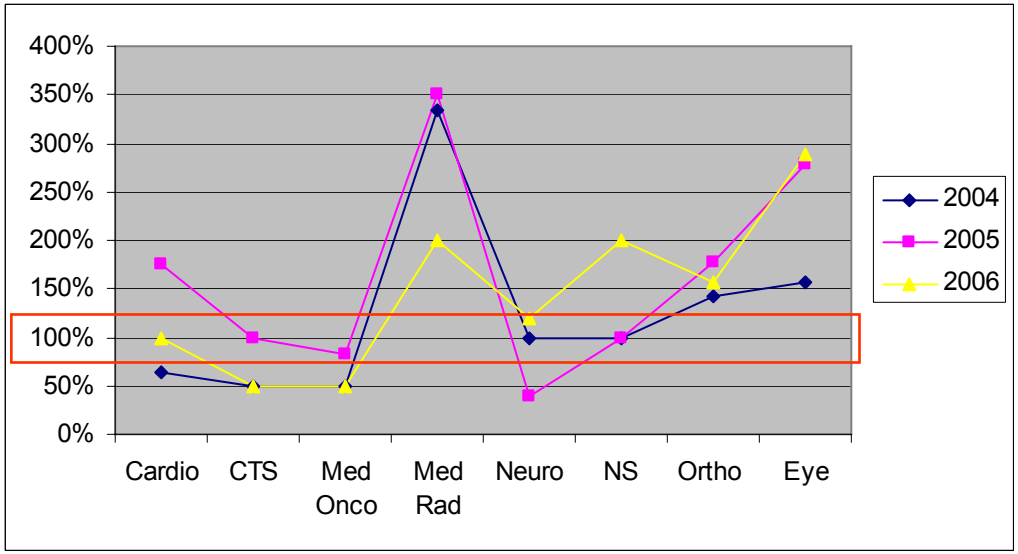




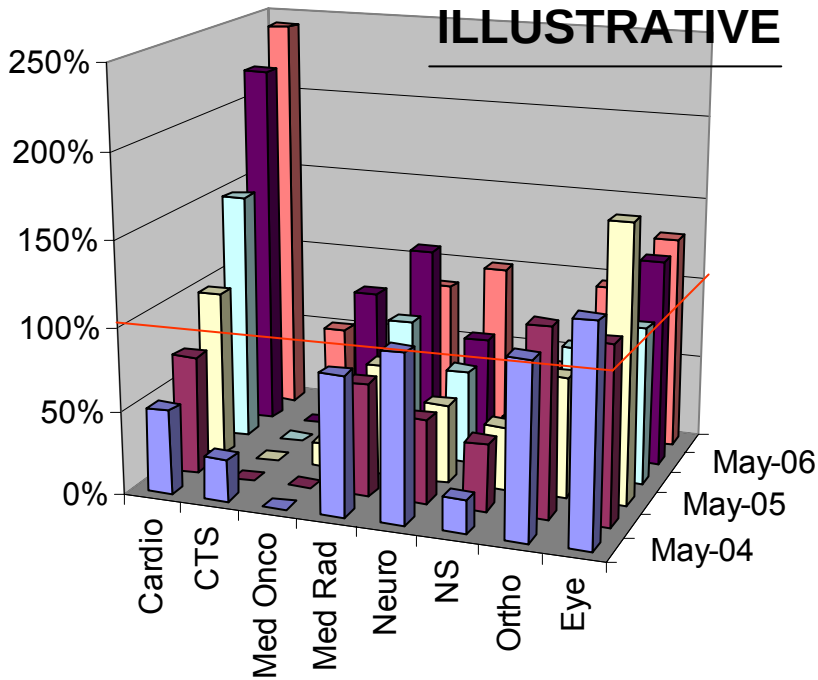


- SIT (Specialists in Training) include both Registrars and Medical Officers
- Cardiology includes cardio-thoracic surgeons
- Oncology includes medical oncologists and radiation oncologists
- Neurology includes neurosurgeons and assumes movement of neurology to Outram Campus following completion of neuro-navigation suite

SingHealth will need to strengthen the appeal and value proposition of many of the identified specialties.



ILLUSTRATIVE



Specialty Training Applications from 2004 to 2006 (No. of applicants over no. of positions expressed as percentage)

*Med Onco and Eye refer to BST; the others AST

MOPEX Applications (2004-6)

(No. of applicants over no. of positions expressed as percentage)

Med Onco, Cardiothoracic surgery and Neurosurgery need to increase the attraction to MOPEX applicants to ensure a stable pipeline of doctors.

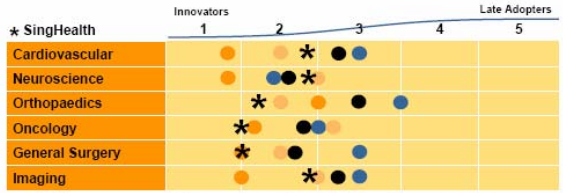
AST applications are generally healthy except for Med Onco and Cardiothoracic Surgery.

Technology assessment is based on analysis by SG2 – SingHealth Clinical Technology Planning Project (28-Feb-07)

Sg2 Technology Adoption Categories

	1	2	3	4	5
Innovators 1	▪ Develop and test new approaches ▪ Invest in research/development at an early stage ▪ Initiatives are often cited at national meetings and in journals				
Early Adopters 2	▪ Seek to be the first in their market to adopt new technologies ▪ Adopt before broad-scale clinical trials are complete and/or reimbursement is secure ▪ Often report on the first widespread use of a particular technology				
Consensus Adopters 3	▪ Focus on technologies that are generally accepted and broadly available in their market ▪ Adopt new approaches after several years of reports at national meetings				
Cautious Adopters 4	▪ Lag behind organisations of similar size in adoption of mature technologies ▪ Are slower to adopt new technologies due to a variety of factors, including capital constraints, staff limitations, local consumer behavior and organisational priorities				
Late Adopters 5	▪ Characteristically have outdated technology and systems ▪ Often do not incorporate technology planning into strategy and future development decisions ▪ Often are skeptical of new technologies				

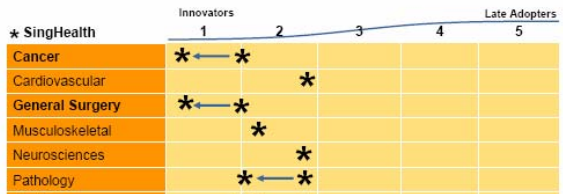
SingHealth Is a Technology Adopter, Not a Technology Developer



	Bed Count	2004 Total Discharges	2004 NIH Funding (USD)	
Developer	AMC 1 NE USA	698	50,062	$231M	
	AMC 2 NE USA	559	30,898	$27M	
	AMC 3 SE USA	737	38,227	$344M	Missed Opportunity
	AMC 4 MW USA	527	25,495	$57M	

Source: American Hospital Directory and National Institutes of Health; Sg2 Analysis, 2006.

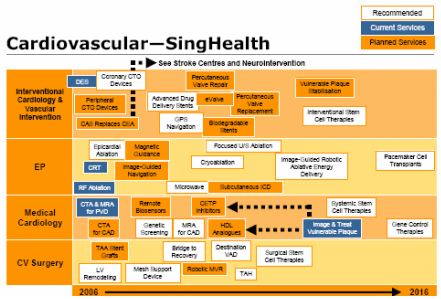
Cancer and Surgery Provide a Platform for Technology Development



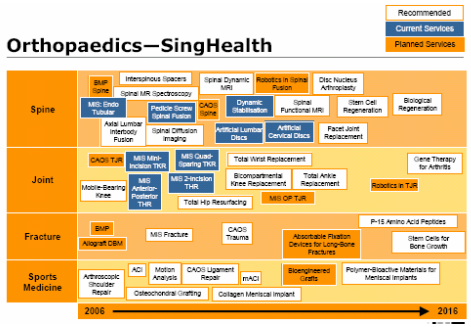
Pathology and radiology are essential to support key clinical disciplines

Source: SingHealth Tech Adoption Surveys, 2006; Sg2 Analysis, 2006.

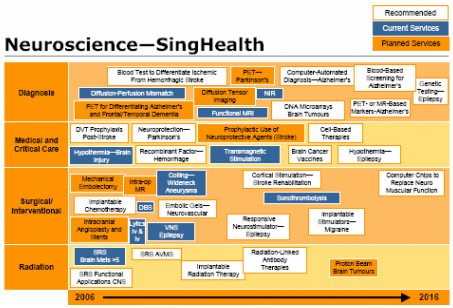
Cardiovascular—SingHealth



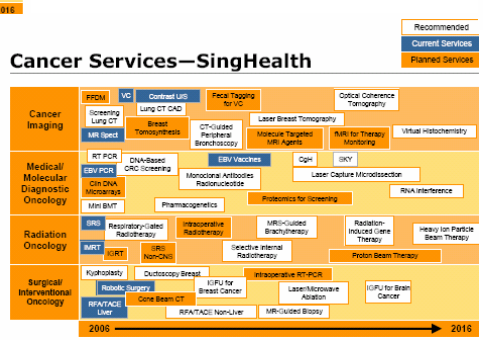
Orthopaedics—SingHealth



Neuroscience—SingHealth



Cancer Services—SingHealth

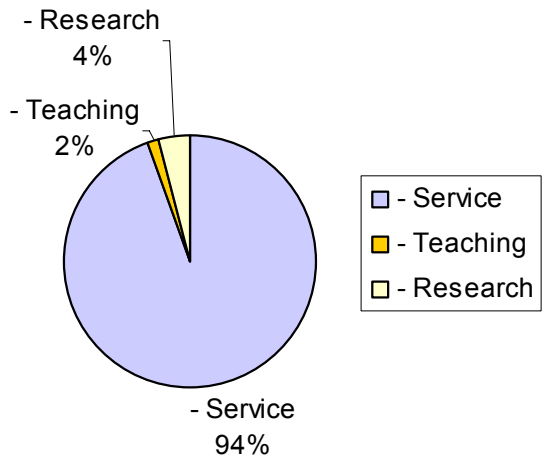


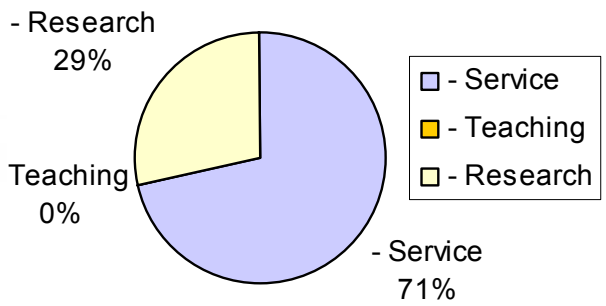
*Ophthalmology not assessed by Sg2

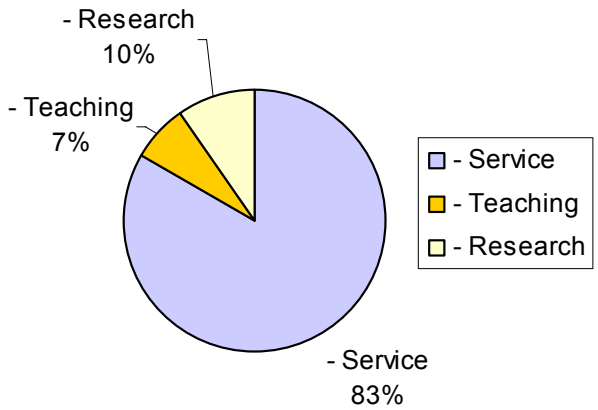
Academic Medicine as the defining model for SingHealth

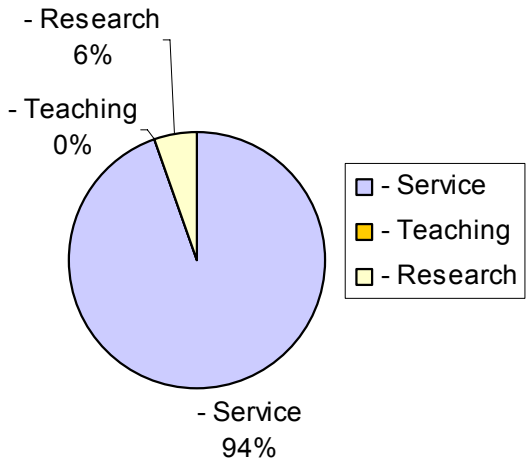
- What is Academic Medicine?
- Why is SingHealth embracing academic medicine?
- Going beyond rhetoric- who and how
  - Engaging Clinicians
  - Prioritization
  - Road Map Moving Forward
- Collaboration with other stakeholders
- Conclusion

Funding will remain a perennial challenge and new revenue streams will have to be harnessed





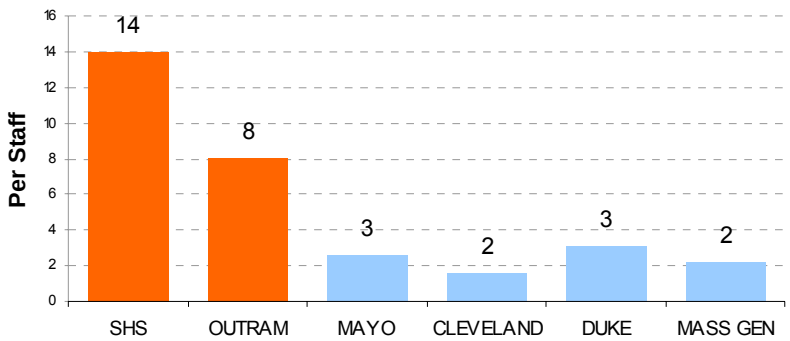




Workload norms will need re-evaluation; increase in manpower across all clinician-types necessary

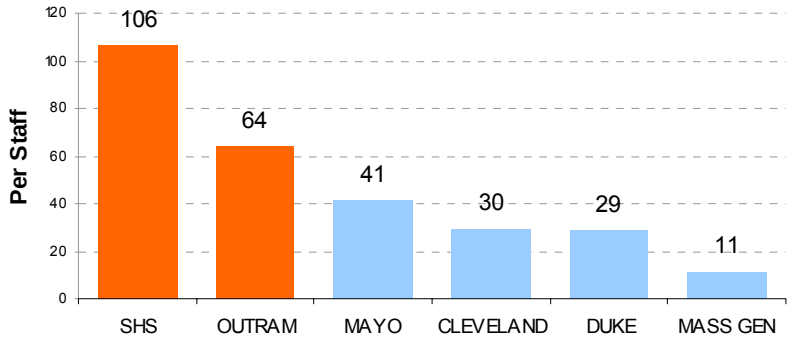
total

Inpatient Discharges Per Staff



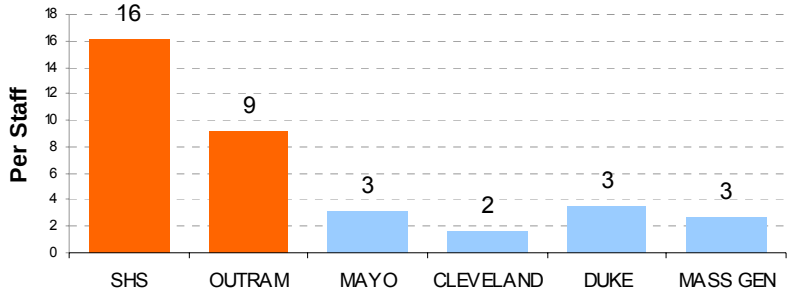
medical

Inpatient Discharges Per Medical Staff



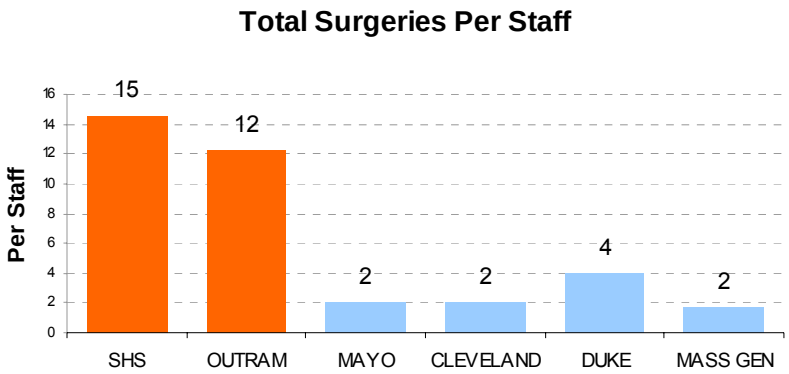
nursing + others

Inpatient Discharge Per Nurse + Other



SingHealth has a higher workload per FTE compared to other AMC- surgeries

total



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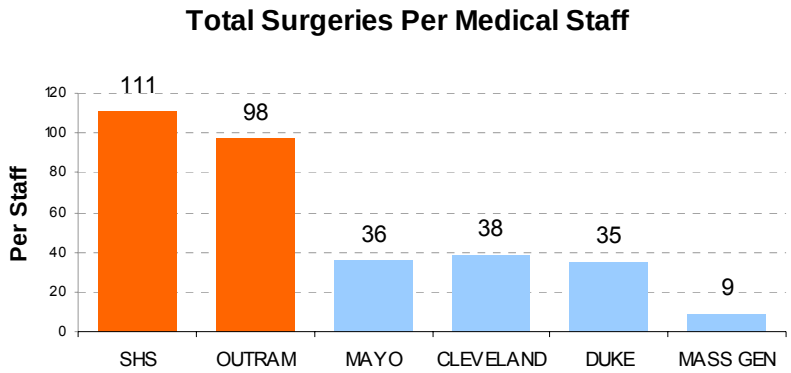
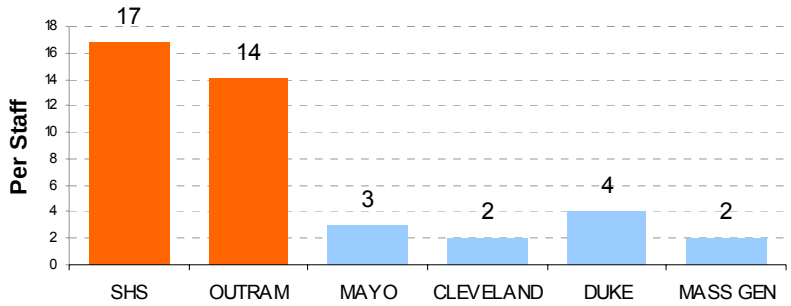
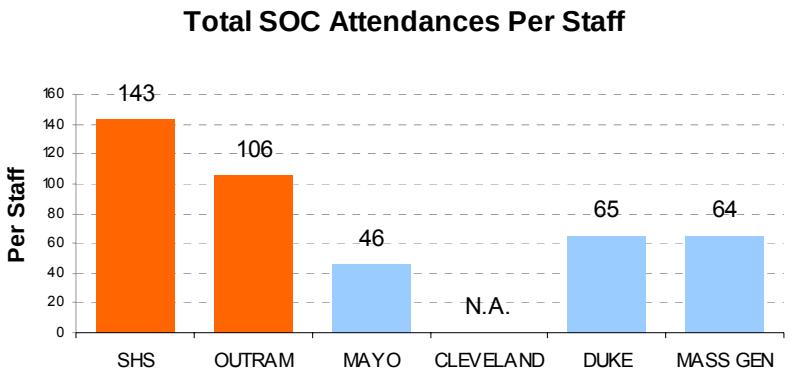


nursing + others



SingHealth has a higher workload per FTE compared to other AMC- outpatient attendances

total



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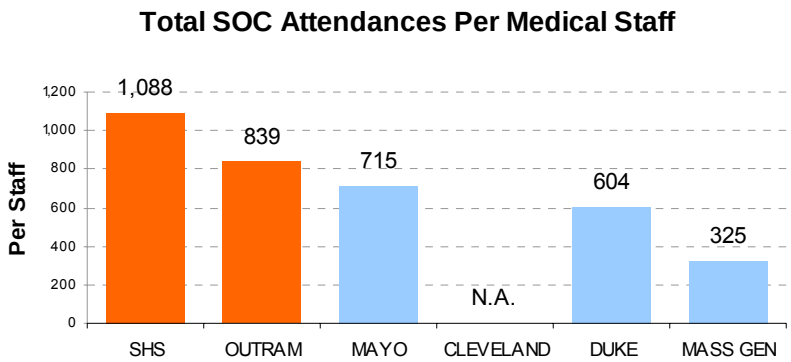
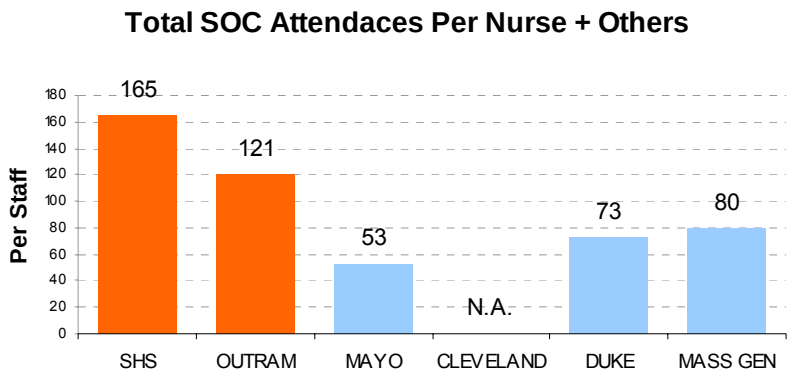
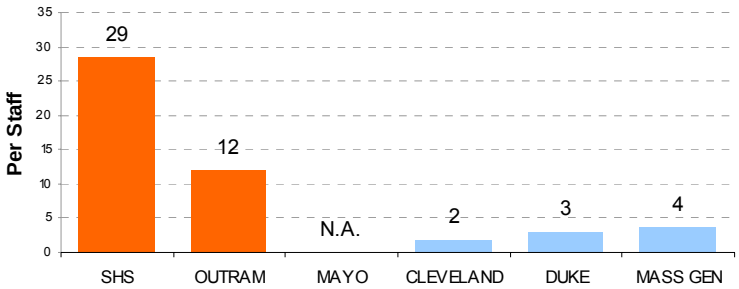


nursing + others

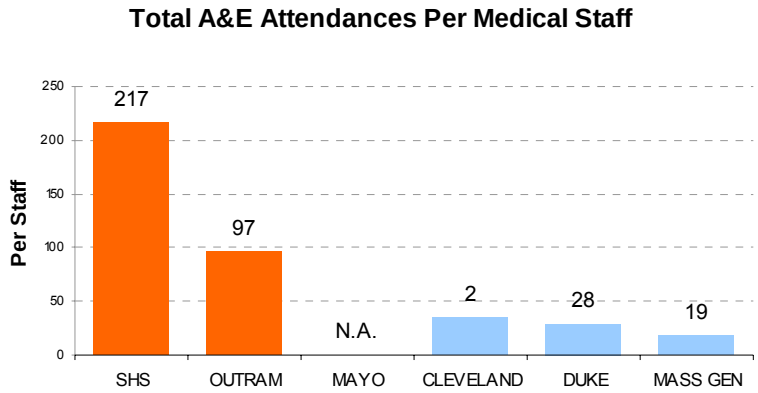


SingHealth has a higher workload per FTE compared to other AMC- Accident and Emergency Dept attendances

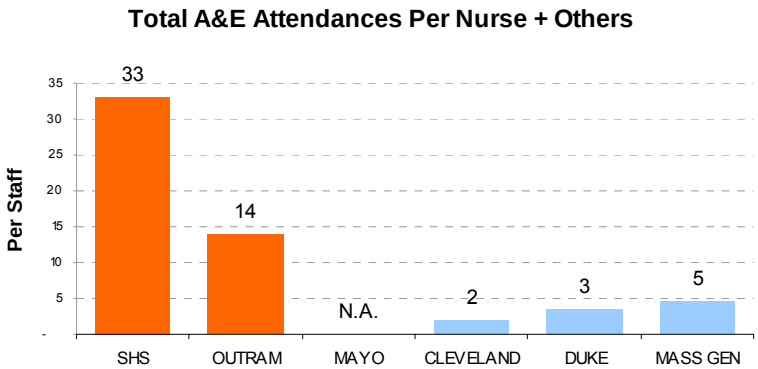
total



medical



nursing + others



Specific recommendations have been made to the Outram Campus AMC Working Group and SingHealth leadership

- Nurturing Beyond the Chosen Five
- Supporting clinical research at all levels
- Fostering opportunity for other specialties to grow into academic practices
- Creating the “Buzz” of Academia
- Supporting infrastructure and backfilling of manpower
- Value Proposition for SingHealth staff
- Structuring the governance model for the campus (SingHealth, Duke-NUS GMS)

Academic Medicine as the defining model for SingHealth

- What is Academic Medicine?
- Why is SingHealth embracing academic medicine?
- Going beyond rhetoric- who and how
- Collaboration with other stakeholders
- Conclusion

Singapore is too small for SingHealth and NHG or Kent Ridge and Outram campuses to fight each other over

Academic Medicine as the defining model for SingHealth

- What is Academic Medicine?
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- Conclusion

The future is promising but the road ahead is fraught with challenges

- SingHealth as a collective must work together- aligned interests, aligned vision
- We must play our part and expect our partners (MOH, Duke-NUS GMS, NMRC, BMRC etc) to play theirs
- Cooperation rather than competition within Singapore

“A rising tide will lift all ships”