

**DEPARTMENT OF ORTHOPAEDIC SURGERY,
NATIONAL UNIVERSITY OF SINGAPORE**



AUGUST 2019 : Issue 17

TREE OF ANDRY



SAFETY NEWSLETTER

Special points of interest:

- DEPARTMENT SAFETY & HEALTH OBJECTIVES, PROGRAMME & ORGANISATION CHART
- EMERGENCY RESPONSE PREPAREDNESS PROGRAMME
- SAFETY & HEALTH AWARENESS & TRAINING PROGRAMME
- TWSH PROGRAMME
- CONTINUOUS SAFETY & HEALTH IMPROVEMENT PROJECT & COLLABORATION
- SPECIAL WELLNESS FOCUS
- NUS/OSHE SAFETY & HEALTH NEWS

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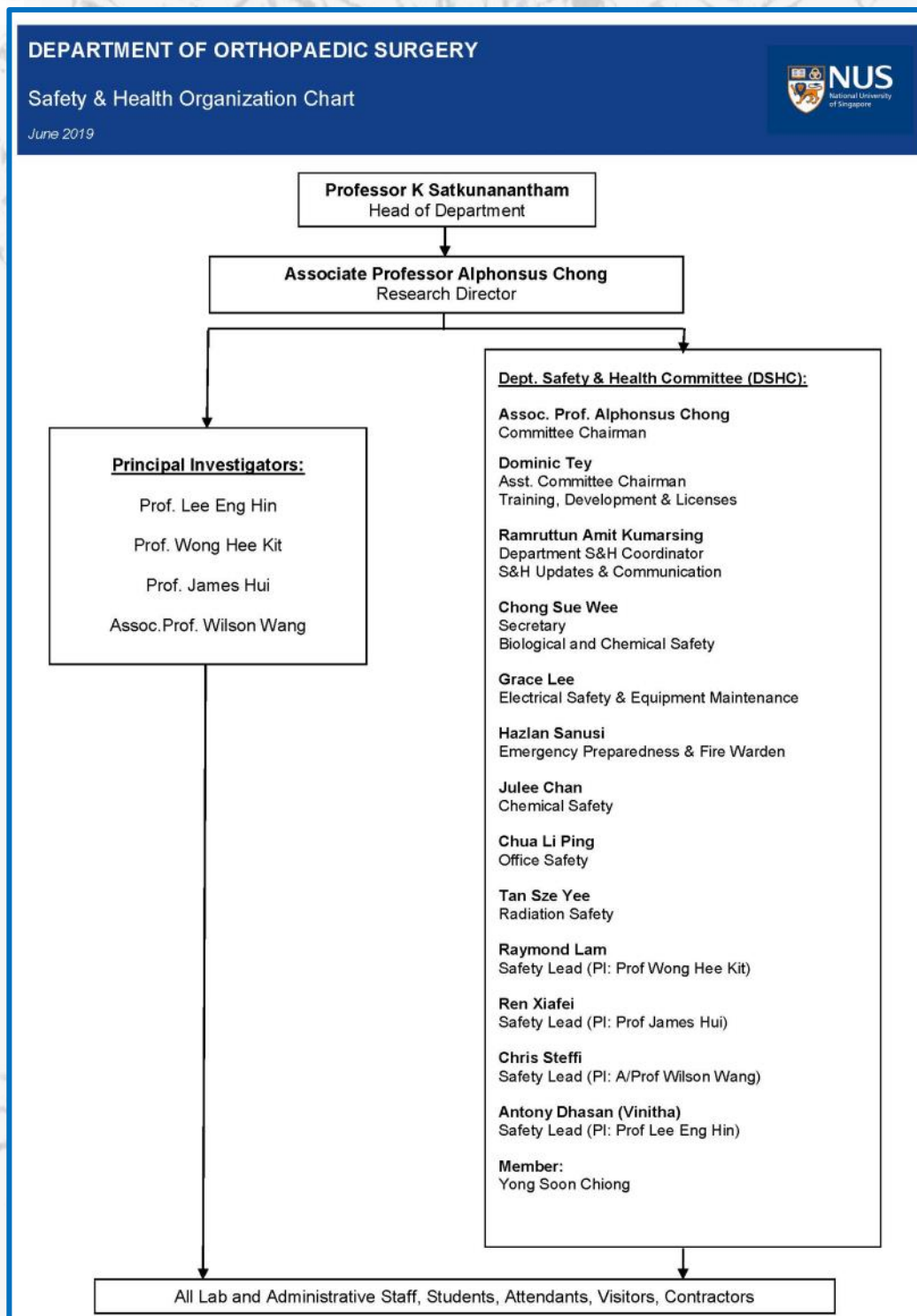
2019 Department Safety & Health Objectives & Programme

2019 Department Safety & Health Objectives						
	Objective	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Current Status/ Remarks
1	To achieve zero reportable accident/incident which result in high impact incident such as those: A. Subjected to Committee of Inquiry B. Resulting in punitive measures by regulator C. Resulting in financial loss > \$500K	✓	✓			Ongoing
2	All new staff and students to complete safety induction within 1 month of commencing duties.	✓	✓			Ongoing
3	To conduct 2 Total Workplace Safety & Health (TWSH) activities to provide a more holistic safe and healthy workplace		✓			Ongoing

2019 Department Safety & Health Programme							
	Objective	Responsible	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Current Status/ Remarks
1	Organize 4 safety, health & wellness activities to serve as an avenue to raise awareness of safety, training and total health and wellness for staff & students	Department Safety & Health Committee	DSHC & Research Admin Meeting (19/02)	- DSHC & Research Admin Meeting (15/05) - Macritchie Walk (28/06)	- DSHC & Research Admin Meeting (31/07) - BCP Sharing (31/07)		Ongoing
2	Participate in safety & health related activities organized by University/Faculties & other organizations/institutes	Staff and Students	-	-	- 4th SHE Conference (04/07) - Environment Roadshow (15/08)		Ongoing
3	To conduct emergency response exercises to familiarize staff & students with emergency procedures not limited to: a) Internal Fire Evacuation Drill b) Chemical & Biological Spill training c) First Aid emergency response	Department Safety & Health Committee & Safety Leads	- ODC Fire Drill (18/01) - MD11 fire drill (21/03)	- First Aid Talk (15/05) - NUHS Fire Drill (08/05) - Chemical & Biological Spill Exercise (22&22/05)	NUSTEP Fire Drill (03/07)		Ongoing
4	Conduct workplace safety inspections & audits once a year	Department Safety & Health Committee	-	Inter Dept. NUSSHA Audit (03/04)	Internal Inspection & Audits (July to Sept)		Ongoing
5	Review workplace safety performance once a year to ensure continual improvement	Head of Department	Ongoing	Ongoing	Ongoing		Ongoing
6	Workplace safety lead to conduct safety induction training to new staff and students	Safety lead & Safety Coordinator	Ongoing	Dept Induction & Quiz (09/04 & 27/05)	Dept Induction & Quiz (27/08)		Ongoing

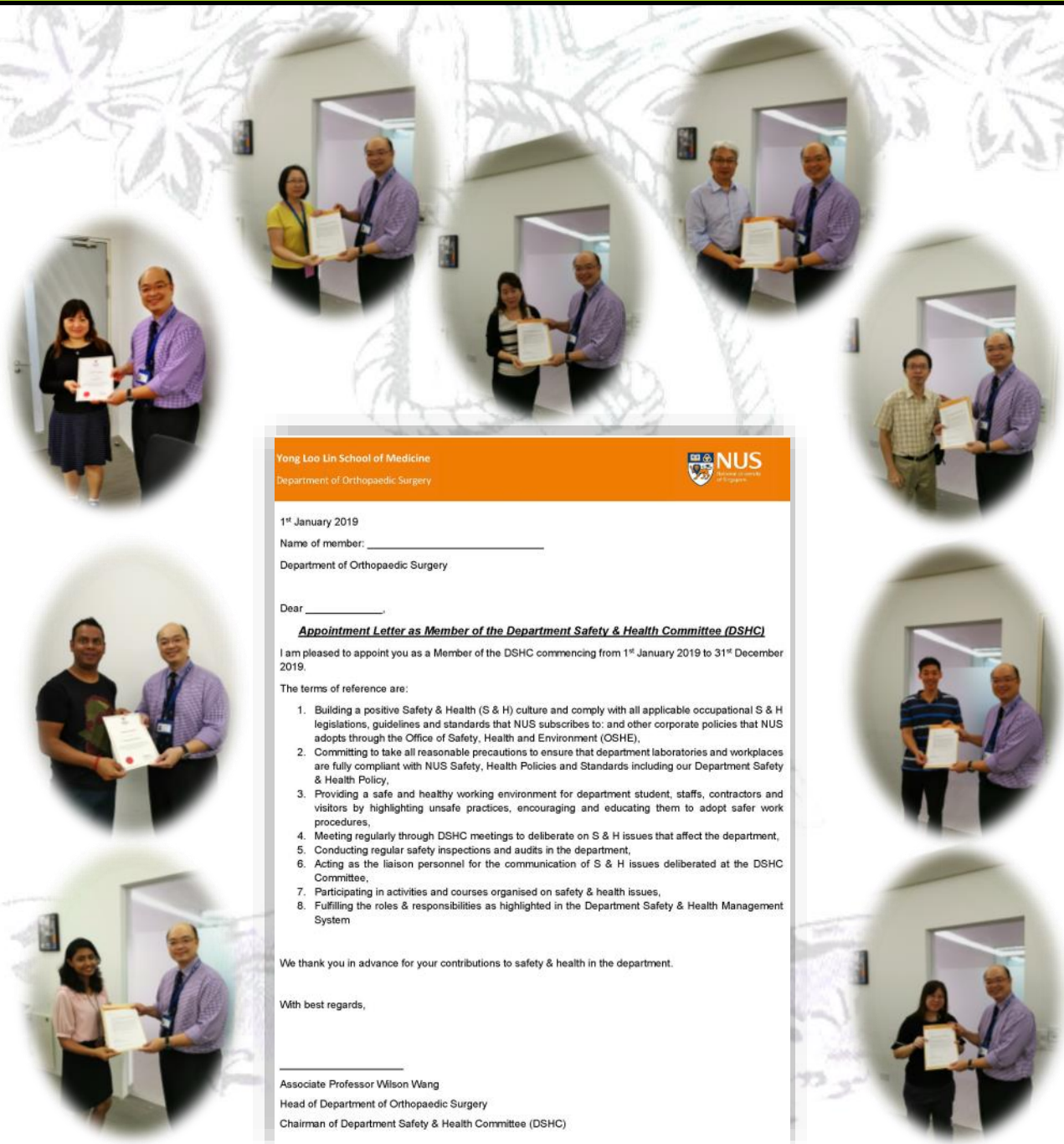
REVISED DEPARTMENT SAFETY & HEALTH ORGANISATION CHART (June 2019)

The Department Safety & Health Organization Chart was revised in June 2019 to reflect the change in top management in the department as well as in the Department Safety & Health Committee (DSHC) .



NEW APPOINTMENT LETTER FOR DEPARTMENT SAFETY & HEALTH COMMITTEE (DSHC) MEMBERS (Jan 2019)

As an official recognition for the hard work of the DSHC members in promoting safety & health (S&H) culture in the department as well as actively being involved in S&H related works such as internal inspections and audits as well as organization of wellness activities, etc., an annual appointment letter was given to each member by A/Prof Wilson Wang, then Head of Department, for their contribution and dedication at improving the safety and health in the department at the start of 2019



Yong Loo Lin School of Medicine
Department of Orthopaedic Surgery



1st January 2019

Name of member: _____

Department of Orthopaedic Surgery

Dear _____,

Appointment Letter as Member of the Department Safety & Health Committee (DSHC)

I am pleased to appoint you as a Member of the DSHC commencing from 1st January 2019 to 31st December 2019.

The terms of reference are:

1. Building a positive Safety & Health (S & H) culture and comply with all applicable occupational S & H legislations, guidelines and standards that NUS subscribes to; and other corporate policies that NUS adopts through the Office of Safety, Health and Environment (OSHE),
2. Committing to take all reasonable precautions to ensure that department laboratories and workplaces are fully compliant with NUS Safety, Health Policies and Standards including our Department Safety & Health Policy,
3. Providing a safe and healthy working environment for department student, staffs, contractors and visitors by highlighting unsafe practices, encouraging and educating them to adopt safer work procedures,
4. Meeting regularly through DSHC meetings to deliberate on S & H issues that affect the department,
5. Conducting regular safety inspections and audits in the department,
6. Acting as the liaison personnel for the communication of S & H issues deliberated at the DSHC Committee,
7. Participating in activities and courses organised on safety & health issues,
8. Fulfilling the roles & responsibilities as highlighted in the Department Safety & Health Management System

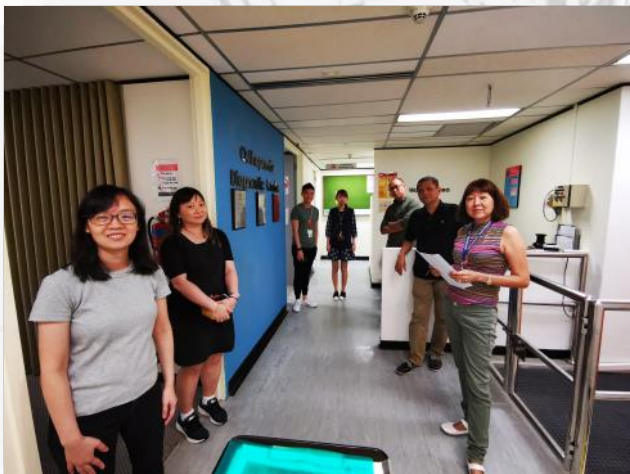
We thank you in advance for your contributions to safety & health in the department.

With best regards,

Associate Professor Wilson Wang
Head of Department of Orthopaedic Surgery
Chairman of Department Safety & Health Committee (DSHC)

ODC FIRE DRILL (JANUARY 2019)

Combined ODC Internal Fire Drill with NUH Main Building fire drill exercise



I better hurry. It seems like I am the last one to evacuate !!!



Briefing by ODC Fire Warden



Evacuation Route from ODC to emergency staircase

Can we go back to our aircon office soon? So HOT outside !!



New Assembly Area beside National University Centre For Oral Health Singapore (NUCOHS)

MD11 FIRE DRILL (MARCH 2019)



Marching Left /Right..
Practicing for the NDP
parade marching !!!



MD11 Fire Emergency procedures
briefing by Department Fire Warden



I cannot find my
name in the floor
register!!



MD11 Floor Register to ensure
that all have safely evacuated
the building during the fire drill



Debriefing by department fire warden at
the Assembly Area in the SRC open field



NUHS TOWER BLOCK (MAY 2019) & NUSTEP FIRE DRILL (JULY 2019)



NUHS TOWER BLOCK FIRE DRILL EXERCISE



All staff successfully reached the Assembly Area and happy that the evacuation fire drill exercise was a success

NUSTEP FIRE DRILL EXERCISE



We are so lucky to have so many handsome Army boys around to protect us !!!



ALWAYS Evacuate to the nearest emergency staircase and DO NOT USE LIFT !!!

CHEMICAL SPILL RESPONSE EXERCISE (MAY 2019)

Scenario 1: A small bottle of 10% formalin was accidentally dropped while removing from the corrosives cabinet. Broken bottle, spillage 100 ml formalin next to corrosives cabinet.
Scenario 2: A small bottle of 37% HCL accidentally dropped while bringing it to the fume cupboard. Broken bottle, spillage 50 ml HCL near fume hood.



BIOLOGICAL SPILL RESPONSE EXERCISE (MAY 2019)

Scenario 1: Human Bone Marrow leakage from centrifuge tubes during centrifugation
Scenario 2: Spillage of bone marrow during cell culture in BSC
Scenario 3: Spillage of bone marrow from collection tube in the lab corridor



Surround the hot zone of the spill using tissue



Alert others by putting spill warning signage

Don PPE while allowing aerosol to settle for 30 minutes



Removal of contaminated PPE after cleanup and disposal of contaminated biohazard waste

Final Cleanup and disposal of contaminated waste into the biohazard bag

- Pour disinfectant solution from outer edge and inwards
- Allow disinfectant to settle for 30 minutes & use tongs to clean up spill

File report through AIMS

BIOLOGICAL & CHEMICAL SPILL RESPONSE EXERCISE (MAY 2019)



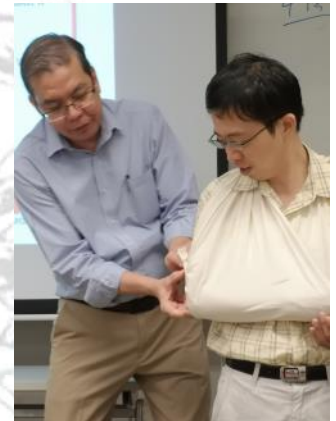
**THANK YOU
FOR PARTICIPATING
IN THE SPILL
EXERCISE TRAINING**



FIRST AID AWARENESS TALK (MAY 2019)



Group photo with Mr. Stephen De Souza, trainer from Singapore Red Cross Academy (SRCA)



Demonstration on bandaging on our volunteer Mr Raymond Lam

In the past few years, the number of incidents reported on AIMS related to sharps including our department incident statistics of cut injury has been on the rise. Hence, the DSHC decided to increase the awareness for all staff and students on the prevention and treatment of common wounds and cut injury. A short familiarization talk and hands-on was organized and conducted by a trainer from Singapore Red Cross Academy.



Bandaging partnership successful

Please be Gentle with me !!!



WORK IN PROGRESS !!!
All participants giving the bandaging process a try



It's SIMPLE, FREE AND CAN SAVE A LIFE!
Get this essential app on your smartphone today! Download the "First Aid App" for Android and iOS for FREE on your App Store



4th NUS SAFETY, HEALTH & ENVIRONMENT (SHE) CONFERENCE (JULY 2019)

The NUS Safety, Health, and Environment Conference is a biennial event organized by the Office of Safety, Health and Environment (OSHE) to showcase the best practices in safety and health by our staff and students. This year's conference theme is **'Inspiring Safety and Health Transformation through Innovation and Integration'** and aims to provide a platform to discuss how safety and health transformation in the university is possible through leveraging on partnerships, collaboration, and technology



All Ready and Fresh before the conference starts



Group Photo with the Department Research Director

Inspiring Safety & Health Transformation Through Innovation & Integration

Workplace Safety and Health 2028

A HEALTHY WORKFORCE IN SAFE WORKPLACES

Deepen WSH Ownership

Refocus on Workplace Health

Promote use of Technology in WSH

Future Direction and Vision of Workplace Safety & Health 2028

SHE Conference Programme

1. Workplace Safety and Health in IR4.0
2. Future Research and Education Landscape in NUS and its Implication on Safety and Health
3. Organisational Excellence Journey in Safety & Health
4. Sharing of Best Practices at Mechanobiology Institute
5. The App Approach to Hazardous Reactions
6. Pedagogical Innovation: Digital Game-based Learning in Safety and Health Education
7. Disruption in Occupational Safety and Health
8. Examples of Total Workplace Safety & Health Practices Implemented
9. Integrating Safety at Every Step in a Construction Project Life Cycle
10. Changes to Safety & Health Regulations
(Reference: <https://uci.nus.edu.sg/shec/>)

JOINT DEPARTMENT WELLNESS ACTIVITY "The Macritchie Walk" (JUNE 2019)



Group Photo
Smile Everyone



MacRitchie Walk

Friday 28 June 2019

Assembly Area:
Mushroom Cafe
Lornie Rd. Singapore
S70000
(30-45 minutes walk from
Cablecar MRT station)

Programme

- 8.30am Assemble & Register at Mushroom Cafe
- 9.00am Warm up, chill walk through:
Lornie Trail (forest path) > Jarring trail (boardwalk) > Chempur trail (boardwalk) >
- 11.00am Meet at Lornie Trail starting point.
Refreshment & Dismissal

Department of ORTHOPAEDIC SURGERY, BIOCHEMISTRY & ANAESTHESIA Joint Wellness Activity

Rest Station



Paiseh!! We are the last group to arrive



Here goes a monkey !!!



I think I accidentally stepped on something soft and dark brown !!!



Follow the leader !!!

DEPT COLLABORATIVE CONTINUOUS IMPROVEMENT PROJECT (CIP)(2018-2019)

PROJECT: E-Inspection: Simplifying the process for departmental safety inspections and audits (CIP024)

Problem Statement: Currently, Orthopaedic Surgery and Biochemistry departments use different document formats to check for compliance to departmental safety committee's, NUS Medicine's Safety Committee's safety inspection and OSHE's Safety Audit. This generates a lot of paper trail and follow-up work for the departmental Safety Committees. Furthermore, non-compliance to safety requirements is a serious issue, and can lead to disrepute of the University.

Goals: To simplify compliance checks by using one global form that would cover all safety elements to meet departmental safety committee's, NUS Medicine's Safety Committee's and OSHE's requirements

Teams:

RFM Team Members	Orthopaedic Surgery Team Members	Biochemistry Team Members
Tan Sian Hoong Doreen (Team Leader)	Tey Kek Keong, Dominic	Yap Lai Lai
Lim Jun Ji	Chong Sue Wee	Cheryl Wang
Lim Yi Hua	Ramruttun Amit Kumarsing	Ooi Pei Kun



CIP 024 Team Photo

Benefits: (1) Ensuring safety, (2) Compliance to safety requirements, (3) Streamline safety audit/ inspection, (4) Better clarity for PIs on safety requirements, (5) Reduction of non-value added task & (6) Increase morale of staff

Project Sponsor: A/Prof Sim Tiow Suan, Assistant Dean, Research Facilities Management

Facilitator: Vicknesh Thangavelu, Head OE Unit

Milestone: Sphera (NUS OSHE sharing platform) will be used to develop the e-inspection platform. We will do the pilot trial in mid 2019 once troubleshooting has been completed.

SPECIAL WELLNESS FOCUS – HEALTH BENEFITS OF EXERCISE

Mental & emotional benefits of exercise

Regular exercise can have a profoundly positive impact on depression, anxiety, ADHD, and more. It also relieves stress, improves memory, helps you sleep better, and boosts your overall mood. You do not have to be a fitness fanatic to reap the benefits. Research indicates that modest amounts of exercise can make a difference. No matter your age or fitness level, you can learn to use exercise as a powerful tool to feel better.

- ◆ Higher self-esteem
- ◆ Better sleep
- ◆ More energy
- ◆ Stronger resilience
- ◆ Sharper memory and thinking

Reference: <https://www.helpguide.org/articles/healthy-living/the-mental-health-benefits-of-exercise.htm>

The Bicentennial Experience (Till- 31 Dec 2019)

It has been 200 years since Sir Stamford Raffles stepped onto this fishing village. Come revisit our national history in this once a lifetime experience!

Visit the official Website: <https://www.bicentennial.sg/>



Breaking Down Our Unique Traits

The Singapore that we know today would not have been possible without the values that carried us through time. Through an ensemble of historical contributors and contemporary figures, we explore these qualities and discover what it means in our journey from Singapore to Singaporeans.

Find new places and trails on the little Red Dot

<https://www.nparks.gov.sg/gardens-parks-and-nature/walks-and-tours/going-on-a-diy-walk>

**All Photos extracted from Google map and NParks Website

HIGHLIGHTS OF NUS/OSHE SAFETY & HEALTH NEWS (JANUARY - JULY 2019)

NEA Waiver for N3 User Licence

- NEA allows waiver of N3 user licence for use of confocal microscope that emits <5mW
- Waiver Conditions:
 - Opaque barrier with appropriate optical density placed around the sample stage
 - Safety interlock available
 - Trained users (NUS Laser Safety Training (OSHRAD02) on IVLE)
 - Competent senior staff to oversee and ensure above conditions are met

NUS Medicine Trusted Third Party (TTP) Services for HBRA Compliance

- Storage and controlled access of digital and hardcopy of Individually-Identifiable Health Information
- For enquiries: medhbra@nus.edu.sg

Laboratory Materials Management System (LMMS)

- Tagging requirements for:
 - Carboys, Spray Bottles and Squeeze Bottles Containing 70% Ethanol are not required to be tagged and inventorised in LMMS provided the stock has been inventorised
 - Reconstituted Poisons

Requirement for Poisons	Stock	Reconstituted Solutions
Lock	Yes	Yes
Log (i.e. Usage Record)	Yes (Hardcopy Usage Record & LMMS)	Yes (Hardcopy Usage Record only)

Business Continuity Plan

Status Forms	BCP Developed 2018		BCP Not Required 2018		New Pis
	BCP Required 2019	BCP Not Required 2019	BCP Required 2019	BCP Not Required 2019	
NUSMed BCP Form (Phase I)	✓	X	✓	X	✓
NUSMed BCP Form (Phase II)	✓	X	✓	X	✓ Critical research activities with maximum allowable downtime <14days
Form A: BCP Table-top Exercise Record	✓	X	✓	X	✓ Critical research activities with maximum allowable downtime <14days
Form B: BCP Withdrawal Form	X	✓	X	X	X

REMINDER Deadline: Friday, 30 August 2019

Significant Changes Arising from NUS Laboratory Biorisk Management Manual

- Updated on 10 December 2018 (https://share.nus.edu.sg/corporate/procedures/safety_and_health/Biological-Safety-Manuals/Manual-lab-biorisk-management.pdf)
- Some examples of new changes:
 - Ultra-Violet (UV) disinfection of BSCs Lamps
 - Minimum retention period of 1 year for cleaning records
 - "UV lamp not in use" label on BSC
 - Procedures for transporting non-regulated materials (Materials not regulated under any local or international regulations) & Exemptions
 - Spill Kit requirement between NUS ↔ NUS & outside NUS (E.g. NUH) ↔ NUS
 - PPE Requirements
 - Overlapping of cuff of the lab clothing
 - PI Certification Requirement
 - Achieve SHMS certification for new PI within 6 months after lab commissioning
 - Safety Requirements for Biological Toxins including non-regulated toxins

Key Changes to NUSSHA Briefing

- Revised Part B: Guidance Notes
 - Improved clarity and additional considerations
- Reduce Frequency of Audits
 - Departments with Commendations & Excellence: Audit once every 6 years instead of 3 years
- Online NUSSHA Application & Document Submission
- Exclusion of Safety Perception Survey
- Remote Audit
- Revised Assessment Criteria

NUS Medicine Safety & Health Policy

- Approved by Dean
- <https://nusmedicine.nus.edu.sg/safety/wp-content/uploads/2019/04/NUSMed-Safety-Health-Policy-Jan-2019.pdf>

Online NUS Medicine Safety Manual

- NUSMed Safety Manual (5th Edition) released on School Safety website (<https://nusmedicine.nus.edu.sg/safety>)
- Login with NUS ID & password

HIGHLIGHTS OF NUS/OSHE SAFETY & HEALTH NEWS (JANUARY - JULY 2019)

Unannounced Laboratory Safety Inspection

- No exemptions. All labs (including NUS Medicine labs, core facilities, research institutes and centres in MD buildings) will be inspected
- HoD / Safety Coordinator will be informed 1 hour before the inspection

Needlestick Injury Prevention Programme

Did You Know?

Blunt end needles can be used instead of regular needles to:

- Homogenise cells
- Prepare protein lysate
- Flush bone marrow
- Retrieve frozen tissue sample or cryobeads from cryovials
- Load samples into HPLC or FPLC



- Contact RFM (medbox81@nus.edu.sg) to request for a trial pack.

Licence/ Permit Request for Purchase of Regulated Materials @ NUS Medicine

- Request of Licences/ Permits
- Via <https://nusmedicine.nus.edu.sg/safety/> with submission of purchase order & vendor email request
- Submission of Licences/ Permits to Supplier by RFM (Applicable for one time use only)

Management of Radiation Licences @ NUS Medicine

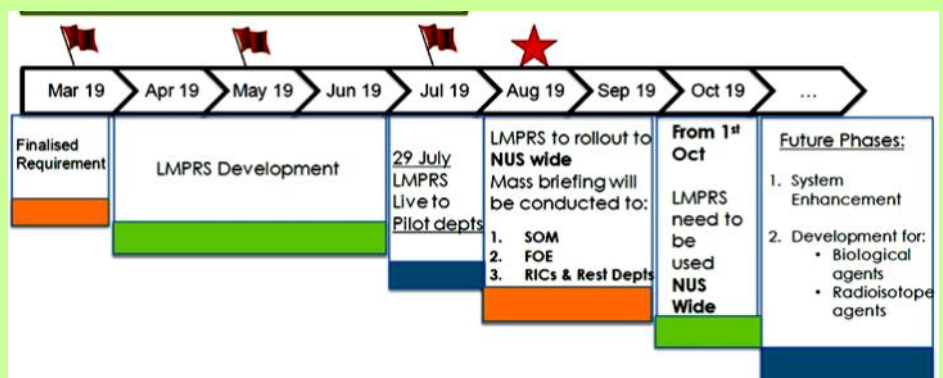
L4 Radiation Licence (Held by RFM)	<p>User to inform RFM (medbox81@nus.edu.sg) for purchase, disposal and storage of radioactive isotopes (L4)</p> <p>User's responsibilities to apply (https://licence1.business.gov.sg) and send received licence to RFM (medbox81@nus.edu.sg)</p> <p> No radiation works can start without TLD</p>
L5 Radiation Licence (Work with irradiating equipment)	
L6 Radiation Licence (Work with radioactive materials)	
R1 Radiation Licence (Supervised by L5/ L6 Holder)	

Update on Safety Audit Management

Pre-Audit <i>Innovative Effect</i>	Pre-Audit is no longer required Obtain updates from pre-audit slides
Post-Audit	- Factors such as PI audit performances and severity of findings will be used to determine if post-audit is necessary - <u>No physical meeting. Use SKYPE for Business</u>
Audit Scheduling <i>In Progress</i>	Streamline process to arrange PI's Audit & use WSHIR to gather info

Laboratory Materials Purchase Requisition System (LMPRS)

- Complement Laboratory Material Management System (LMMS) System
- Purchasing Requisition System for **All** chemical Buys
- Regulatory controls at School- level:
 - Real-time chemical license check with LMMS approval (based on licensed quantity)
 - Approval by Regulatory Officer (RFM) for purchases of regulated chemicals



Happy National Day
Singapore!

