



OFFICE OF SAFETY HEALTH AND ENVIRONMENT

ANNUAL REPORT 2017

Contents

Director's Message	4
Organisational Structure	6
Management Team	7
Key Milestones and Events	9
Key Safety & Health Highlights in 2017	11
Safety and Health in NUS	17
Lean and Green	29
OSHE Year in Review	31
Awards and Accolades	39
Results and Statistics	41

Our Vision

A Safe and Disaster Resilient University where Safety, Health, Environmental Protection and Emergency Preparedness are embraced as Core Values.

Our Mission

Saving Lives, Preventing Injuries, Ensuring Business Continuity by Transforming Mindsets and Facilitating the Development and Implementation of Best Practices.

Our Values

Nurturing Potentials

All for One and One for All

Service Excellence

I Own All I Do

+ To Rise Above and Go Beyond our Normal Limits

DIRECTOR'S MESSAGE



It has been an exciting and eventful year for OSHE as we organised two major safety and health promotional events on campus and launched new initiatives and programmes to raise safety and health standards on campus and to consolidate and reduce administrative processes for research and teaching compliance.

The NUS Safety and Health Awards (NUSSHA) held in April recognised departments for their safety and health performance and achievements in 2016/2017. The first 'Excellence' awards were presented to two departments. This is testament of the increasingly positive mind-sets of NUS staff and students towards safety and health.

In July, the Asian Conference on Safety and Education in Laboratories (ACSEL) was held in conjunction with the biennial NUS Safety, Health and Environment Conference. More than 400 delegates from 12 countries came together to share best practices to advance safety and health standards in universities and research institutes.

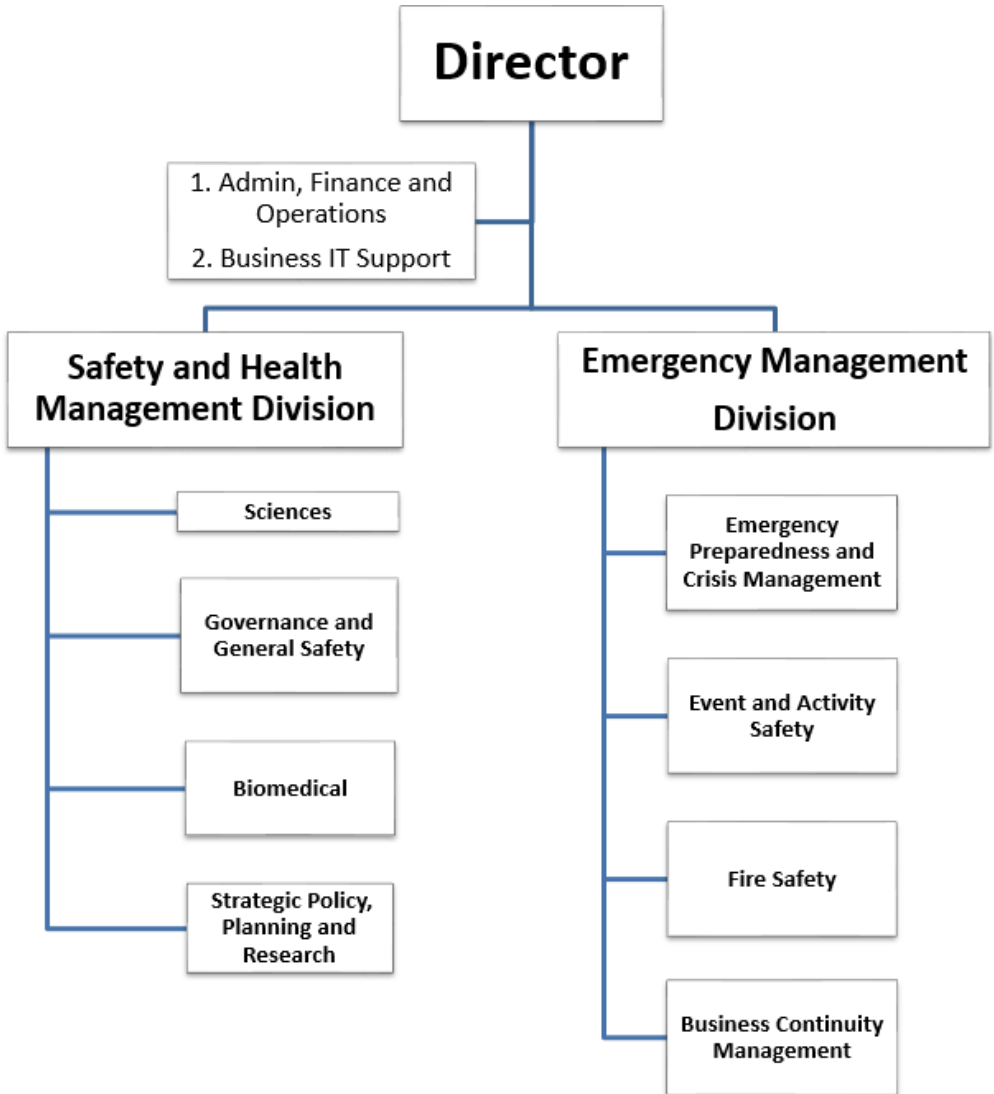
We would like to thank all our stakeholders, including NUS Senior Management, Deans, Directors, Heads of Department, Institutional/Faculty/Departmental Safety and Health Chairpersons, Committee Members and Coordinators for supporting us in our journey of raising safety and health standards on campus. We look forward to your continued partnership and support in the coming years as we work towards a sustaining a positive safety and health mindset among all staff and students.

Dr Peck Thian Guan
Director



Our Service Creed

OUR ORGANISATIONAL STRUCTURE



OUR MANAGEMENT TEAM



Dr Peck Thian Guan
Director



Mr Saravanan Gunaratnam
Deputy Director
Head of Safety and Health Management Division



Mr Yam Guan Shyh
Deputy Director
Head of Emergency Management Division



Ms Tan Bee Guan
Senior Associate Director
Business IT Unit



Mr Ravindran s/o Sockalingam
Senior Associate Director
Emergency Management



Mr Danny Toh
Senior Associate Director
Governance and General Safety Group



Mr Gabriel Chen
Associate Director
Engineering Group



Dr Tessa Joseph
Associate Director
Medical Schools Group



Ms Gisela Ho
Associate Director
Administration



Ms Tan Chuen Hui
Associate Director
Science Group

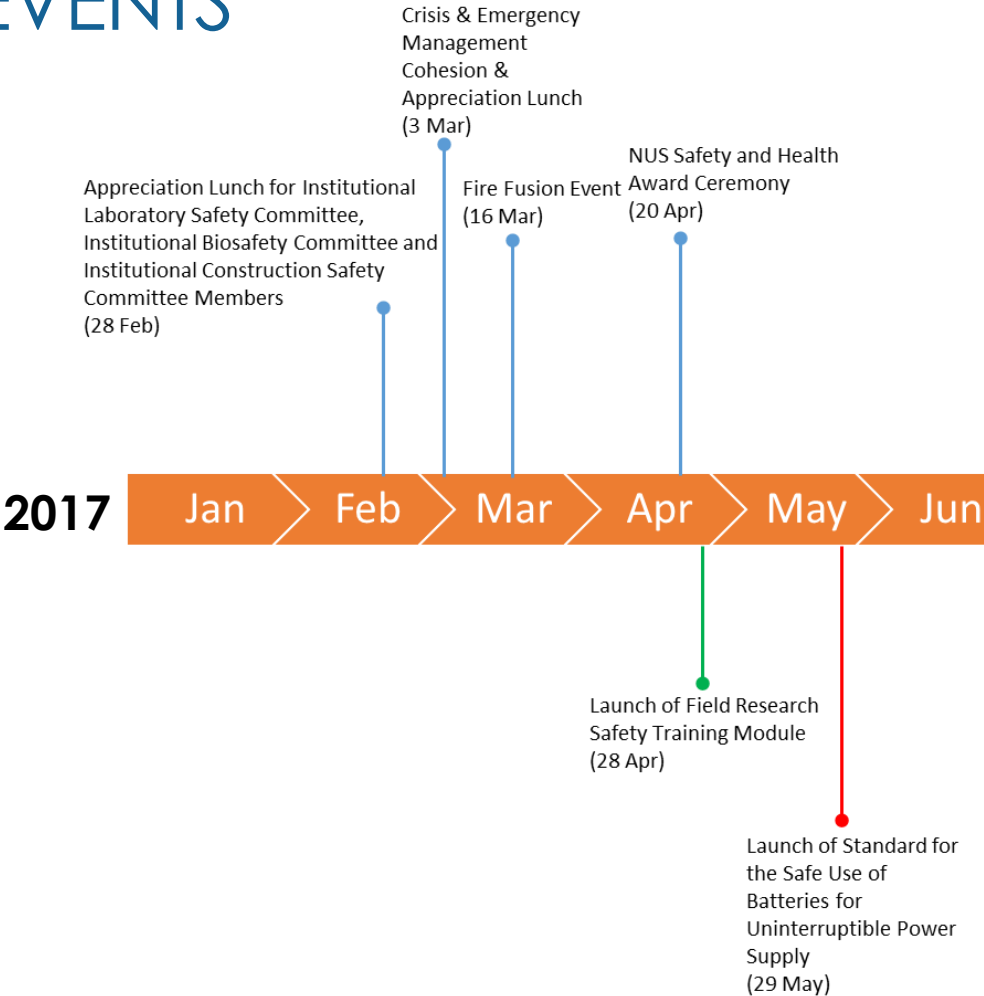


Dr Lim Cheh Peng
Senior Safety and Health
Manager
*Regulatory Affairs (Life
Sciences) Group*

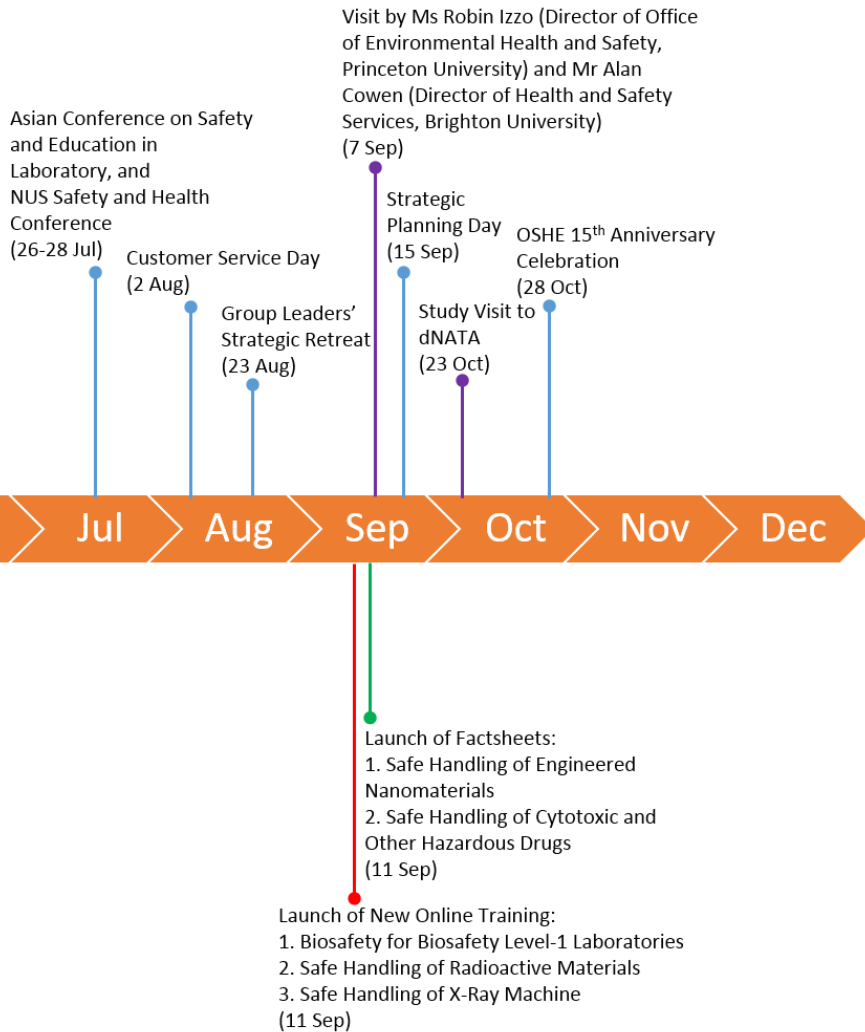


Mr Jedison Ong
Senior Safety and Health
Manager
Research Institutes Group

KEY MILESTONES AND EVENTS



- Events
- Visits by/to other organisations
- Launch of standards, manuals and factsheets
- Launch of training modules



KEY SAFETY & HEALTH HIGHLIGHTS IN 2017

OSHE is constantly finding ways to enhance how to raise safety and health standards in NUS and assist the NUS community in achieving compliance to safety and health regulations and standards.



1 New Standard



3 New EHS360 Modules



3 Enhancements to Programmes



4 New Training e-Learning Modules

Standard for the Safe Use of Batteries for Uninterruptible Power Supply (UPS)

A standard was developed on the safe operation and maintenance of UPS systems. The standard was launched on 29 May 2017.

New EHS360 Modules

An online integrated system, known as EHS360, was developed to enable NUS staff and students better manage the administrative tasks involved in safety and health compliance.

Following the launch of the first module (Accident and Incident Management System) in 2016, three more modules were launched this year.

Workplace Safety and Health Information Registry (WSHIR) Module

WSHIR is a central depository of all safety and health-related documents. This module helps safety and health coordinators and leads in departments manage and update information such as licences, risk assessments, safe work procedures, etc. It can also be used for the risk profiling

of workspace(s) in the departments, communication of hazards and generation of reports for performance monitoring.

Training Management Module

This module provides a platform for staff and students to manage their training needs. Supervisors are able to assign relevant safety and health training courses for their group members and the trainees are able to view the status of completion for these assigned training. In addition, the module is able to send email notifications to remind staff/student to attend the training relevant to their work and generate reports for management review.

Audits and Inspections Module

This module provides a platform for auditors to prepare, submit and retrieve audit reports.

Enhancement of Existing Programmes

1



Enhanced Eye and Face Protection Requirements in Laboratories and Workshops

On 1 Jan 2017, the eye and face protection programme was extended to all teaching laboratories and workshops where hazardous materials and/or activities are present.

2



Enhanced Security Requirement for Laboratories Storing Explosive Precursors

As required by the Singapore Police Force, enhancements were added to security controls for the storage of explosive precursors.



Laboratory Materials Management System (LMMS)

Developed in conjunction with ODPRT and University IT, LMMS is an IT tool to enhance the way laboratory materials are managed. In 2017, the chemical inventory module was rolled out to NUS departments in phases.

Future development of LMMS include:

- a. Integration with NUS procurement system
- b. Development of radiological equipment/materials inventory module
- c. Development of biological materials inventory module

3

New Training e-Learning Modules

1

Launched on 11 Sep 2017, the new '**Biosafety for BSL-1 Laboratories**' training was developed for those conducting BSL-1 work only. The module provides an introduction to biosafety, risk management, different biosafety levels, legal requirements and waste management.

2

Launched on 28 Apr 2017, the new '**Field Research Safety**' training is recommended for all those who are conducting field research activities. The module provides an introduction to potential hazards and advisories on safety control measures for field research.

3

Launched on 11 Sep 2017, the '**Safe Handling of Radioactive Materials**' was developed for individuals performing activities involving the use of radioactive materials or equipment containing radioactive materials. It provides users an overview of the regulatory requirements, risk management, disposal and incident management when handling such materials.

4

Launched on 11 Sep 2017, the '**Safe Handling of X-Ray Machines**' training is mandatory for users of machines that can produce X-Rays. The module enables trainees to get a better understanding of the regulatory requirements, risk management and incident management when handling such equipment.

NUS Safety and Health Award (NUSSHA)

The **NUS Safety and Health Awards** (formerly known as ASHPA) 2016/2017 recognises NUS departments, research centres/institutes (RIRCs), administrative offices and halls of residences that have implemented an effective safety and health management system.

*“Celebrating
People,
Partnerships
and Progress”*

NUSSHA ceremony 2017 Held on 20 Apr 2017 at the University Cultural Centre, the event was presided over by the Guest of Honour, Prof Tan Chorh Chuan (NUS President) and Senior Management.

Of the 48 departments that participated in NUSSHA, 40 won the ‘Commitment’ award and 6 achieved the ‘Commendation’ award.

For the first time in the award history, 2 of the participating departments/schools (Pharmacology and Saw Swee Hock School of Public Health) were conferred the ‘Excellence’ award, which is the highest award category.



Asian Conference on Safety and Education in Laboratories (ACSEL)

Held in conjunction with the NUS Safety, Health and Environment Conference

489

Delegates



12 Countries

40 Organisations

50 Oral Presentations



31 Poster Presentations

Topics presented during the conference were related to laboratory safety and health, Total Workplace Health and Safety (TWSH), safety education, emergency preparedness and laboratory design.

NUS hosted the 4th ACSEL from 26 to 28 Jul 2017, which was jointly held with the 3rd NUS SHE Conference from 27 to 28 Jul 2017.

NUS President, Prof Tan Chorh Chuan graced the occasion as the Guest-of-Honour and Prof Chia Kee Seng, Dean of Saw Swee Hock School of Public Health, delivered the keynote address.



Prof Chia Kee Seng delivering the keynote address.



Group photo of the conference delegates.

SAFETY AND HEALTH IN NUS

OSHE provides a wide range of safety, health and emergency-related services to the NUS community and engages staff/students at every level to facilitate a safe and disaster-resilient University.



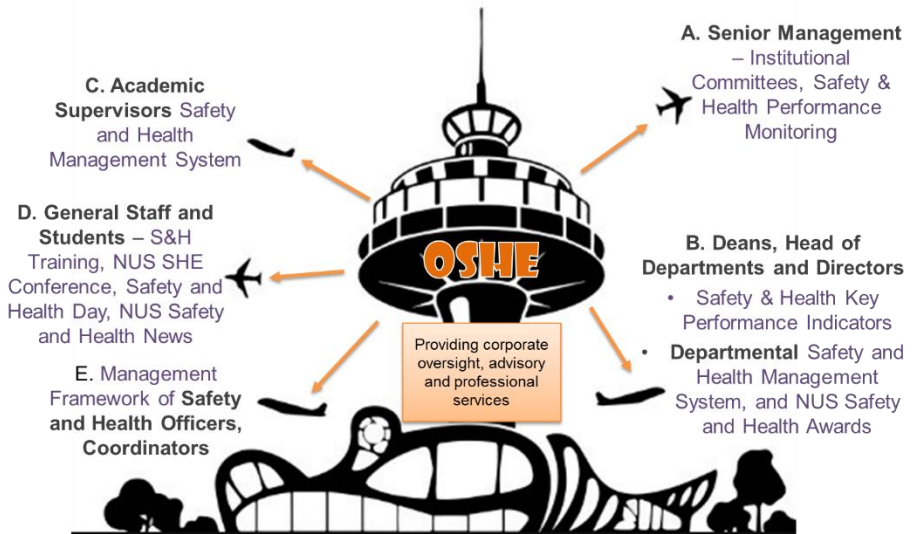
Safety and Health

Management division is responsible for facilitating the building of a positive safety, health and environmental culture and learning experience for all NUS staff and students through the adoption of SHE best practices and systems.

This is achieved through the implementation of a safety and health management system across NUS departments and faculties.

Emergency Management

division equips NUS staff and students with the knowledge and tools so that they can efficiently and effectively plan and organise their activities and events safely, and manage crisis and emergency situations expediently when they happen.



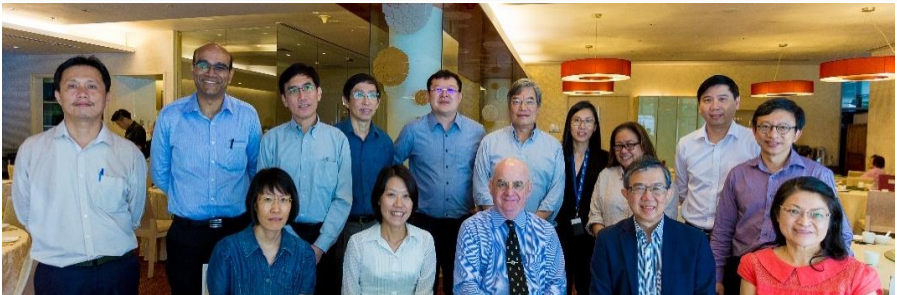
360-Degree Approach

OSHE takes on a 360-degree approach to managing safety, health and environmental compliance in NUS. The Department provides corporate oversight, advisory and professional services while engaging all stakeholders to take ownership of safety in the campus.

A. Engaging Senior Management

Appreciation lunch for the Institutional Laboratory Safety Committee (ILSC), Institutional Biosafety Committee (IBC) and Institutional Construction Safety Committee (ICSC)

Both the ILSC and IBC are appointed by the Deputy President (Research and Technology) to provide strategic oversight on all laboratory-related safety and health issues. ICSC is appointed by the Deputy President (Administration) to provide strategic oversight on all construction-related safety issues. On 28 Feb 2017, an appreciation lunch was organised to recognise the efforts of the ILSC, IBC and ICSC committee members.



Appreciation lunch for ILSC, IBC and ICSC members with NUS Senior Management on 28 Feb 2017

Meeting with New Deans, Heads of Departments (HoDs) and Directors

Members of the University Management have a responsibility for providing leadership in safety and health stewardship. As such, OSHE meets new key appointment holders of selected departments to introduce them the services provided by OSHE, to support them in their safety journey. In 2017, OSHE met with the following HoDs/Directors:

1. A/Prof Chu Jang Hann, Justin (Director, NUS Medicine BSL-3 Core Facility)
2. Prof Yu Hao (HoD, Department of Biological Science)
3. Prof Liu Bin (HoD, Department of Chemical and Biomolecular Engineering)



Institutional Biosafety Committee Meeting

B. Engaging Safety and Health Appointment Holders

Safety and Health Coordinators (SHCs)

Following the approval to implement a 'Management Framework of NUS Safety and Health Coordinators' in 2016, the framework was launched in 2017 and the following programmes were offered exclusively to SHCs to raise their competencies in safety and health :

Programme	Date
Biospill Response Training	28 Feb, 11 Apr, 18 Jul, 17 Oct
Chemical Spill Response Training	21 Mar, 24 Mar, 15 Aug
Risk Management Training (Laboratories)	28 Mar, 20 Jun, 12 Sep
Risk Management Training (General Workspaces)	16 May, 11 Jul
'Being an Effective Safety and Health Coordinator in NUS' Session during ACSEL 2017	27 Jul



Biospill Response Training conducted for SHCs



SHCs, Ms Teresa Ang and Mr Shaun Soon, sharing at the panel discussion during ACSEL

Crisis and Emergency Management (CEM) Team and Unit Incident Commanders (UICs)

The **NUS CEM team and UICs Cohesion and Appreciation Lunch** was held on 3 Mar 2017 to acknowledge their contributions to NUS.

Fire Safety Teams

Held on 16 Mar 2017, **Fire Fusion** is an annual event when teams in charge of fire safety in NUS buildings are presented the NUS Building Fire Safety Excellence Award.



Dr Peck Thian Guan's opening address during the appreciation lunch



Platinum Award Winners (Group 1) with Prof Tan Chorh Chuan



Prof Tan Chorh Chuan graced the NUS CEM team and UIC Cohesion and Appreciation Lunch



Platinum Award Winners (Group 2) with Prof Tan Chorh Chuan

C. Engaging General Staff and Students

OSHE's Participation in Major Safety and Health Events in NUS

In addition to facilitating various safety, health and emergency-related drills and exercises, OSHE staff also support faculties, schools and research institutes/centres at their safety and health events. These events are organised to create awareness of safety and health among staff and students.

10 Safety Day Events

6 Safety and Health Workshops and Training

3 Emergency Drills and Exercises

Safety and Health Events:

Faculty/School/RIRC	Safety and Health Event	Date
Faculty of Dentistry	Safety and Health Awareness Day	17 Feb
Tropical Marine Science Institute	TMSI Safety Briefing	17 Feb
Temasek Laboratories	T-Lab Safety Day	15 Sep
Faculty of Science	Science Safety Day	26 Sep
Faculty of Engineering	Engineering Safety and Health Day	29 Sep
Mechanobiology Institute	MBI Safety and Health Day	9 Oct
Yong Loo Lin School of Medicine	NUS Medicine Safety Fair	19 Oct
Life Sciences Institute, Singapore Institute for Neurotechnology, NUS Synthetic Biology for Clinical and Technological Innovation	Centre for Life Sciences & Brenner Centre Safety Day	3 Nov
Solar Energy Research Institute of Singapore	SERIS Safety Day	9 Nov
Centre for Remote Imaging & Processing (CRISP)	CRISP Safety and Health Day	10 Nov



OSHE staff with A/Prof Asher Lim (Vice Dean, FOD) at the FOD Safety and Health Awareness Day



Dr Vernon Seow (Safety and Health Manager, OSHE) giving a talk at the NUS Medicine Safety Fair



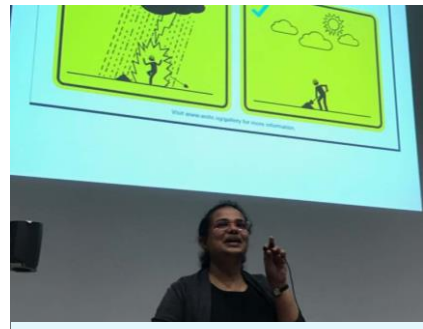
Ms Zoey Zhou Qian Safety and Health Manager, OSHE) giving a talk at the MBI Safety and Health Day



Hands-on session on the use of the fire extinguisher at the 'CRISP' Safety and Health Day



Mr Saravanan Gunaratnam (Deputy Director, OSHE) at the Faculty of Science (FOS) Safety Day with the FOS Dean and safety committee.



Dr Sheela Reuben Safety and Health Manager, OSHE) giving a talk at the TMSI Safety Briefing

Workshops, Trainings and Drills Conducted:

Workshops and Trainings	Date
Safe Handling of Non-Human Primates (NHPs)	6 Feb, 22 Feb, 23 Mar, 23 May, 10 Jul, 11 Aug, 7 Sep
Root Cause Analysis and Introduction to AIMS	22 Feb
WSH Committee Training (General Workplaces)	25 Apr, 24 Oct
Risk Management Training for BSL-3 Facilities	1 Jun
WSH Committee Training (Laboratories)	22 Aug
Environmental Engineering Alumni Dialogue Session with Students	31 Oct
Drills	Date
Combined Fire Drill with SCDF (LKCNHM)	17 Jan
Combined Fire Drill with SCDF (MD6)	28 Jun
Combined Fire Drill with SCDF (CeLS)	17 Aug



Combined fire drill with Lee Kong Chian Natural History Museum



Mr Saravanan Gunaratnam (Deputy Director, OSHE) at the alumni dialogue session for Environmental Engineering students.



Dr Rajkumar Ramamoorthy (Manager, OSHE) conducting the 'Safe Handling of NHPs' training.

D. Engaging the National Community

Safety and Health in Higher Education and Research (HER)

The Working Group on Safety and Health in Higher Education and Research (HER) Sector, under the care of the Workplace Safety and Health Council (WSHC), started in 2013 to provide a formal platform for Institutions of Higher Learning and Research Institutes to share safety and health best practices and information. The Working Group is chaired by Dr Peck Thian Guan.



The Her Working Group at the XXI World Congress on Safety and Health at Work



Dr Peck speaking on behalf of the HER group at the XXI World Congress on Safety and Health at Work

Singapore Standard on Fire Safety in Laboratories

Mr Hairulnizam bin Ishak from OSHE is the NUS representative providing expertise to the Working Group in the development of a Singapore Standard on Fire Safety in Laboratories.



Singapore Standard on Fire Safety in Laboratories Working Group

E. Engaging the International Community

Dialogue Session between Singapore Universities and Japanese Universities (26 Jul)

During the Asian Conference on Safety and Education in Laboratories (ACSEL), a pre-conference dialogue session was organised on 26 Jul between Singapore and Japanese universities to discuss topics such as mutual recognition of each institution's safety and health training courses.



Dialogue session between Singapore and Japanese universities

Setting up a Department Safety and Health Management System (DSHMS) for NUS Suzhou Research Institute (23-27 Oct)

OSHE staff visited the NUS (Suzhou) Research Institute to conduct relevant training that will enable the institute to set up a DSHMS.



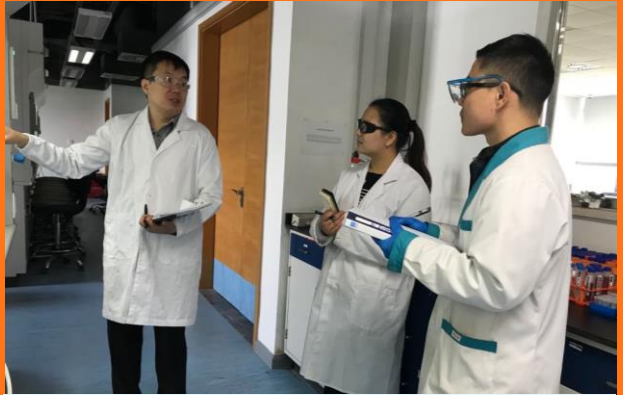
OSHE staff conducting training in NUS Suzhou RI



OSHE staff visiting NUS (Suzhou) RI



Dr Vernon Seow (Safety and Health Manager, OSHE) conducting a swipe test



Mr Danny Toh (Senior Associate Director, OSHE) conducting an inspection in a laboratory



Testing a drone as part of the development of a guideline on unmanned aircraft operations



Training safety and health coordinators on how to manage a chemical spill



Conducting CPR AED training



Emergency Management Division conducting Hands-On Fire Safety Training

OSHE@WORK

LEAN AND GREEN



OSHE constantly strives to improve its processes to do things more efficiently. The following improvements and cost-savings are a result of the ongoing efforts to consolidate and streamline existing processes. This eases the administrative workload for the research and teaching community in NUS.



Total Cost Savings from:

- EHS360 modules
- Improved Audit Requirements
- Improved Training Requirements
- Consolidated Radioactive Sealed Source Disposal

>\$700k



Performance-based Frequency for Safety and Health Audits

The NUS Safety and Health Awards (NUSSHA) encourages and rewards departments that have implemented or maintained a sound Department Safety and Health Management System (DSHMS).

From 1 December 2017, the frequency of audits for departments with mandatory DSHMS has been revised from once every two years to once every three years if they have achieved 'Commitment', 'Commendation' or 'Excellence' awards at NUSSHA 2017.

The scheme also recognizes departments who demonstrate the ability to self-regulate the management of safety and health. The audit frequency of Academic Supervisors in departments that have achieved 'Commendation' and 'Excellence' awards at NUSSHA 2017 was revised from once every three years to once every six years.



Improved Requirements for Safety and Health Training

It is the Academic Supervisors' (AS) responsibility to manage their staff and students' risk in all workspaces, including the workspaces that are not managed by them. This is achieved through administrative controls such as the implementation of a safety and health directive for NUS staff and students working in non-NUS organisations, induction training for AS to cover general safety and health hazards, and periodic certification audits for AS.

Previously, AS were also required to undergo the same hazard-specific safety training as their staff and students even if they were working in facilities that were not managed by the AS.

After reviewing that the existing control measures implemented were sufficient, Senior Management supported the removal for this requirement to reduce the administrative burden on AS.

In order to align the training requirements to the three-year cycle of the 'NUS Safety and Health Management System for Academic Supervisors' standard, the validity of safety and health training certificates were revised from 1 Jan 2017.

Training certificates for all core NUS safety and health training courses were extended by one year and applicable staff/students would only need to attend a refresher training once every 3 years instead of 2 years.



University-Wide Radioactive Sealed Source Disposal

In 2017, OSHE coordinated a consolidated University-level radioactive sealed source disposal. Due to the consolidated effort and the identification of a vendor with technology that could dispose the sources at a lower cost, the final cost of the exercise was 80% less than the budgeted amount.



OSHE YEAR IN REVIEW

Strategic Planning Process

OSHE conducts a strategic planning exercise to define its strategies, priorities, work plan and resources for the following year. As part of the exercise, satellite events are held throughout the year for OSHE staff to brainstorm strategies and workplans.



Customer Service Day

Customer Service Day took place on 2 Aug 2017.

OSHE staff evaluated past performance prior to Customer Service Day and had the opportunity present a review of feedback from external and internal customers.



Group discussion to identify challenges and possible solutions during Customer Service Day.



Presentations during Customer Service Day.

Group Leaders' Retreat

The inaugural Safety and Health Management Division Group Leaders' Retreat took place on 23 Aug 2017. The retreat allowed the group leaders to present the 2018 key objectives and projects they have identified for their groups, and provided a platform for the prioritisation of these projects so that resources can be allocated accordingly.

Strategic Planning Day

This event is for respective groups to share their work plans for the following year. In 2017, the Strategic Planning Day was held on 15 Sep 2017.

Focus areas for 2018:

1. Enhancing compliance (manuals, standards, etc.)
2. Enhancing systems and processes (reducing administrative processes)
3. Enhancing safety and health culture



SHM Group Leader's Retreat



Strategic Planning Day

Developing Our People

OSHE continues to adopt the 70:20:10 learning model advocated by the NUS Office of Human Resources (OHR) in which 70% of a staff member's development activities is acquired through on-the-job training and projects, 20% from mentoring or learning from others, and 10% from formal classroom programmes.

Training

Safety and Health Officers (SHOs) participate in internal and external training courses to equip them with both technical and people-management skills.

Training for SHOs	Date
Safety Inspection Skills	22 Feb
Field Research Safety	24 Apr
Becoming an Effective Coach to Safety and Health Coordinators	31 Oct – 1 Nov



SHOs attending the 'Becoming an Effective Coach' training course



Dr Sheela Reuben conducting field research safety PDG

University Campus Infrastructure

OSHE is part of the University Campus Infrastructure (UCI) cluster, led by the Vice President (Campus Infrastructure), Prof Yong Kwet Yew. The department works closely with several offices in this cluster to provide services and solutions to the campus community. In 2017, OSHE supported a number of UCI events, in particular a teambuilding event on 17 May and a farewell dinner for outgoing President, Prof Tan Chorh Chuan, on 29 Nov.

UCI Teambuilding Event



UCI Teambuilding Event



UCI Teambuilding Event

President's Farewell Dinner



UCI organised a farewell dinner for outgoing President, Prof Tan Chorh Chuan

Social and Wellness Events

OSHE 15th Year Anniversary Celebration



OSHE superheroes at the 15th year anniversary celebration

2017 was a big year for OSHE as we marked our 15th anniversary. The department celebrated this milestone on 28 Oct 2017 by organising a lunch celebration. The theme for this event was 'Superheroes' to not only honour colleagues who dedicate their time to fulfilling OSHE's mission in NUS, but also to the family members of OSHE staff, who are the unsung heroes.



Dr Lim Cheh Peng and her son at the 15th year anniversary celebration

A superhero isn't someone who lives above us...they live among us and with us.
- Dr Peck Thian Guan

Social Activities

The OSHE Social Committee is responsible for organising events and activities to provide opportunities for OSHE staff to bond and get healthy together (a complete list of the activities is provided in the Results and Statistics section.)



Dr Mary Chong from Saw Swee Hock School of Public Health giving a talk on nutrition



ReLAC Chinese New Year event



OSHE staff bonding over bowling



BBQ dinner after Customer Service Day



Games after Customer Service Day



Learning self defence moves after Strategic Planning Day



OSHEians keeping themselves fit on a hike up Bukit Timah Nature Reserve

AWARDS AND ACCOLADES

'Campus Leaders Who Care' Award



Campus Leaders Who Care Award

NUS President-Designate and Provost, Prof Tan Eng Chye, was conferred the 'Campus Leaders Who Care' award by the US-based Campus Safety, Health and Environmental Management Association (CSHEMA).

This international award recognises senior administrators of universities for their outstanding involvement and support in enhancing safety and health at their institutions.

The association recognised Prof Tan Eng Chye who championed new initiatives to raise safety and health standards on campus, such as the requirement for Deans, Directors and Heads of Department to have safety and health KPIs included in their performance appraisal. He displayed visible leadership by conducting safety visits to faculties, providing resources for safety and health programmes, attending safety and health promotional events, and chairing the NUSSHA



Prof Tan Eng Chye receiving the award from NUS President, Prof Tan Chorh Chuan at the NUS SHE Conference

AAALAC Full Accreditation

The AAALAC International accreditation program evaluates organisations that use animals in research, teaching or testing. Those that meet or exceed AAALAC standards are awarded accreditation.

In 2017, NUS was awarded Continued Full Accreditation by AAALAC. The AAALAC site visitors commended the programme on occupational health and safety for the animal care and use, particularly the risk assessments conducted and safety monitoring of staff.

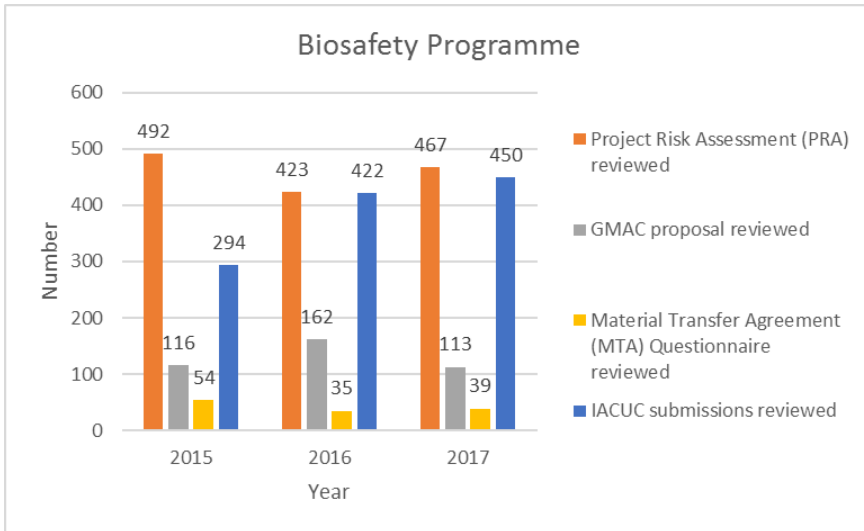
RESULTS AND STATISTICS

Operational Results

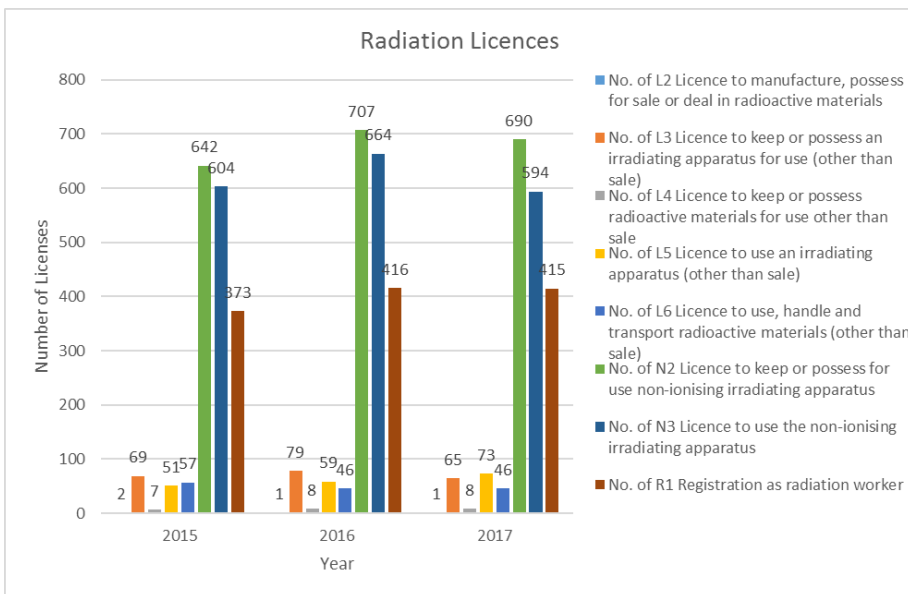
Trainees Attending OSHE Courses

		No. of Trainees		
		2015	2016	2017
Induction	Laboratory Safety Induction Training	273	1392	1530
	Chemical Safety	3627	4101	3489
Chemical	Safe Use & Handling of Hydrofluoric Acid	5	234	178
	Safe Use & Handling of Pyrophoric Chemicals	1	274	219
	Semi-Quantitative Risk Assessment			247
	Chemical Spill Response	9	766	702
	Chemical Spill Response (Hands-On)			31
Biological	Biosafety for BSL-1 Laboratories ^{NEW}			118
	Biosafety for BSL-2 Laboratories	2050	2894	2302
	Safe Handling of Human Tissue and Fluids	13	1636	1159
	Safe Needle Usage in Research Laboratories		931	1549
	Safe Handling of Non-Human Primate (Macaque) Derived Materials (Classroom)			49
	Risk Management for BSL-3 Facilities (Classroom)			26
	Biosafety Legislations & Guidelines	7	282	170
	Biological Spills and Emergency Response	11	572	490
	Biological Spills and Emergency Response (Hands-On)			24
Radiation	Laser Safety Training	860	903	883
	Safe Handling of Radioactive Materials ^{NEW}			58
	Safe Handling of X-Ray Machines ^{NEW}			124
	Basic MRI Safety Training	5	56	74
	MRI Safety Training for Operators	5	45	25
General	Respiratory Protection Programme Training for First-Time Users		483	540
	Respiratory Protection Programme Training for Returning Users		104	206
	Risk Management for Laboratories	244	257	782
	Risk Management for General Workplaces	159	38	104
	Risk Management for Laboratories (Hands-On)			71
	Risk Management for General Workplaces (Hands-On)			41
Ergonomics	Field Research Safety ^{NEW}			55
	NUS Office Ergonomics Training			93
Mental Health	NUS Laboratory Ergonomics Training			89
	Suicide First Responder Awareness Course	22	45	24
Fire Safety	Customised Fire Safety Training			2938
	Fire Safety Education Course	650	544	522
	Fire Warden Training Course	320	245	174
	Fire Safety Coordinator Course	40	45	29
	Fire Safety Refresher Course	206	260	142
Emergency Response	Crisis Management (Business as Usual)	56	59	46
	Students' Events / Activities Safety & Crisis Management Workshop	383	367	494
	CPR/AED Familiarisation Programme	763	757	745
Appointment-Based	Workplace Safety and Health (WSH) Committee (General Workplace)	34	46	24
	Workplace Safety and Health (WSH) Committee (Laboratories)	65	32	7
	Safety and Health Management System (SHMS) - Tools & Techniques for Development, Implementation and Maintenance of SHMS			23
	Internal Auditor Workshop for S&H Management System			106

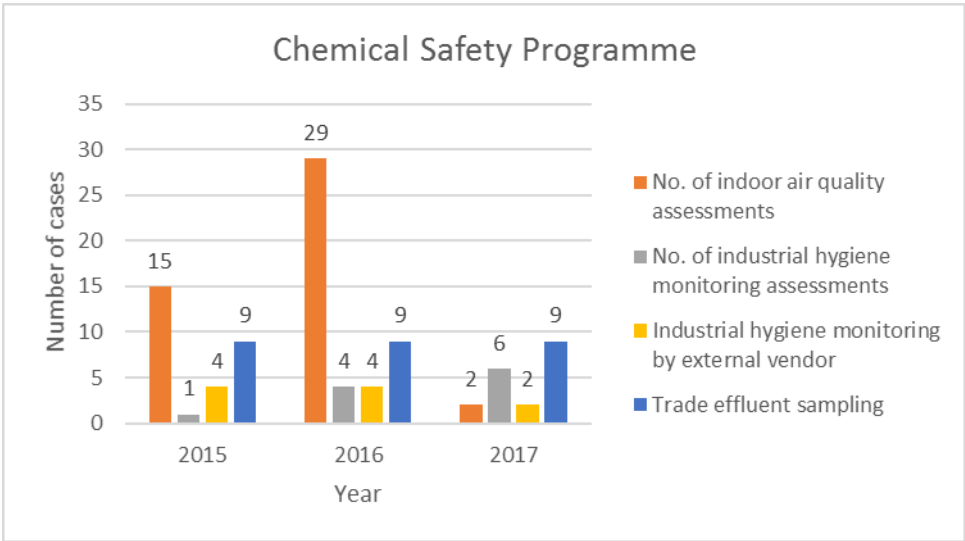
Biosafety Programme



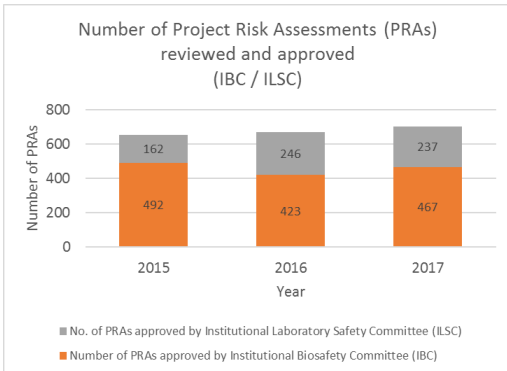
Radiation Safety Programme



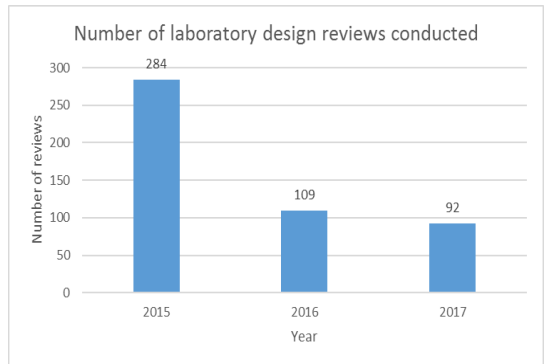
Chemical Safety Programme



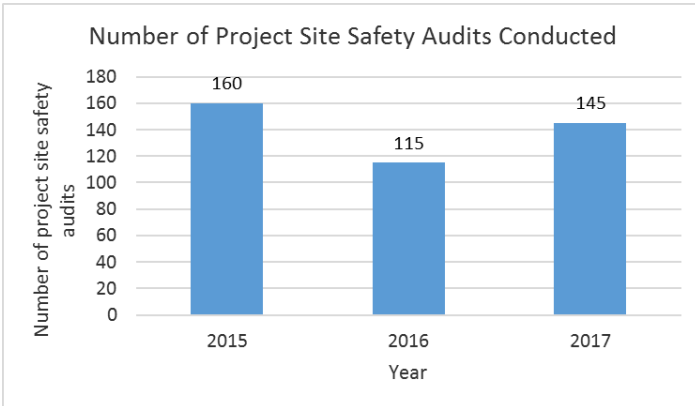
Project Risk Assessments



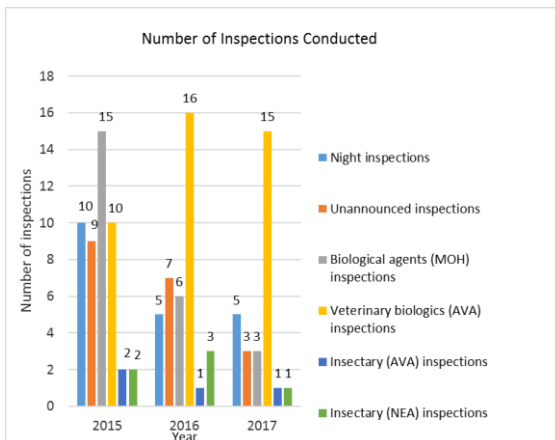
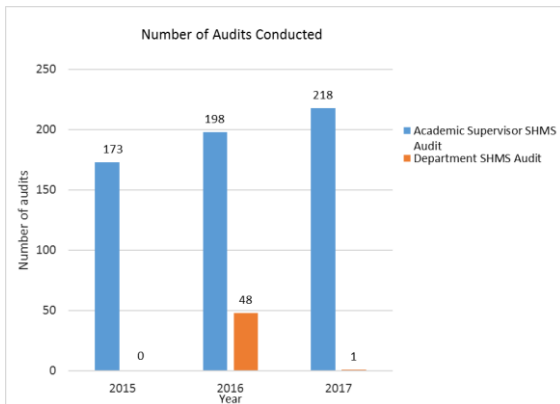
Laboratory Design Reviews



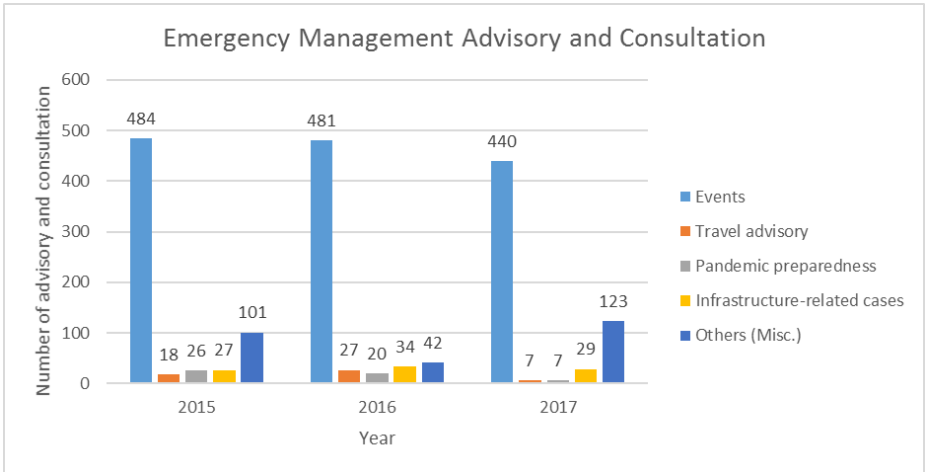
Construction Project Site Safety Audits



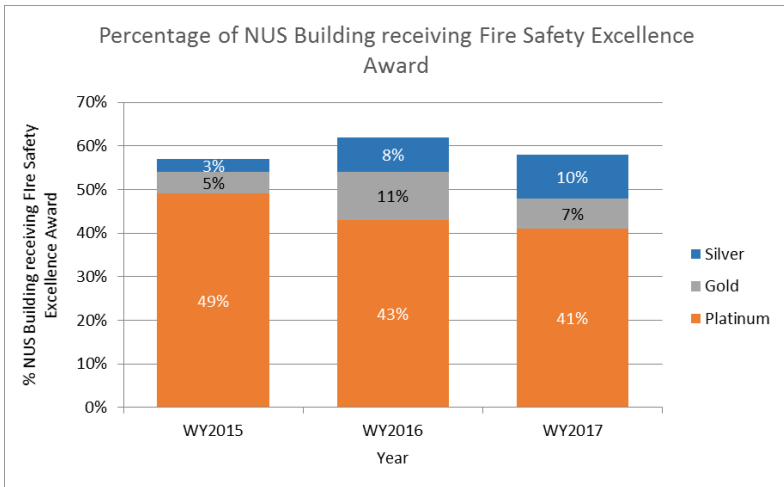
Audits and Inspections



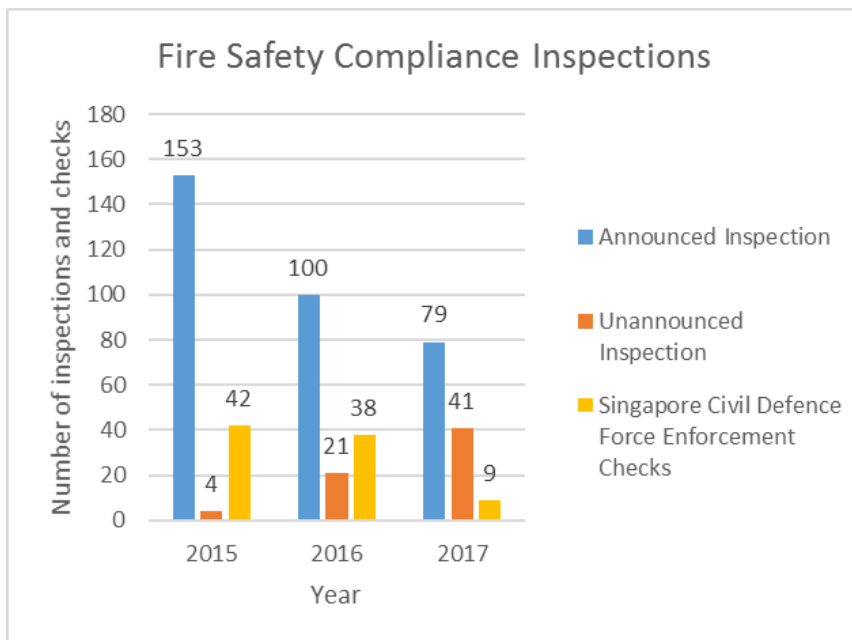
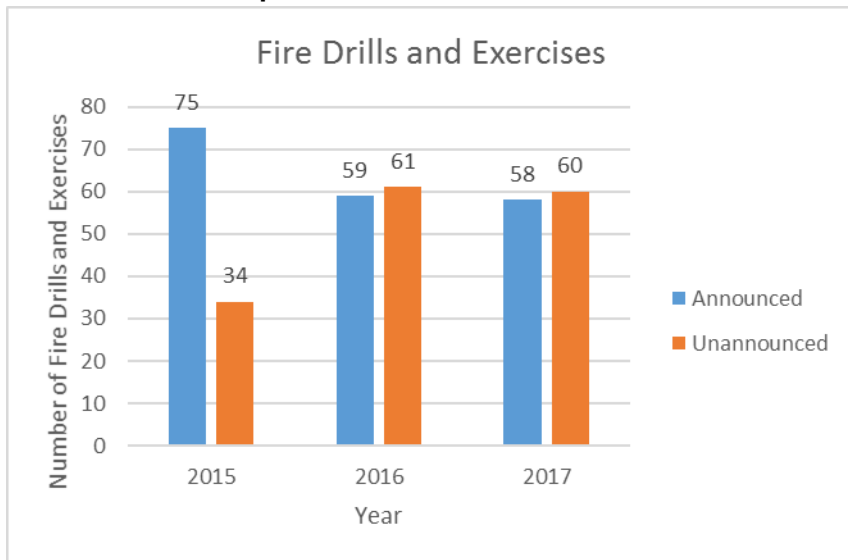
Emergency Management Advisory and Consultation



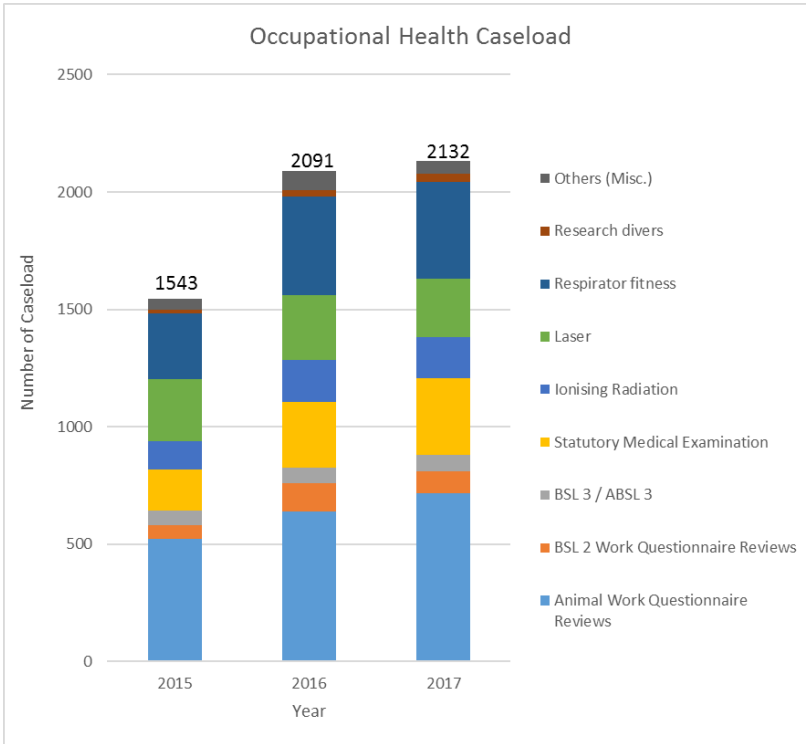
Fire Safety Excellence Award



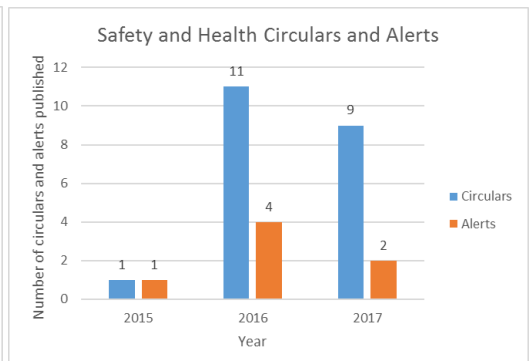
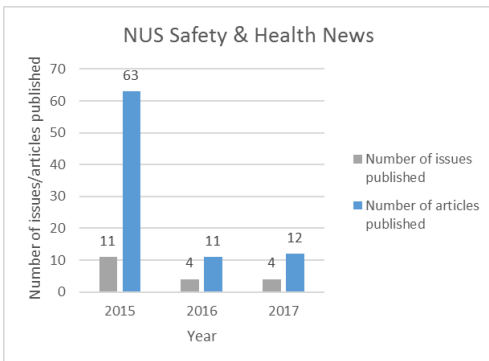
Fire Drills and Inspections



Occupational Health Caseload



NUS Safety and Health Newsletter

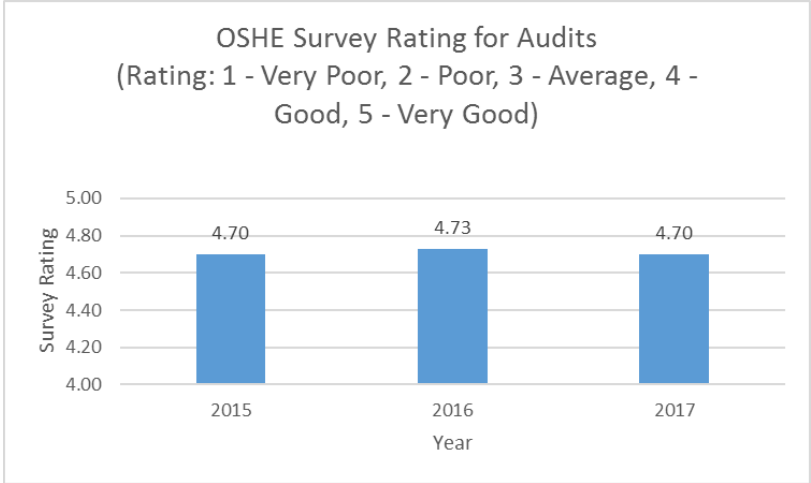


Customer Results

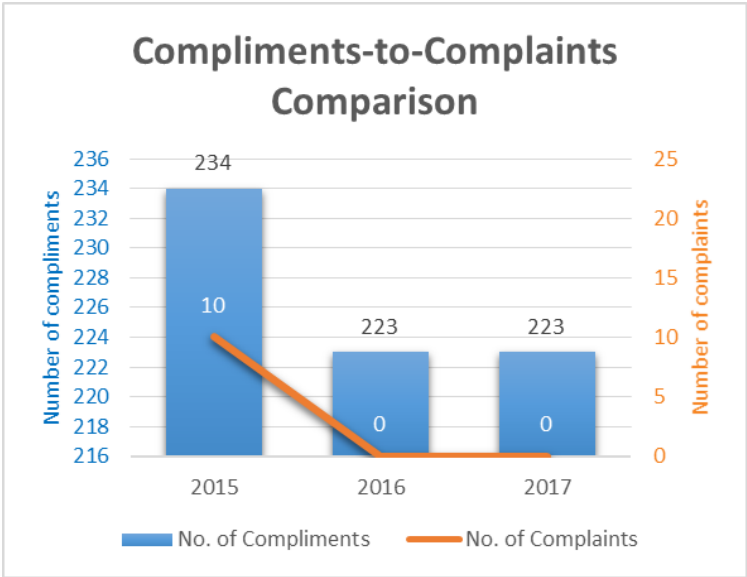
Customer Satisfaction Scores for Training Courses

		Ratings		
		2015	2016	2017
Induction	Laboratory Safety Induction Training	5.53	5.92	6.09
	Chemical Safety	5.85	5.85	5.97
Chemical	Safe Use & Handling of Hydrofluoric Acid	5	5.57	6.64
	Safe Use & Handling of Pyrophoric Chemicals		5.41	6.15
	Semi-Quantitative Risk Assessment			6.25
	Chemical Spill Response	6.71	5.92	6.29
	Chemical Spill Response (Hands-On)			6.31
Biological	Biosafety for BSL-1 Laboratories ^{NEW}			5
	Biosafety for BSL-2 Laboratories	5.62	5.48	5.78
	Safe Handling of Human Tissue and Fluids		5.36	6.18
	Safe Needle Usage in Research Laboratories		5.71	6.19
	Safe Handling of Non-Human Primate (Macaque) Derived Materials (Classroom)			6.45
	Risk Management for BSL-3 Facilities (classroom)			5.14
	Biosafety Legislations & Guidelines		5.47	6.29
	Biological Spills and Emergency Response	6.71	5.63	6.12
	Biological Spills and Emergency Response (Hands-On)			6.72
	Lasers Safety Training	5.99	5.97	6.24
Radiation	Safe Handling of Radioactive Materials ^{NEW}			6.02
	Safe Handling of X-Ray Machines ^{NEW}			6.25
	Basic MRI Safety Training		6.61	5.5
	MRI Safety Training for Operators		6.21	7
General	Respiratory Protection Programme Training for First-Time Users		5.96	6.46
	Respiratory Protection Programme Training for Returning Users		5.77	5.63
	Risk Management for Laboratories	6.2	5.77	5.95
	Risk Management for General Workplaces	5.94	5.83	6.26
	Risk Management for Laboratories (Hands-On)			5.67
	Risk Management for General Workplaces (Hands-On)			5.91
Ergonomics	Field Research Safety ^{NEW}			5.95
	NUS Office Ergonomics Training			5.9
Mental Health	NUS Laboratory Ergonomics Training			5.36
	Suicide First Responder Awareness Course	5.82	5.91	5.36
Fire Safety	Mental Health First Aid			6.21
	Fire Safety Education Course	6.05	5.98	
	Fire Warden Training Course	6.13	6.04	6.06
	Fire Safety Coordinator Course	5.88	6.09	6.01
Emergency Response	Fire Safety Refresher Course	6.18	6.12	6.42
	Crisis Management (Business as Usual)	6.3	6.15	6.11
	Students' Events / Activities Safety & Crisis Management Workshop	6.4	6.34	6.32
Appointment-Based	CPR/AED Familiarisation Programme	6.7	6.75	6.7
	Workplace Safety and Health (WSH) Committee (General Workplace)	5.93	5.62	5.8
	Workplace Safety and Health (WSH) Committee (Laboratories)	5.89	5.82	5.86

Audit Survey Rating

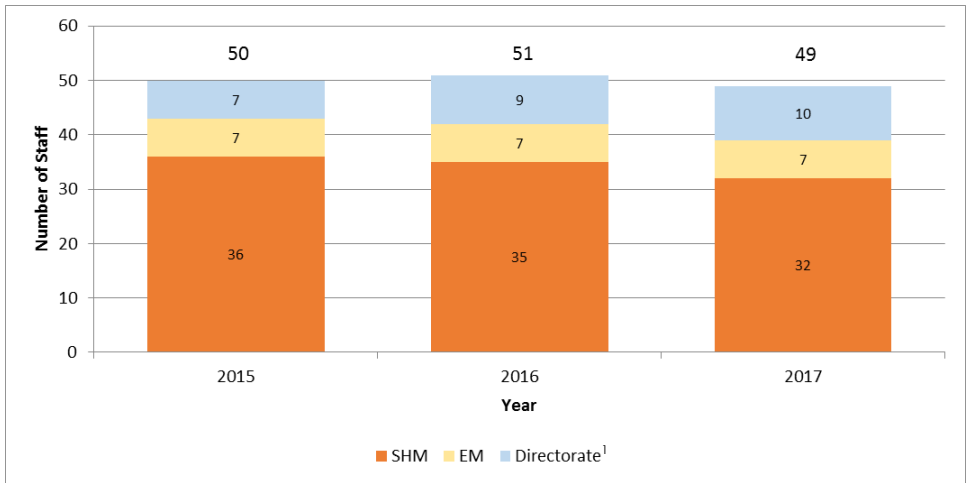


Compliments and Complaints



People Results

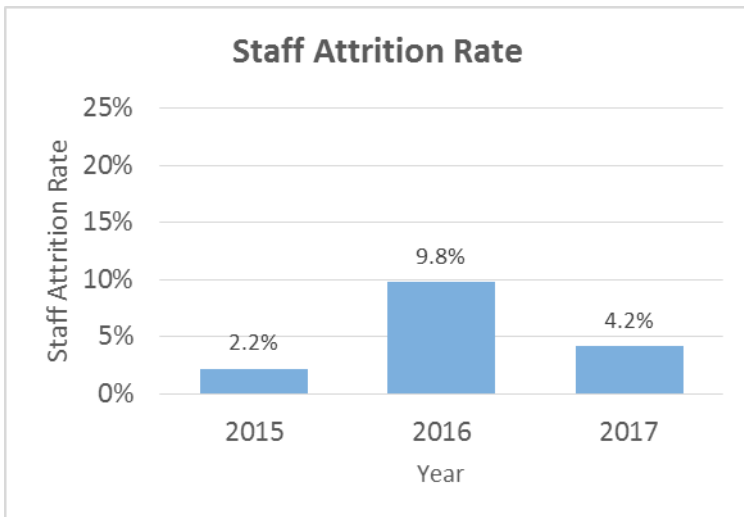
OSHE Staff Strength



¹Directorate consists of:

1. Director
2. Personal Assistant to Director
3. Admin, Finance and Operations
4. Business IT Support

OSHE Staff Attrition Rate



Social and Wellness Programme

Date	Event	Organiser
31-Jan	Nutrition Talk	OSHE Social Committee
22-Feb	ReLAC Chinese New Year Celebration	UCI
07-Apr	Bukit Timah Nature Reserve Hike	OSHE Social Committee
17-May	One UCI Teambuilding	UCI
29-Jun	Bowling	OSHE Social Committee
05-Jul	ReLAC Hari Raya Celebration	UCI
02-Aug	Team Bonding Activities and BBQ During Customer Service Day	OSHE Social Committee
09-Sep	NUS Day of Service	NUS
15-Sep	Team Bonding Activities During Strategic Planning Day	OSHE Social Committee
28-Oct	OSHE 15th Year Anniversary	OSHE Social Committee
02-Nov	ReLAC Deepavali Celebration	UCI
20-Dec	ReLAC Christmas Celebration	UCI

Professional Certifications of OSHE Staff

Professional Certification	Number
Registered Fire Safety Manager (SCDF)	13
Registered Safety Officer (MOM)	13
OHSAS 18001 Lead Auditor	12
Biosafety Coordinator (MOH)	11
Advanced Certificate in Training and Assessment (WSQ)	6
Noise Monitoring and Control Officer (WSQ)	6
ISO 14001 Lead Auditor	6
Radiation Safety Officer (ANSTO)	3
Business Continuity Certified Expert (BCMI)	2
Laser Safety Officer (UNSW)	2
Crisis Management Certified Expert (BCMI)	1
Certified Safety & Health Manager (USA)	1
Environmental Control Officer (NEA)	1
Certified Instructor for Mental Health First Aid (Singapore)	1
Certified Fire Protection Specialist (NFPA, USA)	1
Certified Fire and Explosion Investigator (USA)	1
Registered Biosafety Professional (USA)	1
Biosafety Professional Certification (IFBA)	1
Certified Safety Professional (CSP, USA)	1
Certified Industrial Hygienist (CIH, USA)	1
Senior Fire Safety Manager (SCDF)	1
Lean Six Sigma (Yellow Belt)	1
Lean Six Sigma (Green Belt)	1

OSHE Staff Supporting International, National and Institutional Committees

Committee	Staff	Role
ISO PC 283 and Development of the ISO Standard on Occupational Health and Safety Management System (ISO 45001)	Dr Peck Thian Guan	Head of Singapore Delegation
SPRING Singapore's Technical Committee on Occupational Safety and Health Management System	Dr Peck Thian Guan	Co-Convenor
International Advisory Committee, Asian Conference on Safety and Education in Laboratory	Dr Peck Thian Guan	Member
International Steering Committee, Asian Conference on Safety and Education in	Dr Peck Thian Guan	Member
	Mr Saravanan Gunaratnam	Member
Local Organising Committee, Asian Conference on Safety and Education in Laboratory	Mr Joel Swee Dao Wen	Chairman
	Mr Daniel Wong	Deputy Chairman
	Mr Goh Keng Beng	Member
	Dr Wong Su Ee	Member
	Dr Vernon Seow	Member
	Ms Tang Fenglin	Member
	Mr Francis Zheng	Member
	Mr Ryan Yu	Member
	Dr Lim Cheh Peng	Advisor
Working Group for Development of Singapore Standard : Fire Safety in Laboratories	Mr Hairulnizam bin Ishak	Member
Working Group on Safety & Health in Higher Education and Research Sector	Dr Peck Thian Guan	Chairman
	Mr Saravanan Gunaratnam	Member
	Dr Sheela Reuben	Secretariat
SPRING Singapore's Technical Committee on Business Continuity	Mr Yam Guan Shyh	Member
Biorisk Association of Singapore	Dr Tessy Joseph	President
	Dr Rajkumar Ramamoorthy	Treasurer
	Dr Vernon Seow	Asst secretary
	Dr Suzette De Leon	Asst treasurer
	Mr. Andy Yip	Auditor
Institutional Biosafety Committee (IBC)	Dr Peck Thian Guan	Member
	Mr Saravanan Gunaratnam	Member
	Dr Tessy Joseph	Member
	Dr Suzette De Leon	Secretariat
	Dr Christine Hu	Asst Secretariat
Duke-NUS ABSL-3 Biosafety Committee (ABC)	Dr Tessy Joseph	OSHE Rep
NUS Medicine BSL-3 Biosafety Committee (BBC)	Dr Tessy Joseph	Member
Institutional Animal Care & Use Committee (IACUC)	Dr Rajkumar Ramamoorthy	OSHE Rep

Committee	Staff	Role
Institutional Laboratory Safety Committee (ILSC)	Dr Peck Thian Guan	Member
	Mr Saravanan Gunaratnam	Member
	Mr Joel Swee Dao Wen	Secretariat
Institutional Safety & Health Professionals (ISHP)	Mr Saravanan Gunaratnam	Chairman
	Mr Andy Yip	Secretariat
	Mr Francis Zheng	Asst Secretariat
Safety and Health Management Committee (SHMC)	Dr Peck Thian Guan	Deputy Chairman
	Dr Wong Su Ee	Secretariat
Business Continuity Management Committee (BCMC)	Dr Peck Thian Guan	Member
	Mr Yam Guan Shyh	Member
	Ms Shen Wan Ting Sheena	Secretariat
Risk Management Steering Committee (RMSC)	Dr Peck Thian Guan	Member
	Dr Wong Su Ee	OSHE Risk Representative
APRU Multi Hazard Campus Safety Workshop 2018 Workgroup Committee	Mr Mohammad Fazulee Bin Abdul Rahman	Member
NUS SGSecure Committee (NSC)	Dr Peck Thian Guan	Member
	Mr Yam Guan Shyh	Member
	Mr Ravindran s/o Sockalingam	Secretariat
	Mr Mohammad Fazulee Bin Abdul Rahman	Asst Secretariat
	Ms Wong Thai Jin	Asst Secretariat
WoW Catalysts	Mr Jedison Ong	Member
	Dr Sheela Reuben	Member
UCI Planning and Research (PR) Unit	Dr Lim Cheh Peng	PR Leader
	Dr Wong Su Ee	Presenter



OFFICE OF SAFETY, HEALTH & ENVIRONMENT

NATIONAL UNIVERSITY OF SINGAPORE

VENTUS (UNIVERSITY CAMPUS INFRASTRUCTURE)

8 KENT RIDGE DRIVE

#03-02 SINGAPORE 119246



6516 6863



safety@nus.edu.sg



<http://www.nus.edu.sg/osh/>



Office of Safety, Health and Environment
University Campus Infrastructure