

A top-down view of various medical supplies on a teal background. In the upper left, there is a syringe and a thermometer. To their right are two small glass vials. A stethoscope is positioned in the center-right, with its chest piece resting on the surface. In the lower right, there is a blister pack containing several white, round tablets, with a few tablets scattered nearby.

SGH Alumni Newsletter

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SGH PGMI
Postgraduate
Medical Institute

NEW APPOINTMENTS

Key Leadership & Clinical Appointments



Assoc Prof Andrew Tan Gee Seng
Chairman
Division of Radiological Sciences
Singapore General Hospital



Prof Lim Soon Thy
Deputy Group Chairman
Medical Board
SingHealth



Ms Ng Gaik Nai
Chief Nurse (Designate)
Singapore General Hospital



Assoc Prof Lita Chew
Group Director
Allied Health
SingHealth



Adj Assoc Prof Tan Thean Yen
Deputy Chairman
Medical Board (Ambulatory Disciplines)
Changi General Hospital



Ms Stephanie Teo Swee Hong
Group Director Chief Nurse
Regional Health System
SingHealth



Assoc Prof Chew Min Hoe
Chairman
Division of Surgery
Sengkang General Hospital



Mr Benedict Tan Wee Bor
Chief Data Officer (CDO)
SingHealth



Assoc Prof Tan Kiat Tee Benita
Chairman
Division of Ambulatory and Outpatient Care
Sengkang General Hospital



Ms Tan Soh Chin
Senior Director (Special Projects)
SingHealth



Ms Wong Sook Thow
Chief Nurse (Designate)
KK Women's and Children's Hospital



Prof David Low Chyi Yeu
Deputy Medical Director (Clinical)
National Neuroscience Institute

AWARDS RECIPIENTS

President's Awards 2020

The President's Award for Nurses is the highest accolade in the nursing profession. This national award is given in recognition of nurses who have made significant contributions to the profession and the community, while also displaying outstanding competency, leadership qualities, and innovation capabilities. They are also dedicated to nurturing young nurses and committed in contributing their professional expertise in the community.

Congratulations to the recipients of the President's Award for Nurses 2020!



Ms Patricia Yong
Deputy Director, Nursing
Singapore General Hospital



Dr Alice Chua
Assistant Director, Nursing (APN)
National Cancer Centre Singapore

AWARDS RECIPIENTS

National Day Awards 2020



Left to right: Assoc Prof Andrew Tan, Ms Jennifer Wee, Prof Chan Choong Meng, Assoc Prof Tan Thuan Tong, Ms Susan Lee

Congratulations to our National Day Awards recipients!

Public Administration Medal (Silver) recipient Prof Chan Choong Meng; Public Administration Medal (Bronze) recipients Assoc Prof Andrew Tan Gee Seng, Ms Jennifer Wee, Assoc Prof Tan Thuan Tong, Ms Susan Lee and The Public Service Medal - Assoc Prof Mark Leong.

Congratulations to our 5 Commendation Medals recipients, 19 Efficiency Medals and 102 Long Service Medals recipients. Thank you everyone for your tireless contributions to the service of Public Healthcare for the Nation. For the full list of awards recipients, please visit: https://www.pmo.gov.sg/-/media/PMO/National-Day-Awards/NDA_PDF/2020_NDA-pdf.pdf

Source: SGH Facebook

NEW DEVELOPMENTS

SGH AND PHILIPS TO ESTABLISH A DIGITAL AND COMPUTATIONAL PATHOLOGY CENTER OF EXCELLENCE

Singapore General Hospital and Royal Philips (NYSE: PHG, AEX: PHIA), a global leader in health technology, on 4 Sep 2020 announced that they will work together to establish the Singapore General Hospital Digital and Computational Pathology Center of Excellence. The SGH Center of Excellence aims to advance pathology practice by implementing a fully digital histopathology workflow and deploying artificial intelligence (AI) to increase productivity and enhance patient care.

Located within SGH's Division of Pathology, one of the largest pathology laboratories in ASEAN, the Center of Excellence aims to establish ASEAN's first fully digitised histopathology laboratory by expanding its digital pathology capabilities for primary diagnosis, training, and R&D with the Philips IntelliSite Pathology Solution. Both SGH and Philips will also work closely on other diverse areas, including streamlining of the histopathology laboratory's digital workflow.

A recent study, conducted by SGH and Philips, revealed that full digitization of SGH's histopathology laboratory with the Philips IntelliSite Pathology Solution has the potential to save over 12,000 hours every year. Through optimisation of digital pathology at SGH, the hospital will be able to further its research in AI. AI-based tools can aid pathologists in diagnosing diseases such as cancer, which is the leading cause of mortality in Singapore, and empower them to face the current challenges in pathology. The increasing number of cancer cases, an aging population, and rapid advances in personalized medicine have resulted in significant increases in the complexity of pathological diagnostics and the workload of pathologists. AI will allow pathologists to focus more on challenging tasks and unusual cases that require a higher degree of expertise and skills.

"We have always attempted to transform our processes and capabilities in anticipation of evolving circumstances and the needs of our patients. As healthcare becomes more complex and demanding, digitisation has become a key enabler for the Hospital to provide better care for our patients and to be more efficient," said Prof. Kenneth Kwek, Chief Executive Officer at SGH. "Digital pathology is an example and our partnership with companies such as Philips with the clinical and technical know-how is important in helping us achieve our goal."

"Digital pathology will enhance the quality and efficiency of a histopathology laboratory," said Diederik Zeven, General Manager, Health Systems, Philips ASEAN Pacific. "We are committed to partnering with leading healthcare institutions like Singapore General Hospital to bring the latest in precision diagnoses and AI capabilities to help them augment clinical quality, improving patient outcomes and thereby reducing the cost of care." Philips IntelliSite Pathology Solution enables pathologists to review and interpret digital images of surgical pathology slides prepared from formalin-fixed paraffin-embedded (FFPE) tissue samples. This technology replaces the need for traditional glass slides to be viewed under a microscope, and facilitates referencing and storage. Ultimately, digital images allow the application of computer-aided image analysis with AI.

Source: SGH Website

NEW DEVELOPMENTS

SGH CREATES PORTABLE CHAMBERS THAT CONVERT WARDS, ICUS INTO NEGATIVE PRESSURE ISOLATION ROOMS



(From left) Dr Zibui Tan and Dr Hairil Rizal Bin Abdullah switching on the nebuliser to release the virus-containing droplets in the simulated patient room, while Dr Jye Yng Teo and Dr Balamurugan Periaswamy observe the release of the droplets from the nebuliser and time the duration of release

Singapore General Hospital has created portable systems that can convert wards, intensive care units (ICU) and operating theatres into negative pressure isolation rooms within hours to house patients with infectious diseases. One of the two transparent chamber-like systems at Singapore General Hospital (SGH), called the System of Portable AnteRoom for Containment (SG-Sparc), can be fitted behind the entrance of a ward or ICU. It measures 1.2m by 1.6m, and is 2.4m high.

After any gaps between the entrance and the system are sealed, a Hepa filter unit at the top of the system is powered up to create a negative pressure environment within the patient's room, so that infectious droplets and air from the room cannot seep outside into the corridors.

The chamber has two doors, one at the entrance of the ward and one inside the ward, facing the patient. When the inside door opens for medical staff to enter or leave the room, contaminated air flows into the chamber and through the Hepa filter, so that clean air re-enters the room.

The 70kg system takes an hour to set up and was installed at SGH's Medical ICU in July. One more of the same type will be added to the Medical ICU soon. The collapsible SG-Sparc can also be fixed to single- and multiple-bed wards with infectious diseases patients. The size of the system is customisable, and each takes two weeks to fabricate.

The other SG-Sparc system, used in operating theatres, is larger to allow an ICU bed, ventilator and medical staff to pass through. Measuring 3.8m by 1.6m and with a height of 2m, the system prevents droplets from escaping the room while surgical operations, including aerosol-generating procedures, are performed on infectious patients.

The 150kg chamber takes two hours to set up. One system has been installed in an operating theatre in SGH. The two systems were developed by anaesthesiologists from SGH, in collaboration with local biomedical incubator The Biofactory. The project was funded by SingHealth Duke-NUS' Urgent Covid-19 Research Fund, with contribution from The Biofactory.

Compared to existing systems, SG-Sparc has a combination of advanced features such as contactless sensors and a higher rate of air filtration, which makes it the first of its kind, said Dr Mavis Teo, a consultant at SGH's Department of Anaesthesiology.

In a room fitted with the system, the air can be filtered up to 300 times an hour, compared to an operating theatre where the air is filtered 12 times an hour. Medical staff can open the system's doors by waving at the sensor without touching it. The inventions come at a time when existing numbers of isolation rooms abroad are insufficient to support the Covid-19 surge. It is also costly and time-consuming to build isolation rooms.

To ensure and test the system's ability to contain viruses, scientists from the Agency for Science, Technology and Research's Institute of Bioengineering and Nanotechnology released live non-pathogenic viruses into a simulated patient room installed with SG-Sparc. No microbes escaped from the room. SG-Sparc is the third collaboration between SGH and The Biofactory, after SG-Safe, a foldable swab test system, and SG-Safer, an isolation X-ray booth.

Read more at <https://www.straitstimes.com/singapore/sgh-creates-portable-chambers-that-convert-wards-and-ic-us-into-negative-pressure-isolation>

Photo credits & Source: The Straits Times & SGH Website

NEW DEVELOPMENTS

NEW WEIGHT LOSS PROCEDURES AT SGH FOR THOSE UNFIT FOR SURGERY

Singapore General Hospital (SGH) will soon offer a minimally invasive procedure that helps people lose weight. It is meant for those unsuitable for surgery and will be available from October. Known as Endoscopic Sleeve Gastroplasty, the method has been trialled in three patients since August 2019. An endoscope is inserted down the throat and an attached device is used to stitch up the stomach. This reduces the size of the stomach by about 70% and restricts the amount of food intake.

Read more at <https://www.sgh.com.sg/news/sgh-helps-patients-lose-weight-safely-without-surgery/sgh-helps-patients-lose-weight-safely-without-surgery>

Source: SGH Website & CNA News

SGH HELPS FRAIL ELDERLY PATIENTS PREPARE FOR SURGERY WITH AWARD-WINNING PROGRAMME



Maximum Inspiratory Pressure Assessment

Preparing for surgery is like getting ready for a marathon. The fitter and better prepared one is, the faster and better recovery will be. And that is what the Perioperative Programme for Elderly (PREPARE) designed by Singapore General Hospital (SGH) aims to do – enhance general health and well-being of frail elderly patients before they undergo major surgery.

Studies have shown that being frail puts an elderly patient at greater risk of developing surgical complications such as longer hospital stay, hospital readmissions, and possibly even death. In 2019 alone, approximately 9,400 elderly aged 65 years and above underwent elective surgery at SGH, and the number, including those who are frail, will continue to rise as Singapore's population ages rapidly.

"Imagine running a marathon without training. The ability to complete the race is questionable and recovery will be long and painful. This is why competitive marathoners work with a team of experts to ensure they are in top form when they race. The idea of PREPARE is similar. We assembled a team to prep our elderly patients so that they can withstand the stress of surgery, and have an uneventful and shorter recovery," said Dr Hairil Rizal Abdullah, Senior Consultant, Department of Anaesthesiology, SGH, who led the team that introduced PREPARE at the Hospital's Pre-Admission Centre (PAC) in January 2019.

The PREPARE team comprises anaesthesiologists, physiotherapists, internal medicine specialists, nurses and, dietitians. They are embedded in PAC so that elderly patients aged 65 years and above undergoing major surgery will receive mandatory screening in the same location and on the same day as their pre-surgery assessment.

A nurse will first screen the patient using a questionnaire which takes less than five minutes to complete. Their reviewing anaesthesiologists will then draw up a personalised plan and refer patients to other members of the PREPARE team depending on their needs. They may see a physiotherapist who will further assess them and teach them exercises that they can do at home pre- and post-surgery. They may also see a dietitian for nutrition optimisation, and an internal medicine specialist to stabilise their pre-existing chronic medical problems, if necessary. After surgery, the PREPARE team will continue to review the patients in the wards to ensure continuity of care.

To measure the beneficial impact of the interventions, the team compared the care outcomes of about 40 patients from January to December 2019 who went through PREPARE with nearly 90 patients from January to June 2018 who did not. These patients were aged 65 years and above who had major abdominal surgery. They discovered that the PREPARE cohort were discharged two to three days earlier, and had a 10 to 20 per cent reduction in hospital bill. There was also about 25 per cent more patients in the PREPARE cohort who had no complications during hospitalisation. To date, close to 120 elderly patients have gone through PREPARE, which has clinched this year's Care Redesign Best Practice Medal at the National Healthcare Innovation and Productivity Awards in July.

Photo Credits & Source: SGH Website

NEW DEVELOPMENTS

WARD@BOWYER: MORE THAN JUST ANOTHER ISOLATION FACILITY FOR COVID-19



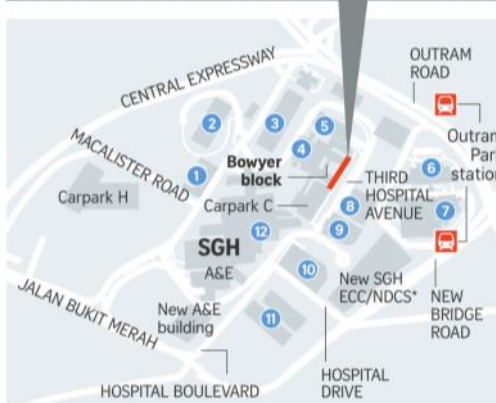
New isolation ward at SGH

The 3,200 sq m ward housing 50 isolation single rooms took six to seven weeks to build. It is situated on a portion of an open-air carpark at Singapore General Hospital.



NEW ISOLATION WARD

- Each isolation unit measures 2.3m by 5.6m with a height of 2.5m
- Each room has an attached toilet and shower
- Other facilities in the ward include X-ray facility, nurses' stations, changing rooms and rest area for staff, doctors' on-call rooms, medical preparation room, and treatment room with resuscitation bay



- | | |
|------------------------------------------------------------------------------------------|------------------------------------------------|
| 1 Ministry of Health | 8 SGH Block 8 |
| 2 Duke-NUS Medical School | 9 National Cancer Centre Singapore |
| 3 Academia | 10 National Heart Centre Singapore |
| 4 Singapore National Eye Centre | 11 Outram Community Hospital/ SingHealth Tower |
| 5 Diabetes and Metabolism Centre | 12 SGH Blocks 1-7 |
| 6 Health Sciences Authority | |
| 7 SingHealth Polyclinic Outram/ Health Promotion Board/ National Dental Centre Singapore | |

*Singapore General Hospital Elective Care Centre/ National Dental Centre Singapore

Source: SINGAPORE GENERAL HOSPITAL
STRAITS TIMES GRAPHICS

Construction of the 3,200sqm facility, which comprises 50 purpose-built isolation units, started in mid-May 2020 and took about six weeks to complete. Each unit measures 2.5m (height) x 2.3m (width) x 5.6m (length), and is a negative pressure single room with en suite toilet and shower facilities. In addition, as exists in any ward, the new facility includes nurses' stations, changing rooms and a rest area for staff, doctors' on-call rooms, and medical preparation room, etc.

The modern history of SGH began in three buildings built in 1926 – Bowyer, Stanley and Norris Blocks. Of these, only the historic Bowyer Block remains and is a National Monument in recognition of its national significance and rich history. This new facility is located immediately adjacent to the Bowyer Block and is aptly named Ward@Bowyer.

“SGH has undergone numerous transformations since its establishment nearly 200 years ago to keep up with the needs of Singaporeans. The Bowyer Block, which now houses administrative offices, is a standing reminder of how far we have come in advancing patient care. Today, we are leveraging technology and developing tools as well as systems to allow us to take better care of our patients, many of which are introduced in this new Ward@Bowyer,” said Associate Professor Ruban Poopalalingam, Chairman, Medical Board, SGH.

A biosensor will be given to patients in Ward@Bowyer to be worn on their wrists. It transmits their heart rate, respiration rate and oxygen saturation level readings wirelessly to a mobile app, which patients themselves can access via an in-room smart phone, and allows remote monitoring by clinicians. With contact-free continuous monitoring, the team can detect early warning signs of patient deterioration and intervene before it happens.

Patients can also use the smart phone to interact with their care team via a video conferencing app or let them know if he/she is feeling unwell on MyCare Lite, a mobile app developed by SGH's Nursing Division and IHiS (Integrated Health Information Systems). The app allows doctors or nurses to assess patients in the room without bringing additional equipment. There are also pre-loaded games in the smart phone to help patients take their mind off being in a hospital.

By leveraging technology, the care team can efficiently monitor and interact with patients without unnecessary risk of exposure. If an x-ray is required, patients will be brought into an on-site x-ray booth, SG SAFER, designed by SGH's Department of Diagnostic Radiology. It is operated by one, instead of the usual two radiographers, who wears just an N95 mask instead of full personal protective equipment, as a result of the protective isolation elements included in the design.

Read more at <https://www.straitstimes.com/singapore/contact-free-patient-monitoring-at-new-isolation-facility-in-sgh>

NEW DEVELOPMENTS

MADE-IN-SINGAPORE ROBOT FEATURES FASTER AND MORE COMFORTABLE COVID-19 SWABBING

First patient-controlled nasal swab robot

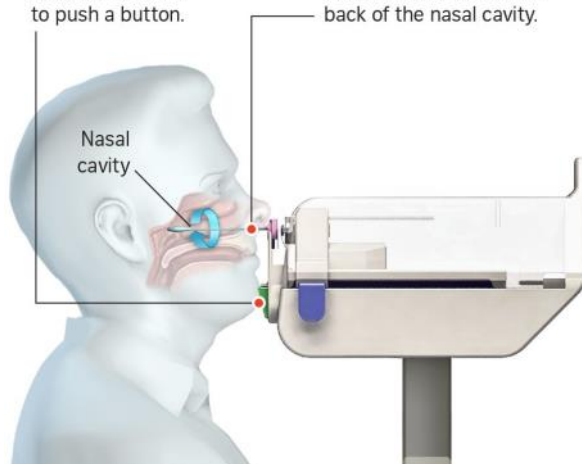
Clinicians and patients who have used SwabBot say that the machine is safe, faster and more comfortable compared with a manual swab test.

1 Activation

Patient will latch his nostril firmly onto the disposable nosepiece. When ready, he will activate the robot by using his chin to push a button.

2 Swabbing

The nosepiece moves slightly upwards to widen the nostril, and the swab will extend and rotate safely and gently through the patient's nose to the back of the nasal cavity.



Duration

The whole process takes about **20 seconds**.

Safety

The robot has a **built-in feature** that withdraws the swab stick if there is resistance when moving deeper into the nasal cavity. The individual can also terminate the process by moving his head away from the robot.

Sources: NATIONAL CANCER CENTRE, SGH
STRAITS TIMES GRAPHICS: LEE HUP KHENG

A robot that carries out nasal swabbing to diagnose Covid-19 has been developed by clinicians who say the automated procedure is safe, faster and more comfortable compared with manual swab tests. Although other countries have developed similar robots, the clinicians said the made-in-Singapore bot is the first that allows patients to fully control the swab process so they are more comfortable. Patients can activate and terminate the machine at will.

A patient is seated in front of the robot, called SwabBot, similar to how he would take a mechanised eye examination. He holds onto the handhold and latches his nostril onto the disposable nosepiece. SwabBot is equipped with a built-in feature that withdraws the swab stick if there is resistance when it is moved deeper into the nasal cavity. If patients feel uncomfortable at any point, they can stop the process by moving their head away from the robot.

The process takes 20 seconds, while a manual swab test can take twice as long. At the end of the procedure, a medical staff member will open the machine to remove and store the swab stick. The robot, including its interior, will be wiped down and covered with a fresh plastic drape fitted with a nosepiece for the next patient.

The machine, which is 35cm by 40cm, and 49cm high, was developed by clinicians from the National Cancer Centre Singapore (NCCS), the Singapore General Hospital (SGH) and Duke-NUS Medical School, in collaboration with medical robotics company Biobot Surgical. The team said the robot can address the limitations and risks of manual swabbing. It reduces swabbers' risk of exposure to the virus and the need for training people, standardises the consistency of swabs taken, and increases the efficiency of conducting swab tests.

"Our team felt that we had to find a better way to swab patients to reduce the risk of exposure of Covid-19 to our healthcare workers, especially when patients sneeze or cough during the

swabbing process," said principal investigator Rena Dharmawan, associate consultant of head and neck surgery at NCCS' Division of Surgery and Surgical Oncology.

Beyond that, the clinicians wanted to make the swabbing procedure more comfortable for patients. SwabBot retains the same gentle touch and precision as surgeons who perform very delicate procedures, said Dr Luke Tay, consultant at SGH's Department of Vascular Surgery, who is one of the project's team members.

Source: Tomorrow's Medicine & The Straits Times

CORONAVIRUS DISEASE OF 2019 (COVID-19)

Early-Stage Coronavirus Vaccine Trial Begins in Singapore

The early-stage clinical trial for a Covid-19 vaccine has started in Singapore, with the first vaccinations expected to be given to volunteers during Mid-August. Clinicians and researchers are now screening those who have stepped forward to ensure they are suitable for the trial, which is expected to last until October.

The SingHealth Investigational Medicine Unit is administering the trial for the vaccine. Called Lunar-Cov19, the vaccine is developed by Duke-NUS Medical School and United States pharmaceutical company Arcturus Therapeutics. Associate Professor Jenny Low, deputy clinical and scientific director at the SingHealth unit, told The Straits Times yesterday that more than 250 volunteers have stepped forward for the trial.

Around 100 people will take part in the trial. The volunteers are in their 20s to 50s. "As the trial is open to volunteers from 21 to 80 years old, we continue to be on the lookout for more participants, especially those in the older age group," she added.

Prof Low said the volunteer response for the vaccine trial has been encouraging. "It shows that people are willing to contribute towards the advancement of science, even if the trial may not benefit them directly."

A vaccine works by "showing" the immune system an important part of the virus and "training" it to recognise and remember a pathogen without exposing the patient to the risk of disease. Traditional vaccines do this by injecting a killed or weakened form of the virus into the human body so that the immune system recognises the invader and begins summoning its "soldiers" - antibodies and T-cells - to get rid of it.

However, the Lunar-Cov19 vaccine involves a newer type of biotechnology. The vaccine contains only fragments of the virus' genetic material, instead of the whole virus. When these viral genetic fragments enter the human cell after injection, the genome fragments commandeer the cell to begin producing the signature spike protein of the coronavirus. This trains the body to recognise a key part of the virus - the spike protein - without exposing it to the whole virus.

Prof Low said the vaccine had shown promising pre-clinical results, and the next step would be to ensure it is safe, and that it can elicit a robust antibody and T-cell immunity in vaccinated individuals to confer long-lasting protection against Covid-19.

The early-stage clinical trial for the Lunar-Cov19 being conducted here is known in medical circles as a phase I/II trial. Typically, a phase I vaccine trial involves a small number of subjects, usually fewer than 100. They are recruited to evaluate the different doses of a vaccine for potential toxicity, and to understand how drugs are removed from the body. The body's immune response will also be measured.



Assoc Prof Jenny Low said the volunteer response for the vaccine trial has been encouraging..



The Lunar-Cov19 vaccine is one of 26 vaccine candidates worldwide that either have been tested on humans or have received approval to do so

SPECIAL EDITION

CORONAVIRUS DISEASE OF 2019 (COVID-19)

The focus of phase II is similar, except the number of subjects is usually increased to several hundreds. Prof Low said that combining phases I and II for this trial will allow for greater flexibility and help to speed up the trial without any gaps in time after phase I. She added: "This is important during a pandemic such as Covid-19, where the search for a vaccine is critical to saving lives and should be accelerated where possible without compromising on safety."

Before a clinical trial is allowed to take place, many measures have to be in place to ensure the safety of a vaccine. This includes having experts conduct extensive pre-clinical tests, such as laboratory tests, animal studies and safety tests. A vaccine can move into the clinical trial stage only when promising pre-clinical results are shown, Prof Low said.

The trials are also tightly regulated by both ethics and regulatory boards, and close safety monitoring takes place at every phase. The Lunar-Cov19 vaccine is one of 26 vaccine candidates worldwide that either have been tested on humans or have received approval to do so. Some 139 others are still at a pre-clinical phase.

"As one of the vaccine candidates in the world that has reached the clinical evaluation stage, this trial is definitely significant for Singapore," said Prof Low, who is also a senior consultant at the department of infectious diseases at the Singapore General Hospital. "If the vaccine is efficacious, Singapore would have played a key role in the global search for a Covid-19 vaccine, and hopefully be able to help find a solution to the current pandemic." Singapore will also have priority access to the vaccine for its population, Prof Low added.

The next phase of the trial - phase III - will look into finding out if the vaccine reduces the occurrence of a particular disease. The Strait Times had earlier reported that phase III of the clinical development process involves inoculating a much larger pool of thousands of volunteers in Singapore and abroad, and that this could start before the end of the year.

Photo Credits & Source: The Strait Times & SGH Website

Defending Against COVID-19 in the Dormitories



Ms Lim Soo Ting, Senior Nurse Clinician and Advanced Practice Nurse, Nursing Clinical Services, KKH

In late March 2020, seeing the rising need for help to provide COVID-19 screening and medical care to migrant workers, I joined fellow healthcare colleagues in answering the call to serve. My volunteer post was at one of the first mobile medical posts that KKH had set up at the dormitories.

Preparations were tough, yet rewarding. We worked hand in hand with the dormitory management and the Singapore Armed Forces' FAST (Forward Assurance and Support Team) to coordinate efforts and integrate directives from the Ministry of Health. This enabled us to accurately and safely register, swab, isolate and treat the dormitory residents.

Our top priority was to look after the health and safety of everyone in the dormitory. As a nurse specialising in diabetes management, I worked closely with the doctors and pharmacists to care for the dormitory residents with diabetes. This included recommending and making adjustments to their medication, and supporting their blood glucose monitoring. We also conducted education and enforcement of infection control measures, safety measures and self-care.

Everyone went the extra mile to creatively support the well-being and welfare of the dormitory residents, and I was moved and inspired by the compassion and humanity I witnessed – including choreographing a fun dance to help the residents remember safety measures, making tweaks to the way meals were cooked to ease their homesickness, and even helping to coordinate money remittance to their hometowns for their families back home.

The wonderful team spirit and strong support from our senior leaders and peers greatly enabled us to give our best to care for and support the health of the migrant workers.

Source: SGH Website

CORONAVIRUS DISEASE OF 2019 (COVID-19)

Anxiety in Singapore: Stats, Types and Who's at Risk

Feeling anxious (especially during the COVID-19 pandemic) is absolutely normal but what happens when the fretting and fear gets out of control? When is it time to seek help?

"The term 'anxiety disorders' refers to a range of mental conditions characterised by fearfulness, worry and uncertainty which interfere with the person's life," explains Associate Professor Leslie Lim, Senior Consultant from the Department of Psychiatry at Singapore General Hospital (SGH).

Conditions that fall in the category of anxiety disorders include:

1) Generalised Anxiety Disorder (GAD)

Those with generalised anxiety disorder (GAD) worry excessively about health, money, family or work even if there is no reasonable cause. Symptoms include being anxious, easily startled or having difficulty relaxing, difficulty in concentrating and trouble falling asleep. In addition to the above-mentioned symptoms, attacks are usually accompanied by headaches, muscle tension, irritability, sweating and fatigue.

2) Obsessive Compulsive Disorder (OCD)

OCD is characterised by **Obsession**: Persistent and intrusive thoughts and impulses which are resisted at the cost of mounting anxiety. **Compulsion**: Repeated actions that are performed in reaction to obsessions and in accordance with the sufferer's rules.

3) Panic Disorder

Panic disorder is characterised by sudden attacks of fear, usually accompanied by breathlessness, a choking sensation, shortness of breath, a pounding heart and fears of losing control or going crazy. It can occur anytime, even while watching television or sleeping, and typically lasts about 10-20 minutes each time.

4) Social Phobia (or Social Anxiety Disorder)

Those with social phobia are excessively anxious and self-conscious in everyday social situations. They fear being watched and judged by others, and may be overly worried for days or weeks before a social event. Symptoms include profuse sweating, trembling, nausea and blushing.

5) Post-Traumatic Stress Disorder (PTSD)

This condition usually afflicts survivors of natural disasters, war veterans as well as victims of assault, rape and accidents or even to an observer, such as someone who watched a loved one being harmed. Sufferers are easily startled, emotionally numbed, irritable or aggressive and experience frequent flashbacks.

6) Specific Phobias

Phobias arouse an intense and irrational fear of something that may not actually be dangerous, such as animals, heights, thunder and enclosed spaces (agoraphobia). For people with phobias, sometimes just thinking about the trigger is enough to bring on a panic attack.

SPECIAL EDITION

CORONAVIRUS DISEASE OF 2019 (COVID-19)

How to Tell If it is a Problem?

"In its mild form, an anxiety disorder will not affect normal life. For example, a person with a job will still be able to perform daily work although he or she may be less productive than usual," explains Associate Professor Lim. Only severe forms of anxiety disorders can disrupt daily activities, making it impossible for the sufferer to function normally.

"If the anxiety is disruptive, you should consult a doctor," he adds. "Your doctor will take some blood tests to rule out physical issues like hyperthyroidism, as well as use a diagnostic tool like an electrocardiogram (ECG) to exclude cardiac conditions."

Getting rid of anxiety

Fortunately, anxiety disorders are highly treatable. Depending on the specific type of anxiety disorder, doctors may prescribe several classes of medications (such as anti-depressants for GAD). Psychotherapy can also help. This includes cognitive behaviour therapy which helps you to recognise and control your fears, modify your way of thinking, or desensitise you to anxiety triggers.

Source: HealthXchange.sg & Yahoo Website

What is a Good Quality Face Mask?

Effectiveness of different types of masks



A study by Duke University in the United States published in Science Advances journal found that there are "masks" that actually increase the spread of droplets, rather than reduce it. The Duke study, which compared the spread of droplets from a range of masks, found that most of them gave fairly good protection.

However, the results of the study also found that one of the 15 types tested proved to be worse than not wearing a mask at all. This was a single layer neck gaiter made of 92 per cent polyester and 8 per cent spandex. Explaining this apparent anomaly, the researchers said the neck gaiter "seemed to disperse the largest

droplets into a multitude of smaller droplets which explains the apparent increase in droplet count relative to no mask in that case".

"Considering that smaller particles are airborne longer than large droplets (larger droplets sink faster), the use of such a mask might be counterproductive."

The authors added that of the masks they tested, "some mask types approach the performance of standard surgical masks, while some mask alternatives, such as neck fleece (gaiters) or bandanas, offer very little protection". Associate Professor Eric Westman, one of the researchers involved, in a webinar on the results said that the findings also showed "people do spit out particles when they speak", and not just when they cough, sneeze or shout.

Another mask that is better not worn in public spaces, and in fact has been banned in some places, are those with valves or vents. Such masks, which make breathing easier, do protect the wearer. But they allow air, including any droplets in them, to freely flow out - and so, do not stop the transmission of the virus from an infected person.

Source: The Straits Times

FELLOWSHIPS & INTERNATIONAL COLLABORATIONS

Dr Ujjwal Sinha from India shares his fellowship experience in SGH, Department of Orthopaedics (Sports Service).

My orthopaedic journey started in 2008 from ESI hospital new Delhi from where I finished my postgraduation in 2011 and worked in various institutions across India before coming to Singapore General Hospital (SGH) and started my dream fellowship in sports medicine here. There is no doubt that this is one of the best premier institute of the world where any aspiring orthopaedic surgeon will love to get trained.

This was my first visit to Singapore but after arriving here I never felt that I am on a foreign soil. Everyone was so supportive and helpful, right from SMC to PGMI to each and every staff of the department. I have been put under direct supervision of A/Prof Paul Chang for the entire fellowship duration of 6 months but at the same time I have been posted with A/Prof Andrew Tan and A/Prof Denny Lie on their respective OT days in ASC and MOT. The fellowship programme is designed in such a manner that in this limited time frame one gets maximum surgical exposure and gets a chance to work with all three eminent sports surgeon of SGH who do not need any introduction in this field.



Assoc Prof Paul Chang (right), Director of Sports Service in Orthopaedics with Dr Sinha (left)



Dr Sinha (right) with colleagues from Orthopaedics Department

My usual day starts here with morning 7 am teaching class of the department which always have been very informative and motivating to me. After that at around 8.00 am I rush to the Operating Theatre (OT) which usually goes up to 4 pm and sometimes stretches beyond it also. The surgical experience here is one step ahead than my expectation. Knee and shoulder arthroscopy is a routine but along with that there is ample exposure of hip and ankle arthroscopy and replacements.

There are certain differences between the health industry here and back home in India. One of the major problem would be financial constraints for some of my uninsured patients but I am pretty sure slowly the scenario will change and I would be able to deliver them cost effective and world class treatment which they deserve in all respect. The strength and skill which I am acquiring here is certainly going to pay off in my practice. I personally believe in sharing the knowledge so I would love to associate with some learning centres in India where I can help my junior colleagues to learn the art of arthroscopy.

So in short I thank Singapore General Hospital for this wonderful opportunity and support and I hope this fellowship programme will continue to help other deserving candidates. Thank you!



Dr Sinha (left) with Prof Andrew Tan from Orthopaedics Department

FELLOWSHIPS & INTERNATIONAL COLLABORATIONS

Dr Md Abu Saleh Esha from Bangladeshi shares his fellowship experience in SGH, Department of Vascular & Interventional Radiology.

What was your impression of Singapore's healthcare industry?

Truly speaking I had no concrete idea about the vascular and interventional radiology as in my country the subject is new and at budding stage. So, I came here with some idea about the advanced technology and treatment facilities of Singapore General Hospital (SGH). Honestly here at Interventional radiology department the Angio suites equipped with state of art of machines and wide range of procedure performed surprise me a lot. Overall health care system which I came across during my fellowship is fantastic, well-co-ordinated and dedicated for patient.

Why did you choose to apply to Singapore/SGH for your attachment?

I heard about SGH from one of my senior fellow Dr Biswajit Bhowmik who did his fellowship in Vascular and Interventional 2013. Meantime I also came to know that SGH secured the 3rd world best hospital in Newsweek's survey. Those factors encourage me to chose SGH for my training attachment.



Dr Saleh Esha (2nd from left) with the junior colleagues of DVIR

Did you face any difficulties (e.g. culture, language) during your attachment? What were they?

Not at all other than the language and healthcare system. Initially I struggled a little bit with the language and to cope up with healthcare system. But with the time being, I was fully accustomed with the Singlish and fantastic healthcare system. As an Asian neighbour country and lots of Bangladeshi working here in Singapore, I did not feel any difficulty with the culture and other aspects.

During your attachment, what was a 'typical' day like?

My day started at 7:30 am with morning session which includes discussion of interesting cases, mortality & morbidity meeting, biopsy audit, research meeting and multidisciplinary meeting. Then I attend to the Interventional Radiology (IR) procedures with the respective consultant at the angiogram suite. Sometimes I scheduled for on-call /extended for emergency IR procedures usually 1-2 days in a week..



Dr Saleh Esha (2nd from right) with the IR colleagues and Dr Pradesb Kumar (1st from right)

What were your learning experiences?

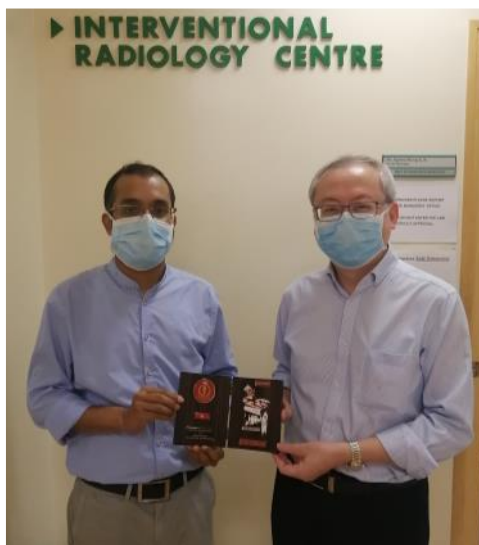
Excellent. SGH is a fantastic organization for fellowship in Vascular and Interventional Radiology. Training setup and curriculums were focused. The resources material was extensive and excellent. The trainers (consultants) and supportive staffs were cooperative.



Dr Saleh Esha (1st from right) with the visiting fellows from Bangladesh

Photo Credits: Dr Saleh Esha

Dr Md Abu Saleh Esha from Bangladeshi shares his fellowship experience in SGH, Department of Vascular & Interventional Radiology.



Dr Saleh Esha with A/Prof Tay Kiang Hiang, HOD of Department of Vascular & Interventional Radiology

How has the attachment made an impact on you?

I think the attachment with Singapore General Hospital (SGH) made a great impact on my life. As I already mentioned I had little exposure in interventional radiology before attachment. I have learnt here every step of Interventional Radiology (IR) procedure starting from consent taking for procedure, pre procedural check-up, conscious sedation assessment, post-operative follow up and management of complications.

What did you enjoy most during your attachment?

A lot of enjoyment during my attachment. Specially I missed Wednesday morning session of interesting case discussion where we participated as a whole department. It was like weekly reunion for us. Resident and fellows are scared to ask different questions and query by the consultants.



Do you have any interesting/memorable experience during your attachment that you would like to share?

Really there were plenty of memorable events during my one-year attachment at SGH. The best of all was to participating the 19th Congress of ASEAN Association of Radiological at 2019, where I got a chance to meet legendary interventional radiologists all over the world and oriented with their outstanding techniques and manoeuvre in the field of Vascular and Interventional Radiology.



Would you recommend SGH to interested fellows? Why?

Yes. I highly recommend SGH to the interested fellows as SGH is one of the world best hospital. The hospital especially IR department is well equipped, high volume and wide range of interventional procedures are performed.

How would you describe your fellowship experience in 3 words?

Well-organised, focused and excellent.

Top photo: Dr Saleh Esha (3rd from right) attending the 19th Congress of ASEAN Association of Radiological with the other fellows.

Bottom photo: Dr Saleh Esha (1st from right) with Prof Tan Bien Soo (left), A/Prof Tay Kiang Hiang (3rd from right) and other fellows

Photo Credits: Dr Saleh Esha



TELL US WHAT YOU WANT!

We are always looking for ways to improve and engage our alumni members. If you have any suggestions or ideas for newsletter contents or alumni events, know anyone who would like to contribute to the newsletter, please let us know! Email your suggestions and contributions to alumni@sgh.com.sg

UPCOMING EVENTS

OCTOBER

7TH

SGH Gastroenterology & Hepatology GP Webinar (Week 1)

Topic: Practical Insights into Colorectal Cancer Prevention by Dr Vikneswaran Namasivayam.

Registration Link: https://ihis.zoom.us/webinar/register/WN_kv4xEBBASiOWwvf4R5mh4A

9TH

PGMI Afternoon Talk: Music Therapy & Stress Management

Participants will be given a brief introduction to music therapy and the benefits of music on mental health. Different strategies of using music at home will also be discussed. The session will end with experiential activity. Registration link: <https://ihis.zoom.us/meeting/register/tJYuceCsqTMvGtJm-lbV7LcFJhiRTxxCf36K>

14TH

SGH Gastroenterology & Hepatology GP Webinar (Week 2)

Topic: Liver Function Test Abnormalities in the COVID Era by Dr Rajneesh Kumar.

Registration Link: https://ihis.zoom.us/webinar/register/WN_oivBP7YgQLCuVcYbgxjzyw

17TH

SGH Pelvic Floor Disorders Webinar 2020

Pregnancy and childbirth is an unforgettable and often the most rewarding experience in a woman's life. However, carrying a baby to term often results in significant changes to the pelvic floor with inadvertent consequences to bladder and bowel function.

Registration link: https://ihis.zoom.us/webinar/register/WN_8n8n9YR5RmuMGo27cyWAlg

21ST

SGH Gastroenterology & Hepatology GP Webinar (Week 3)

Topic: Primary Care Management of Fatty Liver by Dr Reina Lim. Registration Link: https://ihis.zoom.us/webinar/register/WN_vz4y-l5vRBOtcEfnCN0S9g

23RD

Women's Health Webinar 2020

KKH Family Medicine Service is organising the Women's Health Webinar on Zoom. For more information, please visit: <https://www.singhealth.com.sg/events/education/womens-health-webinar-2020>

**-
24TH**

UPCOMING EVENTS

OCTOBER

28TH

SGH Gastroenterology & Hepatology GP Webinar (Week 4)

Topic: The GP and Pancreatic Cysts by Dr Chin Yung Ka. Registration Link: https://ihis.zoom.us/webinar/register/WN_orM7qdMRTM6ndy95z8hkPA

29TH

SGH GPCME Urology Webinar

Topic 1: How to Manage Recurrent Urinary Tract Infection (UTI) by Dr Valerie Gan Hue Li
Topic 2: Dietary & Lifestyle Modifications for Urinary Stone Prevention by Dr Jay Lim Kheng Sit.

Registration Link: https://ihis.zoom.us/webinar/register/WN_lclkmiaNT1CcpDltB6FkJw

NOVEMBER

9TH

-

13TH



Singapore Hyperbaric & Underwater Medicine Course (SHUMEC) 2020

Welcome to the 10th Singapore Hyperbaric and Underwater Medicine Course (SHUMEC), jointly organized by the Republic of Singapore Navy (RSN) and Singapore General Hospital (SGH). The course will be conducted from 9 to 13 November 2020.

SHUMEC's teaching faculty comprises Singapore's leading practitioners in the field of Diving and Hyperbaric Medicine from the RSN, SGH and our key partners. Participants will gain a strong foundation in the practice of Diving and Hyperbaric Medicine, and obtain the necessary knowledge to perform assessments for divers and workers involved in compressed air works.

For more information, please visit: <https://www.sgh.com.sg/events/SHUMEC/singapore-hyperbaric-and-underwater-medicine-course>

Please refer to our website <https://www.sgh.com.sg/pgmi> for events updates.

SGH ALUMNI NEWSLETTER

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