

ISSUE 21

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SingHealth DukeNUS
ACADEMIC MEDICAL CENTRE

SURGERY

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BUILDING A FIRM FOUNDATION



Assoc Prof Tan Hiang Khoon

Deputy Chief Executive Officer (Future Health Systems), Singapore General Hospital (SGH); Director, SingHealth Duke-NUS Global Health Institute (SDGHI); Group Director, International Collaboration Office (ICO), SingHealth

“ During my tenure in Surgery ACP, I witnessed the collegiality of the surgical faculty and the strength of our larger surgical community, including our nurses, allied health professionals, and administrators, as we come together to advance the mission of our ACP. I am greatly honoured to have had the opportunity to serve this community as the Academic Chair. I want to highlight a few significant achievements in the last few years to recognise your contribution in our journey to establish ourselves as a global leading academic surgical unit. ”

Since its inception, Surgery ACP has continually strived to advance patient care and quality across disciplines in the SingHealth Duke-NUS Academic Medical Centre (AMC). In 2017, SGH was the first of our institutions to enrol in the American College of Surgeons National Surgical Quality Improvement Program (NSQIP), followed by CGH, SKH, and KKH. NSQIP provided us the tools with which to analyse and report on our surgical care quality and benchmark our work against some of the best hospitals in the world. Our work in improving surgical quality shone through in 2020, when SGH's surgical outcomes ranked in the top 10 percentile of hospitals and was recognised by NSQIP as a meritorious hospital for surgical patient care.

The formation of the integrated Division of Surgery and Surgical Oncology in October 2019 provided a platform that leverages on the diverse skillsets of the surgical community across SGH and NCCS. This alignment has facilitated seamless patient care, improved our education programme and strengthened our capability to develop academic initiatives that require multi-disciplinary collaborations across surgical teams.

Surgery ACP exists in the dynamic ecosystem of the AMC — our network of clinicians, researchers, innovators, educators, and administrators are our strength. Instrumental to the success of an academic surgeon is an enabling environment with sustained support from peers and leaders from our AMC. It takes a village to raise a clinician

scientist, educator or innovator. We have worked hard in the last few years to build a strong pipeline of clinician scientists, clinician investigators and clinician innovators. This would not have been possible without the unwavering support of the entire surgical community.

The inability to access safe and affordable surgery leads to more lives lost than HIV, tuberculosis, and malaria combined. This is a clear and present challenge that I firmly believe can only be addressed with the commitment and resolve of the surgical community. Surgery ACP has responded to this call for action by establishing the Global Surgery Programme with support of more than \$1.3 million from well-meaning funders that enables us to make an impact beyond our shores.

I am grateful for the support over the past years from the Academic Medicine Executive Committee and the Joint Office of Academic Medicine, Surgery ACP Deputy Chair and Vice Chairs across domains that I have had the privilege to serve with, and each and every faculty member.

As we move towards the next phase of Surgery ACP's growth, I have every confidence that Assoc Prof Henry Ho will lead the ACP from strength to strength and continue to deliver great outcomes and value to our patients and our AMC. I look forward to continuing my engagement as Director of SDGHI with Surgery ACP and the greater surgical community in the coming years.

Thank you, Assoc Prof Tan Hiang Khoon!

Surgery ACP's achievements under Assoc Prof Tan's leadership include

- Record amounts of funding support in research and innovation — record sum of \$9.6 million secured in 2019
- Increase in academic productivity of surgical faculty — 429 peer-reviewed articles published in 2020
- Multiple innovative devices brought to market, e.g. Klaro light for open surgery, bio-rubber glue for quick surgical recovery and pain relief, and SwabBot COVID-19 swab test robot
- Improved undergraduate/graduate medical education with high satisfaction scores by students — 91% Duke-NUS students found the teaching of surgical faculty to be effective in 2020
- Several academic programmes established including Surgical Chair professorships in Colorectal Surgery and Urology, Global Surgery, and the NAS Academic Fund for nurses, allied health professionals, ancillary staff, and administrators

GOING BEYOND SURGERY



Assoc Prof Henry Ho

Division Chairman, Division of Surgery & Surgical Oncology, SGH/NCCS; Academic Chairman, Surgery ACP; Senior Consultant, Department of Urology, SGH; Clinical Director, Singhealth Duke-NUS Innovation Centre, SingHealth

“ I am honoured to take over the role of Academic Chairman of Surgery ACP from Assoc Prof Tan Hiang Khoon. I am blessed to be standing on the shoulders of a giant who has taken us several steps towards our Academic goals. **”**

The triple helix of healthcare

Clinical care, research, innovation and education are closely intertwined and even more so in Academic Medicine. We cannot do one well without the other, instead we must leverage on one another to bring us even further on our academic journey.

Just like a healthy tree needs to stay grounded with hardy roots, a firm foundation is necessary for our growth.

Maximising Growth opportunity

As one of the pioneer fellows at Stanford Biodesign, I learnt a lot about transforming healthcare through clinical implementation. It is also my passion to translate innovation into clinical practice that can improve outcomes for patients and healthcare providers.

Here at SingHealth, in addition to growing our infrastructure, such as clinics, operating theatres, we are growing our talents; and embracing depth and diversity. I see a lot of opportunities with this growth to transform how we will deliver future surgical care.

During this growth phase, we cannot stick with the old ways of doing things. We need to re-think the way we train our surgeons, manage our resources, and bring in a new model of care.

Beyond surgery

Our triple helix growth rides on the tenets of strong collaborative models, high quality of patient care outcomes, and the sharing of best practices. To ensure that our growth is not lopsided, we have to take into consideration every hospital within the ACP.

To me, this means going beyond surgery. As surgeons, we tend to confine ourselves to technical knowledge and expertise. We need to go beyond that to thought leadership in order to reach the next level of Academia. To do this, we must think about the other aspects of surgical care such as quality, cost-effectiveness, and efficiency of services.

I consider myself very fortunate to be taking over the helm during the re-emerging phase of the COVID-19 pandemic when we can prepare for a different future together. This is the time for everyone to contribute to the triple helix growth in our ACP. I look forward to exciting times ahead with our members!



DEVELOPING A SCIENTIFIC MINDSET



Asst Prof Tay Kae Jack

Senior Consultant, Department of Urology, SGH; Director, Urologic Oncology, SGH; Director, Resident & Student Research Mentorship Office, Surgery ACP

“ I have always been curious about research, having discovered my interest in genitourinary cancers during my registrar training. I was fortunate to have received guidance from good mentors since my early days of research.

I believe it is important for mentors to develop a close rapport with their mentees. It is also good to involve our medical students or residents from the start of a research project such as at the conceptualisation stage so that they feel a sense of investment in the project.”

A win-win situation

Our Resident & Student Research Mentorship programme offers a platform for Surgery ACP faculty to post the requirements for their research projects. We then pair students or residents with certain interests, or basic skillsets like data analysis, to the research projects. In this way, our students or residents can further develop their interest or strengths while those with no prior research background can get training from their mentors.

The programme thus serves as a discovery process. It helps students who are still exploring their long-term plans to identify their areas of interest, or areas that they do not find suitable. In this sense, the programme offers a win-win situation to all.

More than mugging of facts

Research is basically a science that trains us to interrogate clinical questions based on facts and data. We analyse evidence that we gather, such as patient data. If the data is not available, we conduct experiments. We can then support or dispute facts.

In our current climate of fake news, a sceptical and scientific mindset is crucial in furthering medicine. We should not be gullible and just accept the conventional

truths. We need to question how such truths were arrived at and examine the conclusions drawn.

In this way, research helps train us to develop a scientific mindset that continually questions how things are done, or if things can be done differently. To me, this is where the real learning takes place. Medicine is so much more than mere memorisation of facts.

Inter-disciplinary collaboration

I hope to explore the huge research potential of fostering inter-disciplinary collaboration. I feel that when residents are posted to specialised programmes too early, they end up working in multiple silos.

I believe that there are benefits in reaching out to non-medical expertise, for example, imaging, coding, computer science or engineering, for inter-disciplinary collaboration so that we can gain fresh perspectives.

As our ageing population develops more complex health problems, we can no longer adopt a cookie-cutter approach to patient care. Inter-disciplinary collaborations will come in useful to provide more targeted treatments with fewer side effects for patients with multiple diseases, and ensure quality of life.



Congratulations!

Asst Prof Tay Kae Jack was conferred the National Medical Research Council (NMRC) 2020 Transition Award

“I am excited to have received the NMRC award as a validation of my research efforts in prostate cancer. I also feel humbled by the support of my fellow researchers and SingHealth, and look forward to more collaborative efforts to advance our research.”

BRINGING TOGETHER RESEARCH CHAMPIONS



Assoc Prof Tan Kwong Wei Emile John

Head and Senior Consultant, Department of Colorectal Surgery, SGH; Director, SGH Gastrointestinal Function Unit; Director, Health Services Research, Surgery ACP

“ Having intellectual curiosity is, to me, very important. It keeps us questioning how well we are doing and if we can do things better.

For us surgeons, knowing how we are faring compared with other people requires accurate benchmarked data. Health services research helps us get such information.”

Making use of data

Such research actually presents a very low barrier to entry for us surgeons since our operating theatre is like our laboratory. With the heavy caseload in SingHealth, we have immediate access to large-scale datasets. But without analysis and review, the raw data is useless.

Health services research helps to interpret our raw data so that we can gain insights into pain points, or behaviour and practices that affect outcomes, cost and quality. An example is how we carry out manpower planning during these COVID-19 times based on research and scenario-planning.

With the information gained from health services research, we can put in place studies that push for solutions in the right direction. In this sense, we can get results very quickly. This greatly facilitates continuous learning and improvement which is important in enhancing patient care.

Benefitting from benchmarking

I had been involved with health services research for some time before taking on the appointment of Director, Health Services Research, Surgery ACP. I have seen how health services research benefits us and our institutions.

An example is our participation in NSQIP. NSQIP provides participating hospitals with tools, analyses, and reports to measure their quality of care so as to make informed decisions for improvements.

Our Colorectal Surgery Department was one of the first to join NSQIP. Our Surgery ACP Academic Chair at that time, Assoc Prof Tan Hiang Khoon, saw the value of benchmarking and helped push for health services research on a larger scale. As more of our departments and institutions join NSQIP, we can achieve a deeper understanding of how we can improve our processes and outcomes.

With the launch of our SingHealth Duke-NUS Global Health Institute in 2018, we have also developed greater awareness of where our healthcare services are doing well, or not so well, on a global scale.

Growing health services research

One project that I hope to roll out soon is a quality framework developed together with stakeholders from financial analytics and the Office of Performance. The framework looks at cost buckets and measures of quality.

We hope that with the publication of our framework, we can engage researchers with different expertise to collaborate on a few studies.

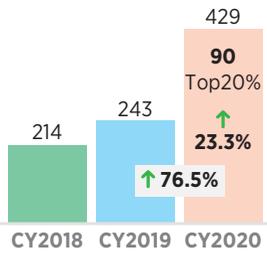
I also hope to grow health services research internally. I have set targets for the next few years to identify other potential health services research projects and bring together research champions for greater synergy and idea-generation. I believe that we can get the best out of one another in this way.



SURGERY ACP ACHIEVEMENTS FOR FY21 WORKPLAN

> Grow and Develop Research/Innovation and Nurture Clinician Researchers

Total Number of Publications



Build Pipeline of Clinician Researchers in our pursuit to be the Top Academic Surgical Unit in Singapore in 3 years

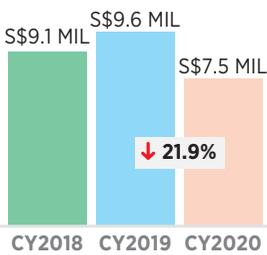
5 Clinician Scientists and 1 Cluster Clinician Scientist

 Prof Chow Kah Hoe Fierce Clinician Scientist Award – Senior Investigator 2017 Clinician Scientist Award – Investigator 2010	 Prof Narayanan Gopalakrishna Iyer Clinician Scientist Award – Senior Investigator 2020 Clinician Scientist Award – Investigator 2013, 2016	 A/Prof Lim Chwee Ming Clinician Scientist Award – Investigator 2020	 A/Prof Tang Tjun Yip Clinician Scientist Award – Investigator 2021	 Asst Prof Tay Kae Jack Transition Award 2021	 Asst Prof Loh Hong Pheng Amos Cluster Clinician Scientist 2014
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Notable Mention

 Asst Prof Ong Chin-Ann Johnny Awarded NMRC CS-IRG in 2021	 Dr Kenneth Chen Awarded NMRC CS-IRG-NIG in 2021
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Total Research Funding Received



Reason for not achieving target:
1. Only 1 NMRC grant call in CY2020
2. Gap in new applications

2 Clinician Innovators

 Dr Ronnie Mathew	 Dr Ng Tze Kiat
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6 Nurturing Clinician Scientists
1 Nurturing Clinician Investigator
2 Nurturing Clinician Innovators

Nurturing Clinician Researcher Scheme (NCRS)

 Dr Wong Si Min Jolene	 Dr Koh Hong Xiang Frederick
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Awarded NCRS (Clinician - Scientist) in FY2021 Cycle 1

Active in grant applications (Year 1 of 3-year plan)

12 NMRC Applications (including resubmission) | **5** NCRS Applications

- 2 NMRC Transition Award (1 awarded)
- 3 NMRC Clinician Scientist Award – Investigator (1 awarded)
- 4 NMRC Clinician Scientist - Individual Research Grant (1 awarded)
- 3 NMRC Clinician Scientist - Individual Research Grant - New Investigator Grant (1 awarded)

> Enhance Students' Experience through Career Guidance & Exposure in Surgery (CGES)



FY2020	FY2021	FY2022
Successful Pilot Run (Duke-NUS)	2nd Run (33% increase in class size and inclusion of all 3 medical schools)	Explore new funding for sustainability (1 run per year)

CGES Pilot Programme (Year 2 to 4 Duke-NUS students)

 Oversubscribed 12 offered out of 24 applications	 Course Met Objectives 98.9%
 Overall Satisfaction 99.2%	 Recommend to Colleagues 99.4%



Assoc Prof Cheow Peng Chung
Programme Lead, Y5 Surgery and SIP, YLL at SGH



Assoc Prof Chong Tze Tec
Vice Chair (Undergraduate Education)

CGES 2nd Run in Mar 2022



2nd Run (33% increase in class size and inclusion of all 3 medical schools)

> Leading our Residents Ensuring We Stay the Course

SingHealth RiSE Awards 2021
Best ACGME-I Programme Award
Otolaryngology (<40 residents)



Assoc Prof Caroline Ong
 Vice Chair, Postgraduate Education,
 Surgery ACP

07

SurgeOn

Enabling Surgical Skills Training



Asst Prof Lim Chin Hong
 Director, Surgical Skills Training Continuum



Dr Lee Zhen Jin, SGH



Asst Prof Lin Jinlin, CGH



Asst Prof Sharmeni Su Sivarajah, SKH



Asst Prof Lee York Tien, KKH

- Basic Surgical Skills Workshop Hybrid Model, comply with safe management restrictions (faculty movement, class sizes, etc.)
- Revamped Modular Curriculum Model to fit different learner needs
- Pilot Run: 20 Feb 2021, 10 participants
- Extremely encouraging outcomes; same principles to convert other Surgery ACP workshops

Residency — Key Leadership

Maintaining high training standards across institutions, continued institutional accreditation



GS PD
Asst Prof Teo Jin Yao
 (w.e.f 1 Dec 2020)



ENT PD
Asst Prof Neville Teo



SIG PD
Prof Alexander Chung
 (w.e.f 1 Nov 2020)



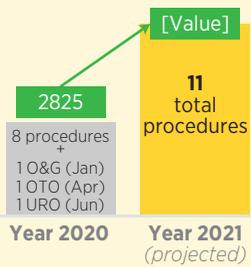
URO PD
Asst Prof Valerie Gan
 (w.e.f 1 Jan 2021)



PS PD
Asst Prof Chiang Li Wei

Postgraduate Achievements

> 1 Plan for better care with expanded Surgical Procedures

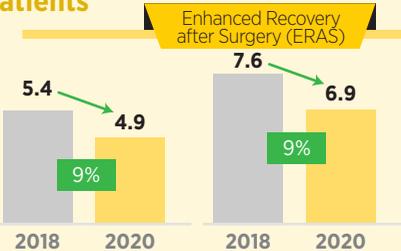


Identified as meritoriously performing hospital for "High Risk Meritorious List" — Top 10% (low mortality and morbidity) for cases in Y2020 that had expected risk in the highest quartile

> 2 Improve surgical outcomes of patients

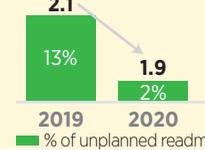
Est total cost savings: \$481,095
 Cost reference: MOH VDC Dashboard
 Cost component: Room Charges, Daily Treatment Fee and Consumables

340 days reduction in length of stay with early implementation and intervention of ERAS to HPB & CLR (Yr2019)



> 3 Risk stratified international benchmarking

Reduction in Bariatric unplanned readmission rate, while not increasing the average length of stay, with enhancement to outpatient post-op care



Exemplary

- Compared to average NSQIP hospitals
- Appendectomy Readmission
- Colorect ROR
- Gynecology Morbidity

Area of Opportunity

- Nephrectomy length of stay
- Orthopedic SSI

Clinical Innovation Achievements

> Global Surgery Programme (Capacity Building Beyond Borders) (FY2021, Year 3)

Increased support from the original pledge of \$967,550 to \$1,102,950



Programme extended to **Year 7** (Nov 2025)

Overseas Engagement
FY2021 Achievements
Myanmar Paediatric Urology Programme
 2-day online teaching course with exam training

Topics included:

- Urinary Tract Infection / Vesicoureteric Reflux
- Antenatal diagnosed Hydronephrosis & Pelvi-Ureteric Junction obstruction
- Undescended Testis, Foreskin & Circumcision

Teaching faculty from KKH Paediatric Surgery prepared 50 Myanmar trainees for their medical exit examination

Virtual Congress Sponsorship

Supported 24 delegates from Low-Middle-Income-Countries (LMICs) such as Sri Lanka, Bangladesh, Vietnam, Pakistan etc. for the virtual 6th SingHealth Duke-NUS Scientific Congress 2021, 17 - 18 Sep 2021

Themes of symposium included:

- Radiological Sciences & Surgery
- Immunology, Paediatrics & Medicine
- Global Health



> Global Health Initiative — Pandemic Response

Devising better strategies to tackle the COVID-19 crisis and future pandemics

\$900K: Pandemic Impact & Resilience Fund

Response and Outcome Analysis of Tertiary Surgical Unit in Asia

To understand the impact of COVID-19 on the outcome of patients and the impact of current policies.

25 TERTIARY HOSPITALS / SPECIALIST CENTERS | **11** COUNTRIES | **2** MANUSCRIPTS IN PROGRESS

\$100K: Innovation & Innovative Care Fund

Innovation and Innovative Care Fund — Telemedicine Centre

To pilot innovative technologies and novel model of care in our hospitals in the new normal after the COVID-19 crisis.

1,216 VIDEO CONSULTATIONS | **1,006** PLANNED VIDEO CONSULTATIONS UNTIL DECEMBER 2022

The Perspectives and Well-being of Healthcare Workers, Migrant Workers and the General Population during COVID-19

27 OUTREACH TO MIGRANT WORKERS | **2,744** LOCAL HEALTHCARE WORKERS RECRUITED | **3** PUBLICATIONS

2 MANUSCRIPTS IN PROGRESS | **1,598** REGIONAL HEALTHCARE WORKERS RECRUITED

Global Surgery Achievement

NMRC AWARD WINNERS

NMRC oversees the development and advancement of medical research in Singapore. NMRC's mission is to promote excellence in translational and clinical research, nurture a vibrant research community of clinicians and enhance knowledge translation for better health and economic outcomes.

These awards and programmes recognise clinician scientists and researchers for their outstanding achievements and contributions, in transforming medicine and improving patient care for Singapore and beyond.



NMRC Research Training Fellowship

Dr Lim Hui Jun
Resident, General Surgery Residency, SingHealth



Clinician Scientist Award - Individual Research Grant

Asst Prof Johnny Ong
Consultant, Department of Sarcoma, Peritoneal and Rare Tumours, SGH & NCCS

(NMRC awards from Jun 2021 grant call cycle)

RESEARCH:

“PSP” — PREHABILITATION FOR SURGERY, SARCOPENIA AND PHD — KEEPING THE DREAM ALIVE



Dr Frederick Koh Hong Xiang

Associate Consultant, Colorectal Service, Division of Surgery, SKH

Although the surgical profession has developed greatly over the recent decades, one might not be faulted for entertaining the thought, “What more can be done to improve surgery?”. The advent of ERAS (Enhanced Recovery After Surgery) was thought to be the final frontier of surgery, with an evidence-based, multidisciplinary, multi-modal approach to improve surgical outcomes. At the same time, the condition of sarcopenia, first coined by Irwin Rosenberg in 1988, has been gaining significant traction over the last half decade, though its molecular pathways and regulatory mechanisms remain poorly understood. Despite this, bimodal “prehabilitation” (a word so new it is regarded as a spelling error), comprising of resistance training and nutritional supplementation, have been shown to be effective in managing the condition. I am currently pursuing a Clinical and Translational Science PhD with Duke-NUS, supported by the NMRC Research Training Fellowship (RTF) and SingHealth Nurturing Clinician Research Scheme (NCRS), to understand the regulatory mechanism of sarcopenia and investigate how prehabilitation can reverse this disease state for patients who are due to undergo surgery.

Sarcopenia is one of the most prevalent health problems in the greying population of Singapore, which will put significant pressure on our healthcare system in the years to come. Unravelling the epigenetic landscape and cell signalling networks involved in the pathogenesis of sarcopenia may help to shed light on the regulatory mechanisms, and potentially lead to new avenues for drug discovery and therapeutics. To leverage on a novel systematic and integrated biorepository of sarcopenia-specific biomaterials, multi-omic profiling of appropriate body fluids (e.g. serum) has been performed on relevant cohorts that may yield potential novel biomarkers. A combination of tissular and serum biomarkers, in tandem with anthropomorphic and imaging measurements, will address an unmet clinical need that will greatly improve the prediction, diagnosis, prevention and management of sarcopenia.

Publish! AWARD — 2021

Recognising researchers who have published quality articles in internationally acclaimed scientific or medical journals.



An optimised protocol harnessing laser capture microdissection on matched primary and metastatic colorectal tumours

Dr Lim Hui Jun
Resident, General Surgery Residency, SingHealth



Multiparametric MRI-ultrasonography software fusion prostate biopsy: initial results using a stereotactic robotic-assisted transperineal prostate biopsy platform comparing systematic vs targeted biopsy

Dr Alvin Lee Yuanming
Senior Resident, Urology Residency, SingHealth

SINGAPORE MEDICAL ASSOCIATION CHARITY FUND OUTSTANDING MENTOR AWARD 2022

The SMACF Mentor Award is an annual award that is administered by the Singapore Medical Association, administered by the Wong Hock Boon Research Day, overseen by the NUS Yong Loo Lin School of Medicine. Selection was conducted independently by the SMACF.



Dr See Xinyi, Anna
Consultant, Department of Otorhinolaryngology-Head & Neck Surgery, SGH



A/Prof Toh Song Tar
Head & Senior Consultant, Department of Otorhinolaryngology-Head & Neck Surgery, SGH



Dr Frederick Koh Hong Xiang
Associate Consultant, Colorectal Service, Division of Surgery, SKH

WONG HOCK BOON RESEARCH DAY 29 JAN 2022

Research Oral Presentation, 2nd Place with Distinction ((NUS Medicine) Student Awardees: Benjamin Tan, Nicole Tan, Teo Yao Hao, Dominic Yap, Alex Cheong)

WORLD SLEEP SOCIETY & ITALIAN ASSOCIATION OF SLEEP MEDICINE 15 MAR 2022

Young Investigator Award (NUS Medicine Student Awardees: Benjamin Tan, Nicole Tan, Teo Yao Hao, Dominic Yap, Alex Cheong)

EDUCATION:

SURGERY ACP EDUCATORS' EVENING 2021 — INAUGURAL EVENT ON 11 OCTOBER 2021

The number of committed educators in our ACP has grown over the years, with many faculty members regularly discussing teaching matters with interested colleagues but some remain isolated without opportunities for sharing. The Educators' Evening aims to foster our Educator Community of Practice (CoP) by bringing together experienced and new educators from different departments to build networks and relationships.

The original plan to hold the event as a physical one in 2020 was unfortunately derailed due to the pandemic. When the clinical situation stabilised in 2021, a hybrid event with safe distancing measures was planned in its place. Unfortunately, the Delta surge resulted in additional restrictions imposed at short notice, and physical events were disallowed. Rather than cancel, we amended the programme by adding a 'live-stream' component to encourage engagement.

Attended by 44 members from across all SingHealth institutions, the evening opened with a livestream demonstration at the new

100% of respondents would recommend event to others

☆☆☆
"Could feel the passion from speakers. **Well done!**"

Activity

Live stream from i3Hub of new VR/ AR facilities
Onsite reporting by Dr Neville Teo, PD, ENT and SACP JEDI* (Dr Law Zhi Wei, Urology Resident and Dr Aaron Seah, GS Resident)

Zoom interactive Q&A
Hosted by Dr Chiang Li Wei, PD, Paediatric Surgery and SACP JEDI* (Dr Esther Chan, Paediatric Surgery Programme)
*JEDI (Junior Educator Development Initiative) – 3 SACP residents chosen for the SingHealth GME Residency year-long educator mentorship programme

Welcome Notes by Assoc Prof Caroline Ong, Vice Chair (Postgraduate Education), SACP

Invited Speakers

- 1) **Ms Kirsty Jane Freeman**, Lead Associate, Clinical Performance Centre, Duke-NUS
"Simulation + Deliberate Practice + Human Factors: enhancing patient and clinician safety through simulation-based education"
- 2) **Assoc Prof Yuen Heng Wai**, Director, Surgical Technology and Innovation, SACP
"Game on! - Harnessing technology for surgical education"

"The event is an **excellent** idea!"

Q&A and Closing

"The possibilities!"

Programme for the hybrid Educators' Evening 2021

SingHealth Duke-NUS Institute of Medical Simulation (SIMS) i3Hub. Three SACP educators provided viewers with real-time, first-person perspectives of a Virtual Reality (VR) resuscitation game, spurring a lively audience discussion on VR gaming as a teaching method. Discussion was further deepened with invited talks on the principles of simulation-based education and a sharing on a successful technological educational

grant project. Participants' feedback on the session was positive, validating our decision to proceed with the event despite restrictions.

We look forward to further strengthening our educator networks with more of such events. Do join your fellow educators at the next Educators' Evening!

MINIMALLY INVASIVE BREAST SURGERY: PART 1 THE FELLOWSHIP, CHALLENGES AND WINS



I am Chi Wei, a Consultant Breast Surgeon in CGH. I was from the third batch of SingHealth GS Residency and graduated from the programme in 2017. I met my fellowship mentor Professor Hung-Wen Lai in 2016 when I attended a conference as a Year 4 resident. To cut a long story short, I was impressed with his work and he encouraged me to pay him a visit in Taiwan. My wife is from Taiwan, so I visited my mentor for a week while on annual leave. During the trip where I joined him in his operating theatre as well as multiple academic meetings, I decided that this is going to be my subspecialty niche! Having a good foundation was the

most important preparation for my fellowship, and I thank Prof Su-Ming Tan for teaching me the basics in oncological and reconstructive breast surgery. I had a very fruitful training stint in both research and clinical aspects — I learnt minimally invasive breast surgery techniques and published multiple peer-reviewed articles. Most notably, I co-authored the first textbook/atlas on minimally invasive breast surgery techniques and organised the 1st International Endoscopic and Robotic Breast Surgery (IERBS) Conference, the first conference dedicated to endoscopic and robotic breast surgery!

After returning from my fellowship in 2019, I set up a minimally invasive breast surgery service in CGH. Since then, approximately 50 patients have benefitted from it. In addition, I developed two new minimally invasive techniques with my team. The biggest challenge on my journey thus far was to convince stakeholders on the value of my team's work, while ensuring patients are offered the best care. I have no regrets taking the less-travelled path of embarking on minimally invasive breast surgery and am honoured to be bringing the full spectrum of minimally invasive techniques to our patients. In 2022, we hope to expand our services and share our knowledge and experiences with other breast surgeons in the region so that we can benefit more patients.



ACHIEVEMENTS OF GLOBAL SURGERY PROGRAMME: CAPACITY BUILDING BEYOND BORDERS (2018-2021)



30 June 2021, Pakistani fellow, Dr Hana Arbab's in-service training and sharing session at The Indus Hospital and Health Network, Pakistan

The Global Surgery Programme, led by the Surgery ACP, promotes the transfer of surgical skillsets, facilitating surgical learning and contributing to research and epidemiological study and safe surgery practice.

for our faculty to build regional networks and enhance surgical capabilities of the local counterparts through education and training sessions. More than 60 operations or cases were reviewed and 200 regional attendees participated in the lecture sessions. In December 2019, the programme supported a Pakistani fellow, Dr Hana Arbab for a 12-month fellowship attachment at KKH's Department of Paediatric Surgery. Upon her return to Pakistan, Dr Hana conducted an in-service training and sharing session with her local counterparts. Additionally, the programme supported the development of pre-recorded lectures and an online teaching course as part of the training and exam preparation for medical trainees from the Myanmar Paediatric Urology Programme in Mandalay/Yangon.

for suitable surgical training opportunities online. When pandemic measures were in place in 2020, fellowship applications had to be put on hold. Currently, letters for support are provided in these applications to ensure the commencement of fellowships. With the support of donors, partnership engagement and training courses continued through virtual sessions.

Moving forward, the Global Surgery Programme will work towards building closer ties and relationships with our partner hospitals to set a foundation for greater collaboration in research, education and patient care.

During the COVID-19 pandemic, travel restrictions and social-distancing measures posed a challenge in resuming normal work processes. Despite the difficulty, the programme continued to engage delegates

Chair, Global Surgery Programme
Dr Foo Fung Joon
foo.fung.joon@singhealth.com.sg | 6930 5326

Programme Secretariat
Ms Nurimah Juri
nurimah.juri@sgh.com.sg | 6326 6842



Since its inception on 22 November 2018, the programme, funded by philanthropy, has overseen

7
overseas engagements

supported
1
fellowship

76
delegates for
participation at surgical
and scientific
workshops/congresses



In 2019, trips to Vietnam, Myanmar, Thailand and Papua New Guinea offered opportunities



GLOBAL SURGERY PROGRAMME:

GLOBAL HEALTH INITIATIVE: PERSPECTIVES AND WELL-BEING OF HEALTHCARE WORKERS DURING COVID-19 PANDEMIC



Asst Prof Irene Teo

Health Services and Systems Research
& Lien Centre for Palliative Care,
Duke-NUS Medical School

Global Health Initiative

With the support of a generous donation from Musim Mas Group, the **Global Health Initiative**, headed by Assoc Prof Tan Hiang Khoon, SDGHI Director, focuses on developing innovative models of care and improving the resilience of our healthcare system. The well-being of our people is our topmost priority during challenging times and it is critical to understand their perspectives regarding the risks of COVID-19.

Perspectives and Well-Being of Healthcare Workers

As the COVID-19 pandemic places a strain on healthcare systems across the globe, it is important to consider the long-term

psychological well-being of our healthcare workers (HCWs). Hence, Asst Prof Irene Teo, Health Services and Systems Research & Lien Centre for Palliative Care, Duke-NUS Medical School, is leading a study examining stress, job burnout, anxiety and depression among HCWs, as well as their accompanying risks and protective factors.

A total of 2,744 HCWs from across SingHealth were recruited to participate in an online survey. Early data in 2020 indicated that during the circuit breaker period, perceived high job risks and longer working hours were associated with higher odds of stress, job burnout and anxiety. Our follow-up study in 2021 indicated significant increases in all psychological outcomes, with the largest increase being job burnout (25%

to 39%). HCW-perceived teamwork and feeling appreciated at work were associated with lower odds of psychological morbidity. The study was expanded regionally to include Malaysia, Thailand, Vietnam, Indonesia and the Philippines. We are finalising our latest reports which will be submitted for peer-review publication.

Scan these QR codes to read more about these findings:



PERSPECTIVES AND WELL-BEING OF GENERAL POPULATION DURING COVID-19 PANDEMIC



Asst Prof Semra Ozdemir

Health Services and Systems Research
& Lien Centre for Palliative Care

The general population is another important focus under the Global Health Initiative.

Perspectives and Well-Being of General Population

In order to make informed policy decisions on the management of current and future pandemics, it is crucial that we better understand the perspectives of the general population. Asst Prof Semra Ozdemir, Health Services and Systems Research & Lien Centre for Palliative Care, Duke-NUS Medical School, is leading a study to assess the perspectives of the general population on preventive measures to minimise the spread of COVID-19 and similar pandemics; and to

examine the well-being of the population and their perceived risk and anxiety related to COVID-19.

A draft survey instrument was developed to be tested on a sample size of the general populations in Singapore, Indonesia, and Vietnam. Pre-testing for the three countries has been completed, and data collection began in January 2022. Data analyses and manuscript preparation have commenced following data collection and the results will be reported when ready.



CGH TRACS REXILIENCE® TALKS FOR SINGHEALTH UROLOGY RESIDENCY

SingHealth Urology Residency Programme collaborated with the CGH TRaCS (Training, Resilience along with Community Cohesiveness & Self-Help Efforts) Team to run a series of Wellness Talks spanning August to November 2021, for our Programme faculty, residents and administrators. The topics covered included Stress Management @Work, Self-Care @Work and Joy @Work. We hope that the talks have been beneficial to our Programme and look forward to partnering with other partners for more engaging wellness activities!



Facilitated by:
Diana Hashim
Counsellor
Dept of TRaCS

Hosted by:
Evelyn Peck
Dept of TRaCS

SingHealth DukeNUS
ACADEMIC MEDICAL CENTRE

PATIENTS. AT THE HEART OF ALL WE DO.®

ENT DISSECTION COURSES IN THE COVID ERA! BY DR TAY KAIJUN, R4 ENT RESIDENT

Pre-COVID, the annual dissection course was often the highlight of my academic/training year. The faculty would take time off their busy schedules with the sole aim to teach and perform elaborate dissections/rare surgeries. We would be given time off to get our hands dirty!

Unfortunately, all of this was cancelled with the COVID-19 pandemic. I was thus overjoyed when I heard we were organising dissection courses again.

Some changes naturally had to be made. We had to be grouped according to our hospitals, and safe distancing measures had to be implemented. There were no foreign dissectors or faculty across the cluster. However, dissection and learning remained the same — exciting, enjoyable and fruitful!

I am particularly grateful to all the organising committees, faculty and support staff for taking the time and effort to make this happen during the pandemic. Their efforts reminded me I made the right choice to join this residency!



Resident Dr Neo Wei Li being taught by faculty Dr Kimberley Kiong as she performs a neck dissection during Head and Neck Surgery Course



Residents and Faculty enjoying lunch with social distancing measures during the Functional Endoscopic Sinus Surgery Course

10 YEAR LONG SERVICE AWARD — GS RESIDENCY ADMIN

A recent recipient of the 10-year Long Service Award, Carolyn Ho Geok Eng has worked in SingHealth General Surgery Residency Programme since January 2011. Carolyn enjoys working with her faculty and residents and credits her Programme Directors — Prof Wong Wai Keong, Assoc Prof Cheow Peng Chung, Assoc Prof Tan Ngian Chye and Assoc Prof Teo Jin Yao for their guidance throughout the past decade. She would also like to thank her team, Laney and Veronica, for their strong support through the years.

