



SingHealth **DukeNUS**  
ACADEMIC MEDICAL CENTRE

# MEDICINE

ACADEMIC CLINICAL PROGRAMME



Changi  
General Hospital  
SingHealth



Sengkang  
General Hospital  
SingHealth



Singapore  
General Hospital  
SingHealth



ADVANCING AS  
**ONE**

MEDICINE ACADEMIC  
CLINICAL PROGRAMME

— 2018 —

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## Foreword

*Dear Colleagues,*

As I read through the reflections and plans of the vice-chairs in the various offices in Medicine ACP, I am heartened that, with everyone's support and contributions, we have made decent progress in the past 6 years. For that, I would like to thank the Council, as well as all of you in Medicine ACP for your tremendous efforts, great tenacities and commitments, when the going has not been easy from time to time.

I am also grateful to the generosity and support of many colleagues beyond Medicine ACP, like our strategic partner, Duke-NUS, sister institutions and ACPs from the SingHealth cluster, that have made our academic journey possible. One fine example who deserves special mention is Dr Tham Chee Kian from Department of Medical Oncology in National Cancer Centre, who is now the Programme Director of our Internal Medicine Residency Programme, overseeing more than 150 residents at any one time.

However, while we are laying down our foundation, we must also prepare ourselves for change. Today, the biggest impetus for change in our clinical practice is obviously the burden of the ageing population and chronic illnesses in our society, coupled with the explosive growth in biomedical and informational technologies as well as the wide adoption of telecommunication and various social media platforms by the public. With the scale of the problems increasing, together with the cost of healthcare and the accessibility of alternate communication platforms, there are both challenges and opportunities for us to consider, and experiment with new models of care. Thus, presenting opportunities for research and innovation that goes beyond just clinical service concerns.

While there will always be a place for traditional basic science, translational research and clinical trials for new therapeutic agents or interventions, Health Services Research (HSR) deserves more attention now and we need to get many more of our clinicians to be familiar with this field. Sometimes, the ideas may derive from a Quality Improvement (QI) initiative. But, to create real impact and to ensure sustainability and large scale adoption of a good idea, there need to be demonstration of rigour of the initial pilot, with reproducible outcome measurements, and the necessary knowledge for large scale implementation, adapting to different settings. Hence, the necessity to combine the synergies of QI, HSR and implementation science. Of course in this day and age, there is no reason not to leverage on new technologies, hence the introduction of a new section on device and apps development in our Clinical Service Improvement and Innovation (CSII) Office. Albeit nascent, by establishing these platforms, I hope we will also create new career opportunities for, and accommodate more diverse interests of many future generations of clinicians.

Having said that, no innovation and technologies can negate the need for humanities in healthcare delivery. In fact, the more we adopt science, apply robotic technologies and artificial intelligence, the more we need to question what is the human's fundamental role in patient care, and how best to preserve



“ One of the most important mind-sets that we need to instil in the next generation is that of *lifelong learning* and the ability to adapt and change. ”

what is not replaceable. As we celebrate the clinical applications of the human genome project becoming clinical realities and the advent of many novel therapeutic options such as biologics, we need to be conscious of potential ethical dilemmas and the magnification of health disparity and the challenge in achieving equitability in the access of healthcare in our clinical practice. This is why I feel compelled to introduce the Office of Medical Humanities in Medicine ACP. We will start slowly, but the creation of awareness among ourselves is at least the start of the solution.

All of the above highlighted the challenges in preparing the next generation of clinicians. What any clinician needs to know, is now beyond what is in the medical textbook. We need to embrace beyond science to practice holistic medicine. We need to collaborate widely with nurses, allied health professionals, engineers, scientists, data analysts and many others, to advance health and healthcare for our population and beyond. Hence, the concepts of inter-professional education and collaboration, as readily evident in the setting of global health. Probably, one of the most important mind-sets that we need to instil in the next generation is that of lifelong learning and the ability to adapt and change.

As we embark on our next lap, I would like to extend our warmest welcome to our colleagues from Changi General Hospital (CGH) and Sengkang General Hospital (SKH), who are now part of the big family of Medicine ACP. Given the time constraints since the inception of our new administrative entity, we have not been able to systematically collate all the academic achievements of our colleagues in CGH and SKH in this year book. I look forward to us working closer in education and research, and learning best practices in care delivery from each other for the benefits of our patients in the coming years.

Yours sincerely,

**Assoc. Prof. Chow Wan Cheng**  
ACADEMIC CHAIRMAN, MEDICINE ACP



# Our People



Front from left:  
Dr Deanna Lee, Dr Melonie Sriranganathan, Dr Andrea Low,  
Dr Crystal Lim, Dr Low Su Ying, Dr Chow Wan Cheng,  
Dr Jenny Low, APN Sri Rahayu Bte Masjum, Dr Ong Thun How,  
APN Joanna Phone Ko & APN Zhang Rong Fang

Back from left:  
Dr Jagadesan Raghuram, Dr Anantham Devanand,  
Dr Augustine Tee, Dr Jason Chang, Dr Phua Ghee Chee,  
Dr Ang Tiing Leong, Dr Jansen Koh, Dr Siau Chuin,  
Dr Derrick Aw, Dr Koo Wen Hsin, Dr Tan Thuan Tong &  
Dr Charles Chuah

Members absent from photo:  
Dr Andrea Kwa, Dr Cindy Ng, Dr Damien Tan,  
Dr Farooq Akram, Dr Julian Thumboo, Dr Laura Tay,  
Dr Loo Chian Min, Dr Yeang Shu Hui,  
APN Maslinna Binte Abdul Rahman & Ms Kala Adaikan

## Medicine ACP Council

The Medicine ACP Council aims to transform healthcare in Singapore by creating a vibrant academic environment that will inspire our healthcare professionals to push the frontiers of medicine and improve the lives of patients. They meet regularly to collaborate and keep members updated on plans and strategies to pursue our academic medicine mission. In 2018, we incorporated new focus areas such as inter-professional education, device and apps management and medical humanities. With the restructuring of the SingHealth cluster, we warmly welcome our colleagues from CGH and SKH into our Medicine ACP family.



## Administrative Team, Medicine ACP

In the past years, Medicine ACP has gathered more momentum, cumulating much academic activities, interests and talents. In order to continue this upswing, much needs to be planned, organized and implemented through the various Offices. Through the continuous and combined efforts, the administrative team works together with the clinicians to ensure that our academic mission is achieved as efficiently as possible, growing from strength to strength, each year.



The team comprises of administrators from Clinical Services, who manage many of the Departments' initiatives. The Education team manages the residency, undergraduate, postgraduate and faculty development programmes. The Research team takes care of the various programmes, personnel and performance of the Office.

Collaborating with these offices is the Communication team that crafts suitable collaterals that assist to raise awareness and attract participation from the Medicine ACP community. Also, with an increasing volume of academic activities, the Communication team has been playing an integral part in driving philanthropy efforts and translating the donations received to the respective programmes and purposes to perpetuate many of the academic efforts within the ACP.

## Master Physicians of Internal Medicine

The Master Physician of Internal Medicine Award is kindly supported by the Lee Foundation. This award was established to support and recognise senior clinicians who are leaders with extensive medical knowledge in their field.

Last year, A/Prof Tan Ban Hock was presented with this prestigious award for his unfaltering commitment and exceptional contributions in advancing the practice of Internal Medicine through education, research and patient care. He is known for his unprecedented bedside skills and has mentored many professionals to date, who now hold leadership positions within and outside of Medicine. As an Associate Programme Director for the Internal Medicine Residency Programme when it was first set up, A/Prof Tan had set in place many of the key components of the residency framework. He is also one of the most prominent clinicians in the infectious diseases sphere who is highly regarded in both public and private sectors.



In 2016, the inaugural award was presented to both Prof Ng Han Seong and Prof Ong Yong Yau for serving as role models to successive generations of doctors through their many years of dedication to advance the practice of medicine.



Today, the Master Physicians are featured regularly at our academic events like the annual Medicine ACP Week and quarterly Medical Grand Rounds to add richness to the educational value by contributing their clinical pearls to the Medicine ACP community.

Back from left:  
Dr Dennis Seow,  
Dr Jason Chang,  
Dr Bok Chek Wai,  
Dr Phua Ghee Chee,  
Dr Gan Wee Hoe &  
Dr Ng Heng Joo

Front from left:  
Dr Marjorie Foo,  
Dr Andrea Low,  
Dr Goh Su-Yen,  
Dr Chow Wan Cheng,  
Dr Kang Mei Ling &  
Dr Lee Huei Yen

Members absent  
from photo:  
Dr Lee Haur Yueh &  
Dr Tan Thuan Tong



## Heads of Departments, SGH

Meet our distinguished Heads of Departments who play key roles in the development of academic activities in their respective Departments.

Back from left to right:  
Dr Phua Ghee Chee, Dr Kek  
Peng Chin, Dr Pang Shiu Ming,  
Dr Warren Fong, Dr Bok Chek  
Wai & Dr Jason Choo

Front from left:  
Dr Lina Choong, Dr Loo Chian  
Min & Dr Jason Chang

Members absent from photo:  
Dr Andrew Ong, Dr Goh  
Su-Yen, Dr Jon Yoong,  
Dr Krithikaa Nadarajan,  
Dr Limin Wijaya, Dr Sonali  
Ganguly, Dr Nguyen Minh Ha,  
Dr Ong Thun How, Dr Tan  
Chuen Wen, Dr Tan Qiao Li,  
Dr Tan Shian Ming,  
Dr Sobhana D/O Thangaraju &  
Dr Wong Gee Chuan



## Education Oversight Committee, SGH

The Education Oversight Committee is tasked to work closely with the clinical Departments to develop and implement an education framework that will support the education strategies and initiatives of Medicine ACP. The committee comprises of Education leads from the clinical Departments under Division of Medicine, SGH.



Front from left:  
Ms Xin Xiaohui, Ms Ratna Bte Abdul  
Rahman, Dr Low Su Ying,  
Dr Tan Thuan Tong, Dr Tharmmambal  
Balakrishnan & Ms Fiona Loh

Back from left:  
Dr Pang Yee Hau, Dr Poh Yih Jia,  
Dr Kirsten Yeo, Dr Tay Wei Yi,  
Dr Sin Gwen Li, Dr Grace Kam,  
Dr Cheong May Anne, Dr Ho Le Onn,  
Dr Leow Leong Chai,  
Dr Kamaraj Kanagasabapathy &  
Dr Teh Ming Ming

Members absent from photo:  
Dr Chua Ying Ying, Dr Chiong Yi,  
Dr Lim Chee Hooi, Dr Ryan Tan &  
Dr Yip King Fan

## Clinical Performance Improvement (CPI) Committee, SGH

The CPI committee, formed on January 2016, is co-chaired by Dr Low Su Ying and Dr Tan Thuan Tong, Directors of the Clinical Service Improvement and Innovation Office under Medicine ACP. Supported by Department QI champions, representatives from Junior and Senior Residency programmes, as well as the Clinical Governance office, the Committee strives to develop and implement a quality framework that delivers best and safest clinical care.



From left:  
Dr Loo Khang Ning, Dr Zheng Shuwei, Dr Ryan Tan,  
Dr Marianne Anastasia DeRoza, Dr Alvin Tng,  
Dr Jenny Hsieh & Dr Chew Si Yuan

Members absent from photo:  
Dr Ann Kwee, Dr Chiang Jian Bang, Dr Chua Jia Min,  
Dr Jonathan Teh, Dr Melinda Tan, Dr Pang Yuzhi,  
Dr Tan Hui Zhuan, Dr Tan Pei Ling & Dr Thien Siew Yee

## Senior Residents Committee, SGH

It is hoped that through the Senior Resident Committee, we groom our Medicine ACP's future leaders. The Committee serves as a platform and voice to address the welfare and education concerns of junior colleagues. Organised in sub-committees, such as Education, Welfare and Administration, they work closely with the Division of Medicine administrators to create solutions for their many day to day clinical operational challenges and educational demands encountered.

# Research

## Programmes

### Nurturing Clinician Scientist Scheme (NCSS)

**Objective**

The NCSS aims to nurture and develop our young clinicians who are passionate about research work to gain experience and competencies to strive for competitive national grants. This Scheme paves the way forward for clinicians to embark on their research careers.



Into its 6<sup>th</sup> year, there are now a total of 13 awardees. This Scheme has been a successful stepping stone for clinician-researchers to contend for national grants such as the National Medical Research Council (NMRC) Transition Award (TA) and the NMRC Clinician Scientist Award (CSA).

**NCSS**  
  
**AWARDS**  
 from  
 2011 to 2018

### Pitch for Funds

**Objective**

The two-tiered programme, Junior Pitch for Funds (JPFF) and Pitch for Funds (PFF), was initiated in 2013, aimed at cultivating research interest among the junior residents/medical officers and senior residents/registrar. It provides funding to kick-start their research projects.



Shortlisted candidates are required to present their research proposal to a panel of judges, who will assess the project's feasibility and methods before providing suggestions to fine tune and improve any key areas of their projects. Besides being a stepping-stone for budding clinician-researchers, this programme provides a platform for Medicine ACP to collaborate with distinguished clinician-researchers across SingHealth Duke-NUS.

For the recent round, we had the pleasure of having Dr Gopalakrishna Iyer from Surgery ACP, who is currently leading the SingHealth Duke-NUS Head and Neck Centre, A/Prof John Allen Carson from the Centre for Quantitative Medicine from Duke-NUS Medical School and our very own NMRC TA recipient, Dr Ng Chin Teck, to kindly join as the panel of judges. Dr Nicodemus Edrick Oey and Dr Tan Chee Wooi emerged as the winners of the Junior Pitch for Fund and Pitch for Fund, respectively.

**JPFF**  
 (Junior Pitch For Funds)  
  
**AWARDS**  
 from  
 2013 to 2018

**PFF**  
 (Pitch For Funds)  
  
**AWARDS**  
 from  
 2012 to 2017

**AM-ETHOS**  
**Duke-NUS Medical**  
**Student Fellowship Award**  
  
**AWARDS**  
 from  
 2015 to 2017

**SingHealth Medical**  
**Student Talent**  
**Development Award**  
  
**AWARDS**  
 from  
 2015 to 2017

### Other Awards

**NMRC**

**Transition Award Winners**



**AWARDS**  
 from  
 2012 - 2018



**Dr Katy Leung**  
 Senior Consultant,  
 Dept of Rheumatology  
 & Immunology



**Dr Andrea Low**  
 Senior Consultant,  
 Dept of Rheumatology  
 & Immunology



**Dr Damien Tan**  
 Senior Consultant,  
 Dept of Gastroenterology  
 & Hepatology



**Dr Ng Chin Teck**  
 Senior Consultant,  
 Dept of Rheumatology  
 & Immunology



**Dr Tan York Kiat**  
 Senior Consultant,  
 Dept of Rheumatology  
 & Immunology



**Dr Nicholas Francis Grigoropoulos**  
 Consultant,  
 Dept of Haematology



**Dr Tan Hong Chang**  
 Consultant,  
 Dept of Endocrinology

**NMRC**

**Clinician Scientist Award Winners**



**AWARDS**



**Dr Jenny Low**  
 Senior Consultant,  
 Dept of Infectious Diseases



**Dr Katy Leung**  
 Senior Consultant,  
 Dept of Rheumatology  
 & Immunology

## Publications & Grants

CLINICIAN RESEARCHERS FROM MEDICINE ACP  
**AUTHORED AND CO-AUTHORED**

**184**  
 publications  
**IN 2015**

**229**  
 publications  
**IN 2016**

**242**  
 publications  
**IN 2017**

**Amount of Competitive Research Funding Secured by Medicine ACP: (SGD) Annualised Quantum of Research Grants Obtained**

**TYPES OF GRANTS**

- NMRC & MOH grants (excludes CISSP)
- NMRC (CISSP) grants
- SHF grants
- Medicine ACP grants
- Other grants

**Total (Includes CISSP)**

	CY 2015	CY 2016	CY 2017
NMRC & MOH grants (excludes CISSP)	\$ 2,129,276	\$ 4,221,768	\$ 1,422,115
NMRC (CISSP) grants	\$ 336,373	\$ 588,622	\$ 635,405
SHF grants	\$ 109,636	\$ 416,106	\$ 504,685
Medicine ACP grants	\$ 92,325	\$ 238,540	\$ 299,596
Other grants	\$ 123,702	\$ 146,380	\$ 156,435
<b>Total (Includes CISSP)</b>	<b>\$ 2,791,311</b>	<b>\$ 5,611,416</b>	<b>\$ 3,018,236</b>

\*Data gathered from Medicine ACP under SGH Campus only

## Clinician Profiles

### Dr Katy Leung Ying Ying

Recipient of NMRC Clinician Scientist Award – Investigator (CSA-INV) in 2018

Dr Katy Leung is a passionate clinician scientist who dedicates her time in the pursuit of understanding and finding solutions for rheumatology and immunology diseases. She started her research journey as an awardee of the NCCS. In 2011, she received a grant for her project to study the prevalence of knee osteoarthritis (OA) in Singapore and its associated risk factors.

Acknowledging the high burden of knee OA with no specific disease-modifying drug available, she started work on her subsequent research project, "Concurrent validity of biochemical biomarkers associated with morphological change in patients with early OA". The objective of the project was to build a cohort of patients with early knee OA, followed by a four-year study on the pathogenesis of the disease. Being one of the few cohorts in the world enriched with multidimensional data that offers a unique and rare opportunity to study the pathogenesis of early knee OA, she was hopeful that it may bring about a breakthrough in this field. This study won her the NMRC TA in 2012.

After working hard on this subject area for about 8 years now, Dr Leung's outstanding and consistent record of excellence in research was recognized at a national level, earning her the prestigious NMRC's CSA in April 2018. Dr Leung is the first Rheumatologist in Singapore to be awarded this distinguished title.

2011  
NCCS  
Awardee

2012  
NMRC TA  
Awardee

2018  
NMRC CSA-INV  
Awardee



“ Every **DISCOVERY** is akin to small drops that will develop into a stream that could nurture and benefit lives. ”

### Dr Tan Hong Chang

Recipient of NMRC Transition Award in 2018

Dr Tan Hong Chang is a dedicated clinician researcher who invests his time and effort to broaden his scientific understanding of patients with endocrinological conditions. Dr Tan is also part of the NCCS alumni in Medicine ACP, who received his NCCS grant in 2013 for his project on Branch Chain Amino Acid Catabolism. Over the years, his quest to answer various research questions increased along with his subject areas.

In 2018, Dr Tan received the NMRC TA in recognition for his research project that explored why glycine (a non-essential amino acid) is deficient in morbid obesity and whether it is linked to the pathogenesis of metabolic disorders. The study shows that if glycine-linked dysregulation contributes to such diseases, then restoration of glycine metabolism might become a therapeutic strategy for ameliorating some aspects of morbid obesity.

As an endocrinologist, Dr Tan actively contributes to the nation's mission of war on diabetes by continuing his research and working on translating the findings to solutions for patients. He is the Director of Research for SingHealth Duke-NUS Disease Centre (Diabetes). Besides the numerous research projects he is involved in, Dr Tan is also the lead for the Pitch for Fund programmes within Medicine ACP, where he aims to share his knowledge, skills and experience with junior clinicians who may be interested in pursuing a clinician-researcher track.

2013  
NCCS  
Awardee

2016  
Research Director  
for SDDC  
(Diabetes)

2018  
NMRC TA  
Awardee



“ A productive mentor-mentee relationship is dependent not only on commitment and hard work, but also the **INTEGRITY AND ABILITY TO WORK WELL AS A TEAM.** ”

### Dr Laura Tay Bee Gek

Research Co-Investigator of Frailty Study

Dr Laura Tay from Department of Geriatric Medicine in SKH has been working hard on the sub-specialties, frailty and sarcopenia for the past decade. She aims to not only raise awareness but also to translate her research findings into feasible interventions to cope and/or prevent the adverse effects of sarcopenia and frailty.

Dr Tay currently collaborates with Dr Ng Yee Sien, from the Department of Rehabilitation Medicine in SGH, who is the principle investigator of a study to look at having a mobile community-based platform for the evaluation and intervention in physical fitness, physical frailty and sarcopenia. Dr Ng, the former Department Head of Rehabilitation Medicine, now divides his time for clinical work between SGH and SKH. He also lends his expertise via an advisory role to Ministry of Health. Their project is funded by both NMRC centre grants awarded to SingHealth Regional Health Systems and SGH.

The second project led by Dr Tay is the Pro-LIFE study, funded by the National Innovation Challenge on Active and Confident Ageing Grant. This study seeks to determine the prevalence of physical frailty, sarcopenia and physical fitness in community-dwelling seniors, and to examine the relationship between these three constructs. Thereafter, the target group will be primed to receive interventions with follow ups to observe reversal of their frailty conditions. Preliminary data gathered from the 135 seniors recruited under this study showed depression and malnutrition as potentially modifiable risk factors for pre-frailty/frailty.

Dr Tay is also our newly minted member of the Research office, representing SKH, under the Medicine ACP Council. We hope to establish more research collaborations between the institutions and cluster, translating more research outcomes to feasible interventions for our patients.

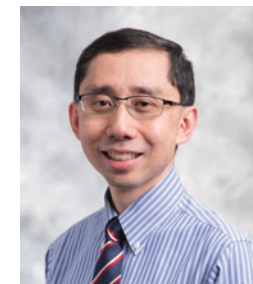
#### Research Focus Areas

Frailty is a geriatric syndrome where the loss of physiologic reserves increases the vulnerability in an older adult and brings about adverse health outcomes. As a dynamic condition, frailty is potentially reversible and preventable with appropriate medical interventions. One of the key biological substrates for frailty is sarcopenia, an age-related loss of skeletal muscle mass and function.



“ With an increasing aging population, it is important to **IDENTIFY AND DEVELOP** models of care to ensure our seniors remain robust through their golden years. ”

### Plans and Priorities



A/Prof Charles Chuah  
Academic Vice-Chair,  
Research, Medicine ACP

Since 2012 until today, clinician researchers in Medicine ACP have won more than \$50 million in competitive funding and authored/co-authored over 1,400 publications, out of which half have a journal impact factor of higher than two. Our clinician scientists have also been successful in securing the National Clinician Scientist career awards. Building upon these significant achievements, our research priorities are to **continue nurturing research talents** through start-up grants for research career development, **establish structured mentoring process** for clinician researchers, and **provide centralised clinical research coordination** and administrative support. With the revised Medicine ACP Council, Dr Andrea Low, the new Director of the Early Career Development, together with Dr Tan Hong Chang and Dr Nicholas Grigoropoulos (respective programme leads for the Pitch for Funds and Research Interest Group) will be leading in developing the pipeline of clinician researchers.

The team would also like to **develop high-impact research** by securing more competitive grants, publishing high-impact papers, and conducting clinical trials to pave the way for better cure. The Director of Clinical Trials, Dr Jenny Low, and I, in my role as Director of Translational Scientific Research, will work together through our respective sections to achieve these goals.

We also aim to **foster deeper integration of Health Service Research (HSR) and clinical service improvement** by identifying and prioritizing important clinical and operational issues for care improvement through HSR; fostering sustainable collaborations with clinicians, nurses, allied health professionals and scientists in SingHealth-Duke-NUS; and supporting the development of medical informatics infrastructure for research. Last but not least, to successfully **integrate research with clinical practice** by assimilating quality improvement and HSR, we have Dr Julian Thumboo, who is also the Director of HSR Unit in SGH, to lead the HSR section in the Research Office of Medicine ACP. This research team also welcomes colleagues from Allied Health, CGH and SKH to foster deeper ties and enhance research collaborations to reach out to a broader group of patients.


# Education

## Undergraduate Programmes

To groom and mentor future generations of doctors, our clinicians pave the way by actively participating in various educational ventures.

We receive a consistent stream of medical students from Duke-NUS Medical School, Yong Loo Lin School of Medicine, and Lee Kong Chian School of Medicine.

### IN ACADEMIC YEAR OF 2017

	<b>399</b> YONG LOO LIN SCHOOL OF MEDICINE
<b>128</b> DUKE-NUS MEDICAL SCHOOL (YEAR 2 & 4)	<b>83</b> LEE KONG CHIAN SCHOOL OF MEDICINE



Our clinician educators help in coordinating and overseeing the teaching programmes during the medical students' rotations to ensure that they are equipped with medical knowledge and bedside skills. Here are some of the key personnel in charge of the students rotated to SGH from the three medical schools.

#### DUKE-NUS MEDICAL SCHOOL

Representatives from SGH	Dr Lina Choong Year 2 Medicine Coordinator	Dr Limin Wijaya Year 4 Medicine Coordinator
Representative from CGH	Dr Chionh Chang Yin Medicine Coordinator	
Representative from SKH	Dr Deanna Lee Medicine Coordinator	

#### YONG LOO LIN SCHOOL OF MEDICINE

Representatives from SGH	Dr Ong Thun How Medicine Coordinator	Dr Tan Shian Ming M4 Medicine Coordinator
	Dr Felix Keng M2 CSFP Medicine Coordinator	Dr Andrew Ong M5 Medicine SIP Coordinator
	Dr Chiong Yi M3 Medicine Coordinator	Dr Nguyen Minh Ha M5 Medicine Coordinator
	Dr Wong Gee Chuan M3 Medicine Coordinator	Dr Anson Wong M5 Medicine Coordinator
Representatives from CGH	Dr Ang Ting Leong M3 Medicine Coordinator	Dr Wong Chiu Kit M5 Medicine Coordinator
Representative from SKH	Dr Deanna Lee Medicine Coordinator	

#### LEE KONG CHIAN SCHOOL OF MEDICINE

Representatives from SGH	Dr Goh Su-Yen Year 3 Clinical Block Lead	Dr Kavitha Garuna Murthee Year 5 Clinical Block Lead
Representative from SKH	Dr Deanna Lee Medicine Coordinator	

## IM Residency Programme Directors

The IM Residency Programme Directors (PD) work closely with the Senior Residency Programme PDs and ensure that the educational environment is conducive in nurturing each resident to be the pipeline of medical leaders.

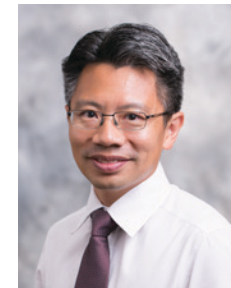
Back from left:  
Dr Kek Peng Chin, Dr Jason Choo,  
Dr Benjamin Cherng, Dr Jason Chang,  
Dr Warren Fong, Dr Tham Chee Kian &  
Dr Goh Kiat Sem

Front from left:  
Dr Ashfaq Ahmed Larik, Dr Kang Mei Ling &  
Dr Chandramouli Nagarajan

Members absent from photo:  
Dr Ong Thun How



## IM Residency & Senior Residency Programmes



Dr Phua Ghee Chee  
Director of Postgraduate  
Education

Dr Phua Ghee Chee and PDs from the IM Residency and Senior Residency Programmes meet regularly to support and learn from each other. This also ensures that our common education goals are discussed and the Medicine ACP's vision for future clinicians are realised through the many iterations.

Residents also attended the Practical Assessment of Clinical Examination Skills (PACES) course which is a clinical component of the Membership of the Royal Colleges of Physicians (MRCP) (UK) Examination. Through peer learning programmes initiated and supported by the residents, including the PACES course, the passing rate of MRCP exams has improved over the years.

### EDUCATION NUMBERS AT A GLANCE (AY 2017-June 2018)

**157**  
RESIDENTS

In Internal Medicine (IM) Residency Programme

**90**  
SENIOR RESIDENTS

Amongst the 10 Senior Residency Programmes

### ACADEMIC YEAR 2017 - 2018



### AS ASSOCIATE CONSULTANTS

### PASSING RATE FOR MRCP EXAMS



## Faculty Development Programme for Residents

As the Senior Residents' responsibilities expand to teach medical students, there is an impetus to encourage and develop all SRs to be more efficient educators. With this in mind, the Resident as Future Teachers (RaFT) workshop was piloted in 2017 for the Internal Medicine (IM) Year 3 Residents to hone their teaching skills before they become SRs. This three hour workshop was supported by the Centre for Resident and Faculty Development (CRAFD) team under SingHealth Graduate Medical Education (GME) office.

Dr Phua Ghee Chee, the Director of Postgraduate Medical Education for Medicine ACP along with two of our newly minted Associate Consultants, Dr James Li Weiquan from CGH and Dr Andrew Ong from SGH facilitated this workshop. Dr James Li was engaged to add his valuable experience and insights in his prior role as facilitator of the workshop targeted at Residents. Moving forward, the RaFT workshop will take place annually to groom future batches of residents.



### Objective

To teach future Senior Residents to give constructive feedback effectively to students based on the DESC model (Describe, Explain, Suggest and Consequence).

## Dr Tham Chee Kian Programme Director, Internal Medicine Residency Programme



Dr Tham Chee Kian is a dedicated educator from the Department of Medical Oncology in National Cancer

Centre Singapore. He has served as the Associate Programme Director (APD) for the SingHealth IM Residency Programme for several years. As an APD, he has led both the Residents' Affairs and Clinical Competency committees and has been instrumental in enhancing many initiatives, like the programme rotations and elective system. Besides improving the system, he also works closely with the Chief Residents and various Specialty Coordinators to improve the training experience of IM residents.

Dr Tham officially took on the role of PD in 2017, bringing about substantial changes to the system, such as introducing the Procedural Refresher Course, which is part of the programme's credentialing process. Not forgetting the welfare of the residents, he ensures that there is a strong support network within the IM Residency programme. He is currently working with the chief residents to introduce a house system to build kinship.

“ My mission as an educator is to **HELP LEARNERS REALISE THEIR FULLEST POTENTIAL**, which could be either hidden or in the development phase. ”

## Chief Residents, IM Residency Programme

The Chief Residents of IM Residency are capable leaders who look into the needs and well-being of their juniors, fellow residents and medical students. May it be academic matters or peer engagements, they ensure that their peers' and juniors' journey towards becoming a clinician is a rewarding and gratifying one.

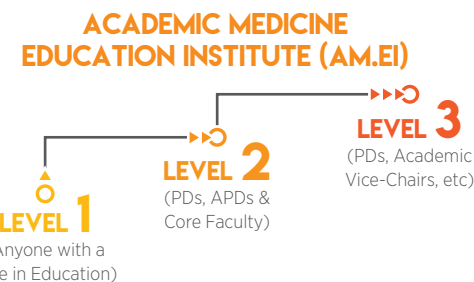


From left:  
Dr Rayan Alsuwaigh, Dr Kennedy Ng, Dr Jolene Liu & Dr Marcus Sim

## Faculty Development

### Education Competency Roadmap for Faculty

To cultivate continuous learning, our educators attend workshops and courses to obtain in-depth training to become effective education leaders and specialists. With the help from Academic Medicine Education Institute (AM.EI), various courses are developed to assist the faculty to achieve three main competency levels:



Through these 3 levels, the faculty will be introduced to useful key education principles, tools and best-shared practices to promote day-to-day application. Almost 100% of core faculty have achieved Level 1 competency.

### Core Faculty Competency Levels as at 30th June 2018



(Those with level 2 & 3 has also achieved level 1)  
\*Data gathered from Medicine ACP under SGH campus only

### Customised Educational Workshop for Medicine ACP Faculty

#### Objective

This Customised Educational Workshop aims to bring together the Medicine ACP faculty to focus on gaining better understanding of setting standards for assessment and evaluation. Through harmonization of these assessment tools and methods, we hope to build a robust brand of education that the future generation of clinicians will be able to relate and benefit.

Slated to begin in the second half of 2018, this workshop will be co-facilitated by faculty from Medicine ACP and educators from AM.EI. It will showcase customised videos of interactive and practical sessions on various assessment and evaluation tools. The impetus for this standardisation is stronger than before, as currently our faculty has begun to teach students from all three medical schools.



### Train-The-Trainer Workshops for Internal Medicine Faculty

A multi-year collaboration between AM.EI, Duke University in Durham and the Department of Internal Medicine (DIM), spurred the culture of teaching and coaching within the Department. Through the guidance from Duke University's esteemed medical educators, Dr Lawrence Greenblatt, Dr Mamata Yanamadala and Dr Nilesh Patel, our DIM faculty learned valuable skills in bedside teaching and assessment of medical students and junior doctors.

The collaboration culminated in a Train-the-trainer faculty development workshop within DIM in February 2018, where faculty members, Dr Kavitha Garuna Murthee and Dr Krithikaa Nadarajan, conducted workshops for senior residents and clinician educators, focusing on bedside teaching and remediation techniques. Garnering positive feedback, the team was requested by AM.EI to conduct a similar symposium in March for the colleagues of KK Women's and Children's Hospital (KKH). With the symposium's success, a subsequent workshop titled "Not Everyone Is Perfect - Challenging Learners, Remediation and Role Of Educators" will be conducted at the Asia Pacific Medical Education Conference (APMEC) coming January 2019. The team will use interactive methods to lead participants into recognising learners in difficulty, eliciting the underlying causes; and systematically formulating remediation plans to help learners achieve their required competencies.

Moving forward, the DIM team plans to conduct more workshops both locally and internationally. The DIM faculty and seniors are using lessons learnt in their daily interactions with learners, striving to improve learning experience within the Department and Medicine ACP.

<b>2015 - 2018</b> Collaborations with Medical Educators from Duke University	<b>Feb 2018</b> DIM Conducted workshops for SRs
<b>Jan 2019</b> DIM will Organise Workshop at APMEC	<b>Mar 2018</b> DIM Organised Symposium at KKH



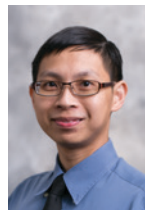
## Health Professions Educators Essentials (HaPEE) Programme

The HaPEE Programme organized by AM.EI is an inter-professional programme which is the sister course to the Harvard Macy Institute's US programmes, consisting of four one-week modules onsite in Singapore for clinical educators of SingHealth Duke-NUS Academic Medical Centre. The programme aims to promote the development of clinicians as teachers, educators and change-agents in the healthcare delivery system that values an inter-professional approach to learning and patient care. Attendees of this programme have the opportunity to learn how to develop and implement strategies to teach and facilitate learning efficiently and effectively. This programme also include National Healthcare Group (NHG) participants, strengthening the benefits of diversity in experiences.

2 of our up and coming clinician educators, Dr Adrian Chan and Dr Warren Fong, completed this fruitful programme.



PARTICIPANTS OF THE HAPEE PROGRAMME



**Dr Warren Fong**  
Consultant,  
Department of  
Rheumatology &  
Immunology  
Clinical Lecturer at  
Yong Loo Lin School  
of Medicine NUS

“ The programme opened my eyes to the **GREAT EDUCATION INITIATIVES** that are taking place through the institutions, many of which I have begun to implement in my own teaching programmes. ”



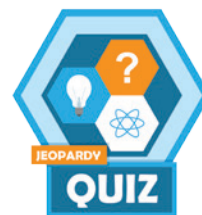
**Dr Adrian Chan**  
Consultant,  
Department of  
Respiratory and  
Critical Care  
Medicine  
Clinical Faculty Tutor  
at Duke-NUS School  
of Medicine

“ I learnt the importance and benefits of an **INTER-PROFESSIONAL TEAM DELIVERING QUALITY TEACHING** to our learners. ”

## Medicine ACP Medical Grand Rounds

The Medical Grand Round (MGR) was created to encourage inter-departmental learning and continual medical education across specialties. Back when we started, Departments took turns to host each session to address clinical cases on a quarterly basis.

In 2018, the MGR format was rejuvenated where a blend of specialties come together to review a case, tapping on a multi-disciplinary approach. The Master Physicians of Internal Medicine are also invited to share their valuable clinical insights. Also, to inject the element of fun, an exciting Medical Jeopardy quiz have been introduced, where three teams compete for a place at the final round during the Medicine ACP Week in August 2018.



## Clinician Profiles

### A/Prof Anantham Devanand

Recipient of GCEO Excellence Educator Award in 2016

A/Prof Anantham Devanand is part of the founding core faculty of the SingHealth Internal Medicine Residency programme. His enthusiasm and drive in promoting education and embracing positive change contributed significantly to the success of the programme. This includes setting up of an evaluation framework and a clinical competency committee. In addition, A/Prof Devanand is proud to have served as the Director of the Respiratory Medicine Advance Specialty Training (AST) before the residency system was introduced.

A/Prof Devanand continues to play a major role in undergraduate education. He is a faculty member for the Duke-NUS practice course, as well as the critical care rotation. As the Deputy Director of the Singapore Medical Association Centre of Medical Ethics and Professionalism, he has spent the last decade teaching courses on ethics that are compulsory for every exiting specialist trainee. He also leads the SingHealth law programme.

Given his expertise on this subject matter, he is now heading the Office of Medical Humanities in Medicine ACP. He received the SingHealth GCEO Excellence Award 2016 for his steadfast dedication to the development of education for the benefit of the next generation.



“ Knowledge is an infinite resource. **THE MORE YOU GIVE THROUGH TEACHING, THE MORE YOU ACCUMULATE.** ”

### Dr Jansen Koh Meng Kwang

Recipient of Outstanding Educator Award in 2018

Dr Jansen Koh from the Department of Respiratory and Critical Care Medicine in CGH has been a strong advocate of medical education. His specific interest in respiratory and critical care lies in the point of care ultrasonography. Back in 2013, he completed his fellowship in Clinical Simulation and Medical Education at the Learning Institute, Toronto, Canada.

Subsequently, he played a key role in shaping the next generation of clinicians by paving the way through his leadership position as Associate Programme Director of Internal Medicine Residency Programme for CGH from July 2013 to June 2017. He also spearheaded several medical education initiatives, such as e-learning and simulation programmes. He currently co-leads the Changi Simulation Institute housed within CGH.

Dr Koh received the Outstanding Educator Award at the 2018 SingHealth Excellence Awards for his outstanding contributions at the SingHealth cluster level.



“ I encourage all doctors to be **MEDICAL EDUCATORS**, not only for medical students and doctors-in-training, but also to their colleagues and patients. ”

## Plans and Priorities



**A/Prof Loo Chian Min**  
Academic Vice-Chair,  
Education, Medicine ACP

There has long been a tradition of teaching among our clinicians since the past. They are driven by, the mission, and a genuine interest, to groom the next generation of doctors. Out of their own volition, with little resources, setting themselves as role models, they conveyed to the young what is expected as a high standard of practice of medicine, not only in terms of skills and knowledge, but also attitudes and bedside manners. Today, supported by a network of programmes and activities that **encourage knowledge sharing and collaboration**, we would like to carry on these important traditions. As everyone becomes more focused in acquisition of knowledge of their specialty, activity such as the Medical Grand Round (MGR) hopes to **encourage inter-departmental learning and continual medical education across specialties**. It was recently rejuvenated, incorporating the involvement of more Departments, expert opinions from the Master Physicians and a game segment Medical Jeopardy. Thanks to the support of many in the Division of Medicine, SGH, we are glad that this event has gathered much attention and attendance for its fun element and educational value.

The Education Office in Medicine ACP also strives to **increase the proficiency of teaching** of all our clinicians, so that everyone has the necessary knowledge and skills to **groom the next generation of clinicians**. Now that the majority of the faculty in the SGH campus have completed Levels 1 and 2 of the education competency roadmap, the Faculty Development team led by Director, Dr Jason Chang, is looking at more **customised learning at Medicine ACP level** to better cater to our clinicians' needs through short workshops and video tutorials. While increasing the proficiency level of our senior clinicians, the Undergraduate Medical Education team headed by Director, Dr Ong Thun How, oversees the **harmonisation of undergraduate curriculum**, working with the three medical schools. We hope to **synchronise the assessment methods and tools used in clinical trainings** for all medical students, so as to ease the job of teaching for our faculties.

With our nursing and allied health colleagues taking the lead in our new focus of inter-professional education, and our fellow colleagues from CGH and SKH coming on-board, we hope that we will continue to contribute to the SingHealth brand of academia as a whole.

# Medical Humanities

## Office of Medical Humanities

In addition to clinical service, education and research, Medicine ACP is introducing Medical Humanities as an area of focus from August 2018. In a digital age with the adoption of robotic technologies and artificial intelligence, it has never been more important to bear in mind that we are ultimately taking care of human beings. The humanities reinforce the biopsychosocial model of disease and remind us all to view each patient as a unique individual with an equally unique experience of illness and suffering. This field helps educate the next generation of doctors through professional identity formation and development of shared values that provide a sense of fulfillment in work. It reminds our healthcare leaders that the true value proposition of medicine are outcomes that matter to patients.



## Plans and Priorities



A/Prof Anantham Devanand  
Director, Medical Humanities,  
Medicine ACP

The Office of Medical Humanities aims to **draw on the creative and intellectual strengths of diverse disciplines** spanning philosophy and ethics, arts and popular culture, history, literature and religion. The field helps us **re-examine clinical care, education and research through different lenses** to develop a deeper and more critical understanding of meaning, value and purpose. New perspectives will foster close and meaningful relationships amongst doctors, patients and colleagues, **enriching existing multi-disciplinary collaborations and encouraging new ones**. By connecting with the everyday experiences of healthcare with the utmost sensitivity and reviving the joy of caring, we hope to find **deeper fulfillment in our work and lives**.

The newly established Office aims to achieve the above through a 4-pronged approach: **communication, co-operation, content curation and community-building**. We will communicate to raise awareness of the vast possibilities that the humanities offer us and co-operate with existing partners such as residency, Duke-NUS and the Post Graduate Medical Institute. We will work on curating existing resources, courses and information to make them more accessible and enhance visibility. Ultimately, we will build a community that learns and shares together. Staying true to the essence of inter-professional collaboration, the Office is supported by Dr Crystal Lim, an esteemed Medical Social Worker and Joanna Ko, a resourceful APN who runs the SGH rapid-response service.

## Medicine ACP's Involvement in Global Health

Living in a highly globalized world today that eases the movement of goods, services, information and people, there are still many parts of the world including quarters of the most developed countries that have low or no access to healthcare. Global Health refers to the area of study, research and practice that places priority on improving health, increasing accessibility to healthcare and achieving equity in health for all people worldwide. Seeing large parallels between Global Health and our academic mission of pushing the frontiers of medicine, especially in the education arena where mindsets of the next generation of clinicians will be shaped, Medicine ACP embraced this discipline.

In 2017, Medicine ACP had the privilege of having Prof Michael Merson, the founding Director of the Duke Global Health Institute (DGHI) in Duke University, Durham, to give an engaging talk on the importance of Global Health during our annual academic week to the Medicine ACP community.

Supported by the academic leadership in SingHealth and Duke-NUS, and advised by Prof Merson, Medicine ACP co-organised with AM.EI our inaugural Global Health Introductory Course over 2.5 days in July 2018. This course provided participants with the foundational knowledge to identify issues and explore solutions to the global health issues we face currently. Relevant scenarios were explored through short lectures, case studies and interactive discussions facilitated by global and local faculties from the UK, NUS and Duke-NUS. This Medicine ACP and AM.EI joint effort drew 40 participants from the SingHealth and Duke-NUS family.

Going forward, anticipating the establishment of the SingHealth Duke-NUS Global Health Institute (SDGHI), Medicine ACP looks forward to many collaborations among members of our ACP and this new establishment in our academic organisation, bringing new opportunities for research and education to many of our colleagues.



# Clinical Service Improvement & Innovation

As healthcare evolves with today's increasingly complex technologies and treatments, it is necessary for healthcare professionals to continuously seek solutions to improve the delivery of healthcare services to patients. Following the aim of continuous improvement, projects ventured by our clinicians have brought about significant changes and benefits to the challenges faced in the healthcare sector.

## Home Based Chemotherapy

Chemotherapy can be time consuming and the burden of travelling back and forth for treatment may be inconvenient to patients and their caregivers. The Home Based Chemotherapy initiative was launched to enhance the delivery of care to patients.

This initiative has increased the level of safety for patients, reduced the rate of infection, and decreased the number of days needed for caregivers to take leave from work. Patients also benefited from the overall saving from the decreased transportation cost.

This programme will continue to provide patients with quality and convenient care.



**PATIENT:**  
There is no need to travel to the hospital. I just wait at home for the nurse to arrive. The price of treatment is the same as the clinic, which is good.

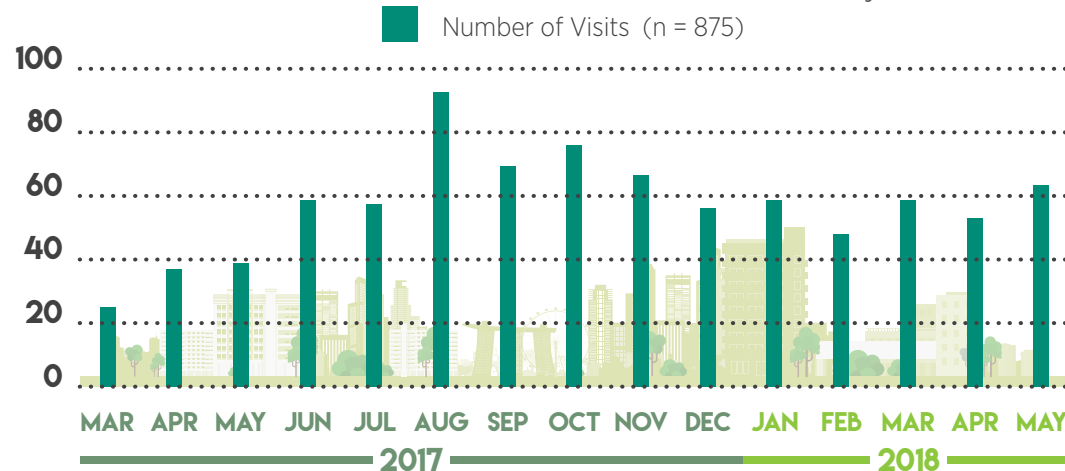
**CAREGIVER:**  
Without the need to take leave every week from work to bring my father to the hospital, I can now look for a part-time job.

Since the initiative's launch

successful home treatments

from the patients and their caregivers.

Total Numbers of Home Treatment as of 31<sup>st</sup> May 18



## Renal Dialysis Centre Improvement Team bagged the Special Mention Team Award at the Singapore Health Quality Service Awards (SHQSA) 2018

SHQSA is a platform that honours healthcare professionals who demonstrate remarkable commitment in delivering quality care and excellent service. Exemplary effort that enhance patient experiences and safety are recognised with team awards in the clinical practice improvement and service initiative improvement categories.

The team successfully reduced waiting time in between dialysis sessions and streamlined the Renal Dialysis Centre (RDC) Operations.

Effort and collaborations have eased difficulties in operations faced by RDC staff and have improved patient satisfaction. In the spirit of continuous improvement, the team is looking to further improve in-centre operations. The centre is currently involved in a project that will reduce cancellation of porter requests to further shorten waiting time for patients at RDC.

### THINKING OUT OF THE BOX FOR UNCONVENTIONAL SOLUTIONS

CHALLENGES	SOLUTIONS
<p>Long waiting time for porters between dialysis sessions due to cases assigned with physical, paper notes.</p>	<p>Team <b>digitalised all paper-based forms</b>. Patient scheduling is completed in Excel spreadsheet to better organise schedules.</p>
<p>Frequent cancellation of porters resulted in a disorganised scheduling list.</p>	<p>Porters are assigned and arranged by requests via the <b>e-porter system</b> managed by scheduling experts from the Transport Office. Porters are then informed through a <b>Personal Digital Assistant (PDA)</b>.</p>
<p>Long waiting time for cleaning of curtains.</p>	<p>Installation of <b>retractable panels, in place of cloth curtains</b>, as they only require a wipe-down after each dialysis session. <b>Time Saved: 22.5 - 52.5 minutes.</b></p>

## SGH Medical Intensive Care Unit Acute Response Team (SMART)

Traditionally, critically ill patients are transferred to the Intensive Care Unit (ICU), where a multidisciplinary team of intensivists, specialised nurses and respiratory therapists try to stabilise and treat patients in the shortest possible time. However, in reality the transfer of patients to ICU takes time, and this delay is a risk factor of increased mortality and cardiorespiratory collapse.

Led by Dr Esther Tan, Associate Consultant from SGH Department of Respiratory and Critical Care Medicine (RCCM), the SGH Medical Intensive Care Unit Acute Response Team (SMART) aims to circumvent this delay by providing a mobile team that can respond rapidly to a deteriorating patient at their bedside. The multidisciplinary team consists of an intensivist, an Advanced Practice Nurse (APN) and a respiratory therapist. They work closely with the general ward's team to evaluate and stabilise patients with the institution of ICU-level interventions prior to triaging of the patient for ICU care. In addition, SMART also creates an avenue to encourage interdisciplinary learning, team work and collaboration amongst healthcare professionals.



**PROJECT PILOTED**

**CLINICAL INNOVATION SUPPORT GRANT**

**\$50,000 AWARDED**

# Clinical Services at a Glance

In FY2018 as at June, the Division of Medicine received:

**75,295**  
PATIENTS  
through the  
**SPECIALIST OUTPATIENT CLINICS (SOCs):**

**4.2%**  
INCREASE  
from June FY2017

DOM managed  
**40%**  
of total SOC patients in SGH.

**10,402**  
Inpatients admissions

DOM managed  
**50.1%**  
of total patient admissions in SGH  
(DIM inpatients / total SGH patient admissions)

**THE DEPARTMENT OF INTERNAL MEDICINE**  
managed the most number of patients

**5,434**  
ADMISSIONS

## 2017 Three Best Quality Improvement (QI) Project Team Award

The top three best QI projects amongst all other completed projects within Medicine ACP were celebrated in recognition of their efforts and contributions to quality improvement initiatives during the Medicine ACP Week in 2017.

**QI Project:**  
**Causes of Missed Change-of-Shift Handovers in the Era of the Electronic Medical Record: A Root-Cause Analysis**



From left: Dr Wong Kok Seng, Ms Ratna Binte Abdul Rahman, Mr Daniel Seto, Dr Law Shipei, Dr Dorothy Ng & Dr Kenneth Chew

**QI Project:**  
**Quality Improvement Initiative To Reduce Tunneled Catheter-related Infection in Hemodialysis Patients in a Tertiary Hospital**



From left: SNC Ng Li Choo, ANC Sumathi Silva Thore, ANC Maslinna Binte Abdul Rahman, Dr Lina Choong, Dr Darren Lee Kian-Guan, Ms Lydia Lim, Dr Yeon Wenxiang & Dr Wong Kok Seng

**QI Project:**  
**Decrease Post-operative (post-op) Average Length of Stay (ALOS) of Hip Fracture Patients Eligible For Inpatient Rehabilitation**



From left: APN Grace Lim, Dr Saw Hay Ma, Dr Chiong Yi & Dr Wong Kok Seng

# Achievements & Awards



## Regional & International Recognition

In 2017, the Department of Rheumatology & Immunology was awarded the Centre of Excellence by the Asia Pacific League of Associations for Rheumatology (APLAR) for their work in research, training, education and patient care initiatives. The work of the passionate team of doctors who demonstrated high standards in the three pillars of excellence (education, research and training) and as an outstanding reference for rheumatology clinicians across the Asia-Pacific region was recognised.

The Department of Endocrinology also raised the bar in providing holistic diabetes care and management. In the recent years, the Department has been working hand in hand with both internal and external stakeholders from healthcare industry to drive efforts in bringing down the rate of diabetes in Singapore. Their efforts include implementing an integrated system for diabetes care that pools data for audit, QI and research purposes, setting standards to care, training and education and streamlining care processes to deliver optimal care and outcomes to patients.

Their collective efforts were recognised in 2017 when the Department was acknowledged as a Centre of Education and Excellence in Diabetes Care by the International Diabetes Federation (IDF).

## Clinician Profiles

### Dr Tharmmambal Balakrishnan

Recipient of Medicine ACP QI Mentor Award in 2017

Dr Tharmmambal Balakrishnan is a consultant with the Department of Internal Medicine (DIM), who has been driving the Acute Medical Ward (AMW) project to fruition in February 2015. Her effort has not only benefited SGH in terms of faster bed turnover, but also to patients who have gone through AMW with shorter hospitalisation period and more efficient work processes.

Being the Department QI Champion, Dr Tharmmambal has been actively encouraging junior doctors and other Department doctors to highlight workflow issues and have worked with them to systematically develop improvement plans. She has also been working with ward nurses and nursing research staff to plan and implement effective delirium protocol in the DIM wards by taking the lead and providing clinical inputs to support the initiative. Her efforts to bring together various healthcare professionals as a team to achieve the ultimate goal of improving patient outcomes and care are truly commendable. For all her efforts in promoting QI initiatives and culture, she was presented with the inaugural Medicine ACP QI Mentor Award in 2017.

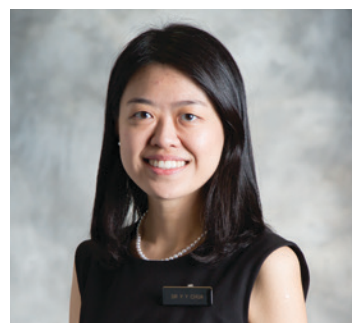


“ Our work involves many people and without everybody doing their work effectively, it isn't possible to make **MEANINGFUL CHANGES.** ”

### Dr Chua Ying Ying

Recipient of Safety Star Award in 2017

Dr Chua Ying Ying, consultant from Department of Infectious Diseases was presented the Safety Star Award for her effort and perseverance in ensuring staff and patient safety through her project on the increase in Methicillin Resistant Staphylococcus Aureus (MRSA) acquisition. MRSA is the most common multi-drug resistant organism in Singapore hospitals and MRSA infected patients are more likely to die during their hospitalisation period, stay longer in hospitals and incur higher hospitalisation fees. Noticing an increase in MRSA acquisition in Sengkang Health, Alexandra Hospital, Dr Chua and her team did a series of investigations to identify the cause. After collecting and studying the data, they were successful in identifying the root cause and immediately planned for various interventions and protocols to be set up to prevent recurring infections. After the team's collective efforts, they managed to successfully reduce the MRSA acquisition rate by 30% in 6 months.



“ I believe the key to improvement is to **TRY NOT TO MAKE THE SAME MISTAKES TWICE** and strive for better changes. ”

## Plans and Priorities



A/Prof Tan Thuan Tong  
Academic Vice-Chair,  
Clinical Service Improvement  
& Innovation, Medicine ACP

Being in the healthcare sector, we want to provide excellent care and experience for our patients. Besides the two pillars, education and research, the third pillar of delivering care effectively requires us to embrace, and **consistently and continuously improve and innovate** our practices. With this in mind, Medicine ACP formally embarked on the journey of quality improvement and innovation back in 2012. Since then, many of our staff have worked on various issues to improve the delivery of care to our patients. These included digitalising the clinical handover system to optimise handing over and inaugurating the Acute Medical Ward (AMW) pilot project. Additionally, this initiative saved cost for both patients and hospital. Many of our clinicians are now also trained in the philosophy of Quality Improvement and the methodologies to be employed to assist and advance work processes.

We have formally renamed the office of Clinical Service and Improvement as Clinical Service Improvement and Innovation, reflecting the need to innovate. There will also be a new section, Medical Device & Apps Development, headed by Dr Damien Tan, reflecting the needs for us to embrace the necessary changes in the model of care that will soon arrive and affect our day-to-day clinical practice. Moving forward, **working in collaboration with the local clinical performance improvement committee** in Division of Medicine, SGH, and other similar physician-led committees in CGH and SKH, the Clinical Service Improvement and Innovation team in Medicine ACP hopes to provide resources, such as small grant funding and administrative support, to **support and encourage many of our clinicians to embark on their journey to streamline care** and optimise efficiency in workflow, thus improving the work lives and experiences of our patients, as well as our colleagues. Having roped in our colleagues from Nursing, Allied Health, CGH and SKH into the Medicine ACP Council, we hope we are now better positioned to achieve this goal through collaboration and learning from each other's best practices.

## New Academic Collaborations



Collaborating with institutions from both public and private sectors, Medicine ACP's clinicians bring their expertise to provide comprehensive care for our patients with chronic and complex illnesses.

### SingHealth Duke-NUS Sleep Centre

Sleep medicine is a new medical field and the spectrum of sleep disorders is vast. The SingHealth Duke-NUS Sleep Centre was set up in 2017 to provide a one-stop service for adults and children with sleep disorders and to help raise awareness on these conditions.

The Singapore General Hospital Sleep Centre (under SingHealth Duke-NUS Sleep Centre) has been taking academic leadership in Sleep Medicine in Asia by organising yearly academic symposiums and conferences since 2008.

They were the first in Southeast Asia to receive a 5-year accreditation in Clinical Management and Adult Testing Services by National Association of Testing Authorities, Australia (NATA/ASA).

To increase public awareness and promote SingHealth Duke-NUS Sleep Centre as a Centre of Excellence for the management and research of Sleep Disorders & Obstructive Sleep Apnoea, the Centre signed a Memorandum of Understanding (MOU) in 2017 with Philips to collaborate in areas of clinical care, research and education. Since then, SDDC Sleep Centre and Philips have been working together to raise public awareness through the development of educational materials for World Sleep Day 2018.



### Infectious Diseases Research Institute (IDRI)

Our colleagues from the Infectious Diseases (ID) Department of SGH work closely with the Emerging Infectious Diseases (EID) Programme from Duke-NUS on areas such as Dengue, Zika, Yellow Fever and Multi-drug resistant organisms (MDRO), among others. To further strengthen this collaboration and increase visibility of infectious diseases research, the Infectious Diseases Research Institute (IDRI) was formed in 2017.

Under the newly established IDRI, The Viral Research & Experimental Medicine Centre (ViREMiCS) was set up and made possible through a generous philanthropic donation of S\$2 million from the Tanoto Foundation. It is currently the first academic research facility in Singapore, and possibly globally, to provide ISO-accredited molecular tests in the development and assessment of new drugs and vaccines for patients against infectious diseases. The facility ensures that partners from pharmaceutical and vaccine industries can harness the full suite of services from expertise in infectious diseases research to highly specialised laboratory services in one single space, creating a cost-effective and highly efficient model that will propel the acceleration of new drugs and vaccines from bench to bedside.

Last December, SingHealth and Agency for Science, Technology and Research (A\*Star) signed a memorandum of understanding (MOU), establishing a strategic research partnership to interweave the harnessing of large data in precision medicine and spur innovation in immunotherapy and drug development.



# Philanthropy



Funding is essential to support potential projects which will make discoveries that have transformative impact on patients' lives. Throughout the years, Medicine ACP has also expanded on philanthropy initiatives.



<p><b>\$1</b> RECEIVED MILLION from GOH FOUNDATION</p>	<p><b>\$2</b> RECEIVED MILLION from TANATO FOUNDATION</p>
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## Seah Cheng Siang Professorship

Prof Seah Cheng Siang was a master clinician who was known for his exceptional diagnostic ability and strong advocacy for equal patient care regardless of social status. He pioneered the work in Gastroenterology Department at SGH and the former Toa Payoh Hospital. Many doctors remember him as a great teacher who championed postgraduate medical education in Singapore. Prof Seah taught by example, sharing his clinical knowledge, enthusiasm for research and bedside manner with a generation of physicians, many of whom are leaders in their medical fields today.

The Seah Cheng Siang Professorship is the first professorship established in Medicine ACP. Through this Professorship, we aim to honour the late Prof Seah Cheng Siang, a luminary of SGH's leadership, and to continue his legacy of delivering holistic patient care and excellent bedside practice to budding clinicians. The Professorship was established with strong support from the late Prof Seah's family, colleagues, former students, grateful patients and SingHealth leadership.

In July 2018, we took the opportunity to thank all the donors who helped us to achieve this milestone. With this Professorship, we hope to scale greater heights in the frontiers of academic leadership, which will play a key role in building up the next generation of competent and confident clinicians to meet our nation's healthcare needs.



### Objective

We aim to honour the late Prof Seah Cheng Siang, a luminary of Singapore General Hospital's leadership, and to continue his legacy of delivering holistic patient care and excellent bedside practice to budding clinicians.

## SingHealth Duke-NUS Gala Dinner 2017

The biennial SingHealth Duke-NUS Gala Dinner was a celebration of the unwavering support from donors in partnering clinicians, researchers and educators at the SingHealth Duke-NUS Academic Medical Centre (AMC) to improve healthcare for patients and the community.

Medicine ACP received \$1 million from Goh Foundation to support research activities in Reverie Rheumatology Research Fund (RRRF) and \$2 million from Tanato Foundation to support the establishment of the Viral Research and Experimental Centre @ SingHealth Duke-NUS (VIREMICS) to catalyse breakthroughs in Infectious Diseases.

## Health Services Improvement and Clinical Innovation (HSI-CI) Programme


With a demographically ageing population and increasing chronic disease burden, the demands for healthcare system are set to increase. The HSI-CI programme was established in 2017 to head quality innovative projects and related research activities at SGH.

The Fund was made possible with the support from donors who believed in developing measures of care where safety could be built into every part of the healthcare system, ensuring patients receive safest and most reliable care across the continuum.

New models of care for holistic management of complex and chronic diseases are also being assessed under this programme to maximise resources and patient management. On top of re-engineering the system and process, the fund also looks at ways to develop staff by providing them with the right knowledge, skills and tools to improve and generate new and innovative ideas.

## Lee Seng Gee Appreciation Fund for Faculty Development (Medicine)

With Singapore's ageing population, the number of complex cases involving patients with multiple serious chronic conditions such as asthma, diabetes, high blood pressure and heart disease is on the rise. With a generous \$500,000 gift from the DS Lee Foundation, the Lee Seng Gee Appreciation Fund for Faculty Development (Medicine) was established to support continuing education and training activities to shape the future of clinicians and empower them with the know-how to deliver the highest level of care for our patients. This advancement in knowledge will contribute to the overall professional development of clinicians.

<p> <b>\$500,000</b> GIFT FROM THE DS LEE FOUNDATION</p>	<p>=</p>	<p>The Lee Seng Gee Appreciation Fund for Faculty Development (Medicine)  <b>ESTABLISHED!</b></p>
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## Reverie Rheumatology Research Fund (RRRF)

Established in 2014, the Reverie Rheumatology Research Fund (RRRF) was established to support five key areas of rheumatology research where there are pressing unmet medical needs: Systemic Lupus Erythematosus (SLE), Systemic Sclerosis (SSc), Osteoarthritis (OA), Rheumatoid Arthritis (RA), and Spondylarthritis (SpA). RRRF helps to raise funds to accelerate discoveries and uncover new cures for rheumatological conditions through research. The Rheumatology and Immunology Department has been actively involved in raising funds for this cause. For instance, an inaugural Swim for Rheumatology event was organised in September 2017 that brought together swimmers, consisting of past and present national swimmers, students and a team of SGH clinicians.

SWIM FOR RHEUMATOLOGY		
128	>5,000	>\$200,000
SWIMMERS	OVER LAPS	RAISED THROUGH THE EVENT



## Future of Medicine Fund

With a constant need to think of ways to sustain all our programmes and to look for means to start new ones that will benefit our colleagues in their academic endeavours, we started the Future of Medicine Fund in 2016.

We hope to continue to grow this fund from year to year to fuel our academic activities. Join us in our endeavor to shape the future of medicine! You can make a difference today by contributing an amount using the donation form attached at the end of this yearbook.

<p> APPROXIMATELY <b>\$14,000</b> raised over a year</p>
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# Medicine ACP Key Contacts

**ACADEMIC CHAIRMAN**

Dr Chow Wan Cheng

**ADVISORS**CGH, Dr Augustine Tee  
SKH, Dr Koo Wen Hsin**CLINICAL SERVICE  
IMPROVEMENT & INNOVATION****Academic Vice-chair**

Dr Tan Thuan Tong

**Directors**Dr Low Su Ying  
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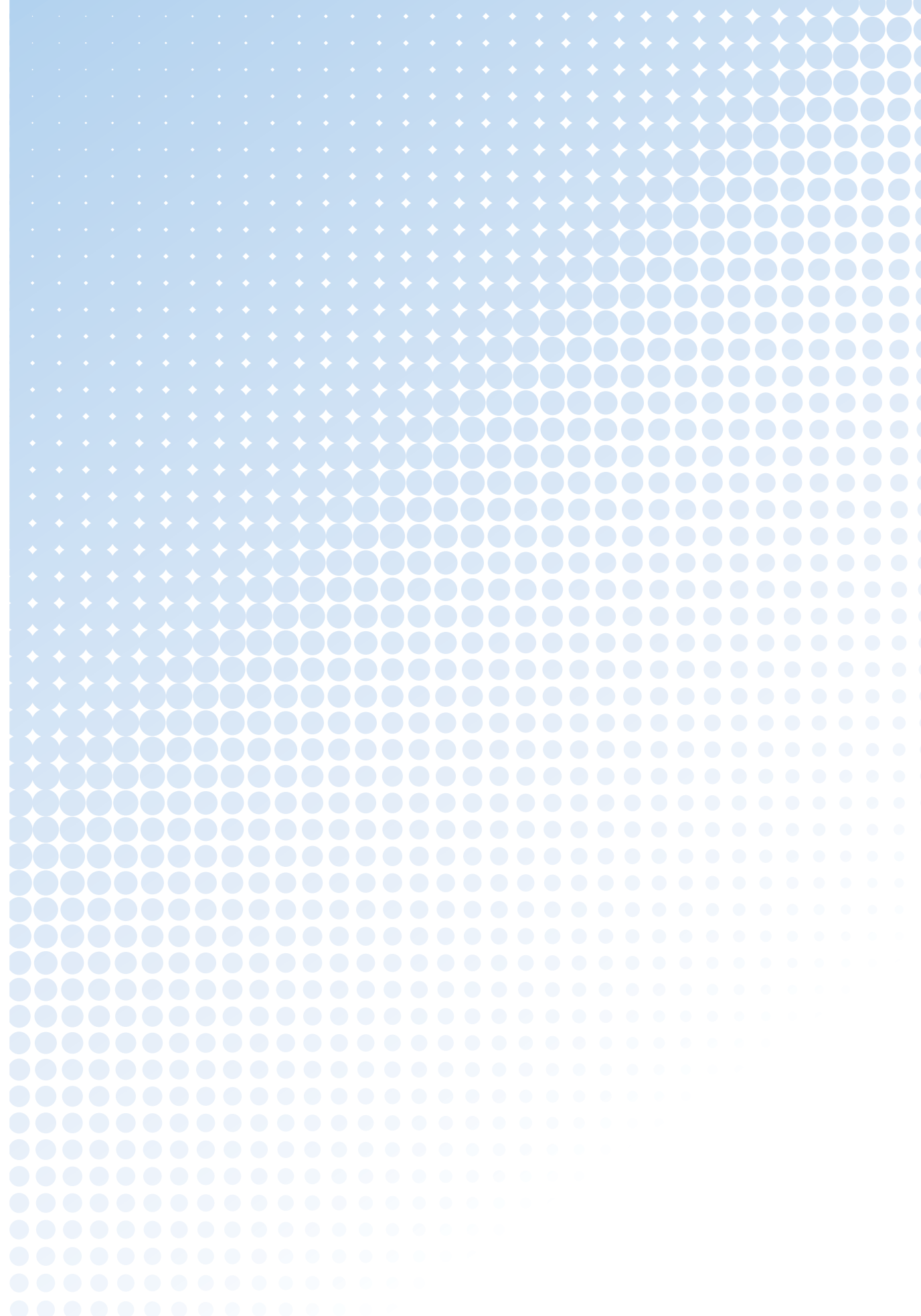
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*Information accurate as at August 2018*

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