

NATIONAL OUTSTANDING CLINICIAN AWARD 2020

Associate Professor Sum Chee Fang (岑志方)

Senior Consultant
Division of Endocrinology
Khoo Teck Puat Hospital

Senior Consultant
Diabetes Centre
Admiralty Medical Centre

“For his exemplary contributions and unwavering commitment to developing and advancing diabetes and endocrinology care”

Associate Professor Sum Chee Fang is known to many as an outstanding clinician and leader with “a heart for his patients and all who he had worked with and mentored”. He has excelled in varied roles over the past three decades as a doctor, physician and endocrinologist with deep clinical skills and expertise in all areas of internal medicine and endocrinology. He is also a well-respected teacher and mentor to generations of doctors and nurses.

A/Prof Sum is a pioneer in setting up the Diabetes Centre in Alexandra Hospital in 2001. The centre adopted a comprehensive inter-disciplinary approach to diabetes care and management of patients with complex diabetes problems. He recognised early on the critical importance of upskilling nurses by training them in the area of diabetes care. His foresight led to a collaboration with like-minded professionals in Singapore and the Nanyang Polytechnic team to establish the Specialist Diploma in Nursing (Diabetes Management and Education) in 2000.

A/Prof Sum’s passion to create a culture of interdisciplinary learning helped the team keep up with evolving healthcare demands and patient needs. When the Diabetes Centre moved to Khoo Teck Puat Hospital (KTPH) in 2010, in line with the transition from Alexandra Hospital to KTPH, A/Prof Sum established the Centre with a strong emphasis on patient engagement and education, built on a foundation of academic research.

A/Prof Sum also initiated the Advanced Practice Nurse (APN) Programme at the Diabetes Centre. Recognising the crucial role APNs play in patient care, he personally trained a number of Diabetes Educators in the clinical aspects of patient care in diabetes, which inspired most of them to take up further studies. He was also one of the first clinicians to upskill and train the APNs and worked out a Collaborative Prescribing Agreement for the Centre, which allowed its APNs to prescribe diabetes medications for patients under clinician supervision.

A/Prof Sum also chaired the National Healthcare Group (NHG) Diabetes Disease Management Committee from 2001 to 2008, and the Ministry of Health Diabetes Strategy Advisory Committee in 2008. He also helped set up the NHG Diabetes

Registry that has provided valuable data for research projects across multiple healthcare institutions. This registry continues to serve as one of the most important resources for monitoring and improving diabetes management within NHG.

A/Prof Sum also generously extended his knowledge and time beyond the hospital to improve the standards of diabetes management care at Woodlands Polyclinic since 2016. On top of advising the care team, A/Prof Sum led them in analysing patient data and identified areas that could be improved upon to enhance patient care experience.

A/Prof Sum remains a leader in diabetes and endocrinology care. He has been instrumental in developing and enhancing diabetes care in the public sector through his various contributions in hospital management, national committees and in the training of staff. A passionate educator and researcher, A/Prof Sum has more than 100 publications in peer-reviewed journals.

His dedicated service and contributions over his 36-year career has been recognised with him being awarded the National Healthcare Group Outstanding Citizenship Award in 2006 and the Ministry of Health Distinguished Senior Clinician Award in 2016.

For his exemplary contributions and unwavering commitment to developing and advancing diabetes and endocrinology care, A/Prof Sum is awarded the National Outstanding Clinician Award 2020.

NATIONAL OUTSTANDING CLINICIAN SCIENTIST AWARD 2020

Professor Yong Eu Leong (杨有亮)

Senior Consultant
Department of Obstetrics & Gynaecology
National University Hospital

Professor
Department of Obstetrics & Gynaecology
Yong Loo Lin School of Medicine
National University of Singapore

“For his outstanding research in women’s health and human fertility, and his exemplary leadership in innovations to improve medical care”

As one of Singapore's leading medical researchers, Professor Yong Eu Leong has pushed the frontiers of knowledge for menopausal osteoporosis and human fertility for over 30 years.

A significant contributor to the understanding and treatment of male and female infertility, Prof Yong’s research has shed light on how androgen receptor mutations and polymorphisms cause sexual reversal in XY individuals and low sperm counts in men. With the help of the Molecular Diagnosis Centre at the National University Hospital (NUH), his findings have been translated into novel genetic testing services for patients in Singapore and around the world.

In 2014, Prof Yong started the Integrated Women’s Health Programme (IWHP), which is a unique study focused on the key health concerns of mid-life Singaporean women. For the first time, the size and scope of women-specific health issues, such as menopause, osteoporosis, anxiety, depression, pre-diabetes, pre-hypertension, urinary incontinence, poor sleep and hip fractures, have been scientifically characterised. Equipped with this knowledge of women’s health needs, Prof Yong went on to lead more randomised control trials to study innovative interventions adapted to the Singapore context, such as a smart phone app to restore optimum weight in women with gestational diabetes, and novel drugs targeting bone signalling proteins from the Traditional Chinese Medicinal plant, *Epimedium*, for post-menopausal osteoporosis.

A prolific researcher, Prof Yong has authored more than 150 peer-reviewed publications to date. In 1999, he received a Ministerial Citation from the then-National Science and Technology Board, for his contributions to research on the genetics of human fertility. In 2004, he received the Biomedical Research Council (BMRC) – National Medical Research Council (NMRC) Clinician Scientist Investigator Award, given to outstanding clinician scientists to carry out internationally competitive translational and clinical research. In 2011, Prof Yong received the NMRC Clinician Scientist Award (CSA) under the senior investigator category, and successfully renewed his award for another 5 years in 2017. For his current CSA research, he and his team aim to improve clinical management of osteoporosis by identifying new protein target sites for osteoporotic drug development.

From 2001 to 2003, Prof Yong served as Vice-Chairman (Research) Medical Board, National University Hospital, where he spearheaded many initiatives to train new clinician-scientists and develop Singapore's research infrastructure. He was the founding Director (Research) at the NUH Office of Biomedical Research, predecessor of the current NUH Research Office, as well as a founding member of the NUH Investigation Medicine Unit, an inpatient facility to improve the quality of clinical research.

Prof Yong's research excellence is matched by his dedication to the education of young doctors and clinical care of patients. As Professor and past-Head of the Department of Obstetrics and Gynaecology at both NUH and NUS, Prof Yong lends his academic prowess and expansive clinical experience to the training of future generations of clinician-scientists and medical practitioners. During his 11-year tenure as Head (2008 to 2019), the NUH Department of Obstetrics and Gynaecology trained a new generation of confident and highly-skilled specialists dedicated to caring for women and their foetuses. Under his leadership, the department also made remarkable strides in improving the quality of care and value-driven outcomes for patients, in procedures such as lower segment Caesarean section and hysterectomies. During this period, the number of women who chose to deliver their babies in NUH doubled, a development that testifies to Prof Yong's leadership, emphasis on teamwork, and innovations to address the concerns of Singapore women.

For his outstanding research in women's health and human fertility, and his exemplary leadership in innovations to improve medical care, Prof Yong is awarded the National Outstanding Clinician Scientist Award 2020.

NATIONAL OUTSTANDING CLINICIAN MENTOR AWARD 2020

Associate Professor Keson Tan

Senior Consultant
National University Centre for Oral Health, Singapore

Associate Professor
Faculty of Dentistry
National University of Singapore

“For his vision, passion, and dedication in grooming future generations of dentists”

Since beginning his career in 1988 as a Senior Tutor in the Faculty of Dentistry at National University of Singapore (NUS), Associate Professor Keson Tan has been passionate about the teaching and mentoring of dental students as well as expanding the field of knowledge in Prosthodontics.

A/Prof Tan has served as Programme Director of the Graduate Prosthodontic MDS Residency Training Programme since 2001. This programme is a three-year full-time residency course leading to the degree of MDS (Prosthodontics) and is the recognised Basic Specialist Training for the specialty of Prosthodontics. Programme residents have won several international research awards, and seven ex-residents have been inspired to join academia in Singapore, Malaysia and the US. The programme owes its success to A/Prof Tan's close mentorship of residents and his strong programme philosophy of uncompromising clinical standards coupled with thought-independence in treatment plan development and multi-disciplinary joint consultations in the management of highly complex cases. A/Prof Tan maintains close contact with the graduates from this programme, supporting them after graduation as they develop their careers as specialists.

In 2001, A/Prof Tan was appointed Dean of the Faculty of Dentistry and served until 2009. In 2007, he oversaw the enhancement of the Adjunct Staff Scheme to include private dental practitioners in the Undergraduate and Postgraduate faculty. Among the adjunct faculty were many alumni who were inspired by A/Prof Tan's belief in mentorship and his efforts to better support future dental professionals in their education.

A/Prof Tan also contributed to the Undergraduate Bachelor of Dental Surgery (BDS) course that encompass preclinical and clinical teaching modules through all four years of the course. For example, he introduced the Integrated Course in Occlusion in 1993, a preclinical module that is foundational for the clinical phases of the BDS course.

A/Prof Tan has been instrumental in shaping the future of dental education in Singapore. The concept of a national dental centre that synergistically incorporates the domains of education, research and clinical service was mooted during his tenure as Dean. Even after he stepped down, he continued to offer his expertise and insights in layout, process interface and advanced pedagogical designs. These eventually

materialised in the modern 11-storey National University Centre for Oral Health, Singapore (NUCOHS), which officially opened in July 2019.

Beyond the University, A/Prof Tan also contributed to the Prosthodontics specialty and dental fraternity in Singapore. He is a supportive and active contributor to the Prosthodontic Society of Singapore. He has also served in various capacities in the Academy of Medicine Chapter of Dental Surgeons, the Dental Specialty Board for Prosthodontics, Academy of Medicine Chapter of Dental Surgeons and the Singapore Dental Council. In 2008, the Ministry of Health appointed him to the Dental Specialists Accreditation Board. In all these appointments, A/Prof Tan consistently guided and provided holistic guidance to younger clinicians.

A/Prof Tan is also active in research. He has published over 55 publications, and won the 2009 William R Laney Award for the best article published in the International Journal of Oral and Maxillofacial Implants. Today, he continues to actively mentor and inspire young academics in their research journey and lifelong learning.

As a visionary and mentor, A/Prof Tan has taken the lead in shaping and nurturing dentistry students, residents and staff, including a large pool of well-qualified adjunct staff, in order to build a strong dental fraternity. In the process, he has helped raise the global stature of the school.

For his vision, passion, and dedication in grooming future generations of dentists, A/Prof Tan is awarded the 2020 National Outstanding Clinician Mentor Award.

NATIONAL OUTSTANDING CLINICIAN EDUCATOR AWARD 2020

Associate Professor Nicholas Chew Wuen Ming (周文明)

Group Chief Education Officer
National Healthcare Group

Chairman Medical Board
Woodlands Health Campus

Senior Consultant
Department of Psychological Medicine
Tan Tock Seng Hospital

“For his inspiring dedication and exemplary contributions in advancing graduate medical education”

A passionate advocate for education and learning, Associate Professor Nicholas Chew has been at the forefront of undergraduate and postgraduate education since joining the National Healthcare Group (NHG) in 2001. He has displayed outstanding leadership in advancing graduate medical education, both in NHG and in Singapore.

A/Prof Chew has spearheaded various initiatives for faculty and leadership development at the cluster level and is a respected mentor among his peers. He played a pivotal role in establishing the NHG Residency Programme in 2009. A key member of the start-up team, he helped design, implement and enhance the Programme’s system, policies, and procedures to effectively guide residents, as well as create a conducive training environment for them. He was also instrumental in the development of a new training model for Postgraduate Year 1 (PGY1) medical students with the Accreditation Council for Graduate Medical Education-International (ACGME-I) in 2010.

A/Prof Chew was Designated Institutional Official (DIO) of the NHG Residency Programme between 2011 and 2018. Under his leadership, the Programme received national and international recognition for its quality and rigorous standards of training.

In 2015, A/Prof Chew was appointed NHG Group Chief Education Officer, overseeing the development and implementation of NHG Group Education strategies to reinforce NHG’s population health mission. Striving to build a strong pipeline of future healthcare professionals, he has championed initiatives to advance leadership competencies and capabilities among staff, including improving inter-professional faculty development, and fostering a culture of Collective Leadership in the organisation.

A/Prof Chew inspires with his spirit of innovation. He helmed the launch of the NHG Training and Education Database (TEDBase) across NHG institutions in 2015, in order to improve the efficiency and accuracy of faculty information. He also led the implementation of the LEAP (Learning Evaluation & Assessment Platform) mobile application, which streamlines administrative processes and allows residents to monitor their own training progress.

At the national level, A/Prof Chew has collaborated extensively with international experts and MOH to introduce innovative development programmes for residency faculty members and the inter-professional community in Singapore. He continues to be actively involved in faculty and leadership development through workshops and conferences, both locally and internationally.

A/Prof Chew served as a member of the Joint Committee on Specialist Training from 2011 to 2015, Specialist Accreditation Board from 2011 to 2018, and Training and Assessment Sub-Committee for PGY1s. He contributed to the implementation of the National PGY1 Training and Assessment Framework and led a workgroup to restructure the PGY1 Training Assessments. He presently serves on the Psychiatry Residency Advisory Committee.

As Chairman Medical Board of Woodlands Health Campus (WHC), A/Prof Chew oversees the development of care strategies, clinical services, policies and governance. He advises on the planning and employment of medical staff, including training and development, as part of the institution's efforts to build a robust pool of competent clinicians to meet the needs of patients when WHC opens progressively from 2023.

For his inspiring dedication and exemplary contributions in advancing graduate medical education, A/Prof Chew is awarded the National Outstanding Clinician Educator Award 2020.

National Outstanding Clinical Quality Champion Award 2020

Dr Chow Mun Hong (周文匡)

Senior Consultant
Director, Quality Management
Chief Risk Officer
SingHealth Polyclinics

Clinical Assistant Professor
Duke-NUS Medical School

Vice-Chair, Strategy and Innovation
SingHealth Duke-NUS Family Medicine Academic Clinical Programme

“For his inspiring leadership, exemplary efforts in advancing system-wide quality and safety for patients, and commitment to developing future generations of healthcare professionals”

Dr Chow Mun Hong has dedicated his professional career to improving patients' lives. In his 30-year medical career, he has nurtured generations of healthcare professionals in SingHealth Polyclinics (SHP), and instilled systemic improvements to ensure that improving patient care continues to be a key focus at SHP.

Dr Chow founded the SHP Quality Management Department in 2006 and built an integrated Quality Framework for work areas including clinical governance, quality assurance, patient safety, patient experience, enterprise risk management, improvement, and culture and capacity building.

He set up a system of multi-disciplinary expert groups in various aspects of quality and safety, workgroups in various clinical fields, and Improvement Collaboratives that connected SHP-level Clinical Leaders and clinic-based improvement teams. This enabled every member of SHP to thrive in an integrated inter-disciplinary system which emphasises institutional learning and knowledge management, governance and improvement.

Having great passion for transforming care delivery systems, Dr Chow spearheaded the design of a Clinical Information System that provided point-of-care decision support, generation of reports to support improvement, as well as registry-based views of patients to enable proactive patient monitoring. These functions were foundational to SHP's ability to consistently provide quality chronic disease management by multi-disciplinary teams at high volumes. SHP's development of Telecare has also enabled them to transform from a reactive to a proactive mode of care delivery, delivering care to patients even when they are not physically at the clinics.

At the Singapore Healthcare Improvement Network (SHINe), Dr Chow co-chaired the National Curriculum Workgroup for Patient Safety and Quality Improvement (PSQI) that developed a common set of learning objectives for various topics on PSQI, and is currently the Co-Executive Lead for a Large Scale Initiative on Transitions of Care that

is working on improving the safety and effectiveness of care transitions at various healthcare institutions across Singapore.

Dr Chow has been training Family Physicians and other healthcare professionals in Quality and Safety since 1999 and is committed to developing future generations of physicians. Each member of the SHP family participates in a Quality and Safety training framework developed by Dr Chow that guides them in skills development as they progress in their career. Many senior clinicians at SHP today remember the lessons they have learned and apply them now as leaders.

Concurrent to his role at SHP, Dr Chow served at SingHealth Headquarters, as Director, Clinical Governance and Quality Management, and thereafter as Director, Innovation and Quality Management. He expanded the Quality and Safety training for all SingHealth Residents and other staff, and introduced Design Thinking as a complement to existing initiatives for improvement.

For his inspiring leadership, exemplary efforts in advancing system-wide Quality and Safety for patients, and commitment to developing healthcare professionals to ensure continuity across generations, Dr Chow is awarded the National Clinical Quality Champion Award 2020.

**NATIONAL CLINICAL EXCELLENCE TEAM AWARD 2020
KK HUMAN MILK BANK PROGRAMME**

Clinical Assistant Professor Chua Mei Chien (蔡美娟)

Head and Senior Consultant
Special Care Nursery and Department of Neonatology
KK Women's and Children's Hospital

Director, KK Human Milk Bank
KK Women's and Children's Hospital

Clinical Assistant Professor
Duke-NUS Medical School

Adjunct Assistant Professor
Lee Kong Chian School of Medicine
Nanyang Technological University, Singapore

Clinical Senior Lecturer
Yong Loo Lin School of Medicine
National University of Singapore

Dr Agarwal Pooja Jayagobi

Consultant
Department of Neonatology
KK Women's and Children's Hospital

Clinical Assistant Professor
Duke-NUS Medical School

Clinical Teacher
Yong Loo Lin School of Medicine, Singapore

Adjunct Assistant Professor
Lee Kong Chian School of Medicine
Nanyang Technological University, Singapore

Ms Wong Anng Anng (黄恩恩)

Senior Milk Bank Coordinator, KK Human Milk Bank
KK Women's and Children's Hospital

“For their outstanding contributions and achievements in establishing a national Donor Human Milk Bank programme for the benefit of premature and critically-ill babies in Singapore”

The KK Human Milk Bank (KKHMB) was launched in August 2017, with an aim to provide a ready supply of safe pasteurised donor human milk (PDHM) for premature

and critically ill babies when their mothers' own milk is insufficient. Breast milk is scientifically proven to be the best nutrition for all infants, especially those born premature. The World Health Organization and the American Academy of Paediatrics recommend the use of donor human milk as the first choice for preterm infant feeding after a mother's own milk.

KK Women's and Children's Hospital (KKH), Singapore's largest academic medical centre specialising in women's and children's health, is equipped with a 40-bed neonatal intensive care unit that serves the largest birth cohort in Singapore and manages neonates with the most complex medical and surgical conditions. Recognising that the exclusive use of human milk in very low birth weight (VLBW) infants averaged only 11.5% over the past 12 years and the important role of human milk in the reduction of necrotising enterocolitis (NEC)¹, the team planned to set up the first and only donor human milk bank in Singapore.

Due to the lack of local and regional expertise in donor human milk banking, the team went on a study trip to the Perron Rotary Express Milk Bank in Western Australia to attain the necessary knowledge and skills required. With support from Temasek Foundation, careful planning of the supply chain process, as well as the infrastructure set up based on international best practices, KKHMB was established.

As at 30 September 2020, KKHMB has recruited 691 donors and benefited more than 1,844 recipients. The exclusive use of human milk in the vulnerable neonatal population in KKH has increased dramatically from the baseline of less than 20% to 97%. More importantly, the incidence of NEC has drastically reduced from 5.8% in VLBWs to no cases in 2018. This has helped significantly reduce the total medical bill size as well as length of hospital stay of these patients.

Since its launch, the KKHMB has garnered strong public support with many mothers coming forward to donate their excess breast milk. Mothers of recipients report a better sense of well-being knowing that PDHM offers better outcomes for their babies. With the milk bank working closely with the lactation service in the hospital, mothers of recipients also feel better supported in their endeavour to breastfeed, with many managing to increase their own milk supply.

Beyond Singapore, KKHMB has received regional interest to understand more about the effective establishment of such a programme. With the success of KKHMB, an additional grant from Temasek Foundation was secured in July 2019, enabling the milk bank to grow its capacity to provide PDHM to patients up to 12 months of age with a broader range of medical conditions and even after hospital discharge.

For their outstanding contributions and achievements in establishing a national Donor Human Milk Bank programme for the benefit of premature and critically ill babies in Singapore, the KK Human Milk Bank team is awarded the 2020 National Clinical Excellence Team Award.

¹ Necrotising enterocolitis a lethal gut condition where the intestines can become damaged due to tissue death, and can lead to severe illness and even death of the baby. It is primarily seen in premature infants, and is potentially life-threatening, and survivors may suffer long-term health issues associated with poor growth and cerebral palsy.