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Bringing healthcare closer to home

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Celebrations for newly-minted healthcare professionals

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Shop right, eat right!

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A TRIBUTE TO NURSES:

HIGHEST *Honours* FOR *Champions* OF CARE

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evidence

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On the Cover
Mdm Kuttiammal Sundarasan (left) and Dr Lee Yee Mei (right), recipients of the 2017 President's Award for Nurses.

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INSTITUTIONAL NEWS



Distinction in Healthcare Innovation

JurongHealth Campus received two National Health IT Excellence Awards.

For its work with Integrated Health Information Systems (IHIS) to implement the Closed Loop Barcoded Blood Product Administration system, JurongHealth Campus received the National Health IT Excellence Award 2017 (Beyond Quality to Value) from Health Minister Gan Kim Yong on 30 May 2017. The system aims to increase efficiency and reduce errors in blood product transfusion.

The Champion for Health IT Excellence Award went to Adj A/Prof Gamaliel Tan, Chief Medical Informatics Officer and Head, Orthopaedics, who led a team to achieve a 4-Less Environment (Chartless, Scriptless, Filmless and Paper-less) by implementing a single integrated Electronic Medical Records (EMR) system across Ng Teng Fong General Hospital (NTFGH) and Jurong Community Hospital (JCH).

Making Their Mark

+ Dr Raghav Sundar and Dr Joline Lim, Associate Consultants from the Department of Haematology-Oncology, National University Cancer Institute, Singapore (NCIS), clinched the Merit Award at the 2017 American Society of Clinical Oncology (ASCO) Meeting. The doctors received the awards for their research on combination cancer therapies, and were the only two merit award winners from Singapore.



Dr Raghav Sundar



Dr Joline Lim

+ NTFGH's Principal Medical Social Worker Alvin Chua was conferred the PS21 Distinguished Star Service Award at the Excellence in Public Service Awards 2017 ceremony. He was recognised for going the extra mile in helping a troubled 20 year-old patient start afresh in life.



Alvin Chua receiving his PS21 Distinguished Star Service Award from DPM Teo Chee Hean.

National Day Awards 2017

Congratulations to the 63 National Day Awards recipients from the National University Health System (NUHS). The honours are given out annually to public servants, community and grassroots leaders, and educators for their exemplary contributions to Singapore.

THE PUBLIC ADMINISTRATION MEDAL (SILVER) & PUBLIC SERVICE MEDAL

+ Mr Foo Hee Jug
Deputy CE, NUHS, and CEO, NTFGH

THE PUBLIC ADMINISTRATION MEDAL (SILVER)

+ Associate Professor Grace Ong
Faculty of Dentistry, NUS

THE PUBLIC ADMINISTRATION MEDAL (BRONZE)

+ Professor Lawrence Ho Khek Yu
Group Director, Research Office, NUHS, and Vice-Dean, Research, NUS Yong Loo Lin School of Medicine

THE PUBLIC SERVICE MEDAL

+ Associate Professor Roy Joseph
Emeritus Consultant, Department of Neonatology, NUH, and Chairman, National Medical Ethics Committee

THE COMMENDATION MEDAL

+ Mr Shaun Peter Baggarley
Chief Medical Radiation Physicist, NUH

+ Ms Janet Lam Mei Peng
Senior Nurse Clinician, NUH

+ Mr Michael Ong Kah Leong
Senior Assistant Director, Diagnostic Imaging Department, NUH

+ Mr Tan Nam Ann
Director, Operational Support Services, NUH

+ Ms Wei Suat Nee
Deputy Director, Hospital Planning, NTFGH

THE EFFICIENCY MEDAL

+ Ms Pauline Chong Li Yen
Senior Nurse Clinician, NUH

+ Ms Fang Lei
Senior Manager, Obstetrics & Gynaecology, NUH

+ Ms Margaret Hong Nguik Wah
Executive, Human Resource, NUH

+ Ms K Venmathy
Senior Social Work Coordinator, NUH

+ Ms Leong Yoke Mei
Medical Technologist, NUH

+ Ms Murugian Jayasheela
Service Team Leader, Emergency Medicine, NUH

+ Ms Racey Lee Napenas
Senior Pharmacy Technician, NUH

+ Ms Rohaizah Binte Samad
Nurse Manager, NUH

+ Ms Shu Fui Fui
Principal Pharmacy Supervisor, NUH

+ Mr Isacc Steven
Senior Supervisor, Tow Trucks/Portering, NUH

+ Ms Yeo Hui Ling
Nurse Clinician, NUH

+ Ms Chia Guat Tin
Senior Nurse Manager, NTFGH

+ Ms Celestine Lee Mei Ling
Senior Manager, Communications, NTFGH

+ Mr Mohamad Salleh Bin Manit
Assistant Nurse Clinician, NTFGH

+ Ms Sim Chiew Te
Medical Social Worker, NTFGH

Thirty-nine NUHS staff also received the Long Service Medal. For a full list of the 2017 NUHS National Day Awards winners, please refer to the NUHS website at www.nuhs.edu.sg

One NUHS Together for Singapore

The new NUHS Family gathered at West Coast Park on 4 August 2017 to keep fit and celebrate the nation's 52nd year of independence. Over 1,000 participants across NUHS institutions took part in a 1 km run. Joining them as Guest of Honour was Member of Parliament for West Coast GRC and NTUC Assistant Secretary General, Mr Patrick Tay (photo below, 2nd from right).





Visual Tribute to Everyday Heroes

Our People, Our Pride 2017 highlighted the passion and commitment of NUH staff through images of them at work.

Every National University Hospital (NUH) staff member — from housekeepers to service ambassadors and nurses to administrative staff — plays a vital role in shaping the experience of patients. The photo exhibition, *Our People, Our Pride 2017*, held at the hospital's main lobby from 20 to 23 July 2017 celebrated the staff's dedication to delivering quality patient care.

In conjunction with the event, NUH also collaborated with Community Chest Singapore for the T.R.I.C.E Tiles Project. Staff donated \$10 to decorate a tile with murals that highlight NUHS' core values of Teamwork, Respect, Integrity, Compassion and Excellence (T.R.I.C.E.). They could also donate \$10 for a tile painted by a Movement for the Intellectually Disabled of Singapore (MINDS) beneficiary, and another \$10 to present a painted tile to another colleague. Over \$30,000 was raised, with all proceeds going to MINDS.

Solutions for a Better Future



In line with NUHS' push for multidisciplinary education and research, the inaugural Medical Grand Challenge was launched in August last year to encourage creativity and entrepreneurship among students from the National University of Singapore (NUS) to address unmet healthcare needs. Seventeen teams comprising students from across the Medicine, Engineering, Law, Arts and Business faculties presented novel solutions to health challenges, and the winners were announced on 18 August 2017.

The top three winning innovations were:

1. "Hipportable"; a transportable belt that allows caregivers to lift and transport elderly with disabilities.
2. "PDSafe", which reduces infections in peritoneal dialysis patients by allowing contactless sterilisation.
3. "FootSense"; an affordable, portable, home-based foot temperature monitoring system to detect foot ulcers.

A Learning Journey

An NUHS delegation visited two US institutions as part of the planning process for the redevelopment of Kent Ridge Campus.

Ten years after the completion of the NUH Masterplan in 2007, NUHS is looking into a phased, long-term redevelopment plan of its Kent Ridge Campus involving NUH, NUS Yong Loo Lin School of Medicine (NUS Medicine) and NUS Faculty of Dentistry (FoD). This is to enable NUHS to continue its transformation to meet the future clinical, education and research needs of Singapore.

To find out how other academic health systems have undertaken a similar yet complex infrastructure development, an NUHS delegation, led by NUHS Chief Executive Professor John EL Wong and NUH Chairman Medical Board Professor Quek Swee Chye, visited the University of California, San Francisco (UCSF) and Johns Hopkins University Hospital (JHM) from 1 to 5 May 2017.

The study trip offered some key learning points. Examples include how, at both UCSF



The NUHS delegation at the UCSF Benioff Children's Hospital.

and JHM, master planning and facilities development started with a strategic plan and a review of clinical service lines; and how JHM applied innovative solutions such as centrally-managing onsite, mobile and offsite units to address space limitations.

Beyond the master planning for Kent Ridge Campus, the visits underscored the importance for NUH to review how it can better marry its overall mission to provide quality tertiary care for patients in Singapore, with its responsibility to patients in the Western part of Singapore.



Dr Richard Hui (5th from left), Head, Choa Chu Kang Polyclinic and Dr Lew Yui Jen, CEO, NUP (3rd from right), led a tour of the polyclinic for NUHS Board Members Mr Paul Chan (3rd from left) and Mr Khoo Teng Chye (2nd from right). Accompanying them were Prof John EL Wong (4th from right), CE, NUHS, and Ms Wong Soo Min (4th from left), Group CFO, NUHS.



NUHS Board Members Mr Richard Lim (2nd from left) and Ms Kwa Kim Li (3rd from left) on a tour of the polyclinic led by Dr Tan Kim Kiat (1st from left), Deputy Head, Choa Chu Kang Polyclinic and Mr Thomas Wee (3rd from right), COO, NUP.

Meeting Point

Choa Chu Kang Polyclinic hosts NUHS Board Meeting.

NUHS Board Members took the opportunity to tour Choa Chu Kang Polyclinic during their Board Meeting on 26 May 2017. They better understood the primary care facility's operations and how patients can benefit from the services provided.

With the formation of the National University Polyclinics (NUP), NUHS is now able to provide a full spectrum of care for patients across primary, intermediate and tertiary care settings. This also ensures more coordinated and seamless care for patients in the Western region of Singapore.



Get Social

JurongHealth Campus launches Workplace by Facebook.

JurongHealth Campus staff now have a legitimate reason to use Facebook during office hours. The organisation has adopted the social networking website's collaborative platform that connects colleagues on campus with familiar tools (like those on Facebook), keeps teams on the same page and shows the most important things on campus as they happen. A fun-filled roadshow was organised on 21 July 2017 at the staff Kampong area at NTFGH, Tower B, Level 2, to get everyone at JurongHealth Campus on board. Workplace at Facebook is accessible via desktop or personal mobile devices.



Dr Sumanto Haldar explaining the role of spices in improving blood glucose control to SMS Chee Hong Tat in the CNRC kitchen.

Minister's Visit to CNRC

Food and nutrition play an important role in the war against diabetes and obesity. To learn more about their correlation, Senior Minister of State for Health and Communications and Information Mr Chee Hong Tat visited the Clinical Nutrition Research Centre (CNRC) on 22 June 2017. A joint initiative between A*STAR's Singapore Institute for Clinical Sciences (SICS) and NUHS, CNRC is the first centre in Asia to have under-one-roof capabilities to perform research across the food chain and at all levels from the cellular level to whole-body nutrition. The centre is also fully-equipped with state-of-the-art facilities to conduct its nutritional studies.



Top and bottom: Prof John EL Wong, CE, NUHS, with members of the NUHS RHS Advisory Council.

Thanks for the Support

The NUHS RHS Advisory Council held an appreciation dinner to recognise the contribution of its members.

The NUHS Regional Health System (RHS) Advisory Council members come from different public, private and people sectors, and include primary care, intermediate and long-term care, social service providers and governmental organisations. To acknowledge their contributions, the Advisory Council held an Appreciation Dinner on 10 July 2017.

The Advisory Council was formed in 2014 to provide strategic direction and guidance on the overall development of the RHS. Since its formation, the Advisory Council has identified areas of care needs, to inform and develop service delivery models. These innovative models have married healthcare and social care elements to provide holistic care and improve care provider efficiency. Some examples include the NUHS-RHS Integrated Intervention and Care Extension (NICE) and Transitional Care programmes, which clinched the PS21 EXCEL Award, Most Innovative Project/Policy in 2016 and 2015 respectively; the RHS Manpower Partnership Programme; and Keat Hong Family Medicine Clinic.

Paying Tribute to Nurses

A main highlight of Nurses' Day 2017 was celebrating the achievements of two senior NUHS nurses who received the President's Award for Nurses.

Mdm Kuttiammal Sundarasan, Chief Nurse of NTFGH and JCH, shows day in, day out that nursing is an indispensable profession. The same is true of Dr Lee Yee Mei, Assistant Director of Nursing at NUH and Head of Nursing at NCIS. Fittingly, then, both of them were recently honoured with the 2017 President's Award for Nurses.

The highest accolade in the nursing profession, the Award is given each year to nurses who have made significant contributions to the profession and the community. All five of this year's recipients — including Mdm Kuttiammal and Dr Lee, received their awards from President Tony Tan during the Nurses' Day Reception at the Istana on 27 July 2017.

CONGRATULATIONS! HOW DOES IT FEEL TO ACHIEVE THIS NATIONAL RECOGNITION?

Mdm Kuttiammal: I am very happy for myself and for JurongHealth Campus, as this is the first time the Award has gone to someone from our campus. I could not have done it without my family at home, my family at work and our patients.

Dr Lee: I am humbled and filled with gratitude to receive the Award. But the journey does not end here. I will continue this meaningful work, as part of NUHS' Nursing legacy, to transform the profession in NUHS and in Singapore.

OF ALL YOUR CAREER ACCOMPLISHMENTS THUS FAR, WHAT ARE YOU MOST PROUD OF?

Mdm Kuttiammal: Being part of the pioneering team at JurongHealth Campus and getting all our staff to embrace a new work culture and become one team. The path was not without its trials and tribulations, but I gained an immense amount of skills and knowledge that I would not have picked up from any nursing school.

Dr Lee: Completing my PhD in 2013. The doctorate programme prepared me to address current and future issues that require a strong scientific foundation for nursing practice, as well as promote and elevate the positive image of the nursing profession.



Mdm Kuttiammal and Dr Lee flank Minister for Health Gan Kim Yong (centre) and are joined in the front row by senior members of NUHS management and its nursing fraternity.

WHAT IS MOST REWARDING ABOUT YOUR JOB?

Mdm Kuttiammal: I get to meet people from all walks of life, as well as nurture my nurses to grow in their role as caregivers and achieve greater heights in the profession.

Dr Lee: Because cancer treatment lasts as long as six to eight months, patients and family members soon become friends. Every one of them has inspired me to pursue better quality care, and offer hope where there previously was none.

WHAT ADVICE DO YOU HAVE FOR JUNIOR NURSES?

Mdm Kuttiammal: While the challenges may seem daunting, there has never been a more exciting time to enter nursing. There is no limit to where a career in nursing can take you. With the right attitude and knowledge, and by leveraging technology and innovation for better patient care, the opportunities are limitless.

Dr Lee: To be future prepared, nurses need to be nimble; develop resilience and be adaptable to manage change within the healthcare system. Nursing leaders need to be strategic in professional development, influencing policies and contribute globally through international collaboration.

ABOUT THE AWARDEES

A nurse for 40 years, **Mdm Kuttiammal Sundarasan** has been with JurongHealth Campus since its inception in 2009. She was instrumental in planning, designing and integrating NTFGH and JCH, and in building the nursing team from scratch to its current strength of 1,800. Under her leadership, many technological innovations have been introduced at the two hospitals, including the Electronic Patient Information Board and the "Code Blue" button to improve bedside care. She also guided her team in developing the "Virtual Nurse", Singapore's first mobile learning app to facilitate nursing training on campus.

Dr Lee Yee Mei's passion for oncology nursing started even before graduating from nursing school in the early 1990s. She has initiated programmes to expand cancer services beyond the hospital, allowing patients to receive care at home or in the community, and is active in cancer patient support groups and community screening activities. As the first Advanced Practice Nurse (APN) in Singapore to independently perform bone marrow extraction — a procedure typically done by doctors — she is committed to mentoring aspiring APNs and student nurses, and promoting clinical pathways for nursing development.



It's Their Day!

During the last week of July into early August 2017, Nurses' Day celebrations were held across the NUHS cluster to honour and recognise the contributions of nurses to the nation.



What's a party without cake? NUH nurses had that and more in the last week of July. Besides the customary cake-cutting, flower-gifting, and K-pop Dance Showcase by our talented nurses, the nurses were also treated to supper bentos and a movie screening!

NUH nurses working in the NUH Wards 2 and 3, which are housed within Alexandra Campus, had fun posing in front of the camera with NUHS management who were present to thank them for their hard work.



JurongHealth Campus celebrated Nurses' Day on 28 July with a mobile coffee truck which was parked outside NTFGH. Minister for Health Mr Gan Kim Yong made a special appearance and, together with NTFGH senior management, staff, patients and volunteers, bought hot drinks for the nurses.



This year, the JurongHealth Campus' theme was "Celebrating Heart Work". Smiles and laughter were the order of the day as nursing staff took part in fun activities, including a lip sync battle, which featured some hilarious costumed characters.



Joining the NUS Alice Lee Centre for Nursing Studies (ALCNS)'s nursing students at this year's Conventus were fellow NUS medical students, who wowed the 400-strong audience with their dance performance inspired by the Hollywood blockbuster, *La La Land*.



NUP nurses showed their creativity and energy with exciting performances and fun activities at the Nurses' Day celebrations held at each of the polyclinics. Senior management also served them lunch to show their appreciation for the nurses' hard work. From their big smiles, it's evident that all had a great time.



ALCNS and NUS Medicine marked Nurses' Day with its 11th annual Conventus event on 3 August. For the first time, an inauguration ceremony was held to welcome incoming nursing freshmen to ALCNS and the profession.

MERITORIOUS SERVICE

Our heartiest congratulations go out to these Nurses' Merit Award 2017 winners from NUHS! They were among 100 nurses selected by the Ministry of Health in recognition of their outstanding performance and contribution to the profession.

NTFGH

+ **Loo Kai Chin**
Assistant Nurse Clinician



+ **Rosidah Binte Idris**
Nurse Clinician



+ **Grace Tacbibanan**
Senior Staff Nurse



+ **Nur Azizah Binte Suhaimi**
Senior Staff Nurse



NUH

+ **Wong Shuting**
Nurse Clinician



+ **Peck Sin Yee**
Nurse Clinician



+ **Michelle Tan Meiling**
Nurse Manager



+ **Wendy Wee May Yin**
Nurse Educator



+ **Nagarajan Pathmmavathi**
Nurse Clinician



+ **Zelana Binte Mohd Fauzi Antoni Das**
Nurse Manager



+ **Foong Li Li**
Advanced Practice Nurse



+ **Pan Lijing**
Assistant Nurse Clinician



+ **Judith Kaylene Lee**
Nurse Manager



+ **Susan Ong**
Assistant Nurse Clinician



+ **Jessica Gan Kai Lun**
Assistant Nurse Clinician



NUP (PIONEER POLYCLINIC)

+ **Teo Lay Sze**
Nurse Manager



Healthcare Closer to Home

NUP's new Pioneer Polyclinic introduces dedicated care teams and provides accessible and quality services.



Residents of Pioneer and Jurong West used to have to travel to Jurong Polyclinic in Jurong East for appointments. But with the opening of Pioneer Polyclinic on 17 July 2017, they can now cut their travelling time and enjoy greater convenience. Located at 26 Jurong West Street 61, it is a five-minute walk from Pioneer MRT station.

Residents can access a wide range of services at the seven-storey building, from treatment for acute conditions and chronic disease management to women's and children's health services. General clinical services such as health screening, wound management and physiotherapy are also available. The new polyclinic will help to reduce pressure on Jurong Polyclinic, especially with the growing population in Jurong.

Apart from its accessible location, Pioneer Polyclinic was designed with patients in mind. For example, clinics in the polyclinic are colour-coded to make

each floor easily distinguishable. The straightforward alphanumeric naming convention is used, along with universal pictograms so that patients can find their way around easily. For increased convenience, supporting services such as drawing blood samples and blood pressure measurement are located on the same floor.

This new primary care facility is part of the Healthcare 2020 Masterplan by the Ministry of Health to meet the needs of Singapore's ageing population. Prior to the opening, Minister for Health Mr Gan Kim Yong and Associate Professor Benjamin Ong, Director of Medical Services at MOH, toured the premises on 27 June 2017. Advisor for Pioneer Constituency Mr Cedric Foo and Advisor for West Coast GRC (Boon Lay) Mr Patrick Tay also visited on 8 July 2017. This is part of efforts to engage the community and to work with the grassroots leaders to better understand residents' needs and reach out to residents in the area.



health professionals. Patients will see the same team at every visit. This helps to foster stronger bonds between patients and healthcare professionals as well as promote coordinated care to achieve better outcomes. "This care model will not only enable the care teams to better understand the patients' medical and psychosocial history, and enhance patients' engagement, it will also allow the teams to deliver care that is coordinated and seamless for the patients, thereby improving their health outcomes and satisfaction," said Dr David Tan, Head of Pioneer Polyclinic. Each of the three existing care teams will be matched with up to 6,000 patients and there are plans for two more teams.

Community engagement is a key theme in the design of Pioneer Polyclinic. Common areas offer a conducive healing environment for patients and their family to interact. There are also dedicated spaces for health talks and workshops to promote healthy living. In addition, the polyclinic has spaces decked with artwork painted with soothing colours to encourage healing. These art pieces are painted by students of Jurong West Primary School.

PIONEERING FEATURES

Pioneer Polyclinic is the first to automate its pharmacy registration process. This boosts efficiency, and half of all patients can expect to collect their medicine within 10 minutes.

The polyclinic is also the first to pair all patients suffering from chronic diseases with a dedicated care team comprising family physicians, care managers, care coordinators and allied



Health Minister Gan Kim Yong (centre) and DMS Assoc Prof Benjamin Ong (3rd from right) with senior members of MOH, NUHS, NUP and NHGP management.

WHAT'S NEW?

The first polyclinic to open in more than 10 years, Pioneer Polyclinic...

- Offers an automated pharmacy registration process
- Pairs patients who have chronic diseases with dedicated care teams
- Adopts patient-centric features such as colour-coded clinics
- Incorporates universal barrier-free designs to meet the needs of the elderly, handicapped and families in general
- Has eco-friendly features that meet the criteria of Building and Construction Authority's Green Mark Platinum rating



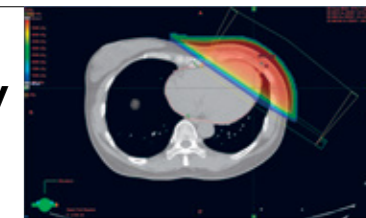
Saving More Lives

NUHCS expands resuscitation services to more patients.

When patients with cardiothoracic diseases suffer from heart or lung failure, Extracorporeal Membrane Oxygenation (ECMO) can be an invaluable resuscitation option. The temporary life-support technique involves using a pump to circulate blood outside the body while a machine removes carbon dioxide from the blood and adds oxygen before getting it back into the arteries.

As one of the two local public healthcare institutes that offer the life-saving procedure, the National University Heart Centre, Singapore (NUHCS) launched the ECMO Retrieval Service in January 2016. Under this initiative, patients from NTFGH, Khoo Teck Puat Hospital and Tan Tock Seng Hospital are transferred to NUHCS if they require ECMO support. Since 2016, NUHCS has successfully instituted ECMO in 34 patients, of which 24 were inpatients and the remaining 10 were patients from the three other hospitals.

As Easy as ABC



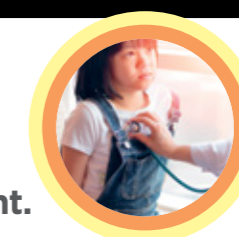
The Active Breathing Coordinator tool reduces radiation exposure to the heart during left breast cancer radiation therapy.

Radiation therapy for cancer patients works by destroying the genetic material within cells — both cancerous and healthy. This means that besides the target area, neighbouring organs may receive significant dosage too. This is of particular concern in cases of patients with left breast cancer, because of the heart's location behind the left chest wall.

The Early Breast Cancer Trialists' Collaborative Group from the UK has found that patients who received adjuvant radiation therapy for left breast cancer had a 1.7 times higher risk of getting ischemic cardiac disease, compared to those with right breast cancer. While this did not translate to higher mortality rates, oncologists at NCIS believe that radiation to the heart — regardless of the amount — should be minimised. To this end, NCIS' Department of Radiation Oncology has invested in an Active Breathing Coordinator (ABC) tool. The tool is connected to a respiratory monitoring device so that radiation is delivered at maximum inhalation, when the patient's chest wall is furthest from the heart. Since the tool was introduced in 2014, about 300 NCIS patients have benefited from an almost 50 per cent reduction in mean radiation dosage. The NCIS team has also improved their technique to cut the time spent by patients on the CT simulator machine. The ABC tool is now used by all patients with left breast cancer undergoing radiation therapy at NCIS, which has invested in more equipment last year.

More Holistic Support

With NUH's participation, the Circle of Care programme now includes a healthcare component.



Higher school attendance rates and improved reading and numeracy skills were observed among children from disadvantaged homes, thanks to early intervention by teachers, social workers and education therapists under the Circle of Care programme, which NUH joined in June 2017. With the NUH team now on board, the programme has expanded to offer healthcare services.

Since then, more than 120 pre-schoolers have undergone health checks, of which 60 were subsequently referred to specialists. The team visits pre-schools to conduct medical screening and nutrition checks, and looks out for developmental delays. The children's social and emotional health is also evaluated, and those with issues may be referred to specialists at NUH. Parents also get to learn about healthy habits from doctors during discussions on their child's development.

"Good physical health and healthy social-emotional development are the foundations and building blocks in which cognitive skills develop," said paediatrician Chong Shang Chee, head of NUH's child development unit. "Research is robust in the role of early intervention in children with development or health issues — in reducing further down trajectories of health problems or learning delays."

The Circle of Care programme was piloted by philanthropic group Lien Foundation and welfare organisation Care Corner in 2013 and covers 10 pre-schools and two primary schools.



A Warm Welcome

NUS Medical Dinner 2017 provided newly-minted healthcare professionals with an opportunity to celebrate as well as network.

Students from NUS' Medicine, Nursing and Pharmacy faculties may find themselves focused on their respective fields of study during term time. But these distinctions were blurred when the Class of 2017 gathered at the Raffles City Convention Centre on 4 July 2017 for the annual NUS Medical Dinner, which welcomes fresh graduates to their respective professions. The theme this year was 'Celebrating Interprofessional Education', emphasising the importance of teamwork in healthcare delivery, as professionals from different disciplines have to cooperate to achieve the best outcome for patients.

The dinner was attended by more than 750 people, including NUS President Professor Tan Chorh Chuan, Dean of NUS Medicine, Associate Professor Yeoh Khay Guan and Vice-Dean of Education Associate Professor Lau Tang Ching. Alumni from NUS Medicine also turned up, and the



NUS President Prof Tan Chorh Chuan, Dean of NUS Medicine, A/Prof Yeoh Khay Guan and Vice-Dean of Education A/Prof Lau Tang Ching share a laugh with NUS students.



event was particularly significant for those from the Class of 1977 and 1967 as they celebrated their 40th and 50th anniversaries respectively.



A Finger on the Pulse

Participants of The Heart Truth Symposium 2017 gained valuable insights and tips on cardiovascular health matters.

What should you do during cardiac emergencies? What are some common misconceptions about the coronary stenting heart procedure? These were some of the questions answered during the insightful Heart Truth Symposium, which was held on 1 July 2017 at the NUHS Tower Block Auditorium.

Organised by NUHCS, the fifth edition of this event was met with an overwhelming response, with all 300 tickets snapped up a month before the event. The five speakers included four professionals from NUHCS — Assistant Professor Yeo Tee Joo, Dr Julian Wong, Assistant Professor Kang Giap Swee and Professor Tan Huay Cheem — as well as dietician Ms Valerie Teong from NUH.

Over three hours, the audience learnt valuable heart-related information including the health benefits of exercising, preventive measures for Peripheral Arterial Disease, and the low-down on delicious but unhealthy local food dishes. The guest speakers also shared anecdotes from their personal experiences of working with heart patients, as well as the latest research findings in this field. Members of the audience who had further questions also took the chance to clarify their doubts during an engaging Question & Answer session.



A HEARTY READ

The Director of NUHCS publishes a compilation of his articles on cardiovascular topics.

For the past 10 years, Director of NUHCS Professor Tan Huay Cheem has been sharing insights on heart health through his column in *Lianhe Zaobao* newspaper. His writings have been compiled into a new book titled '临床心得第二集'. This is his second Chinese book after the first was published five years ago.

Written without technical jargon, the book raises awareness on heart health and educates readers on how to take better care of their heart. The topics covered are wide-ranging, from heart attack symptoms and the treatment of hypertension, to issues such as doctor-patient communication. The book is priced at \$22 per copy and is available at the NUHCS Heart Pharmacy. All proceeds will go to The Heart Fund, which helps needy patients, as well as supports cardiovascular research and educational programmes.



Assoc Prof Jeannette Lee (far left) and Prof Chia Kee Seng (far right) with award recipients.

Marking Milestones

The annual SSHSPH AlumNite was a night of celebrations for the Class of 2017 and the first NUS Emeritus Professor of Public Health.

The annual NUS Saw Swee Hock School of Public Health (SSHSPH) AlumNite was held at the NUS Tahir Foundation Building on 6 July 2017, a day before the School's Commencement Ceremony. That evening, 40 Master of Public Health (MPH), Master of Science (MSc) and Doctor of Philosophy (PhD) graduands received their degrees, witnessed by their families, alumni, as well as faculty members. Students from the Class of 2017 with excellent academic performance and outstanding achievements also received awards, including the Dean's Medal and Prize, from Vice Dean Associate Professor Jeannette Lee.

Making the event even more meaningful, NUS President designate, Deputy President (Academic Affairs) and Provost Professor Tan Eng Chye conferred the inaugural NUS Emeritus Professorship of Public Health to Professor Lee Hin Peng. The award serves as a recognition of Prof Lee's teaching and research contributions to NUS for the past 40 years. On behalf of SSHSPH, its Dean, Professor Chia Kee Seng, also presented Prof Lee with a photo and crossword puzzle collage of words that represented Prof Lee's values and principles, such as compassion and humility. "What's most noteworthy is that Hin Peng is like

a gentle giant of public health. In spite of his accomplishments, Hin Peng remains genuinely humble, unassuming and modest, often eschewing the limelight. Hin Peng officially retired from NUS on 30 June 2017 but his legacy lives on; we see his influence in many parts of the School and the work it does; he is part of warm memories among his many colleagues and friends," said Prof Tan in his speech. Addressing the graduands, Prof Lee said: "You now have the tools to do the job, now go out and conquer disease, and promote 'health for all' with skill and compassion."

FIRST NUS EMERITUS PROFESSOR OF PUBLIC HEALTH



Prof Lee Hin Peng has made significant contributions over 40 years of dedicated service, including:

- Authoring 163 peer-reviewed articles and receiving more than 5,000 citations
- Championing the control of tobacco smoking in Singapore as a member of the World Health Organization (WHO) Expert Advisory Panel on Smoking and Health from 1981-1993
- Setting up Singapore's first community-based hospital, St Luke's Hospital, in 1995
- Establishing the NUS Institutional Review Board for research in 2003

Prof Lee Hin Peng (middle) receiving his NUS Emeritus Professorship in Public Health Award from Prof Tan Eng Chye (left) and the School's memento from Prof Chia Kee Seng (right).



Top-of-Mind Awareness

The first Head & Neck Cancer Public Forum by NCIS was held for public education.

In conjunction with the World Head & Neck Day, NCIS organised its first Head & Neck Cancer Public Forum on 22 July 2017 at the NUHS Tower Block. The event was also supported by the Singapore Cancer Society. Admission to the event was free and there was also a Chinese session to cater to the Mandarin-speaking audience.

A panel of cancer specialists spoke to 225 participants about the preventive measures, symptoms and treatment of Thyroid cancer, Nasopharyngeal cancer (NPC) and Larynx (voice box) cancer.

The speakers from NCIS and NUH were Associate Professor Thomas Loh, Dr Choo Bok Ai, Dr Tan Chee Seng, Dr Rajeev Parameswaran, Dr Lim Chwee Ming, Dr Chong Wan Qin and Dr Francis Ho.

Besides the experts' presentations, there was a sharing session by a cancer survivor on his personal experience, and a musical performance by NPC oneHeart — a support group comprising volunteers who reach out to patients with head and neck cancers, as well as their caregivers.





An Alternative to Liver Transplants?

A new clinical trial to evaluate the efficacy of stem-cell therapy for liver function comes amid a growing waiting list for a liver transplant in Singapore.

A new clinical trial by a multi-centre team led by NUH aims to determine if stem-cell therapy can improve liver function. The trial will be conducted on 46 patients suffering from liver cirrhosis, which is the hardening of the organ caused by diseases such as chronic hepatitis B and non-alcoholic fatty liver. Funded by the National Medical Research Council (NMRC), the \$2.6 million trial will run for four years.

As part of the study, stem cells will be taken from a patient's own bone marrow, isolated and then injected into the patient's liver to initiate the repair. Researchers will then use biopsies and clinical measurements of liver function to test the efficacy, effectiveness and safety of the treatment. Although similar treatments have been conducted elsewhere, they have not been fully evaluated for efficacy.

Stem-cell therapy is not a substitute for a liver transplant, which provides a definitive cure for liver cirrhosis. However, stem-cell therapy provides an option for those who are not eligible for a transplant due to their age or other health complications.



Promoting Cancer Research

The 4th NCIS Annual Research Meeting (NCAM) was held on 30 June 2017, followed by a mini-symposium on gynaecologic oncology the next day. Hosted by NCIS and co-organised by the Cancer Science Institute of Singapore, the conference attracted more than 270 clinicians, clinician-researchers and researchers. This year's NCAM saw more awards presented across various research categories, in a bid to stimulate the culture of cancer research at NCIS.

The event's plenary speakers included Professor Sir David Lane (one of the scientists credited with the landmark discovery of cancer gene p53 in 1979) and Professor Jack Gilbert, Director of the Microbiome Centre at the University of Chicago. They spoke about molecular stratification in ovarian cancer and microbiome and cancer treatment.

NCAM 2017 aimed to:

- Promote a culture of research
- Nurture junior clinician investigators
- Foster cross-disciplinary interactions
- Showcase cancer research beyond the NCIS campus



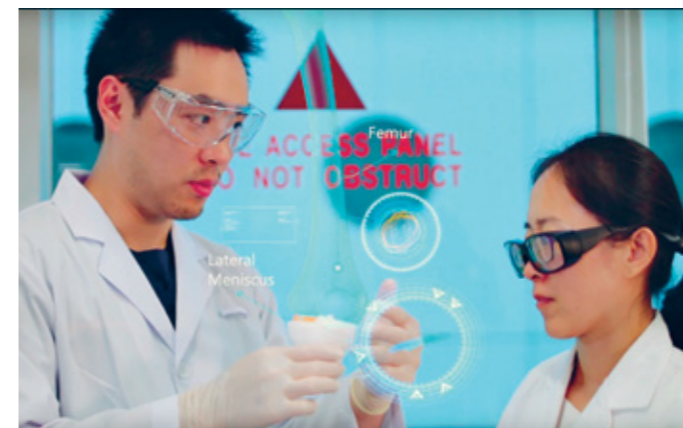
Advancing Population Health Research



NUHS was awarded the NMRC Centre Grant to advance population health in Singapore. Its Singapore Population Health Improvement Centre (SPHERiC) will conduct rigorous multi-disciplinary research, build capabilities and foster collaboration in population health with the goal of translating evidence into action.

Nutrition, physical activity, chronic disease management, primary care and infectious diseases are the five research themes identified to address the key health challenges in Singapore. This will be supported by SPHERiC's three cores — Population Health Analytics Core, Health Systems and Models of Care Core and Implementation Science Core.

The Centre will bring together local and international experts from different fields, including sociology, behavioural sciences, health economics, psychology, organisational management, health systems and services research and quality of life research. Seed funding will also be awarded to new research efforts to facilitate proof-of-concept pilots between the Centre and its partners.



Reimagining Healthcare

A new initiative by NUHS will promote innovation and industry collaboration in healthcare.

Aspirating innovators in the healthcare system can now tap on NUHS' Summit Programme in INnovation (SPIN) for support in their efforts to improve healthcare delivery. Under the scheme, participants will be mentored by experienced and established innovators from NUS Medicine and NUS.

"Innovation is about creating something new, and of value to the world. In healthcare, this means the well-being of people. SPIN gathers clinician-innovators and their scientific knowledge, resources and expertise to create real innovation and value for the community," said Professor Hang Chang Chieh, Executive Director, Institute for Engineering Leadership, who will serve as SPIN's Chief Advisor. Other advisors include Professor Luke Lee, Associate President (International Research & Innovation) at NUS and Professor Philip Phan.

Decoding Data

The NUS-MIT Healthcare Analytics Symposium and Datathon 2017 explored how data analytics could tackle pressing healthcare problems.

Between 30 June and 2 July 2017, more than 200 local and international clinicians, data scientists, software engineers and innovators gathered at NUS to study how data analytics could be used more effectively in the age of electronic health records.

Co-organised by SSHSPH and the Massachusetts Institute of Technology (MIT), the NUS-MIT Healthcare Analytics Symposium and Datathon 2017 featured a two-day datathon, which saw 12 multi-disciplinary teams analysing de-identified datasets from three real-life medical databases. Armed with this data, teams competed to develop analytics programmes that could derive relevant insights. Participants were judged on the results derived from the data and the innovativeness of their analytics.

Ultimately, a team led by Professor David Pilcher, Chair of the Australian and New Zealand Intensive Care Society Centre for Outcome and Resource Evaluation, emerged the datathon's winner. Their project combined results from real-time visualisation and statistical models to gauge the effectiveness of fluid bolus as a treatment for low blood pressure in intensive care.



The organisers of SB 7.0, Assoc Prof Drew Endy (left) and Assoc Prof Matthew Chang (right) speaking to the audience.

Championing Collaboration

Global cooperation took centre stage at the Seventh International Meeting on Synthetic Biology.

The Seventh International Meeting on Synthetic Biology (SB7.0) kicked off on 13 June 2017 at the University Cultural Centre. Co-organised by NUS Synthetic Biology for Clinical and Technological Innovation (SynCTI), the four-day conference attracted synthetic biology practitioners from more than 40 countries.

Highlighting the importance of such instances of global collaboration, Associate Professor Matthew Chang, Director of SynCTI and the Singapore Consortium for Synthetic Biology, said, "While synthetic biology is already being used to advance many aspects of our life... I believe the international synthetic biology communities must work together to benefit all people and the planet."

Keynote sessions delved into research about restoring extinct and endangered species, and using yeast to produce painkillers. Broader topics addressing the future of synthetic biology were also explored.

Launched in 2004, the Synthetic Biology Conference series is the world's foremost professional meeting in the field. SB7.0 was co-chaired by Assoc Prof Chang and Assoc Prof Drew Endy from Stanford University.

+ SB7.0 featured more than 100 speakers across 12 thematic sessions.



"The Flood" team, led by Professor David Pilcher (3rd from left) emerged as Champions of the Datathon 2017.

A datathon is a play on 'data' and 'hackathon'. The term describes the use of the hackathon model — with its sprint-like nature — in data analytics.





Civic Efforts Lauded

NUHS was recognised for its efforts to engage the community and improve the well-being of residents.

NUHS was recently presented the Community Partnership Excellence Award at the PA Community Spirit Awards 2017, in recognition of its support for the People's Association (PA), grassroots organisations (GROs) and Singapore's five Community Development Councils (CDCs).

A key initiative that has emerged from NUHS' long relationship with PA is the Community Health Screening programme, which has benefited more than 6,000 residents through 45 screening events. This is together with partners from the Health Promotion Board (HPB), Singapore Cancer Society (SCS), South West CDC, NUP, Muslim Healthcare Professionals Association and many others. Residents are screened for chronic diseases such as diabetes, hypertension and high cholesterol, as well as breast and colorectal cancer. Visual and hearing checks have also been introduced. Mobile hearing buses run by NUHS' ENT department have been set up in 40 heartland locations to increase awareness of hearing loss at a nominal fee. To date, 3,600 residents have been screened and 400 hearing aids have been fitted. Other screening efforts include the Public Health Service, an annual event in Clementi co-organised by NUS Medicine, and the Bukit Panjang and Queenstown cohort studies by SSHSPH to better understand the community's health status and needs.

Beyond screening, intervention programmes targeting residents at risk of dementia and frailty include the Dementia Prevention Programme and the Healthy Ageing Promotion Programme for You (HAPPY). These aim to keep participants' minds and bodies active through exercise and therapy.



Lessons in Health

Stress management, fall prevention, healthy eating at hawker centres — these are just some of the topics that are covered in the 10-session Wise & Well @ Community Health Post programme. Under the initiative, allied health professionals such as dietitians and physiotherapists share with residents simple lifestyle changes they can make to improve their health and well-being. This programme was recently introduced to Bukit Batok residents, and is one of NUHS' community efforts to reduce the risk of chronic diseases like high blood pressure, diabetes and high cholesterol.

Shop Right, Eat Right!

Dietitians educated the elderly from the SilverACE senior activity centres on how to pick healthier foods when they shop for groceries, during a tour of the NTUC Fairprice at One@Kent Ridge organised by NUHCS on 18 May 2017.



All smiles at the start of the tour.



Participants were eager to learn how to understand product labels better.



Dietitians shared how to choose heart-healthy options of everyday items like milk and bread.



Encouraging Exercise

Exercise therapy will be introduced at Alexandra Hospital, thanks to a new partnership between NUHS and Sport Singapore.

NUHS joined hands with Sport Singapore (SportSG) on 28 July 2017 to pilot an Active Centre within Alexandra Hospital (AH) in September next year after NUHS takes over its premises. At the Centre, patients with chronic conditions will undergo targeted exercise therapy that complements their conventional medical treatment.

"The Active Centre will promote exercise as an effective treatment modality for patients to better manage their chronic medical conditions," said Associate Professor Khoo See Meng, Clinical Lead of the Alexandra Campus Development Team. By establishing exercise as an integral part of standard medical management, we hope to encourage patients to take ownership of their health and wellness."

Having exercise therapy at AH will convenience patients, who will be able to take part in the programme while they are visiting the hospital's other clinics. Participating patients will have risk and assessment tests done before they embark on the exercise programme. They will also be closely supervised and monitored by a medical team.



SPREADING THE WORD ON BLOOD DONATION

NUHS supported the Red Cross' Missing Type Campaign, which aimed to raise public awareness on blood donation and to encourage more people to donate blood. As part of the campaign, which ran from 4 to 7 July 2017, people omitted the blood-type letters A, B, and O from their names. They then posted photos of themselves with their "new" names on social media. As of August 2017, more than 500 posts in support of the campaign were uploaded on Instagram, using the #MissingTypeSG tag.



A Strong Partnership

NUHS recently engaged community leaders to share the organisation's health aspirations and goals for patients and residents in the western region of Singapore.

ON 27 MAY 2017, NUHS Chief Executive Professor John EL Wong and MOH Deputy Secretary (Development) Ms Teoh Zsin Woon met Mr Murali Pillai, Grassroots Advisor to Bukit Batok SMC GROs and other grassroots leaders. They discussed NUHS' community health screening efforts and the importance of lifestyle intervention.

ON 2 JUNE 2017, Prof Wong and fellow NUHS staff met Dr Teo Ho Pin, Mayor of the North West District and Grassroots Advisor to Bukit Panjang SMC GROs, to share insights from the NUHS Community Health @ Bukit Panjang cohort study. The study reviews the state of health of residents living in Bukit Panjang and identifies opportunities for interventions to help residents manage their health conditions.



Nearly **4,000** RESIDENTS were surveyed for the **NUHS Community Health @ Bukit Panjang** cohort study, thanks to the support of **Dr Teo Ho Pin** and the **Bukit Panjang Constituency Office**.

CONGRATULATIONS TO NUHS' WINNERS!

The annual **National Medical Excellence Awards** recognise outstanding healthcare professionals who have improved people's lives significantly.

ASSOCIATE PROFESSOR CHONG YAP SENG

Senior Consultant
National University Hospital

Associate Professor
Yong Loo Lin School of Medicine
National University of Singapore

National University Health System

NATIONAL OUTSTANDING CLINICIAN SCIENTIST AWARD 2017

“ For his outstanding contributions towards improving population health in Singapore through the study of health and disease in early life, and its potential impact in later life

Associate Professor Chong Yap Seng

is a clinician-scientist who specialises in foetal growth and early development, and has improved population health in Singapore through his work. On the research front, Assoc Prof Chong and his team are behind one of the world's largest and most comprehensive birth cohort studies — Growing Up in Singapore Towards healthy Outcomes (GUSTO) — that was launched in 2009. The team has recruited over 1,200 Singaporean volunteers who are being studied since early pregnancy to discover new prevention and early intervention strategies to optimise health. Its findings so far have contributed to local health policy and clinical practices. In addition, the GUSTO study has won international acclaim for the innovative approaches and new medical technologies used. Assoc Prof Chong is also in the research team for the Singapore PREconception Study of long-Term maternal and child Outcomes (S-PRESTO) cohort study, one of the first few studies on women planning to conceive.

As an obstetrician, he led the Medical Education Unit at NUHS for 10 years and is the Vice-Dean of Academic Medicine at NUS Medicine. A thought leader, Assoc Prof Chong has given numerous lectures and was invited to join prestigious international committees, including those under the World Health Organization, and the Bill & Melinda Gates Foundation.

PROFESSOR ARIJIT BISWAS

Senior Consultant
National University Hospital

Professor
Yong Loo Lin School of Medicine
National University of Singapore

National University Health System

NATIONAL OUTSTANDING CLINICIAN AWARD 2017

“ For his outstanding contributions and achievements in clinical work that have advanced the safety and quality of obstetric care

Professor Arijit Biswas has led the Division of Maternal-Fetal Medicine at the Department of Obstetrics and Gynaecology of NUH for 17 years.

He has played a key role in improving obstetric care in Singapore through initiatives such as introducing fetal ECG (STAN) monitoring in labour — which has since become a standard practice at NUH. Open to challenging the status quo for better patient care, Prof Biswas has implemented new prenatal intervention treatments and fetal therapy procedures. He also performed the first case of radio-frequency ablation in a monochorionic twin pregnancy in Singapore.

Beyond his excellent clinical work, Prof Biswas is passionate about teaching and has mentored many residents and junior colleagues. This has won him the NUH Postgraduate Teaching Excellence Award 2012. He also holds numerous leadership and advisory positions, such as Chairman of the national O&G Resident Advisory Committee and sitting on the Clinical Advisory Group on Zika Virus Infection and Pregnancy. Prof Biswas has published more than 137 papers in international peer-reviewed journals with a citation count of 1852 and a H-index of 22, and is still pursuing research work actively.

