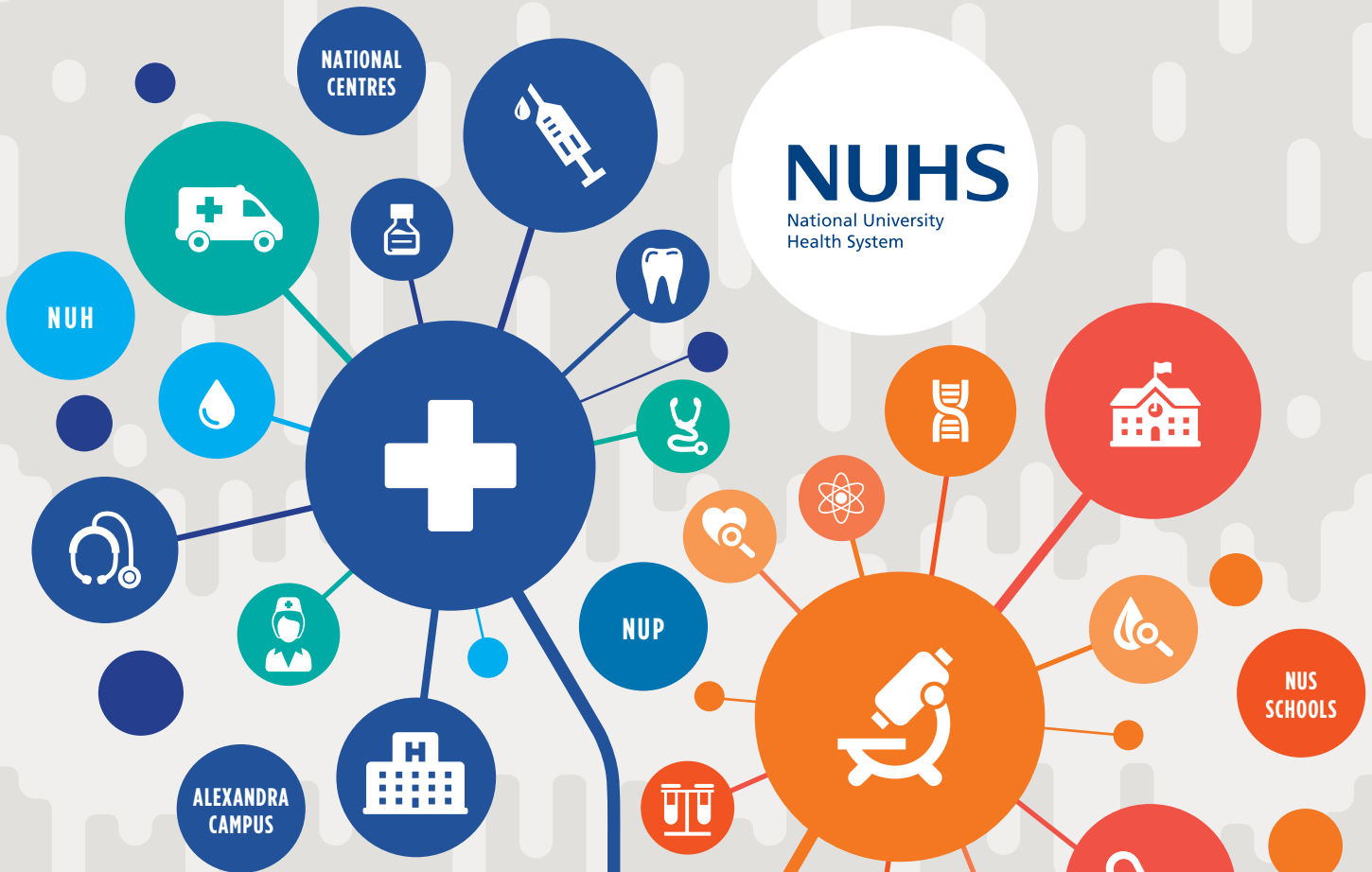


evidence **PLUS**



CLINICAL CARE

Helping patients with advanced gastric cancer

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EDUCATION

Readying students for 21st century healthcare

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RESEARCH

Debunking myths about antibiotics

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Celebrating health in the heartlands

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Better
INTEGRATION
Better
HEALTHCARE



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evidence plus

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INSTITUTIONAL NEWS



First Visit as Second Permanent Secretary

Mr Ng How Yue (first from right), the new Second Permanent Secretary, Ministry of Health, and Ms Ngiam Siew Ying (first from left), Deputy Secretary (Policy), Ministry of Health visited National University Health System (NUHS) on 1 February 2017. They were given an overview of NUHS, followed by a tour of its research and clinical facilities at Kent Ridge Campus.



IAP Calls on SSHSPH

The NUS Saw Swee Hock School of Public Health welcomed members of the School's International Advisory Panel (IAP) — Prof David Heymann, Prof Baron Peter Piot, Prof Kenneth Warner and Dr Margaret Hamburg. As part of their three-day visit from 1 to 3 February 2017, the IAP team was briefed on the School's achievements and progress over the last five years, as well as future challenges to be faced.



An Exchange of Ideas

Dr Vivian Lee, Dean and Chief Executive Officer of the University of Utah Health Sciences (UUHS), led a senior delegation on a visit to the NUHS from 13 to 15 March 2017. NUHS Senior Management gave the delegates an overview of the Group, as well as its strategies to overcome Singapore's healthcare challenges. The top-ranked US university teaching hospital, in turn, shared its experience in successfully implementing Value Driven Outcomes. This initiative enables clinical decision makers to lead improvements in care delivery taking into consideration cost, quality and patient service.

NUHS

National University
Health System



National University
Hospital



Yong Loo Lin School of Medicine
Faculty of Dentistry
Saw Swee Hock School of Public Health



National University
Cancer Institute, Singapore



National University
Heart Centre, Singapore



National University
Centre for Oral Health, Singapore

National University
Polyclinics



The Department of Community, Occupational & Family Medicine in 1987



Prof Goh Lee Gan (far right) leading the toast to commemorate 30 years of Academic Family Medicine in Singapore at the 30th Anniversary Dinner on 25 February 2017

Still Going Strong

NUS Yong Loo Lin School of Medicine celebrated 30 years of Family Medicine.

Undergraduate training in Family Medicine began in Singapore in 1971 as a one-week posting to a general practice (GP) clinic and 10 lectures on "Introduction to General Practice", organised voluntarily by the College of General Practitioners, Singapore.

Thirty years on, the discipline is now a well-established undergraduate programme, as well as a postgraduate curriculum and Masters of Medicine (Family Medicine) examination.

The Division of Family Medicine, NUS Yong Loo Lin School of Medicine, commemorated 30 years of Academic Family Medicine with an anniversary dinner on 25 February 2017. The event was attended by Guest of Honour, Mr Chan Heng Kee, Permanent Secretary, Ministry of Health.

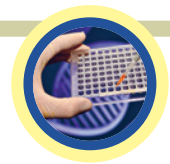


NUHS to Operate Alexandra Hospital in 2018

Minister for Health Mr Gan Kim Yong announced at the Ministry of Health Committee of Supply Debate 2017 that NUHS will operate Alexandra Hospital after Sengkang Health moves to its permanent location in 2018.

Alexandra Hospital will complement other NUHS services at Kent Ridge and Jurong. It will provide a person-centric health delivery model, in which one team of doctors, nurses and allied health professionals works closely with a patient and his or her family, and community partners.

With a potential for redevelopment, NUHS envisions the Alexandra site to be a new health-empowering green campus that will provide holistic and integrated care, as well as preserve Alexandra Hospital's healthcare heritage.



National Medical Research Council Awards 2017 Recipients

The National Medical Research Council (NMRC) Awards recognise clinician scientists and researchers for their outstanding achievements and contributions, and aims to support them in developing breakthrough research that benefits the Singapore population. We are proud to present the winners from NUHS!

SINGAPORE TRANSLATIONAL RESEARCH INVESTIGATOR AWARD

- + **Professor Chng Wee Joo**
National University Cancer Institute, Singapore
NUS Yong Loo Lin School of Medicine
NUS Cancer Science Institute of Singapore

CLINICIAN SCIENTIST AWARD - SENIOR INVESTIGATOR

- + **Associate Professor Christopher Chen**
National University Hospital
NUS Yong Loo Lin School of Medicine

- + **Professor Yong Eu Leong**
National University Hospital
NUS Yong Loo Lin School of Medicine

CLINICIAN SCIENTIST AWARD - INVESTIGATOR

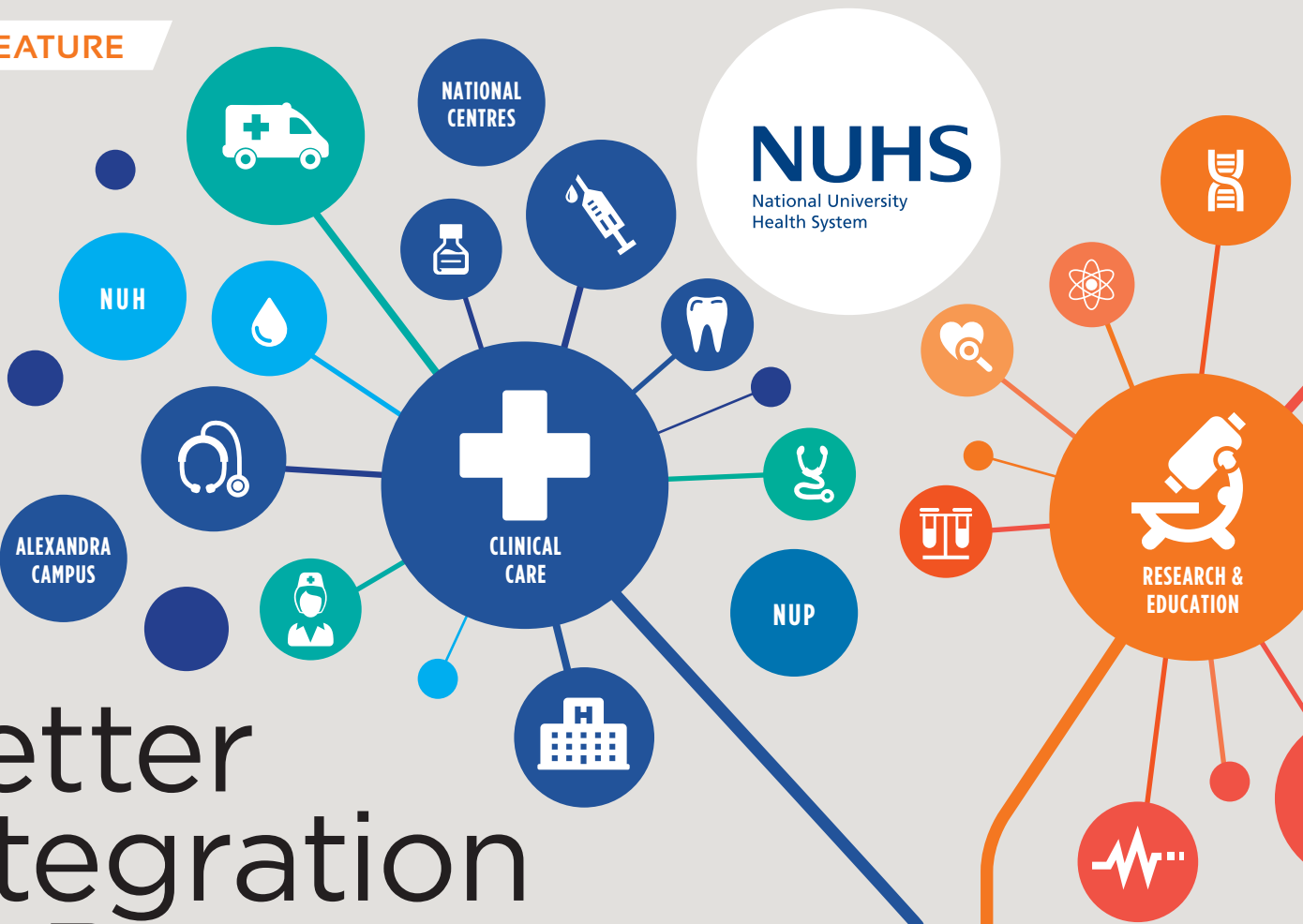
- + **Associate Professor Chan Shiao-ying**
National University Hospital
NUS Yong Loo Lin School of Medicine
- + **Dr David Tan Shao Peng**
National University Cancer Institute, Singapore
NUS Yong Loo Lin School of Medicine
NUS Cancer Science Institute of Singapore

- + **Dr Ng Kar Hui**
National University Hospital
NUS Yong Loo Lin School of Medicine

- + **Dr Citra Nurfarah binte Zaini Mattar**
National University Hospital
NUS Yong Loo Lin School of Medicine
(from May 15 grant call)

TRANSITION AWARD

- + **Dr Feng Lei**
NUS Yong Loo Lin School of Medicine
- + **Dr Anand Devaprasath Jeyasekharan**
National University Cancer Institute, Singapore
NUS Yong Loo Lin School of Medicine
NUS Cancer Science Institute of Singapore



Better Integration Better Healthcare

A new NUHS emerges from the reorganisation of Singapore's public healthcare system to provide comprehensive, integrated, seamless health and healthcare.

Our public healthcare system has made significant strides over the last few years in realising the Healthcare 2020 Masterplan's goal of improving the accessibility, quality and affordability of healthcare. However, Singapore's future healthcare needs are bound to grow in volume and complexity due to our ageing population and rising chronic disease burden. To get ahead of these challenges, the Ministry of Health (MOH) announced a major reorganisation of Singapore's public healthcare sector on 18 January 2017.

Under the new system, the six existing Regional Health Systems are grouped into three integrated clusters, each with its own network of polyclinics:

- + **Central region** — National Healthcare Group (NHG) and Alexandra Health System (AHS) have merged.

- + **Eastern region** — Singapore Health Services (SingHealth) and Eastern Health Alliance (EHA) have merged.

- + **Western region** — National University Health System (NUHS) and Jurong Health Services (JurongHealth) have merged.

By combining strengths and talents, cluster partners can offer a fuller range of facilities and services across different care settings, deploy their resources and capabilities more efficiently, and expand the career options and professional development opportunities available to employees. MOH is also working with the three clusters to ensure cross-cluster information flow and coordinated services.

The reorganisation — to be completed by early 2018 — enables patients to continue with their





NUS SCHOOLS



current healthcare arrangements and appointments. It also puts healthcare institutions in a better position to contribute towards MOH's transformation of Singapore's healthcare system beyond 2020: from Hospital to Community, from Quality to Value, and from Healthcare to Health.

"This reorganisation of the public healthcare clusters will enable us to meet our future healthcare challenges," said Mr Gan Kim Yong, Minister for Health, in January. "I am confident that we will be able to better optimise resources and capabilities, and provide more comprehensive and patient-centred care to meet Singaporeans' evolving needs."

THE NEW NUHS

The Western region will now be under the care of NUHS. With the merger of NUHS and JurongHealth, the new NUHS comprises three hospitals (National University Hospital, Ng Teng Fong General Hospital and Jurong Community Hospital); three national specialty centres (National University Cancer Institute, Singapore, National University Heart Centre, Singapore and National University Centre for

Oral Health, Singapore); one medical centre (Jurong Medical Centre); three academic health sciences institutions based at the National University of Singapore (NUS Yong Loo Lin School of Medicine, NUS Faculty of Dentistry, NUS Saw Swee Hock School of Public Health); and a new entity, National University Polyclinics (NUP).

Polyclinics play a critical role as primary care providers in delivering community-based, patient-centred care. NUP — Singapore's third polyclinic group — will eventually have seven polyclinics. Five are already running in Bukit Batok, Clementi, Choa Chu Kang, Queenstown and Jurong, all of which were previously part of the NHG and SingHealth polyclinic groups. Another two polyclinics will be set up in Pioneer (by July 2017) and Bukit Panjang (by 2020).

Assuming the role of NUP's Chief Executive Officer (CEO) is Dr Lew Yii Jen, who was Senior Director of Clinical Services at NHG Polyclinics. Mr Foo Hee Jug, formerly CEO of JurongHealth, is now Deputy Chief Executive (Deputy CE) of NUHS and he continues to be the CEO of Ng Teng Fong General Hospital. He serves alongside the three existing Deputy CEs, Mr Chua Song Khim, Adjunct Associate Professor Joe Sim and Associate Professor Yeoh Khay Guan. Professor John EL Wong continues in his role as Chief Executive (CE) of the newly-incarnated NUHS, which will continue with its tripartite mission of advancing patient care, biomedical research and health science education. The integration will also enable the new NUHS to provide comprehensive, integrated and seamless health and healthcare.

Building the New NUHS Together



Concerns raised by staff at the Town Hall sessions were addressed by CE NUHS Prof John EL Wong (third from the right) and other senior leaders of NUHS.

To explain the rationale of the reorganisation and address NUHS staff concerns, CE NUHS Professor John EL Wong and other senior leaders of NUHS held Town Hall sessions on 20 and 26 January 2017. Among the questions raised were those relating to pay structure, harmonisation of policies and practices within the NUHS cluster, and how to integrate the new entities into the new NUHS.

Prof Wong explained that as a start, priority is being given to ensuring that patient care continues. Functional Integration Committees made up of representatives from both NUHS and JurongHealth are being formed to map out the work that needs to be done. Staff will have opportunities to give their input on the reorganisation as well as receive regular progress updates.

Above all, Prof Wong called on everyone to play their part by focusing on providing good care and "value-driven outcomes" that ultimately benefit patients. "We go back to the [fundamental] principles — trust, transparency, fairness," he added. "These are tools with which we can make good and rational decisions within NUHS to enable us to achieve the aims of the reorganisation."



DRIVING PRIMARY CARE TRANSFORMATION

A management team led by Dr Lew Yii Jen is already in place to oversee NUP's overall operations. While ensuring minimal disruptions to polyclinic operations during the transition period, the team will drive a team-based model of patient care that aligns the efforts of Family Physicians, care managers, allied health professionals, hospital staff and personnel within NUHS institutions, as well as external community partners.

“ Looking ahead, we will work even closer with the various healthcare partners in the new NUHS for better integration of care across primary care to tertiary care. The key opportunities lie in being able to develop and strengthen primary care to enable our population in the West to receive quality, integrated and seamless care in the community and closer to their homes.”

Dr Lew Yii Jen
CEO, National University Polyclinics



Gut's the Answer

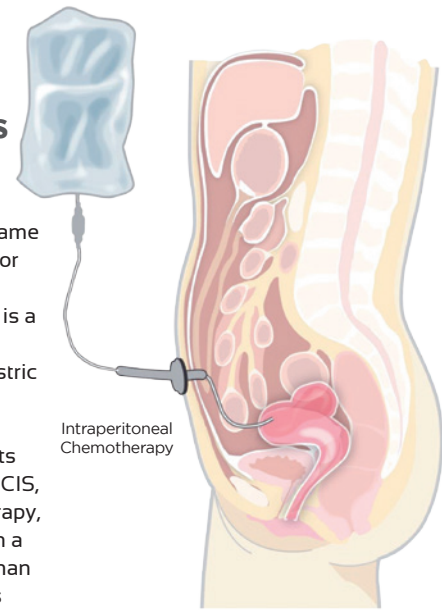
Chemotherapy through the abdomen may help patients with advanced gastric cancer.

The preliminary findings of researchers from the National University Cancer Institute, Singapore (NCIS) have shown that using intraperitoneal chemotherapy in addition to conventional chemotherapy may help patients with advanced gastric cancer to survive longer and enjoy a better quality of life.

When intraperitoneal chemotherapy is used, about one litre of chemotherapy liquid containing Paclitaxel is inserted into the abdomen. The drug then kills any cancer cells it comes into contact with. However, as the drug is a large molecule, very little of it will be absorbed into the bloodstream, which makes it fairly safe to use. After an hour of treatment,

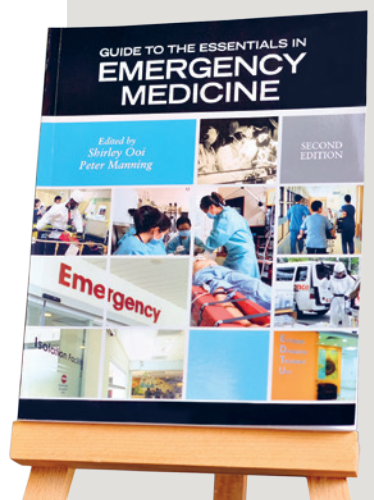
patients can go home on the same day. The procedure, as Professor Jimmy So, Head of Surgical Oncology at NCIS describes it, is a "simple, outpatient treatment".

Patients with advanced gastric cancer usually survive three to 10 months with conventional treatment. But of the 22 patients in the Phase II clinical trial at NCIS, with intraperitoneal chemotherapy, 16 of them survived longer than a year, with half living for more than 18 months. The team's findings were presented at Digestive Disease Week held in May 2016, in San Diego, California and published in the *Journal of Gastrointestinal Surgery* in March, 2017.



Best-Selling Doctors

A textbook on emergency medicine techniques by two associate professors from NUS Yong Loo Lin School of Medicine has become an international bestseller. *Guide to the Essentials in Emergency Medicine* was written by **Associate Professor Shirley Ooi** and **Associate Professor Peter Manning**, and contains practical instructions on tackling common life-threatening conditions. Assoc Prof Ooi and Assoc Prof Manning are also senior doctors at the National University Hospital's (NUH) Emergency Medicine Department.



Taking on Allergies

NUH's Food Oral Immunotherapy programme brings hope to children with food allergies.

It is common wisdom that children with allergies should avoid allergens, be these cow's milk, egg or nuts like cashew and pistachio. But the Food Oral Immunotherapy (FOI) programme at the National University Hospital (NUH) may relieve parents of the burden of constantly checking labels and foods for possible allergens.

Started in August 2015, the treatment programme introduces patients to a miniscule amount of a certain food allergen. The amount is gradually increased over several months, until the child increases his or her tolerance to the allergen. Through FOI, the threshold of an allergic reaction is increased significantly — a child who would have an allergic reaction after taking 1/200th of a single peanut can raise that threshold to as many as 20 peanuts.

The programme is led by Dr Soh Jian Yi, a Consultant at NUH's Paediatric Allergy, Immunology and Rheumatology division. It was initially rolled out to treat allergies to cow's milk, but will be expanded to include eggs and tree nuts.



13-year-old Tng Shih Kai can now take about 10 to 12 peanuts after completing the 10-month food oral immunotherapy programme at NUH. With him are Dr Soh Jian Yi (right) and his father, Mr Tng Yan Hui.

MP for Chua Chu Kang GRC (Keat Hong), Mr Zaqy Mohamad (third from left) and grassroots leaders Mr Johnny Yeo, PBM (first from left), and Mr Chua Kok Wei, PBM (second from left), visited KHFMCC on 24 March 2017.



Expanding Capabilities

Keat Hong Family Medicine Clinic's partnership with NUHS gives patients access to more services, among them eye and mental health care.

Keat Hong residents now enjoy convenient access to quality and integrated care at the newly-opened Keat Hong Family Medicine Clinic (KHFMCC). The facility, nestled within Keat Hong Community Club, is the newest Family Medicine Clinic (FMC) set up in partnership with NUHS. Frontier FMC in Clementi was the first.

In addition to common ailments like fever, cough and flu, KHFMCC's family doctors and nurses also manage chronic conditions like diabetes and high blood pressure. The facility's

partnership with NUHS makes it part of a larger multidisciplinary team of healthcare professionals in western Singapore. This gives Keat Hong residents convenient access to NUHS' resources and expertise, including an NUH-run pharmacy. Medication is dispensed here at prices similar to polyclinics, and is offered at lower cost to seniors and children.

The partnership also allows KHFMCC and NUH to work together through a common IT platform. KHFMCC's doctors can easily access NUH patients'

medical records and communicate with NUH specialists, ensuring a high level of care continuity.

Beyond primary care, KHFMCC's collaboration with its partners enables it to provide more specialised services. With the support of optometrists and specialists from NUH, KHFMCC can treat and manage patients with eye conditions like glaucoma. There is also a Mood & Anxiety Clinic run by a team of mental health professionals and supported by community partners like the Agency for Integrated Care, Fei Yue and Club Heal.

Strengthening Paediatric Dentistry

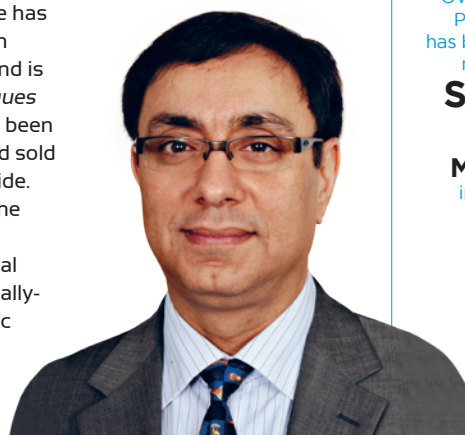
The NUS Faculty of Dentistry welcomes its newest member, internationally recognised researcher Professor Monty Duggal.

The NUS Faculty of Dentistry's newly-developed Graduate Paediatric Dentistry programme will be strengthened with the appointment of Professor Monty Duggal as its advisor. The three-year course develops graduates' understanding of all aspects of paediatric dentistry.

As an internationally recognised researcher, Prof Duggal will also expand the Faculty's research capabilities. His primary research interests are cariology and translation research in clinical paediatric dentistry,

including dental traumatology. He has published more than 130 research papers in international journals and is the author of *Restorative Techniques in Paediatric Dentistry*, which has been published in seven languages and sold more than 16,000 copies worldwide.

Prof Duggal joins NUS from the Leeds Dental Institute, where as Professor and Chair of Child Dental Health, he oversaw an internationally-acclaimed postgraduate paediatric dentistry programme. He also led the Institute's Trauma and Transplantation service.




Over the years, Prof Duggal has been awarded more than

\$S11 MILLION in research grants.



An Eye on the Future

Readying students for 21st-century healthcare was a central theme of the Asia Pacific Medical Education Conference, the region's largest.



1,200
PARTICIPANTS
from 33 countries
attended APMEC 2017,
making it the biggest
medical education
conference in the
Asia-Pacific region

How can medical educators keep up with rapidly changing technology and demographic disruptions? These were some of the issues tackled at the 14th Asia Pacific Medical Education Conference (APMEC), which was hosted by the Centre for Medical Education (CenMED), Yong Loo Lin School of Medicine. Themed "From Globalisation of Education to Globalisation of Healthcare", the five-day conference took place from 11 to 15 January 2017 at the National University of Singapore (NUS). It was co-organised by Singapore's Ministry of Health and the Accreditation Council of Graduate Medical Education (International) of the United States.

As in previous years, participants attended a series of plenary talks, workshops and panel discussions.

Keynote speakers included thought leaders like Professor Matthew Gwee from CenMED and Professor Ronald M Harden, Professor of Medical Education (Emeritus) at the University of Dundee. In line with this year's theme of healthcare in a global context, the sessions reviewed current trends, issues and priorities and strategies in medical education.

Speakers also stressed the importance of nurturing a new generation of healthcare practitioners who are competent and well-equipped to deliver 21st-century healthcare. "We hope (that this) global view of medical education will not only serve to educate our community of educational scholars and teachers, but that it will also serve as inspiration to them to stay current for the benefit of our students and, ultimately, for our respective nations," said Prof Gwee.



EXAMPLES OF DEMOGRAPHIC DISRUPTION INCLUDE:

- Longer life expectancies
- Expanding ageing populations
- The rise of 'lifestyle' diseases like obesity and type 2 diabetes

Like-minded healthcare professionals across various restructured hospitals at the inaugural NTFGH Nursing Symposium.



Reaching New Heights

Nurses kept abreast of developments in healthcare practices at Ng Teng Fong General Hospital's first-ever Nursing Symposium.

Ng Teng Fong General Hospital (NTFGH)'s inaugural Nursing Symposium attracted more than 300 delegates from various healthcare partners, including hospitals, intermediate and long-term care institutions and nursing homes. Themed "Building Capability for Quality and Safety", the symposium was held between 9 and 10 March 2017.

Over two days, NTFGH staff as well as external speakers led several

plenary sessions that gave participants an insight into the latest trends and developments in healthcare practices. In addition, nurses also attended specialised workshops where they learnt about harnessing technology to improve patient care and work processes.

The symposium also included sharing sessions that facilitated discussions on the challenges and issues facing the sector.



They're All "Ears"

At the inaugural World Hearing Day Research Symposium, participants got a better understanding of the latest research in otorhinolaryngology.

NTFGH marked World Hearing Day by co-organising the World Hearing Day Research Symposium with Ear Science Institute Australia. The full-day conference on 3 March 2017 attracted a good mix of ENT surgeons, audiologists, students and Allied Health Professionals. Through the day's four sharing sessions, participants better understood the implications of new research into ear and hearing health. Among the topics discussed were tissue regeneration in the ear, and trends in hearing aid usage in Singapore over the last decade.

A Revamped MPH Curriculum



The revised NUS Saw Swee Hock School of Public Health Masters in Public Health (MPH) programme will be launched in the upcoming academic year (AY2017/2018).

Taking into consideration feedback from employers, alumni, students and faculty, the revised MPH programme should better serve the training needs of public health professionals in Singapore and the region.

All students will now complete the programme within 12 months (full-time) or 24 months (part-time). Core modules will be complemented by electives structured within three focus areas in Health Policy and Healthcare Delivery, Epidemiology, Health Promotion and Global Health and an 8MC practicum project. The revised specialisation in Occupational Health will also be offered and caters to both medically and non-medically qualified applicants.



Prof Dale Fisher (seated, third from right) represented NUH & NUS at the GOARN Meeting of Training Partners, held in London from 13 to 14 February 2017

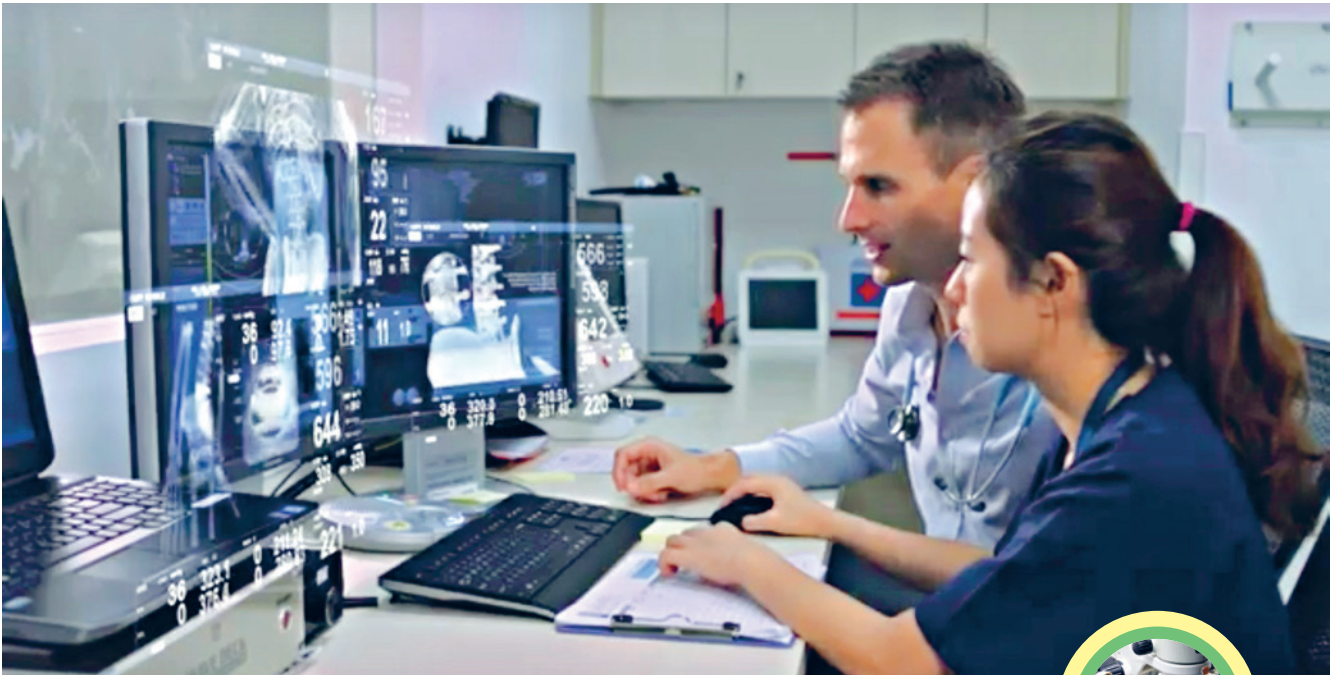
Stronger Together

NUS took part in an international dialogue on response strategies to global disease outbreaks.

The NUS was among 20 global healthcare and medical institutions that participated in the recent Global Outbreak Alert and Response Network (GOARN) Meeting of Training Partners, held in London from 13 to 14 February 2017. Other notable attendees included the World Health Organization (WHO), US and Africa CDC, Robert Koch Institute of Germany, universities from most continents and the London School of Hygiene and Tropical Medicine.

At the two-day meeting, participants explored how global response to disease outbreaks could be enhanced through training and capacity development. The plan is for a three-tiered competency based training programme that all deployed in outbreaks should undertake. "Investment in training is giving our staff the best chance to save lives in the field," said Professor Dale Fisher, Vice Chair and Training Lead, GOARN Steering Committee and Chair, Infection Control, at the National University Hospital.

GOARN is a key international outbreak response coordination mechanism, involving WHO, healthcare networks, United Nations agencies and non governmental organisations. It devises strategies for the global response to outbreaks of deadly diseases like Ebola and yellow fever.



Nurturing the Next Generation of Researchers

The Summit Research Programmes train, test and stretch the capabilities of young, budding clinician-scientists.

Early-career scientists are being nurtured to become the next generation of biomedical researchers under the Summit Research Programmes (SRP) of the National University Health System (NUHS). The aim of the initiative, launched on 21 October 2016, is to achieve significant improvements in disease understanding as well as clinical practice and innovations that will improve health outcomes, and lead to societal and economic benefits for Singapore. SRP draws on the participation of clinician-scientists and medical experts across the NUHS. Six research programmes are part of the SRP (see box).



NUHS SUMMIT RESEARCH PROGRAMMES

- 1 Cancer
- 2 Metabolic Disease
- 3 Tuberculosis
- 4 Cardiovascular Disease
- 5 Synthetic Biology
- 6 GUSTO* Birth Cohort Study

* Growing Up in Singapore Towards Healthy Outcomes

Eczema in Infants Linked to Tooth Decay

New findings, released in January this year, indicate that babies with eczema are three times more likely to develop tooth decay at two and three years of age. The relationship between eczema, or atopic dermatitis (AD) and tooth decay is largely unknown, and this is the first time a link between the two diseases has been discovered. The research was led by the National University of Singapore (NUS) Faculty of Dentistry, which is part of the NUHS, and Singapore Institute for Clinical Sciences (SICS) of the Agency for Science,

Technology and Research (A*STAR).

In a paper published in *The Journal of Allergy and Clinical Immunology* (JACI), the research team outlined how they found the link between eczema and tooth decay, and the need for timely intervention to ensure early detection and prevention of tooth decay in toddlers. The study was part of the Growing Up in Singapore Towards healthy Outcomes (GUSTO) programme, a nationwide birth cohort study involving collaborators from the NUS, NUHS, KK Women's and Children's Hospital and SICS.



ECZEMA is one of the most common skin conditions worldwide and affects about

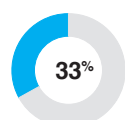
1 IN 5 school-going children in Singapore.

Antibiotics-Related Myths Debunked

Misconceptions about antibiotics are common, with a substantial minority abusing these drugs, a study reveals.

A study has uncovered misconceptions and inappropriate practices related to knowledge and use of antibiotics in Singapore among patients attending primary care clinics. The results of the NUHS-led study — driven by medical students from the NUS Yong Loo Lin School of Medicine with the guidance of Public Health, Family Medicine and Infectious Disease specialists — were published in November 2016. The researchers hope that the findings can be used to educate the public about when antibiotics are necessary, and to stem the spread of antibiotic-resistant bacteria.

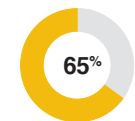
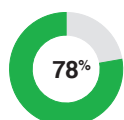
KEY FINDINGS:



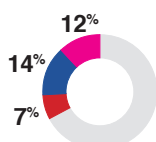
A third of patients from the study expect antibiotics to be prescribed by their GPs for common ailments like coughs, sore throats, runny nose and blocked nose (ie Upper Respiratory Tract Infection, URTI-related symptoms).



50 per cent of those expecting antibiotics in the study would ask their doctors to prescribe the medication or would see another doctor if antibiotics was not prescribed.



Misconceptions by the majority of respondents who did not know that “antibiotics are ineffective against viruses” (78%) and who thought that “antibiotics cure URTI faster” (65%).



Other wrong antibiotic practices uncovered include “keeping antibiotic stocks at home” (12%), “taking leftover antibiotics” (14%), and circulating prescribed antibiotics among other family members (7%).



New Combination Therapy for High Risk Heart Attack Patients

Results of a Dyslipidemia International Study (DYSIS), led locally by Associate Professor Poh Kian Keong, Senior Consultant, Department of Cardiology, NUHCS, showed that more than 70 per cent of patients from thirty countries worldwide with post-acute coronary syndrome (ACS) and stable coronary heart disease (CHD) were unable to achieve low-density lipoprotein (LDL) cholesterol targets despite diet, exercise, and

statin therapy. This once-daily combination tablet effectively lowers cholesterol through its dual mechanism of action: it treats the two main sources of cholesterol in the blood by inhibiting the absorption of cholesterol in the digestive tract — through ezetimibe — and the production of cholesterol in the liver through atorvastatin. The DYSIS study results were revealed in February 2017.



Never Too Young to have a Heart Attack

In a study of 15,000 heart attack cases in Singapore, cardiac investigators from National University Heart Centre, Singapore (NUHCS), National Heart Centre Singapore, Tan Tock Seng Hospital, Changi General Hospital and Khoo Teck Puat Hospital have found that heart attack occurring before 40 years of age in Singapore is uncommon. Of the 15,000 patients studied, 601 cases (approximately four per cent of heart attack patients) were less than 40 years of age.

That being said, the same study shows that young people who suffer a heart attack have a significantly higher chance of dying compared with other young people of the same age. This increased risk of dying emerges as early as seven to eight years after the heart attack occurs, and worsens progressively from eight years onwards. This means that young persons with a heart attack have a significantly shorter life span than young people in general.

RISK FACTORS

Prominent risk factors for young heart attack patients are:



1 Family history of coronary heart disease

and

2 Smoking



It is therefore important for young persons with a family history of coronary heart disease to go for early health screening for high cholesterol levels, high blood pressure and diabetes, and to get these treated early. This study also serves to caution the young about the harmful effects of smoking and further reinforces that there is no ‘safe’ level of smoking. It is an illusion to think that smoking will not cause major harm to young people.



Student Healthcare Volunteers visit Pekanbaru, Indonesia



Fifteen undergraduates from the National University of Singapore (NUS) Yong Loo Lin School of Medicine (NUS Medicine) made a trip to Riau Province in Sumatra in late 2016 to provide basic healthcare to the residents of its capital Pekanbaru. They were part of the 25-strong team in a student-led trip, in a community service project called Project Sukacita, from 4 to 11 December 2016. The other volunteers were Indonesian students from the Singapore Management University and Nanyang Technological University who went along as translators.

The villagers do not often get to see a doctor, so the NUS Medicine students taught them to look

out for symptoms that warrant medical attention. They also conducted health screenings and held demonstrations to teach the villagers about personal hygiene, such as the correct way to wash hands and brush teeth. The group also helped the villagers to clean their homes and undertook some maintenance work. They also taught English and held art and craft lessons for younger villagers.

“Taking part in this project allowed me to appreciate how much I have learnt since entering medical school, and how everything I have learnt has such important applications,” said Jaron Koh, a Year 2 NUS Medicine student.

Jamiyah Partners NUHS to Build Capabilities



(Seated from right): Dr Tan Xin Quan and Dr Sue-Anne Toh from NUHS Regional Health System Planning Office signing the MOU in the presence of Minister for Trade and Industry Mr S Iswaran (standing on the right).

Jamiyah Nursing Home (JNH) has expanded its eldercare services, thanks to a Memorandum of Understanding (MOU) that JNH has signed with four partners to deliver integrated community care.

The partners are the National University Health System (NUHS), National Healthcare Group Diagnostics (NHG Diagnostics), Muslim Healthcare Professionals Association (MHPA) and the West Coast Constituency (WCC).

Under the MOU, JNH works with NUHS on NUHS’ Infectious Diseases Community Programme, to develop, adapt and implement relevant and appropriate infection prevention and treatment protocols in the home.

Through this collaboration, NUHS helps to train JNH staff

to conduct their own Chronic Disease Management Programme workshops in the community to empower patients and caregivers with self-management techniques.

NUHS and Jamiyah will jointly develop an appointment consolidation programme to help JNH patients consolidate their multiple visits to the NUHS Specialist Outpatient Clinic (SOC) and explore ways for such patients to be seen by one single doctor where possible.

The MOU signing ceremony was held at JNH on 25 February 2017 and graced by Minister for Trade and Industry Mr S Iswaran. It also coincided with the official opening of the JNH Senior Care Centre and Dementia Ward.



MP Vivian Balakrishnan (fifth from left), MP Liang Eng Hwa and Mayor Dr Teo Ho Pin visited the NUHS Primary Care Network booth.

▶ Strengthening Community-Based Care

A community cares for its residents – and to strengthen such care, the NUHS set up a series of meetings between management staff and Grassroots to discuss and define collaborative steps to achieve better health for their residents. NUHS Chief Executive Professor John EL Wong, Deputy Chief Executives Mr Chua Song Khim and Adjunct Associate Professor Joe Sim; and JurongHealth Group Chief Operating Officer Ms Joanne Yap met Bukit Batok Advisor Mr Murali Pillai on 8 January 2017, and Clementi Advisor Dr Tan Wu Meng on 24 January 2017. Discussions centred on the healthcare and social support currently available within the constituencies, and explored potential collaborative efforts to improve residents' health.

The Chinese New Year celebration, organised by the Jelapang Residents' Committee and held on 12 January 2017, was another opportunity for such engagement. During the event, NUHS Deputy Chief Executives Adjunct Assoc Prof Sim and Mr Chua interacted with General Practitioners (GPs) from the PCN @ Bukit Panjang. PCNs were set up to bring together GPs, nurses and primary care coordinators to form a support network for residents with chronic medical conditions.

Celebrating Health in the Heartlands

Residents of Bukit Panjang enjoyed a fun day at Health Fiesta @ Bukit Panjang on 5 March 2017. The event was held at Bukit Panjang Community Club and kicked off with a morning mass brisk-walk exercise. There were also health talks and health-themed exhibitions.

The NUHS set up a Primary Care Network (PCN) booth at the event. The PCN comprises General Practitioners, nurses and primary care coordinators who provide medical, social and financial support to patients with chronic medical conditions. At the booth, visitors could learn more about the available healthcare services and how such a network could benefit them. They could also have their blood pressure, height and weight measured, and their Body Mass Index (BMI) and risk of chronic diseases assessed for free. A free colorectal cancer screening kit was also made available for those aged 50 and above.

The event was jointly organised by Bukit Panjang, Senja-Cashew and Zhenghua Community Centre, and supported by Al-Iman Mosque.

Cancer Care on the Go



With the recent launch of the NCIS On The Go programme, cancer patients are now able to receive treatment at satellite clinics located near their homes. Convenient locations aside, they are able now to sidestep the waiting time at hospitals.

These satellite clinics are situated island-wide and include community centres, recreational centres and medical centres where oncology nurses from the National University Cancer Institute, Singapore (NCIS)'s Home Care team are stationed. These nurses provide basic treatment care and services, such as changing dressings, giving injections, taking blood, and even administering chemotherapy treatment (for selected patients).

A schedule is updated quarterly on the NCIS website and patients can phone in or email for an appointment, at least a day in advance. The NCIS On The Go programme was launched on 1 February 2017. There are plans to offer other treatments such as subcutaneous chemotherapy treatments.



Heart Support Group Goes Snap-Happy

Having a hobby helps in keeping oneself active and healthy. Towards this end, Ng Teng Fong General Hospital's Art&Health programme organised a nature photography workshop on 4 March 2017 for the budding shutterbugs among their patients. 15 members of the NTFGH's Heart Support Group – a platform for patients to connect, encourage, lend support and motivate each other – attended a workshop conducted by Mr Fong Chee Wai, President of the Nature Photographic Society, Singapore, at the Singapore Botanic Gardens.

At the workshop, participants learnt about various camera functions and picked up tips on how to compose a photo. The gloomy weather did nothing to dampen their enthusiasm, and they went around the Gardens to practise applying their new knowledge. The workshop concluded with a group review, during which participants shared their snaps and gave each other constructive feedback.



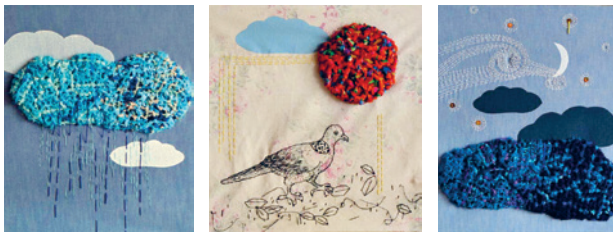
Shaping the Future of Public Health

Celebrate public health achievements made in Singapore and help the next generation of public health professionals by supporting SSHSPH's fundraising dinner.

Every eligible individual with a passion for disease prevention deserves an equal opportunity to pursue a desired education at the National University of Singapore (NUS)'s Saw Swee Hock School of Public Health (SSHSPH). With that in mind, to raise money for its Help-A-Student Fund that goes towards building bursaries and scholarships, as well as subsidise higher-learning programmes, the School will hold its fundraising dinner on 19 May 2017 at the Della and Seng Gee Guild Hall, National University of Singapore Society, Kent Ridge Guild House.

Themed "Celebrating Public Health", the event will honour the public health fraternity's camaraderie, dedication and partnership that enabled significant milestones achieved over the past decades. Over 250 public health leaders and colleagues are expected to attend the event.

To find out how you can support, please contact Ms Czarina Buenaventura at ephclmb@nus.edu.sg or 6601 3450.



Perfect Knots

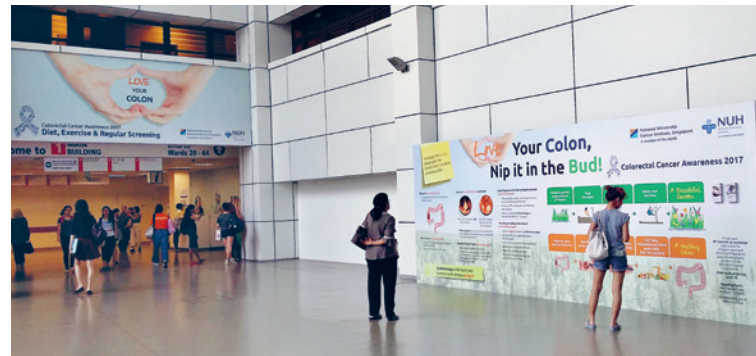
A community project brings Jurong residents together to create fabric artworks for Ng Teng Fong General Hospital (NTFGH).

Beyond decorative value, art can be a therapeutic and expressive tool to promote healing and comfort for patients and their families. With this intention in mind, NTFGH's Arts&Health programme actively collaborates with local artists and the community to co-create visual art for permanent display in NTFGH and Jurong Community Hospital (JCH). "Ties that Bind" is a series of 15 fabric collages by local visual artist Ms Tay Bee Aye — together with residents of Jurong East View RC and Taman Jurong.

To create the artworks, fabric pieces of different colours and textures were collected and then knotted to form gardenscapes, blue skies and 3D insects.

Ms Tay hoped that the art-making process would also build bonds among strangers and encourage unity in the community.

Ties That Bind is on display from now till end-June 2017 at Art Wall opposite Discharge Pharmacy, Level 2, Tower B, Ng Teng Fong General Hospital. The artworks will be installed permanently in NTFGH Ward B8 at the end of the 6-month exhibition.



Improving Colon Health

Guard against colorectal cancer with regular screening and a healthy lifestyle.

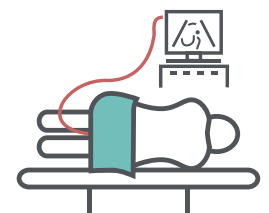
Colorectal cancer is a cancer of the large intestine (colon and rectum). Most colorectal cancers begin as small non-cancerous growths (polyps) which may later become cancerous.

To remind visitors and patients about Singapore's leading cancer and what they can do to improve colon health, these educational displays were placed by National University Hospital to enhance knowledge, raise awareness and encourage early detection.

A free Faecal Immunochemical Test (FIT) kit is available to Singaporeans and Permanent Residents aged 50 and above at Colorectal Centre, Level 16, NUH Medical Centre.

WHY SCREEN?

- Screening can detect early cancer or polyps
- Polyps can be removed
- Early cancer if treated, can be cured



COLONOSCOPY is the best way to detect and remove polyps (growth on the inner surface of the colon).

Supporting Organ Donation

NUS students were treated to informative sharing sessions by recovered organ transplant patients at *Game of Survivors*. The fundraising event of the National University Centre for Organ Transplantation (NUCOT) was held at University Town on 16 February 2017.



Organised in partnership with National University of Singapore (NUS) Medical Society and TeamNUS, the event featured a treadmill challenge. Every 1km ran was matched with a \$10 donation. After six hours, 150 treadmill runners raised more than \$6,000 to assist needy transplant patients.



Through games, participants learnt different facts and information on organ donation, including the Human Organ Transplant Act (HOTA).



Another highlight was a forum for tertiary students to share their views on organ donation. The session aimed to debunk myths of organ transplantation and inspire undergraduates to do their part for the cause.



NUCOT's very own band, The New Chords, formed by organ transplant patients, healthcare professionals of NUCOT, and NUS Medical Society students, entertained the audience with their performance.

Every Drop Counts

Staff of NTFGH and Jurong Community Hospital (JCH) set an example by joining members of the public to donate blood on 24 February 2017. Many were first-time donors.

“I’m saving lives in the ICU every day, but this is different!”

Jomilyn Cabali
Senior Staff Nurse,
ICU, NTFGH



“I hope to pay it forward. In future, if I happen to need blood, I hope someone will do the same for me.”

Irene Chan
Friends of JurongHealth
Volunteer



“I’m still saving lives at the age of 64. This makes me feel great! I’m proud of myself for doing this.”

Anita Kwan
Porter, NTFGH & JCH



“As a doctor, I know the importance of blood and that’s why I want to do this regularly.”

Dr Vivekandan Panchalingam
Medical Officer,
NTFGH



“I’m a nurse and I see blood often but donating blood still makes me nervous. This is my first time donating and I’ll do this again.”

Elizabeth Hau
Enrolled Nurse, JCH



Matters of the Heart



Go Red for Women is a global annual campaign to raise awareness of women and heart disease.

As part of International Women’s Day and Mothers’ Day, the Women’s Heart Health Clinic of the National University Heart Centre, Singapore has events lined up for May.

▶ THE HEART OF A WOMAN PRECEPTORSHIP COURSE

6 May 2017, 8.30am to 1.30pm
Seminar Rooms TO9-03/04, Level 9,
NUHS Tower Block

This seminar for medical students and healthcare professionals aims to educate and foster action about prevention, identification and treatment of women’s cardiovascular diseases, as well as offer new understandings on how the disease affect men and women differently.

To register, call 6772-3282 or email nuhcs@nuhs.edu.sg

▶ HEALTHY MUMMY, HEALTHY FAMILY SYMPOSIUM

6 May 2017, 10.30am to 12.30pm
Taurus Ballroom, Level 1,
Marina Mandarin Singapore

Find out about **women and heart disease** and learn some nutrition tips for the family from dietitian, Ms Valerie Teong. Singapore’s top bento artist will be there to conduct a Hearty Bento Workshop for selected participants.

Tickets at www.sistic.com.sg/events/chealth0517

TAKE IT TO HEART

Lower the risk of cardiovascular diseases with the following tips:



Take part in moderate physical activity such as brisk walking for at least 30 min each day, five times a week.



Control your cholesterol and sugar intake by choosing foods such as whole- and multi-grains products, fruits, vegetables, nuts, and fatty fishes including salmon, mackerel and albacore tuna.



Drink in moderation. Women should limit their alcohol intake to no more than two standard drinks a day.



Avoid smoking.

CALLING FOR VOLUNTEERS FOR HEPATITIS B STUDY



The liver is a vital human organ. It converts the food we eat into energy; it filters blood to get rid of toxins; and it helps in digesting and removing waste products from the body. Hepatitis – the inflammation or swelling of the liver – would disrupt these functions and affect an individual's ability to survive.

No cure exists as yet for hepatitis B. A preventive vaccine for hepatitis B

virus (HBV) is available, but people who are already infected can at best control their condition by taking antiviral drugs.

The National University Health System (NUHS) is leading research studies about Hepatitis B – and we are looking for suitable volunteers. If you are **21 to 71 years old and HBV-positive for longer than six months**, call us now to be a part of it.

ABOUT THE STUDY

- **Aim:** To discover the key triggers leading to long term immune control of Hepatitis B as well as to improve the rates of patient follow up
- **Research Partners:** Agency for Science, Technology and Research (A*STAR); National University of Singapore; Duke–NUS Medical School; Singapore General Hospital; Tan Tock Seng Hospital; and Changi General Hospital
- **Duration:** 5 years
- **Benefits:** Free lab tests and consultations + possible compensation for travel expenses

For more info, call **6772 5715 / 9889 4164** or visit www.facebook.com/nuhshepatitistrials.

THIS STUDY IS IMPORTANT BECAUSE:



Many people infected with HBV feel well and do not show symptoms such as jaundice (yellowing of the skin and eyes), dark-coloured urine and joint pain. They may unknowingly pass the virus to others.



About **160,000** Singaporeans, or **3.6%** of the population, suffer from HBV infection, most of whom are unaware they are carriers. Liver cancer is the third most common cancer in Singapore.



Worldwide, some **240 million** people have chronic hepatitis B and 1.4 million people die each year from HBV-related liver diseases.

QUICK FACTS ON HBV



A virus found in the blood and other bodily fluids of a person



Transmitted through direct contact with bodily fluids, sexual contact or unsanitary sharing of needles