



**FACES OF HEALTHCARE**  
SINGHEALTH DUKE-NUS ACADEMIC MEDICAL CENTRE

Annual  
Report  
2013



Dedicated to all our wonderful healthcare heroes and heroines who shared their stories and smiles with us, and to all colleagues who came together to make this publication possible.

## CHAIRMAN'S MESSAGE

# Being ready for Singapore's healthcare needs



The healthcare landscape in Singapore faces a rapidly ageing population, increasing burden of chronic diseases and rising expectations of patients.

The Academic Medicine partnership between SingHealth and Duke-NUS is well-poised to meet the needs of the population through initiatives and discoveries which will significantly improve healthcare for the nation.

This year alone, we have seen research discoveries in dengue, breast cancer and glaucoma – three major diseases that afflict the population. Research collaborations across and beyond the cluster have reaped results that will lead the way to novel and effective treatment.

Our close interactions with patients have given rise to many initiatives that make it safer, faster and easier for them to receive care from us. I commend the work of our Medical Social Workers who devised a “One Medifund” system that makes it much easier and more dignified for our patients to seek financial help.

Adding to better patient experience is the “SingHealth 10-Point Plan” which constitutes a simple,

comprehensive checklist of guidelines for infrastructure and design. This was developed by a cross-institution multidisciplinary team of clinical and administrative professionals to enable us to augment our facilities to cater to the needs of our ageing patients. The plan guides all enhancements of existing infrastructures and new facilities.

Patients are at the heart of all we do, and we are committed to ensuring that the next generation of healthcare professionals continues to provide the best care. Young doctors are encouraged to teach and prepare for the role of educators. They are placed in an innovative team-based education system where interprofessional learning increases their capacity and capability as educators.

Building on that premise, the Academic Medicine Education Institute, set up in 2012, saw its first cohort of 37 fellows take part in their first education grand rounds, actively teaching and sharing knowledge with their peers.

While our healthcare professionals work towards providing increasingly better care, the physical landscape around them continues to be improved to

allow more space and facilities for expanding their academic girth.

The Academia building is only the beginning of our development efforts. Aligning ourselves to the national Healthcare 2020 Master Plan, the construction of more facilities and infrastructures makes us available to patients at more locations, offering high quality appropriate care at all stages.

Next up was the new National Heart Centre Singapore building which started operations in March 2014 on SGH Campus, bringing a two-fold increase to our clinical capacity in cardiovascular medicine. The superstructure offers seamless care delivery that leverages on technology to integrate clinical systems and improve outcome. Also planned for SGH Campus is the repurposing of the Mistri Wing building into a multidisciplinary care centre for diabetes and metabolic diseases.

Away from SGH Campus, there is much to look forward to after the groundbreaking ceremony of the Sengkang General and Community Hospitals. Designed to deliver integrated care with built-in flexibility to meet future needs, the colocation of a community hospital with

an acute hospital will ensure a more seamless and coordinated patient experience. We are on track to complete the hospitals in 2018.

At the time of this message, we are also preparing for the groundbreaking of the Outram Community Hospital which will be yet another development that allows us to provide a smoother and safer transition of care from hospital to home.

Our Regional Health System will allow us to reach out and improve the lives of even more patients, first and foremost by right-siting them, and working to ensure we cut down unscheduled readmissions. These goals require us to extend our reach and work with community partners to make it happen.

These improvements to healthcare would not have been possible if not for passionate staff and stalwart leadership. I would like to convey my appreciation to our outgoing board member Mr Gerard Ee for his significant contributions to SingHealth, and also welcome Ms Euleen Goh onto the Board.

Our future will be exciting. Much will depend on our ability to continually explore and exploit the

opportunities to better meet the needs of the nation. We are guided by our philosophy: make a difference for our patients and provide better healthcare for Singaporeans. This must be our unifying purpose.



Mr Peter Seah Lim Huat  
Chairman, SingHealth

## LEADERS' MESSAGE

# People Power



Running the nation's largest Academic Medical Centre (AMC) means being the best for our patients.

When the SingHealth Duke-NUS Joint Academic Medicine Executive Committee (AM EXCO) was formed in 2010, it did not just bring the leaders across the two institutions together. It stood for the belief that patient care can be improved through a shared pursuit of innovation, curiosity and academic rigour.

Our journey in Academic Medicine requires us to change the way we work. Integration and functional convergence across areas in care, education and research give space for more collaboration and creativity.

The strategic partnership between SingHealth and Duke-NUS, that sparked a chain reaction of initiatives and programmes, has matured and was formalised with the signing of our Memorandum of Understanding at the SingHealth Duke-NUS Joint Board Retreat.

In these four short years, the cluster's academic landscape has scaled new heights — collaboration and teamwork as the crux of our transformation, with improving patients' lives as our driving force.

Academic Clinical Programs (ACPs) form the backbone of our Academic Medicine journey, bringing cross-

institution integration and synergies in clinical care, education and research. With the formation of ten ACPs to date, we bear witness to never-before-seen levels of collaboration among healthcare professionals across our institutions, bringing each of their cultures and best practices to the table.

The robust and organic conversations brought about by this collaboration have resulted in several ground-up initiatives like the Central Employment of doctors, regular Research Grand Rounds, and even a shuttle service linking KKH and SGH campuses!

Our ACPs are supported by Research and Education Joint Institutes, co-chaired by SingHealth and Duke-NUS, to germinate growing academic endeavours. The new National Neuroscience Research Institute Singapore (NNRIS) and the National Heart Research Institute Singapore (NHRIS) are specialised areas of such collaboration, led by clinician scientists to catalyse clinical research.

Our efforts in philanthropy have helped grow our interest in Academic Medicine. The Benjamin Sheares Professorship in Academic Medicine launched in 2011 has since been joined by the Tan Cheng Lim Research and Education Fund, the Arthur Lim

Professorship in Ophthalmology, the Lee Seng Teik and Lee Hoo Leng Professorship in Plastic Surgery and Regenerative Medicine, and the proposed Balachandran-Kajima Professorship in Academic Medicine. These professorships allow us to nurture outstanding individuals in medical research and teaching.

As we organise ourselves to propel collaborations that can make an impact on patients, we also welcome the formation of SingHealth Duke-NUS Disease Centres (SDDC), which foster the development of subspecialties by bringing together the collective strengths of our professionals in various disciplines. The SingHealth Duke-NUS Head and Neck Centre and the SingHealth Duke-NUS Breast Centre provide a borderless and disease-focused practice to deliver holistic patient-centric care.

When brought under the scrutiny of our Academic Medicine Advisory Council, comprising distinguished professors from international AMCs and health ministries, the plethora of activities generated from our partnership gained resounding approval. With recommendations to further strengthen an innovative culture and enhance education and mentoring efforts, we can look forward to even more initiatives to cater to the overflowing interest to embark on academic pursuits.

Looking back at the fast-paced and productive FY of 2013-14, we can see that it has been an inspiring and satisfying journey. We identified what we wanted to achieve, we did what we needed to, and we know who we are working so hard for.

In this Report, we revisit the developments and achievements in the many facets of Academic Medicine and impact on our our patients. We also celebrate the faces of healthcare – capable, passionate and inspiring professionals who give their all for our patients.

This vibrancy in Medicine means that every patient who comes to us, now and in the future, will be given the most appropriate treatment and best outcome.

This is for you. Thank you for your dedication.



Prof Ivy Ng  
Group Chief Executive Officer  
SingHealth



Prof Ranga Krishnan  
Dean  
Duke-NUS Graduate  
Medical School



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and the People behind them

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# THE SINGHEALTH DUKE-NUS PARTNERSHIP



The SingHealth Duke-NUS Academic Medicine partnership builds on the collective clinical strengths of the SingHealth Group and Duke-NUS Graduate Medical School's research and medical education capabilities.

Like in many academic medical centres in the world, the partnership between a healthcare provider and a university provides a synergistic framework where research, scholarly work and education contribute to the advancement of patient care.

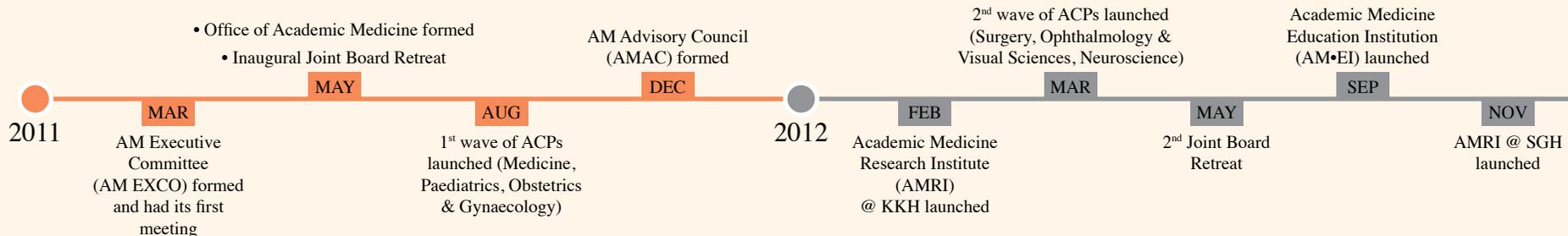
Our journey in Academic Medicine is guided by our desire to improve patients' lives and transform Medicine.

This journey is centered on the formation of Academic Clinical Programs (ACPs) - structures that cut across multiple institutions and strengthen the collaborative potential among healthcare professionals in the areas of clinical care, education and research.

The ACPs are complemented by joint institutes of research and education, providing administrative support to advance medical teaching and catalyse clinical research.

Expanding on the ACPs' cross-institution network are the SingHealth Duke-NUS Disease Centres. These centres bring together the collective strengths of specialists across various subspecialties to provide a borderless and disease-focused practice to deliver holistic patient-centric care.

These activities are supported by the Joint Office of Academic Medicine, a collaborative department between SingHealth and Duke-NUS formed to ensure smooth transition and implementation of initiatives between the two partners.





Academic Medicine  
Research Institute  
Duke-NUS SingHealth

AMRI is a collaboration between Duke-NUS and SingHealth that serves as an academic nexus by providing scientific support to nurture the research career of budding and established clinician investigators, clinician scientists and other scientists in the cluster.

The research joint institute helps researchers transform their ideas into research proposals, respond to grant calls, execute projects and publish papers. To that end, AMRI provides mentoring, facilities, development of collaborations and supports pilot studies.



Academic Medicine  
Education Institute  
Duke-NUS SingHealth

Building on the collective strengths of SingHealth’s clinical excellence and Duke-NUS’ educational expertise, AM•EI facilitates the sharing of best practices in teaching, interaction and teamwork across disciplines.

This supports the spirit of Generativity, which is developing excellent healthcare educators who can contribute to building up other healthcare professionals in a vibrant learning environment that promotes care innovation and improves patient outcomes.

### SINGHEALTH DUKE-NUS DISEASE CENTRES

Integrated multidisciplinary practice units that tap on unique strengths and skill sets of different specialties and domains in a one-stop patient-centric service. This structure also allows for the development of subspecialties to greater depth, improving collaboration, sharing of best practices and establishment of consistent protocol for better training and research.

There are currently two SDDCs – the SingHealth Duke-NUS Head and Neck Centre led by Dr Tan Hiang Khoon, and the SingHealth Duke-NUS Breast Centre led by Dr Ong Kong Wee.



Information accurate as at March 2014

## Prof Terrance Chua

*Medical Director, NHCS*

*Deputy Group Director, Medical*

Prof Terrance Chua is big on organisational learning.

He elaborates: “In public healthcare, we get to treat a whole multitude of patients. We also teach and conduct research. This gives us the potential to change the way we practise Medicine on an organisational level.”

Using the example of a risk calculator recently developed by NHCS, Prof Chua explains that it is now possible to determine a particular patient’s likelihood of suffering from chronic arteric disorder with a simple push of a button. He adds that over 2,000 patients were studied in order to make this tool a reality.

“There is no way you can accomplish great things by being a single operator in your own clinic. As part of a larger unit, we can more accurately determine the risk for patients and provide better care,” he says.

But Prof Chua also realises that this system has plenty of moving parts that are hard to align. Leaders in this scenario must employ communications as a means to keep their people on track.

“While we have people with many different strengths, researchers still need to work with investigators and educators need to work with clinicians,” says Prof Chua. “As leaders we have to spend a lot of time listening to all of them, addressing their concerns, and also to learn from what they bring to the table.”

Despite the uncertainty of change, Prof Chua has faith.

“Looking at how efficiently the NHCS staff managed the move to our new building, I have confidence in their united strength to take on any challenge.”

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## Yong Khee Ming

*Assistant Director  
SingHealth Academy*

“The most memorable moment in my career is to see the opening of Academia. I helped redesign its education facilities and pushed for more technologies to be integrated into the building. The wet skills lab has a customised push-in freezer to ensure better preservation. First of its kind.”



## Lee Soo Boon

*Assistant Director, Pharmacy  
SGH*

“I was told that Hong Yen, a specialist pharmacist, had been given the 2014 GCEO Excellence Awards. I had been mentoring her since her junior years and I was extremely proud of her. That was my best day at work!”



## Prof Tan Kok Hian

*Senior Consultant, Dept of Maternal Fetal  
Medicine, KKH  
Group Director, Academic Medicine*

“My best day at work is when I get to see my patients in the morning, work with my research team on pregnancy studies in the afternoon, and then meet colleagues in the evening to strategise ways to strengthen our SingHealth Duke-NUS Academic Medicine framework. In these ways, I hope to work towards improving health and pregnancy outcomes for our population.”



## Dr Lalit Kumar Radha Krishna

*Senior Consultant, Palliative Medicine  
NCCS*

“While I was training as a gynaecologist, there was a patient who was very distressed by her pain and emotional suffering. We struggled to ease her pain for three days, then the palliative care team came and did it in one hour. I quit the rotation that week and started training as a palliative care physician.”

## Rita Bte Abdul Rahman

*Clinic Coordinator  
NDCS*

This Clinic Coordinator at NDCS' Specialist Outpatient Clinic believes in doing what she loves: "When your true talent reveals itself, you will be more enthusiastic about your pursuits and you have the energy to overcome obstacles."

The proud grandmother of two was actively involved in missionary trips with dental and medical teams to Bintan, Batam and Thailand in the early 2000's. To her, those were memorable times.

At work, she is not one to shy away from collaboration and teamwork. Rita gives credit to her colleagues from different professions, admiring their strengths, thinking skills and empathy. "They shape the person I am today," she says.

"The day I leave NDCS, I want to leave behind the same passion and joy, where fun-loving staff are able to enjoy the fruits of labour through teamwork."

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## Assoc Prof Scott Compton

*Associate Dean, Medical Education, Research and Evaluation  
Duke-NUS*

Team Based Learning (TBL) is a big thing at Duke-NUS and Associate Dean Scott Compton wants to cut it down to pieces and look at it through a microscope.

Once a clinical researcher, his affection for medical school curriculum management and pursuit of process analysis landed him a job at Duke-NUS – one that he loves tremendously.

"I am in the process of conducting a number of educational research studies that are related to testing the assumptions that TBL is based on. I'm drawn to finding out if those assumptions are valid, and how we can improve our educational practices."

At the heart of his work are his students, whom he speaks very fondly of.

"One of my greatest joys is working with them in the creative process of research," he says. "The best days are when I see their successes. It's awesome to feel their happiness and to be part of it all."

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## Wee Liang Kwee

Senior Principal Radiographer  
NNI

“Come on, you’re working in a hospital. It is guaranteed that patients will scold you. One day, a patient may die on you.”

Veteran radiographer of 35 years Wee Liang Kwee does not sugar coat his words. His advice to the next generation is as clear as the images his machines produce – this is a tough job. You need a lot of hard work and determination, and some will not make it.

“You’re using a machine, but that machine interacts with people. Some of the younger staff will take it out on the patients, but I tell them that they will be a patient one day and we always have the next patient to take care of,” he says.

Call it tough love, but Liang Kwee’s philosophy has raised its share of outstanding radiographers, some of whom still accord him the title of *shifu*.

“When you’re under my mentorship, it’s my expectation that you exceed me. I don’t want to still be teaching you ten years on!”

To him, nothing feels greater than seeing his students excel. Well, maybe except saving his patients’ lives.

“When a person suffers a stroke, our team goes down in time to extract the blood clot from his brain. I provide the imaging support and the nurse supports the doctor for the procedure,” he relates. “You actually witness the blood clot being extracted right in front of you, and you know that the patient is saved.”

“That feels *shiook*, man.”

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# SINGHEALTH DUKE-NUS ACADEMIC CLINICAL PROGRAMS TRANSCENDING BOUNDARIES

## WAVE 1

### MEDICINE Academic Clinical Program



#### 13 departments from 1 institution

Formed in Q2 FY2011

- The Medicine Residency Programs manage 209 junior and senior residents, with 70% of the 1st cohort of Junior IM Residents joining the SingHealth Senior Residency Program
- Successfully launched the Nurturing Clinician Scientist (NCS) programme in 2011; 2 NCS awardees have received the NMRC Transition Award
- Won 88 institutional or national competitive grants worth over \$20 million, with over 439 publications authored and co-authored by clinician researchers

### PAEDIATRICS Academic Clinical Program



#### 9 departments across 2 institutions

Formed in Q2 FY2011

- 2 research focus identified — GUSTO (Growing Up in Singapore Towards Healthy Outcome); and STIIC (SingHealth Translational Immunology and Inflammation Centre)
- Set up a committee to standardise undergraduate training approaches across three medical schools in Singapore
- Set up and raised \$1.7 million for Tan Cheng Lim Education and Research Fund

### OBSTETRICS & GYNAECOLOGY Academic Clinical Program



#### 6 departments across 2 institutions

Formed in Q3 FY2011

- Organised the first Clinical Practice Improvement Day showcasing clinical innovation / improvements projects as well as sharing of best practices
- Launched OBSTETRICS Course, an evidence-based multiprofessional training course for obstetric emergencies
- Launched Pitch for Grant to promote clinical or translational research for junior doctors within ACP

## WAVE 2

### SURGERY Academic Clinical Program



#### 17 departments across 2 institutions

Formed in Q4 FY2011

- Organised the 1<sup>st</sup> SingHealth Surgical Congress together with SGH Division of Surgery, hosting over 800 participants from 26 countries
- General Surgery & Orthopaedic Surgery were ranked top SingHealth Residency Program in AY12 and AY13 respectively
- Rolled out 7 research programmes to raise overall research engagement and groom specific talent

### OPHTHALMOLOGY & VISUAL SCIENCES Academic Clinical Program



#### 11 departments from 1 institution

Formed in Q4 FY2011

- Established a cure for myopia progression through atropine eye drops & developed Asia's first genetic test for identifying patients with a type of eye disease
- First in Singapore and South-east Asia to receive the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) accreditation for training program
- Conducted more than 1,056 research studies, with \$176 million in competitive grants, more than 1,952 scientific papers published, received 285 awards and registered 81 patents





WAVE 3

WAVE 4

**NEUROSCIENCE**  
Academic Clinical Program



**8 departments from 1 institution**

Formed in Q4 FY2011

- Project to redesign CT scanning process to reduce radiation doses while maintaining accuracy won SingHealth Enhancing Performance, Improving Care Award
- First interprofessional Education Day held
- More than \$50 million in research grants in last 5 years

**CARDIOVASCULAR**  
Academic Clinical Program



**2 departments from 1 institution**

Formed in Q3 FY2012

- Moved into the NHCS new building which is furnished with 38 clinic consultation rooms, 3 major operating theatres and capacity for 6 cardiac catheterisation labs and 24 beds in the Short Stay Unit
- Organised 4<sup>th</sup> Asia PCR / SingLive, held from 24-26 January 2013, with participation of at least 2,000 international delegates
- National Heart Research Institute of Singapore (NHRIS) formed

**ONCOLOGY**  
Academic Clinical Program



**6 departments from 1 institution**

Formed in Q4 FY2012

- Collaboration between NCCS and Clearbridge Biomedics, in partnership with SGH Pathology has resulted in the establishment of the regions' first Circulating Tumour Cell Centre of Research Excellence
- Organised 2 sarcoma symposiums attended by more than 700 medical professionals from local hospitals and private specialists in various disciplines
- Collaboration with Duke-NUS, Fundeni Clinical Institute (Romania) and Koen Kaen University (Thailand) to expose molecular secrets of bile duct cancers from different countries

**PATHOLOGY**  
Academic Clinical Program



**2 departments across 2 institutions**

Formed in Q4 FY2012

- Set up Translational Pathology Centre with collaborative grant from SGH Pathology and other partnering institutions
- Organised international and regional courses on Breast Pathology, Hematolymphoid Pathology and Cytology
- Ten collaborative and two competitive grants secured

**RADIOLOGICAL SCIENCES**  
Academic Clinical Program



**6 departments across 5 institutions**

Formed in Q1 FY2014

- New regular combined Academic Grand Rounds initiated to bring RADSC faculty together
- Seed funding for budding clinician investigators and clinician educators started
- Strategic review of talent management and mentorship implemented



## Assoc Prof Eranga Vithana

*Head, Ocular Genetics Laboratory*

*SERI*

To Associate Professor Vithana, research is an art, and scientists are creative minds at work — understanding, interpreting and redrawing the many elements of that art form.

“It’s nature. Sometimes simple, sometimes complex,” she says. “If you don’t have the sense of wonderment about it then you’ll be tired of it quick. But when you’re able to see it, then you’ll be struck with curiosity. You’ll go for it, you won’t get stale. There’s enough science for everyone.”

And that is her philosophy. She makes it known that she loves working with clinician scientists. It is a symbiotic relationship that is beneficial to patients.

“The kind of drive researchers get and the kind of partnership that is forged with clinician scientists is unique. You bring different things to the table and it becomes something really nice and beautiful because you’re both working towards translating research,” she explains.

“It’s our duty as scientists to work with the clinician scientists. That’s the only way we can do something for the patients.”

She explains that the clinician scientists keep researchers close to the ground and help them see what the real questions are. The researchers are then able to tell the clinician scientists how they can go about answering the questions.

While competition for grants and personal glory might get in the way of things, Prof Vithana remains true to her calling.

“You have a role to play because you’ve been given this opportunity to work as a team for the patients. This is what I tell my students as well – you find your purpose; do your best, do it right, and don’t compromise on your principles.”

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## Dr Sally Ho

*Assistant Director, Education, SHP*

*Program Director (Family Medicine), SingHealth Residency*

Dr Sally Ho is happy about a lot of things – when patients’ conditions improve, when an old uncle or auntie regards her as their ‘daughter’, when her Family Medicine Residency Program achieved full accreditation.

And for the lousy moments, there are always friends to pull you through.

“I remember one of the low points in my work as a junior family physician. I was very tired from always feeling rushed and feeling that I could not provide good care for my patients. I had a chat with Dr Chow Mun Hong when I felt like giving up.”

She continues: “He did not paint me a rosy picture. However, he did remind me of what I knew deep inside - that the work is meaningful and I can and do make a difference to my patients. It helped sustain me through that difficult period and kept me in SHP till now!”

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## Eddy Nai

*Assistant Manager, Commissioning Secretariat*

*SKH*

Eddy does not want to leave behind any legacy. The humble man shrugs off the notion of grandeur: “Nothing. Being a simple man will do.”

However his work with SKH is anything but simple. Being a member of the commissioning secretariat sees him supporting work that ensures the functionality of the 1,400-bed environment that will serve the Northeast community in Singapore.

“I enjoy work that involves space coordination, infrastructure and implementation of new technologies to improve the daily lives of people,” he reveals. “Working in Sengkang Health, I am able to work, share and learn new knowledge. Most importantly, I can continue to pursue my passion of ensuring functionality by integrating people, place, process and technology.”

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### Chia Puay Choo

*Director, Operations (Support Services)  
Director, New Building Project, NHCS*

“I chose to be in healthcare. Even though I am not a doctor or a nurse, I still find it very meaningful to work in a hospital. I hope we never forget the single, most fundamental ingredient of healthcare – the human touch; the warmth and care we give are so essential to healing.”



### Yang Ming Xing

*Physiotherapy Manager  
SHP*

“Expanding the network of rehabilitation services within SHP is definitely on top of my list at the moment. Primary care network is going to be the next ‘in’ sector. As we move away from the idea of institution-based healthcare provision, primary care will be the area of expansion, progression and excitement.”



### Anu Pandey

*Class of 2015  
Duke-NUS*

“Best day at work? For me it would be those days when I can afford a little bit more time to sit down and listen to our patients’ stories. I am always humbled by some of their experiences, and it helps me put my difficulties in perspective.”



### Dr Mark Cheah

*Chief Resident, Internal Medicine  
SGH*

“Teaching is the highest form of understanding. When we teach, we engender not only our knowledge but also our values to the next generation.”



## Clinical Assoc Prof Chew Ming Tak

*Senior Consultant, Dept of Orthodontics  
NDCS*

Associate Professor Chew Ming Tak, NDCS's first PhD holder conferred by the University of Groningen (Netherlands) in 2007 for his research on dentofacial deformities, loves mathematics for its precision of answers. He elaborates: "When you derive the answer, it's either right or it's wrong. There is no uncertainty."

One more thing that is certain – public healthcare is losing talent to the allure of private practice. "When we train people, we are hoping that eventually most stay on and contribute to the institution," Prof Chew says.

Despite the odds, seasoned educators like Prof Chew have a way of connecting with their students. His philosophy on teaching is: "Support your student in any way possible. I want to help my students not just academically, but also by ensuring I give them enough leeway to develop as they deem."

His passion for teaching has been rewarded with the "Faculty Excellence in Teaching" award conferred by NUS. He has won this award for two academic years, an achievement he speaks fondly of. At the end of the day, he hopes his students remember him as a forthcoming and genuine teacher.

"You have to put away the bias. There are no secrets you should hold back. Besides, you want your students to be better than yourself. That is the hallmark of a successful educator," he says.

Prof Chew's efforts in clinical work, research and education are all aimed at a specific goal - happy and satisfied patients.

"As orthodontists, we don't deal with life or death situations, but when a grateful patient writes you a card or gives you a small box of chocolates in appreciation, that's enough to make my day."

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## Dr Edmund Wong

*Deputy Medical Director (Clinical Services)  
Senior Consultant, Vitreo-Retinal Service, SNEC*

It may be a little too soon for him to talk about leaving a legacy, but Dr Edmund Wong has a clear vision on what he wants to leave behind.

“I want to leave with the knowledge that I have cared for and saved the vision of many people and have done my best to help people with eye problems see better,” he says.

“After having looked after my patients well, I would also like to have developed a group of interested, passionate younger doctors to follow in the footsteps left behind by my seniors and those before them.”

That vision reveals the passion Dr Wong has for patient care and education. He comes to work every morning with a firm resolve.

“Patient care. There’s no doubt that I enjoy interacting with patients and derive a lot of satisfaction from improving their lives. The fact that as doctors we can actually do something positive – you see patients change, their lives change, their family’s lives change – it’s tremendously rewarding.”

And his work for patients does not just happen at the clinic either. Dr Wong has taken his craft to charity screenings and surgeries to the less fortunate in Indonesia, Myanmar, Vietnam and China. His experience there gave him hope for public healthcare in Singapore.

“Some of these countries have very basic healthcare, but in every society one thing is apparent – health is a major concern for the people. Resources are directed to the industry and healthcare professionals are driven by their passion to care for the nation.”

He continues, “I’m glad for Singapore’s healthcare, and especially in SingHealth. We still hold true to this root value and are not driven by commercial distractions. Our clinical research is also enhancing care and improving health.”

This, to him, is most important to impart to the next generation — a caring mind dedicated to caring for as many patients as possible.

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## Enny Kiesworo

*Chief Operating Officer (Research), SingHealth*

*Director (Administration), Office of Clinical Services, Duke-NUS*

Enny is a research dynamo. Her three years in SingHealth has been filled with excitement for the work she has been doing.

“It is impossible not to be passionate about what I am doing. In healthcare, every day is different and interesting, and I enjoy working with the people, especially my team of very committed administrators,” she says.

“We operate in a very dynamic environment where we need to constantly change, adapt and be proactive in supporting the growing needs of research which ultimately aims to improve the lives of our patients.”

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## Chandra Sekaran Pethaperumal

*Nurse Clinician, Children's Intensive Care Unit*

*KKH*

As the nurse coordinator of the neonatal and paediatric Extracorporeal Cardiopulmonary Oxygenation (ECMO) Specialist Nurse team at KKH, Chandra Sekaran knows how crucial adaptability and teamwork are in delivering life-sustaining support for critically ill patients.

“In 2013, I was part of an ECMO emergency team transporting a child to KKH. It was very challenging, but we were eventually able to nurse the child back to health. It gives me a sense of satisfaction to know that I was a part of the team that saved the child's life,” says Chandra.

To ensure that the best care is consistently delivered, Chandra works closely with fellow nurses and perfusionists from NHCS to facilitate the hospital's training and accreditation programme for ECMO nurse specialists.

“My dream is for the KKH Children's Intensive Care Unit to become an ECMO centre that serves the region, making a difference to the lives of many more children,” shares Chandra.

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# ACADEMIA

## BUILT TO DEFINE TOMORROW'S MEDICINE



### LIVE STREAMING

5 sessions from a major operating theatre (OT) for live discussions and learning

•  
11 sessions within Academia

•  
Number of sessions expected to double in FY2014



### VISITS AND TOURS

66 VIP and official guided tours

•  
3 tours a week conducted on average  
(VIP and Non-VIP tours)



### CLINICAL WORKSHOPS AND COURSES

49 workshops and courses held

•  
1,146 surgeons, trainees and students attended



### SEMINARS AND CONFERENCES

More than 700 trainings conducted

•  
More than 20,000 participants attended these sessions

•  
14 conferences and major events,  
out of which 9 were by external organisations

•  
These conferences involved more than  
2,700 participants



### UTILISATION

75% for large training rooms  
(auditorium & seminar rooms)

•  
39% for small training rooms

•  
64% for Procedural Skills Labs



### CUSTOMISED STORAGE FOR CADAVERIC SPECIMENS

Customised chiller with a "trolley push-in" design for storage of cadaveric specimens in the wet skills lab

•  
First of its kind in the world



## LEVERAGING ON TECHNOLOGIES FOR EDUCATION

eLecture and eLearning enable remote learning away from the classrooms

In October 2013, a LIVE simulcast was made using the eLearning platform, Mediasite, which allowed the streaming of a lecture live to 9 polyclinics

Live streaming capabilities connect all education facilities within Academia

Up to 7 concurrent sessions can be held with external parties

Live streaming sessions have been conducted from SGH Major OTs to the Netherlands and from KKH to Academia

Opened in July 2013, the 13-storey twin tower on SGH Campus houses the expanded SGH Department of Pathology and SingHealth research and education facilities



## FACILITY MANAGEMENT

SingHealth Academy assumes the role of facility manager for Academia education facilities

Centralised bookings for all shared facilities

A logistics team takes care of room booking, coordination and set up

An AV team takes care of all AV setup, live streaming and recording



## Cai Kaining

*Occupational Therapist*  
BVH

Her life as a medical technologist at the blood bank made Kaining want to do more for patients. She wanted to interact with them. A visit to a career fair introduced her to the profession of occupational therapy, and she was sold.

“When you work directly with people, there’s a certain level of fulfillment when you made an impact in their lives. As an occupational therapist, I get to help people with things that are meaningful to them,” she explains.

All Kaining wants to do is to help as many people as she can. “I am quite a positive person. My patients will come to me and tell me that they can’t perform some tasks, but I always tell them to concentrate on what they are still able to do,” she says. “It’s not about what you lost, but about what you still have. We can help make some adaptations to make your life easier.”

“It’s about helping the patients to regain their sense of confidence.”

Beyond helping her patients settle in their daily routines, she hopes to help her patients reintegrate into the community, increase their independence and engage in a healthy lifestyle.

“Our Asian elderly population is more reliant on domestic helpers, and this takes away roles they play in their lives. Keeping our elderly engaged will enhance their self-worth and reduce the risk of depression,” she says.

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## Vivienne Ong

*Manager, Operations  
SKH*

The best is yet to come for Vivienne, whose career choices have always centered on healthcare. From translational cancer researcher to public health graduate to policy-maker and now in her role as operations manager for SKH, she hopes to make a positive impact on the lives of others.

“I would like to see healthcare simplified, more accessible, and with low moral hazard.” She elaborates, “It will be affordable and quality healthcare that is readily made available to those who require it, without having to navigate convoluted rules or qualification criteria. Individuals should also exercise good judgment and not consume healthcare unnecessarily.”

But for now, she is focused on outpatient transition of the SKH team into Alexandra Hospital.

“Planning, managing risk and working with many stakeholders keep me awake at night, in a good way.”

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## Dr Tchoyoson Lim

*Senior Consultant, Neuroradiology  
NNI*

There’s one thing about being a teacher that pleases Dr Lim: “When my students realise they have verbalised the correct answer to the question posed without any help from me, that aha! moment is much more precious than my own aha! moments.”

The passionate educator wants his medical students to be able to learn, think and reflect as a life skill, and not just as means to pass exams. Mainly because as they move on in their careers to being a doctor, they learn that it is more than just studying.

“What influences me most at work is a composite sketch of mentors, colleagues, inspirational figures from the past and present, our students, our research subjects. If our patients and students do well, then it is a good day.”

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### Teo Lay Cheng

*Senior Staff Nurse, Public Education  
(Cancer Education & Information Service)  
NCCS*

“People I meet, including some relatives, believe cancer patients may have done something wrong in the past. They also frequently ask whether cancer is contagious. I reassure them that they can stay together in the same house, eat together, sleep and hug each other.”



### Kenneth Goh

*MD / PhD Student  
Duke-NUS*

“Behind the scene, there’s a huge amount of complexity to make things work for our patients. Doctors and nurses may get most of the credit, but there are many more good people working in the background helping our patients get back on their feet and back home!”



### Jaime Low

*Deputy Director, Office of Strategy  
Management, SingHealth*

“I’m currently working with my HR and Finance colleagues to improve our planning and budgeting processes. It’s very exciting to be part of a project that looks at how to change for the better. There is immense satisfaction when stakeholders give feedback that the implemented changes have benefitted them and made a real difference.”



### Zabariah Bte Yusoff

*Senior Patient Service Assistant  
SNEC*

“I have recently been assigned to manage training for the new staff. I am not sure if I am able to leave a legacy. However, I would be most satisfied if I know that the lessons and experiences I share with my younger colleagues are put to good use.”



## Dr Gilbert Tan

*Assistant Director, Clinical Services  
SHP*

Everyone has a role model, someone who inspires them and paves the road to their future.

When Dr Gilbert Tan was just an undergraduate, a particular General Practitioner (GP) showed him that Medicine should be more than treating his patients' ailments.

"As a doctor, I adhere to the aphorism to cure sometimes, relieve often, but comfort always. Being there with our patients at different stages of their life journey is an important feature of family medicine. This is what attracted me to pursue family medicine as a career."

In a way, all his patients are like family to him.

"A lot of my satisfaction comes from seeing my regular patients. They have grown old with me, their conditions have evolved. It's a journey I have with them," he explains. "I feel like I'm more than a doctor. I'm also a life coach, a counsellor and a friend."

Work at the polyclinic can be hectic and Dr Tan considers his nursing and allied health colleagues part of his large extended family. Their expertise and professional help enable patients to receive all their care under one roof, at an affordable price.

Adding to Dr Tan's family are his residents and medical students, whom he wishes to inspire and cultivate.

"Family medicine should be at the forefront of Medicine. Prevention is better than cure so you want to treat and manage chronic diseases before they develop into complications and end up in the hospitals," he says.

"To that extent, I hope to be a role model, as much as the GP who had inspired me, to the next generation so that they will take up family medicine as a career."

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## Yusnita Binte Omar

*Assistant Manager, Education and Training, Division of Radiation Oncology  
NCCS*

A bad day for Yusnita is when she has to sit in front of the computer all day. The lack of interaction is a great loss for the 18-year veteran in radiation oncology.

“What surprises me most about healthcare are the life learning experiences I gain day-to-day from the people with whom I interact,” she elaborates.

Many of these invaluable experiences come when she aids patients in radiotherapy sessions. Occasionally, she would meet a patient who has claustrophobia.

“For head and neck cancer patients, we have to make a shell to immobilise their head during treatment. We need to pick up little cues and bring those who have the fear through the entire process, helping them overcome and win the battle,” she says.

“When they can be on their own and no longer need me to be with them, that is the best moment of my day.”

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## Ng Wai May

*Advanced Practice Nurse, Neurology  
NNI*

It came from a challenge: “I bet you can’t get into nursing.”

The words of her mother prompted the start of a meaningful career for Wai May, one where the Advanced Practice Nurse has found to be fulfilling and meaningful. To the veteran nurse of 19 years, all that matters is that she makes a difference to people’s lives.

“I even got to save a boy once!” she recollects a fateful reunion dinner night where she was able to help resuscitate a drowned boy long enough for the paramedics to come.

But of the many lives she’s changed, perhaps the most important one is of her mother’s, when Wai May was given the President’s Nurse Award this year.

“She was there at the Istana. I think she was very happy, but being conservative she didn’t show it much,” she says.

“But deep within, I knew that she was happy and proud of me.”

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## Dr Goh Bee Tin

*Senior Consultant*

*Dept of Oral and Maxillofacial Surgery, NDCS*

Among the many accolades she has, there is one that sets the NDCS research head apart – she was once given the “Happiest Staff Award”. Always ready with her characteristic laughter, Dr Goh hopes to spread her love for research. She thinks research in dentistry has opportunities abound.

“Dental diseases are very common, so that gives rise to great potential for research,” she explains. “It is also very heavy on device and material development.”

She cites her work in bone bioengineering, where it is possible to grow the bone needed for jaw reconstruction instead of having to harvest it from another part of the body. This interest has led to Dr Goh’s collaboration with NTU in bone bioengineering research and 3D bioprinting.

She hopes that through leading by example, this will encourage more clinicians to try out research. “There will always be those who will never be interested, but there is also a group who has never experienced research. If they were exposed to it, they might be converted,” she says.

Dr Goh wants to inspire young hopefuls with her journey, and at the same time let them experience first-hand the joy of getting their hands dirty in research. Dr Goh is also hoping to broaden her reach by attracting research mentors who are renowned in the field. Together, they can shape the future of research at NDCS.

“As researchers, we are pressurised by the need to obtain grants and get published, so sometimes I have to remind myself not to lose focus,” confesses Dr Goh.

“You might actually win a grant by making it attractive for the grant-giver, but you could lose your original objective. Research must have a genuine desire to improve patient care.”

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# TEACHING FOR THE LOVE OF MEDICINE

SingHealth Group Education was set up to oversee and drive clinical training initiatives as well as synergise education efforts across the cluster. Working closely with MOH and the Cluster Education Office, it offers structured clinical training through governance framework for medical, nursing and allied health professionals.

In August 2013, the Academic Medicine Education Institute (AM•EI) and SingHealth Residency jointly organised the inaugural SingHealth Duke-NUS Education Conference. More than 1,300 interprofessional healthcare educators across the cluster attended the two-day conference to share best practices.

## Academic Medicine Education Institute (AM•EI)

- 37 interprofessional healthcare educators have successfully completed their year-long Fellows programme
- Second intake saw 24 educators from ACPs, nursing and allied health groups
- \$14,000 Education Innovation Grant launched to support projects that focus on innovative curricular programmes was awarded to three teams
- 58 participants joined the Fellowship in Team-based Learning programmes
- 56% of the participants came from 10 countries across the region

### KEY STATISTICS

1,525

AM•EI Members

504

Participants at Education Grand Rounds

1,102

Training places offered

## SingHealth Residency

- 18 programmes received their ACGME-I accreditation
- 10 new SingHealth Medical Senior Residency programmes started
- More than 90 residents attended the Residents as Future Teachers (RaFT) curriculum programme that equips them with teaching skills
- 185 awards were given out to honour outstanding residents and faculty at the Residency in SingHealth Excels (RiSE) Awards 2013

### KEY STATISTICS

	AY2013	AY2012
New Resident Intake	314	215
No. of Faculty	1,094	894
No. of Residents	680	426
No. of Residency and Senior Residency Programs	19 Residency Programs and 15 Internal Medicine subspecialties Senior Residency Programs	

## Cluster Education Office (EDO)

### Cluster Clinical Postings (AY2013)

Medicine	60,453
Nursing	69,331
Pharmacy & Allied Health	9,280

### Overseas Electives Postings (AY2013)

Medicine	9,726
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## SingHealth Academy

- Assumed the role of facility manager for education facilities at Academia
- Integration of Mediasite eLecture and Blackboard Learning Management System allows virtual learning anytime, anywhere

### KEY STATISTICS FOR BLACKBOARD

	FY2013	FY2012
Active enrolled users	2,004	888
No. of courses	340	289
Lecture recordings published in Mediasite	<ul style="list-style-type: none"> <li>• 1,523 since Jan 2013</li> <li>• Average of 666 viewers per month</li> </ul>	



## ALLIED HEALTH TRAINING AND EDUCATION

No. of staff involved in active teaching	<ul style="list-style-type: none"> <li>• 8 AM•EI Pioneer Fellows</li> <li>• 200 AM•EI members</li> <li>• 46 Postgraduate Allied Health Institute (PGAHI) faculty</li> <li>• 131 AHPs teach at external and internal programmes / workshops</li> </ul>
No. of professionals trained	<ul style="list-style-type: none"> <li>• PGAHI offered 3,394 training places in FY13</li> <li>• Since its start up in 2003, PGAHI has offered a total of 17,656 training places</li> </ul>
No. of international and local collaborators	<ul style="list-style-type: none"> <li>• 13 institutes of higher learning                             <ul style="list-style-type: none"> <li>– Curtin University (AU)</li> <li>– University of Sydney (AU)</li> <li>– University of Melbourne (AU)</li> <li>– Flinders University (AU)</li> <li>– University of Western Australia (AU)</li> <li>– Shinshu University (JP)</li> <li>– Hong Kong Polytechnic University (HK)</li> <li>– University of Southampton (UK)</li> <li>– London South Bank University (UK)</li> <li>– University of Illinois (USA)</li> <li>– Taipei Medical University (TW)</li> <li>– Ngee Ann Polytechnic (SG)</li> <li>– James Cook University Singapore (SG)</li> </ul> </li> </ul>

## ALICE LEE INSTITUTE OF ADVANCED NURSING

	FY2013 <i>(April 2013 - March 2014)</i>	FY2012 <i>(April 2012 - March 2013)</i>
No. of professionals trained	9,896	10,087
No. of courses conducted	49	48
No. of international professionals trained	867	681
No. of international collaborators	91	
Nursing student days	10,057	9,136

### Highlights

#### Patient Navigators

Patient navigators plan and coordinate care for patients with complex chronic diseases and discharge problems. Training is conducted in collaboration with doctors from different hospitals, advanced practice nurses, nurse clinicians in specialty care and allied health professionals. The first intake commenced from 13 Feb to 30 May 2014, with a total of 33 nurses trained as Patient Navigators.

#### Second intake of Resident Nurses

With the support of clinical departments in the hospitals, the second intake of resident nurses commenced on 20 January 2014 with the introduction of new specialties: internal medicine, medial oncology, neurology, renal medicine and emergency medicine. The 21 participants are currently undergoing a 6-month internship training with their selected specialties to equip them with the required clinical skills.

## Dr Deepak Mathur

*Consultant, Dept of Women's Anaesthesia, KKH  
Adjunct Associate Professor, Duke-NUS*

Dr Deepak Mathur's journey in Medicine spans a lifetime. Raised in a family of doctors, he met and married his wife while in medical school. He then practised in India and Oman, and spent a further 13 years in the UK before moving to Singapore in 2011.

"As a medical professional, my clinical and personal skills are best suited to a specialty such as anaesthesia where rapid decisions are made. I thrive on that," Dr Mathur explains. "Although I love interacting with patients, I am happy just working behind the scenes to make sure that they're alright."

"In fact, I have to explain to my children that I don't just put patients to sleep, I also wake them up," he jokes.

In addition to his interest in teaching, Dr Mathur is active in research in the areas of obstetric anaesthesia and maternal resuscitation. He led a multidisciplinary team at KKH in the development and implementation of a dedicated response code for pregnant women suffering cardiac arrest. The code was rolled out in 2014, the first of its kind in Singapore hospitals.

"When a pregnant woman goes into cardiac arrest, the window of opportunity for intervention is measured in a matter of minutes," Dr Mathur says.

"During my first six months at KKH, I assisted in the care of a patient who had collapsed in the labour ward. Without the quick and coordinated response of a multidisciplinary team of medical professionals, she would not have been successfully resuscitated."

And while his work is mostly behind the scenes, Dr Mathur still manages to make his patients smile.

"When you administer an epidural to a woman who is distressed from labour pains, the look of relief and happiness on her face soon after the procedure is probably one of the most professionally satisfying moments for an anaesthetist."





### Fiona Chan

*Senior Medical Technologist, Specialist  
Outpatient Clinic, Clinical Laboratory  
SGH*

“We take patients’ blood specimens daily in the outpatient lab. It is important to me that the phlebotomy process is executed correctly and expeditiously, and that the whole process is a pleasant experience for the patients. I hope to train a younger generation of phlebotomists to continue providing efficient care to our patients.”



### Kenneth Chin

*Class of 2016  
Duke-NUS*

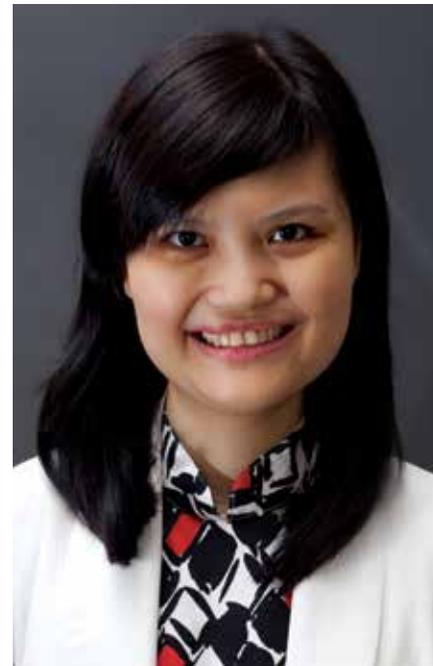
“It was initially my ambition to pursue biochemistry, but in my honours year, I would pass by crowds of patients in the lobby. Many bore scars from their battle with cancer, and it was painful to see the forlorn look on some of their faces. It occurred to me that, more than just Medicine, these patients needed hope.”



### Deng Wanqi

*Volunteer Executive  
BVH*

“I have always wished to alleviate the pain of patients, which is why I started out designing cancer drugs. But I realised that it lacked the human touch. Now, as a volunteer executive, I am able to help patients and see them enjoy the companionship of others.”



### Jan Koh

*Senior Medical Social Worker  
NHCS*

“The best day at work starts with a hot coffee, and ends with me and my colleagues together in the office, sharing snacks and talking about our day at work. It is the best way to unwind and provide a listening ear for each other.”

## Isabella Lim

*Nurse Clinician  
SNEC*

If there ever was a Nurses' Fan Club, Isabella would be their president. The nurse clinician loves her profession with a passion.

"I remember my teacher had to call my parents in after my 'O' Levels to persuade me against my decision to go into nursing, but thankfully my parents were supportive of me," she recalled.

Since joining SNEC in 2002, her work as a corneal transplant coordinator has netted her a trove of valuable experiences with her patients, most of whom are like family to her.

The joy of an osteo-odonto-keratoprosthesis patient finally being able to see his mother, the surprise visit by a patient and her entire family from Sri Lanka, the helplessness of having to tell a patient he is no longer able to see – these moments are all etched in her memory.

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## Benedict Tan

*Group Chief Information Officer*

Benedict has two interests – healthcare and IT. Perhaps it was more than luck that his first job with the National Computer Board after graduation was a posting to the Ministry of Health to support healthcare IT.

With an integrated system, he feels that patients will be well looked after: "Nobody wants to be sick. We should do our utmost to let them have a seamless and caring journey through our facilities, and beyond that let them have access to care from outside of hospital premises."

His vision has the support of his medical colleagues.

"I once asked a young doctor who chose to focus on Medical Informatics why he made the choice. His answer illuminated and motivated me to this day – 'As a doctor, I can treat perhaps hundreds, maybe thousands of patients in my lifetime. By enabling healthcare IT, I can potentially make a difference to millions and millions of patients and citizens.'"

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## Prof Kanaga Sabapathy

*Principal Investigator and Head, Division of Cellular and Molecular Research  
NCCS*

Asked what drives him, Professor Kanaga Sabapathy responds in a heartbeat: “Science.”

“Nature created all things, many of which remain unknown. I want to discover them myself for the first time,” he elaborates.

Research is not for the weak-hearted, as Prof Sabapathy rightly put. If one treats it like a job, it is going to be a long ride. One also needs a lot of passion to stick with one of the most competitive fields of Medicine – cancer research.

Prof Sabapathy has no shortage of passion. He grew up admiring great scientists, pursued studies in hope of curing cancer and left a great job in Singapore behind to become the second Asian scientist at the prestigious Research Institute of Molecular Pathology in Austria.

He is very clear on what he wants to achieve.

“At the beginning, it was curiosity-driven research. I have been trained to generate top-notch knowledge that can become textbook knowledge for others. The next generation can then learn from what we do.

“But 15 years of being in an institution where there are patients have given me a clearer goal – to distill that knowledge to actual treatments in the clinics that can help our patients.”

The same passion led him to uncover the secrets of the p53 gene, a tumor suppressant in humans. Thirty-five years of work has already been put in by researchers all over the world to understand what it exactly does, and Prof Sabapathy and his team had successfully shown proof of principle in mice of its misdeeds during cancer treatment, and how to overcome it.

And now, two years after the discovery, the team is paving the way towards clinical trials that can verify its application in cancer therapy.

What possibility, and what passion it brings. All in the name of science.

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### Petty Chen

*Class of 2015  
Duke-NUS*

“My current third-year research project on the cost-effectiveness analysis of gestational diabetes mellitus screening strategies allows me to conceptualise and understand different levels of healthcare from a top-down approach – from the administrators and clinicians to the documentation and the finances.”



### Kalaraine D/O Thanapal

*Assistant Appointment Supervisor  
SNEC*

“Before joining healthcare, I was oblivious to the industry, but in my 13 years in healthcare, I have been awed by our healthcare professionals’ care, concern and dedication towards their patients. I’m also surprised by how many different types of illnesses can affect the eye.”



### Kevin Tan

*Deputy Director  
Group Procurement Office*

“I do not have very lofty goals. I only hope that I can influence colleagues that work with me, especially my own team members, to do what is right, instead of doing what makes them look good, transcending office politics, self-interest, and insecurity.”



### Dr Dawn Teo

*Consultant, Dept of Otolaryngology  
KKH*

“My children influence me most in my work, motivating me to provide the best care I can possibly give. In December 2013, I successfully performed the first paediatric robotic surgery in Singapore for a child with sleep apnoea. The look of pure happiness and relief on the parents’ face made a lasting impact on me.”



## Prof Fong Kok Yong

*Chairman, Medical Board, SGH*

*Group Director, Medical*

On an ideal day, Professor Fong Kok Yong would find himself looking into an overgrown garden, the morning sun shining down while he stretches and indulges in that James Patterson novel he has never gotten the time to finish.

But an ideal day comes but once every few months for Prof Fong, especially since the cluster has seen an immense amount of change in the pursuit of Academic Medicine. Could all this change be too fast, too soon?

“I’m not really concerned about moving too fast or too slow; it’s all relative. What’s important to me is that once something is started, you should always look back and see if you’re moving at the appropriate pace,” he says.

Prof Fong’s pace is a deliberate one. With the formation of the Cluster Medical Council comprising institutions’ CMBs and medical heads, he gets help in juggling both ends of the spectrum – patients and healthcare staff. It is a hard act to follow, but he is comforted by the increasing number of like-minded professionals willing to do the best for the system.

“I facilitate the patient-flow in and out from our healthcare system, and also to pick and nurture the people to fit into various roles,” he explains. “Processes and infrastructure we can fix. My top concern is the mindset.

“Not that they’re resistant to change, but that our people might end up being diverted from their original purpose of being in this industry.”

And Prof Fong hopes to be seen as being fair in implementing the necessary changes.

“Our people have made a lot of sacrifices but at the end I wish for them to know that it’s all done for the benefit of our patients. If we ever lose track of that, we would have failed them.”

# PATIENTS AT THE HEART OF ALL WE DO

## A mobile buddy for asthma patients

**SINGAPORE** – Asthma patients now have a mobile application, Asthma-Care Buddy, at their fingertips to help them manage their condition.

Believed to be the first asthma care management mobile app created in the region, it gives asthma patients clear instructions on what to do when they experience various symptoms.

The app includes tools such as the peak flow meter record, asthma check assessment and action plans that en-

## Cooling the body can 'cut risk of fatality' after cardiac arrest

By POON CHIAN HUI

CARDIAC arrest victims can be kept alive using a new technique that cools their bodies to below the normal temperature and then slowly rewarms them.

The "therapeutic hypothermia" treatment more than triples their chances of surviving, according to preliminary results of a clinical trial in Singapore.

It also reduces the risk of brain damage – a common problem among those who live.

The technique – which is already used in countries such as Australia – spells new hope for the 1,500 people in Singapore who suffer a cardiac arrest outside hospital every year.

At the moment, their survival rate is a dismal 2.7 per cent.

But, the patient's body is rapidly cooled to between 32 deg C and 34 deg C. This is done either by wrapping large oesophageal pads around the torso and legs or by pumping cool saline into a catheter that is inserted into the body.

The temperature is then maintained for 24 hours while the patient is put into a medically induced coma.

After that, the body is gradually warmed to the normal 36.5 deg C.

Bringing the temperature down helps to save brain cells, said Associate Professor Marcus Ong, who is the lead researcher in the trial at Singapore General Hospital (SGH).

This is because when oxygen is cut off during a cardiac arrest, it starts a chain reaction that ultimately leads to cell death.

But when the cells are cooled, they do not react as much oxygen, which reduces the damage.

"It left alone, the area of damage would increase and become permanent," added Prof Ong, a senior consultant in emergency medicine at the hospital.

Forty cardiac arrest patients aged 18 to 60 were involved in the clinical trial between 2008 and last year.

Most of the survivors given conventional intensive care ended up in a coma or vegetative state.

By contrast, more than half of the patients who received the hypothermia treatment woke up with minimal brain damage.

They include intensive care technology manager Pong Hui, who collapsed suddenly at work last September.

Coloxygen and paracetamol managed to reverse the pain. And by the time the 36-year-old arrived at hospital, his heart had started beating again.

He was then cooled and slowly



Associate Professor Marcus Ong (left), the lead researcher in the clinical trial at Singapore General Hospital, with the cooling system, which was used in cardiac arrest victims Pong Hui (left) and Pong Hui (right).

### How therapeutic hypothermia works

COOLING the body of someone whose heart has stopped can help to reduce the amount of permanent damage done to organs.

That's because it reduces the cells' need for oxygen, so that their own heat helps to raise

normal temperature of 36.5 deg C. The patient usually wakes up in one or two days, said SGH's Associate Professor Marcus Ong.

There are few cases of cooling the patient, called therapeutic hypothermia. The goal is to do it soon.

The goal is to do it soon.

## A Diva to manage mum's blood pressure

KKH docs develop automatic system for use during caesarean births

## Help for children with haemophilia

● CONTINUED FROM PAGE 18 repeated bleeding episodes can damage joints and result in disability later in adulthood.

In the past five years, the proportion of young patients on prophylaxis at KKH has doubled. Today, two thirds of patients seen are on regular, on-going treatment, while the rest receive treatment when there are bleeding episodes, said Dr Lam. The young-

## Looking after autistic children

By LIM YI HAN

MUMMY Ineswita (left) and her son had autism three years ago, she was worried because she did not know how to cope with his condition.

But, not only is she able to handle him, but she is also part of a support group that helps other parents of children with developmental needs.

She is one of the 1,300 parents and caregivers who attended a programme by the KK Women's and Children's Hospital (KKWC).



## Personal asthma plans save lives

Study finds written instructions put caregivers in better position to prevent deadly attacks in kids

Poon Chian Hui

Parents and caregivers who are given a written game plan drawn up by their doctors are better placed to prevent deadly asthma attacks in their children, a study of some 500 patients has found.

## Major new facility opens at KK Hospital

South-east Asia's largest neonatal intensive care unit has opened at KK Women's and Children's Hospital.

Research Associate Gan Kim Yong said the facility, which has a capacity of 32 beds, would give more babies, born prematurely or with life-threatening conditions, a better chance at survival and a better life.

It is equipped with advanced features and technology, the hospital said.

Each bed is equipped with a ventilation and weak gases to equipment to monitor and immediately generate audible cues for the staff.

There are facilities to perform major operations and neonatal resuscitation. It also has a dedicated neonatal surgical suite for babies undergoing brain operations or with open wounds. This optimises the risks associated with breathing clearable babies out of the incubator.

## Safer biopsy, thanks to Mona Lisa

Robot detects prostate cancer more accurately too



Dr Ong Hui Yi with the Mona Lisa, which can detect prostate cancer with 90 per cent accuracy. It also cuts down the risk of infection to two out of 500 patients, from one in 20 patients using the previous manual procedure. (171973) LIM YI HAN

## 'We are sure that we have a way to treat myopia'

By POON CHIAN HUI

FOR 16 years, doctors at the Singapore National Eye Centre (SNEC) have been trying to find a way to stop myopia in its tracks.

They say they finally have the answer: eyeglasses with a concentration of 0.01 per cent atropine.

"We are at a stage where we are sure that we have a way to treat myopia," said SNEC medical director Donald Tan, adding that the eyeglasses could be available for prescription in the next six months.

"This is a breakthrough in the fight against myopia here."

affected by the time the Singapore is considered a capital of the world.

The eyeglasses do not stop myopia, but they seem to slow its degenerative effects 60 per cent. This may short-sighted child, who might would normally by 300 degrees a year, experience a 40-degree increase.

For decades, it has been that atropine, which is from certain plants, can counter myopia.



## SGH's auto system cuts pharmacy 'near misses'

It also frees up staff for other work and speeds up dispensing to patients

By POON CHIAN HUI

AMID the hustle and bustle of a hospital pharmacy, medicine can sometimes be picked, labelled or packed wrongly.

## MEDICINE MACHINES

Singapore General Hospital's automated pharmacy system has helped reduce the number of incidents of wrong drugs or dosages retrieved to almost zero



## One-stop centre cuts transplant patients' waiting time

No more long queues, clinic shuttling as SGH houses specialists under one roof

By POON CHIAN HUI

UP TO 1,000 transplant patients at Singapore General Hospital (SGH) can look forward to shorter and smoother health-care journeys, thanks to what is SGH's biggest.



http://bit.ly/1ge6zE2

# Pharmacists earn 'specialist' title

First 20 accredited in bid to improve patient care as Singapore's population ages

Twenty pharmacists have become the first in Singapore to be named as specialists in their field. They have received Health Ministry accreditation in one of five areas of medicine - oncology, cardiology, infectious diseases, geriatrics

and psychiatry. Becoming specialists leaves members of the profession better equipped to deal with complex cases in hospitals, a growing problem as Singapore's population ages and lifestyles become more sedentary. The accreditation system for pharmacists was announced in September last year. Another three pharmacists are on track to receive specialist status, once they have completed their registration with the Singapore Pharmacy Council.

In future, those who want to specialise will have to undergo one-year residency stints at hospitals and get a postgraduate degree. Minister of State for Health Amy Khor yesterday described the accreditation system as "one of the first such developments towards pharmacist specialisation in the world".



Specialist pharmacist Lee Jue Fern talking to a patient at Khoo Teck Puat Hospital. The principal pharmacist says and manage ailments is critical. "Pharmacists will have to collaborate more closely and effectively, both within and beyond the pharmacy context. Cent-centers are added. The new up



## Conquering compression stockings: It's in the bag

After being told by the doctor that he must wear the stockings, the patient was frustrated. He had to be helped to put on the stockings. The high-tech stockings are designed to help improve blood circulation in the legs. The stockings are made of a special material that is designed to be comfortable and easy to wear. The stockings are made of a special material that is designed to be comfortable and easy to wear. The stockings are made of a special material that is designed to be comfortable and easy to wear.

# SGH to roll out more robust cervical cancer test

Screening to be introduced by year end and will complement Pap smear testing

By SALMA KHALIK SENIOR HEALTH CORRESPONDENT SINGAPORE General Hospital (SGH) will be introducing a more robust cervical cancer test, by also checking for the human papilloma virus (HPV), before the end of the year. Early symptoms of the deadly cancer

would still get a clean bill of health with the test, Prof Tay said. This is why SGH, which does 90,000 Pap smears a year, has introduced a more robust screening to identify if a woman has HPV, to complement the Pap smear test. Scientific studies have shown that women who do not have HPV are highly unlikely to get cervical cancer so they need to do Pap smears less frequently, said Prof Tay. Prof Tay said there are limitations to using Pap smears as the pre-cancerous lesions are localized, and can often



## Dental centre sinks teeth into 3-D mould

With the other centre's failure to fit the teeth, the specialist surgeon from Full Denture Centre in Singapore, used a patient's 3-D digital model to create a custom-made mould for the teeth.

## Siblings overcome the odds to carry out transplant op

New methods help prevent rejection where donors, patients not a match. If there are antibodies in the recipient's blood, the donor's blood will be rejected. The high levels of antibodies in the donor's blood will be rejected. The high levels of antibodies in the donor's blood will be rejected.



## Woman with a heart of titanium

A heart pump implant has given Ms Teresa Lee a new lease of life, but adapting to the changes has not been easy. She has to wear a special pump around her neck, and she has to be careful of what she eats and drinks.

# More health services in Tampines

Patients at revamped polyclinic can tap health wellness, physio expertise. The health wellness clinic offers to patients with mild to moderate mental health issues, it provides training for students.



## Regrowing bone the natural way

Dr. Lee said that the natural way to regrow bone is through a process called autologous conditioned serum-stimulated bone formation. This process involves taking a patient's own blood and using it to stimulate the growth of new bone.

## No need for patients to sit tight at cancer centre



With an RFID tag, patients can go off for a meal or take a walk instead of sitting in the waiting area. Half an hour before their treatment is due, they will receive a text message from staff. PHOTO: SICHONG TOO

A NEW electronics system is cutting the wait time for chemotherapy treatment at the National Cancer Centre Singapore. The system allows patients to go off and have a meal or walk around instead of sitting and waiting for fear of missing their turn. With RFID, the centre's staff can send patients a text message 30 minutes before their treatment is due, to tell them to return for their chemotherapy.

## SingHealth saves time with One Medifund scheme

just one interview to assess patient's need on behalf of 6 of its institutions. The scheme covers six Singapore General Hospital (SGH) health institutions, namely Singapore General Hospital, National Cancer Centre Singapore, National Heart Centre Singapore, National Skin Centre Singapore, National Eye Centre Singapore, and National Dental Centre Singapore.

## Providing a channel of relief... through art

Art therapy gains popularity as way to help patients deal with disabilities. Patients with mental health issues can benefit from art therapy. Art therapy is a form of psychotherapy that uses art-making as a means of self-expression and emotional healing.



Ms Ho Jue Fen, 45, is a patient of Singapore General Hospital. She works with other staff at the Art Studio, SGH, to support her Singapore through art-making with other patients. The programme is an initiative of the National Cancer Centre Singapore. PHOTO: SICHONG TOO

## Assoc Prof Victor Samuel Rajadurai

*Head and Senior Consultant, Dept of Neonatology, KKH*

*Adjunct Associate Professor, Duke-NUS*

For 23 years, Associate Professor Victor Samuel Rajadurai has been on a mission to provide the best care possible for newborn babies requiring life-saving care.

“Hard work and long hours are the norm when caring for critically ill babies,” shares Prof Rajadurai, or ‘Prof Sam’, as he is affectionately known to fellow colleagues.

“They can get sick at any time, day or night, and you have to attend to them immediately to prevent the problem from negatively impacting their development,” he explains.

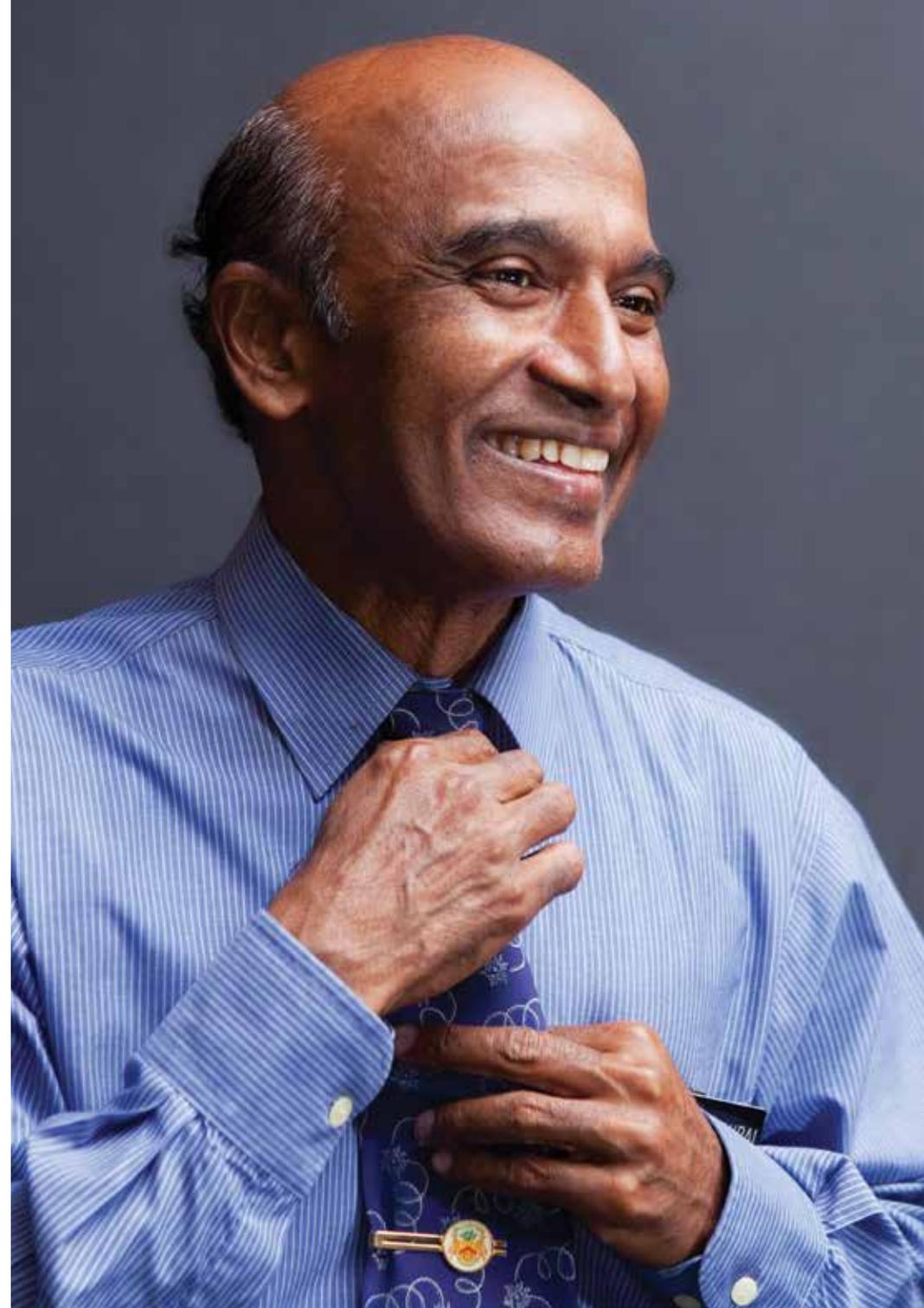
As Head of the Department of Neonatology at KKH, Prof Sam is a mentor for junior doctors and a counsellor to colleagues. In 2013, he played a key role in the expansion and enhancement of the hospital’s neonatal intensive care unit (NICU) to further augment care for newborn babies suffering from serious medical conditions. The newly-expanded NICU is currently the largest one in Southeast Asia. The veteran physician also serves as President of the College of Paediatrics and Child Health, Singapore, as well as Vice President of the Perinatal Society of Singapore.

Beyond these shores, Prof Sam plays a crucial role in the advancement of neonatal care through international collaborations with many countries, including Australia, Canada, Europe and the United Kingdom. A notable example is his current involvement in a multicentre trial involving the supplementation of docosahexaenoic acid to very premature babies, along with milk feeds. Funded by National Health and Medical Research Council, Australia, the trial seeks to improve neurodevelopmental outcomes and reduce lung damage, the need for respiratory support and prolonged oxygen use in very premature babies.

Recent collaborations have also seen a neonatal care team from KKH sharing their expertise with counterparts in several cities in China and South India, to improve the medical expertise and standards of care for critically ill babies.

“My wish is for healthcare to be available and affordable for all who need it,”

Prof Sam says. “We have to do our very best to improve care so that babies can grow and reach their full developmental potential.”





## Cheah Le Le

*Senior Nurse Educator, SingHealth Alice Lee Institute of Advanced Nursing  
SGH*

Le Le's love for education is best said in her own words: "I want to inspire every nurse to be confident in nurturing the future generation."

"I wish to instil a strong culture of nurses as resilient leaders through the strong values of teaching and guiding. Nurses who are taught and guided well become future mentors of safe and effective nurses.

"Once I met a nurse who told me that I had inspired her to be the nurse she is today. She said I am a role model for a dedicated nurse. It was a pleasant surprise and it was the best day in my 20 years of being a nurse."

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## Ching Suiee Lan

*Senior Staff Nurse, Short Stay Unit  
NHCS*

Suiee Lan's foray into healthcare was inspired by her interactions with nurses. She remembers the time when she was admitted to the hospital at the age of 12, and when she volunteered at a nursing home after her 'A' levels – it was these interactions with nurses that cemented her career in nursing.

She is also inspired by the patients she cares for: "I was taking care of a patient who suffered from heart failure and had to be on a pump for over a year while waiting for a new heart. Everyone thought that he would require a new heart to continue living, but his condition miraculously improved after a year to the point where he no longer required the pump or transplant to survive!"

As a testament to her commitment and passion to nursing, Suiee Lan won the PS21 Distinguished Star Service Award in 2013.

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## Prof Tan Cheng Lim

*Emeritus Consultant  
Dept of Paediatric Subspecialties, KKH*

“A doctor serves humanity while at work, and his job is never boring or desk-bound. I hope to be remembered as a paediatrician who tried his best to instil dedication and professionalism in the younger generation of doctors, to enable them to surpass the current generation in skills and heart.”



## Winnie Goh Mei Lian

*Senior Enrolled Nurse  
Neuroscience Clinic, NNI*

“My ex-manager once told me that anyone can do the job as long as they put their heart into it. This is true especially now, when healthcare professionals like me have to gain multiple skills and knowledge, and learn to coordinate and communicate with patients and colleagues.”



## KT Maruthapandian

*Senior Radiographic Assistant  
NDCS*

“I was part of the NDCS Staff Wellness committee and felt so honoured that I can be there to witness our wellness committee receive bronze, silver, then gold and finally platinum medals for the Health Promotion Board’s Singapore Health Award in sequent years.”



## Dr Nicole Keong

*Associate Consultant, Neurosurgery  
NNI*

“Recently, a young lady walked into the clinic and said ‘Hello’. She used to be a patient of mine in a life-threatening coma with a haemorrhage and needed emergency surgery, followed by neurointensive care and rehabilitation. It was wonderful that the different NNI teams had contributed to her second chance at life.”



### Chong Kai Wei

*Executive, Clinic Operations  
SHP-Bedok*

“Healthcare is a lot more complex and intricate than what the general public perceives. The amount of work put in behind the scenes by our professionals is vital to maintaining high standards of service and care to patients. I am truly fortunate to work alongside these professionals.”



### Abirami D/O Nagarasan

*Principal Enrolled Nurse, Ward 44  
NHCS*

“I was feeding an old lady at a nursing home one day. As she stroked my hair, she told me that I should continue to help and care for the needy, not just today, but for as long as I can. Her words left a great impression on me. I am truly blessed to be doing what I am doing now.”



### Dr Kelvin Teo

*Resident, Ophthalmology Residency  
Program, SNEC*

“For me, my best day wasn't my first cataract surgery; it was the next day when the patient came back with good vision. At the end of the day, our job is about achieving the best results for our patients and the best moments are when you know you have done that.”



### Katheryn Maung

*Deputy Director, SingHealth Duke-NUS  
Joint Office of Academic Medicine*

“The impact of Academic Medicine became real to me when doctors discovered a hole in my heart and I became a patient myself - excellent care and access to advanced robotic surgery greatly improved my recovery time. It is a privilege to be in a place with good people committed to discovering new ways to improve care and patients' lives.”



### Grace D/O Krishnan

*Neuroscience Clinic  
NNI*

“As a passionate and committed healthcare professional, I’m always praised and motivated by my Assistant Manager, Ms Tay Lee Lian, for going the extra mile for patients as well as colleagues. I wish for healthcare to be an evergrowing industry with more passionate people pouring their love and compassion to our patients.”



### Tan Loon Liang

*Senior Executive Chef  
SGH*

“My legacy? Not thought of it yet. But I want to be a person who makes staff and patients happy.”

Mr Tan has spent more than 12 years in SGH, cooking 4,000 meals a day.

That’s about 17,520,000 happy, well fed patients.



### Dr Teo Sze Yiun

*Head and Senior Consultant, Dept of  
Diagnostic and Interventional Imaging  
KKH  
Adjunct Assistant Professor, Duke-NUS*

“In the fight against breast cancer, education raises public awareness of the importance of breast screening and inculcates critical thinking in the next generation of doctors. I often test my medical students not only on their knowledge, but also their problem-solving skills. This equips them to advance new solutions and cures for the future.”



### Leow Suat Lay

*Senior Nurse Manager  
NDCS*

“I became a patient when I was in Sec 1 and frequently visited the outpatient clinic for about six years. I was fascinated by the nurses in white uniforms and caps. They were fierce-looking but showered me with loving care.”



## Prof Thomas Coffman

*Executive Vice Dean, Duke-NUS*

Professor Thomas Coffman loves a good challenge. Allured by possibilities brought about by synthesis of medical science and translational outcomes, young Thomas was nurtured into Academic Medicine by his role models in nephrology.

Since then, he has made a career from finding out how the kidney works (he thinks it's the coolest and most incredible organ in the human body), and how to best match the complicated set of social and clinical problems faced by nephrology patients with increasingly advanced treatments.

The Head of the Duke Medicine Nephrology Division was then given another challenge. His active research and mentoring on kidney disease and involvement in the foundation of the Cardiovascular Research Center at Duke made him prime candidate to helm the new Cardiovascular and Metabolic Disorders Signature Research Program at Duke-NUS.

"I had the interesting responsibility of encouraging people to move halfway around the world to a new place and start up research programmes on topics that are highly relevant to local public health needs," says Prof Coffman.

It turns out that it was not as hard as he thought. The combination of compelling healthcare needs with available resources made possible by an exciting partnership between the school and SingHealth makes it a natural choice for the researchers.

This developing partnership between Duke-NUS and SingHealth became his next exciting challenge, when he took on the role of Executive Vice Dean at Duke-NUS. Clinical practice and focused research made room for administrative paperwork as Prof Coffman set sights on change management.

"I am fortunate to be able to be part of what I think is a very aspirational process in developing an academic medical centre. While I could have been very happy as a clinician, I am more inspired by the opportunity to bring the elements of research and education to improve the lives of patients," he says.

"To be a part of the excitement of Academic Medicine, I feel like a kid in a candy shop."

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# IMPROVING CARE WITH RESEARCH

## STAFFING

### No. of Clinician Scientists

*Clinicians with ≥ 50% time spent in research*



49

SingHealth



19

Duke-NUS

### No. of Clinician Investigators

*Clinicians with < 50% time spent in research*



more than  
100

### No. of Principal Investigators who lead ongoing research



more than  
190

### No. of Research Staff working under Principal Investigators



more than  
640

## RESEARCH ACHIEVEMENTS (SingHealth and Duke NUS)

### Patents

- 255 invention disclosures
- 19 registered trademarks
- 164 patent applications filed
- 20 licenses executed
- 12 patents granted

### Competitive Grants

- \$1.17 billion competitive funding
- \$148.52 million pharma / industry funding

### AMRI Grants and Awards

- 22 graduated Khoo Scholars
- 10 won national grants
- 14 won foundation grants

### Research papers in peer-reviewed journals

(FY01 - CY13)

More than  
7,000

For more on AMRI and Khoo Scholars





## ALLIED HEALTH PROFESSIONALS

No. of AHPs involved in active research



166

AHP Researchers

29

Clinical Doctorates

34

PhDs

1

Clinician Scientist\*

\* Dr Andrea Kwa became Singapore's first Pharmacy Clinician Scientist in 2014

Total papers published



FY2013

39

FY2012

41

FY2011

36

Total grants received

FY2013 \$4,185,126

FY2012 \$1,639,164

FY2011 \$1,731,347

## NURSING

No. of nurses involved in active research



132

FY2013

106

FY2012

Total papers published



FY2013

10

FY2012

20

Presentations made



FY2013

132

FY2012

106

SGH Research Grants

FY2013 \$110,000

FY2012 \$83,971

### RESEARCH HIGHLIGHTS

#### SGH nurses embark on large clinical trial on preventive care for pressure ulcers

The trial aims to determine whether the application of a prophylactic dress or fatty acids oil spray, in addition to standard prevention strategy, would reduce incidence of sacral pressure ulcer among high-risk patients in the acute setting.

#### Research focus on caregiver well-being

Two papers on nurses' work on educational needs, experiences and welfare of caregivers have been published – *Experiences of caregivers with Parkinson's Disease in Singapore*, and *Educational needs of stroke caregivers*

Information accurate as at March 2014

## Olivia Khoo

*Senior Principal Medical Social Worker  
SGH*

It was 2008 when Olivia met her Cambodian patient. The teenage girl came to the hospital with leukemia and was very sick. Despite the medical team's efforts, the girl succumbed to the disease after a two-and-a-half year battle.

"Her father was very close to her. Having nursed her through the disease, it was very hard on the man," she relates. "I remember when she relapsed, he got down on his knees and begged the medical team to do something."

After the passing of the girl, Olivia prepared for the worst. The medical team had a strong suspicion that the man would take his own life, but Olivia was on the case. She gave him a call after the funeral.

"A part of him wanted to die, but he felt a sense of responsibility to his daughter and promised to call me once a day."

And every day, Olivia would hear his voice and provide a listening ear. The daily calls eventually came every other day, and then every week and then every month.

Three years on, Olivia still hears from him, but only on special occasions – "He feels that I am a link to his daughter.

"You see that death does not always mean that it is the end. In a way, it can give you a new lease of life."

The resilience of patients is what made Olivia give up a promising career in public relations to pursue medical social work. What she lost in financial incentives, she gains many times more in job satisfaction.

The secret, according to Olivia, is simple: "People think that there must be some marvellous method to helping patients, but sometimes being there is all that matters."

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## Dr Nagaendran Kandiah

*Senior Consultant, Neurology, NNI*

*Clinician Scientist, National Medical Research Council*

Dr Kandiah's research on how silent strokes result in worse cognition among patients with mild dementia may provide the missing piece to understanding the disease. Doctors can potentially change the way early dementia is managed.

By using advanced neuroimaging in humans combined with animal models, Dr Kandiah is able to study the patterns of change in the various brain networks as a result of silent strokes.

This promising research is fuelled by his curiosity: "I have always been interested in finding novel mechanisms of disease among Asians, and I believe silent small vessel strokes is one such important piece in the development of dementia among Asians."

"Even in diseases that have been around for a long time, careful clinical observation coupled with passion to investigate new mechanisms can bring about new discoveries and meaningful difference to the patient."

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## Sharon Fan

*Clinic Pharmacy Manager*

*SHP-Tampines*

With the multidisciplinary care that patients receive, it surprises Sharon that many people still think of healthcare as being staffed only by doctors and nurses.

"My wish for healthcare is that all patients will recognise and appreciate pharmacists as healthcare professionals who play an important role in the management of their medications," she says.

To that extent, the 2013 GCEO Excellence Awards winner is working hard at expanding the clinical pharmacy services within SHP, one example being a pilot project in Tampines to enhance the anticoagulation service.

With all the hard work done by our pharmacists, every bit of encouragement they get from patients is heart-warming.

"There are brilliant moments when patients express their gratitude for our good service despite having to work through lunch hour or when we have helped them review their medications. These make the workday more pleasant and provide us with the motivation to go on."

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## Gail Chang

*Principal Clinical Pharmacist  
Oncology Pharmacy, KKH*

“Once, while counselling a patient on chemotherapy, I was in pain from an injury but trying not to show it. When I realised that the patient was feeling overwhelmed, I doubled my efforts, and her gratitude shone so brightly on her face that I felt uplifted in spite of my own discomfort.”



## Lakshmanasamudram S Mohanram

*Ophthalmic Investigation Specialist  
SNEC*

“I invented an electrode for recording the electrical signals from the retina. The main component of the electrode was inexpensive silk thread, which is used in weaving Indian women’s saris. The presentation of the work led me to receive an award from the International Society for Clinical Electrophysiology of Vision in 2000.”



## Assoc Prof Lo Yew Long

*Head and Senior Consultant (SGH Campus)  
Neurology, NNI*

“My personal beliefs shape my teaching style, which strongly focuses on a clinical approach hinged on the basic understanding of neuroscience: constructive participation, self-learning and questioning form the core domains. I strongly advocate teaching as a means of engaging the next generation, ensuring continuity and fostering creativity.”



## Lee Chen Ee

*Director, Office for Service Transformation  
SingHealth*

“I believe that everyone in their own way, doing their own jobs, can make a positive impact in this world. Over the years, I’ve found that people in healthcare are especially nice and caring, and they all have their own story to tell about how they want to make things better for our patients.”

## Dr Low Lian Leng

*Registrar*

*BVH Medical / SGH Family Medicine and Continuing Care (FMCC)*

Dr Low has big dreams. He wants a better integrated medical and social framework for the elderly population, and BVH is where his work takes place.

“I took up advanced family medicine training to improve my knowledge and skills to provide continuing care for patients in the community. When the opportunity at BVH/FMCC came, I was excited to be able to provide care across the entire care continuum,” he says.

The centre also empowers elderly patients and their caregivers to self-manage their conditions.

But that is not the end for Dr Low: “I am currently involved in the SGH Transitional Home Care project with a multidisciplinary team to provide discharge planning support, coordination and continuity of care from SGH to the home setting. We aim to stabilise patients who are home-bound and have difficulties accessing healthcare after their discharge”

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## Arthur Wong

*Manager, Group Communications*

*SingHealth*

“When you walk around the hospitals and centres, you get to feel and experience the many miracles our healthcare professionals perform for their patients. Every single day, a life is changed for the better, and it’s a great feeling to be able to play a part in that.”

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## Veronica Lew

*Staff Nurse*

*SGH*

“I can vividly remember the first time a patient under my care was discharged. The old lady had stayed in the hospital for several weeks, so she was extremely elated when she could finally go home as she wished. Although I was overwhelmed with nervousness, I could sense her joy. It was my best day at work!”

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## Prof Antonio Bertoletti

*Emerging Infectious Diseases Program  
Duke-NUS*

Professor Bertoletti is interested in a virus. He can trace it back to the age of the dinosaurs, and of 350 million people infected by the virus worldwide, 75% are in Asia. He is interested in finding out how it works, why some people are immune to it and how he can translate his research into therapies for chronic patients.

His 25-year journey with the Hepatitis B virus (HBV) started in Italy, where a young Antonio took his curiosity in understanding how things work to the laboratories. This interest gradually took up more of his time, and Prof Bertoletti eventually found his place in research labs pursuing the secrets of the HBV.

“There is a relationship between the virus, the population and the environment which it manifests. I’m interested in finding out how something so small, with so little DNA can be so successful,” he says.

His search brought him to Africa and then London before settling in his current stint at Duke-NUS’ Emerging Infectious Diseases Signature Research Program where his team is focused on developing preclinical models to refine and optimise the T Cell Receptor gene therapy they created.

The passionate researcher puts it simply: “We are trying to make in-vitro antigen-specific T Cells that we can introduce to patients as a form of therapy.”

The process involves cloning T Cell receptors from patients immune to or cleared from HBV, and then repackaging the recognition receptors for introduction to HBV patients.

However, T Cell response can also cause liver damage, and the team now faces challenges in the lab to translate their efforts into clinical practice.

“You have the hypothesis and you have the methods, but with the HBV there are no good animal models,” he explains.

Despite the challenges, Prof Bertoletti remains passionately curious, and his goal of translating his research pushes him on. To his students and colleagues in the lab, he wishes the same.

“While I would like to see my research continued through the work of others, it’s more than just leaving behind a legacy and having my colleagues question their curiosity. What they do in the lab must come from their own interests.”





## Assoc Prof Lita Chew

*Head, Pharmacy  
NCCS*

“Success has nothing to do with what you gain in life or accomplish for yourself. It’s what you do for others.” – that pretty much sums up the philosophy of Associate Professor Chew, whose helpful nature started when she was a little girl.

She says: “I have always enjoyed helping mom with household chores. As I grew older, I guess that habit grew. I like helping people find solutions that meet their specific needs. I do more than just my work.”

In NCCS, she is engaged in training and developing advanced pharmacy practitioners. Outside of work, Prof Chew, who is also Singapore’s Chief Pharmacist, is involved in voluntary services under the Pharmaceutical Society of Singapore.

“Along the way, I meet like-minded people who become my source of inspiration and motivation.

“Certainly, there is more joy giving than receiving!” she affirms.

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## Tarumampal D/O Mariyappan

*Patient Care Associate  
SHP-Bukit Merah*

“Every day is a good day, especially when I am able to deliver my care and concern for the people around me. I wear a smile on my face and always remember to say *thank you* at the end of the service.”

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# GIVING FOR THE LOVE OF MANKIND



*Quantum leaps in biomedical sciences, technology and research over the last few decades have been nothing short of phenomenal. Yet, evolving disease patterns, chronic illnesses and our ageing population continue to pose healthcare challenges.*

*To advance Medicine, we must focus tenaciously on research and education.*

*Prof Soo Khee Chee, Deputy Group CEO (Research & Education), shares his insights on the role philanthropy plays in Academic Medicine.*

Adrian was a patient of mine who suffered from recurrent head and neck cancer. We tried desperately to save him. I must have operated on him on at least three separate occasions. He was a painter and a poet, and he always had his three caring sisters accompanying him on his medical appointments.

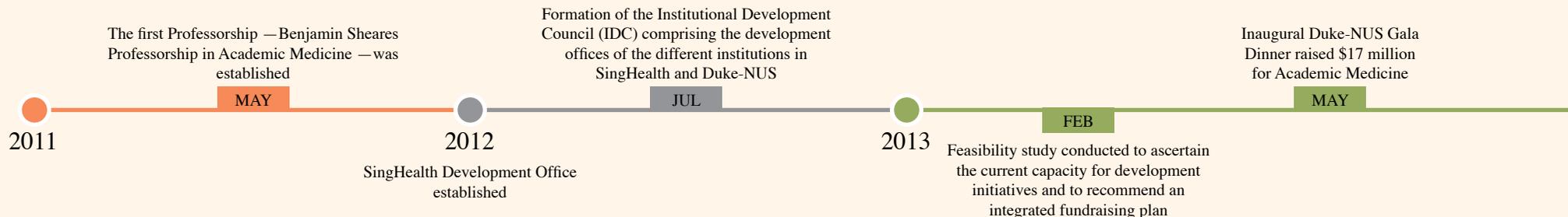
On one such appointment, Adrian decided to will half of his house to NCCS, with the other half going to his church. I tried to convince him to will the money to his sisters instead, but he insisted. When he passed on, Adrian made a \$62,000 donation to the Centre from the sale of his house.

This story of a noble man and his love for mankind exemplifies my passion in philanthropy.

The spirit of giving is a partnership among those endowed with different resources, coming together to help the community. As healthcare professionals, we give our vision of healthcare for the future, our expertise in clinical care, research and education, and our infrastructure.

Along this line, I hope the community believes and trusts in our Academic Medicine endeavours. They can do so by taking ownership and giving towards our vision of tomorrow's healthcare.

You don't have to be rich to be a philanthropist. The fact is that nearly everyone has something to offer – a good word or a small donation to help others in a similar situation. Every little bit enables us to achieve our research and education goals.





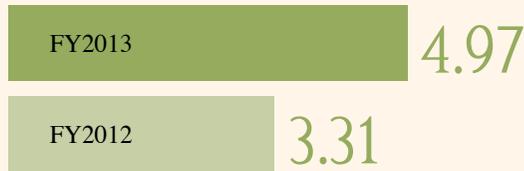
Total Funds Raised



Needy Patients

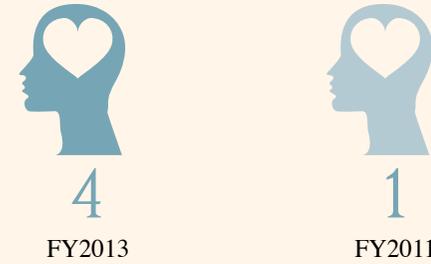


Academic Medicine (Research & Education)

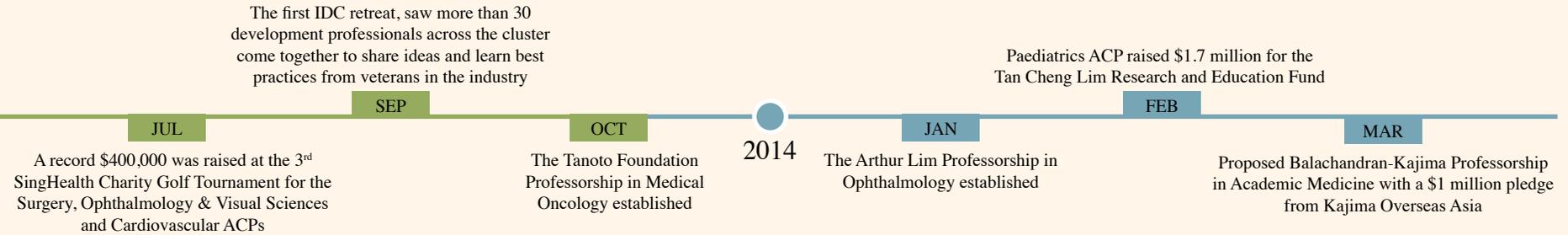


All units in S\$ million

No. of named funds launched



Total no. of gifts



Information accurate as at March 2014

## Emily Ang

*Advanced Practice Nurse Intern*

*NNI*

The thought of becoming an Advanced Practice Nurse (APN) started to impress upon Emily when she returned from her Health Manpower Development Programme (HMDP) in 2004. Emily wanted to understand the disease progression and medical complications for brain tumour patients and wished to equip herself with knowledge to better help her patients relieve their symptoms.

With the support of her former and present head of department, Assoc Prof Ivan Ng and Assoc Prof Ng Wai Hoe, she applied for the Master of Nursing programme at NUS.

Since becoming an APN intern, Emily's perspective on nursing has changed. It became more than a job. The daily grind and little things like not being able to take her usual break time no longer held a strong grip on her. Instead, she has learnt to value the time she has with her patients.

“After acknowledging that we have done the best for our patients and that death cannot be avoided, the agony of separation between the living and the dead still takes its toll on me. The condolences of ‘you have to let go’ does not make me feel better,” she explains.

Instead, she channels her emotions and thoughts to providing better care for her patients. To Emily, the human touch is something that textbooks cannot teach. In an ever-evolving and increasingly technology-reliant healthcare environment, she thinks it is important that the younger generation of nurses appreciate the values she holds dear.

She says: “I think caring with a logical rationale should go beyond what is stated in the protocol. We should ask ourselves what the end point and overall goals are for our patients, even when we discharge them back to the community.”





## Assoc Prof Silke Vogel

*Assistant Dean, Graduate Studies*

*Deputy Director, Centre of Regulatory Excellence, Duke-NUS*

Researcher by training, educator by choice – her experience in teaching and working with students at Columbia University’s Master of Science programme kick-started her current endeavour at Duke-NUS.

Her greatest joy at work is derived from her students: “I feel passionate about all my different work areas, but if I had to pick the area I currently feel most passionate about, then it would be in successfully guiding our PhD students through the programme and ensuring they all excel in their research and subsequent careers.

“I think the best legacy I can leave behind would be to have helped them reach their full potential and for me to be known as somebody who provided guidance and mentorship to people around me.”

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## Dr Howard Cajucom-Uy

*Senior Manager, Singapore Eye Bank*

*SNEC*

When asked about how he would like others to remember him as, Dr Howard Cajucom-Uy has this to say: “Here was a person who did his job to the best of his abilities. Here was a person who treated others with respect. Here was a person who valued loyalty, integrity and teamwork.”

The senior manager at the Singapore Eye Bank is quick to attribute his passion to the strong culture at SNEC and its people, especially one Professor Donald Tan, his previous medical director, supervisor and mentor.

“He taught me everything I know about the cornea as well as eye banking. I admire his work ethics and how he is constantly thinking of innovative ways to do and improve things,” he says.

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## Assoc Prof David Silver

*Cardiovascular & Metabolic Disorders Signature Research Program  
Duke-NUS*

He owned his first lab when he was nine. A boy with a penchant for biology took to building a mini-lab in his closet. Many years on and several encounters with inspirational mentors later, Associate Professor David Silver was granted his crowning moment – his very own lab at Columbia University.

Since then, the biomedical scientist has moved to Duke-NUS and has gotten involved in the school's Cardiovascular & Metabolic Disorders Signature Research Program, where he also teaches.

He says: "I'm most passionate about scientific discovery and trying to answer important questions in biology and Medicine, and mentoring young scientists to do the same."

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## Lee Kwee Huey

*Nurse Clinician, Ward 47B  
NHCS*

Kwee Huey is pleasantly surprised by the appeal of nursing as a career choice to young people. "The nursing profession is not glamorous at all! It is one of the most tedious fields and yet there are still so many wanting to be nurses," she says with a chuckle.

Her own love for the profession comes from the tender love and concern nurses gave her after her surgery as a child. She hopes to impart this same spirit to her juniors at work.

"I hope to give them a good foundation in nursing. More importantly, I want to impart to them more than just skills and knowledge, but also the confidence that they are doing something truly incredible. I hope that they will also teach this to their juniors in future."

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## Dr Joyce Koh

*Senior Consultant, Dept of Orthopaedic Surgery  
SGH*

When her colleagues found out that she was also accepted into law school after college, they joked that she would have been driving a Lamborghini now had she taken that career path. But a passion for making a difference steered her towards public healthcare.

“We should do things that allow us to have a good night’s rest. Satisfaction doesn’t come from material gain, but from being able to make a difference in someone’s life,” she says.

Even her choice in specialty stems from this principle: “Orthopaedics has a lasting impact on my patients and allows me to have longer, more meaningful relationships with them.”

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## Ho Whei Chern

*Manager, Communications & Service Quality  
SKH*

Whei Chern is SKH’s go-to when it comes to engaging the Northeast community. She is passionate about encouraging a healthy and compassionate culture — that healthcare workers should provide comfort as well as clinical care, and she has an amazing story to back this.

“I was at the A&E one night and noticed an elderly lady on a trolley. She was very ill and staff came by to check on her machines, say a few words, pat her on the shoulders and then leave. They even put a blanket on her, but no one noticed that her foot was exposed. And it was cold,” she recounts.

“Each time a staff came by, I would silently pray that they would cover it, but I finally inched over and tucked her foot under the blanket. And this lady, who had been silently staring at the ceiling, looked down her trolley, directly at me, and smiled.”

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## Yap Soon Ghee

*Deputy Director, Nursing (Informatics)*

*SGH*

This nurse makes a different kind of ward round.

“They pay me to play computer games,” he quips.

The deputy director with 25 years of nursing experience spends his day making rounds to stakeholders, looking to enhance their work with the use of information technology.

“In a way, nursing informatics is really like playing games, finding ways to create a good system that is beneficial to everyone,” he elaborates.

Soon Ghee heads the nursing informatics department at SGH, one of the latest career paths available to our nurses.

Deployed around the wards, informatics nurses have in them an acumen for the inner workings of nursing processes, and actively seek to integrate informatics with nursing care in order to improve the way things are done.

It’s not an easy job, as Soon Ghee elaborates: “Integrating nursing processes with IT isn’t all that difficult, but because of the complex nature of human behaviour, you need informatics nurses to translate the human nursing practices to a programming level.”

Despite the odds, he feels that the institution is actually ahead of the pack when it comes to nursing informatics. With a clear career path and a healthy work balance between informatics development and clinical care, his nurses are a happy bunch.

“Our informatics nurses are not simply pulled out of the wards to work on ad-hoc projects. They’ve deliberately been put back into the wards so that they can sharpen their thinking,” he shares.

“You need to know how to look after patients and anticipate things that will come. With that, you learn to understand and appreciate the complexities of bedside care. Then you look for a gap that IT can help make better.”

With a healthy number of informatics nurses supporting an increasing slew of initiatives, Soon Ghee is excited about what the future may bring for the profession.

“The role of nurses will evolve from bedside care to patient-centric, consultative care. I may not be able to be part of this shift, but I think nursing informatics will play a significant role in helping us get there.”





## Yong Limin

*Rehab Manager, Rehab Services  
BVH*

“As we face the challenges of an ageing society, I hope to use evidence-based geriatric rehabilitation services to enhance our older patients’ health and safety. My wish is to develop a holistic and comprehensive, yet efficient and sustainable community-based geriatric care services for our patients so that we can all age well.”



## Sia Kheng Hong

*Group Chief Financial Officer*

“I’m passionate about developing healthcare finance as a compelling and rewarding career choice for young finance professionals. SingHealth is an accredited training organisation of the Institution of Singapore Chartered Accountants, and we hope to grow our share of the best finance professionals who thrive in addressing the complex challenges of healthcare delivery in Academic Medicine.”



## Chia Li Sen

*Patient Care Assistant, Ward 56  
NHCS*

“There was a patient who was about to undergo a cardiac bypass and he was worried about the surgery as he had suffered a stroke before. So I approached another patient in the ward who had a successful bypass and asked him to speak to the new patient and make him feel better.”



## Teo Swee Ngim

*Senior Medical Social Worker  
SHP-Queenstown*

“Every patient and their family have their own strengths and resilience. Our role as medical social workers is to draw out that strength and resilience in them so that they will have better sense of control of the unexpected changes brought about by the illness.”



# DESIGNED FOR OUR PATIENTS

## SENGKANG GENERAL AND COMMUNITY HOSPITALS

operational in 2018



The co-location of General and Community Hospitals allows for wide range of medical and surgical facilities, as well as clinical support services

A wellness garden on level 5 provides a conducive environment for healing

Separate routes for visitors, patients and staff for increased privacy, with another automated route for logistics

COMMUNITY HOSPITAL

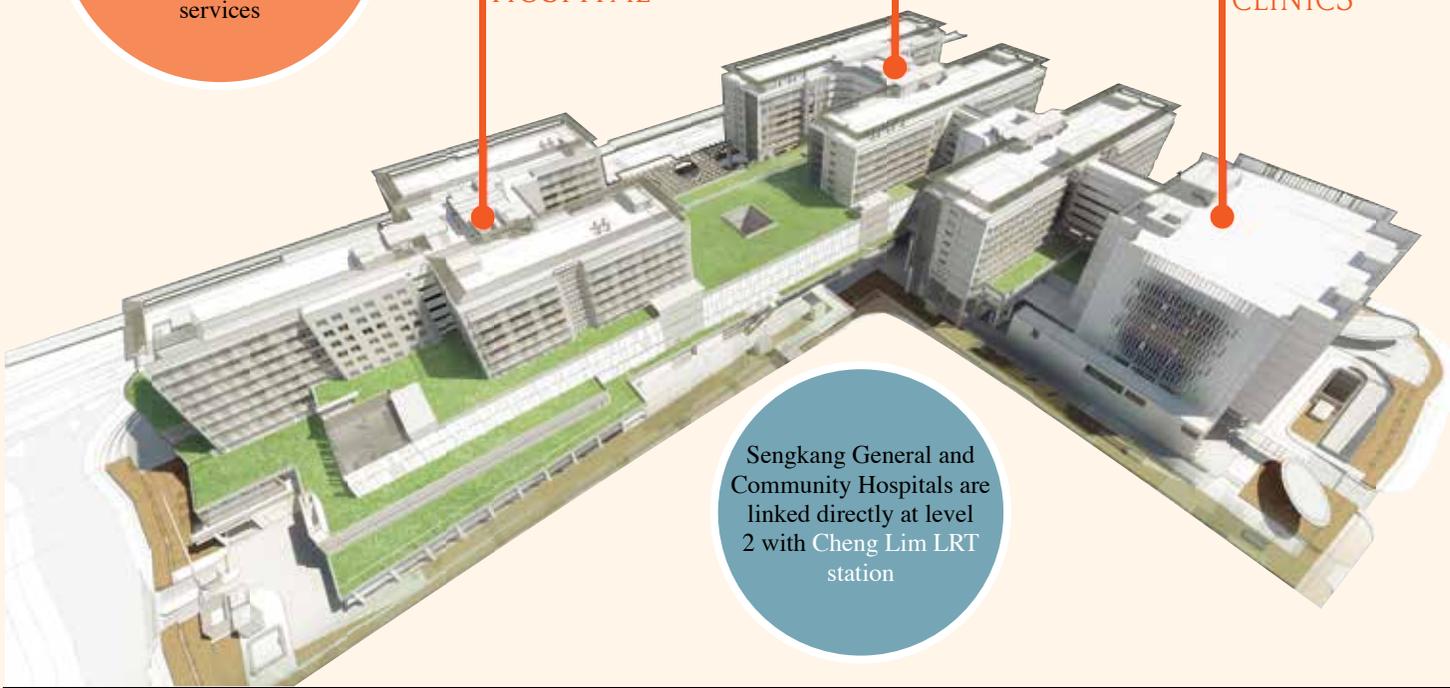
GENERAL HOSPITAL

SPECIALIST OUTPATIENT CLINICS

200 of the 1,400 beds in the hospitals are “swing” beds, able to be converted for use as either community or acute hospital beds

Sengkang General and Community Hospitals are linked directly at level 2 with Cheng Lim LRT station

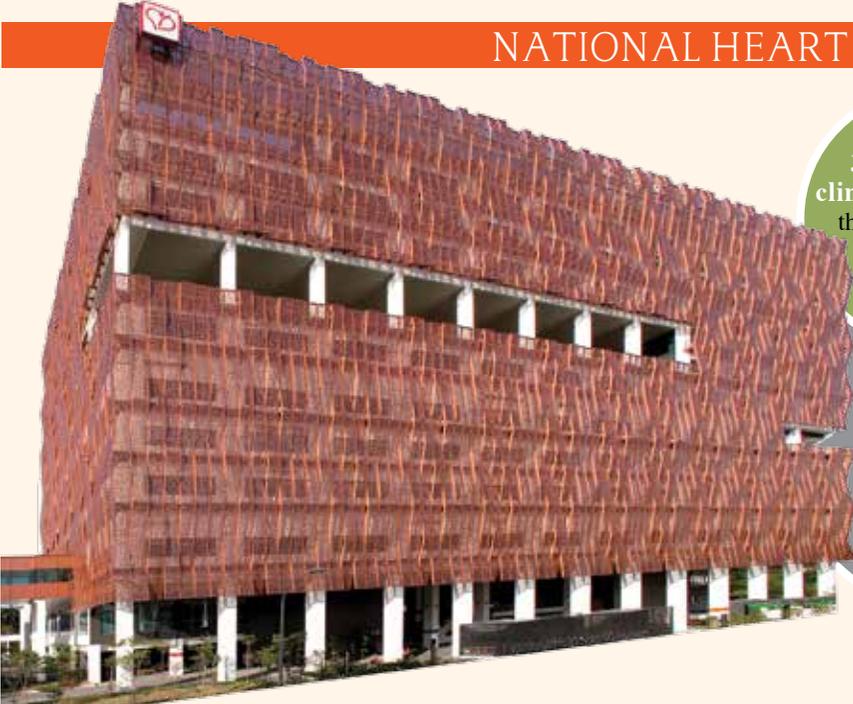
The Community Heart at level 1 brings the community together with cafes, retail outlets and open event spaces





# NATIONAL HEART CENTRE SINGAPORE

operational Mar 2014



38 outpatient clinic rooms, double the capacity at the former Mistri Wing facility

Admissions Office and Pre-Admission Tests Centre under one roof, providing greater convenience to patients

Awarded BCA Green Mark Platinum Award for the building's eco-friendly features

Dedicated 1.5 floors of research space to enhance interaction between clinicians and researchers

Faster and simpler outpatient experience with 1 Queue 1 Bill system

Age-Friendly environment makes it safe, accessible and comfortable for elderly patients

50,000m<sup>2</sup> gross floor area, with 2,200m<sup>2</sup> of greenery creating a therapeutic healing environment

# OUTRAM COMMUNITY HOSPITAL

operational in 2018

Expanding our continuing care capabilities is the Community Hospital located on SGH Campus, where the School of Nursing building once stood.

This development enhances the care journey for our patients and optimises their recovery with the support of post-acute facilities in our campus before they are discharged back into the community.



Information accurate as at March 2014

## Stephanie Teo

*Assistant Director of Nursing  
SHP*

There is a voice in Stephanie's head, but for the sake of her patients, she has learnt to ignore it.

"During a leadership course, I learnt about mental models and the left-hand column. It's like an inner conversation you have with yourself while you are having a difficult exchange of words with someone. These are unspoken thoughts and are usually negative in nature," she explains.

"Over the years I have learnt to cut out these conversations and take on a more objective viewpoint." And she brings this perspective to her nurses: "If there is a lot of negative thought, it can make the nurse very cynical towards her patients. But if you think positive, the emotions and attitude will naturally come out right."

Even away from the workplace, she encourages the same positive outlook in her family. Should there be differences, they will talk it out and resolve it before going to bed.

"If we continue to tell people they are no good, they will become what you tell them. So it's better to emphasise the positive," asserts Stephanie.

Having a positive and inquisitive mindset has allowed the Assistant Director of Nursing to take on challenges she has at work. Currently working with a team of doctors and nurses to review nursing practices on child development assessment, her curious nature allows her to improve care.

"I like to study and analyse the problem to see if there is any solution I can think of. When you look at child development assessment, it is important to revisit some of our practices so that we can equip our nurses with relevant and up-to-date information for their patients."

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### Tan Chye Ngoh

*Senior Enrolled Nurse  
BVH*

“Though serving palliative patients has always been my wish, I realised the importance of my role in supporting and motivating the elderly in the rehabilitation unit. It touches my heart when I see my patients’ conditions improve each day and return to the community. I simply love my job as a nurse.”



### Philip Heng

*Director, Operations & Performance  
Management  
SGH*

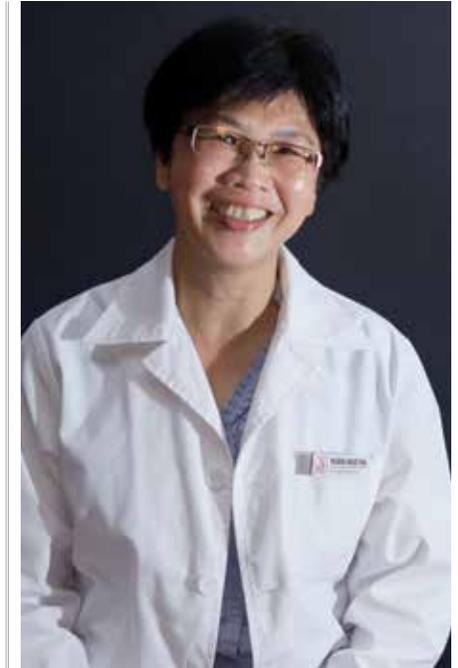
“Healthcare is about trained professionals using medical equipment combined with clinical processes to deliver care to patients. It is made complex with considerations of policies, financing and psychosocial makeup of the society. All these elements are constantly evolving at a different pace, influencing one another. This is why healthcare is such an exciting and dynamic field to work in!”



### Chitra Vallei D/O Govindasamy

*Assistant Director of Nursing  
SNEC*

“I am passionate about teaching and being an educator. To that end, I’m working on a pilot project for an Ophthalmic Assistant and Technician Course, developing these programmes to address both local and regional manpower needs and provide an opportunity for our senior colleagues in SNEC to leave a legacy for ophthalmic education.”



### Huang Hgoi Yin

*Principal Dental Technician  
NDCS*

“I hope to sow seeds of knowledge, skills and values amongst the younger generation by nurturing and guiding them. It is most rewarding to be able to witness my students graduate. It always makes me feel like a proud mother.”

## Nasriah Bte Nasir

*Senior Medical Social Worker, Dept of Child Development  
KKH*

Nasriah comes from a family with a culture of caring.

“Social work is close to my heart, as my late father was a volunteer with several community welfare organisations for many decades,” explains the social worker of ten years. “Coincidentally, my name also means *help* in Arabic.”

In 2013, Nasriah became one of the first two certified trainers for the Signposts for Building Better Behaviour parenting programme in Singapore, which aims to support parents and caregivers of children with developmental needs. She also co-authored a research article on the outcome of the programme, published in the Journal of Intellectual and Development Disability.

“Caring for a child with developmental issues is no easy feat, and I am deeply inspired by the ceaseless efforts of parents and caregivers,” she says. “It is always a good day at work when I see their happy smiles, especially when they share that their children have made progress.”

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## Winston Ong

*Director, Strategic Planning and Management  
SKH*

*How did you end up doing what you do?*

“Middle-age anxiety about the odds of needing medical care, and my doctor-boss kindly prescribing me the work to sort it out.”

*What current project are you most passionate about?*

“Helping to realise a regional healthcare system to which my family and I can entrust our lives.”

*What is the most memorable moment in your career?*

“Gathering enough courage to make that career change for no other reason than faith in its purpose.”

*What legacy do you want to leave behind?*

“I have middle-age anxiety. Would I really want to think about what I’ll be leaving behind when I am dearly departed?”

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## Peter Tan

*Director, Leadership and Organisational Development  
SingHealth*

Peter builds better leaders for SingHealth.

A good day at work sees him sitting down with participants in his leadership development courses. Conducting workshops gives him the chance to get up-close with healthcare professionals and hear real stories from real people. He often walks away with invaluable advice.

This, after a 13-year hiatus from public service, gives him a fresh perspective on the way things are done.

“People are people, what’s different is the context,” he explains. “While you can plan a big change, put in milestones and project timelines, it all boils down to the individual.”

Now working in a large complex organisation undergoing immense change, he has got his work cut out for him.

But as much as he talks about competing interests and stubborn mentalities, the organisational change advocate also realises that sometimes people really just need a few days off to renew their focus and discover for themselves again why they joined healthcare in the first place.

“This story is popular among management – there are two builders chipping away at a piece of rock. One will say he is chipping away at just a piece of rock. The other will tell you that he is building a grand cathedral. Yet both are doing the same activity. It’s perspective that matters,” he shares.

The end point for Peter is really about thinking beyond one’s self. The greatest change comes in seeing things from a systems perspective and leveraging on the new system to bring benefit to the individuals.

“I have met leaders here who have thought less about themselves than making sure we have a good healthcare system for the future,” says Peter.

“They make you think — can you live without your job if it means the system works?”



### Asst Prof Lim Sheow Lei

*Senior Consultant, Dept of Gynaecological Oncology, KKH  
Adjunct Assistant Professor, Duke-NUS*

“Medical oncology allows me to be involved in direct patient care while conducting research to better cancer care. I am currently working to establish a chemotherapy regimen that improves survival rate for advanced ovary cancer patients. My patients have taught me much about life and living, and my greatest satisfaction is in seeing them triumph over cancer.”



### Simon Chen

*Senior Staff Nurse  
NCCS*

“My aunt who is a retired nurse in the US is my source of inspiration. She is the person who encouraged me to become a nurse. After some serious consideration over five years, I decided to pursue my dream and left my job as a tax accountant in a public accounting firm.”



### Kum Chui Lien

*Senior Enrolled Nurse  
SHP-Bukit Merah*

“I would like to leave behind a legacy of nursing values: respect, teamwork, integrity, compassion and excellence in service delivery. With these values, a nurse will be able to provide the best nursing care to patients when they are at their weakest moment and at which care is most needed.”



### Nurayuni Bte Selamat

*Optometrist, Optometry Service  
SNEC*

“Nothing beats the satisfaction of changing how a person views the world with something as simple as a pair of glasses or other vision aids.”



## Adj Assoc Prof Tony Lim

*Senior Consultant, Dept of Pathology, SGH*

*Academic Vice Chair, SingHealth Duke-NUS Pathology ACP*

Associate Professor Tony Lim's story is one of evolution and change, and it began with a night in intensive care as a young House Officer.

"I remember distinctively a patient being admitted with complications of late stage cancer.

"I came face-to-face with a very real fact – that I couldn't save him." Prof Lim continues, "I couldn't live with myself having to make choices and priorities affecting individual patients."

In his next attachment, he found himself in neonatology. The work was intense, meaningful and there were less of the hard choices to make and there were more resources available. But he still felt that it was not for him. His search to find a vocation where he could contribute more brought him to pathology.

"Do what you love so that it comes naturally to you – it's a joy. And continue to push yourself. You will come to a point where you become the only person holding you down. The race is with yourself – how you can become a better doctor for your patients," he says.

Prof Lim believes that we should never stop pushing ourselves. Doctors are given the privilege to save lives. With that, comes the great responsibility of becoming better doctors.

He tells his students that an exam is like climbing up a mountain to find a door: "Passing an exam or becoming a consultant only means that you have an opportunity to open that door and explore that vast universe of Medicine behind it.

"There will be mentors and peers to guide, encourage and inspire you. But it is a lifelong learning process so that you can do the best for your patients."

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# THE RISE OF HEALTHCARE IT

## PATIENT SERVICES

### ePayment

SingHealth is the first public healthcare group in Singapore to offer electronic payment, allowing online credit card payments for hospital, outpatient clinic and pharmacy bills.

### 1 Queue 1 Bill

The workflow at NHCS streamlines consultation, investigation and medication dispensing process to provide patients a better experience.

### One Medifund

By implementing one single assessment for Medifund, it is now a seamless experience for patients to apply and get approval for Medifund assistance across SGH Campus and SingHealth Polyclinics.

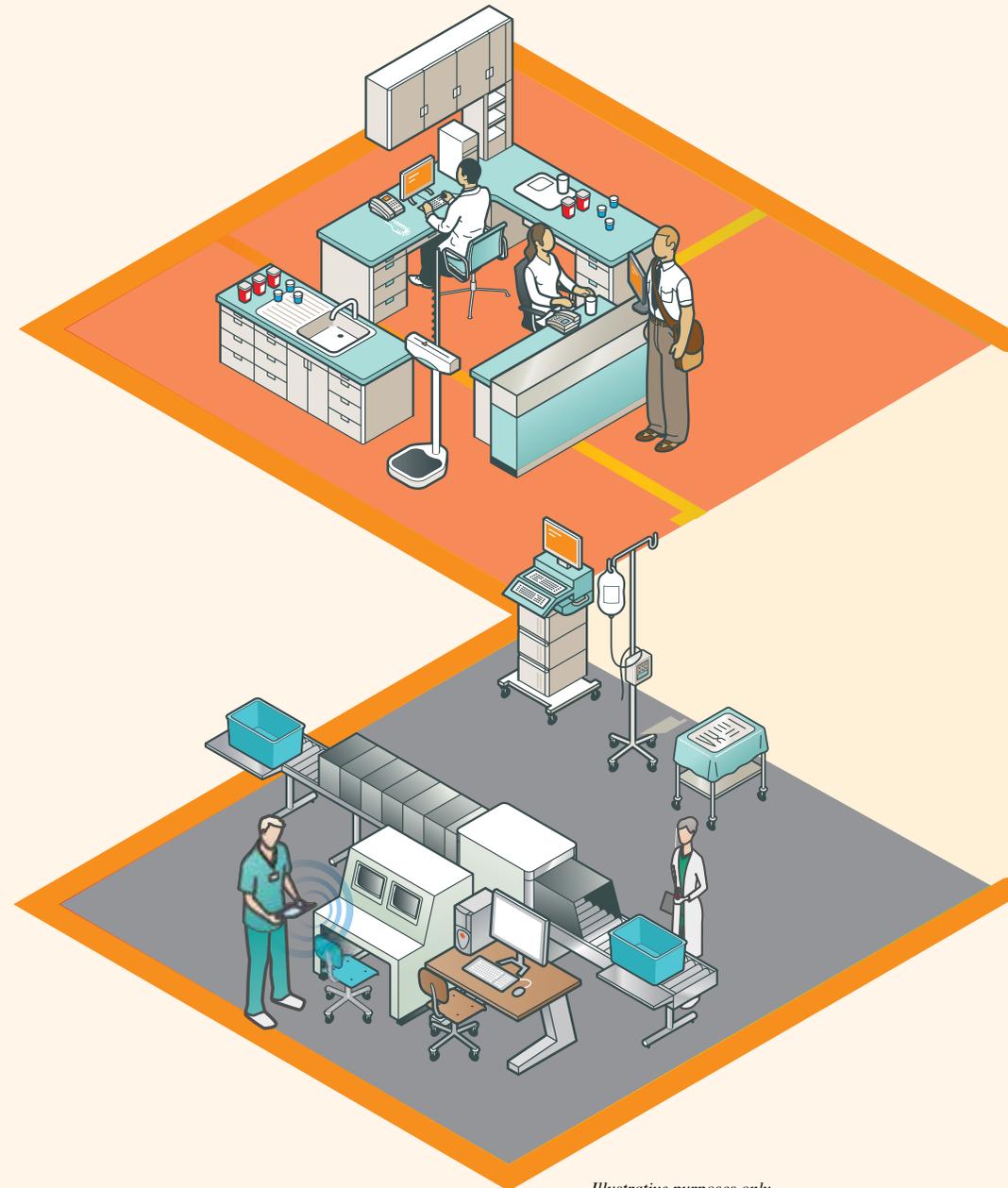
### Automated RFID Prescription Delivery System

Packs and assembles patients' medication at the SGH outpatient pharmacy. The use of RFID technology improves efficiency and safety and reduces waiting time for patients.

### Real-Time Ambulatory Patient Information Deployment Enabler (RAPIDE)

The NCCS system has enabled its chemotherapy unit to treat 20% more patients, reducing waiting time to within an hour for 80% of its patients.

It tracks nurses' and patients' locations and gives real-time updates on recliner and bed availability.



*Illustrative purposes only*

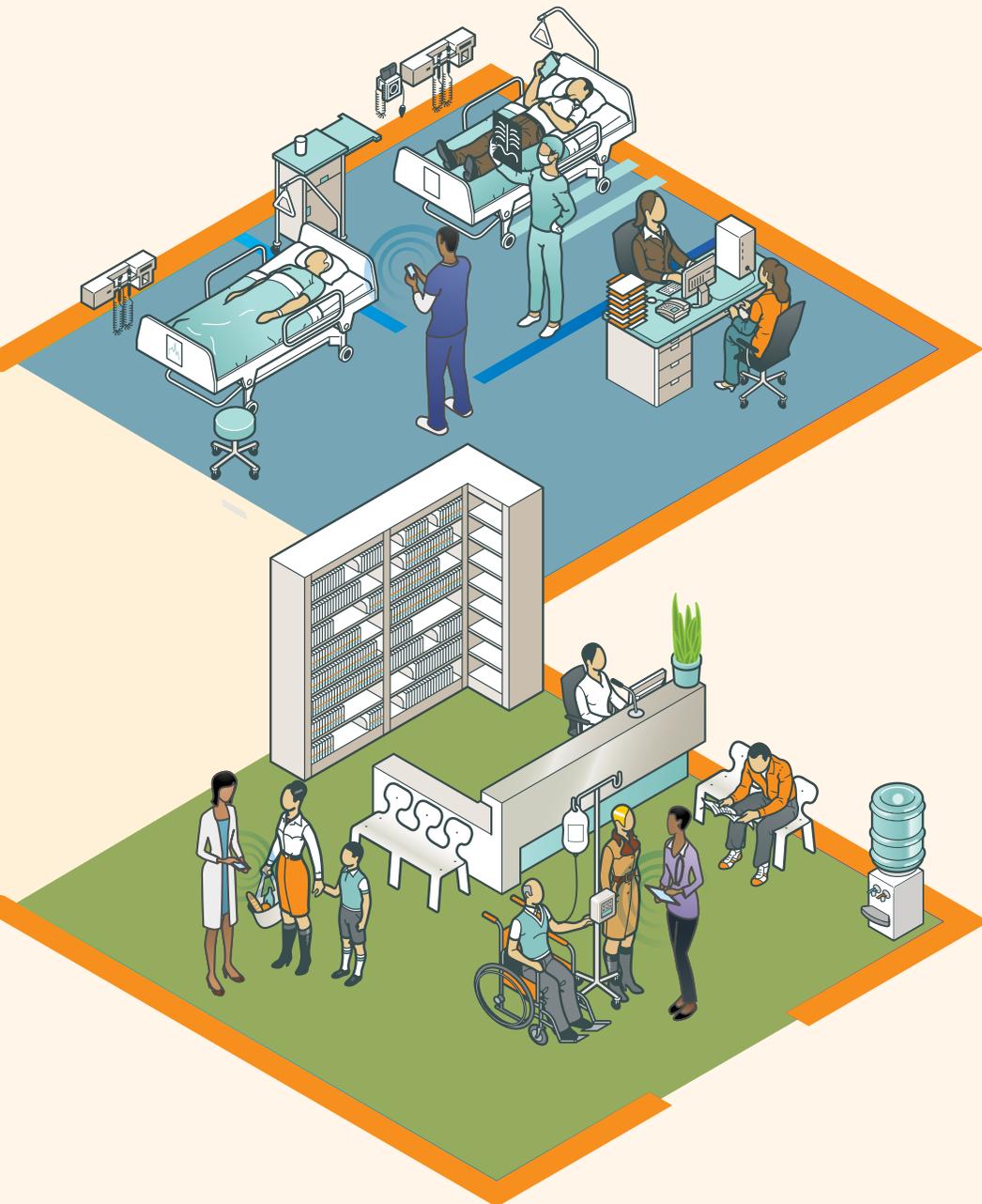
## ELECTRONIC MEDICAL RECORDS

### Electronic Clinical Notes

The system helps transform clinical notes into clear and structured online documentation, enhancing communication and facilitating research and analysis.

### Electronic Clinical Handover

Built as a module of the existing electronic medical record system, the system enables clinicians to quickly summarise key patient handover information and sort cases according to urgency.



## CLINICAL SUPPORT SERVICES

### I2M-SAFE Automated Packing System for Pharmacy

Integrated with the existing inpatient pharmacy system, the new system features a packing robot, automated medicine cabinet, medication carts and RFID verification to dispense medication in unit doses, making it safer and more efficient.

### Full Lab Automation System

Implemented at the SGH Clinical Laboratories in Academia with automated blood tube sorting machines, automated specimen requisition and integration with laboratory analysers.

### Integrated Radiology Information System and Picture Archiving and Communications System

The voice recognition-enabled system streamlines workflows and provides clinicians across SingHealth institutions and Eastern Health Alliance instant access to unified imaging data.

### Digital Modeling at NDCS

Dental plaster cast models are now digitised into 3D orthodontic images at NDCS for easier analysis and reduce storage space.

## MOBILE APPLICATIONS

### Nurses Pal

Three features – intravenous drip rate calculator, pressure ulcer prevention app, and prevention of patients’ fall app – transform the mobile phone into smart tools that make work more efficient.

### Mobile Appointment

Enables patients to use their smartphones to view, change, or make follow-up appointments at Specialist Outpatient Clinics and polyclinics.

### SNEC MyEyeDrops

Reminds patients to apply eye drop medications and provides video tutorials to teach the correct application methods.

### AsthmaCare Buddy

This SHP application includes tools and action plans for patients to monitor and maintain good asthma control, be reminded of vaccinations and information on GPs in the area.

### SGH Diabetes Pal

Guides patients who are new to insulin therapy on the required dosage based on their input every morning, helping them achieve optimum blood sugar levels.

### SingHealth Health Buddy

Provides health advice by clinicians on managing various disease conditions and information on the cluster’s specialists and services.

*Information accurate as at March 2014*

## Dr Ashish Mehta

Senior Research Scientist  
NHCS

When Dr Ashish Mehta joined NHCS in 2010, he was happy to be given the opportunity to work on what he deemed was good. He had a dream, and he liked that the Centre gave him free reign to pursue answers to satisfy his curiosity.

“My research is a tribute to my mother. As a biology student, I was disheartened when medical sciences couldn’t do much to diagnose or treat her about 10 years ago,” he reveals. “So now I try to understand diseases so others can benefit from my research.”

This drive led to the internationally-acclaimed discovery of a potential patient-specific cure for a dangerous heart rhythm disorder, as Dr Mehta led his team to completely reverse the syndrome in the lab using a tailored drug therapy.

The team is excited about continuing studies on the disease, working with collaborators from KKH and around the world, hoping to produce a diagnosis tool with impactful clinical application.

All this came about from having a little freedom to do what you feel is right.

“We started out wanting to look into the medical needs of our heart patients. During the course of the study, we uncovered the specific trigger of a potentially fatal heart rhythm disorder and that spurred us to ask why that is happening,” he relates.

“That *why* got us excited, and made us dig more to try and understand something that has not been known till now.”

Dr Mehta employs the same philosophy when it comes to teaching. He has mentored students from polytechnics and universities here, and enjoys the diversity of ideology and opinions.

“It’s good to have many people around when you want to understand a problem. You talk to them, and you might end up with something new.”

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## Saudha Bte Sadimin

*Senior Clinic Coordinator and Dental Surgery Educator  
NDCS*

A career as a teacher is not always rainbows and sunshine, but there is no other place Saudha would rather be.

“The best part about teaching is the chance to watch the students grow throughout the programme. I am very passionate about what I teach and to see that reflected in my students is personally and professionally fulfilling,” she says.

Currently active in secondary schools to create awareness of the dental profession, she hopes to get the younger generation interested in healthcare. Saudha feels the best thing about teaching is to help others succeed.

“I receive a great sense of satisfaction from building relationships with my students. When they show enthusiasm for the subject matter and express their gratitude for my skills as an instructor, I know I have made a connection.”

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## Efen Tan

*Senior Medical Social Worker  
BVH*

A serious road accident during her first year in university changed her outlook on life and made Efen want to pursue a career that gives her fulfillment.

An encounter with her first cancer patient then directed her down the path of palliative care.

“I used to visit her regularly in the ward to provide emotional support. Her sudden passing made me realise that life is short and full of uncertainties. That inspired me to work with end-of-life patients. I hope to help more, especially the single elderly in their last stage of life.” she relates.

Together with her colleagues, Efen hopes to develop a suitable psychosocial care model for palliative patients in a community hospital setting. “I wish to see more funded facilities and support aimed at allowing the elderly to continue to receive care in their home. Not just for the needy patients, but also for middle income families.”

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## Low Chin Poh

*Senior Staff Nurse  
BVH*

Not even his own mother was prepared for the career switch that Chin Poh picked for himself. The graduate in mechanical engineering realised that nursing could be the career he had been looking for, and BVH offered him a step towards his aspirations with their Professional Conversion Programme.

“My mother thought that nursing has always been associated with the female gender, so I shared stories of male paramedics and nurses who make a difference in many lives, and how much I wish I could play a part. My passion touched her and she gave me her blessings,” he relates.

Now, nine years into his career as a nurse, Chin Poh is thankful he made the switch.

“I am proud to be a nurse. It has allowed me to grow professionally and has also developed my soft skills. Gender should never come into play in any career, especially for nursing.”

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## Jayaram Veeramani

*Patient Services Associate  
NDCS*

Jayaram Veeramani is full of smiles. Hers is a very important smile, considering that she is the first person patients meet when they come to the Centre.

“I love my job and serving patients, especially the elderly and needy. By going the extra mile to put smiles on their faces give me a sense of satisfaction. I strive to achieve this on a daily basis,” she says.

In fact, the Centre loves her smile so much that they put her in a new role as a trainer for call centre staff. Jayaram has both attitude and aptitude, with her past experience as a telephone operator coming in handy.

“I was trained to speak with a smile, as though the caller was standing in front of me. This approach encourages the caller to return with a smile, creating an amicable speaking experience. I am very excited to start imparting my years of telecomm experience and knowledge to this new team.”

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## Dr Terence Tan

*Senior Consultant, Radiation Oncology and  
Chief Quality Officer, NCCS*

“Surgery was actually my first choice as a specialty,” reveals Dr Terence Tan. “However, when I looked down the list of disciplines on the traineeship application form, my eyes rested on radiotherapy. It involves technology, it involves the use of computers and requires the understanding and use of physics. That’s me.”

Dr Tan started his specialist training as a surgical trainee, but it did not take long for him to ask for a switch. He had bigger things to do, and he is pretty happy doing all of them now.

In his role as the Chief Quality Officer at NCCS, Dr Tan oversees clinical quality, service quality, licensing, credentialling and risk management.

A bugbear of healthcare administration is waiting time. Dr Tan feels no differently, though his experience as a practising clinician gives him a better picture.

“I guess it makes me more sensitive to our patients’ needs. I can sympathise and see it from their point of view. That’s why we have to evaluate all the places they have spent waiting and see how we can make their wait shorter and more tolerable.”

And Dr Tan is all about patient experience. According to him, NCCS is purpose-built for a collaborative environment that gives their patients the best care.

He explains: “In our tumour board meetings, every specialty comes together to discuss the patient. Medical oncology, radiation oncology and surgical oncology are there. Radiologists are also there to help us appreciate the x-rays and pathologists are there to explain the subtleties of different kinds of cells.”

He ends: “We do our utmost to bring hope to our patients. I am greatly heartened when patients leave with a smile after receiving the highest standard of care from us.”

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Joint Board Retreat • 29 May 2014

**SingHealth Board of Directors**

**S1 Mr Peter Seah Lim Huat**

Chairman • Chairman, DBS Bank Ltd

**S10 Mrs Christina Ong**

Board Member • Managing Director, Club 21 Pte Ltd

**Mr Ernest Wong Yuen Weng**

Board Member • Chairman, Fullerton Financial Holdings Pte Ltd

**S3 Prof Michael B. Wood**

International Board Member • Consultant, Mayo Clinic • President Emeritus, Mayo Foundation

**S2 Prof Victor J. Dzau**

International Board Member • President, US National Academy of Sciences' Institute of Medicine

**Mr Philip Eng Heng Nee**

Board Member • Chairman, mDR Limited

**S4 Prof Raj Mohan Nambiar**

Board Member • Senior Consultant, Ministry of Health • Emeritus Consultant, CGH

**S9 Mr Willie Cheng Jue Hiang**

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**S7 Mr Yatiman Yusof**

Board Member • Former Member of Parliament & Senior Parliamentary Secretary

**S8 Mr Khoo Boon Hui**

Board Member • Senior Deputy Secretary, Ministry of Home Affairs

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Board Member • Chairman, SingHealth Foundation • Emeritus Consultant, SGH

**Mrs Tan Ching Yee**

Board Member • Permanent Secretary, Ministry of Health

**Mr Lucien Wong Yuen Kai**

Board Member • Chairman & Senior Partner, Allen & Gledhill LLP

**S11 Ms Koh Lin-Net**

Board Member • CEO, Media Development Authority of Singapore

**D6 Prof Ranga R. Krishnan**

Board Member • Dean, Duke-NUS Graduate Medical School Singapore

**Mr Cheng Wai Keung**

Board Member • Chairman & Managing Director, Wing Tai Holdings Limited

**Ms Euleen Goh Yiu Kiang**

Board Member • Chairman, Singapore International Foundation

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**Mr Lee Ming San**

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**Mr Alvin Lim Chng Thien**

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**D11 Assoc Prof Lim Yean Teng**

Board Member • Director, Cardiology Associates Pte Ltd

**D4 Prof Michael Merson**

Board Member • Director, Duke Global Health Institute

**D12 Mr Chandra Mohan K. Nair**

Board Member • Partner, Tan, Rajah & Cheah

**S6 Prof Ivy Ng**

Board Member • Group Chief Executive Officer, Singapore Health Services

**D5 Assoc Prof Benjamin Ong Kian Chung**

Board Member • Director of Medical Services, Ministry of Health

**D8 Mrs Quek Bin Hwee**

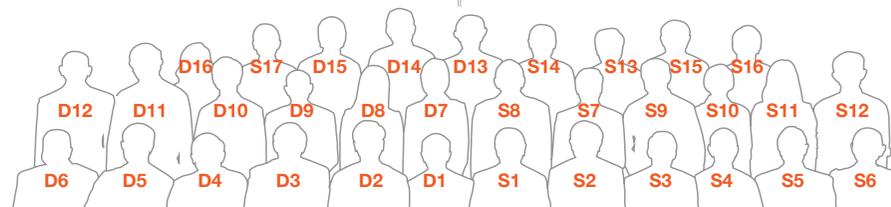
Board Member • Senior Audit Partner, PricewaterhouseCoopers LLP

**S5 Prof Tan Ser Kiat**

Board Member • Chairman, SingHealth Foundation, Emeritus Consultant, SGH

**Mr Teo Siong Seng**

Board Member • Managing Director, Pacific International Lines (Pte) Ltd





Defining Tomorrow's Medicine

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Group Chief Executive Officer

**S12 Prof Ang Chong Lye**

Deputy Group Chief Executive Officer, Clinical Services &amp; Informatics

**S13 Prof Soo Khee Chee**

Deputy Group Chief Executive Officer, Research &amp; Education

**Prof Ng Han Seong**

Group Chief Risk Officer

**S16 Mr Sia Kheng Hong**

Group Chief Financial Officer

**Mr Tan Jack Thian**

Group Chief Operating Officer

**S14 Prof Fong Kok Yong**

Group Director, Medical

**Ms Esther Tan**

Group Director, Strategic Human Resource

**Prof Wong Tien Yin**

Group Director, Research

**S17 Assoc Prof Koo Wen Hsin**

Group Director, Education

**S15 Prof Tan Kok Hian**

Group Director, Academic Medicine

**Dr Tracy Carol Ayre**

Group Director, Nursing

**Assoc Prof Celia Tan**

Group Director, Allied Health

**Mrs Tan-Huang Shuo Mei**

Group Director, Communications &amp; Service Quality

**Ms Lee Chen Ee**

Director, Office for Service Transformation

**Mr Benedict Tan**

Group Chief Information Officer

**Assoc Prof Loo Chian Min**

Chief Medical Informatics Officer

**Assoc Prof Chua Yeow Leng**

Group Director, International Collaboration Office



## MANAGEMENT

**D6 Prof Ranga R. Krishnan**

Dean

**D13 Prof Thomas M. Coffman**

Executive Vice Dean

**D14 Prof Patrick J. Casey**

Senior Vice Dean, Research

**S13 Prof Soo Khee Chee**

Senior Vice Dean, Clinical, Academic &amp; Faculty Affairs

**D15 Prof Robert K. Kamei**

Vice Dean, Education

**Prof Wong Tien Yin**

Vice Dean, Clinical Services

**D16 Ms Karen Chang**

Vice Dean, Corporate Services

**Assoc Prof Sandy Cook**

Senior Associate Dean, Education

**S15 Prof Tan Kok Hian**

Senior Associate Dean, Academic Medicine

**Prof Ng Keng Yeen**

Senior Associate Dean, Clinical, Academic &amp; Faculty Affairs

**Prof Frank C. Starmer**

Associate Dean, Innovative Solutions

**Assoc Prof Scott Compton**

Associate Dean, Medical Education, Research &amp; Evaluation

**Dr David M. Epstein**

Associate Dean, Research

**Ms Corinna Cox**

Director, Communications, Development &amp; Alumni Relations



Singapore  
General Hospital

**Prof Ang Chong Lye**

Chief Executive Officer, SGH  
Deputy Group CEO, Clinical Services & Informatics  
Member, Academic Medicine Executive Committee

**Prof Fong Kok Yong**

Chairman, Medical Board, SGH  
Group Director, Medical



KK Women's and  
Children's Hospital

**Prof Kenneth Kwek**

Chief Executive Officer, KKH

**Prof Alex Sia**

Chairman, Medical Board, KKH



Sengkang Health

**Prof Christopher Cheng**

Pro-Tem Chief Executive Officer, SKH

**Assoc Prof Ong Biauwh Chi**

Pro-Tem Chairman, Medical Board, SKH



National Cancer  
Centre Singapore

**Prof Soo Khee Chee**

Director, NCCS  
Deputy Group CEO, Research & Education  
Senior Vice Dean, Clinical & Academic Faculty  
Affairs, Duke-NUS  
Member, Academic Medicine Executive Committee  
Academic Chair, SingHealth Duke-NUS Oncology  
ACP

**Assoc Prof Joseph Wee**

Chairman, Medical Board, NCCS  
Academic Vice Chair, Clinical Services,  
SingHealth Duke-NUS Oncology ACP



National Dental  
Centre Singapore

**Assoc Prof Kwa Chong Teck**

Executive Director, NDCS  
(till 31 July 2014)

**Assoc Prof Poon Choy Yoke**

Director, NDCS  
(wef 1 August 2014)  
Academic Chair, SingHealth Duke-NUS  
Oral Health ACP  
(wef 26 August 2014)



National Heart  
Centre Singapore

**Prof Koh Tian Hai**

Medical Director, NHCS  
Academic Chair, SingHealth Duke-NUS  
Cardiovascular ACP  
(till 31 May 2014)

**Prof Terrance Chua**

Medical Director, NHCS  
Deputy Group Director, Medical  
Academic Chair, SingHealth Duke-NUS  
Cardiovascular ACP  
(wef 1 June 2014)



National  
Neuroscience Institute

**Prof Lee Wei Ling**

Director, NNI  
Academic Chair, SingHealth Duke-NUS  
Neuroscience ACP

**Assoc Prof Francis Hui**

Chairman, Medical Board, NNI  
Academic Vice Chair, Clinical,  
SingHealth Duke-NUS Neuroscience ACP



Singapore National  
Eye Centre

**Prof Donald Tan**

Medical Director, SNEC  
Academic Chair, SingHealth Duke-NUS  
Ophthalmology & Visual Sciences ACP  
(till 31 July 2014)

**Prof Wong Tien Yin**

Medical Director, SNEC  
Group Director, Research  
Academic Chair, SingHealth Duke-NUS  
Ophthalmology & Visual Sciences ACP  
(wef 1 August 2014)



Polyclinics  
SingHealth

**Dr Adrian Ee**

Chief Executive Officer, SHP



Bright Vision  
Hospital

**Mr Chua Puay Hian**

Chief Executive Officer, BVH

**Assoc Prof Lee Kheng Hock**

Medical Director, BVH

**SingHealth Duke-NUS Medicine ACP**

**Assoc Prof Chow Wan Cheng**

Academic Chair  
Chairman, Division of Medicine, SGH

**Assoc Prof Chan Choong Meng**

Academic Vice Chair, Education  
Senior Consultant, Dept of Renal Medicine, SGH

**Prof Julian Thumboo**

Academic Vice Chair, Research  
Head and Senior Consultant, Dept of Rheumatology & Immunology, SGH

**Assoc Prof Wong Kok Seng**

Academic Vice Chair, Clinical Services & Improvement  
Head and Senior Consultant, Dept of Internal Medicine, SGH

**SingHealth Duke-NUS Paediatrics ACP**

**Assoc Prof Ng Kee Chong**

Academic Chair  
Chairman, Division of Medicine, KKH

**Prof Ho Lai Yun**

Academic Deputy Chair  
Emeritus Consultant, Dept of Neonatal & Developmental Medicine, KKH

**Asst Prof Chan Yoke Hwee**

Academic Vice Chair, Clinical  
Deputy Chairman, Division of Medicine, KKH

**Prof Phua Kong Bo**

Academic Vice Chair, Education  
Senior Consultant, Gastroenterology Service, KKH

**Assoc Prof Law Hai Yang**

Academic Vice Chair, Research  
Chief Scientific Officer, Genetics Service, KKH

**SingHealth Duke-NUS Obstetrics & Gynaecology ACP**

**Assoc Prof Bernard Chern**

Academic Chair  
Head and Senior Consultant, Dept of Obstetrics & Gynaecology, KKH

**Assoc Prof Tan Hak Koon**

Academic Deputy Chair  
Head and Senior Consultant, Dept of Obstetrics & Gynaecology, SGH

**Prof Ho Tew Hong**

Academic Vice Chair, Education  
Senior Consultant, Division of Obstetrics & Gynaecology, KKH

**Assoc Prof John Tee**

Academic Deputy Vice Chair, Education  
Senior Consultant, Division of Obstetrics & Gynaecology, KKH

**Prof George Yeo**

Academic Vice Chair, Research  
Senior Consultant, Dept of Maternal Fetal Medicine, KKH

**SingHealth Duke-NUS Surgery ACP**

**Prof London Lucien Ooi**

Academic Chair  
Chairman, Division of Surgery, SGH

**Assoc Prof Kevin Lim**

Academic Deputy Chair  
Chairman, Division of Surgery, KKH

**Assoc Prof Tan Seang Beng**

Academic Vice Chair, Clinical  
Senior Consultant, Dept of Orthopaedic Surgery, SGH

**Assoc Prof Low Yee**

Academic Deputy Vice Chair, Clinical  
Head and Senior Consultant, Dept of Paediatric Surgery, KKH

**Prof Wong Wai Keong**

Academic Vice Chair, Education  
Head and Senior Consultant, Upper GI / Bariatric Surgery, SGH

**Asst Prof Caroline Ong**

Academic Deputy Vice Chair, Education  
Senior Consultant, Dept of Paediatric Surgery, KKH

**Asst Prof Tan Hiang Khoon**

Academic Vice Chair, Research  
Senior Consultant, Division of Surgical Oncology, NCCS

**SingHealth Duke-NUS Ophthalmology & Visual Sciences ACP**

**Prof Wong Tien Yin**

Academic Chair  
Medical Director, SNEC  
Group Director, Research

**Prof Aung Tin**

Academic Vice Chair, Research  
Deputy Medical Director (Research), SNEC  
Executive Director, SERI

**Assoc Prof Ian Yeo**

Academic Vice Chair, Education  
Deputy Medical Director (Education), SNEC

**Prof Wong Tien Yin**

Academic Vice Chair, Clinical & Faculty Management (Interim)  
Medical Director, SNEC  
Group Director, Research

**SingHealth Duke-NUS Neuroscience ACP**

**Prof Lee Wei Ling**

Academic Chair  
Director, NNI

**Assoc Prof Ng Wai Hoe**

Academic Deputy Chair  
Deputy Director, NNI

**Assoc Prof Au Wing Lok**

Academic Deputy Chair  
Head, Neurology, TTSH Campus

**Assoc Prof Francis Hui**

Academic Vice Chair, Clinical  
Chairman, Medical Board, NNI

**Prof Tan Eng King**

Academic Vice Chair, Research  
Senior Consultant, Neurology, SGH Campus

**Assoc Prof Nigel Tan**

Academic Vice Chair, Education  
Senior Consultant, Neurology, TTSH Campus

**Prof Lim Shih Hui**

Academic Vice Chair, Education  
Senior Consultant, Neurology, SGH Campus

**SingHealth Duke-NUS Cardiovascular ACP**

**Prof Terrance Chua**

Academic Vice Chair  
Medical Director, NHCS  
Deputy Group Director, Medical

**Assoc Prof Kenny Sin**

Academic Vice Chair, Clinical Services  
Deputy Medical Director, NHCS

**Asst Prof Kurugulasigamoney Gunasegaran**

Academic Vice Chair, Education & Training  
Senior Consultant, Cardiology, NHCS

**Prof Stuart Cook**

Academic Vice Chair, Research  
Distinguished Clinician Scientist, NHCS

**Assoc Prof Lim Soo Teik**

Academic Deputy Vice Chair, Education and Training  
Deputy Medical Director, NHCS

**SingHealth Duke-NUS Oncology ACP**

**Prof Soo Khee Chee**

Academic Chair  
Director, NCCS  
Deputy Group CEO, Research & Education

**Assoc Prof Joseph Wee**

Academic Vice Chair, Clinical Services  
Chairman, Medical Board, NCCS

**Assoc Prof Toh Han Chong**

Academic Vice Chair, Research & Education  
Deputy Director, NCCS

**Prof Teh Bin Tean**

Academic Vice Chair  
Clinician Scientists / Faculty Development  
Principal Investigator, NCCS

**SingHealth Duke-NUS Pathology ACP**

**Prof Tan Puay Hoon**

Academic Chair  
Head and Senior Consultant, Dept of Pathology, SGH

**Assoc Prof Jacqueline Hwang**

Academic Vice Chair, Clinical Service (SGH Campus)  
Senior Consultant, Dept of Pathology, SGH

**Assoc Prof Nancy Tee**

Academic Vice Chair, Clinical Service (KKH campus)  
Head and Senior Consultant, Dept of Pathology & Laboratory Medicine, KKH

**Assoc Prof Koh Tse Hsien**

Academic Vice Chair, Research  
Senior Consultant, Dept of Pathology, SGH

**Asst Prof Kenneth Chang**

Academic Vice Chair, Education  
Senior Consultant, Dept of Pathology & Laboratory Medicine, KKH

**Assoc Prof Tony Lim**

Academic Vice Chair, Strategic Programs  
Senior Consultant, Dept of Pathology, SGH

**SingHealth Duke-NUS Radiological Sciences ACP**

**Assoc Prof Tan Bien Soo**

Academic Chair  
Senior Consultant, Dept of Diagnostic Radiology, SGH

**Assoc Prof Ong Chiau Li**

Academic Deputy Chair  
Senior Consultant, Dept of Diagnostic & Interventional Imaging, KKH

**Assoc Prof Tchoyoson Lim**

Academic Vice Chair, Research  
Senior Consultant, Neuroradiology, NNI

**Assoc Prof Cheah Foong Koon**

Academic Vice Chair, Education  
Head, Cardiac Radiology, NHCS

**Assoc Prof Tay Kiang Hiong**

Academic Vice Chair, Clinical Services Operations  
Head and Senior Consultant, Dept of Diagnostic Radiology, SGH

**Assoc Prof James Khoo**

Academic Vice Chair, Strategy & Innovation  
Head and Senior Consultant, Division of Oncologic Imaging, NCCS

**Asst Prof Marielle Fortier**

Academic Vice Chair, Clinical Services Quality  
Head and Senior Consultant, Dept of Diagnostic & Interventional Imaging, KKH

**Asst Prof David Ng**

Academic Deputy Vice Chair, Clinical Services  
Head and Senior Consultant, Dept of Nuclear Medicine & PET, SGH

**Assoc Prof Sitoh Yih Yian**

Academic Deputy Vice Chair, Clinical Services  
Deputy Director, NNI



<b>Filled FTEs include MOH-Funded</b>	Year ended 31 Mar 2014*	Year ended 31 Mar 2013
Doctors	2,318	2,172
Dentists	124	108
Nurses	7,262	6,896
Allied Health Professionals	3,507	2,871
Others	6,054	5,476
<b>Total</b>	<b>19,265</b>	<b>17,523</b>

\* Staffing figures refer to Filled Posts, in terms of Full-Time Equivalent, and may not add up to total due to rounding. FY2013 figures includes MOH-funded positions.

	Year ended 31 Mar 2014	Year ended 31 Mar 2013
Beds	2,639	2,609
Bed Occupancy Rate	79.7%	79.1%
Inpatients	156,312	156,297
Total Patient Days	734,419	729,173
Average Length of Stay (days)	4.7	4.7
Day Surgeries	109,203	105,853
Inpatient Surgeries	65,779	62,273
Specialist Outpatient Clinic Attendances	1,813,941	1,772,432
Accident & Emergency Attendances	318,292	323,317
Dental Attendances	190,629	174,997
Dental Procedures	255,676	222,597
Polyclinic Attendances	1,732,797	1,721,310

	Year Ended 31 Mar 2014 (S\$ million)	Year Ended 31 Mar 2013 (S\$ million / *Restated)
<b>Assets by Major Categories</b>		
Plant and Equipment	558	465
Trade and Other Receivables	459	646
Other Assets	1,066	807
<b>Total</b>	<b>2,083</b>	<b>1,918</b>

<b>Liabilities by Major Categories</b>		
Trade and Other Payables	792	653
Other Current Liabilities	124	104
Non Current Liabilities	418	414
<b>Total</b>	<b>1,334</b>	<b>1,171</b>

<b>Total Equity</b>	<b>749</b>	<b>747</b>
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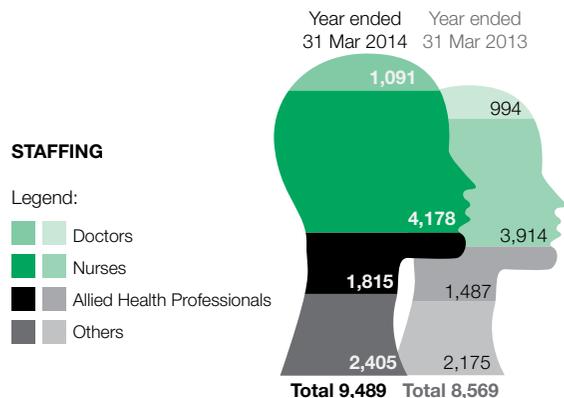
<b>Revenue Breakdown by Major Categories</b>		
Clinical Revenue	1,219	1,135
Subvention	1,224	1,120
Other Revenue	377	316
<b>Total</b>	<b>2,820</b>	<b>2,571</b>

<b>Expenditure by Major Categories</b>		
Manpower	1,551	1,390
Supplies and Consumables	412	389
Other Operating Expenses	725	668
Depreciation and Amortisation	134	124
<b>Total</b>	<b>2,822</b>	<b>2,571</b>

\*The financials ended 31 Mar 2013 have been restated due to the early adoption of Singapore Financial Reporting Standards 110.



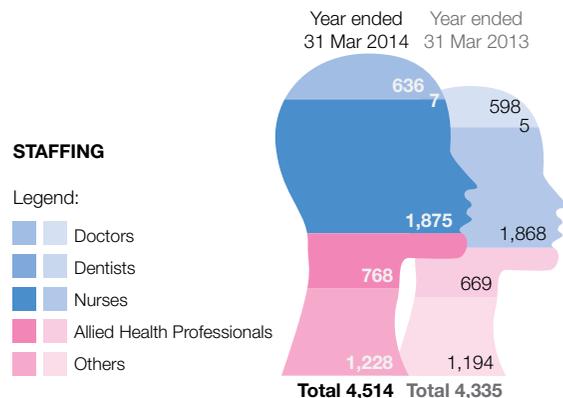
Outram Road, Singapore 169608  
Tel: 6222 3322 • www.sgh.com.sg



	Year ended 31 Mar 2014	Year ended 31 Mar 2013
Beds	1,597	1,597
Bed Occupancy Rate	81.6%	81.6%
Inpatients	78,422	78,036
Total Patient Days	475,355	474,002
Average Length of Stay (days)	6.1	6.1
Total Surgical Operations	82,467	79,507
Day Surgeries	43,687	43,940
Inpatient Surgeries	38,780	35,567
Specialist Outpatient Clinic Attendances	687,737	679,967
Accident & Emergency Attendances	144,346	149,269



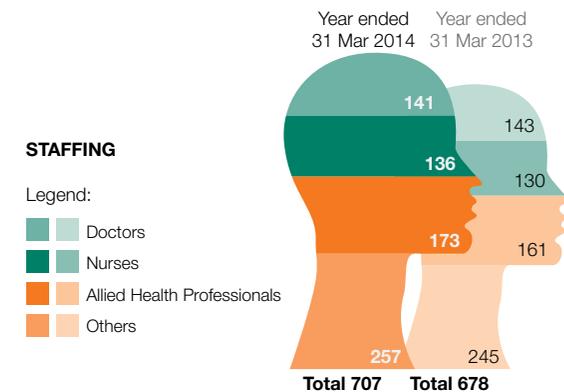
100 Bukit Timah Road, Singapore 229899  
Tel: 6225 5554 • www.kkh.com.sg



	Year ended 31 Mar 2014	Year ended 31 Mar 2013
Beds	857	827
Bed Occupancy Rate	77.5%	77.3%
Inpatients	68,229	68,722
Total Patient Days	210,285	211,542
Average Length of Stay (days)	3.1	3.1
Total Surgical Operations	35,098	34,300
Day Surgeries	14,945	14,353
Inpatient Surgeries	20,153	19,947
Specialist Outpatient Clinic Attendances	538,553	521,540
Accident & Emergency Attendances	173,946	174,048



11 Hospital Drive, Singapore 169610  
Tel: 6436 8000 • www.nccs.com.sg



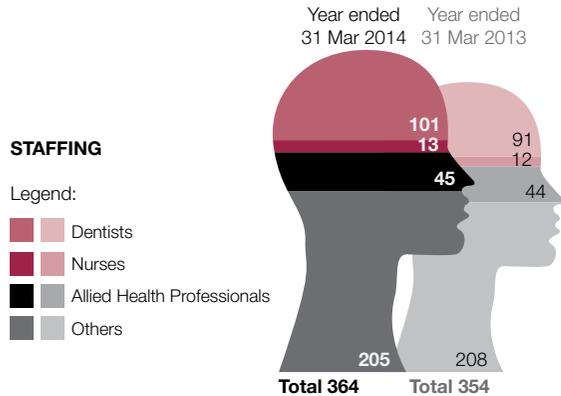
	Year ended 31 Mar 2014	Year ended 31 Mar 2013
Day Surgeries	9,967	9,938
Specialist Outpatient Clinic Attendances	135,818	135,076

\* Staffing figures refer to Filled Posts, in terms of Full-Time Equivalent, and may not add up to total due to rounding. FY2013 figures includes MOH-funded positions.



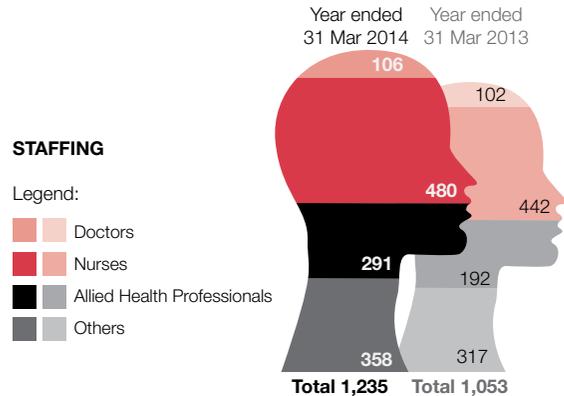
## National Dental Centre Singapore

5 Second Hospital Avenue, Singapore 168938  
Tel: 6324 8802 • www.ndcs.com.sg



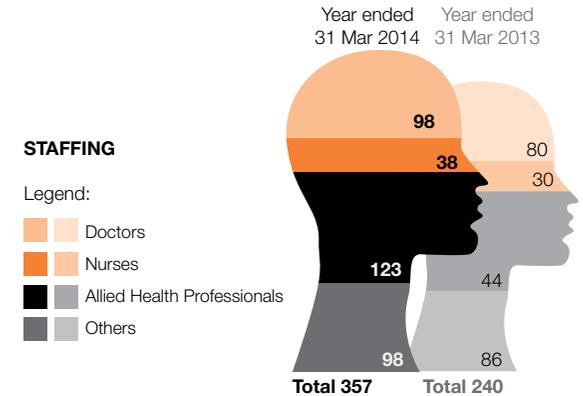

## National Heart Centre Singapore

5 Hospital Drive, Singapore 169609  
Tel: 6704 8000 • www.nhcs.com.sg




## National Neuroscience Institute

11 Jalan Tan Tock Seng, Singapore 308433  
Tel: 6357 7153 • www.nni.com.sg



	Year ended 31 Mar 2014	Year ended 31 Mar 2013
Day Surgeries	6,567	5,614
Dental Attendances	152,069	146,034
Dental Procedures	161,555	155,370

	Year ended 31 Mar 2014	Year ended 31 Mar 2013
Beds	185	185
Bed Occupancy Rate	72.2%	64.6%
Inpatients	9,661	9,539
Total Patient Days	48,779	43,629
Average Length of Stay (days)	5.0	4.6
Inpatient Procedures (Interventional & Surgical)	6,846	6,759
Specialist Outpatient Clinic Attendances	109,811	112,023

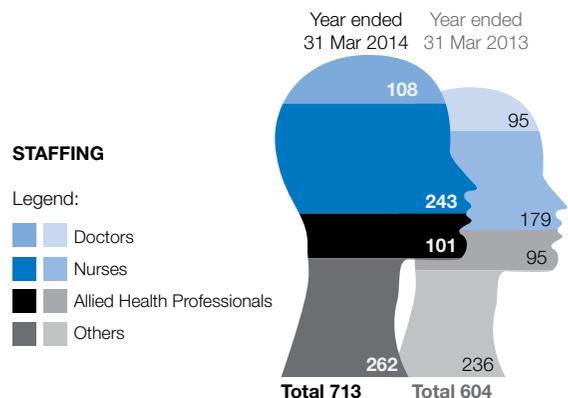
	Year ended 31 Mar 2014	Year ended 31 Mar 2013
Specialist Outpatient Clinic Attendances	42,784	40,673

\* Staffing figures refer to Filled Posts, in terms of Full-Time Equivalent, and may not add up to total due to rounding. FY2013 figures includes MOH-funded positions.



## Singapore National Eye Centre

11 Third Hospital Avenue, Singapore 168751  
Tel: 6227 7255 • www.sneec.com.sg

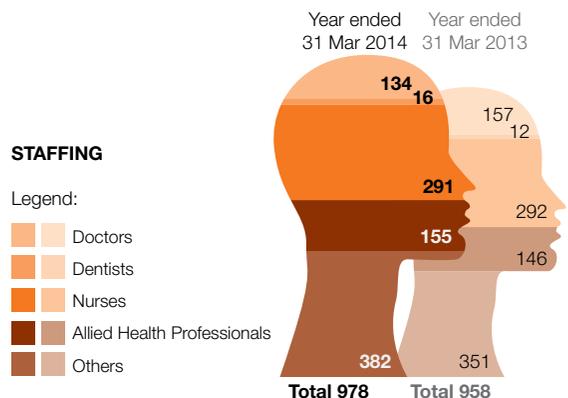


	Year ended 31 Mar 2014	Year ended 31 Mar 2013
Day Surgeries	34,015	31,990
Specialist Outpatient Clinic Attendances	299,238	283,153



## Polyclinics SingHealth

167 Jalan Bukit Merah, Tower 5, #15-10, Singapore 150167  
Tel: 6236 4800 • polyclinic.singhealth.com.sg



	Year ended 31 Mar 2014	Year ended 31 Mar 2013
Polyclinic Attendances	1,732,797	1,721,310
Dental Attendances	38,560	28,963
Dental Procedures	94,121	67,227



## Bright Vision Hospital

5 Lorong Napiri, Singapore 547530  
Tel: 6248 5755 • www.bvh.org.sg

	Year ended 31 Mar 2014	Year ended 31 Mar 2013
Licensed Beds	318	318
Total Staff Strength	334	293

## DUKE NUS

GRADUATE MEDICAL SCHOOL SINGAPORE

8 College Road, Singapore 169857  
Tel: 6516 7666 • www.duke-nus.edu.sg

	As at Jul 2014
<b>Education</b>	
Total current students (MD + MD/PhD + PhD)	220
Total Graduates to date	158
Faculty in Education	775
Regular rank appointments	85
Faculty with Duke appointment	1
<b>Research</b>	
Faculty Growth As at 31 Jan 2014	
Research faculty holding regular rank appointments with Duke-NUS	120
Dual appointments with SingHealth entities	23%
Clinically trained	44%
Duke-NUS faculty with Duke University appointments	25

\* Staffing figures refer to Filled Posts, in terms of Full-Time Equivalent, and may not add up to total due to rounding. FY2013 figures includes MOH-funded positions.



 SGH









**Academic Medical Centre**