

IN COMMEMORATION OF THE NATIONAL UNIVERSITY HOSPITAL'S 25TH ANNIVERSARY

PATIENT CARE • OUR FOCUS RESEARCH • OUR CORNERSTONE TEACHING • OUR TRADITION

24 JUIN

The National University Hospital was born, opening our doors to 180 staff, serving 50 outpatients and 4 inpatients.

ars on.

We have over 5,500 staff serving more than 670,000 outpatients and 59,000 inpatients.

The NUH is now a major referral centre for a comprehensive range of medical and dental specialties. It is also the principal teaching hospital of the NUS Yong Loo Lin School of Medicine and the Faculty of Dentistry.

MESSAGE from the Senior Minister

The National University Hospital (NUH), Singapore's first restructured hospital, opened on 24 June 1985 at the Kent Ridge university campus. However, its genesis goes back to the late 1960s, when the idea of a university hospital was first mooted.

Today, NUH's close links with the National University of Singapore set it apart from other hospitals. The unique identity of a teaching hospital continues to be a key attraction for clinicians who aspire to do more than practise tertiary medical care. The hospital offers an environment where research and education are an integral part of medicine. Research has flourished, which in turn has led to better treatment and care for those who are ill. It laid the foundation for many of the clinical breakthroughs which not only bring hope and better treatment to patients, but also enhance Singapore's reputation for medical excellence.

Indeed, NUH has made significant contributions to healthcare in Singapore by spearheading many quality initiatives. In 2004, NUH became the first Singapore hospital to receive the Joint Commission International accreditation, an international stamp for excellent clinical practices in patient care and safety. This accreditation has since become a benchmark for patient care and

safety for hospitals in Singapore. Since 2006, NUH has also published its clinical outcome data on its website, thus providing greater transparency for benchmarking against international outcomes. Through these initiatives, Singaporeans can be assured of the effective and high-quality care that they receive from NUH.

A key member of the National University Health System since 2008, NUH is embarking on an exciting phase as an academic medical centre to develop as an integrated centre of excellence in healthcare service, research and teaching. I am confident it will continue to excel in the search for better treatment and in nurturing the next generation of healthcare professionals.

quelly

Goh Chok Tong Senior Minister, Singapore

MESSAGE from the Minister for Health

When I was told to get a new hospital in Kent Ridge up and running, I seized the opportunity. I gathered a team of "rebels": people who were familiar with public hospitals but had been critical of the status quo. I told them: "now is your opportunity to correct the "wrongs" and make public hospitals better. Let's make a difference." They did not disappoint.

We made the most progress where the clinical heads were supportive of change. I remember Prof Foong Weng Cheong who was then the Head of Surgery. We introduced and promoted "day surgery", knowing that hospitalisation was costly to the patients and many surgeries could be carried out safely as outpatient procedures. When we

started, day surgery made up less than 10% of all surgeries. Today, more surgeries are being carried out on outpatients than inpatients.

I remember the late Prof Chan Heng Leong, the Head of Medicine. We renovated and furnished a day chemotherapy suite, to enable cancer patients to receive chemotherapy as outpatients in more home-like environment. Not all medical treatment needed to be carried out in hospitals. We became the first hospital to conduct kidney dialysis in the community. A bit inconvenient for the doctors, but a lot more convenient for the patients and their family members. This is now the norm.

The late Prof S S Ratnam was another legend. He had a fertile mind and wanted to push infertility and obstetric care to higher level but was constrained by civil service rules. I worked closely and productively with him and made a lot of headway.

We were never shy to learn from others and copy good ideas readily. From Thomson Medical Centre, I copied the concept of allowing husbands into delivery suites, to share the joy of birth with their loved ones.

We made progress not just in traditional clinical areas. We had also innovated in laboratory medicine, radiology, clinical pharmacy, physiotherapy and many other areas. I was fortunate to have sensible and creative rebels heading each of these areas.

We also set out to make hospitals less hospital-like. Hospitalisation was such a traumatic experience that we thought patients would welcome a less intimidating and a more cheerful encounter. We converted the entrance lobby and brought in relevant commercial tenants to complete the service to our patients and visitors: bank, restaurant, florist, hair dresser etc. When NUH opened, many visitors commented that it looked more like a hotel.

Little details made a lot of difference: hospitals used to smell, well, like hospitals. We consulted a hotel housekeeper and replaced the floor cleaning disinfectant that was then used in all hospitals. We also worked with the McDonald's to do up an X-ray Suite so that children no longer fear going for X-ray.

It was an exciting opportunity to make patients' hospital experience better, less stressful, and cheaper. We seized such an opportunity and made a difference.

At 25, NUH must never lose that spirit of adventure, and must remain perennially motivated to want to make life better for our patients.

There is always a better way to do things and always assume that the status quo is never perfect. In particular, continue to talk to patients, get their feedback, listen to their suggestions: they have much to teach us. Talk to staff: doctors, nurses, pharmacists, physiotherapists, housekeepers; look out for "rebels", support them and try out new ideas.

The best is yet to be for Singapore healthcare, and NUH must always be out there in the lead.

Happy 25th Anniversary!

(from an

Khaw Boon Wan Minister for Health, Singapore

MESSAGE from the Chairman

The National University Hospital (NUH) has come a long way. Its emphasis on research and education, besides clinical care, reflects its patient-centred approach to healthcare and its commitment to medical excellence.

Since its inception, NUH has been the place where aspiring doctors learn and improve the science and art of healing. Our doctors have also been active in teaching and nurturing these aspiring doctors who take care of Singapore's healthcare needs.

I am happy that the three-pronged focus on clinical care, research and education has been strengthened as a result of the formation of the National University Health System in 2008. This groups the NUH with the NUS Yong Loo Lin School of Medicine and the Faculty of Dentistry under a common governance.

This provides a good platform for people to work together as a team. We now have a good organisation structure and environment for scientists and clinicians in search of cures for diseases. More can be done and will be done to encourage translational and clinical research.

Working closely with other healthcare providers such as the Jurong Health Services, Alexandra Hospital, St Luke's Hospital and the polyclinics, NUH is poised to provide better integrated care for patients in the western part of Singapore. Through collaborations with other healthcare providers and partners, we aim to advance healthcare through impactful research, excellent care and teaching.

I first joined the NUH Board in 1985 and I am happy to be back to serve my third term on the Board, having "retired" twice before. What truly heartens me as we celebrate this silver jubilee is to see so many of our staff, friends and colleagues who joined us from the first year still with us today. I thank all of you in NUH for your contributions and wish you many more satisfying years with us.

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Lim Yong Wah Chairman, National University Health System

MESSAGE from the Chief Executive Officer

Since the National University Hospital (NUH) opened its doors 25 years ago, it has been running like clockwork through the collective and unfailing effort of every staff, past and present.

As we celebrate our 25th Anniversary, I would like to extend my gratitude to our pioneers and predecessors for the solid foundation they have laid through their hard work and dedication. My heartfelt appreciation also to those who have been with the hospital for 25 years, for their commitment and contributions.

This book, produced in commemoration of our 25th Anniversary, is apt as it showcases the complexity and myriad of details that go into running the hospital, both frontline and behind the scene. A pictorial compilation that seeks to provide a glimpse into the various patient care, research activities and teaching at the NUH within a day, it conveys that even though each staff is responsible for different aspects of the hospital's operation, we share and are bounded by our common focus – our patients.

Many of the photographs were taken by a team of talented photographers comprising clinicians, nurses and allied health professionals – the same people who work on the ground and are most familiar with the nuances and

workings of the hospital. The result of seven months of hard work is a special publication that tells the story of the NUH: the hospital, our patients and our staff.

Our road ahead will be challenging but fulfilling as we further our aspirations as an academic medical centre. However, our patients will remain our focus in all that we do. We endeavour not only to provide quality medical treatment and cure for diseases, but also to provide relief and comfort always to each and every one of our patients.

We will build on the firm foundation laid by our predecessors, guided by our mission to deliver quality and safe care to our patients, 24 hours a day, seven days a week.



Joe Sim Chief Executive Officer, National University Hospital

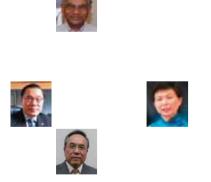


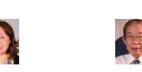




It is because of you we are here today and have the confidence to go beyond.

As we celebrate our 25th Anniversary, catch a glimpse of the action that takes place over 24 hours at the NUH.



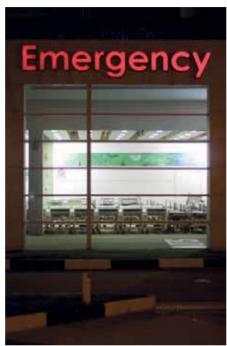




18 The time is A life hangs in the balance QUICK ACTION by our team extends a lifeline to the patients who pass through the NUH everyday.











PROMPT PRIORITISATION

based on the severity of the patients' conditions ensures that the most lifethreatening conditions are given immediate medical attention.



SPEED, CLINICAL EXPERTISE, **TEAMWORK AND PREPAREDNESS**

meld into a blur of coordinated movement as our team races to save lives. At the Accident & Emergency Unit, fast medicine is the order of the day, everyday.



Time is of the essence

speed is crucial when it comes to saving patients with heart attack. Our door-to-balloon time of 58 minutes during an emergency coronary angioplasty has surpassed the international norm and set a new benchmark. For our patients, we race to win.







PATIENT is a team hard at work.



1985 The heart and soul of healthcare...





...unwavering through the times

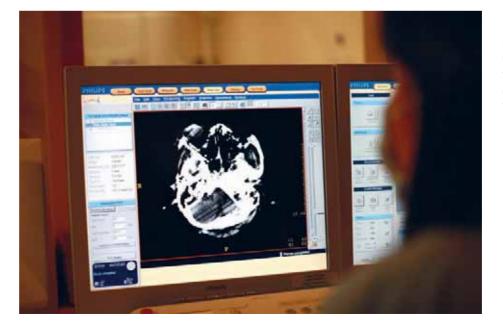
IT MAY BE EARLY HOURS, but doctors and nurses are on call; ready to respond to the needs of the sick. This is what we do, and will continue to do – providing the best care for our patients, always.





knowing the ENEMY is half the battle won – that is why the quest to find clues, explanations and answers to what ails our patients involves expert scientific minds in our laboratories. Working alongside our doctors and nurses are allied health workers like radiographers and technologists, who quietly but assiduously tease and ferret out the facts from biological specimens.

A picture tells a thousand words



IN THE FORM OF AN ULTRASOUND,

MRI, X-ray, CT scan or PET scan, the picture goes beyond words. These shine light into the dark recesses of our bodies and enable our doctors to see what troubles our patients.

26 24/7





but we are already in the thick of action











on thorough updates of information regarding patients. The night nursing team may have been replaced by the day team, but the caring for our patients does not change.









THE PERSONAL TOUCH still counts in the way our patients are cared for. Technology has become a mainstay in healthcare over the years, but it will never replace the warmth of human contact.







Empowering our patients





PATIENT CARE reaches a new height as we leverage technology to help our patients take care of their health. For example, through an in-house developed Computer-Aided Anti-Coagulation Therapy, our patients on warfarin can now do their blood tests at home and text their results to our staff for drug titration. This reduces unnecessary hospital trips for our patients.

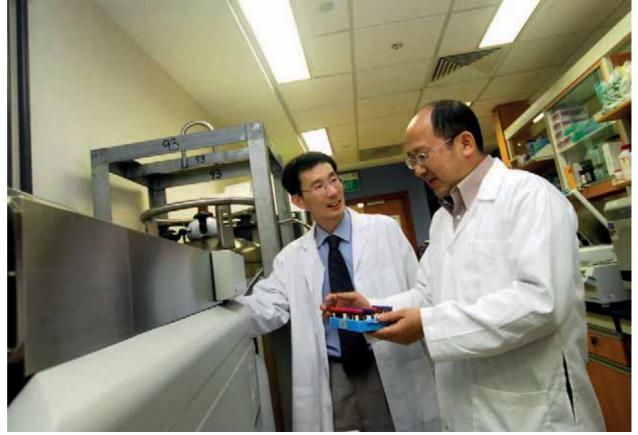


Research is in our blood

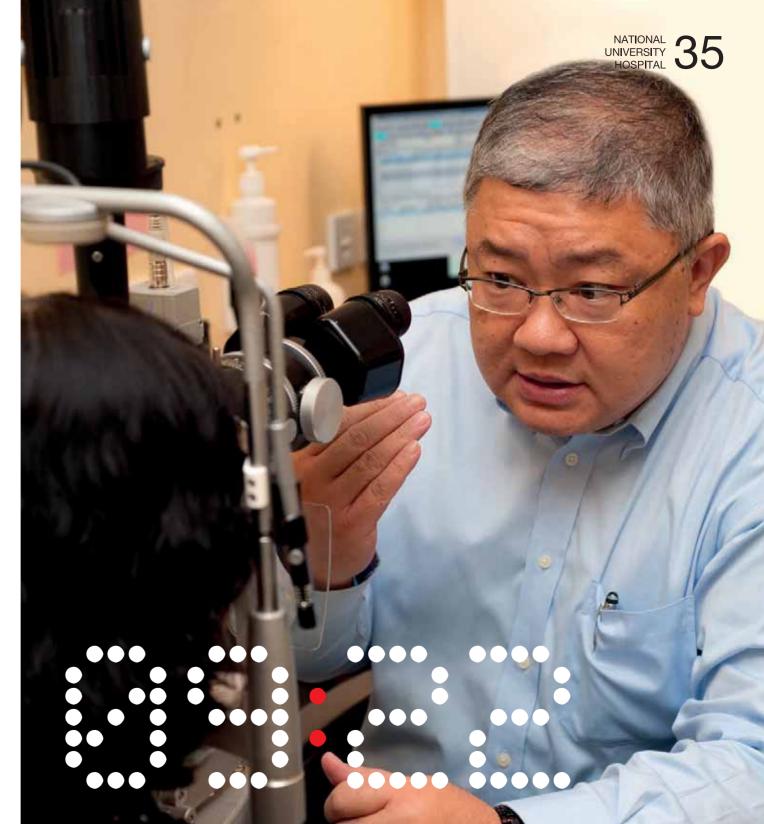
MADE POSSIBLE through our partners – patients and volunteers.







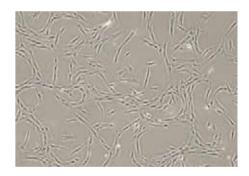
PHARMACOLOGY – the interaction between humans and drugs – is an exact science. Research and state-of-the-art equipment allow the exact measurement of the concentration of a drug in the blood, so that we can understand their effects more precisely and dose the patients better.



An eye for detail



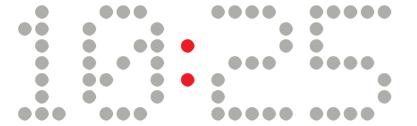
THE NUH IS THE FIRST HOSPITAL IN SINGAPORE to have a Good Manufacturing Practice laboratory. The laboratory grows patient stem cells to repair and rejuvenate damaged tissues like cartilage and engineer donor stem cells to harness our body's immunity to fight diseases such as cancer. This potentially opens doors to an entirely new avenue of treatment to complement existing therapy. The laboratory will be cultivating even more types of stem cells to benefit more patients.

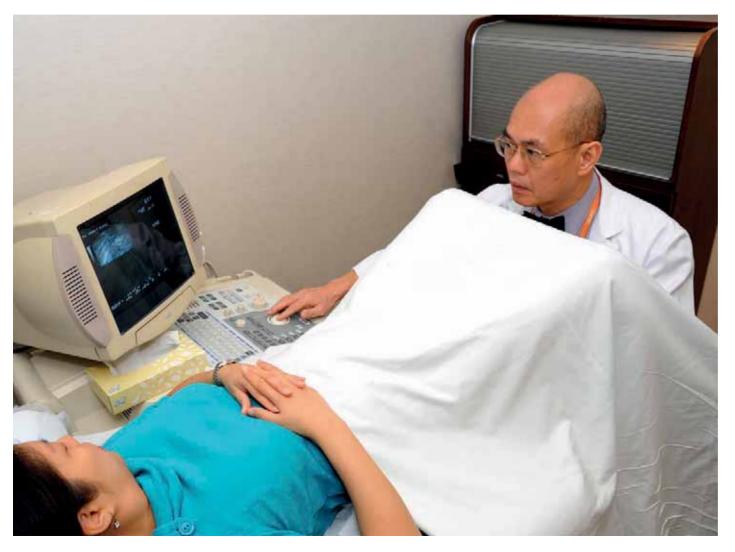


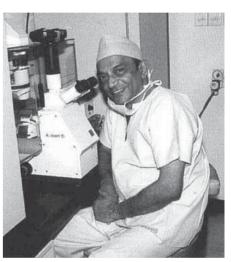


Close up of cells









The ART of conception





Preparing 2,400 meals a day runs like clockwork



YOU WILL NOT FIND CHOLESTEROL-FORMING, heart-stopping fare like laksa or fried carrot cake on our hospital dining menu. But the catering team does serve up hearty, tasty and healthy fare that is nutritionally balanced and planned to help our patients get well and back on their feet again.

ERAC CEPAL/SAVI 225 1000.0 0.89 1769. WE TEND 17 15 28 00 28 45 34:30 45:18 46:00 52:45 57:30 FATY 面回来 34.1 CHO*

Our fight against diabetes and obesity begins with the air we breathe

THE NUH IS HOME TO A METABOLIC RESEARCH PROGRAMME

that investigates our body's natural response to various types of stimuli, such as different foods, exercise and weight loss. We have a comprehensive suite of capabilities to assess appetite regulation, body composition, energy expenditure and responsiveness to insulin. These studies help us understand why some people develop diabetes and heart disease, and help us develop new medications for the treatment and prevention of these conditions.

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The art and science of healing begins with listening

EVERYONE – colleagues, patients and their families – has stories to tell and lessons we can learn from. At the NUH, we are all ears.

















Meet our specialists-to-be



OUR FIRST BATCH OF RESIDENTS from the National University Health System Residency Programme. The programme identifies and grooms clinical leaders as early as possible during their training, with potential leaders mentored through structured training programmes. As part of character building, our Residents will also have the opportunities to serve in the wider community through humanitarian programmes.





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At the NUH, some things never change

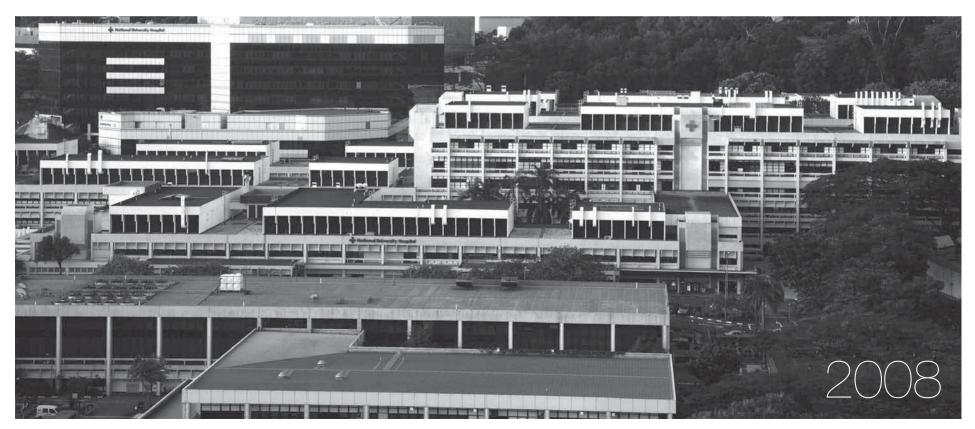
AS THE PRINCIPAL TEACHING HOSPITAL of the NUS Yong Loo Lin School of Medicine and the Faculty of Dentistry, NUH upholds the time-honoured tradition of mentoring and teaching medical and dental students and is proud to play a leading role in nurturing Singapore's future healthcare professionals.

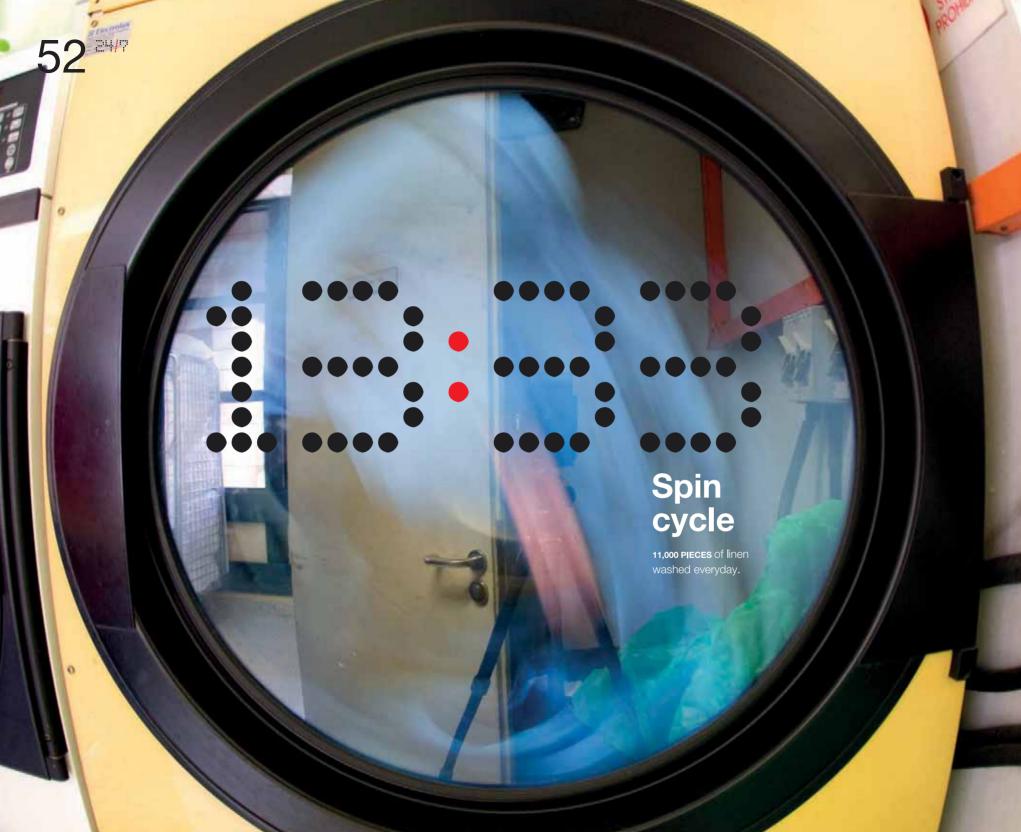




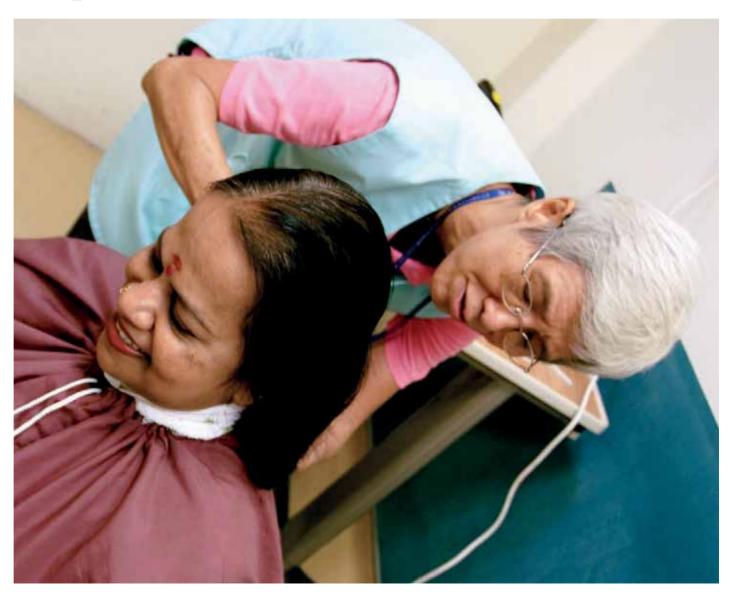
From hospital to Singapore's first academic medical centre

THE NATIONAL UNIVERSITY
HEALTH SYSTEM Which consists
of the NUS Yong Loo Lin
School of Medicine and the
Faculty of Dentistry leverages
each institution's strengths;
providing quality healthcare,
delivering excellent medical
and dental education and
conducting meaningful
research into illnesses and
medical conditions afflicting
Singaporeans.









COURTESY OF OUR ENTHUSIASTIC AND
DEDICATED VOLUNTEERS who befriend
and chat with our patients. It is their
way of showing our patients they care.



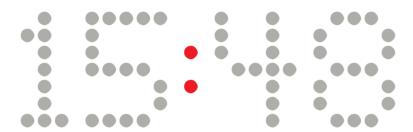




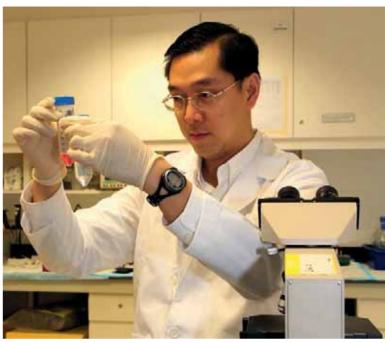
We make no bones about giving the best to our patients







From bench...





...to bed

OUR PATIENTS ARE AMONG THE FIRST to reap the benefits of scientific investigative work to develop new treatments for illnesses plaguing Singaporeans. In the process, they are our partners in pushing the frontiers and ushering in a new era of medicine. That, is translational medicine in action.



WITH APPROXIMATELY 57 MILLION

pages of patient information in our safekeeping, we are progressively moving towards an integrated electronic medical records system.

Soon, patient data can be retrieved at the click of a button.

1978

Building on the foundation of a rich legacy

THE NUH'S STRONG CLINICAL FOUNDATIONS Were

laid by many dedicated clinicians who were also members of the University's teaching staff at the medical and dental schools. Among those still with us today are Professor Lim Pin, University Professor and Emeritus Consultant (seated, fifth from left), Professor Cheah Jin Seng, Emeritus Consultant (seated, fifth from right), Emeritus Professor Chia Boon Lock, Emeritus Consultant (seated, fourth from right), Associate Professor Thai Ah Chuan, Senior Consultant, University Medicine Cluster (seated, second from right) and Associate Professor Evan Lee, Senior Consultant, University Medicine Cluster (standing, fifth from right). They are among many of our distinguished clinicians who embody the finest traditions of Singapore Medicine.





1988



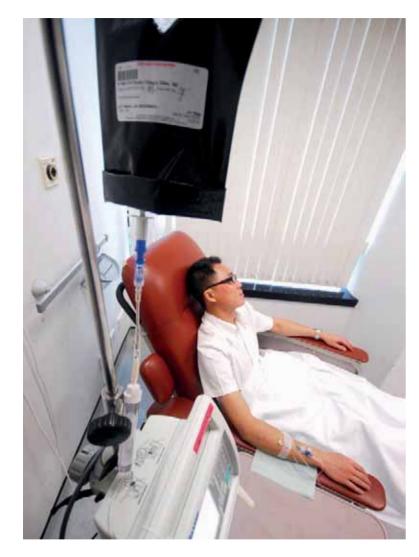
"To reckon all who have taught me this art equally dear to me as my parents and in the same spirit and dedication to impart a knowledge of the art of medicine to others."

- THE HIPPOCRATIC OATH





THE CALL TO SHARE and pass on medical knowledge has always been a tradition at the NUH. In teaching the science of medicine, our clinicians also impart an understanding and appreciation of the ethos, art and artistry that animate and ennoble the practice of medicine.



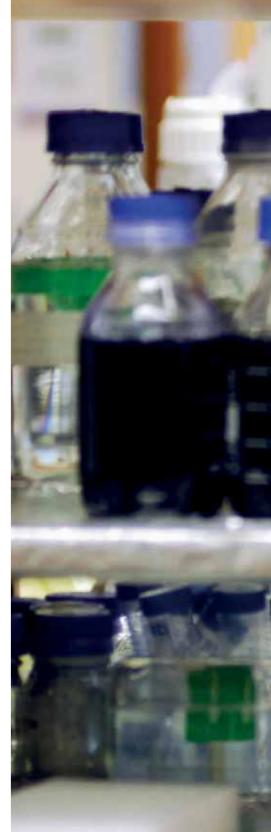
A little bit of medical history is made at the NUH everyday

ward rounds in the morning. Laboratory work in the afternoon. It is all in a day's work for our clinicianscientists. The long hours pay off when they find meaningful solutions to our patients' medical conditions.

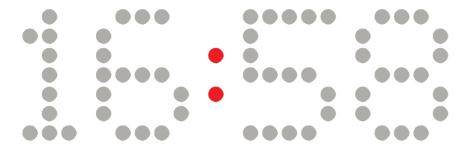


First in man

THE NUH IS ALSO HOME to very early drug development studies in cancer, and has completed several first-time human Phase I trials. This means patients have early access to novel and innovative drugs which are tested under clinically rigourous processes.







The circle of knowledge



OUR DOCTORS TEACH AND LEARN

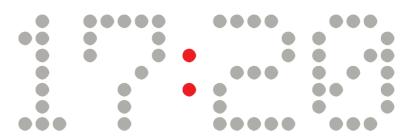
from those they instruct. The tradition of learning, sharing and discovering runs deep here at the NUH.

Those who can, teach

OUR NURSES also play an active role in training and nurturing nursing students. Every year, hundreds of these students are trained at the NUH to become competent and knowledgeable professionals.







Because our patients believe we can

OUR KIDNEY AND LIVER
TRANSPLANT TEAMS continue
to overcome the odds to
give our patients a new
lease of life.





Thank You!

NOTHING BEATS that glow of deep satisfaction, when patients and their family members take the time to tell our staff that they are appreciated.











THE FIRST-OF-ITS-KIND.

Modelled after the High Dependency wards and Intensive Care Units, the Mrs Lee Kong Chian Critical Care Nursing Simulation Laboratory houses an intelligent mannequin that mimics a patient's vital statistics and physical reactions in response to the "treatment" rendered by nurses.

2003



crises come and go: SARS in 2003; H1N1 in 2009. Through it all, our team at the NUH has stood shoulder-to-shoulder and weathered storms. Lessons have been learned and applied today. Together, we stand ready for the next challenge.

Team spirit in tough...



and fun times

WE BELIEVE THAT HEALTHY, HAPPY AND CONNECTED STAFF are able to better care for our patients. That is why we work hard and play hard!



Touching and changing lives in Singapore...



2008

THE NUH HOUSES SINGAPORE'S
FIRST national centre for dialysis
and treatment for children
with renal conditions. Our
21-year-old Paediatric Renal
Replacement Programme sees
close to 3,000 children with
kidney diseases every year.

...and beyond the border

OUR MULTI-DISCIPLINARY TEAM

performed Indonesia's first paediatric liver transplant in one of the largest government hospitals in Central Java, Indonesia. More than just saving lives, our doctors also shared knowledge and skills with their counterparts there, enabling them to continue the good work.

41

I want to be just like you when I grow up!

SAVING LIVES takes skills. Touching lives takes compassion.

2006









Working round the clock

The day comes to a close but the hospital never sleeps









... and with it, new hopes and aspirations





while most people are fast asleep, our maternity wards are busy caring for mothers and their little ones.

Acknowledgements

It started with pure passion for photography.

Associate Professor Chen Fun Gee and Dr Kao Pao Tang had always wanted to build a library of photographs reflecting the bustle of activities in the NUH. This came to fruition when they shared their idea with the hospital's Corporate Communications team. The idea evolved into a special publication to commemorate the hospital's 25th Anniversary.

Simply named "24/7", the book is a compilation of photographs depicting what goes on in the NUH – everyday, 365 days a year – painstakingly picked and put together over seven months. The result is 64 pages of photographs showcasing the people who strive to provide our patients with the best care and what differentiates the NUH as a University hospital.

To all who are named here as well as those whose names we may have inadvertently left out – thank you for your time, support and assistance to make this project possible.

We hope you will enjoy the book as much as we do.

Photographers

Ms Jo Ann Ang, Dr Chai Ping, Associate Professor Chen Fun Gee, Dr Eugene Goh, Dr Kao Pao Tang, Mr Nik Kiong, Dr Catherine Koh, Mr Patrick Lim, Dr Loon Seng Chee, Ms Mardia Hazwanie, Dr Kewin Siah, Dr Tan Tze Siong, Dr Teo Swee Guan, Mr Charles Wu

Individuals

Mr Liam George Adrien, Mr Sajat Bin Ali, Mr Pravin Anand, Mdm Ang Geok Khim, Ms Surianti Gum Ati, Associate Professor Marion Aw, Ms Aw Yi Bing, Mr Darius Beh Lian Lian, Mr Joel Santos Bulanadi, Ms Jean Chang, Associate Professor Paul Chew, Mdm Shirley Chong, Ms Margaret Choong, Mdm Susan Chua, Ms Chua Chye Phing, Ms Paula Cristina, Dr Dan Yock Young, Dr Andrew Dutton, Dr Eng Chon Boon, Mr Go Eng Huat, Dr Goh Boon Cher, Ms Zarinah Bte Hairom, Ms Ho Mei Yi. Associate Professor James Hui. Ms Gowri d/o Karunakarar, Ms Moira Khaw, Professor Phillip Koeffler, Ms Angeline Koh, Professor Prabhakaran Krishnan, Mr Lam Wei Ting, Mr Linus Lau Jian Fa, Dr Lee Soo Chin, Mdm Lee Ah Hong, Mr Shawn Lee Hsien Ren, Ms Lee Poh Yin, Ms Lei Heng, Ms Liew Yun Rou, Mr Lim Chin Aik, Ms Lim Hui Ting,

Mr Michael Lim, Dr Lim Siew Eng, Ms Tammy Lim Su Hui, Ms Wendy Lim, Dr Gabriel Liu, Ms Adelia Loh, Associate Professor Adrian Low, Professor K K Madhavan, Mr Sanjay Ryan Menon, Mr Mohamed Musa Bin Mohamed. Mdm Mani Mekalai d/o Narasamy, Mr Ng Swee Siang, Associate Professor Benjamin Ong, Mr Raymond Ong Swee Seng, Dr Peng Yeong Pin. Associate Professor Tai E Shyong. Associate Professor Tan Huay Cheem, Mr Tan Tek Seng, Ms Tan Wei Ling, Mdm Teo Phuay Hoon, Professor A Vathsala, Dr Kavita Venkataraman, Ms Voon Kiat Yee, Mdm Camilla Wang Choon Chin, Dr Wang Lingzhi, Ms Wang Jin, Professor P C Wong, Professor Wong Hee Kit, Ms Yang Yumin, Mdm Felicia Yap, Professor Yap Hui Kim, Ms Jacklyn Yek Jia Lin, Associate Professor Allen Yeoh, Professor Yeoh Khay Guan, Dr James Yip, Dr Yong Wei Peng, Ms Yu Kun

Institutions

Cancer Science Institute of Singapore, Singapore Civil Defence Force

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About the NUH

The National University Hospital (NUH), a member of the National University Health System (NUHS), is a tertiary hospital that provides advanced, leading-edge medical care and services. Equipped with state-of-the-art facilities as well as dedicated and well-trained staff, the NUH is a major referral centre that delivers specialist care for a wide range of medical and dental specialties including Cardiology, Gastroenterology & Hepatology, Obstetrics & Gynaecology, Oncology, Ophthalmology, Paediatrics and Orthopaedic Surgery.

With combined resources from the NUS Yong Loo Lin School of Medicine and Faculty of Dentistry, the NUH is meeting the healthcare needs of patients, training future generations of doctors more effectively, and helping to develop solutions to our healthcare problems through research.

In 2007, the NUH was tasked by the Ministry of Health to develop two new national centres, the National University Cancer Institute, Singapore (NCIS) and the National University Heart Centre, Singapore (NUHCS) to meet the growing needs for cardiac and cancer

treatment. The NCIS offers a broad spectrum of cancer care and management covering both paediatric and adult cancers. The NUHCS brings together cardiac specialists and experts from a multitude of medical and surgical disciplines to provide a comprehensive and holistic approach to the treatment of heart problems.

In 2004, the NUH became the first Singapore hospital to receive the Joint Commission International (JCI) accreditation, an international stamp for excellent clinical practices in patient care and safety.

For more information, please visit www.nuh.com.sg

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