

PATIENT CARE

Patient Satisfaction
Guaranteed/ p.12

EDUCATION

Fuelling the Passion for
Education/ p. 16

RESEARCH

Greater Collaborative
Neurobiology and Ageing
Research on the Horizon/ p. 26

NEUSLINK

Issue 5 • January – June 2015
MCI (P) 079/06/2015



Mentoring Minds, Inspiring Hearts

How mentorship is
shaping the future of
transformative healthcare



National
Neuroscience Institute
SingHealth

ADVISORS

Assoc Prof Ng Wai Hoe
Assoc Prof Sitoh Yih Yian
Assoc Prof Seow Wan Tew
Assoc Prof Francis Hui
Adj Assoc Prof Nigel Tan
Mr Steven Sobak

ACKNOWLEDGEMENTS

Prof Tan Eng King
Assoc Prof Lim Kah Leong
Adj Assoc Prof Louis Tan
Assoc Prof Deidre Anne De Silva
Dr Adeline Ng
Dr Carol Tang
Dr Jai Rao
Dr Kevin Tan
Dr Sharon Low
Dr Tu Tian Ming
Dr Yu Wai-Yung
Ms Ng Hwee Lan
Ms Rozana Bte Othman
Ms Tay Lian Bee
Ms Violet Chua
Ms Zhou Lifeng

C/o SingHealth Inspirational Patient and Caregiver Awards 2015

Mr Edwin Lim
Ms Melissa Lim
Ms Teo Wei Shan

EDITORIAL TEAM

Christina Wee
Cynthia Anne Victor

DESIGN

Redstone Communications

COPYWRITING

Hedgehog Communications

ADDRESS

Neus-link c/o Corporate Communications
National Neuroscience Institute
11 Jalan Tan Tock Seng
Singapore 308433
Tel: (65) 6357 7153 Fax: (65) 6256 4755
Email: NNI-CorporateCommunications@nni.com.sg
Website: <http://www.nni.com.sg>

p. 10



PATIENT CARE

4 Remembering Mr Lee Kuan Yew

His enduring legacy for healthcare and education



6 Singapore Health Inspirational Patient and Caregiver Award 2015

Honouring patients who inspire us with
their fighting spirit

7 New Record Heights in Service and Quality

NNI receives award for its dedication and excellent service

8 Enhancing Patient Care Services in Neuroradiology

Improving patient experience with a new
facility for neuroimaging services

10 A Future of Optimism for Parkinson Patients

Moving Towards a Brighter Tomorrow for
patients and caregivers

12 Patient Satisfaction Guaranteed

NNI fares well in MOH Patient Satisfaction Survey 2014

13 Hand Hygiene Hour 2015

Advocating the importance of good hygiene habits

EDUCATION

- 14** **Mentorship: Clinicians**
Setting a lasting impression for the next generation of doctors
- 16** **Fuelling the Passion for Education**
Delivering top-notch medical and nursing educational programmes across NNI
- 18** **Mentorship: Nurses**
Providing a smooth continuity of care for patients as a role model
- 20** **Mentorship: Allied Health Professionals**
Learning from one another and growing professionally
- 22** **4th Singapore International Neurocognitive Symposium**
Establishing care and rehabilitative approaches for Young Onset Dementia
- 23** **Events at a Glance**
- 24** **Clinical Reasoning in Neurology**
A crucial skill for effective patient care

p. 16



CONTENTS

Issue 5 • January – June 2015



p. 24

RESEARCH

- 26** **Greater Collaborative Neurobiology and Ageing Research on the Horizon**
NNI and NUS sign MOU to deepen research in ageing-related conditions and neurotechnology
- 28** **Finding Hope through Education**
Dr Adeline Ng and Dr Sharon Low find a glimmer of hope for their patients in their pursuit for advanced education and training
- 30** **Mentorship: Researchers**
Guiding mentees and bringing out the best in them

TRIBUTE

“ Health policies cannot remain static — we need to study the best of international health systems, learn from their experiences and continually adapt best practices to suit our local context. ”



Remembering Mr Lee Kuan Yew

His enduring legacy for healthcare and education

On March 23 this year, we were greeted with the sad news of Mr Lee Kuan Yew's passing. Singapore had lost its founding father and a great leader of the world. His foresight in areas such as infrastructure, public housing, healthcare and education led Singapore to her standing today as a first-world city-state; a far cry from her humble beginnings as a fishing village.

Mr Lee was an advocate on life-long learning, while he provided continual guidance and mentorship to the leaders of Singapore. His determination to establish quality resources such as education and healthcare - in a country without any natural resources - was visionary, and we owe our current standing in the world to his early perseverance.

It is through his policies on healthcare that Singapore is able to provide some of the best medical care in Asia today. During his leadership, he introduced national health insurance measures such as Medisave, Medifund and the new MediShield Life to help Singaporeans pay for their hospitalisation bills. An important policy was to require co-payment to discourage over-consumption and over-treatment, which has become a problem in many advanced countries.

In a speech at the official opening of the Khoo Teck Puat Hospital on 15 November 2010, Mr Lee further outlined his thoughts on the development of healthcare in Singapore, its future and integration

with the community. He believed that amidst an ageing population and increasing pressure on healthcare, continuous innovation would be the key to its future.

"Improvements in healthcare come about not just because there are new drugs, new devices or new procedures. They require healthcare institutions and professionals to continually innovate and enhance their delivery of health services."

He continued: "Health policies cannot remain static - we need to study the best of international health systems, learn from their experiences and continually adapt best practices to suit our local context."

Building strong networks with the community is also a key concern, and Mr Lee said that healthcare institutions must also engage the community to create healthy living environments - hospitals should link up with grassroots organisations, Voluntary Welfare Organisations (VWOs), neighbouring General Practitioners (GPs) and other community care providers.

Mr Lee's sound fundamental principles will continue to guide Singapore's healthcare system into the future as part of his lasting and enduring legacy, a gift to benefit Singaporeans from all walks of life for many years.

SINGAPORE HEALTH INSPIRATIONAL PATIENT & CAREGIVER AWARD

Honouring patients who inspire us with their fighting spirit

Edwin Lim 1

Edwin was diagnosed with amyotrophic lateral sclerosis (ALS) at the age of 48, and lost the use of his vocal cords and limbs within 18 months. Through sheer determination and loving support, he proceeded to publish two books based on his successful career in banking of over 20 years.

Said Edwin, "It was a challenge having to overcome both the mental and physical hurdles, but I knew that my journey would not be a solo trip." He added, "Being able to share my difficulties with a caregiver or loved ones made it much easier to overcome the circumstances as they are my beacon of courage, strength and hope."

Today, Edwin is an active member of the Motor Neuron Disease Support Group at the National Neuroscience Institute (NNI). He said, "Having the opportunity to share my personal experiences is extremely meaningful because when patients can see my physical condition, they understand that there is still so much to live for and wonderful memories to be shared with loved ones."

Teo Wei Shan 2

A pet groomer at age 22, Wei Shan met with an unfortunate motorcycle accident, which left her in a coma for 15 weeks. She was unable to recognise any of her family members or friends after she woke up. Also,

Wei Shan had lost her strength and was unable to speak, walk or feed herself.

Unfazed by these setbacks, Wei Shan regained her ability to walk and speak through relentless belief and determination, with a step at a time. Wei Shan has since found re-employment as a part-time waitress and is working as hard as before.

Said Tan Bee Ling, Senior Staff Nurse at the Neurosurgery Department, NNI, "Wei Shan's resilience shone through despite her recurrent admissions and having to undergo two major neurosurgical operations." She added, "Her ability to bounce back and function normally really amazed me. I admire the courage and persistence she showed me on the long road to recovery."

Melissa Lim 3

In 2003, Melissa Lim was diagnosed with acoustic neuroma, a non-cancerous and usually slow-growing tumour. While recovering from surgery to remove the tumour, she felt that interacting with patients who had been through similar ordeals could benefit her tremendously.

Melissa set out to help fellow patients in need of befriending and support at NNI's Brain Tumour Support Group, and later moved on to form the Brain Tumour Society (Singapore) or BTSS in March 2014. As the President, she has launched Singapore's first Brain Tumour Awareness Day on 1 November 2014, and organised various fund-raisers, support group meetings and quarterly educational talks for the public.

Said Melissa, "Befriending can be powerful if you meet people who undergo setbacks but still live their lives well. You'll learn that everything doesn't have to be perfect for you to be happy; you can still have a very fulfilling life if your attitude towards life is right."



NEW RECORD HEIGHTS IN SERVICE AND QUALITY

A record number of 2,748 healthcare professionals from 19 institutions were honoured at the annual Singapore Health Quality Service Award, held on 16 January this year. Organised by the SingHealth Duke-NUS Academic Medical Centre, the award is Singapore's first dedicated platform to honour healthcare professionals who have delivered quality care and excellent service to patients.

Said Professor Ivy Ng, Group Chief Executive Officer, SingHealth, "The award winners are healthcare professionals with the right values who are in it for the right reasons. They are passionate

about helping others and have demonstrated their commitment to provide high quality care to each patient, every day. The strong participation of 19 healthcare institutions from different sectors reflects our shared purpose to work together as a team to provide safer, better and patient-centric care."

Winners from public healthcare institutions, community hospitals, agencies from the Intermediate and Long-Term Care (ILTC) sector and private healthcare institutions nationwide



Standing with the award winners are: (Fifth from left) Mr Muhammad Faishal Ibrahim, Parliamentary Secretary, MOH; Mr Steven Sobak, Chief Operating Officer, and Assoc Prof Ng Wai Hoe, Medical Director, from NNI; and Prof Ivy Ng, GCEO, SingHealth.

were presented with Gold, Silver and Star awards. NNI is proud to congratulate its award-winning staff for their continued dedication and excellent service.

SINGAPORE HEALTH QUALITY SERVICE AWARD WINNERS



Dr Mahendran Nadarajah
Clinician, Neuroradiology



Mahalakshmi Sangaran
Ancillary, Neuroscience Clinic



Jessiline Teo Ping Ping
Ancillary, Neuroscience Clinic



Assoc Prof Francis Hui
Clinician, Neuroradiology



Oh Hui Ping
Allied Health, Neuroradiology



Ei Ei Kyaw
Allied Health, Neuroradiology



Nur Fakhiran Bte Md Azwan
Ancillary, Neuroscience Clinic



Lim Lee Kiap Sylvia
Ancillary, Neuroscience Clinic



Meneka D/O Sohan Chand
Ancillary, Neuroscience Clinic



Tan Wan Ying Adeline
Ancillary, Neuroscience Clinic



ENHANCING PATIENT CARE SERVICES IN NEURORADIOLOGY

A brand new Neuroradiology facility at the National Neuroscience Institute (NNI), the Outpatient Imaging Centre opened in March 2015, providing state-of-the-art services in one location. This extension to the department aims to facilitate by separating areas for outpatients and inpatients.

The Centre offers patients and family members a range of diagnostic services in Magnetic Resonance Imaging (MRI) and computerised tomography (CT) scans, in a cosy and comfortable environment. The addition of a new MRI scanner will provide improved imaging and diagnostic testing and efficient management of patient capacity.

The Neuroradiology Department is constantly stepping up its efforts to enhance patient experience with prompt and high quality advanced imaging services for all patients. With these changes, NNI aims to see a significant increase in quality service and patients' satisfaction.





A FUTURE OF OPTIMISM FOR PARKINSON PATIENTS

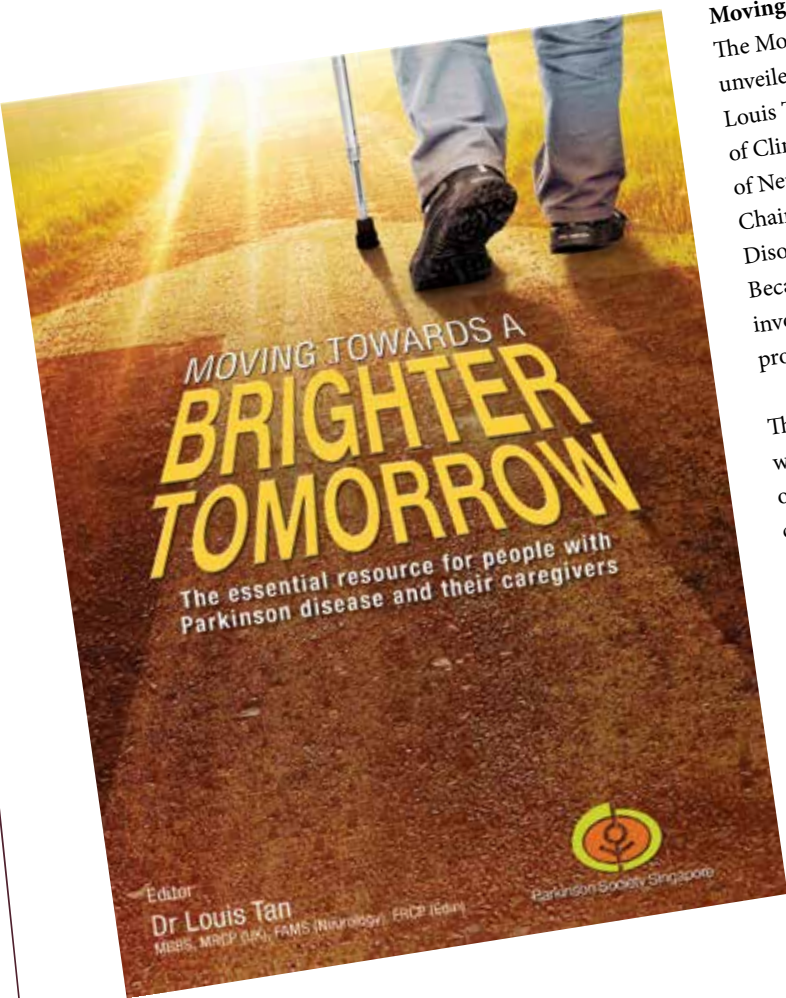
Jointly organised by the National Neuroscience Institute (NNI), Tan Tock Seng Hospital (TTSH), and the Parkinson Society Singapore (PSS), the Parkinson Disease Public Forum was held on April 11 this year at the Toa Payoh Central Community Club. The Forum was supported by the club's Senior Citizens' Executive Committee.

Organised in commemoration of World Parkinson's Day, the bilingual Forum featured movement and voice exercise demos, and topics such as the journey of those afflicted with Parkinson Disease (PD), the symptoms, diagnosis, challenges and solutions. These were discussed further during the panel sessions amongst specialists, nurses, allied health professionals, as well as Parkinson Warriors from PSS.



At the Parkinson Disease Public Forum, topics relating to the condition were discussed during the panel sessions amongst specialists, nurses, allied health professionals, as well as Parkinson Warriors from PSS.





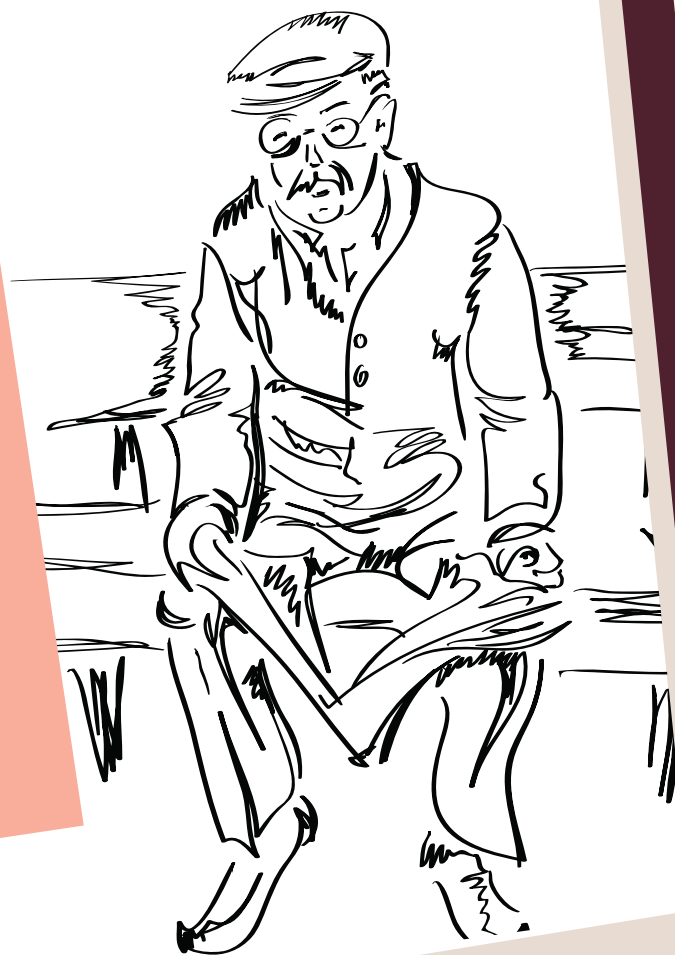
Moving Towards a Brighter Tomorrow: The Book

The Moving Towards a Brighter Tomorrow book was unveiled at the forum by Adjunct Associate Professor Louis Tan, who is editor of the book and also Director of Clinical Research and Senior Consultant, Department of Neurology at NNI. Adj Assoc Prof Tan was previously Chairman of the International Parkinson and Movement Disorder Society's Asian Oceanian Section (MDS-AOS). Because of his experience, Assoc Prof Tan has been involved in a large number of community outreach programmes to raise awareness of PD.

The event's theme shared the same title as the book, which provides comprehensive and current information on PD and the effective ways in which patients and their caregivers can cope with the challenges of the condition. Originally released ten years ago, the latest edition features new chapters on disease management strategies, while providing tips on improving balance and preventing falls, and techniques to keep the mind active. It also includes useful information on self-care for caregivers and presents the latest research findings on potential new treatments.

COPING WITH PARKINSON

- PD impacts the people with the condition and their family in various ways - emotionally, psychologically, financially, relationally and socially.
- People with Parkinson can maintain a positive attitude and regain control of their lives.
- Living with Parkinson does limit one's functioning, but it also presents the person with opportunities to live well in different and creative ways.



Patient Satisfaction GUARANTEED

NNI FARES WELL IN MOH PATIENT SATISFACTION SURVEY 2014

In the recent Ministry of Health (MOH) Patient Satisfaction Survey (PSS) 2014, it was found that the overall satisfaction level across all public healthcare institutions (HCIs) maintained its upward trajectory since 2010. A total of 11,371 patients and caregivers participated in the 2014 survey, conducted from September 2014 to January 2015. An encouraging 79.1% of respondents indicated overall satisfaction levels as “excellent” and “good”, up from 77% in 2013, which records a new five-year high.

Respondents gave better ratings for questions related to “willingness to recommend the HCI to other patients”, “value for money” and “meeting expectations” compared to last year, even though the survey found that respondents’ expectations for healthcare services had also risen.





Overall Satisfaction of NNI in 2013 and 2014

- Based on percentage of patients who responded that the level of service was “excellent” or “good”.

Willingness to Recommend

- On average, the percentage of patients who said that they would “strongly recommend” and “likely recommend” specialty centres to other patients in 2014 rose by 2 percentage points compared with 2013.
- A point to note was that the National Neuroscience Institute made the biggest improvement of 7 percentage points compared with 2013.

NNI owes its success to the support of all its patients, and the sincere dedication and excellent service of its staff - comprising of doctors, nurses, allied health professionals, patient services associates and ancillary members.

“ To improve is to change; to be perfect is to change often. ”

– Winston Churchill

HAND HYGIENE HOUR 2015

#SAFEHANDS

NNI joined its partner institutions at SingHealth to celebrate the first-ever Hand Hygiene Hour on May 5 this year. More than 1,800 people from all institutions participated in this event, which sought to advocate the importance of hand hygiene to all staff and patients. Let us all bear in mind to observe good hygiene habits at all times, so that we can save lives with #safeHANDS!



Mentorship: Clinicians

Dr Tu Tian Ming and Dr Yu Wai-Yung took different paths to arrive at the same destination, that is, NNI. And along the way, they each took turns to teach and be taught by mentors during the journey that is medicine.

For Dr Yu, Senior Consultant, Department of Neuroradiology, NNI, her education and training began in the UK at St George's Hospital and the National Hospital for Neurology and Neurosurgery (NHNN), specialising in neuroradiology. Currently, she reports CT and MRI scans of the brain and spine, while also performing diagnostic catheter angiography. Dr Yu is also the neuroradiology education representative at NNI and was recently made core faculty of the SingHealth radiology residency programme.

INSPIRATION TO SUB-SPECIALISE

She shared, "In the UK, teaching or learning at all levels is the norm. So teaching is part of what is normal for me in my daily job. In terms of interacting with radiology trainees, I try to give them tips that I've learnt along the way or have been taught to me."

Dr Yu was influenced by two personal mentors, one who inspired her to do radiology and the other to subspecialise in neuroradiology. She said, "Both were very encouraging and supportive and gave advice and suggestions. They were also very knowledgeable and expected excellence and high quality."

"The most important part of a mentor is actually to recognise that the mentee needs help."

- Dr Tu Tian Ming

mirror how I was once taught. Some say that imitation is the greatest flattery!"

Dr Tu sub-specialises in ischemic stroke, and now, Dr Tu continues to pay it forward to the next generation with his knowledge. "When

I was mentoring some of my medical officers for their examinations, I taught them the tips and tricks that I had to learn the hard way. These tricks will shorten their learning journey so that they can make more efficient use of their time," he shared.

RECOGNISING MENTEES' NEEDS

Mentoring is a role that Dr Tu embraces as part of the journey, and also with some advice for others in the art of mentorship. "The most important part of a mentor is actually to recognise that the mentee needs help. There are a lot of instances when we are up against the wall but nobody knows. Being approachable as a mentor definitely helps and allows the mentee to sound out the alarm bells way in advance," says Dr Tu.

Since Dr Yu's and Dr Tu's early days as medical students, mentorship has always been a key influence in their careers as clinicians. It is also a cornerstone of progress in the medical field. Necessarily, this time-honoured practice must continue to innovate to achieve greater heights of excellence.

PAYING IT FORWARD

Similarly for Dr Tu, Associate Consultant, Department of Neurology, NNI, he attributes his career to his mentors, "I have had different mentors at various points of my medical career. Each of them had a lasting influence on how I carry myself and how I treat my mentees. My teaching methods often



**Dr Yu Wai-Yung,
Senior Consultant,
Department of
Neuroradiology, NNI**

**Dr Tu Tian Ming,
Associate Consultant,
Department of
Neurology, NNI**

Approachable Mentorship as the Way Forward

At NNI's Department of Neurosurgery, Dr Jai Rao juggles two roles as a Consultant and Adjunct Instructor, to help shape the future of medical care through his brand of personable and approachable mentorship.

With the face of medical knowledge rapidly evolving, Dr Jai is one of the proponents of role modelling – ensuring that medical knowledge and the standards of clinical care are passed on from one generation to the next through the evergreen vehicle of mentorship.

Of his active teaching role at NNI, he said, “The main joy is a firm belief in good mentorship. It is about ensuring that the next generation can maintain the education standards that we have and disseminate that for generations to come. This creates a lasting impact.”

NURTURING MENTEES WITH CARE

On the personal front, being a mentor is also a heart-warming experience that keeps Dr Jai on his toes. He said, “It is really good to see how people have grown; how someone (you saw from the start five years ago) has taken on the roles and responsibilities that you knew they were capable of, and developed into that role well.”

Dr Jai first took up medicine because a general practitioner he knew during his youth left a great impression on him. Eventually, he pursued a career in medicine over one in law because he enjoyed the interaction with people. Today, Dr Jai is also heavily involved in medical education as an Adjunct Instructor. He shared, “Many people do not realise how long a medical career is, and what you are currently doing may not be the same as what you may be doing in 10 years' time. While clinical work is important, the ability to evolve comes in the other things that you do.”

MULTIDISCIPLINARY EDUCATOR

Dr Jai does not limit his teaching solely to his discipline. He also teaches radiology to residents and neurosurgery to some of the neurology students. He said, “Education is collaborative in nature, beyond the boundaries of each department. Good medical knowledge is more of a spectrum involving multiple specialities and professions, where we can all learn together.”

“He or she has to be a role model; to have a high clinical acumen as well as clinical knowledge.”

Defining a successful mentor, Dr Jai said, “He or she has to be a role model; to have a high clinical acumen as well as clinical knowledge. But these are basics on top

of being an effective communicator. You have to be personable so that you can raise critical issues in a non-threatening way.”

He elaborated, “Most of my personal mentors would have been considered more strict, but even the most disciplinarian always made time for me to approach them and ask silly questions. It's about being approachable as well and at times, even a personal confidante.”

SHINING WITH TALENT

As for the way forward, Dr Jai believes that all the ingredients are in place for NNI to shine as a centre of excellence in Medical Education. He shared, “We have good people here, and there is great potential if it is harnessed in the right direction. People will find their way if they are given the opportunity to explore. However, certain things cannot be rushed. It has to be more organic and this is where role modelling comes in.”

Dr Jai feels that the most important message an educator can give out is that you are never alone in your medical journey.

He said, “Knowing that there are close colleagues that you can call upon in time of need is important and allows you to grow as a professional. There is always a support network to tap on. It is always there.”

“Education is collaborative in nature, beyond the boundaries of each department. Good medical knowledge is more of a spectrum involving multiple specialities and professions, where we can all learn together.”

– Dr Jai Rao
Consultant, Department of
Neurosurgery, NNI



EDUCATION



Working in partnership with the SingHealth Academic Medical Centre (AMC), the NNI Education Office ensures that training programmes meet the regulations and quality standards to deliver top-notch education for its staff. It also regularly coordinates medical and nursing educational programmes and care for the developmental needs of staff and faculty across NNI's campuses.

Here is a peek into the office's vision, mission and achievements in the pursuit towards education excellence at NNI.

Fuelling the Passion for EDUCATION

From one generation to the next

Who We Are

From developing undergrad and post-grad programmes, facilitating and coordinating residency postings to developing speciality training guides, securing funding and organising key events and conferences, the Education Office is at the hub and heart of all education activities at NNI. Launched in 2008 and led by Adjunct Associate Professor Nigel Tan since 2011, the Education Office is staffed with dedicated teams across SGH and TTSH campuses and has a commitment towards continuous self-directed learning for themselves and everyone at NNI.

In Adj Assoc Prof Tan's words: "Everyone must be better. That is our mantra."

He elaborated, "For the institution to improve, we need to work on behavioural change on a grand scale. It is about behaving better and doing things in a better way both as individuals and as an organisation as a whole."

What We Do

The team meets the challenges of coordinating across the two campuses by making weekly trips between SGH and TTSH while working towards increasing

communication, standardising processes and generally bridging the gap. Presentations are made by the team to doctors in SGH, addressing questions and establishing themselves as the go-to centre for any education matters.

In addition, the office measures the quality of education and the overall student experience through optimising and tracking various data, constantly monitoring these quality indicators and incorporating feedback to improve programmes. For example, a recent nursing programme conducted in March for advanced diploma nurses benefitted from the immediate feedback loop. Tweaking the programme based on the feedback received in real time, the course ran much more smoothly in the subsequent weeks.

For Nur Ashyura Binte Sukiman, Education Services Executive, her goal is to add value as an education officer. She said, "We try to smoothen out processes so that the posting of student residents go on smoothly, and we receive feedback to better ourselves and improve from there."

Joyce Teo Xinyun agreed that continuous learning is as much a part of the culture of the office as it is for NNI. "The culture and

our bosses are very encouraging towards learning,” she says. “The discussions are always focused on how we think we have performed, is there anything we can do differently and learning points that can be improved on.”

A Senior Programme Executive from the Graduate Medical Education (GME) Office - under the Singhealth Residency programme - Joyce works closely with NNI's Education Office for Neurosurgery-related education programmes. She had the privilege of attending the Accreditation Council for Graduate Medical Education (ACGME) Annual Educational Conference, and participated in a forum where programme coordinators shared systems, processes and best practices in the administration of graduate medical education. Joyce's participation was supported by the GME Office to encourage staff training and development.

What We Envision

Inter-professional education and faculty development are the key foci of the office in the next few years. For this, Adj Assoc Prof

Tan believes that mentorship will continue to be critical: “It is not just about guidance, but being role models.”

The NNI model is well-suited for inter-professional education as it is small enough for staff to work closely together without the navigation of hierarchies. Furthermore, by getting faculty to become better teachers and provide a better teaching experience for learners, CME will ensure that the lifeline of education remains robust from this generation of healthcare professionals to the next.

What Others Say

On nurses' teachings: “Constructive and well-planned training programme for the students. The Nurse Clinicians and Advanced Practice Nurses are very knowledgeable and willing to share their knowledge. I enjoyed my attachment very much.”

On doctors' and department teachings: “Extremely rich teaching environment with very good teaching programme and wide variety of cases for exposure.”

“ We believe in **transformative learning** for learners, tutors and for NNI. We cannot just learn or teach good care. The person must **want to change** him or herself to provide **better care.** ”

– Adj Assoc Prof Nigel Tan
Director, Education Office, NNI



What We Have Achieved

The following milestones are just some of the Education Office's key achievements:

- **NNI Education Day**
A day where all staff across the healthcare profession are brought together in the spirit of learning to build a community for education.
- **Neuroscience Nursing Seminar for Professional Improvement**
A crucial platform for our nurses to upgrade their skills, Nursing Education has seen the privilege of having the Blessings couple from Duke University, USA, to visit and educate the cohort about Neuroscience Nursing in 2014.
- **Designation as World Federation of Neurosurgical Society (WFNS)**
This designation serves as an international validation of the quality of NNI's neurosurgeons' training.
- **International Training Centre for Young Neurosurgeons**
NNI's Neurosurgery Department provides Singapore's only comprehensive neurosurgical teaching programme. It is the only Royal Australasian College of Surgeons (RACS) approved neurosurgery department in South-East Asia to conduct advanced training for FRACS (Neurosurgery) registered doctors.
- **Development of Neurology Senior Residency Training Guide**
An important curriculum document developed in-house by the Education Office that will guide NNI's Neurology Senior Residents in their training.
- **Award Achievements by Neuroscience ACP Educators**
NNI's mentors and educators have received education awards from SingHealth, Duke-NUS and YLLSoM for their teaching efforts.

Mentorship: Nurses

A SUCCESSFUL MENTEE IS A SUCCESSFUL MENTOR

MS ZHOU LIFENG

Nurse Clinician, Department of Neurosurgery, NNI

Lifeng joined the nursing world after her 'O' Levels, as she found it to be the most practical course that was applicable to daily life, and a useful skill that she could help others with; be it friends, family or patients.

As a Senior Staff Nurse, Lifeng is often found guiding junior nurses on the ground on a day-to-day basis, educating them on the specialised needs of neuro-oncology patients. She shared that her role as a mentor is to guide advanced diploma student nurses in linking clinical knowledge with textbook knowledge. She said, "It is about grooming nurses to think critically, generate critical ideas and to train the next batch of junior nurses to do the same."

The softer skillsets – those not from the textbook – such as patient management, education and counselling, also come into play, and it is these areas when mentoring prove to be most needed. With regards to providing that extra personal touch for patients, she said, "Don't underestimate how small simple actions such as shaving or cleaning the face can make a difference to their lives."

To Lifeng, the testimony of a successful mentor is in his or her mentees, "Teaching is a task of trial and error, and it is never easy. You have to tailor and customise your teaching methods according to the mentee. And only if the mentee turns out well, then can you be considered as a successful mentor."

Lifeng's personal mentor is Ms Lee Kah Keow, a Nurse Clinician who is her senior supervisor in NNI. Kah Keow has guided her through some difficult times and taught her the principles behind the decisions she made, not only offering solutions but the rationale behind the solutions as well. In bad times, she would also offer comforting words, giving support that also developed a friendship beyond the mentor-mentee relationship."

Said Lifeng, "We are in an error-free profession, so two-way communication between the mentor and mentee is critical. At any time, we cannot assume that a mentee understands what we are saying because if he or she does not, damage could be permanently and critically done."



LET ACTIONS AND WORDS DO THE MENTORING

MS ROZANA BTE OTHMAN

Assistant Nurse Clinician, Department of Neuroradiology, NNI

Rozana obtained her RN certification from the School of Nursing in 1992, and after a stint at the Institute of Mental Health (then Woodbridge Hospital), she began her radiology nursing career at TTSH in 1994. Since then, she has been actively mentoring and training junior nurses as well as allied health professionals. Said Rozana, “The education of nursing staff and other allied healthcare professionals fall on us, so as to provide a smooth continuity of care for the patients. Over the years, I’ve embraced the roles of both trainer and mentor to my junior staff.”

Rozana fondly recalled her own time as a mentee, being among the staff to move over to the new Department of Neuroradiology in 1999. Although her mentor did not have any paper qualifications beyond her RN certification, Rozana was still encouraged to pursue a specialist diploma, and eventually, a degree. She shared this about her mentor: “She not only encouraged her mentees to pursue paper qualifications, but inspired us to wear different sets of caps proficiently.”

The lively Senior Staff Nurse believes that a successful mentor goes beyond the sharing of experience. To her, a successful mentor is also “able to cultivate and motivate the younger generation to advance their personal and professional growth through their words and actions.”



MENTORING TO BRIDGE THE GAP BETWEEN GENERATIONS

MS NG HWEE LAN

Nurse Clinician, Department of Neurology, NNI

Hwee Lan’s nursing career began after her ‘A’ Levels. Today, she sub-specialises in movement disorders and focuses on patient education, patient motor assessment, medication or titration compliance and monitoring side effects. In addition, she spends time providing clinical guidance to students and trained nurses to ensure that the highest standards of nursing care are rendered to patients.

“I think each mentee should be respected as each of them brings along experience and expertise that we can learn from. Learning is not just one-way, it works both ways,” said Hwee Lan, who describes a successful mentor as “an experienced and knowledgeable advisor with vast experience and perspectives in a particular area, and who is open to sharing his or her experiences in order to advance the personal and professional growth of a younger person.” She also added that a successful mentor must be able to give constructive feedback while demonstrating a positive attitude. He or she must value on-going learning and growth in a special field and should be a model of continuous learning.

Personally and professionally, Hwee Lan has found some benefits of being a mentor. Having enhanced and strengthened her coaching and leadership skills, she also has become a greater asset to her organisation. She also believes that mentoring can give a fresh perspective on one’s performance. She concluded, “You benefit from a sense of fulfilment and personal growth and it can also help to bridge the gap between generations.”



EDUCATION



Ms Violet Chua
Senior Principal Radiographer,
Department of Neuroradiology, NNI

Allied Health Professionals (AHPs) Ms Tay Lian Bee and Ms Violet Chua view mentoring as a continuity tool - to ensure that medical skills and standards are kept taut throughout the healthcare ecosystem.

The flame of education burns bright and strong in Allied Health. At NNI, Lian Bee, Senior Medical Technologist, Neurodiagnostic Lab, and Violet, Senior Principal Radiographer, Department of Neuroradiology, ensure in their roles as allied health mentors and educators, that medical knowledge and skills are passed on seamlessly to juniors and their professional peers.

Lian Bee, whose daily role involves testing for nerve conduction and autonomic functions in patients, said, “We train new staff as well as doctors or registrars on attachments, on the technical skills required in the laboratory until they are competent and independent.”

Likewise, Violet feels that mentoring and teaching are necessary in her job to transfer professional knowledge to co-workers and students, and to help develop or maintain skills levels and support their career advancement.

LEARNING FROM EACH OTHER

For both, such mentorship is never a one-way street as the learning relationship goes multiple ways. Mentors can learn from mentees and vice versa, and all healthcare practitioners can learn from each other inter-professionally with their different knowledge and skill sets.

Lian Bee summed it up: “Many registrars and doctors are more knowledgeable than me, but I can say that I have a contribution to share on the technical side and about

Mentorship: Allied Health Profes

practical, hands-on experience.” She added, “The juniors may also be new but they are able to share some new knowledge with me, and we can learn from each other.”

DEVELOPMENT IN PERSONAL GROWTH AND QUALITY OF WORK

Both AHPs view the value of mentorship on professional as well as personal grounds. For Violet, teaching offers her room for personal growth, “Teaching keeps my mind mentally engaged and stimulated, allowing me to continue my career path as a lifelong learner. It encourages my growth as an individual and a professional.”

She added, “I am learning something new every day from my co-workers, students and through my own search for knowledge. Learning makes me become better and better.” Lian Bee echoed the same sentiment: “I can share knowledge with others, but I have to continually learn more as well to share with and learn from my mentees.”

As a medical technologist, quality is paramount in Lian Bee’s line of work. In the lab, a good result or outcome is based on a series of actions that adhere to the strictest standards, allowing no room for error or compromise. She learnt this well through her own seniors, and it is a standard that she continues to pass on to her juniors.

Said Lian Bee, “For example, we were drilled on the strict maintenance of the machines to ensure the quality of our work and integrity of our test results. My seniors set the highest standard for me, teaching that you have to do the basic things very well so that you can achieve a good and correct outcome.”

One such mentor is Ms Chang Chao Li, who trained Lian Bee in EEG when she began to develop other skills at NNI as part of her professional advancement. She described the experience with her mentor as being ‘wonderful’, and admired her unsurpassed technical knowledge in all aspects of EEG, from the setup of the equipment to the interpretation of the waveform. “Chao Li’s great technical expertise meant she was able to train us very well.”

THE EVOLUTION OF MENTORSHIP AND EDUCATION

Lian Bee believes that the most important attributes a mentor can have are patience, approachability, firmness and consistency. It is a matter of walking the walk, and ensuring that one teaches what one practices. She elaborated, “You have to be very strict and treat everyone equally. Whatever you teach, you have to do the same thing and with consistence.”

As a long-term educator, Violet recalled how education has evolved from its yesteryear and the days of ‘spoon-feeding’ students are long gone, “The education system has changed from passive to active. Students are taught to work more independently and take initiatives.”

Furthermore, traditional teaching media such as the overhead slide projector has

“ I am learning something new every day from my co-workers, students and through my own search for knowledge. Learning makes me become better and better. ”

– Ms Tay Lian Bee

given way to computer-based multimedia technologies, which Violet said has added a new dimension to the teaching and learning processes by providing learners great convenience with high quality.

At the end of the day, continuing education is part and parcel of being a healthcare practitioner, and there are rewards to be reaped from investing in the future.

“The most rewarding part of an educator is seeing people learn and grow in their career,” said Violet, while for Lian Bee, the greatest value of mentorship is in ensuring that there is continuity in her profession, not just for today but for the medical leaders of tomorrow.

Ms Tay Lian Bee
Senior Medical Technologist,
Neurodiagnostic Laboratory, NNI



sionals

EDUCATION

4th SINGAPORE INTERNATIONAL NEUROCOGNITIVE SYMPOSIUM

Connecting the Dots - From Young to Old



From 26 to 28 March 2015, NNI hosted the 4th Singapore International Neurocognitive Symposium at the Singapore Marriott Hotel. With ‘Connecting the Dots - From Young to Old’ as the overarching theme, the event served to remind that neurodegenerative conditions can afflict patients from as young as their thirties.

Attended by more than 350 delegates from around the world, the symposium bore witness to fascinating plenary sessions from some of neuroscience’s greatest minds in the field, all brought together in the common aim to advance neurocognitive care for patients.

Opening addresses by the Organising Committee’s Chairman, Dr Nagaendran Kandiah, and Medical Director of NNI, Associate Professor Ng Wai Hoe, addressed the prevalence of dementia, while acknowledging the symposium’s efforts as a collaborative platform for dementia care since 2008.

The symposium saw the launch of several new initiatives in Singapore: the first being the NNI CARE (Cognitive Assessment and Rehabilitation) Programme for Young Onset Dementia (YOD). With an integrated approach, the programme targets the early onset of dementia (ages 45 to 65) through early diagnosis, intervention and support.

In tandem, NNI’s joint collaboration with the Alzheimer’s Disease Association (ADA), the NNI-ADA ESTEEM (Early Stimulation, Exercise and Emotional Support) Programme, provides additional therapy for YOD patients and caregivers. Assoc Prof Ng said that ESTEEM will “establish a dementia-friendly setting for patients and caregivers by providing day-care therapeutic activities for patients, and relief for caregivers.”

Officially launching the programme was the presentation of ‘Transformation’, a mixed media art piece comprising a butterfly with a symbolic presence, which was created by the ESTEEM patients.

Symposium attendees were also treated to a flipbook presentation of ‘The Tangled Brain’, a pictorial activity book conceived by NNI to help young children understand and deal with loved ones suffering from dementia.



ACADEMIC HOUR

Titled "Winning Hearts, Engaging Minds - Confessions, Collaborations and Lessons from Cardiovascular and Neuroscience ACPs," the inaugural Academic Hour was held on 13 January 2015 at the National Heart Centre Singapore auditorium. The event is a platform for regular academic-related discussions across disciplines and specialties, healthcare thought leadership and trends, with the aim of encouraging more collaborative efforts within existing ACPs and other domains.

Six leaders from Cardiovascular ACP and Neuroscience ACP came forward to deliver their insights, struggles, achievements and 'Aha' moments. Together, they shared one ideology that collaboration was a key factor in providing various opportunities for healthcare professionals to integrate into larger teams and improve their practices, leading to better patient care.



The inaugural Academic Hour was hosted by Adj Assoc Prof Nigel Tan (Extreme Right), Academic Vice Chair, Education, Neuroscience ACP (NEUROSC ACP).

NNI TRANSLATIONAL STROKE RESEARCH SYMPOSIUM

The first-ever NNI Translational Stroke Research Symposium was held on 16 January 2015, and was co-organised by Dr Liao Ping, Clinician Scientist from the Calcium Signalling Laboratory, Research, NNI and Associate Professor Deidre Anne De Silva, Director of Clinical Research, NNI-SGH campus, and Senior Consultant, Department of Neurology, NNI.

The objectives of the event were to enhance NNI's visibility in stroke care and research, and establish the symposium as

a multidisciplinary base for clinicians and researchers to get together and discuss their work in the hope of promoting collaborations.

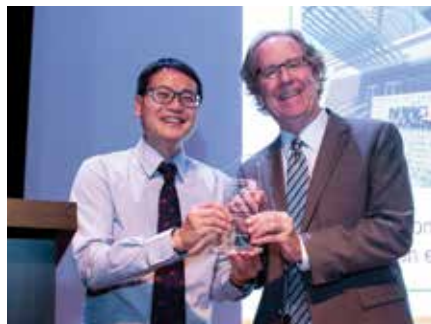


Seen with attendees are Assoc Prof Lim Kah Leong (Extreme Left), Assoc Prof Deidre De Silva (Third from Left), Dr Vincent Ng (Centre), Dr Daniel Oh (Third from Right), and Dr Liao Ping (Extreme Right).

NEUROSCIENCE ACP RESEARCH DAY

More than 170 participants attended the Neuroscience ACP Research Day on February 6 this year, inclusive of doctors, nurses, administrators as well as scientists from NNI, SingHealth, Duke-NUS Graduate Medical School, Lee Kong Chian School of Medicine and other partnering research institutions.

Graced by Professor Thomas Coffman, Dean-designate, Duke-NUS Graduate Medical School, the event celebrated NNI's achievements in research and reviewed current projects. Parallel sessions were held to brainstorm ways to maximise research funding, time and translation, and the NNI Publish! Awards and Junior Research Awards honoured those who have excelled in their area of expertise, from clinical research to basic & translational research, across all levels.



Assoc Prof Ng Wai Hoe, Medical Director of NNI, presenting a Token-of-Appealation to the Guest-of-Honour, Prof Thomas Coffman.

EVENTS AT A GLANCE

1ST NNI GLIOMA FLUORESCENCE SEMINAR



Guest speaker Dr Francesco Acerbi from Milan's Carlo Besta Neurological Institute gave his expert opinion on the application of intraoperative fluorescence technologies in high-grade glioma surgeries.

NNI and Zeiss Singapore came together to host the 1st NNI Glioma Fluorescence Seminar from April 9-10 this year. Organised for neurosurgeons and trainees, the seminar focused on fluorescence-guided glioma surgical procedures. Particularly, the Yellow 560 case study was discussed to evaluate the effectiveness of using Fluorescein Sodium, along with the Yellow 560 microscope by Zeiss, to aid in the treatment of tumours and other related conditions — therefore allowing neurosurgeons to obtain better surgical results and prognostic outcomes.

Guest speaker Dr Francesco Acerbi from the Carlo Besta Neurological Institute in Milan, Italy, provided scientific updates from his expertise, on the application of intraoperative fluorescence technologies over a varied field of clinical applications.

Clinical Reasoning in Neurology



By Adjunct Associate Professor Nigel Tan, Dr Kevin Tan

Clinical reasoning (CR) is the ability to weigh clinical information and make decisions under conditions of uncertainty. CR requires more than just a basic store of knowledge. It calls for the physician to consider, weigh and appraise various sources of information, then integrate these data, taking into account the clinical context to arrive at an appropriate clinical decision for the patient. In essence, CR is a complex skill, one that can be honed through experience.

CR in neurology is important for good patient care, as there is often no 'one-size-fits-all' solution for any single patient, even those with similar medical conditions. Decisions for each patient have to be contextualised carefully. As our learners progress from being medical students to residents and senior residents, CR improves as they gain relevant experience.

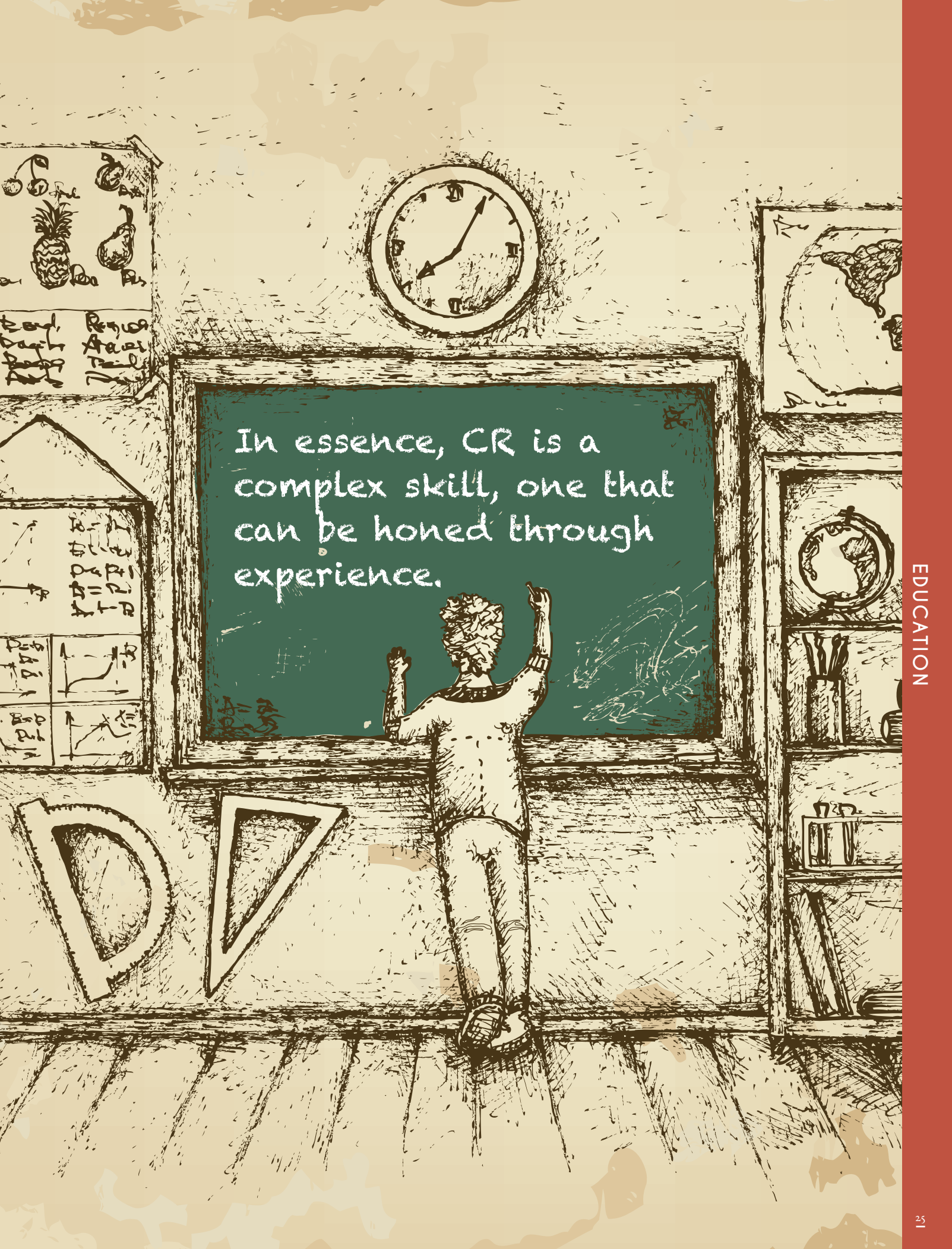
So while CR is a crucial skill for good patient care that can be gained through experience, how do our students and residents learn CR? And how do we assess CR?

The evidence for how to teach CR is still emerging, but asking learners to explain their decisions and providing feedback appears to help, especially when this is centred on real cases (Kassirer, 2010). Deconstructing expert thinking by asking the expert to "think out loud" appears to be effective as well. The role of a good teacher cannot be underestimated. An effective teacher is able to guide a

student through a case, provide feedback on strengths and errors, and coach for improvement. Based on preliminary evidence from a research study that we have conducted in medical students, newer teaching methods such as Team-Based Learning may also be helpful.

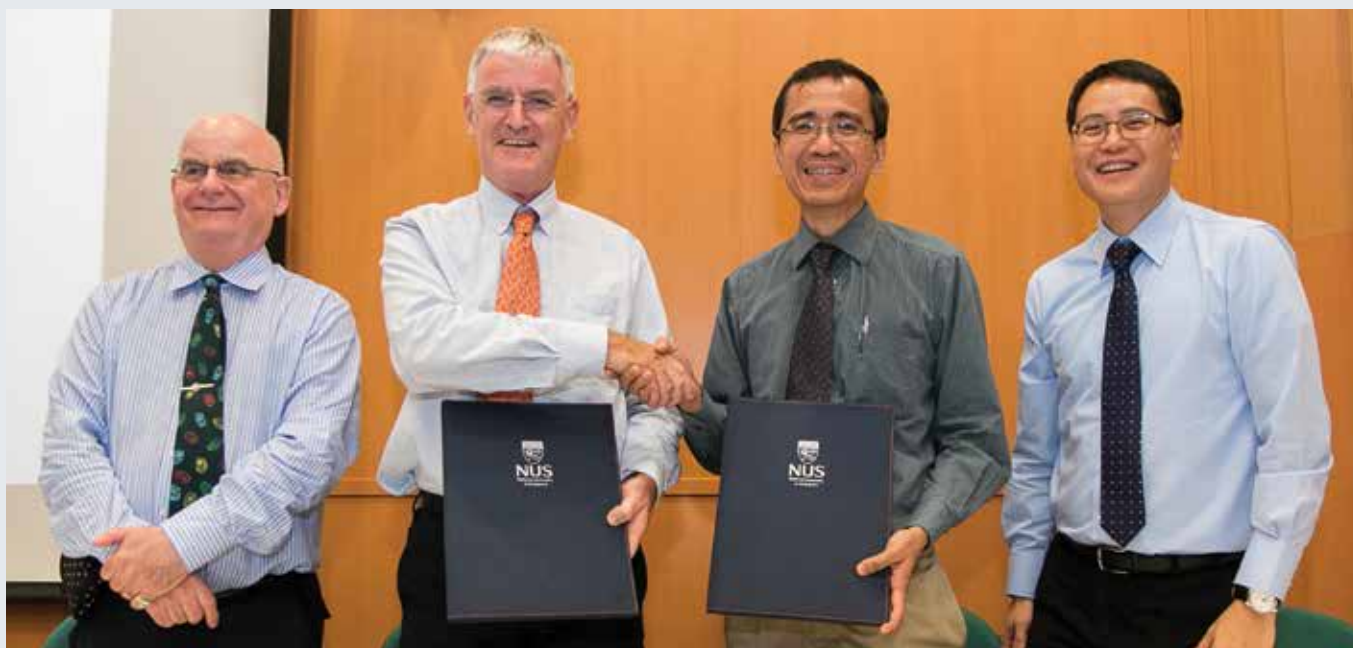
What about assessment? The evidence suggests that there are several ways to assess CR. Case-based discussions (CBD), also known as chart-stimulated recall (CSR), provide a robust, reliable method for assessing CR. We currently use CBD for our internal medicine residents rotating through neurology, as well as for our senior residents as formative assessment. This is always followed by feedback, which is carefully documented. Script concordance testing (SCT) is another method for assessing how close a learner's decision making is in relation to a group of experts. We currently use a validated neurology SCT (Tan et al, 2014) as mid-posting formative assessment for our internal medicine residents.

In summary, CR is a crucial skill for good patient care that is acquired through experience. We may improve our trainees' CR with coaching and feedback from good clinical teachers. There are several evidence-based methods for assessing CR, of which we currently use two in our residency programmes for formative assessment in NNI. Research in CR is constantly emerging, and we look forward to applying new evidence in teaching and assessing CR in our education programmes in NNI.



In essence, CR is a complex skill, one that can be honed through experience.

Greater Collaborative Neurobiology and Ageing Research on the Horizon



From Left: Professor Barry Halliwell, Senior Advisor to the President, NUS; Professor Peter Little, Director of the Life Sciences Institute, NUS; Professor Tan Eng King, Director, Research, NNI; and Associate Professor Ng Wai Hoe, Medical Director, NNI.

On 8 May this year, the National Neuroscience Institute (NNI) and the National University of Singapore (NUS) signed an MOU to formalise, strengthen and deepen on-going partnerships in ageing and age-related neurological disease research in Singapore.

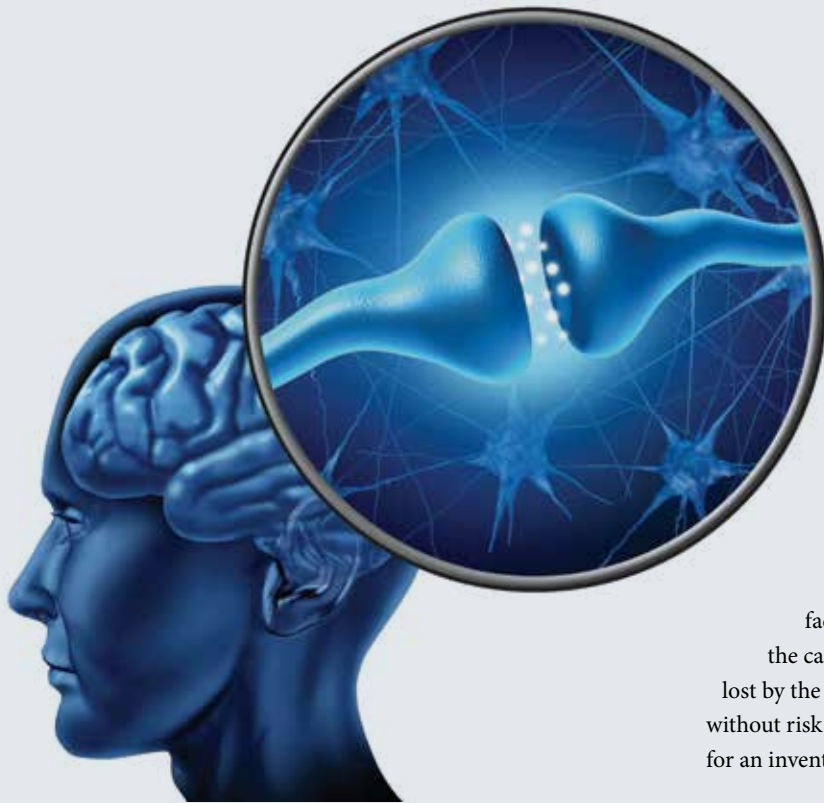
The MOU was signed at the opening ceremony of the 2015 Singapore Institute for Neurotechnology (SINAPSE)-NNI Symposium held at NUS.

With the MOU in place, both institutions can look forward to tighter and more cohesive collaborations with a more seamless workflow and greater proximity advantage. Besides removing administrative barriers, the new MOU will seek to identify synergistic opportunities and leverage the expertise of both institutions.

Possible Restorative Therapies for Neurological Disorders

A key project under this partnership is the study of antioxidants as therapeutic

agents for human disease, particularly for Alzheimer's disease and other brain disorders. Professor Barry Halliwell, Senior Advisor to the President (Research and Technology), NUS, a renowned international expert on the use of antioxidants in biological systems, will work with NNI investigators to evaluate the effect of antioxidants on age-related diseases. The knowledge gained will be used to pioneer therapies to improve the quality of life of the elderly.



Another project that will benefit from the new MOU is the cutting-edge research between NNI, NUS and CellResearch Corporation on umbilical cord stem cells. This ongoing research at the NUS Neurobiology/Ageing Programme - facilitated by Associate Professor Lim Kah Leong, Assistant Director of Research, NNI - is the first of its kind to harness stem cells from the umbilical cord as a pristine source for regenerative medicine, with added potential of an immuno-privilege status that minimizes graft rejection.

If research in the near future proves the potential to be true, it could mean a breakthrough for the immune rejection issues faced by current transplantation cell therapies. In the case of Parkinson Disease (PD), dopamine neurons lost by the disease could be transplanted into an individual without risk of graft rejection. The project has currently filed for an invention disclosure.

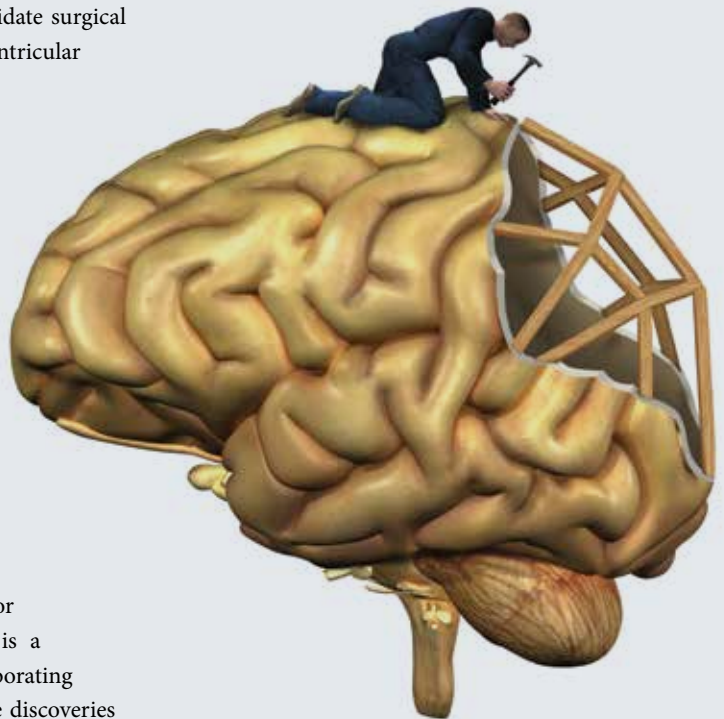
Neurotechnology for Better Patient Outcomes

Another research project led by Assoc Prof Ng Wai Hoe, Medical Director, NNI, and Prof Nitish Thakor, Director, SINAPSE, is a virtual reality surgery platform called 'Dextroscope'. Offering a 3D surgical interface with haptic and kinaesthetic modalities, practitioners are able to better simulate and be immersed in an operative environment much more accurately than with 2D images. The technology has also been used successfully to validate surgical landmarks such as the entry of trajectory points during ventricular cannulation.

The Dextroscope has proved to be a valuable and educational tool for neurosurgery training, pre-operative surgical planning and the rehearsal of operative approaches; by helping to speed up the learning curve of surgeons while improving care outcomes in the operating theatre.

As a result of the MOU, the development of neurotechnology such as the Dextroscope between NNI and SINAPSE will gain greater traction. The cross-fertilisation of NNI's medical expertise and clinical observations with the scientific and technical knowledge of scientists at SINAPSE is expected to bear fruitful results.

Of the momentous signing, Professor Peter Little, Director of the Life Sciences Institute, NUS said, "This agreement is a wonderful example of how the broad range of NUS and collaborating researchers' skills can be brought together collectively to create discoveries and technologies that are of great importance to the care and well-being of Singaporeans."



RESEARCH

Finding HOPE through EDUCATION

Dr Adeline Ng and
Dr Sharon Low find a
glimmer of hope for their
patients in their pursuit
for advanced education
and training

A Registrar from NNI's Department of Neurosurgery, Dr Sharon Low recently completed her PhD with a lab-based research paper on malignant primary brain tumours. She was awarded a scholarship by the National Medical Research Council (NMRC) to pursue a research-based PhD at the YLLSoM (NUS). Currently, she continues her post-PhD research interests under the guidance of Dr Carol Tang, Senior Research Scientist, Research, NNI, and Associate Professor Ang Beng Ti, Head, Department of Neurosurgery (NNI-SGH campus).

Dr Low's largely bench-based research saw her toiling away in the labs for three-and-a-half years, growing cells and inducing strange genetic and protein expressions, with little day-to-day human contact save for her fellow lab colleagues. These years were the most challenging years for Dr Low, who found her research training to be tougher than any part of her surgical training.

Understanding Diseases Better with Research

She shared: "As a neurosurgeon, it was very hard to see the point of growing cells in a lab at some stages during my PhD. There is little human contact, and in research, you are dealing with the unknown – you have no idea what tomorrow will bring and if you can replicate the results to make it real."

Yet, Dr Low soldiered through, egged on by her mentors and emerged with a new

sense towards her clinical practice. She said, "I always felt that clinical knowledge has its limitations. For my disease of interest, doing the research helps me to understand the disease better at levels I cannot see. It has brought a lot of new perspectives to my understanding of the disease and opened my eyes into looking at a clinical problem."

She added, "Because I do research in neuro-oncology; a disease that is very devastating, pessimistic and with a brutal outlook, there is always a light of hope that I can offer my patients with my involvement in research. There is a glimmer of hope that medical knowledge is moving somewhere. There is an advancement in clinical care that is important for the patients."

Reinforcing the Importance of Research

For Dr Adeline Ng, a Consultant from the Department of Neurology at NNI, she was also able to gain invaluable knowledge and training to advance her clinical care during her recent HMDP stint at the UCSF Memory and Aging Center, University of California, San Francisco, under doctors Bruce Miller and Michael Geschwind.

During her one-year training, Dr Ng learnt from a large amount of cases on frontal temporal dementia and rapid onset dementia. Her experience is now contributing towards her research paper on young onset dementia, a study that further investigates psychiatric conditions and

genetic underpinnings in Singapore patients.

She said, "My training, especially being in an academic centre, reinforced the importance of research. I was also really struck by the openness and sharing of knowledge among the researchers there, which is important for research to move forward."

In particular, her mentor, Dr Bruce Miller, was an inspiration with his open and sharing stance towards knowledge and education. He advocated rooting for others around oneself to be more successful, to build a collegial community and get better results through the ideas being shared by everyone.

Because the medical field in general and disease evolves rapidly, both Dr Low and Dr Ng see the light in advancing medical education for their patients. Not only does such training impart challenges for personal accomplishment and growth, it also ensures that the future for patients with neurological conditions remains bright.

Dr Low said, "If anything, patients have taught me that disease is in a constant state of evolution and we need to know what the latest developments and problems are. I'm sure that in 50 years, whatever tumours we are looking at will be different because everything changes."

Dr Ng said, "With therapy development in the works, research is able to offer patients hope for a disease that has been incurable."

“ There is a glimmer of hope that medical knowledge is moving somewhere. There is an advancement in clinical care that is important for the patients. ”

– Dr Sharon Low
Registrar, Department of Neurosurgery, NNI



“ My training, especially being in an academic centre, reinforced the importance of research. I was also really struck by the openness and sharing of knowledge among the researchers there, which is important for research to move forward. ”

– Dr Adeline Ng
Consultant, Department of Neurology, NNI

Mentorship: Researchers

Highly known and regarded for their roles as mentors and educators, Adj Assoc Prof Louis Tan, Associate Professor Deidre Anne De Silva and Dr Carol Tang have been helping their mentees navigate the dynamic and challenging field of research through the good times and the bad.

How has your role and experience as a mentor been so far?

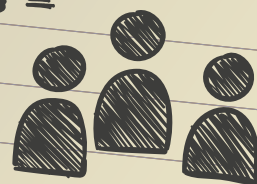
Adj Assoc Prof Tan: My first time mentoring researchers was with two NUS Pharmacy Honours students, whose projects focused on the quality of life in Parkinson Disease (PD) patients in 2003. Since then, I have been a research mentor to six movement disorder fellows from countries as diverse as Philippines, Thailand, China and Netherlands. I have also been a research mentor to two third-year Duke-NUS students, who have spent nine months performing clinical research at NNI. Along the way, I have also been privileged to mentor younger colleagues and nurses with an interest in research.

Assoc Prof De Silva: My experiences with mentoring in research involve medical students, junior residents, senior residents, consultants, post-doctoral researchers and fellows. For each, it is a unique experience depending on the mentee, the scope of the research and the duration of the mentorship. Most important in the mentor relationship are inculcating key skills and knowledge, providing guidance where needed, and offering support for the research project and advice for their career in general.

Dr Tang: Patience is not my virtue, so I place a lot of emphasis on whom I mentor and recruit to the lab. Science is risky and does not guarantee success; furthermore, bench science is even harder because it takes years. So my belief is that folks who need second chances in life tend to be more resilient and tenacious in their pursuit of difficult science. Our lab has a few of such scenarios, yet we have established ourselves to do quality science. It just means Assoc Prof Ang Beng Ti and I have to work harder to motivate and train our team, and monitor their progress over the years. When they see a reason to pursue this difficult work and take off, our responsibilities lighten as we function collectively as a team.



MENTORING =



SUPPORT

What makes a successful mentor?

Adj Assoc Prof Tan: A successful mentor is one who is able to see the potential and bring out the best in their mentees. Mentees are often bright and talented. What is needed is for someone to give direction on the appropriate research questions to ask and the best way to answer these questions; to provide the necessary resources needed, and to encourage them to pursue research.

Assoc Prof De Silva: A research mentor should be approachable yet firm, provide guidance yet allow for freedom to explore, and inspiring yet realistic. A successful mentor is someone who the mentee will be inspired by not only during the mentoring period but for the rest of their career.

Dr Tang: I remember a good piece of advice from Assoc Prof Ivan Ng: "Always keep the flag flying no matter how badly you feel inside." He is right. In mentoring a team of young scientists, and even clinicians, I have to maintain a stable front with strong principles so that we will all be focused on solving a problem however big it seems, and not be distracted by a rollercoaster of emotions. A good mentor also needs to balance his/her team's expectations.

Continued on next page

MENTORING =

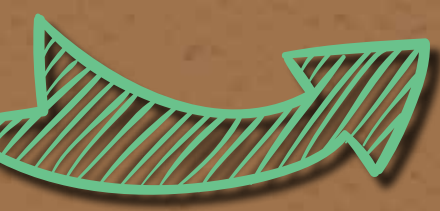


MOTIVATION

Adjunct Associate Professor Louis Tan
Director, Clinical Research,
NNI (TTSH Campus)
Senior Consultant,
Department of Neurology, NNI
(Centre in image)



Adj Assoc Prof Louis Tan counts it a privilege to be able to mentor others in research or other aspects of work and life.



Mentorship: Researchers



Dr Carol Tang enjoys watching the growth of her research mentees and the confidence they have gained through the years of robust scientific training.

Dr Carol Tang
Senior Research Scientist,
Neuro-Oncology Research
Laboratory, NNI

(First row, seated, second
from left in image)

MENTORING = ADVICE



What have been the personal and professional benefits of being a mentor for you?

Adj Assoc Prof Tan: Mentoring others allows the nurturing of a next generation of clinician-researchers. The type of research performed by the next generation will be vastly different from the type and level of research we currently perform. By mentoring them, we are investing in future research development at NNI.

Assoc Prof De Silva: Mentees are often very inspiring. They are enthusiastic and their keenness tends to rub off on mentors who sometimes can get jaded. Working with mentees is a privilege as they will continue the research hopefully to greater heights.

Dr Tang: Personally, I enjoy watching the growth of my folks and the confidence they have through the years of robust scientific training. When they understand how hard science is, and what sacrifices they must make to pursue it, I am satisfied that it was time well-spent.

What are your views on NNI as a Centre of Excellence in research?

Adj Assoc Prof Tan: NNI has the advantage of having clinicians, researchers and basic scientists housed within the same organisation. Its goal is to develop a core of clinician-researchers and clinician-scientists that will take neuroscience research to the next frontier.

Assoc Prof De Silva: NNI has helped to nurture many researchers from medical students to Principal Investigators (PIs). As an academic neuroscience programme, we have many opportunities for researchers to learn, grow and excel.

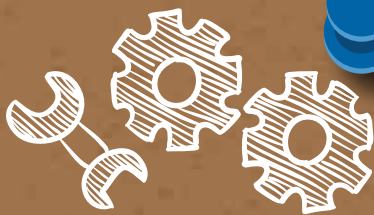
Dr Tang: NNI is already a Centre of Excellence and I must commend the neurologists for taking the lead in that. Scientific education is however a very different discipline, as it requires a combination of survival traits to persevere through years of risky work with no guaranteed outcome. It is a long-drawn process and is always Darwinian. I believe success tastes sweeter for those who have to work harder for it.

What would you like your legacy as a mentor/educator to be?

Adj Assoc Prof Tan: I count it a privilege to be able to mentor others in research or other aspects of work and life. In the end, when those whom I have mentored become successful, it gives me a deep sense of satisfaction to know that in some way, I have contributed to their journey of success.

Dr Tang: I would like to be remembered for never abandoning my folks in hard times, to celebrate their successes and recognise that they can become better than me in science. Everyone has their own dreams, so we need to balance expectations to bring out the best in everyone. Assoc Prof Ivan once reminded me that anyone can do good work as long as placed in the right environment. Again, he is right. It took me many years to fully experience what he said.

MENTORING =



COACHING

Associate Professor
Deidre Anne De Silva
Director, Clinical Research,
NNI (SGH Campus)
Senior Consultant,
Department of Neurology, NNI
(First row, second from left in image)



Assoc Prof Deidre Anne De Silva believes that the most important factors in the mentor relationship are inculcating key skills and knowledge, providing guidance where needed, and offering support for the research project and advice for their career in general.

UPCOMING EVENTS

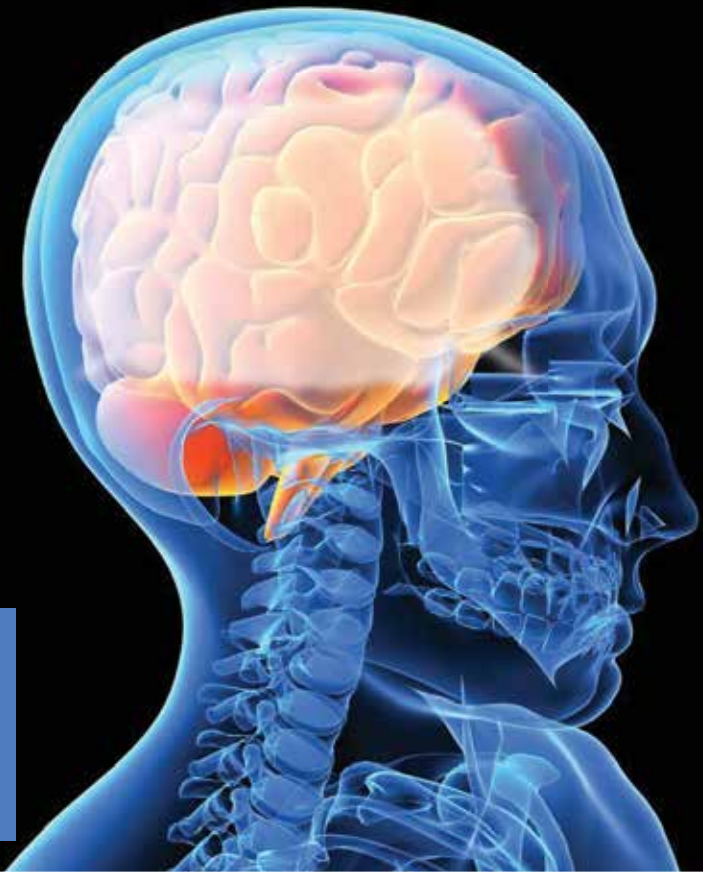
15th ADVANCED NEURORADIOLOGY COURSE

OCTOBER 15 - 16, 2015

Theatrette, Level 1
Tan Tock Seng Hospital, Singapore



Scan the QR Code to get more
details on this course, or log on to
[http://www.nni.com.sg/Education/
HealthcarePro/Medical-eventsandconf/
Pages/15th-advanced-neuroradiology.aspx](http://www.nni.com.sg/Education/HealthcarePro/Medical-eventsandconf/Pages/15th-advanced-neuroradiology.aspx)



UPCOMING EVENTS

5th



Scan the QR Code to find out
about the Workshop or visit
[http://www.nni.com.sg/Education/
HealthcarePro/Medical-eventsandconf/
Pages/5thEMG-AFT.aspx](http://www.nni.com.sg/Education/HealthcarePro/Medical-eventsandconf/Pages/5thEMG-AFT.aspx)

NNI EMG-AFT-Neuromuscular Ultrasound Workshop

Interactive Teaching Course with Live
Demonstrations and Hands-On Tutorials

26 - 29 November 2015
TTSH THEATRETTE, LEVEL 1, SINGAPORE

July

CALENDAR

- 11** GP Seminar - Movement Disorders & Dementia
- 29** 3rd Neuroscience Nursing Seminar
- 30 - 31** ASEAN Neuroscience 2015

August

- 22** GP Seminar - Neuromuscular Disease and Neuropathic Pain
- 29** Community Care Partners Programme (CCPP) Workshop

October

- 3** GP Seminar -Stroke
- 7** Education Day
- 9** NNI Neuro-Oncology Symposium 2015
- 10** Dementia Awareness Day (Screening & Public Forum)
- 15 - 16** 15th Advanced Neuroradiology Course

November

- 26 - 29** 5th NNI EMG-AFT-Neuromuscular Ultrasound Workshop



CONTACT US

National Neuroscience Institute
Corporate Communications Department
11 Jalan Tan Tock Seng
Singapore 308433
Tel: (65) 6357 7153
Fax: (65) 6256 4755
Email: NNI-CorporateCommunications@nni.com.sg
Website: www.nni.com.sg

**PUBLISHED BY NNI CORPORATE COMMUNICATIONS
NATIONAL NEUROSCIENCE INSTITUTE
VISIT WWW.NNI.COM.SG TO DOWNLOAD A COPY OF NEUS-LINK TODAY.**