

SingVision®

ISSUE 2 : 2014

A PUBLICATION OF SINGAPORE NATIONAL EYE CENTRE

We mourn the loss of our Founding Medical Director, Singapore National Eye Centre and Founding Chairman, Singapore Eye Research Institute, Professor Arthur Lim who departed on 30 August 2014. A special memorial tribute issue will be published in the next edition.

PASSING THE LEADERSHIP BATON IN SNEC

Global Accreditation for SNEC Training Programme

Three Cheers

Three 'Visionary' Singapore Doctors

What's Your EyeQ?
Are Eye Check-ups A Must?

Eye Research Breakthrough:
A Promising New Nanomedicine
for Glaucoma Patients

AMD: Spot It Early

Image: Optic Disc Pit Associated Retinal Dehiscence (An award-winning image by the Ophthalmic Imaging Department of the Singapore National Eye Centre)

OPHTHALMOLOGY & VISUAL SCIENCES
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Passing the Leadership Baton in SNEC



Professor Donald Tan
Senior Advisor, SNEC
Member, SingHealth
Board of Advisors

Professor Donald Tan has passed his leadership baton to Professor Wong Tien Yin with effect from 1 August 2014. Professor Wong has also taken on the concurrent role as Academic Chair, Ophthalmology and Visual Sciences Academic Clinical Program (EYE ACP).

Professor Tan led the Singapore National Eye Centre (SNEC) since 2008. During his six years at the helm, Professor Tan successfully steered SNEC to be a global leader in clinical and surgical service, translational research and education in the field of Ophthalmology. Charting new directions and plans, patient and surgical volumes grew in tandem with uncompromising standards and quality. SNEC started the EYE ACP in 2012 with the aim to forge a seamless integration of clinical care, education and research. Professor Tan also significantly advanced and developed SNEC's hub-and-spoke structure with new satellites, such as the primary eye care clinic for right-siting of stable and chronic eye patients in a new step-down model of eye care. He was also the architect during the formative years of the development of the Singapore Eye Research Institute (SERI), now regarded as one of the world's top eye research institutes.

For his work and major innovations in corneal and stem cell transplantation, refractive surgery, myopia treatments and patented surgical devices which are internationally recognised, Professor Tan was awarded the nation's prestigious President's

Science Award in 2009. From 2010 to 2013, he served as the Executive Director of the National Medical Research Council (NMRC), during which he promoted the national agenda for excellence in translational and clinical research, directed initiatives aimed at nurturing a vibrant research community in Singapore, strengthened public sector research for future industry needs and enhanced knowledge translation for health and economic outcomes. Professor Tan was recognised in 2012 when he became the US-based Cornea Society's first international president, once again propelling SNEC to international eminence. Professor Tan was recently named the third most influential ophthalmologist globally by the UK-based The Ophthalmologist journal.

"Many challenges lie ahead in the ever-changing healthcare landscape and increasing demands from patients and various stakeholders. I now pass the baton of leadership to Professor Wong, and we are indeed extremely proud to have Professor Wong at the helm. Please give him your fullest support, just as you have given me, as he leads SNEC in the next phase of growth," said Professor Tan.

Professor Tan will continue to be a tenured Professor in Ophthalmology and senior faculty member of SNEC. He will devote more time to clinical practice and teaching, and continue his cutting-edge translational and clinical research pursuits at SERI, whilst continuing with his international activities as President of the Asia Cornea Society (ACS) and the Association of Eye Banks of Asia (AEBA).

In recognition of his sterling contributions and valuable experience, Professor Donald Tan has been appointed to the SingHealth Board of Advisors. He has been conferred the title of Senior Advisor, SNEC, SingHealth with effect from 1 August 2014. As Senior Advisor, Professor Tan will mentor and guide the incoming team, and represent SNEC on the international stage.

“ I now pass the baton of leadership to Professor Wong, and we are indeed extremely proud to have Professor Wong at the helm. Please give him your fullest support, just as you have given me, as he leads SNEC in the next phase of growth. ”

~ Professor Donald Tan



Professor Wong Tien Yin
Medical Director, SNEC
Academic Chair, Ophthalmology
and Visual Sciences Academic
Clinical Program (Eye ACP)

Professor Wong Tien Yin is well-poised to succeed Professor Tan as Medical Director of Singapore National Eye Centre (SNEC). He has distinguished himself as an outstanding ophthalmologist specialising in retinal diseases, with a sterling academic reputation internationally. As Executive Director of Singapore Eye Research Institute (SERI), which he took over in 2008 and helmed till January 2014, his far-sighted leadership steered the Institute to notable success. He forged cross-disciplinary translational research collaborations among clinicians, epidemiologists and clinician-scientists, which resulted in numerous research breakthroughs and published papers, greatly increasing the capability and reputation of clinical biomedical research in Singapore.

Professor Wong's research has also created several commercial applications resulting in numerous patents on eye imaging software and related technology. For his many achievements, Professor Wong has repeatedly been accorded local and international awards including the inaugural Singapore Translational Research Investigator Award, National Clinical Scientist Award, the President's Science Award and most recently, the prestigious Eisenhower Fellowship Award in 2013.

In his new role as Medical Director of SNEC, Professor Wong will lead SNEC and continue to elevate the Centre's service and reputation in the field of Ophthalmology. As Academic Chair of EYE ACP, he will provide strategic stewardship to further the mission of the Academic Medicine programme in Ophthalmology. Professor Wong's new appointments will run concurrently with his roles as Group Director, Research, SingHealth; Vice Dean, Office of Clinical Sciences, and Head of Academic Medicine Research Institute (AMRI), Duke-NUS Graduate Medical School Singapore.

"On behalf of SNEC and SERI, I would like to express our deepest gratitude to Professor Tan for his passionate and visionary leadership which has enabled SNEC's further growth and development. In particular, I would like to thank him personally for having mentored me over nearly 20 years, and for entrusting me to lead the team at SNEC," said Professor Wong.

World's Most Prolific Author on Diabetic Macular Edema

Professor Wong has been named the world's most prolific author on diabetic macular edema (a major cause of vision loss in diabetics) by the UK-based Ophthalmologist Journal in 2014. He was also lauded as the world's top eye disease researcher in a global ranking of eye disease experts conducted by healthcare information website ExpertScape in 2013.

Professor Wong has published more than 800 peer-reviewed papers, delivered more than 200 lectures globally, and received more than US\$50 million (S\$63 million) in grant funding from agencies such as the Biomedical Research Council and the National Medical Research Council in Singapore, the National Institutes of Health in the United States, and Australia's National Health and Medical Research Council.

A retinal specialist, Professor Wong balances clinical practice in ophthalmology – focusing on macular and retinal diseases such as diabetic retinopathy and age-related macular degeneration – with a broad-based research programme comprising epidemiological, clinical and translational studies of Asian eye diseases. He has also pioneered the use of retinal imaging to predict disease risk.

Passing the Leadership Baton in SNEC

As another step in our leadership renewal, Professor Aung Tin has taken over from Professor Wong Tien Yin as Deputy Medical Director (Research), Singapore National Eye Centre (SNEC). In this role, he will support the Medical Director in formulating and implementing strategies and policies to pursue and strengthen research initiatives to advance the research agenda of SNEC. This new appointment will run concurrent to his role as Executive Director of Singapore Eye Research Institute (SERI). In addition, he is Head (Research, Education & Development) and Senior Consultant, Glaucoma Department, SNEC and also serves as Academic Vice Chair (Research) of the Ophthalmology and Visual Sciences Academic Clinical Program (EYE ACP).

Professor Aung Tin's research interests include angle closure glaucoma and molecular genetics of eye diseases. As a clinician-scientist, he leads a glaucoma research group at SNEC and SERI and is best known for his insights into angle closure glaucoma, and his discoveries made it possible to develop new diagnostic instruments and treatments for glaucoma. His active clinical research in glaucoma has attracted more than US\$15 million in competitive research grant funding over the years which supported numerous studies on therapeutics, imaging, screening and surgical outcomes.

Professor Aung Tin's research achievements have won him numerous accolades including the prestigious Singapore National Medical Research Council – Biomedical Research Council Clinical Scientist Award, the President's Science and Technology Award and the De Campo Lecture and Nakajima Award from the Asia Pacific Academy of Ophthalmology. With over 350 publications and more than 100 international conference lectures to his name, Professor Aung Tin continues to break new ground in ophthalmology research.

Most recently, Professor Aung Tin has been listed as the world's 100 most influential people in ophthalmology by British professional journal, The Ophthalmologist.



Professor Aung Tin
Deputy Medical Director
(Research), SNEC

Three 'Visionary' Singapore Doctors

The Ophthalmologist, a British professional journal, recently published a list of the 100 most influential people in ophthalmology, featuring it as the cover story for its April 2014 issue.

Three Singapore eye experts made this list. Of the 100, 51 are from the United States, which is at the cutting-edge of eye care. They are followed by Britain with 10, Germany with five, and Austria, India, Italy, Japan, Singapore and Switzerland with three each.

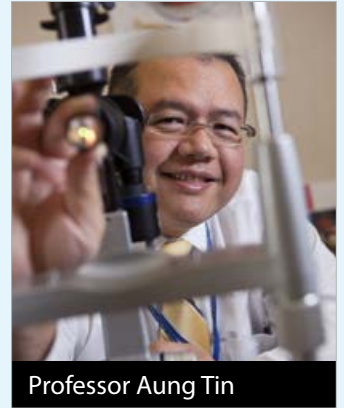
Professor Donald Tan is ranked third on the list, where only the top 20 are ranked. Among his contributions to the field are



Professor Donald Tan ranked third on the list. He is cited for his roles in myopia trials, cornea surgery and transplant

new forms of lamellar keratoplasty, femtosecond corneal and refractive surgery, the Osteo-Odonto Keratoprosthesis (tooth-in-eye corneal transplant), surgical devices for lamellar corneal transplantation, and multiple interventional myopia clinical trials. The founder of the Asia Cornea Society also holds 12 patents that range from stem cell culture technology to novel inserters for Descemet's Stripping Automated Endothelial Keratoplasty surgery.

Also on The Ophthalmologist's list is clinician-scientist Professor Aung Tin, Deputy Medical Director (Research), SNEC and Executive Director of Singapore Eye Research Institute (SERI), who heads the Glaucoma Research Group at the Institute. His research interests include angle closure glaucoma and the molecular genetics of eye diseases. He is active in clinical research, having conducted studies on therapeutics, imaging, screening, clinical and surgical outcomes of glaucoma.



Professor Aung Tin



Professor Saw Seang Mei

Professor Saw Seang Mei, an epidemiologist with the Saw Swee Hock School of Public Health and a professor in Neuroscience & Behavioural Disorders Program in Duke-NUS Graduate Medical School Singapore, is one of only 13 women to make the list. Professor Saw, who also co-heads the Myopia Research Group at SERI, has worked extensively in the area of myopia, including environmental factors that affect short-sightedness. She is the principal investigator of several important epidemiologic studies, which include elucidating genes and environmental factors involved in myopia and pathologic myopia, a major concern in East Asia.

The Ophthalmologist's Editorial Director Mr Richard Gallagher said one of the main reasons for the list was to catalogue and celebrate progress in ophthalmology. Among the accomplishments he cited were the development of new surgical techniques, drugs and ophthalmic devices; breakthroughs in the understanding of biology, pathology and epidemiology; improvements in healthcare administration and delivery; and the growth of an industry and infrastructure to meet the complex medical needs of patients.

"This progress is driven by people, and those driving this progress deserve recognition. One great way of doing this is to highlight the achievements of ophthalmology's most influential contributors. And that's what the Power List is: a celebration, acknowledgement and offer of gratitude to some of the major contributors to ophthalmology today," said Mr Gallagher.

A jury of five notable ophthalmologists, who came from five countries and three continents, selected their top 100 from readers' nominations and then listed them from one through 100. Average scores of the jury's rankings then determined the final list.

A Promising New Nanomedicine for Glaucoma Patients

Eye drops usually have to be applied daily for people with glaucoma, a disease which damages the optic nerves and can cause blindness. Yet this is something that the elderly, who make up the bulk of patients, tend to overlook and fail in compliance. A new nanomedicine, jointly developed by the Nanyang Technological University (NTU) and the Singapore Eye Research Institute (SERI), could solve this problem.

In this new procedure expected to be offered commercially in the future, glaucoma medicine in the form of millions of tiny capsules is injected into the eyeball. These capsules slowly release their contents over six months, replacing the need for daily eye drops that help relieve pressure on the optic nerve. Performed under local anaesthetic, the new therapy has successfully gone through a pilot study with six patients conducted at the Singapore National Eye Centre (SNEC) and has yielded exceptional results, having shown to be both safe and effective in the treatment of glaucoma.

"It is estimated that at least 10 per cent of blindness from glaucoma is directly caused by poor patient adherence to their prescribed medications," said Associate Professor Tina Wong, Head of the Ocular Delivery Research Therapeutics and Drug Group, SERI, and Senior Consultant, Glaucoma Department, SNEC.

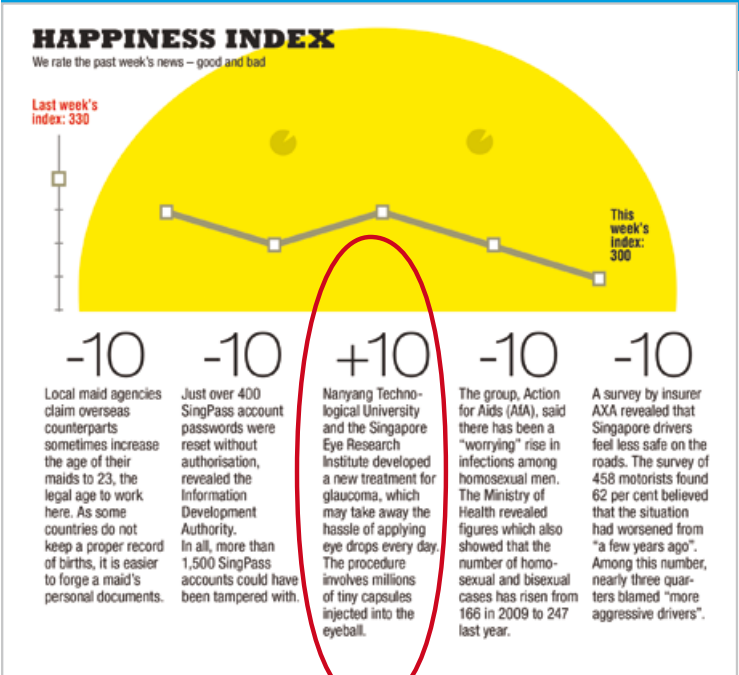
"Many patients find it difficult to adhere to their doctor's prescribed regime for many reasons, such as forgetfulness, finding it too troublesome, or they lack understanding of the disease. The results in this clinical study will open up a new treatment modality for glaucoma other than applying daily eye drops, and will greatly enhance patient compliance and improve treatment outcomes," she added.

Professor Subbu Venkatraman, Chair of NTU's School of Materials Science and Engineering and Associate Professor Wong's research partner, said the successful study of liposomal latanoprost can be hailed as one of Singapore's early successes in the emerging area of nanomedicine. "This is the first nanocarrier-drug combination that shows therapeutic effects for three to four months with a single dose. The tough challenges we faced were to make this nanocapsule stable and biocompatible, while at the same time controlling the release of the drug at the desired rate over months," added Professor Venkatraman.

This promising nanomedicine is now in the midst of being developed. Larger scale clinical trials are currently being planned to pave the way for eventual release to the market.



Did You Know?
This research scored a +10 in The New Paper's Happiness Index for News – which rated the public's favourable reaction towards the benefits of this research.



Richard Fan Gold Medal in Ophthalmology in Recognition of SNEC Outstanding Senior Resident

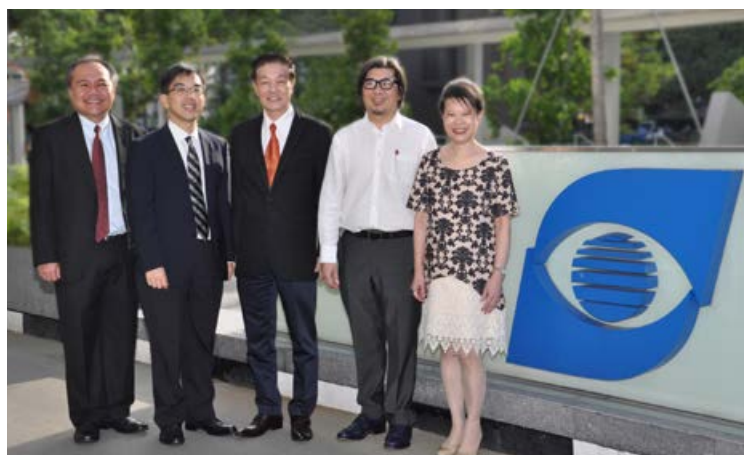
Following the launch of The Arthur Lim Professorship in January 2014, a new endowed fund has been established from a generous gift made by Dr Richard Fan. The prestigious Richard Fan Gold Medal in Ophthalmology will be awarded annually to the Outstanding Senior Resident at the Singapore National Eye Centre (SNEC).

Education is one of the three pillars of SNEC, along with clinical service and research. SNEC has trained one in two of the ophthalmologists in Singapore, fulfilling its responsibility to nurture the next generation of eye specialists to serve the nation. The award will recognise the excellent work and performance of outstanding young doctors under training who will go on to pursue a specialist career in ophthalmology.

Dr Richard Fan was the former head of both the Departments of Ophthalmology in Tan Tock Seng Hospital from 1988 to 1990 and Singapore General Hospital (SGH) from 1990 to 1992 whereupon he left and established a successful practice in the private sector. He provided important impetus in talent development and nurturing of the second generation of ophthalmologists in the public sector enabling rapid advances and progress to be made. With the establishment of SNEC, Dr Fan was appointed as founding member to both the SNEC Board of Directors and Medical Board, and gave unwavering support to the national development of SNEC. Together with the late Professor Arthur Lim, Dr Fan played an integral part in the integration of SGH Department of Ophthalmology and SNEC in 1990.

Dr Fan said, "I'm most delighted to see how SNEC has grown to become a leading referral centre for secondary and tertiary management of eye diseases. SNEC has a rich teaching tradition and is at the forefront of medical education that aims to build a talent pool to provide excellent patient care. I hope this award will inspire and motivate the residents to strive to do their best in their training and excel in the field of ophthalmology."

Professor Wong Tien Yin, Medical Director at SNEC and Academic Chair, Ophthalmology and Visual Sciences Academic Clinical Program (EYE



(From left) Associate Professor Ian Yeo, Professor Wong Tien Yin, Dr Richard Fan, Professor Donald Tan and Ms Charity Wai

“ SNEC has a rich teaching tradition and is at the forefront of medical education that aims to build a talent pool to provide excellent patient care. I hope this award will inspire and motivate the residents to strive to do their best in their training and excel in the field of ophthalmology.”

~ Dr Richard Fan

ACP), said, "As the national eye centre, SNEC will continue its academic mission to train and nurture future generations of leaders in ophthalmology. Developing philanthropic support to sustain SNEC's academic endeavours is vital to our long term success and we are grateful that Dr Fan has started this important initiative. We hope this will inspire and stimulate more to come forward to support this meaningful cause."

"The Richard Fan Gold Medal in Ophthalmology is a step forward to recognise emerging talent in ophthalmology. The medal award will serve as a strong motivator for the residents to strive towards excellence and to realise their potential to become top ophthalmologists in the field," Professor Donald Tan, Senior Advisor, SNEC, added.

Global Accreditation for SNEC Training Programme

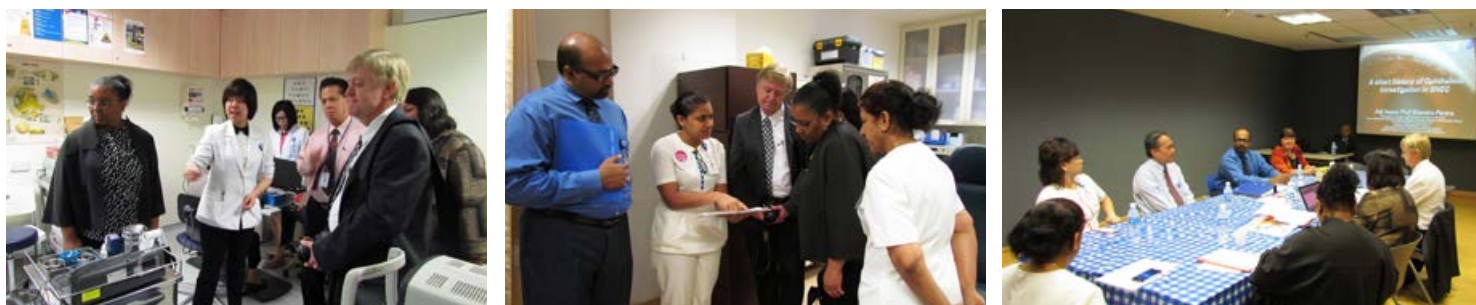
The Singapore National Eye Centre (SNEC) has become the first institution in Southeast Asia to receive international accreditation for its training programme for eye allied health professionals.

SNEC conducts in-house basic ophthalmic courses for nurses and allied health staff such as technicians and assistants. The accreditation is by the International Joint Commission on Allied Health Personnel for Ophthalmology (IJCAHPO), a global group that sets the academic standards for ophthalmic training programmes. IJCAHPO is based in St Paul, Minnesota, USA, and provides international accreditation by setting academic standards for ophthalmic training programmes.

“Through SNEC’s accreditation, a new and exciting partnership between SNEC and JCAHPO is being established to offer JCAHPO certification to SNEC programme graduates,” stated JCAHPO President, Dr Karl Golnik. SNEC’s accredited programme will accelerate staff development with JCAHPO’s certification and credentials being a graduate’s crowning achievement.

In addition to the IJCAHPO accreditation and JCAHPO certification, as part of SingHealth’s Ophthalmology and Visual Sciences Academic Clinical Program (EYE ACP), SNEC has partnered Duke-NUS Graduate Medical School Singapore to organise the first formal training programme for allied health staff on 17 May 2014 with a modular curricula developed by eye doctors, senior nurses and allied health professionals. The structured workplace learning, initially offered in-house to SNEC staff for skills upgrading, will be extended to personnel from other hospitals and neighbouring countries. The inaugural public course will be launched in January 2015 and details of the course and funding support will be announced soon.

Associate Professor Ian Yeo, SNEC’s Deputy Medical Director of Education, called the accreditation a timely one. “Our patients will increasingly demand quality healthcare not just from our doctors but from all members of the eye care team,” he said. SNEC hopes that the accreditation will encourage more to join the eye care profession as nurses or technicians. It expects between 10 and 20 nurses and technicians to be certified each year and the enrolment to increase progressively with regional participants.



Senior academics from JCAHPO and IJCAHPO in SNEC auditing our teaching programmes in March 2014



Sweet Treats at Medical Social Workers Day



Celebrating Social Workers Day as 'One Campus Now', together with the senior management teams from SingHealth institutions

Medical social workers (MSW) are our unsung heroes in many regards, helping patients and families through stressful situations.

"We listen and help as best as we can." These humble words are often how MSW at SingHealth sum up their work. Many of them will be hard-pressed for words when asked to truly define their profession. What they do actually involves compassion, courage, resilience, and extraordinary levels of interpersonal skills.

These unsung heroes' dedication and commitment was affirmed through a special event on 20 March 2014 at the Singapore General Hospital (SGH) Campus to mark the celebration of Social Workers Day and the successful implementation of the One Medifund scheme (see page 11).

The event featured a line-up of meaningful programmes which included a 'Multiple Medifund Assessment' patient journey video, a 'One-For-All Assessment' skit, and even an original song composition entitled 'It's One Campus Now' which aptly described the One Medifund scheme that has been successfully piloted and implemented in November 2013.

"This 'One-For-All' application reduces the hassle for our patients with eye problems. They can now focus on their treatment, instead of having to apply for Medifund assistance at different institutions," said Priscilla Lim, Senior Manager, Medical Social Work Department, SNEC.

Professor Ivy Ng, Group CEO, SingHealth, who was present at the event as Guest-of-Honour, said: "I was heartened to see how our medical social workers have come together to spearhead the One Medifund project - five months of hard work and deep collaboration, driven by a 'can do' spirit and passion to transform the way we deliver care. By streamlining our processes, patients no longer need to go through multiple assessments when applying for assistance at different institutions. Instead, they just have to undergo one assessment which is valid for six months across institutions on SGH Campus. The journey for patients who need our help is now truly seamless and dignified".

The celebration was made extra sweet with MSW Heads of Department brightening up the event with sweet treats they created personally such as cupcakes, agar-agar, cheesecake, mango pudding and tiramisu.



Taking On Every Challenge



Aisah (left) and Noraini recounting their classroom learning experience

Hard work and perseverance paid off for **Noraini Bte Abdul Hamid** and **Aisah Bte Mohamad Said** as they received their award certification for Senior Enrolled Nurse Developmental Programme at the presentation ceremony held at The Academia on 15 April 2014.

They are the first two nurses from the Singapore National Eye Centre (SNEC) to receive this award certification. Excitedly they shared their experiences at the Alice Lee Institute of Advanced Nursing and what their hopes are for the future.

Noraini Bte Abdul Hamid **Principal Enrolled Nurse, Operating Theatre**

Ever since Noraini took up nursing as a profession 35 years ago in 1979, she has been working in various healthcare settings, and with people of all ages and backgrounds. In juggling work and family, it had never crossed her mind to further her nursing career. But with a little push from her supervisor, Senior Nurse Manager, Fang Lai Mei, and encouragement from her family, Noraini gamely took up the three-month intensive nursing course in September 2013.

As an anaesthetic nurse in SNEC's Operating Theatre, Noraini's day-to-day duties not only involve assisting the anaesthetists during operations, but also mentoring the junior nurses as well as helping to coordinate 'live' surgery transmissions. She guides a team of about 20 enrolled nurses in performing duties in the pre-operative, intra-operative, and post-operative phases of the patients' surgical experience, and she always aims to be a positive role model for them.

"I've left school for more than 30 years, so this intensive course was definitely an eye-opener for me!" she said. Playing a mentoring role in SNEC for

many years, she found the preceptorship and mentorship module immensely valuable. Preceptors and mentors provide life-long lessons to new graduates and younger nurses ensuring that the quality of knowledge is passed on and remains strong for years to come.

"Through this course, I've learned that by sharing my knowledge and experiences as a mentor with junior nurses, I can help improve their job satisfaction, decrease orientation time and have a direct impact on how well these nurses will perform on the job. I can now confidently encourage the junior nurses to chase their dreams, to acquire more in-depth knowledge and skills in advanced nursing and professional development. They can do anything if they work hard. There are no barriers!"

"On a personal level, it is very gratifying to achieve a developmental certificate at this point in my career. It is reassuring too, to know that I still have the potential to improve my career prospects after more than three decades on the job," Noraini added gratefully. She is appreciative of the opportunity to develop further professionally and has since taken on greater responsibility to oversee the team of health attendants in the Operating Theatre.

Aisah Bte Mohamad Said Principal Enrolled Nurse, Day Ward

A stint with the Red Cross while she was schooling ignited a love for nursing for Aisah. This led to her taking up a nursing course with the School of Nursing after her GCE 'O' level to make her nursing dreams come through.

Specialising in the care of patients requiring day surgery, Aisah's role in the day ward includes pre-operative and post-operative care, pre-assessment, and patient discharge. She is also trained in the extended roles of venepuncture, intravenous drug administration, ECGs and wound care.

Aisah was apprehensive about coping between classroom lectures, assignments and hands-on practice opportunities when Director of Nursing, Ms Low Siew Ngim put her up for the Senior Enrolled Nurse Developmental course last year. But after a few rounds of persuasion, she finally accepted the offer as she saw it as an opportunity to enhance her nursing skills and knowledge.

"Initially, I really felt a little overwhelmed by the five modules. But as the course progressed, I realised it was not so daunting after all; in fact, it actually felt like a refresher course for me! The trainers were always hands-on to help us. They shared their knowledge and experiences on the job, which was very useful because it helped me remember the concepts more easily," said Aisah.

While she enjoyed all the modules, Aisah found the Heart Saver Course (AED) most helpful and refreshing. "The 'train-the-trainer' course featured group interaction and hands-on coaching. It used practice-while-watching technique, allowing instructors to observe us, providing feedback and guiding our learning".

To Aisah, it is indeed a personal milestone to complete the course. Right now, she is looking forward to take up more responsibilities in the area of patient counselling. Beyond that, she also hopes to take up even more relevant courses in future for professional development.

One Medifund Assessment for Patients at SingHealth Institutions

What is it:

In the past: Patients with multiple problems often had to visit different SingHealth institutions and sit through a 45-minute interview at each institution to apply for Medifund financial aid.

Now: Patients only need to apply for Medifund assistance with any one of the SingHealth institutions. This saves them the need of going through review process at different institutions. The assessment is valid for a period of six months.

What are the benefits:

This new scheme saves patients many trips shuttling between healthcare institutions, medical social workers and pharmacies. The streamlined process is more convenient for patients - they do not need to repeat their application to medical social workers many times, at different institutions. This translates to less hassle, allowing patients to spend more time on their treatment as well as resting and recuperating.

Which are the six SingHealth institutions in this scheme:

Singapore General Hospital, National Heart Centre Singapore, National Cancer Centre Singapore, Singapore National Eye Centre, National Dental Centre and SingHealth polyclinics.

AMD: Spot It Early



Normal Vision



Vision with AMD

Early signs of age-related macular degeneration, which can cause blindness, include distorted vision or a patch in the middle of one's vision.

Many older people may not know that they have age-related macular degeneration (AMD), which, if not treated in time, can lead to blindness. They may overlook small changes in vision, wrongly attributing them to other causes such as ageing. By the time their vision is distorted enough to bother them, it may be too late.

If they get to a doctor early enough, some types of AMD can be treated effectively. In its early stages, tiny yellow spots known as drusen may appear underneath a patient's retina. These spots can be observed only after an eye examination.

"Although the spots are an early sign of AMD, the condition usually does not move on to anything more serious. Most patients won't require treatment at this point," said Dr Laurence Lim, Consultant, Vitreo-retinal Department, Singapore National Eye Centre (SNEC).

But as the condition worsens, vision gets distorted. A straight line may suddenly appear wavy, or some words may go missing, especially if they are in the central vision (the focal point).

These symptoms usually affect only one eye at first, and may therefore go unnoticed unless the individual happens to cover the affected eye. As the condition advances, the symptoms become more obvious and, eventually, there will be a loss of central vision.

Wear and Tear

Typically affecting those above 50 years old, AMD is a result of the progressive ageing of cells in the retina, which is the thin sheet of 'photographic' tissue that lines the back inside wall of the eye.

There is dry and wet AMD. The dry form is more common. Damage to the retina occurs gradually and patients see less central vision with each passing year.

There is no treatment yet for dry AMD, but patients learn to adapt to their condition. With the help of the Low Vision Service at SNEC, they use various tools to cope with their condition. They also learn not to look directly at an object they want to focus on.

In the wet form, vision loss occurs more rapidly, sometimes over a few days. Abnormal blood vessels growing underneath the retina leak or bleed into the retina, causing a sudden worsening of central vision.

“Although a more dramatic type of AMD, it is treatable. But if left untreated for too long, which does happen with some older patients, there will be some scarring of the retina. At that point, it is irreversible,” said Dr Lim.

Treatment Options

If treatment starts before scarring sets in, it can improve vision significantly. “The gold standard now is to inject medicines into the eye, which cause the blood vessels to shrink away.” At SNEC, patients are given one injection every month for three months.

“After that, we re-evaluate. If things settle down, we stop the injections and continue monitoring them every month. If there’s new bleeding, we restart the injections,” said Dr Lim.

Doctors also look out for a particular variant of wet AMD known as polypoidal choroidal vasculopathy (PCV), which is more common in Asians. Patients with this subtype require treatment with laser in addition to injections.

In the past, successful treatment meant preventing severe visual loss. These days, doctors talk in terms of how much visual improvement can be achieved. “A patient may come in with being able to read only the big letters on the chart, but we can get them back to driving vision if they come early enough. Most of our patients get back good functional vision,” said Dr Lim.



Dr Laurence Lim
Consultant
Vitreoretinal Department
Singapore National Eye Centre

Did You Know?

Ageing is the main cause of AMD, but there is also a strong genetic component that puts some people at a higher risk. But you can reduce your risk with preventive actions like these:

- **Wear sunglasses**

This will help protect your eyes from the sun’s ultraviolet radiation.

- **Stop smoking**

It is one of the most clearly established risk factors. About 30 per cent of AMD patients seen at the Singapore National Eye Centre are smokers.

- **Eat right**

Foods rich in carotenoids (like carrots, tomatoes or pumpkins) and antioxidants (such as wolfberries) may help slow down the rate of deterioration. They may even prevent the spread of AMD to the unaffected eye. A low-fat balanced diet rich in green leafy vegetables is also recommended.

- **Seek help early**

Periodically close one eye to see if there’s any distortion in vision and seek help at the first sign of a problem.

- **Control blood pressure**

If you already have high blood pressure, take your medication regularly to keep it under control.

* Article excerpted from *Singapore Health*

What's Your EYEQ?

Do you have a mind-boggling eye condition? Or some burning questions related to your eye health?

Email feedback@sneec.com.sg with your full name, using 'What's Your EyeQ?' as the subject header, and we will get your questions answered.



Dr Anna Tan

Associate Consultant
Vitreo-retinal Department
Singapore National Eye Centre

Are eye check-ups a must?

Like any other organ in the body, the eye is also susceptible to various diseases and infections. Eye check-ups are therefore an important part of health maintenance for everyone – regardless of your age or physical health.

During a comprehensive eye check-up, your eye doctor does much more than just determining your prescription for eye glasses or contact lenses. He or she will also check your eyes for common eye diseases such as glaucoma, diabetic eye disease and age-related macular degeneration, on top of other disorders. Other diseases such as high blood pressure and diabetes can also be picked up during an eye examination as these diseases cause changes in the eye.



Who should get their eyes examined, and how often should it be?

Generally, adults should have their eyes tested to keep their prescriptions current and to check for early signs of eye diseases. Eye checks for children play an important role in ensuring normal vision development and academic advancement of the children.

All diabetic patients are advised to go for an eye check-up at least once a year. Those with a family history of glaucoma should also have routine eye screening even if they have no symptoms.

Elderly people above the age of 65 years are another group that should have eye examinations as they are more prone to problems. If they notice problems with their vision, they should seek medical advice and go for an eye check-up.

Those who reach 40 years of age may also want to get their eyes checked as that is when early signs of diseases can start to appear.

In general, it is not necessary for a young, healthy patient with no eye complaints to go for routine eye check-ups. When in doubt, consult your general practitioner for advice on whether a specialist eye check-up is required. If the doctor suspects that you have an eye problem during the screening, he or she will then order further tests.

SingHealth Excellence Awards 2014

On 16 May 2014, SingHealth honoured 43 colleagues for their outstanding commitment and contributions to patient care, research and education at the SingHealth Excellence Awards held at The Regent Singapore. Often going beyond and above the call of duty, these individuals have set themselves apart and raised the bar in delivering quality care and excellent service to patients.

Our heartiest congratulations to our two SNEC awardees, Dr Marcus Ang, Associate Consultant, Cornea Department and Ms Loh Huey Peng, Assistant Director of Nursing, Operating Theatre for being accorded the Distinguished Young Researcher Award and the Outstanding Nurse Award category respectively in the GCEO Excellence Awards category.

Mrs Christina Ong, Chairman of SingHealth Service Excellence Committee, SingHealth Board Member and Managing Director of Club 21, was the Guest-of-Honour with over 260 guests from various SingHealth institutions at the award ceremony. It was a celebratory evening with great food and entertainment put up by talented pharmacists from KK Women's and Children's Hospital and medical social workers from the Singapore General Hospital.

Distinguished Young Researcher Award



Dr Marcus Ang
Associate Consultant
Cornea Department

Outstanding Nurse Award



Loh Huey Peng
Assistant Director of Nursing
Operating Theatre

Healthcare Humanity Awards 2014

The Healthcare Humanity Award celebrated its 10th anniversary on 14 May 2014 with a record number of 76 recipients. Among the recipients was Senior Staff Nurse Yeo Liew Soo from the Singapore National Eye Centre (SNEC).

Ms Yeo Liew Soo started out as an enrolled nurse in 1986 and over the years, has continuously upgraded her skills and knowledge. She now holds a Bachelor's Degree in Health Science. Depositing her skills to help the needy, Ms Yeo has been on several overseas medical missions assisting to provide eye treatment and surgery in remote villages of India, Sri Lanka, Cambodia, Yunnan and Myanmar. Her motto in life and as a nurse is 'it's better to give than to receive.'

The Healthcare Humanity Award was first established in 2004 to recognise the efforts of Severe Acute Respiratory Syndrome (SARS) healthcare workers. President Tony Tan Keng Yam was the Guest-of-Honour at the awards presentation ceremony.



SNEC award recipient, Senior Staff Nurse Yeo Liew Soo (2nd from left) seen here with Director of Nursing, Ms Low Siew Ngim; Minister for Health, Mr Gan Kim Yong; Medical Director, Professor Wong Tien Yin and Chief Operating Officer, Ms Charity Wai

“ To work in healthcare you must have the heart for it. It's as simple as the desire to help and care for those in need. ”

~ Senior Staff Nurse Yeo Liew Soo

CONGRATULATIONS!

PROMOTIONS



Dr Anita Chan
Senior Consultant
Ocular Inflammation & Immunology Department
Singapore National Eye Centre



Dr Gavin Tan
Consultant
Vitreoretinal Department
Singapore National Eye Centre



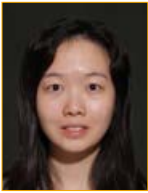
Dr Tan Yar Li
Associate Consultant
Glaucoma Department
Singapore National Eye Centre



Dr Daniel Chua
Senior Resident



Dr Kelvin Teo
Senior Resident



Dr Henrietta Ho
Senior Resident



Dr Daniel Ting
Senior Resident



Dr Loh Kai Lyn
Senior Resident



Dr Andrew Tsai
Senior Resident

WORLD'S MOST PROLIFIC AUTHOR ON DIABETIC MACULAR EDEMA



Professor Wong Tien Yin
Medical Director, Singapore National Eye Centre
Senior Consultant, Vitreoretinal Department, Singapore National Eye Centre
Academic Chair, Ophthalmology and Visual Sciences Academic Clinical Program (Eye ACP)
Group Director, Research, SingHealth
Head, Academic Medicine Research Institute (AMRI)
Vice Dean, Office of Clinical Sciences, Duke-NUS Graduate Medical School Singapore

AMERICAN ACADEMY OF OPHTHALMOLOGY AWARD

Senior Achievement Award



Professor Aung Tin
Deputy Medical Director (Research)
Head (Research, Education & Development) and
Senior Consultant, Glaucoma Department,
Singapore National Eye Centre
Executive Director,
Singapore Eye Research Institute
Academic Vice Chair (Research), Ophthalmology
and Visual Sciences Academic Clinical Program (Eye ACP)

Achievement Award



Dr Chan Tat Keong
Senior Consultant,
Refractive Surgery Department
General Cataract & Comprehensive
Ophthalmology Department,
Singapore National Eye Centre
Adjunct Clinician Investigator,
Singapore Eye Research Institute

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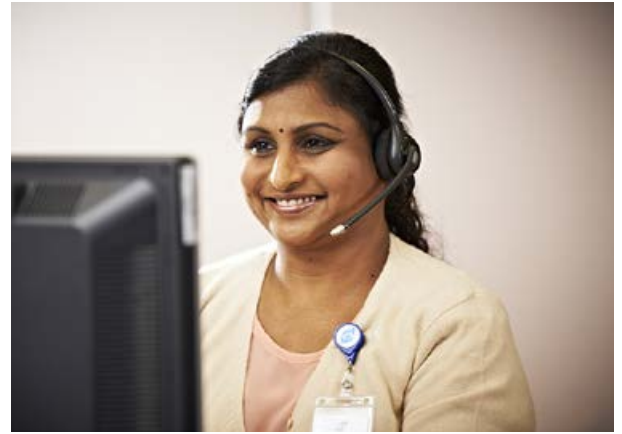
LASIK and Its Alternative

When 31 October 2014
Time 6.30pm - 8.00pm
Where Auditorium, Level 4, Tower Block, SNEC
 To register:
 Call 6322 8822 (office hours)
 Email: events@snec.com.sg



SNEC 25TH Anniversary International Meeting

When 22 - 24 May, 2015
Where Suntec Singapore Convention & Exhibition Centre
 Tel: 6322 8374 (office hours)
 Email: conference@snec.com.sg



Appointment Booking

Tel: (65) 6227 7266
 Fax: (65) 6227 7290
 Email: appointments@snec.com.sg
 Website: www.snec.com.sg

GP Hotline

Tel: (65) 6322 9399

SNEC Laser Vision Centre Hotline

Tel: (65) 6322 8891
 Fax: (65) 6226 3403
 Email: laservisioncentre@snec.com.sg
 Website: www.sneclaservisioncentre.com.sg

Opening Hours

Mondays to Fridays
 8.30am to 5.30pm
 Saturdays, Sundays & Public Holidays
 No clinic sessions

CONSULTATION IS
 BY APPOINTMENT ONLY

Tomorrow's Eye Care, Today[®]

Disclaimer:

The features and stories in SingVision are provided for informational and educational purposes only. The answers you receive from SNEC specialists are not intended to be a substitute for individual medical advice in diagnosing or treating an eye problem. Please consult with your doctor about your specific eye condition and/or concerns.

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Senior Consultant
Adj Asst Prof Ti Seng Ei

Associate Consultant
Dr Melissa Wong

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Adj Assoc Prof Lim Li

Head (Research) & Senior Consultant
Assoc Prof Jodhbir Mehta

Senior Consultants
Prof Donald Tan
Adj Asst Prof Ti Seng Ei
Assoc Prof Louis Tong

Consultants
Adj Asst Prof Anshu Arundhati
Adj Asst Prof Jean Chai
Adj Asst Prof Khor Wei Boon

Associate Consultant
Dr Marcus Ang (on HMDP)

GLAUCOMA

Head (Clinical Service) & Senior Consultant
Adj Assoc Prof Ho Ching Lin

Head (Research, Education & Development) & Senior Consultant
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Assoc Prof Tina Wong

Consultants
Adj Asst Prof Boey Pui Yi
Dr David Goh
Dr Rahat Husain
Adj Asst Prof Desmond Quek

Associate Consultant
Dr Tan Yar Li

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Senior Consultant
Prof J F Cullen

Consultant
Adj Asst Prof Loo Jing Liang

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Senior Consultants
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Dr Audrey Looi

Deputy Head & Consultant
Adj Asst Prof Sunny Shen

Senior Consultants
Prof Chee Soon Phaik
Adj Asst Prof Choo Chai Teck
Adj Assoc Prof Seah Lay Leng

Consultant
Adj Asst Prof Morgan Yang

Associate Consultants
Dr Yvonne Chung (on HMDP)
Dr Livia Teo (on HMDP)

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Head (SNEC Paediatric Ophthalmology Service)
Dr Quah Boon Long

Deputy Head & Senior Consultant
Adj Assoc Prof Audrey Looi

Senior Consultant
Adj Asst Prof Sonal Farzavandi
Adj Asst Prof Yvonne Chung

Consultants
Adj Asst Prof Zena Teo
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Adj Assoc Prof Lim Joo Ee
Assoc Prof Jodhbir Mehta
Prof Donald Tan
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Adj Asst Prof Wang Yee

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Adj Asst Prof Chan Tat Keong
Prof Chee Soon Phaik
Assoc Prof Gemmy Cheung
Adj Assoc Prof Audrey Chia
Adj Asst Prof Choo Chai Teck
Adj Asst Prof Sonal Farzavandi
Adj Assoc Prof Ho Ching Lin
Dr Aliza Jap
Adj Assoc Prof Lee Shu Yen
Adj Assoc Prof Lim Li

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Adj Asst Prof Yvonne Ling
Dr Audrey Looi
Adj Asst Prof Ranjana Mathur
Assoc Prof Jodhbir Mehta
Adj Assoc Prof Shamira Perera
Dr Quah Boon Long
Adj Assoc Prof Seah Lay Leng
Prof Donald Tan
Adj Asst Prof Ti Seng Ei
Assoc Prof Louis Tong
Adj Assoc Prof Sharon Tow
Adj Asst Prof Wang Jenn Chyuan
Dr Doric Wong

Senior Consultants
Dr Edmund Wong
Prof Wong Tien Yi
Assoc Prof Tina Wong
Assoc Prof Ian Yeap

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OPHTHALMOLOGY & LASER VISION CENTRE t d Rosman s Tat Keong Li Mehta g Ei Tseng Jenn Chyuan u Arundhati Fong ne Han Wei Boon			

OPHTHALMOLOGY DEPARTMENT

Consultants (con't) g n ong o	Consultants Adj Asst Prof Anshu Arundhati Adj Asst Prof Boey Pui Yi Adj Asst Prof Chan Choi Mun Adj Asst Prof Chan Jin Hoe Adj Asst Prof Jean Chai Dr David Goh Adj Asst Prof Daphne Han Dr Rahat Husain Adj Asst Prof Khor Wei Boon Adj Asst Prof Laurence Lim (on HMDP) Adj Asst Prof Zena Lim Adj Asst Prof Loo Jing Liang Adj Asst Prof Desmond Quek	Consultants (con't) Asst Prof Mohamad Rosman Adj Asst Prof Sunny Shen Asst Prof Gavin Tan (on HMDP) Dr Grace Wu Adj Asst Prof Morgan Yang	Associate Consultants Dr Marcus Ang (on HMDP) Dr Elaine Chong Dr Yvonne Chung (on HMDP) Dr Anna Tan Dr Tan Yar Li Dr Livia Teo (on HMDP) Dr Melissa Wong
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Singapore National
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22 - 24 MAY, 2015

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Aesthetic Eyeplastic • Paediatric Ophthalmology &
Adult Strabismus • Refractive Surgery • Vitreo-retinal

Other Programmes

Academic Clinical Program (ACP) Symposium
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