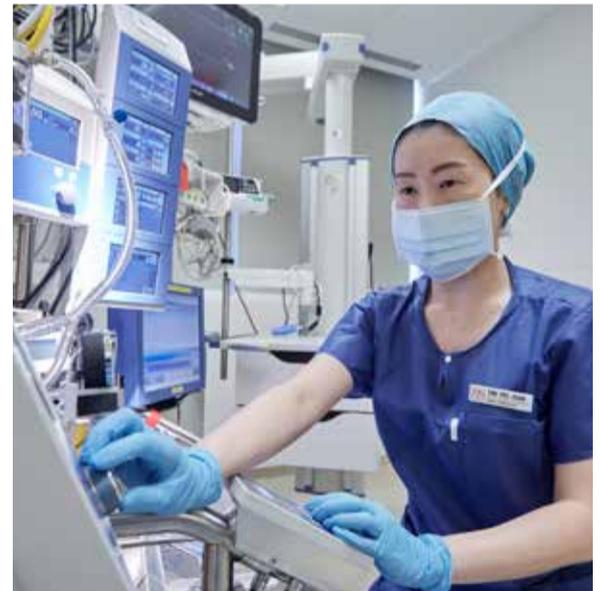
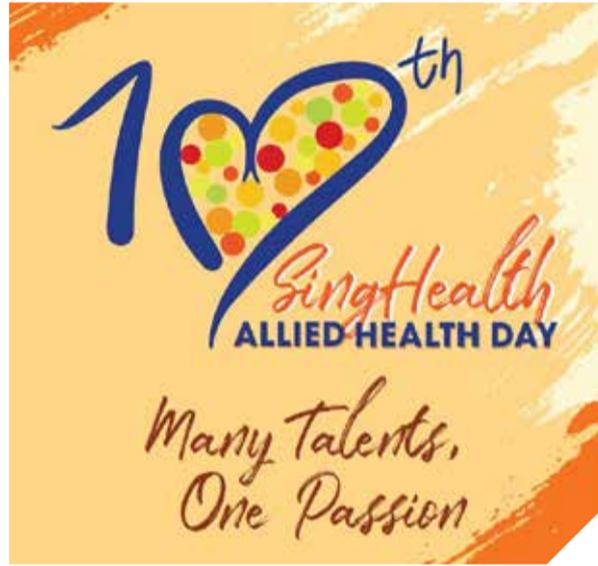


SINGAPORE Health

THE FLAGSHIP PUBLICATION OF THE SINGHEALTH DUKE-NUS ACADEMIC MEDICAL CENTRE



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At SingHealth, we are committed to nurturing generations of Allied Health Professionals. Whether you are a student or thinking of a mid-career switch, there are various schemes to equip you with the essential skills for a career in Allied Health.



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History of Allied Health Services in Singapore

As we celebrate 200 years of medicine in Singapore, here is a look back at the development of Allied Health Services.



1821

- ▶ The "Central Pharmacy" was established when the first General Hospital, later renamed Singapore General Hospital (SGH), opened in the cantonment for troops near the Singapore River.

1909

- ▶ With the set-up of a bacteriological lab at the General Hospital, Medical Lab Technologists were recruited to assist in the analysis of patient samples.



1940s

- ▶ The first dietitian in Singapore joined SGH.

1947

- ▶ The first Physiotherapy Department was established at SGH.
- ▶ Hospital assistants, known as x-ray assistants, were recruited to perform radiography services.



1948

- ▶ SGH started Occupational Therapy services.



1960s

- ▶ Speech Therapy was introduced in Singapore.
- ▶ The first Nuclear Medicine service was introduced in Singapore with the measurement of radioiodine (I-131) uptake by means of a gamma probe scintillation detector system and a rectilinear scanner.



1956

- ▶ Psychology services in Singapore first started in Woodbridge Hospital, now known as the Institute of Mental Health.

1953

- ▶ The first Medical Physicist was employed by SGH as a Hospital Physicist.

1950

- ▶ Prosthetists and Orthotists were introduced in Singapore, and were known as Appliance Maintenance Engineers.

1949

- ▶ Almoner's Department was established at SGH. Almoners were the forerunners of today's Medical Social Workers.



1967

- ▶ The first Radiotherapy Department opened at SGH.



1970s

- ▶ Sleep Technology research was conducted at the Norris Block in SGH.

1975

- ▶ Perfusion service was introduced at Tan Tock Seng Hospital (TTSH).

1977

- ▶ The Audiology unit with sound treatment rooms for hearing evaluations was set up at SGH's Ear, Nose & Throat (ENT) Department.



1982

- ▶ Embryologists were introduced at National University Hospital.

1986

- ▶ Transplant Coordinators were introduced in TTSH after the organ procurement unit was established.

1989

- ▶ Cardiac Technologists were introduced, along with the Clinical Measurement Unit, at SGH.

1991

- ▶ The first Vascular Laboratory was started in SGH with the introduction of vascular ultrasound.

2001

- ▶ The first cochlear implant surgeon at SGH brought in a Canadian expert, Ms Judith Simser, to start the Listen & Talk Programme. The first team of Auditory-Verbal Therapists in Singapore was trained by Ms Simser.

1997

- ▶ Child Life Therapy service was first introduced in KK Women's and Children's Hospital (KKH).



1996

- ▶ Radiochemistry Technologists were first known as Medical Laboratory Technologists in SGH.

1994

- ▶ Optometry Teaching Unit in Singapore Polytechnic was established. Since then, the recognition of abnormalities of the eye and referral to a medical practitioner has been considered the responsibility of an ophthalmic optician or Optometrist.



1993

- ▶ TTSH established the first Podiatry service in its Foot Care & Limb Design Centre.
- ▶ The Orthoptic Department began with one orthoptist in the Singapore National Eye Centre.
- ▶ Respiratory Therapy was pioneered in TTSH.

2006

- ▶ First batch of Oral Health Therapists who were primarily trained for School Dental Services graduated.
- ▶ In KKH, Clinical Counsellors were introduced as case managers when the hospital started a mental wellness service to cater to the psychological well-being of perinatal women.

2007

- ▶ Exercise Physiologists were introduced in Singapore at KKH.
- ▶ Genetic Counsellors were introduced at KKH.
- ▶ Music Therapy was formally established in Singapore through the founding of the Association for Music Therapy in September 2007.



2008

- ▶ Art Therapy was introduced at the National Cancer Centre Singapore.

2011

- ▶ The SingHealth Group Allied Health Office was established to facilitate interdisciplinary collaborations across SingHealth, build thought leaders in patient care, research and education, and encourage innovative and integrated working paradigms.

Allies in adversity

During the COVID-19 pandemic, many Allied Health Professionals went beyond the call of duty and stepped up to serve in various care settings. From working behind the scenes in the labs to fighting the disease head-on in migrant worker dormitories, they experienced a renewed sense of purpose and discovered new ways to work.

Eileen Goh

Medical Laboratory Scientist, Singapore General Hospital

T Shalini

Medical Laboratory Technologist, Singapore General Hospital



SGH's Molecular Laboratory routinely analyses patient samples to diagnose infectious diseases. When COVID-19 hit our shores, the team's workload tripled almost overnight. As Singapore crossed the 10,000 mark in number of cases, the laboratory was running tests continuously throughout the day and overnight. Apart from hospital samples, the laboratory also received samples from mobile medical clinics and mobile swab teams operating in the migrant worker dormitories.

“ A single batch of about 90 samples takes about four to six hours to process and analyse. On a normal day before the pandemic, we would work on about 140 specimens a day, and this increased by five times when COVID-19 hit. We managed this workload with longer work days and reinforcement from other laboratories in the SGH Division of Pathology. We had dedicated shifts, which worked solely on COVID-19 samples, while other staff handled both the routine work of testing for other viruses and COVID-19.

With the lab running tests on COVID-19 samples, everyone had to put on Personal Protective Equipment (PPE), including the N95 mask, even if they were not directly running the tests. When we processed the samples, the lab would be on 'lockdown' with no one allowed to enter or leave until the procedures were completed. Our lab is equipped with negative air pressure capabilities, a strict lab biosafety-standard procedure designed to prevent any possible contamination to its outside areas. When the tests were done, we would signal to our colleagues in the office outside the lab, so that we can open the air-lock of both doors at the same time. Our lab is very, very safe.



Louiselle Ramos

Respiratory Therapist, Sengkang General Hospital

COVID-19 patients who experienced acute or severe respiratory distress were warded in the intensive care units (ICUs) and placed on ventilators. Respiratory Therapists come into close contact with these patients when assisting them with the breathing machine. Despite the risk of increased exposure and the high anxiety levels during the pandemic, the therapists' passion and commitment to serve helped them overcome their fears.

“ It is always tough to see the critically ill unable to breathe properly, and this drives us to want to help ease their breathing difficulties. As COVID-19 patients in the ICUs were not allowed any visitors, we also worked on communicating with them as much as possible to reassure them of our care and convey their families' messages. This went a long way in building their confidence to get better.

Once, during our routine assessment, we encountered a patient who was very emotional. As she held our hands, we assured her that there was nothing to be afraid of, and that we were doing our best to monitor and make her feel better. The most rewarding part of our job is seeing patients who were paralysed and on high mechanical ventilator support being able to breathe on their own again! It is heartening to see them being taken off the ventilators, sit up in their beds, and eventually get discharged from the ICU.

Yap Xin Ying

Senior Oral Health Therapist, National Dental Centre Singapore

Xin Ying was deployed to the Community Care Facility (CCF) at Singapore Expo, which housed COVID-19 patients with mild symptoms and lower risk factors. As one of the four leaders in charge of Expo Hall 10, an admission hall handling incoming patients before they are assigned to a bed, she managed a team of 52 to ensure that operations ran smoothly.



“ The first week of operations was chaotic as we were unsure of what to do, and we had to deal with changes on a daily basis. We also had to adjust to shift work, which comprised two rotating 12-hour shifts. I am grateful that my team members recognised that uncertainty was part and parcel of the job, and were able to go with the flow.

Things settled down after two weeks. It was stressful to work at the CCF, but I believed I could overcome it. There was a lingering fear of catching COVID-19, which served as a wake-up call to be extra careful with infection control procedures. I also moved out of my home during that period to keep my family members safe.

I grew through this experience. I now focus on the more important things in life, and have a stronger sense of purpose. I also discovered new reserves of resilience in myself, learned to be more flexible and fluid, and have become a better team member and leader.

Tan Hwee Thiang

Senior Manager and Senior Principal Nuclear Medicine Technologist, National Heart Centre Singapore



When Hwee Thiang heard about the surge in COVID-19 cases in migrant worker dormitories, she wanted to do something to help. She stepped forward as a volunteer to support the operations at the dormitories and was part of the mobile medical team that screened migrant workers at various dormitories.

“ We had to quickly orientate ourselves with the unfamiliar, hot and dusty surroundings, and get down to work. That included setting up an efficient workflow from screening, manual registration, triage, consultation, pharmacy to swab testing. But even seemingly simple tasks, such as registration, were not so straightforward as the environment was vastly different from the usual patient care setting, and the identification of the workers was not easy as we were less familiar with foreign names. Everyone played an important role in this ‘assembly line’ to ensure speed, accuracy and adherence to safety measures while providing the best care possible.

Levinia Lim

Associate Psychologist, National Neuroscience Institute

Levinia was part of the welfare team at the Singapore Expo CCF for about six weeks in mid-2020. The team comprised pharmacists, human resource, administration and operations staff from various SingHealth institutions, as well as cabin crew from Singapore Airlines (SIA). They took care of the welfare of staff and dormitory workers, while the ops team would communicate with them to understand their needs, get feedback and suggestions, and more importantly, find solutions to improve care.

“ It was touching to see the level of care and attention the team gave to make the patients as comfortable as possible. I remember there was feedback from the dormitory workers that the rice was not cooked properly. The team immediately informed the caterer and did quality control checks the next day before the meals were served to ensure the food was okay. The workers were happy with their meals, and it was satisfying to know a small improvement could make a big difference.

Working at the CCF also reminded me of the importance of slowing down and paying attention to the finer details. For example, the CCF’s snack table needed to be kept full so that staff could quickly grab an energy boost when needed. When restocking the table, a SIA flight steward showed me how categorising the snacks neatly would make it easier for staff to choose something they would like to eat, and in turn, make their day a little better. The hours were long and the work was hard, but the teamwork and satisfaction of helping others got me through the difficult times.



»» Levinia (right) with SIA flight steward, Taufik Rahman (left).

Jae Shi Cheng Zi Jing

Medical Social Worker, SingHealth Polyclinics



As a Medical Social Worker, Jae’s role in providing psychosocial care for patients became exceptionally important during these trying times.

“ I was neither fearful nor surprised when I was deployed to the frontlines. Our sense of responsibility towards those who need help is the driving force for me and my colleagues to do our best and not give up, even in challenging moments. My patients also kept me going. I remember a patient who teared up during a counselling session when he thanked us for being there for the community. This incident is etched in my memory as he had never before shed a tear during his sessions, not even when he shared his heart-rending stories.

One of the biggest challenges I faced was handling crisis cases related to domestic violence or suicide while manning the National CARE hotline, which offers support to the public during the pandemic. With such time-sensitive cases, substituting our usual face-to-face consultation with counselling over the phone had its difficulties as these cases required swift assessment and decisive intervention. The guidance and support from my supervisors and colleagues, as well as the understanding from my loved ones, were key in overcoming these challenges.

Chen Hui Wen

Principal Occupational Therapist, Changi General Hospital

With the implementation of the Circuit Breaker in April 2020 to curb the spread of COVID-19, less urgent therapy sessions were rescheduled to keep patients safe. In June 2020, CGH Rehabilitative Services launched telerehabilitation services for occupational therapy, speech therapy, and physiotherapy.

“ The idea of telerehabilitation was not new, but many factors hindered the launch of such a service during peacetime. For example, there were concerns if it would affect the quality of patient care and if the public could accept it. With the global pandemic, it was timely for us to make it happen. We examined the list of patients who were suitable for telerehabilitation and started the service with them. The young professionals were a natural fit, as they were familiar with videoconferencing. For older patients, we needed to make sure that they could understand what we conveyed via telerehabilitation and remained safe during the sessions, so the presence of a caregiver was helpful. While telerehabilitation was not much different from normal consultations, we had to be extra observant when taking patients through rehabilitative exercises since we were not physically there with them.



There is great strength in unity despite diversity. Each of you brings your unique skills and expertise to the care of our patients so, together, we can get the best possible outcomes. The community of AHPs in SingHealth is very much appreciated, especially as we aim towards a more holistic and seamless experience for our patients. Thank you very much to all of you. Happy Allied Health Day 2021!

– **Prof Ivy Ng**
Group CEO, SingHealth

I am impressed by the dedication and professionalism of our Allied Health Professionals! You truly exemplify the slogan “Many Talents, One Passion”, and that one passion to improve our patients’ lives is what defines us at SingHealth. Happy Allied Health Day!

– **Prof Fong Kok Yong**
Deputy Group CEO (Medical & Clinical Services), SingHealth

My heartfelt thanks to our Allied Health colleagues for touching the lives of our patients and being a strong pillar of support in their journey to recovery. Through your diverse expertise and compassion, you bring hope, and provide therapy, emotional and psychosocial support. Many talents, one passion. Happy Allied Health Day!

– **Prof Kenneth Kwek**
Deputy Group CEO (Organisational Transformation & Informatics), SingHealth & CEO, Singapore General Hospital

A big ‘thank you’ to our AHP colleagues for your partnership and journeying with us through the past extraordinary year. You have been our allies through thick and thin in enhancing the health of our patients and population, and in displaying an exceptional level of professionalism.

– **Prof Lee Chien Earn**
Deputy Group CEO (Regional Health System), SingHealth

May I take this opportunity to thank all our Allied Health Professionals who have stood side-by-side with the entire healthcare team during the past challenging and difficult year. You have made significant and impactful contributions, and have shown courage, resilience and strength in helping Singapore carefully navigate this pandemic. We are deeply grateful and wish you all a very happy Allied Health Day — you certainly deserve it!

– **Prof Wong Tien Yin**
Deputy Group CEO (Research & Education), SingHealth & Medical Director, Singapore National Eye Centre

As Allied Health Professionals, you are an indispensable part of the care team. In your varied roles, you journey with our patients from diagnosis to recovery in ways that patients themselves may not realise. But your touch in caring for them is, most definitely, always tangible. Happy Allied Health Day!

– **Assoc Prof Ng Wai Hoe**
CEO, Changi General Hospital

“What shoulder? Neck lah!” That’s what my trusted physiotherapist told me when my orthopaedist referred me for ‘frozen shoulder’. Our Allied Health Professionals are every bit frontline professionals, and sometimes more experienced and make even better diagnosis as my case demonstrated. There is much to learn from our AHPs!

– **Prof Christopher Cheng**
CEO, Sengkang General Hospital

Happy Allied Health Day

We are so grateful to all our Allied Health Professionals for enabling the excellent, holistic and compassionate care delivered to our patients. A big ‘thank you’ for making a great difference in improving our patients’ lives. Happy Allied Health Day!

– **Prof Alex Sia**
CEO, KK Women’s and Children’s Hospital

Our Allied Health Professionals are integral members of the cancer care team who help our patients receive the best care. Many of you have worked hard to help bring us through the COVID-19 pandemic. We are proud of you and want to wish you a happy Allied Health Day for your tireless contributions to patient care!

– **Prof William Hwang**
Medical Director, National Cancer Centre Singapore

To our esteemed Allied Health colleagues from diverse professions, each of you brings such unique skills and expertise to the holistic care of our patients, which are essential in restoring them to health. We are deeply inspired by your dedication and unflinching sense of duty in overcoming the challenges of the pandemic together. Have a wonderful and happy Allied Health Day!

– **Assoc Prof Poon Choy Yoke**
Director, National Dental Centre Singapore

To all our Allied Health Professionals, we salute your commitment and passion for caring for our patients day and night! Your dedication is an inspiration to all of us! Best wishes on this special day!

– **Prof Terrance Chua**
Group Chairman Medical Board, SingHealth & Medical Director, National Heart Centre Singapore

Wonderful to have a great team with all our Allied Health Professionals! You play a crucial role in the overall care delivery to our patients. Because of you, we are able to provide the much needed comprehensive care to our patients. Because of you, we have found the true meaning of teamwork and collaboration. Thank you for your dedicated support! Happy Allied Health Day!

– **Assoc Prof Au Wing Lok**
Medical Director, National Neuroscience Institute

Allied Health Professionals do not just help our patients — they are the motivating force for patients to regain confidence in independent living back at home. Thank you for working with our patients to achieve their health goals!

– **Ms Margaret Lee**
CEO, SingHealth Community Hospitals

My heartfelt thanks to all our Allied Health colleagues for supporting the community’s well-being. We work as a team to truly meet all the healthcare needs of our patients, and it will never be complete without our Allied Health colleagues! Thank you for making us a great team — as one!

– **Dr Adrian Ee**
CEO, SingHealth Polyclinics

Navigating through COVID-19 safely

Allied Health Professionals overcame the challenges brought on by the pandemic through new initiatives and innovations.

Supporting paediatric patients in isolation

Being hospitalised in an isolation ward for COVID-19 can be a stressful experience, especially for paediatric patients since they are at a stage where physical activities are a necessary part of their development. To support these young patients during their hospital stay, the Child Life, Art and Music Therapy Programmes (CHAMPs) team at KK Women's and Children's Hospital (KKH) prepared a range of resources and activities to keep them engaged.

The team assessed the needs of these patients and reviewed other international programmes to understand how they can be effectively supported. They then developed and curated resources based on their clinical expertise and knowledge.

Using items such as building block construction toys, colouring books, card games, story books, and activity and resource care packs to engage different age groups, the team injected a sense of comfort and security to the hospital experience, which is particularly crucial in times of uncertainty.

"Young children are vulnerable to sudden changes, so familiar activities and routines are important in helping to create a sense of stability and calmness," said Tanuja Nair, Head, CHAMPS and Principal Child Life Therapist, KKH.

The team also created a series of videos and podcast recordings that come with the activity packs for interactive engagement.

Beyond supporting patients in the hospital, the team collaborated with colleagues from the hospital's Corporate Communications department to produce a series of wellness videos for staff and members of the public. The videos touched on topics such as self-care and coping strategies in a pandemic.

For the team, the most challenging part of the process was the inability to have face-to-

face conversations due to infection control measures. They found a way to continue working closely together to come up with creative and innovative ideas via online meetings. "We wrote scripts, filmed, and edited the videos and podcasts in a short span of time. We used our own equipment and resources, consolidating skills that were beyond our usual scope of practice," said Tanuja. "It was a great opportunity for us to enhance our working relationship, and have a renewed understanding of our strengths and areas in which we strive to improve."

Safe x-ray procedure for COVID-19 patients

When the number of COVID-19 cases spiked in early 2020, four general wards at Sengkang General Hospital (SKH) were converted into wards for COVID-19 patients who were stable without significant respiratory symptoms. To reduce the risk of cross infecting staff and other patients, radiography examinations for these patients had to be done within the wards, where two radiographers performed bedside chest x-rays using a mobile radiography unit.

Both radiographers had to be in full Personal Protective Equipment (PPE) throughout the x-ray process and the mobile radiography unit had to be disinfected twice after each session. "On average, it took the team about 26 minutes to complete one simple routine chest x-ray, with a significant portion of the time spent on disinfecting the mobile radiography unit, as well as donning and removing the PPE. This method of performing chest x-rays was not efficient, and we were determined to review the process and streamline it without compromising on infection

control," said Sng Li Hoon, Senior Principal Radiographer, SKH.

A five-member team was formed at SKH to study the possibility of performing chest x-rays through a glass, as the general ward room doors were fitted with a clear glass panel. Initial tests using an anthropomorphic phantom (objects that simulate patients) showed that there was no compromise on image quality, and radiation tests conducted by the medical physicist showed that there were no significant differences in radiation dose between the conventional method and the new method.

With the new method, only one radiographer needed to be in the patient's room while the other radiographer ('clean' radiographer) and the mobile radiography unit

remained outside. The 'clean' radiographer did not need to be in full PPE, translating to a 50 per cent savings in the number of PPEs used. As the mobile radiography unit did not need to be disinfected, the time taken to perform chest x-rays in these wards was reduced. This also mitigated any risk of cross infection.

This method of performing chest x-rays was then approved for use on COVID-19 patients in the cohort wards.

The team hopes that the study provides further insights into the provision of mobile chest radiography services in a safe and efficient way for isolation facilities. Beyond this current pandemic, this study can also be an important resource for hospital administrators when designing ward set-ups in the future.



»»» A team at SKH studied the efficacy of a new method of performing chest x-rays, which improves efficiency and reduces the use of PPE while keeping patients and staff safe.



»»» The CHAMPs team at KKH introduced a range of engaging activities and resources that cater to paediatric patients in isolation wards.

Redefining advanced practice

Delivering quality and patient-centric care involves rethinking patient needs. Find out how these Allied Health Professionals step into their new roles and implement processes to serve patients better.

by Jon White

Dr Vivianne Shih

Specialist Pharmacist,
National Cancer Centre Singapore

Vivianne is part of the first batch of qualified pharmacists in Singapore who are authorised to prescribe medicine and order tests for patients without requiring a doctor's countersignature. Through collaborative prescribing, patients who are deemed clinically stable can be co-managed by pharmacists and the clinical team. The pharmacists and the clinical team constantly communicate with each other to ensure that patients are well-cared-for and that safety is not compromised.

It is a big step for the profession and I am honoured to be a part of it. But I am also cognisant of the responsibilities that come with this new role. With this empowerment, pharmacists will be in close contact with the clinical team and can act as a touchpoint for patients during their course of care. We hope this improves patients' accessibility to care and increases their options in accessing medication.



Photos: Vernon Wong

Cherie Tong

Head, Dietetics, Sengkang General Hospital

In the past, only doctors were authorised to prescribe nutrition feeds, which can result in operational bottlenecks. Cherie championed the need for dietitians to be empowered to order nutrition feeds and saw through the application process that lasted a year. She also set up a cross-disciplinary team that obtained rights to perform Total Parenteral Nutrition (TPN) therapy, a nutrition intervention for high-risk cases.



The most rewarding part of being a dietitian is seeing my patients recover from their illness and improve their health. But providing quality nutrition care to patients cannot be achieved by dietitians alone. It is important to challenge the status quo, get buy-in from stakeholders, and collaborate with multiple parties to overcome obstacles and achieve a common goal.

Sin Sze Yarn

Advanced Practitioner Radiation Therapist,
National Cancer Centre Singapore

Sin works with a multidisciplinary healthcare team to handle complex cancer cases. With in-depth knowledge of clinical assessment and imaging in head and neck radiotherapy, Sin trains other radiation therapists to enhance overall patient experience and uphold consistency of care.

Radiotherapy is especially complex for head and neck cancer patients because of its proximity to many critical organs. Understanding and managing possible side effects can be challenging for such cases, so I do my best to dissect and explain the information thoroughly to my patients. I enjoy working with a team of highly dedicated and professional radiation therapists, and I value the strong synergy within the team. By building a bigger team of experienced staff, more patients will be able to benefit.



Siti Nurfarahdillah Binte Abdul Razak

Podiatrist, Sengkang General Hospital

Podiatrists are highly skilled in advanced wound care management and are often the first line of defence for foot problems. Since February 2019, podiatrists at SKH have been empowered to order x-rays and wound cultures on behalf of doctors. This expedites diagnosis and treatment, eliminating the need for patients to wait to see a doctor unnecessarily, saving them time and costs.



The most rewarding part of my work is the relationships I build with my patients. Since I see my patients regularly, I have the opportunity to get to know them better. Some of them who live alone said that they look forward to their podiatry appointments as they would have someone to talk to. We are happy to listen to their concerns, and at the same time, educate them on the importance of foot care.

Winning team

Patients with advanced heart failure, whose condition cannot be treated by conventional medical or surgical interventions, require a heart transplant. At the National Heart Centre Singapore, they are cared for by a multidisciplinary team whose expertise gives patients holistic care and rehabilitation.

by Jon White

➤ Jael Tay,

Principal Clinical Coordinator
Jael assesses each patient's suitability for a heart transplant and coordinates the procedures leading up to and after the surgery.

“I am the main point of contact for heart transplant patients, and I continue to stay in touch with them even after their surgeries. Besides assisting them in their routine evaluations, I follow up on their medication and keep close tabs on their daily activities. It is important to ensure that patients are scheduled for all necessary appointments and are making good progress in their recovery.”



Photo: Justin Loh

✔ Tan Yee Jean, Senior Perfusionist

During a heart transplant surgery, patients are placed on cardiopulmonary bypass with a heart-lung machine. Perfusionists like Yee Jean operate the heart-lung machine and maintain the haemodynamic status (flow of blood) of the patient throughout the entire period of the bypass.

“Besides operating the heart-lung machine, I also tend to other cardiac devices, such as the intra-aortic balloon pump, which aids in the cardiac output of the transplant patient just before or after the cessation of bypass; the cell saver, which salvages the patient's own whole blood; and extracorporeal membrane oxygenation to provide cardio and respiratory support in situations where the patient cannot be weaned off from cardiopulmonary bypass.”



➤ Loh Peh Rong,

Cardiac Technologist
As a cardiac technologist, Peh Rong assists cardiologists in diagnosing and treating heart-related ailments.

“Before and after each surgery, I carry out tests such as echocardiographic assessments and procedures such as cardiac biopsies to monitor the condition of heart disease patients. I also review patient documentation, schedule appointments and monitor patients' heart rates.”



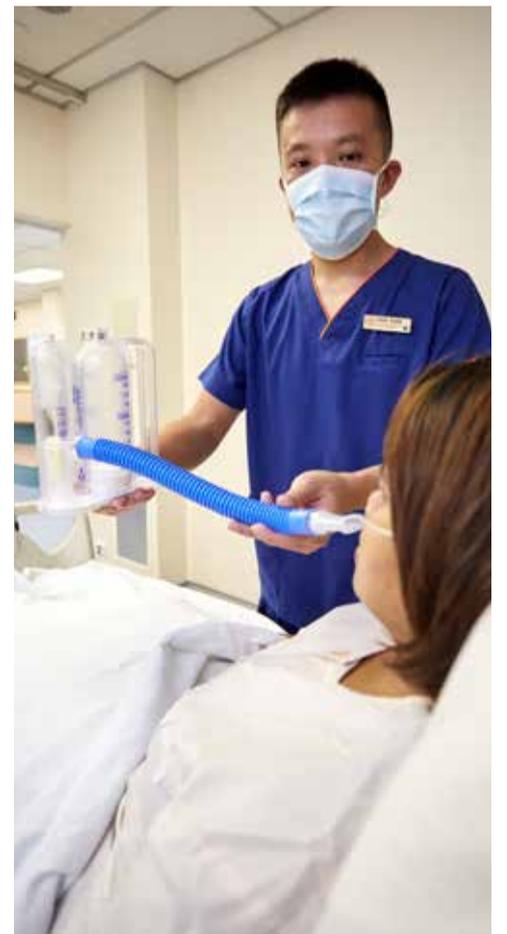
Photo: Mark Lee

➤ Chen Hebin,

Principal Physiotherapist

After a heart transplant, patients are sent to the Cardiothoracic Intensive Care Unit (CTICU) for recovery. At the CTICU, Hebin assists patients with breathing exercises and simple movements to improve muscle function in their limbs. Sitting and walking exercises also commence early in the CTICU to improve the patients' physical function.

“Carefully prescribed exercise helps patients in their recovery. Prior to their discharge, we give tips on how they can continue to exercise safely and take good care of themselves at home. This will prepare patients for outpatient physiotherapy, where they can focus on further improving their exercise tolerance and physical function.”



Photos: Vernon Wong

➤ Pindar Yu, Senior Principal Dietitian, Singapore General Hospital

Pindar offers heart transplant patients personalised dietary advice, evaluates their nutritional status, and works with them on their nutritional goals.

“I usually advise patients on nutrition balance and food safety, such as avoiding pre-cut fruits sold at fruit stalls, half-boiled or raw eggs, and raw seafood, as these foods are potential sources of pathogens that can cause infection. After undergoing a transplant, patients may feel an improvement in their general well-being and quality of life. However, I always remind them not to overeat as this may put excessive stress on the new heart.”

Beyond hospital walls

These Allied Health Professionals empower seniors to keep well, get well and age well in the community.

by Fiona Chen

SERENE LIM

Occupational Therapist, Changi General Hospital

An occupational therapist for five years, Serene provides assistance to patients who encounter difficulties performing activities of daily living (ADLs), such as showering and eating. Before COVID-19 struck, she supported patients under the Hospital to Home (H2H) programme who struggled to attend therapy sessions in the hospital due to their condition. She typically saw elderly patients with dementia who had behavioural concerns, or with physical disabilities.

During her home visits, she conducted functional assessments to assess how safe and able they were when performing ADLs, and explored alternative ways, such as home modifications or assistive aids, to help them do better. She also reviewed whether caregivers were coping well and worked with them to better engage patients in activities.

Working in the community was a rewarding experience, but it came with its own set of challenges. "It is important to understand that each patient is an individual with unique interests. Some patients, especially the elderly, may be less motivated to engage in therapy. Some of them have devoted their entire lives to work, and the idea of leisure and active ageing is a strange concept to them. So, we have to think of other ways to help them," she said.



JULIA LIM

Oral Health Therapist, National Dental Centre Singapore

Julia is a member of Project Silver Screen, a nationwide functional screening programme for Singaporeans aged 60 and above. It consists of three simple checks to ensure the functionality of one's vision, hearing, and oral health.

Apart from oral health screening, Julia shares tips on oral hygiene, such as how to brush and floss well. She goes the extra mile by advising her elderly patients on the next steps following their functional screening, such as the subsidies that are available and where to go for routine care. "I do not just care for the oral health of patients, but also their overall well-being! Although there are limitations to what I can do, I definitely try my best for them," said Julia.



HO PEY YING

Dietitian, SingHealth Polyclinics

Pey Ying's passion for food and nutrition inspired her to pursue a career as a dietitian. Her day-to-day role sees her shuttling between the three SingHealth polyclinics across Singapore to provide nutrition counselling to her patients. She was also part of the Golden Series workshops, a series of talks conducted by doctors and Allied Health Professionals, which provide information on healthy ageing to the public.

Other than nutrition strategies, Pey Ying also gives practical tips on healthier eating-out options and debunks common myths, such as the misconception that one needs to eat less as they age. "While it is true that the body requires less food with age as metabolism tends to slow down, some elderly actually eat a lot less than they need, leading to malnutrition," she explained.



Photo: Vernon Wong

SATYA VIJAY

Senior Principal Audiologist, Sengkang General Hospital

Satya's responsibilities include assessing patients' hearing capabilities and diagnosing ear conditions, such as tinnitus. He also does balance assessments and recommends hearing aids to patients. He was part of a team behind a hearing screening project for the elderly, which conducted a two-day pilot screening on 43 patients in 2018. Satya's main goal is to convince those who have failed the screening to get help.

"People tend to take a long time — some as long as 10 years — between getting diagnosed with hearing loss and getting a hearing aid. This is mostly because they are in denial. In fact, one-third of those whose screening results showed that they suffer some degree of hearing loss felt that they had no problems with their hearing. We want to support these people with education and counselling," said Satya.



Photo: Vernon Wong



Photo: Vernon Wong

WEE HUI LING

Optometrist, Singapore National Eye Centre

Hui Ling is trained to carry out tasks such as visual examinations, prescribing optical equipment to correct vision problems, and diagnosing common eye disorders. Once a week, she sees patients at the SNEC Eye Clinic @ Bedok, which provides comprehensive eye care for those living in Bedok, Simei and Tampines. Most of her patients are the elderly with conditions such as cataract, glaucoma and diabetic eye disease. She frequently finds herself getting quizzed on eye conditions by the seniors.

"They are interested in eye problems commonly seen in their age groups, such as cataract and dry eye. Sometimes we also have to debunk myths as they may be misinformed due to hearsay. For instance, they tend to confuse myopia with astigmatism, and I would tell them about the differences between these conditions and correct any misconceptions they may have," she said.

PRABHA TECHNA MITI

Senior Medical Social Worker,
Sengkang Community Hospital

Prabha helps patients transition from the hospital back to their homes. Her work begins when patients are admitted to the hospital. She observes them while they undergo rehabilitation to identify their needs, plans for their discharge, and does the necessary follow-up thereafter. "There is a lot of discharge care planning involved, and we work together with the patient and their family to help them get ready to go home," she said.

To ensure that patients and caregivers continue getting the help they need after they leave the hospital, Prabha also works with community partners to refer Meals-on-Wheels, home help services, home hospice and day care centres to the patients.

"I usually follow up with patients for about a week after discharge. But in some complex cases, my follow-ups can be for as long as a month.

For example, I may need additional planning for a single elderly patient who may have recuperated well enough to go home but still requires some assistance for daily activities," said Prabha.



Photo: Mark Lee

Helping hands, giving hearts

They may already play a big part in the healthcare setting, but these Allied Health Professionals go the extra mile by volunteering their time and services to the public.

by Fiona Chen

Volunteering for more than three decades

Growing up, Kwek Poi Wah, Senior Medical Lab Technologist, Singapore General Hospital (SGH), was always interested in biology and the root cause of diseases. It is little wonder that she eventually pursued a career as a Medical Lab Technologist, where she performs laboratory tests to analyse and diagnose diseases. But that's not all. She is also well-versed in another aspect of medicine — Traditional Chinese Medicine (TCM).



Photo: Justin Loh

As a qualified TCM practitioner, Poh Wai has been volunteering at the Chung Hwa TCM Clinic and Kwan Yin Free Clinic twice a week since 1983. She sees patients with various conditions, such as knee pain and arthritis, and helps them alleviate their symptoms through techniques like acupuncture and formulating herbal remedies. She believes in both Western and Eastern medicine, and finds great satisfaction in seeing patients benefit from both.

"I hope to be able to continue working at the lab and at my TCM practice for as long as I am able to," she said.

Training healthcare professionals in Sri Lanka



In October 2019, a team of Sengkang General Hospital (SKH) healthcare professionals travelled to Jaffna, Sri Lanka, to conduct a rehabilitation training programme. A collaboration between SingHealth and Singapore International Foundation, the programme sought to equip the local healthcare professionals with the skills to better manage patients with rehabilitation needs, particularly those who have had stroke and spinal cord injury.

The training programme comprised both theoretical and hands-on sessions, and each day typically concluded with a case study discussion with a patient and contributions from different professionals. "Each of us has different skills and expertise to share with the Jaffna team, and that made the experience holistic and interesting," said Mah Shi Min, Principal Physiotherapist, SKH.

Despite the language barrier, it was a rewarding experience for the team. "Throughout the trip, the participants were very enthusiastic about learning, which inspired us and made us realise that our contributions will make a positive difference to the patients whom they provide care for," she added.

Therapeutic singing for people with aphasia

For SGH music therapists Michelle Low and Grace Low, their volunteer work is a reflection of their careers. Every week, they conduct the Aphasia SG Choir, which first started out as an informal sing-along activity at Chit Chat Cafe, a free pop-up cafe for people with aphasia.

"Aphasia is an acquired communication impairment due to damage or injury to the 'language centres' of the brain, which is typically located in the left brain hemisphere," explained Grace. Music taps into the intact right hemisphere of our brains, which means that members of the Aphasia SG Choir are able to express themselves fluently through music and singing.

"Music bypasses the injured brain cells, and uses rhythm and memory to prompt words. Hence, even those with severe expressive aphasia are able to articulate big words with ease through music," Michelle said. Besides exercising their brains, the choir members are also enriched through the friendships formed and self-confidence gained.



Photo: Vernon Wong

Using CT scan machines for a different purpose

When Kenneth Yeo Chye Whatt, Principal Radiographer, SGH, is off from his radiographic duties, he spends some of his free time dabbling with the hospital's computed tomography (CT) scan machines — except he is not working with patients, but with artefacts. This is part of a collaboration with the National Heritage Board, an initiative spearheaded by Kenneth himself, which has helped conservators (professionals who repair and preserve cultural items) get an in-depth look and analysis of artefacts without the need to open the objects.

"The idea is to see how an item is constructed or if it is damaged," Kenneth said. Conservators use information from this cross-sectional analysis for research purposes or to advise on conservation methods.

"It gives me a sense of satisfaction that I am able to use my skills and knowledge to contribute beyond the healthcare industry," he added.



Photo: Vernon Wong

Supporting children with special needs in Jakarta

In February 2019, a team of occupational therapists from KK Women's and Children's Hospital (KKH) visited Jakarta, Indonesia, to conduct a workshop for 36 special education (SPED) practitioners from 10 institutions for children with special needs. This marked the start of a four-year partnership between SingHealth, Singapore International Foundation (SIF), and Foundation for the Development of Children with Special Needs Jakarta.

During the four-year partnership, the team aims to train 50 Indonesian SPED practitioners through a series of six workshops on an integrated approach to manage children with special needs. Among the pool of trainees, a core group of 20 "master trainers" will be identified and further equipped with the skills to train their peers in this field. "This will enable the cascading of skills to a wider pool of SPED practitioners in Jakarta, thus benefiting a larger community of children with special needs," said Soh Siok Khoon, Head, Occupational Therapy Service, Rehabilitation Centre, KKH. She leads the team in this partnership.

Since then, the team has conducted three workshops, covering topics such as basic and instrumental activities of daily living, handwriting skills, and visual perceptual skills. Siok Khoon believes that early intervention is key in supporting the growth and development of children with special needs. "Empowering children and the community enables long-term support and positive outcomes. With this in mind, I find it very meaningful to be able to share our knowledge and experiences with our Indonesian friends," she said.



Future-proofing healthcare

In the healthcare sector, continuous learning is crucial as new medical breakthroughs and technology are constantly being discovered and developed. Five Allied Health Professionals tell us how education has shaped their careers and impacted the lives of others for the better.

by Fiona Chen



Dr Lim Kun Lee
Principal Medical
Laboratory Scientist,
Singapore General Hospital

For the greater good

Dr Lim strongly believes in the importance of upgrading oneself. When she was given the opportunity to pursue a PhD in Microbiology and Immunology at the University of New South Wales in Australia under the SGH Formal Education Scholarship in 2011, she took it up without hesitation.

"I have always been curious to understand how viruses, as tiny as they are, have the ability to affect complex organisms such as human beings and animals," said Dr Lim, who

has been in her profession for 14 years.

It wasn't long before her scholarship proved fruitful — shortly after she returned, Dr Lim was tasked to lead her laboratory in developing sequencing tests during a hepatitis C virus (HCV) outbreak in 2015.

"We did not have an existing protocol to sequence HCV in our lab, so I contacted my former academic co-supervisors in Australia to find out if they could share their research protocols with us. With their protocol, we made some modifications, and set up amplification and sequencing in our lab here," Dr Lim added.

When asked about her four-year PhD journey, she said that the new knowledge obtained outweighed the challenges. "One of the biggest takeaways from the PhD course was gaining the ability to experiment independently, as well as learning to write and review scientific journals, which are important skills in diagnostics and research fields. Being able to instantly apply the techniques I've learned upon returning from Australia was certainly a career highlight, too," said Dr Lim.



Tay Young Soon
Senior Medical
Physicist, Singapore
General Hospital

Knowledge is king

Young Soon's job involves estimating the absorbed dose and dose equivalence of patients undergoing radiological examinations to ensure their safety. He is also responsible for investigating radiation

exposure to staff and patients.

To become a medical physicist, Young Soon attained a Physics degree from the National University of Singapore, and honed his skills through on-the-job training and hospital attachments. "My education journey was a fun one, and I always appreciate being able to learn from others," he said.

After nine years in the profession, he is pursuing a part-time Master's Degree of Physics and Engineering in Medicine from University College London, which will take two years to complete. "With personalised medicine, the role of a medical physicist is becoming even more crucial," Young Soon added.

He hopes to share his newly acquired skills with his juniors and embark on new multidisciplinary research projects. The course also enhances his teaching abilities, which were put to good use when he was appointed as a trainer in the SGH Radiation Response Team course and selected as a non-faculty member for the Nuclear Medicine Residency programme in SingHealth.



Soh Xin Jie
Senior Podiatrist,
Singapore General
Hospital

Paying it forward

With more than five years of experience as a podiatrist, Xin Jie believes that training remains an important part of her career.

She attended a refresher course on Local Anaesthesia Techniques for Foot and Ankle at the Singapore General Hospital-Postgraduate Allied Health Institution. The two half-day courses provided 30 podiatrists from various healthcare institutions with the skills needed for local anaesthetic injections for the foot and ankle. They also learned the pharmacological principles behind this procedure.

During the course, Xin Jie had the opportunity to teach a module on anatomy refresher. "As healthcare professionals, it is crucial that we keep ourselves up-to-date on the latest in patient care so that we are better equipped to help our patients. The more I learn, the more I grow — not just as a podiatrist, but also on a personal level," she said.

Photo: Vernon Wong



Tricia Tan
Respiratory Therapist,
Sengkang General Hospital

Empowering nurses in the ICU

When SKH opened its doors to the public in mid-2018, respiratory therapists like Tricia started training nurses who work in the intensive care unit (ICU) and high dependency unit on mechanical ventilation.

The four-hour workshop, attended by up to nine nurses each session, sees Tricia introducing the fundamentals of both invasive and non-invasive mechanical ventilation as well as the setting up and decontamination of the machines. The nurses also learnt about the different problems that they may encounter and simple ways of troubleshooting them. The workshop even lets the nurses experience what it feels like to be on the ventilator.

Prior to the workshops, only respiratory therapists and ICU consultants were able to operate different ventilators in the ICU. "Now that the ICU nurses have received training, they have the knowledge not only to set up the machines, but also identify basic ventilator issues and troubleshoot them," Tricia said.

Photo: Vernon Wong

Switching lanes

Driven by a passion to help others, two individuals from different walks of life left their jobs and took a leap of faith to become Allied Health Professionals.

by Elena Owyong



Catherine Chua
Senior Principal
Physiotherapist,
Physiotherapy Department,
KK Women's and
Children's Hospital

Previous Career:
London-trained Hairstylist

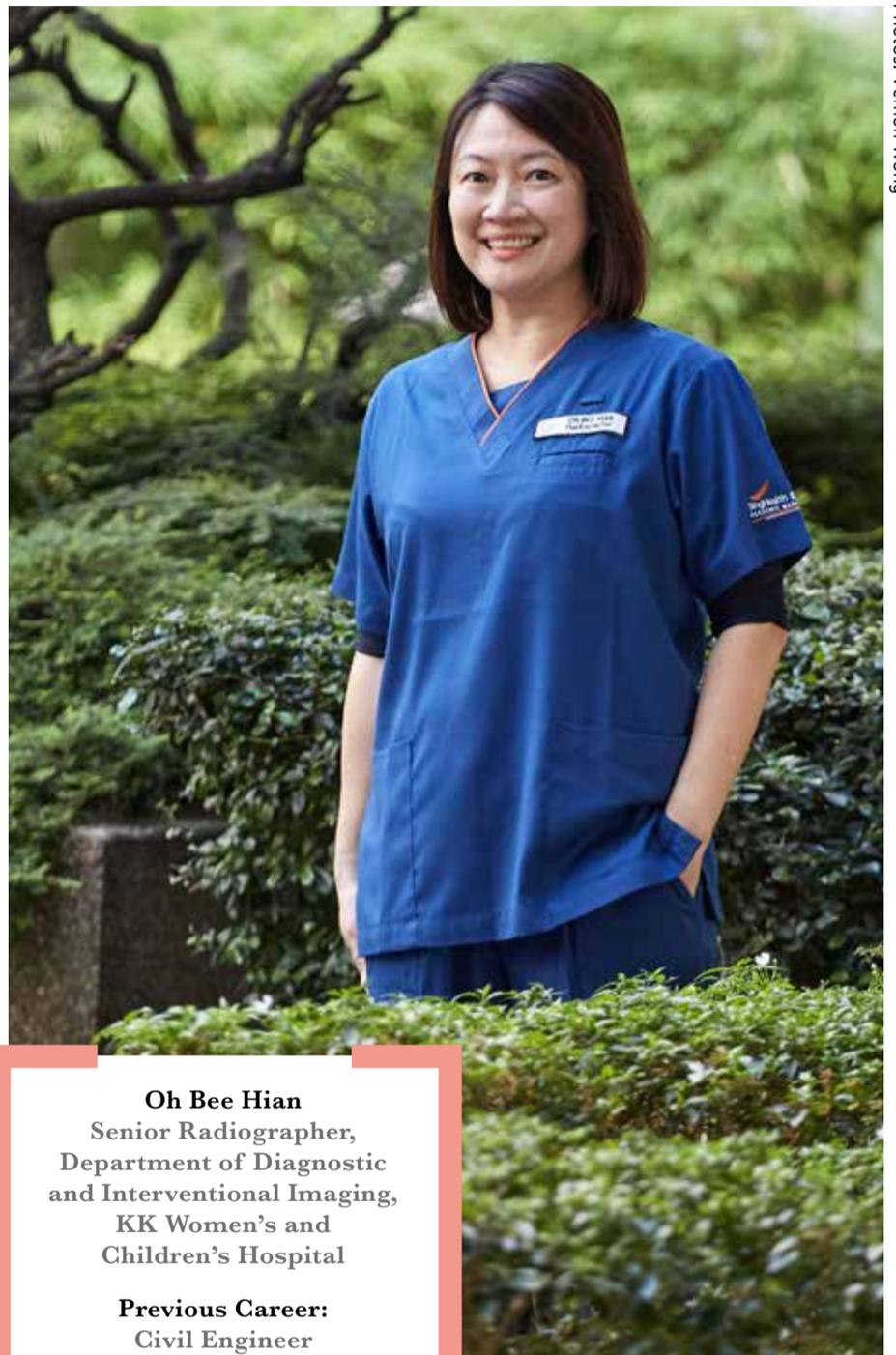
Growing up, Catherine aspired to be a nurse, but her parents were against the idea. She followed their wishes and became a laboratory technician, before switching to hairstyling at the age of 24. She was trained in Singapore and London.

More than a decade later, she became the boss of her own salon, having worked with well-known local and international names in the line. But she still felt that something was missing in her life. At 38 years old, Catherine took the plunge and signed up for a diploma in physiotherapy at Nanyang Polytechnic.

"In my previous career, I was largely dealing with hair and beauty. I wanted to go further than dealing with beauty and skin-deep issues. I wanted to heal the body, too," she explained.

Catherine, a Senior Principal Physiotherapist, was the former Head of the Physiotherapy Department at KK Women's and Children's Hospital, where she managed 40 physiotherapists and five therapy assistants. Known for the BoneBuilding osteoporosis exercise classes that she conducts, Catherine also specialises in women's health, working alongside patients with gynaecological, breast, gynaecological oncological and lymphoedema conditions.

For Catherine, the best thing about her profession is knowing that she makes a difference in patients' lives. "Taking a leap of faith to do a career switch and reaping plenty of experiences from it makes life interesting," she said.



Oh Bee Hian
Senior Radiographer,
Department of Diagnostic
and Interventional Imaging,
KK Women's and
Children's Hospital

Previous Career:
Civil Engineer

When Bee Hian was looking to leave the engineering industry, she spent some time identifying her strengths and skill sets before deciding on healthcare. She sought out friends and acquaintances working in the industry to understand the opportunities available and volunteered in various medical institutions before taking a leap of faith.

"Healthcare is truly the best fit for me, as it merges my interest in biology and my desire to help people in need," she said.

After obtaining a public health qualification overseas, she pursued a Professional Conversion Programme in Diagnostic Radiography at Nanyang Polytechnic. Now in her 40s, Bee Hian has no regrets.

"The joy of being able to help others has been a sustaining strength for me. For a fearful child or a woman in pain, being able to acquire a successful scan without the need for other interventions is a small victory for them and their families," she explained.

Bee Hian advises individuals seeking a mid-career change to bear in mind that there is something to learn from everyone.

"A career change takes time, dedication, and a whole lot of learning with humility. Be prepared to roll up your sleeves and work with younger colleagues, and stay optimistic and flexible to changes."

All in the family

Being an Allied Health Professional is a challenging but fulfilling career. What happens when there isn't one, but two AHPs in the same family?

by Fiona Chen

A love for lab

Working as a healthcare professional has brought Lau Lai Ching, Senior Medical Lab Scientist, Singapore General Hospital (SGH), and her son, Lim Zhi Hao, Embryologist, Department of Reproductive Medicine, KK Women's and Children's Hospital (KKH), closer than ever before.

Despite being exposed to healthcare at a young age because of his mother's work, Zhi Hao admits that his interest in life sciences was sparked only when he started attending university.

"My sister and I used to accompany my mother to the laboratory at her workplace when we were young, and I remember standing in a corner and staring at all the strange equipment that I wasn't allowed to touch," he recalled.

But all those time spent observing his mother at work must have influenced him, for he decided to major in genetics in university.

Having a parent who works in the laboratory, which sometimes commands an erratic schedule, isn't easy.

Lai Ching, who has been working at SGH since 1975, has had to occasionally miss family dinners when lab samples come in late. "Whenever I have to work overtime to complete assignments, I would try to compensate by cooking a good meal for my family or spending extra quality time with them on weekends."

Now that he is in the same line as his mother, Zhi Hao is able to empathise. "When I was young, I did not understand why she had



Photo: Justin Loh

to come home late, but I totally do now!" he said.

Other than their jobs, the mother-and-son pair has something else in common — a sense of pride for what they do.

In her 45-year-long career at SGH, Lai Ching has numerous achievements, including introducing new research techniques that she picked up from training programmes under the Health Manpower Development Plan to her

laboratory, and publishing research papers. With the new techniques she acquired, abnormality detection rate has increased, which has indirectly enhanced patient care.

As for Zhi Hao, he finds his work very gratifying as it brings joy to others, especially when he gets to share good news to couples trying to conceive. Would the father of two encourage his children to become AHPs too? "Definitely. It's a fulfilling career!" he reiterated.

Allied sisters

For sisters Phoebe Tay, Principal Dietitian, Sengkang General Hospital (SKH), and Deirdre Tay, Head, Speech Therapy, SGH, dinner conversations often revolve around their day's work.

"Speech therapists and dietitians work closely together in the medical setting, so we share common knowledge and experiences, and are able to relate to each other," said Phoebe, the younger of the two.

Due to their four-year age gap, the sisters were not as close growing up, unlike the travel buddies that they have become today. "Now, we have a common understanding of our workplaces and work demands. It helps me understand and empathise with Phoebe whenever she has questions or concerns to share," Deirdre added.

Though their job experiences now bear similarities, their initial career aspirations were quite different.

Becoming a dietitian was an easy decision for Phoebe. Her interest in Food and Nutrition as a subject in secondary school led her

to pursue a diploma in Food Science and Nutrition, before completing a degree in Nutrition and Dietetics.

"I have been a dietitian for 12 years. My role has evolved from being mainly a clinical dietitian to taking on additional roles, such as training. It really motivates me when I am able to help my patients improve their quality of life through a healthy diet, and teaching them the link between food and health."

On the other hand, Deirdre's inclination towards a people-oriented profession was why speech therapy appealed to her when she was researching for a potential university course. To ensure she was making an educated decision, she shadowed and consulted several speech therapists before taking the plunge.

"In the past 15 years working in SGH, I have had the chance to practise clinically as a speech therapist, to share my knowledge as a clinical educator, and now, to learn to lead in my role as head of department. There have been no dull moments, and I've enjoyed my career so far!" said Deirdre.



Photo: Vernon Wong

Thinking out of the box

From harnessing digital technologies to redesigning work processes, find out how Allied Health Professionals are working together to solve shared challenges.

by Jon White

Picking up the paintbrush

Yumi Watanabe
Occupational Therapist,
Bright Vision Hospital

Efen Tan
Senior Medical Social Worker,
Bright Vision Hospital

Yumi and Efen are no strangers to the psychological and emotional benefits of art on their patients.

"We have been engaging palliative patients through art and noticed that this helps them explore and dissipate negative emotions, such as sadness and fear," Yumi said.

Recognising the potential psychosocial benefits of art therapy to other patients, such as those on rehabilitation, Yumi and a BVH Medical Social Services colleague took up an art therapy course at Singapore General Hospital (SGH), which equipped them with patient engagement strategies



Photo: Justin Loh

using art. This led to the set-up of the Art Focused Psychosocial Support (AFPS) programme in September 2019. A workshop was subsequently conducted at BVH for Efen and the remaining nine members of the team, to introduce and familiarise them with art therapy rehabilitation.

The programme integrates psychotherapeutic techniques with

creative processes to help patients cope with stress, boost their self-esteem, and improve their social skills. Each week, Yumi and Efen go on an emotional journey with their patients.

"We often tell our patients that art does not need to be beautiful as the most important thing is for it to be an outlet for self-expression. AFPS has been successful in

breaking the ice, especially when we engage patients who are more socially withdrawn, or mute and deaf," Yumi explained.

"Depending on their stage of recovery, we provide different art supplies to different patients," Efen said, elaborating that an option like the use of colour pencils requires less physical exertion. "We had a patient who created colourful flowers out of felt despite having a broken right arm. We were all amazed, and she, too, became increasingly confident of her mobility up until her discharge."

Occupational therapists play an important role in assessing the patients' motor skills before they are enrolled into AFPS. They also flag up any new anxieties that patients may have, which medical social workers can address in their interactions. The programme has fostered deeper collaboration between the two professions, and the staff have also picked up skills from one another to better support patients.

Therapy for children going virtual

Lydea Gn
Senior Speech Therapist,
KK Women's and
Children's Hospital

Even before the COVID-19 pandemic, speech therapists at KK Women's and Children's Hospital (KKH) found telehealth therapy immensely useful and convenient for their patients.

"Some children may feel shy in unfamiliar environments like the hospital, and it can be difficult for healthcare professionals to coax them out of their shells," said Lydea.

Engaging children through video conferencing solves such problems, but presents some unique challenges, too. "We had to get creative about sustaining



Photo: Vernon Wong

a child's attention through a screen, as well as how we could execute our therapeutic strategies digitally. For example, we made sure that our video

conferencing platform has a whiteboard function that allows the therapist and the patient to write and draw on the same screen," said Lydea.

While just 52 per cent of patients were open to telehealth speech therapy in 2017, the acceptance rate increased to 73 per cent last year. The number of telehealth sessions also increased from 35 to 153 in the same period.

"Caregivers appreciate the time savings from not having to travel to and fro the hospital. Some parents are also relieved that their children are able to receive therapy in a familiar environment," said Lydea.

"In certain cases, telehealth can be seen as more beneficial compared to traditional therapy because video conferencing allows therapists to better observe and learn about a child's home environment, including the toys they play with and what they do at home."

One-stop pharmacy service for patients with multiple appointments

Chan Chin Yong
Senior Pharmacist,
Sengkang General Hospital

Pharmacists at Sengkang General Hospital (SKH) noticed that patients with several appointments and multiple medications to collect in a single day tend to get confused by their numerous bills and medications.

To create a more seamless patient experience, the pharmacists introduced Medication Management Counters on each floor so that patients can have their medications reviewed and make payment for one combined bill for the day easily.

"Patients can approach any Medication Management counter to conduct their clinical review. Here, they will also only receive one bill for the entire day's visit," said Chin Yong. Since pharmacists work closely with the doctors, this also makes it easier for them to iron out any clinical issues and carry out interventions on the spot.



Photo: Tech Photo

Making eye drops less daunting

Priscilla Lim
Master Medical Social Worker,
Practice Manager, Singapore
National Eye Centre

When Priscilla saw that some elderly patients were unable to apply eye drops on their own after surgery, she started reviewing commercial eye drop applicators. She realised that existing applicators were usually tailored to a specific brand and were not readily available locally. Hence, she decided to develop her own.

During a call for projects with Ngee Ann Polytechnic, she submitted a proposal to develop an eye drop applicator that would be compatible with most eye drop brands, and worked with the polytechnic students on the initial prototype. "The healthcare industry can benefit from working with young innovators as they are creative, energetic, and in touch with the latest technologies," she said.

After the project's completion, she worked with a vendor to further improve the prototype for commercialisation.



In the process, Priscilla reached out to pharmacists for their input on the different bottle sizes for eye drops, as well as ophthalmologists and occupational therapists for their feedback on product usability. She also collaborated with the Singapore Eye Research Institute on patenting and commercialising the innovation.

The eye drop applicator, OptoAid, was launched in end-2018. It helps patients apply eye drops easily and independently, and offers much more flexibility in the types of eye drops it can be used with.

Empowering seniors through video games

Hozaidah Bte Hosain
Senior Principal
Physiotherapist, Outram
Community Hospital

Tay Ee Ling
Senior Principal
Physiotherapist, Sengkang
General Hospital

In view of an ageing population, Hozaidah and Ee Ling saw a need to develop an efficient method of identifying frail seniors who are at greater risk of falls, as well as engaging and sustainable preventive programmes to reduce these risks and delay the progression of physical frailty.

With their efforts, elderly patients who are newly discharged from the hospital are offered a self-guided home exercise programme, or telerehabilitation



Photo: Vernon Wong

programme, through which therapists conduct virtual exercise classes. Alternatively, they can opt for a set of video games that aim to improve their strength, balance and cardiovascular tolerance.

The video games require more

than just engaging one's thumbs and fingers, Hozaidah said. "Patients may need to move an arm, leg, or a combination of both to achieve a goal or earn points before progressing to the next level. This gamification aspect

acts as an incentive for elderly patients to exercise, as they have to clear the challenges to progress to the next level," she explained.

To produce the video games, Hozaidah and Ee Ling brainstormed for ideas with their team and went through rounds of modifications with feedback from colleagues and inpatient seniors. They then worked with a video design partner to bring their ideas to life.

"The feedback we received during the trial period was very encouraging," Ee Ling said. "Most of the elderly patients enjoyed the games and were kept physically active."

"Bringing clinicians, video designers and researchers together to develop a video game was challenging, but we were guided by a common goal — to provide better care for our elderly patients," Hozaidah added.

Mind your health

There has been increased public awareness on mental health as an integral component of overall health, but it still faces its fair share of misconceptions. Three Allied Health Professionals share how they break the taboo through their line of work.

by Fiona Chen

Dian Handayani

Senior Art Therapist, Singapore General Hospital

What is art therapy and what does your role as an art therapist entail?

Art therapy combines psychological therapy with creative expression, allowing patients to express their emotions through art. It provides a medium for them to communicate their concerns and emotions that may not be easily expressed in words.

Artistic expressions can enhance emotional and psychological well-being. Through art, I provide patients with a safe space for them to get in touch with their innate potential, which can be hampered by chronic illness, trauma, disability, or mental illness. The therapy sessions are centred around the patients' needs, and I hope this helps them rediscover and nurture their possibilities.

What are some of the common myths associated with art therapy?

Some patients are reluctant to try art therapy as they feel that they are not good at art. However, it is not about the artwork they produce, but using art as a resource to understand themselves better. Another common myth is that art therapists are able to read a person's mind just by looking at his art. I can't do that because the patients' interpretation of their own art is personal to them. For instance, the colour red may imply anger for some, but to others, it symbolises love and passion.



Photo: Justin Loh

Senior Art Therapist Dian Handayani encourages patients to better understand themselves and express their emotions through art.

Don't forget self-care!

Here are some tips from our Allied Health Professionals on how you can take charge of your own mental well-being.

Don't neglect the basics

Eat regular and healthy meals, have sufficient sleep, build physical activity into your routine, and go for your medical appointments.

Take time to recharge

Engaging in simple activities, such as meditation or listening to music, can go a long way in helping you gain mental clarity in your day-to-day life.



Learn to say "no"

We often struggle to say "no" and take on more than we can handle in both our professional and social roles. Learn to set boundaries, inform your supervisor if expectations are unrealistic, and don't bottle up stress or anxious feelings.

Join support groups

Joining a support group is therapeutic as people in similar circumstances have an opportunity to meet and rally together. You will also be able to exchange tips on how to manage problems that arise.

Express gratitude

Pen a note or send a message to someone you feel thankful for. Expressing gratitude activates the oxytocin system, which is associated with bonding. This leads to stronger connections with others, and in turn enhances your mental well-being.



Poh Shi Qi

Medical Social Worker, Sengkang General Hospital

What are some of the issues that you help patients and caregivers with?

Patients and caregivers are referred to medical social workers (MSWs) for reasons including psycho-emotional issues stemming from a medical condition (such as diagnosis of cancer), a procedure (such as amputation), or caregiver stress. The sudden onset of a condition can be overwhelming for patients and caregivers. Hence, we pace our patients and journey with them to help alleviate their anxiety.

Patients may feel hopeless at times, and caregiver burnout may surface as a patient's care needs increase. MSWs assess each case based on various factors, such as the patient's stage of life, family and community support, financial resources, and the patient's and caregiver's coping styles. We then make appropriate recommendations to support them in their care journey.

What are some of the misconceptions about the role of a MSW?

The most common misconception is that MSWs only provide financial assistance — it is but a small part of our work. Another misconception is that MSWs are volunteers and do not require qualifications. In reality, MSWs have to obtain a professional degree in social work before joining this field.



Photos: Vernon Wong

»» Medical social workers like Poh Shi Qi support patients and caregivers in ways beyond providing financial assistance.



»» Showing genuine care and empathy for patients is Senior Clinical Counsellor Yasmin Hassan's key approach to counselling.

Yasmin Hassan

Senior Clinical Counsellor, Department of Psychological Medicine, KK Women's and Children's Hospital

How does a day in the life of a clinical counsellor look like?

The role of a clinical counsellor at KKH is very dynamic. We provide counselling, conduct risk assessments, and offer supportive services to our patients with mental health conditions and their families.

As part of mental health promotion, we conduct emotional health screenings for postnatal mothers. The aim is to identify those at risk of postnatal mental health conditions, and provide early intervention and support services for them.

We also look into case management for our patients. We monitor medication compliance, provide psycho-education, and collaborate with community partners to optimise treatment and support for our patients from tertiary to primary care providers.

How do you deal with patients who may be skeptical about receiving counselling?

It is important to understand what motivates a patient. I always try to uncover my patients' reservations about undergoing counselling.

I once had a patient who was hesitant about counselling because of a prior negative experience. Exploring what she found helpful and unhelpful, I journeyed with her to build our therapy sessions and allowed her to steer the sessions in ways she felt would be beneficial. By the end of each session, she was looking forward to the next appointment!

There are two key criteria that enable us to build a positive therapeutic relationship with patients: empathy and validation. Understanding experiences from their perspectives and giving them autonomy in deciding what issues to discuss are helpful. Showing care and having a warm presence make the patients feel at ease and willing to share more about their challenges. I believe these factors help create a positive counselling experience for my patients.

I'm an AHP too!

You may not have heard of their professions, but this team contributes to patient care through their various specialised fields.

by Jon White



Nur Shazalyn

Child Life Therapist, Child Life, Art and Music Therapy Programmes (CHAMPs), KK Women's and Children's Hospital

Shazalyn helps children who are hospitalised cope with being in an unfamiliar environment by preparing and educating them about hospital procedures.

“Through preparation, education and play, I aim to be a safe and reliable figure whom children and their families can approach as they cope with the stress of hospitalisation. I feel most fulfilled when a child breaks into a smile, as it shows that I have made a difference in his or her hospital experience.”



Tarryn Shaw

Senior Genetic Counsellor, National Cancer Centre Singapore

Tarryn supports patients and their families who are at risk of hereditary conditions by advising whether genetic testing is appropriate, interpreting genetic test results, explaining the nature and significance of their conditions, and advising appropriate risk management.

“Genetic advancements are shaping the way we practise medicine, and so much can now be done in terms of management, treatment, and prevention of diseases. By understanding an individual's risk for a particular condition, we have the chance to potentially reduce or even prevent risks associated with the said condition from occurring.”



Alvina Tham

Neuro Technologist, Sengkang General Hospital

Alvina helps diagnose symptoms and identify the root cause of nerve damage through techniques such as Nerve Conduction Study (NCS) and Electroencephalogram (EEG).

“It is common to meet people complaining about numbness in their hands or feet. I enjoy being able to help my patients diagnose nerve conditions so that they can receive timely treatment.”

Nigel Wong

Prosthetist & Orthotist, Orthotics and Podiatry Service, KK Women's and Children's Hospital

Nigel assesses patients and takes measurements for the design and fabrication of artificial limbs (prosthetics) as well as external mechanical devices to support weakened or abnormal joints or limbs (orthotics).

“There is so much fulfilment when working with paediatric patients! You establish a rapport with them because most of their conditions are for life or till they reach adulthood. To see a child who could barely walk or even stand progress from unsteady steps to a more comfortable and confident gait is simply satisfying.”



Qiu Xiangming

Nuclear Medicine Technologist, Singapore General Hospital

Xiangming uses radiation to promptly diagnose and treat a range of medical conditions and diseases.

“My job involves using a safe amount of radiation to scan, diagnose and treat diseases. Nuclear Medicine is an exciting field with constant new discoveries and breakthroughs. We are at the forefront of this emerging specialty, and the chance to learn something new never ceases to keep me motivated.”



Pamela Ang

Senior Radiochemistry Technologist, Singapore General Hospital

Pamela performs quality checks on all radiopharmaceutical products to ensure that work is done in accordance with standard procedures and that nuclear medicine imaging can be performed smoothly.

“My work involves the preparation of different radioisotopes for diagnosis and treatment. I want to make use of the laboratory skills I learnt in school to effectively treat patients with cancer and other diseases, whose lives may be at stake.”



Micheal Lim

Head and Principal Clinical Exercise Physiologist, Sports Medicine Programme, KK Women's and Children's Hospital

Micheal prescribes exercises and promotes physical activity participation among children with varying health conditions, with an aim to improve their movement abilities, physical function, fitness and long-term health.

“The most rewarding part of my job is seeing our advice help children gain confidence in their movement abilities, resulting in higher levels of physical activity participation. What keeps me going is witnessing how improvements in their physical abilities enhance their self-confidence and self-esteem, and elevate their overall daily functions — physically, mentally and socially.”