



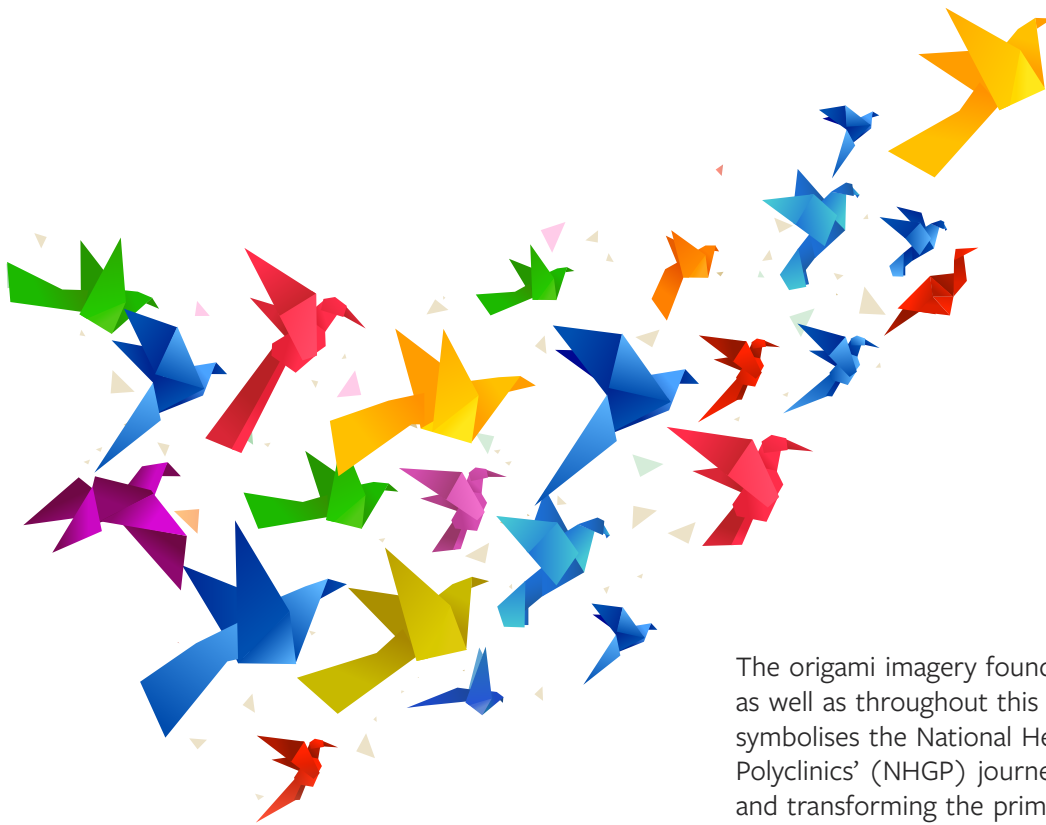
National Healthcare Group
POLYCLINICS



ADVANCING TOWARDS THE NEXT LEVEL

A Future-Ready Primary Care Ecosystem

Annual Report FY2017



The origami imagery found on the cover as well as throughout this Annual Report, symbolises the National Healthcare Group Polyclinics' (NHGP) journey in shaping and transforming the primary healthcare ecosystem in Singapore. Like the limitless forms possible with origami, NHGP is committed to continuously innovate and adapt to meet the evolving primary healthcare needs of the population.

On the cover, the flight of the lively cranes depicts NHGP's energy and unified journey as the organisation forges ahead on its journey to co-create, shape and transform primary care with our healthcare partners and the community. At the heart of NHGP's efforts, is a goal to create a world-class relationship-based primary care ecosystem that is future-ready.



OUR VISION

To be the leading health-promoting institution that helps advance Family Medicine and transform primary healthcare in Singapore.

OUR MISSION

We will improve health and reduce illness through patient-centred, quality primary healthcare that is accessible, seamless, comprehensive, appropriate and cost-effective in an environment of continuous learning and relevant research.

OUR VALUES

Integrity

We are committed to the highest standards of ethical conduct.

Respect

We treat everyone with honesty, decency and fairness.

Compassion

Our paramount concern is the welfare and well-being of our fellow human beings. We sympathise with those struck with illness and suffering and will do our best to help alleviate their condition.

Collegiality

We nurture success by promoting collaboration, participation and trust between individuals and other healthcare organisations, within an environment of sharing and mutual respect.

Professionalism

We are committed to being the best in what we do and achieving the best possible outcome for our patients.

Social Responsibility

We contribute positively to the well-being of the community.



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GROUP CEO'S MESSAGE



Advancements in healthcare and medical technologies have proven to be a double-edged sword. While the advancements have significantly increased Singapore's life expectancy, a longer life might also mean living longer with diseases. By 2030, 1 in 4 Singaporeans will be aged 65 and above compared to 1 in 8 today. This in itself poses challenges by way of an increased prevalence of chronic diseases in the population.

To meet these challenges, the Ministry of Health (MOH)'s Healthcare 2020 Masterplan sets out Singapore's blueprint for a healthcare system that moves beyond healthcare to health, beyond hospital to community and beyond quality to value. These three key shifts mark the move towards ensuring that the healthcare system will be robust enough to cater to the needs of a growing and greying population, and be sustainable in the long term.

FUTURE-PROOFING OUR HEALTHCARE SYSTEM

With this goal of future-proofing our healthcare system in mind, MOH announced in 2017 that Singapore's healthcare clusters were to be reorganised into three integrated clusters in the Central, Eastern and Western regions. For the primary healthcare arm of the National Healthcare Group (NHG), this meant welcoming Geylang Polyclinic and saying goodbye to the polyclinics in the west. NHG Polyclinics (NHGP) now comprises six polyclinics which serve the population in the Northern and Central regions with three more in the pipeline.

However, NHG cannot continue to build more and more polyclinics in order to meet the growing primary healthcare demands, and has been adopting a multi-faceted approach to expand its primary healthcare capacity. One such



Apart from expanding primary healthcare capacity, NHG also recognises the importance of relationship-based healthcare as the cornerstone of improved health outcomes for our patients. This drives us towards a more holistic approach to meeting the needs of the population across the care continuum; from living well, to living with illness, to crisis and complex care, to living with frailty and leaving well.

effort is NHG's Primary Care Network for General Practitioners (GPs) which allows our polyclinics to leverage economies of scale to share resources and to manage population health. Another effort involves the right-siting of polyclinic patients to Family Medicine Clinics and GP Clinics which offers patients the care they need closer to their homes. Finally, implementing innovative solutions that help improve productivity is another way to manage the demand on our finite resources.

RECOGNISING THE IMPORTANCE OF RELATIONSHIP-BASED HEALTHCARE

Apart from expanding primary healthcare capacity, NHG also recognises the importance of relationship-based healthcare as the cornerstone of improved health outcomes for our patients. Such a model of healthcare drives us towards a more holistic approach to meeting the needs of the population across the care continuum; from living well, to living with illness, to crisis and complex care, to living with frailty and leaving well.

We also recognised that the past model of care of intervening only when patients were ill needed to be refocused to improve patient experience, offer more affordable and accessible healthcare, achieve better population health and ensure that our staff are happy and engaged. Within the pages of this year's Annual Report, you will be able to see how NHG Polyclinics has achieved some of these.

KEEPING OUR SIGHTS ON THE FUTURE

While the primary care ecosystem is constantly evolving, NHG Polyclinics has and will continue to provide high standards of accessible, affordable and comprehensive care to patients. This has only been made possible with the vision, leadership and guidance of our Chairman, Mdm Kay Kuok as well as our Board of Directors whom I wish to thank. I wish to also thank MOH for the constant support in our various efforts.

My sincere thanks also to Associate Professor Chong Phui-Nah, CEO of NHGP & Primary Care, for her tireless efforts in leading NHGP. Thank you as well to all NHGP staff for their unrelenting dedication and commitment to always provide our patients with the best care possible.

PROFESSOR PHILIP CHOO

Group Chief Executive Officer
National Healthcare Group

CEO'S MESSAGE



With 1.5 million residents, 15% of which are over the age of 65, the Central and Northern Regions represent the fastest-growing ageing population in Singapore. This particular segment of the population also presents a higher prevalence of co-morbid chronic diseases. As the polyclinic cluster which serves this exact population segment, the National Healthcare Group Polyclinics (NHGP) has its work cut out for it. With this formidable challenge in mind and in line with the Primary Care 2025 vision, NHGP has made it our imperative to ensure that we deliver accessible, sustainable and integrated care to our patients.

One way we hope to achieve this is by establishing a sound and scalable care model. NHGP's Patient Empanelment Teamlet Care Model is a relationship-focused and team-based model of care for chronic disease management, which provides patients and their family members with chronic conditions access to a dedicated team of healthcare professionals including family physicians, care managers and care coordinators. This fosters a strong patient-provider relationship over time, allowing the team to integrate a patient's physical and mental health with social care issues, thereby offering comprehensive care to the patient.

As at FY2017, this care model has been implemented at all of our polyclinics and has shown encouraging results in terms of improved patient health outcomes.

In addition, we are committed to keeping people healthy and by promoting a healthy lifestyle and preventive care amongst our patients and staff members.

ENHANCING PRIMARY CARE CAPACITY

Apart from establishing a sustainable and effective model of care, NHGP also proactively looks into ways of enhancing our primary care capacity. These include innovations to better serve our patients and collaborations with other healthcare institutions to offer patients better access to care.

One such innovation is the Tele-DERM service, a collaboration between NHGP and the National Skin Centre, which enables patients to receive appropriate care for their skin conditions in the community. The service won the Beyond Hospital to Community Award at Ministry of Health's (MOH) National Health IT Excellence Awards in May 2017.

To boost our primary care capacity, in April 2018, the National Healthcare Group launched the first Central-North Primary Care Network



Apart from establishing a sustainable and effective model of care, NHGP also proactively looks into ways of enhancing our primary care capacity. These include innovations to better serve our patients and collaborations with other healthcare institutions to offer patients better access to care.

(PCN) for General Practitioners (GPs) with thirty GP Clinics. Together with Family Medicine Clinics, Central-North PCN will help boost the right-siting of patients and allow us to better balance our patient load across the public and private healthcare sector.

In January 2018, Ang Mo Kio Polyclinic reopened its doors at a new location to cater to the increasing healthcare needs of the Ang Mo Kio community. The redeveloped clinic, which is about three times larger than the previous one, has expanded our capacity and allowed us to provide a more comprehensive range of services to better serve the patients in the area.

ADVANCING SKILLS AND KNOWLEDGE

At NHGP, advancing Family Medicine is a priority and continuing medical education is key. In nurturing the next generation of doctors in Family Medicine, NHGP has been actively supporting its Family Medicine Residents to attain higher qualifications. NHGP's 2017 batch of doctors achieved a pass rate of 100% in their Master of Medicine (Family Medicine) examinations to qualify as Family Physicians. Additionally, two NHGP Family Physicians were conferred fellowship to the Academy of Medicine, Singapore, boosting NHGP's talent pool of Family Physicians.

Primary care research is critical in advancing Family Medicine. In March 2017, together with the Institute of Mental Health and the Lee Kong Chian School of Medicine, NHGP secured a \$5 million research National Medical Research Council (NMRC) Centre grant to increase research capacity and capability for primary care in Singapore.

The grant application, titled 'Primary Health Care Research in Multi-morbidity and Mental Health in a Multi-Ethnic Population (PRIME)', sets to establish a primary healthcare research programme for policy-makers, practitioners and programme planners. With this research programme, NHGP hopes to help advance the standards of primary care research. NHGP continues to work with her partners to advance primary care through research.

LOOKING AHEAD

With our sights firmly focused on the road ahead, NHGP will continue its efforts to drive primary care transformation and advance Family Medicine to achieve a future-ready primary care ecosystem – one that is sustainable, accessible and effective in improving population health.

I would like to take this opportunity to thank our Board, NHGP's senior management members and MOH for their guidance and leadership as well as community partners and NHG institutions for all their help and support. I would especially like to express my appreciation to all staff for their commitment and contributions to NHGP and for doing a commendable job of moving together towards becoming a future-ready organisation.

ASSOCIATE PROFESSOR CHONG PHUI-NAH

Chief Executive Officer
National Healthcare Group Polyclinics & Primary Care

NHGP SENIOR MANAGEMENT

FROM LEFT:

Ms Chen Yee Chui

Chief Nurse, Nursing Services

Mr David Kok

Director, Finance

Associate Professor Chong Phui-Nah

Chief Executive Officer, NHGP & Primary Care

Dr Simon Lee

Chief Operating Officer and
Chief Medical Informatics Officer

Dr Karen Ng

Director, Clinical Services

Mr Shawn Phua

Director, Human Resources



FROM LEFT:

Dr Jonathan Ting

Head, Geylang Polyclinic

Dr Christopher Chong

Head, Ang Mo Kio Polyclinic

Dr Kwan Pek Yee

Head, Yishun Polyclinic

Dr Kong Jing Wen

Head, Hougang Polyclinic

Dr Evan Sim

Head, Woodlands Polyclinic

Dr David Ng

Head, Toa Payoh Polyclinic



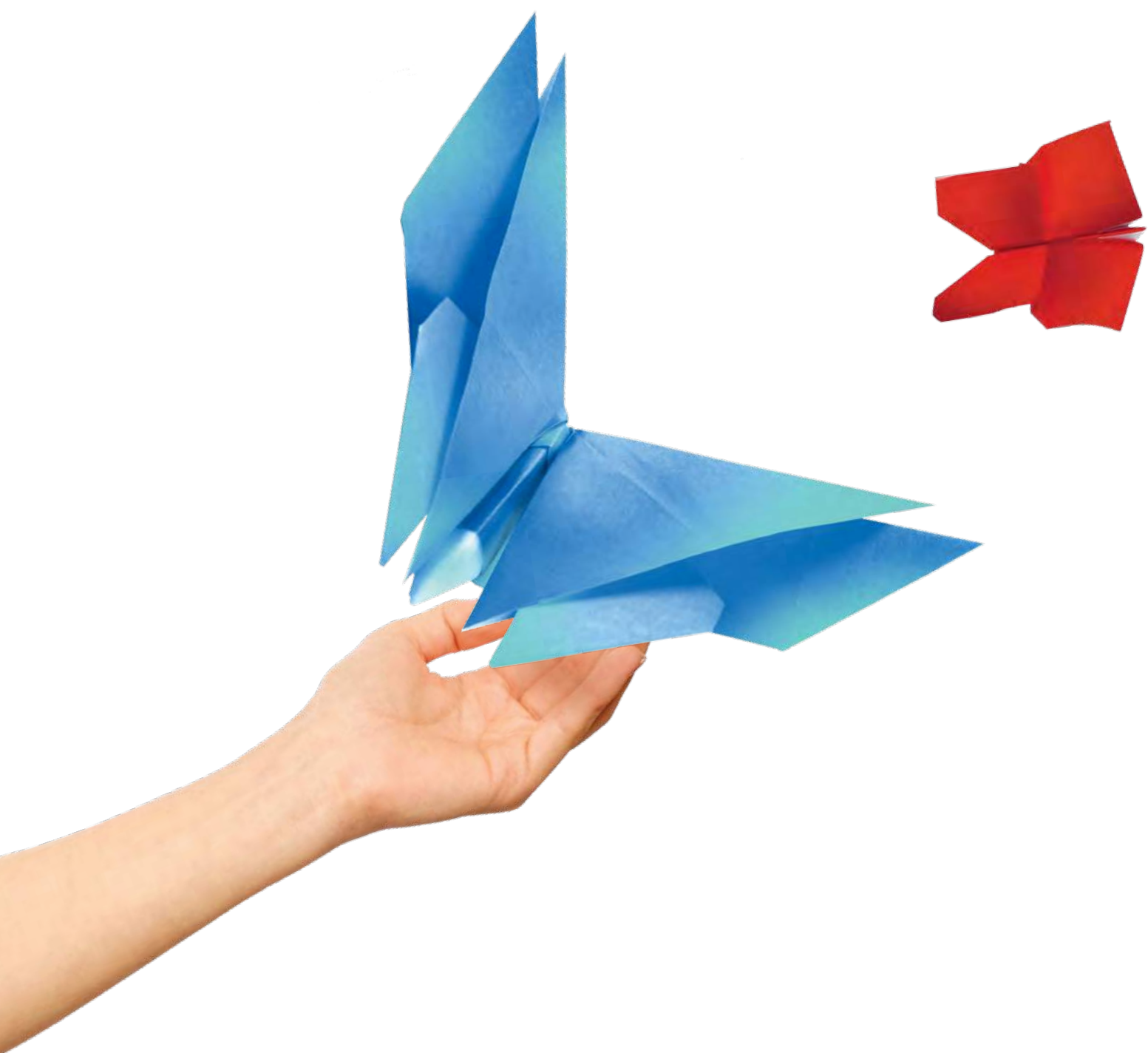
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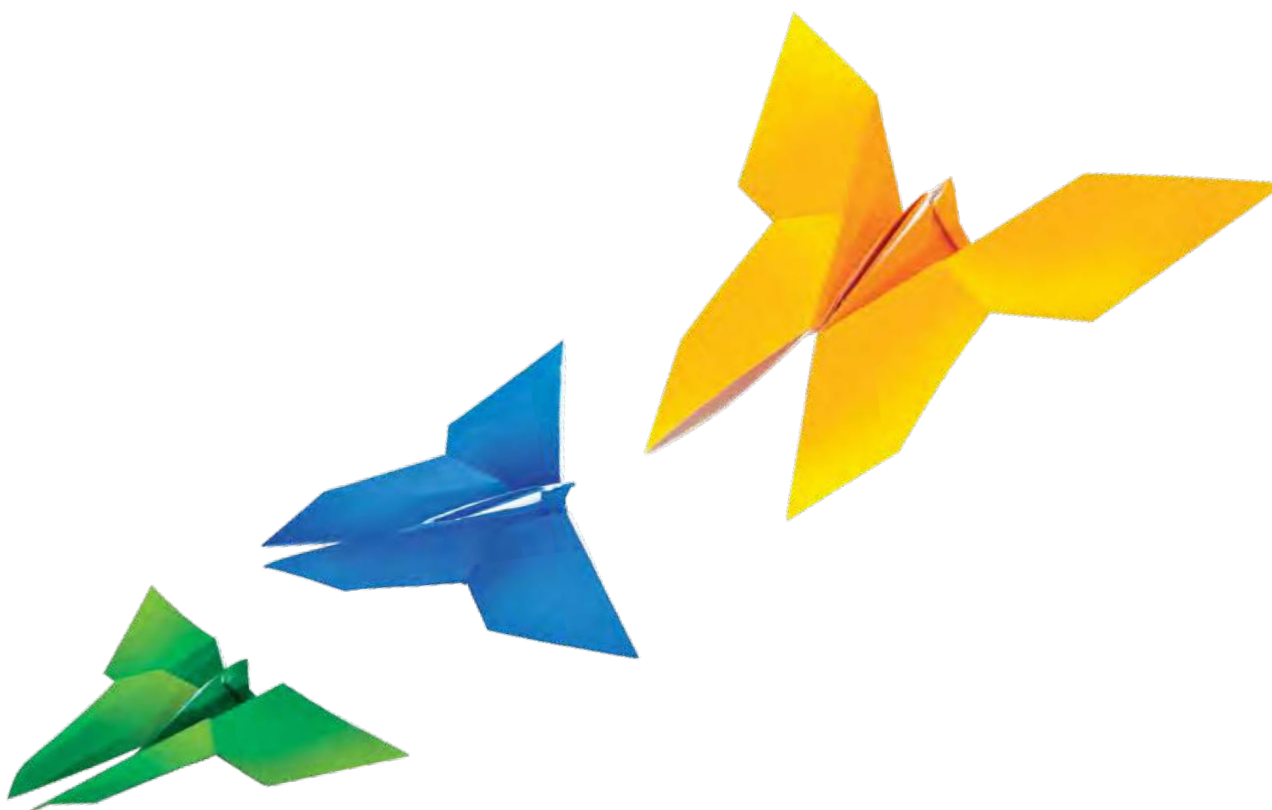
- Ms Noraizah Zainal Abidin**
Deputy Director, Corporate Communications
- Dr Tung Yew Cheong**
Director, Quality and Patient Safety
- Dr Gowri Doraisamy**
Director, Care Integration
- Ms Helen Tsai**
Director, Clinic Operations
- Dr Wee Wei Keong**
Director, Health Promotion & Preventive Care
- Ms Doris Liew**
Director, Operational Support Services
- Ms Jaclyn Fam**
Deputy Director, Corporate Planning

FROM LEFT:

- Dr Tang Wern Ee**
Head, Clinical Research Unit
- Dr Lim Chee Kong**
Deputy Director, Clinical Services (Manpower)
- Dr Irwin Chung**
Director, Primary Care Academy
- Dr Kenneth Low**
Director, Dental Division
- Ms Chan Soo Chung**
Executive Director, NHG Pharmacy
- Dr Darren Seah**
Director, Family Medicine Development
- Ms Lim Soh Har**
Executive Director, NHG Diagnostics







CHAPTER 1

PROVIDING EXCELLENT PRIMARY CARE FOR ALL

In meeting the primary care needs of the population, the National Healthcare Group Polyclinics (NHGP) has been providing patient-centred, timely and accessible care to those with acute and chronic conditions. Care that is sustainable in the long term is key to meeting the growing healthcare demands of Singapore's growing and greying population.

Since NHGP started its primary care transformation journey in 2015, several initiatives have been put in place to ensure that its care and treatment options are integrated and seamless. From refining its model of care to service innovations, NHGP has been taking bold steps to meet the challenges of the future.

PUTTING PATIENTS FIRST

NHGP continuously looks at ways to improve its patient-centric services to benefit patients. In FY2017, NHGP rolled out several initiatives to refine its model of care, maximise its resources and extend its range of services.



Dr Lim Ziliang (second from right), Family Physician, Associate Consultant, and Deputy Head of Yishun Polyclinic in a joint consultation with Care Manager Ms Chong Lee Sze (left), Senior Staff Nurse.

A PATIENT-CENTRED MODEL OF CARE

Since 2015, NHGP has in place a relationship-focused and team-based model of care for chronic disease management. This care model assigns patients and their family members with chronic conditions to a regular care team, called a Teamlet. A Teamlet comprises two Family Physicians, a Care Manager who is a nurse and a Care Coordinator who is a lay person trained in preventive health management.

Each Teamlet focuses on the patient's medical and psycho-social needs to provide holistic and integrated care within the primary care setting.



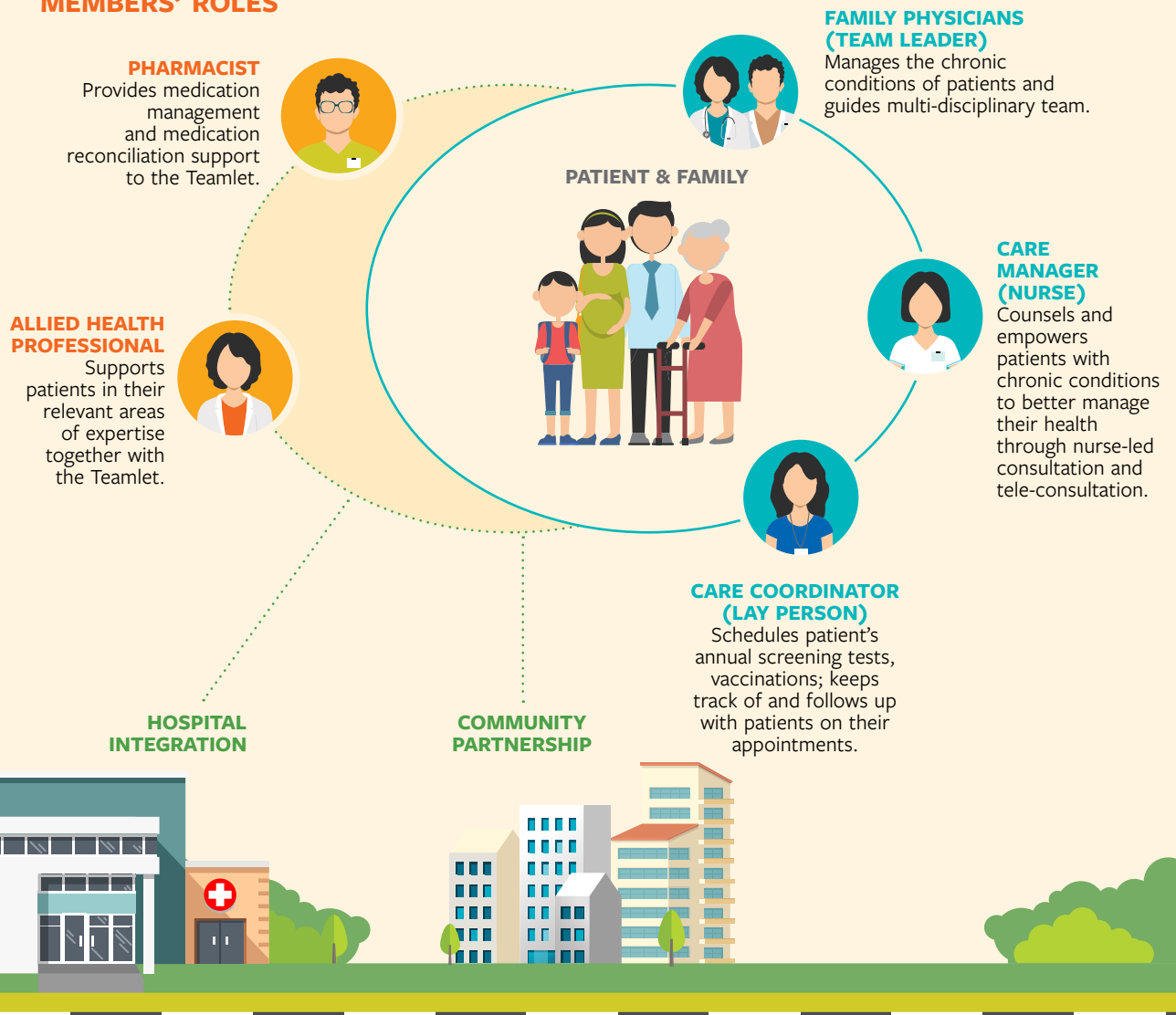
A multi-disciplinary team engaged in a discussion of a complex patient case at the huddle space located behind the teamlet consultation rooms.

The care model seeks to create a bond of trust between a patient and the healthcare team, with the patient and team taking co-ownership of the patient's health.

Since it was first implemented, NHGP has developed 14 Teamlets and also enrolled more than 62,000 patients with chronic conditions as at March 2018.

TEAMLET CARE MODEL

MEMBERS' ROLES



NHGP AT A GLANCE: TEAMLET CARE MODEL (AS AT MARCH 2018)



First implemented in 2015
at Toa Payoh Polyclinic



14 Teamlets
set up across five NHG Polyclinics



More than **62,000 patients**
with chronic conditions

BRINGING SPECIALIST CARE TO THE COMMUNITY

Tele-DERM

NHGP's tele-collaboration service known as Tele-DERM won the IT Excellence: Beyond Hospital to Community Award at the National Health IT Excellence Awards 2017 on 30 May 2017.

First implemented in Hougang Polyclinic in December 2016, Tele-DERM has enabled patients with mild to moderate skin conditions to receive specialist care at NHG Polyclinics. A joint collaboration between NHGP and the National Skin Centre (NSC), Tele-DERM is aligned to Ministry of Health's (MOH) move to bring care beyond hospitals into the community.

Part of NHGP's primary care transformation efforts to offer patients coordinated care by specialists in the community, NHGP's family physicians trained in family practice dermatology use a secure web-based platform to discuss patients' skin conditions and treatment options with NSC dermatologists.

As of March 2018, nearly 2,800 dermatology cases had been reviewed under Tele-DERM, of which 30% were treated by NHGP doctors without having to be referred to NSC. Tele-DERM enables patients to receive appropriate care for their mild to moderate skin conditions in a more accessible manner, within the community.



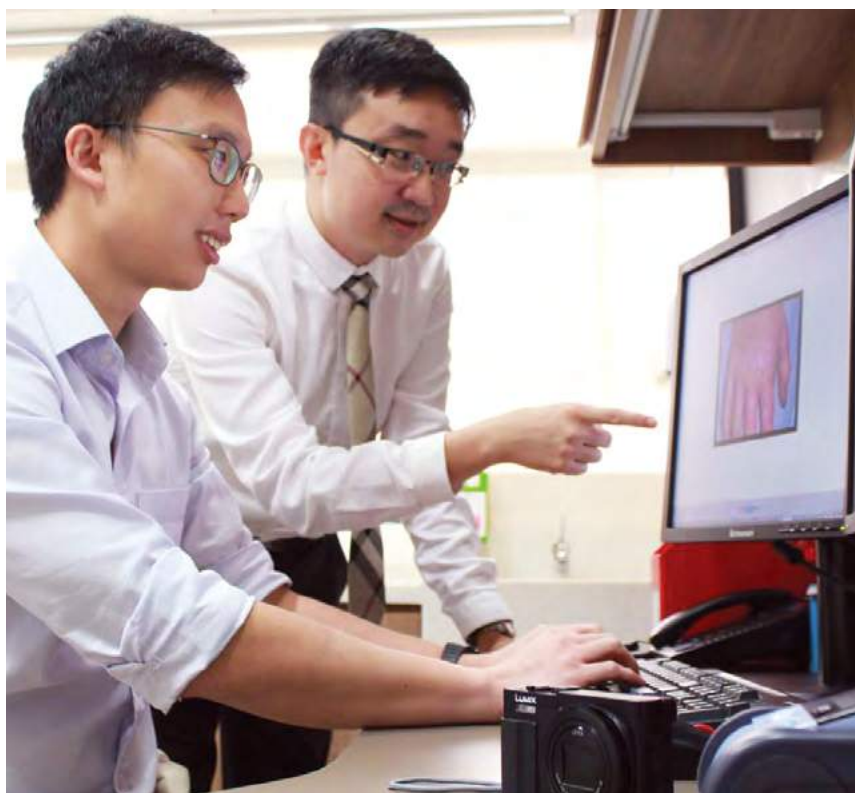
Skin conditions are among the top 10 reasons for patient visits in primary care. Hence, easy access to our colleagues at NSC helps us effectively diagnose and treat them without having to refer them to a specialist unless absolutely necessary.

Dr Kong Jing Wen

Family Physician, Associate Consultant and Head, Hougang Polyclinic



As of March 2018, nearly 2,800 dermatology cases had been reviewed under Tele-DERM, 30% of which were treated by NHGP doctors without having to be referred to NSC



Dr Kong Jing Wen (right) reviewing a patient's skin condition with NSC's skin specialist via a secure web portal.



A nurse engaged in a tele-consult with a patient about his chronic condition.

BRINGING CARE CLOSER TO HOME

Tele-Wound Care Monitoring

The Tele-Wound Care Monitoring service, another NHGP innovation, has been established at all NHG Polyclinics since June 2017.

With Tele-Wound Care Monitoring, patients are taught how to perform wound dressing themselves and are encouraged to care for their wounds at home. To ensure that their healing is monitored, patients send images of their wounds by email to nurses for assessment and follow-up over the phone. As at 31 March 2018, about 700 patients who would otherwise have made around 1,200 physical visits to the polyclinics have benefited from the programme.

Tele-Care Programme

NHGP has also put in place the Tele-Care programme, a nurse-led home monitoring initiative for patients in all NHG Polyclinics since September 2013.

Patients monitor their blood pressure, blood glucose and/or weight, and submit their readings on HealthHub, a one-stop health portal. Care Managers who are nurses trained in chronic disease management, then follow up by assessing patients' readings and advising them accordingly.

Not only can patients request medication refills to be delivered to their homes, NHGP can also hold Tele-Care consultations with those who require medication adjustment, review and assessment of how well

TELE-WOUND CARE MONITORING



**About
700 patients
have saved nearly
1,200 physical visits
to the polyclinics
and have benefited
from the programme**

TELE-CARE



**About
7,600 patients
have saved nearly
10,500 physical visits
to the polyclinics**

they are managing and coping after insulin therapy, etc. This saves patients time and effort of having to make the trip to their polyclinics for such services.

In FY2017, a total of about 10,500 Tele-Care consultations were conducted for about 7,600 patients.

IMPROVING ACCESS TO MENTAL HEALTH

Mental Health Services in the Community

Early diagnosis and intervention are critical for people with mental health conditions. Hence, NHGP has been collaborating with the Institute of Mental Health and Khoo Teck Puat Hospital to offer mental health services in the community.

Since February 2018, the partnership has allowed more patients with common mental health conditions such as depression and anxiety to be managed closer to home. This care arrangement not only reduces stigmatisation by offering treatment in a community setting instead of a hospital, but it also encourages patients and caregivers to seek help early and be cared for holistically in one care setting.

Advantages of integrated mental healthcare

- With the more common mental health conditions managed in the primary care setting, Specialist Outpatient Clinics can cater to patients with more severe mental health conditions.
- Patients treated at NHG Polyclinics are supported by a multi-disciplinary team of Family Physicians, Care Managers, Psychologists and Medical Social Workers who ensure that patients' care needs are managed holistically.
- Patients, especially those with chronic conditions, enjoy the convenience of being cared for at the polyclinic instead of in multiple care settings, thus receiving better continuity of care.



By enabling patients with chronic and mental health conditions to be cared for holistically in primary care instead of in multiple care settings, the patients can benefit from the holistic care that a primary care multi-disciplinary team provides. They can also build rapport and trust with their healthcare team which empowers them to manage their own health.

Dr Winnie Soon

Family Physician, Consultant
Ang Mo Kio Polyclinic

HELPING PATIENTS WITH MENTAL HEALTH CONDITIONS



Mental Health Services are available at Ang Mo Kio, Woodlands and Yishun Polyclinics

A biochemistry analyser capable of processing 22 different types of tests and performing up to 300 tests per hour was also added. With the new services, about 95% of tests could be processed on-site; improving the result-turnaround time significantly.

National Healthcare Group Diagnostics introduced the first conveyor system to be used in primary care. The innovative system automates the entire patient sample collection, from the urine drop-off point and blood-taking stations to the main processing laboratory. The conveyor system complements the pneumatic tubes system already in use at Hougang Polyclinic for floor-to-floor transfers for greater efficiency.

Without the need for staff to physically collate samples, staff could focus on their core tasks of blood-taking and running the laboratory equipment, analysing and validating results. The automation has led to time-savings of about 180 hours.

IMPROVING EFFICIENCY

Hougang Laboratory Conveyor System

To maximise resources and improve efficiency, National Healthcare Group Diagnostics expanded the laboratory services at Hougang Polyclinic to include on-site ultrasound services.



Mr Isaac Eliezer Sutedja, National Healthcare Group Diagnostics Radiographer, carrying out an X-ray using the new DR systems.

New Digital Radiography Systems

In FY2017, National Healthcare Group Diagnostics introduced Digital Radiography (DR) systems to its satellite imaging centres at the polyclinics.

Before the use of the DR systems, radiographers had to manually transfer X-ray images using the Computed Radiography system. Now with the DR systems, X-ray images can be viewed on the visual display unit within six seconds for evaluation by the radiographer before transmission to National Healthcare Group Diagnostics' reading centres for reporting.

The DR system also provides better image quality and reduces radiographers' strain as they no longer had to carry the heavy cassettes from the X-ray room to the processor after each examination.

The DR systems have been implemented at Ang Mo Kio, Hougang, Toa Payoh, Woodlands and Yishun Polyclinics.

New Laboratory Analysers

National Healthcare Group Diagnostics also introduced other improvements to its laboratories to achieve greater efficiency and ensure better patient care.

HbA1c Analyser

In diabetes care for patients, HbA1c is used as a monitoring tool to test patients' blood sugar levels.

The new HbA1c analyser allows samples to be processed at a rate that is 75% faster than before, resulting in an estimated savings of 5,500 hours. Without the need for manual handling of samples, laboratory staff can focus on other tests instead. In this way, National Healthcare Group Diagnostics is

able to manage higher HbA1c test volumes without having to increase laboratory headcount.

Automated Pregnancy Test Analyser

National Healthcare Group Diagnostics has also replaced the manual pregnancy test kits with automated reader analysers. With its connectivity to National Healthcare Group Diagnostics' laboratory information system, the automated reader analysers are able to transmit results online, hence doing away with human subjectivity in manual result interpretation or biasness of manual reading while minimising transcription errors. The new analyser has also brought about time savings as the two-staff verification process can be eliminated.

INNOVATING FOR PATIENT-CENTRED CARE

NHGP's transformation journey has seen it adopting various innovative solutions to improve efficiency and provide patients with greater convenience in FY2017.



Since FY2017, eligible patients can collect their packed medication at any time of the day from more than 30 7-Eleven stores in Singapore



A demonstration of a patient's medication packed in a tamper-proof bag being placed inside a locker at a 7-Eleven store.



Patients can now self-register at the Patient Arrival Kiosk at the Pharmacy to collect their medicine.

GREATER CONVENIENCE FOR PATIENTS

Self-Collection of Medication from Lockers

To enhance its primary healthcare services, NHGP and the National Healthcare Group Pharmacy launched a locker service for medication collection. Since FY2017, eligible patients can collect their packed medication at their convenience at any time of the day from more than thirty 7-Eleven stores in Singapore.

Eligible patients are those with chronic conditions and a valid NHGP doctor's prescription.

The first-of-its kind locker service for medication collection complements National Healthcare Group Pharmacy's home delivery service and provides more options to patients and their caregivers.

Enhanced Self-Registration Kiosks

By January 2018, NHGP had implemented the enhanced self-registration kiosk at all its six polyclinics.

The enhanced kiosk allows walk-in patients to book same-day appointments, thus removing the need to queue up at the counters for help with appointment-booking. Instead, patients can proceed straight to the consultation waiting area after self-registration, or come back

closer to the appointment time. The initiative has reduced patients' waiting time for registration by about 20 minutes.

Patient Arrival Kiosk at Pharmacy

The patient arrival kiosk was deployed at Ang Mo Kio Polyclinic's Pharmacy in January 2018. Patients can now self-register their arrival at the kiosk and skip the queue at the Pharmacy reception counter.

Besides offering patients more convenience, the automated service has resulted in manpower savings by reducing the number of NHGP staff required for the routine registration. Staff can instead offer more value-added assistance to patients.



We are glad to hear from patients who have used the locker service for medication collection that they are pleased with the option to pick up their medication at their convenience, without any compromise of their privacy.

Ms Chan Soo Chung

Executive Director, National Healthcare Group Pharmacy



The self-payment kiosks provide patients a quicker option to make payment.



NHGP's digital transformation efforts are in line with the government's Smart Nation vision to provide citizen-centred services to improve work efficiency and enhance service standards.

Professor Philip Choo
Group Chief Executive Officer
National Healthcare Group

Self-Payment Kiosks

Self-payment kiosks at the polyclinics have been providing patients the convenience to make payments quickly and effectively instead of having to pay manually at the payment counters.

One-Queue System

Patients used to have to take multiple queue numbers when visiting the polyclinic (e.g. a number for consultation and another number for medication collection at the pharmacy). With the one-queue system first implemented at the redeveloped Ang Mo Kio Polyclinic in February 2018, this process has been made simpler for patients. As of July 2018, patients now use the same queue number throughout their visit at all NHG Polyclinics.

MEDICATION CLINIC

To improve transition of care for patients discharged from hospitals to primary care, NHGP collaborated with National Healthcare Group Pharmacy to set up the Medication Clinic in FY2017.

The pharmacist-led Medication Clinic includes services to review patients'

medication, especially if they have been prescribed various medication across multiple healthcare institutions. Using a system known as Patient's Medication List, pharmacists help to increase patient awareness and adherence to their medication. This is particularly important for patients who may have had their chronic medication changed and hence experience difficulties adhering to their prescribed regimen after discharge.

At the same time, as patients' primary care physicians may not be aware of changes made by other healthcare providers, the Medication Clinic is helpful in reducing medication errors and preventable adverse drug events during the transition of care.

Other benefits of the Medication Clinic include:

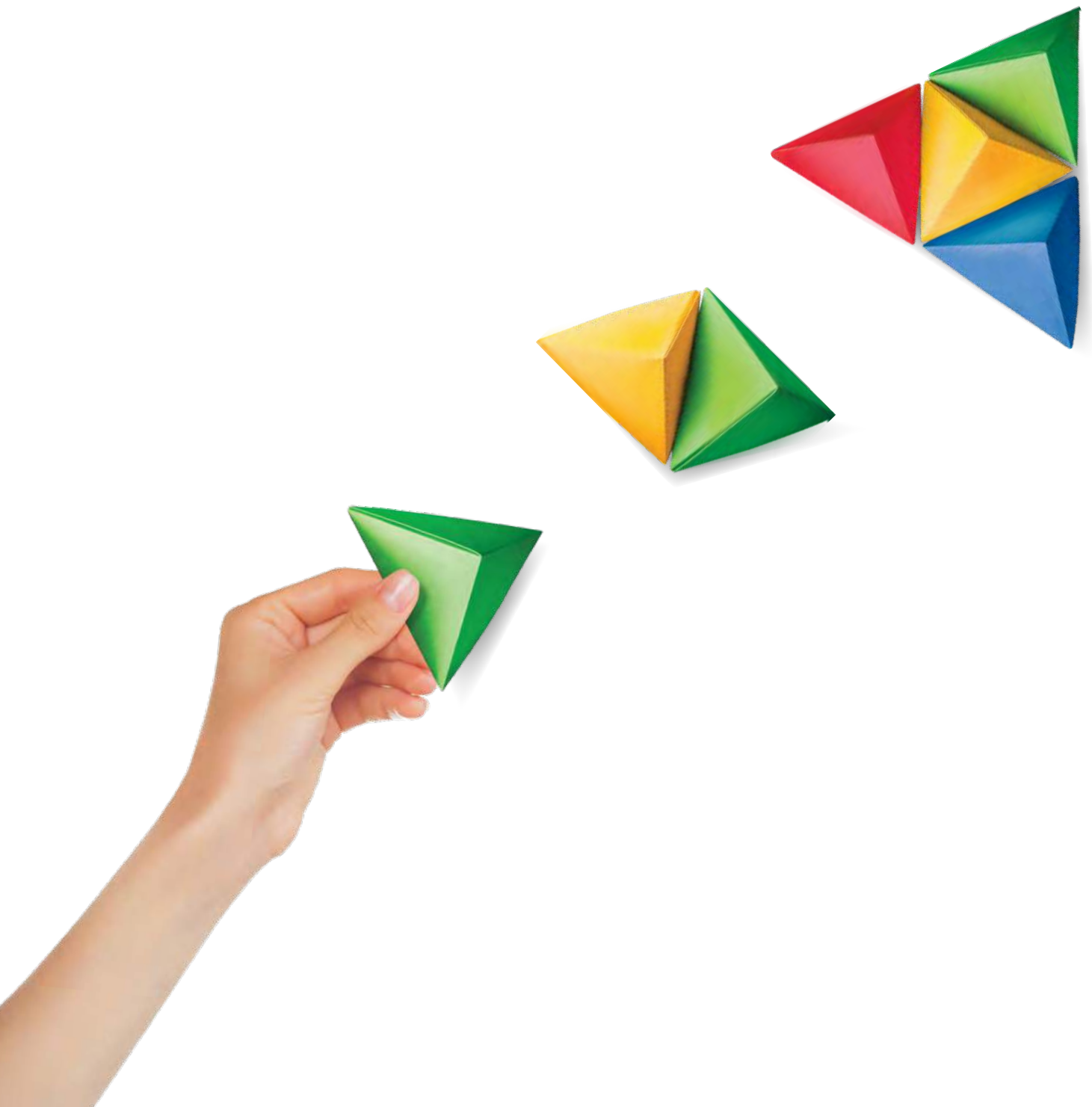
- Identification of patient's medication-related problems
- Reduced patient waiting time
- Support for prescribers to make better prescribing decisions
- Better patient health and safety

MULTILINGUAL MEDICATION LABELS

Another service innovation by National Healthcare Group Pharmacy is the multilingual medication labels, rolled out to all National Healthcare Group Pharmacy branches in October 2017.

Besides the multiple languages used, the medication labels use pictogram icons for patients' easy reference on the dose and frequency of their medication. This is especially useful for patients who are less literate or have poor vision. In addition, important notes such as drug indications, meal instructions and cautionary instructions are provided in the patient's preferred language upon request.

The introduction of the pictogram medication labels has helped to improve patient medication understanding and reduce errors caused by handwritten instructions.





CHAPTER 2

DEVELOPING GREATER CAPACITY FOR CARE

In FY2017, the National Healthcare Group Polyclinics (NHGP) continued to expand its primary healthcare infrastructure capacity to cater to Singaporeans' long-term healthcare needs and to promote better population health for all.

On top of redeveloping existing polyclinics to provide more comprehensive services and facilities, NHGP is also planning to develop new polyclinics. In line with the government's vision of ensuring sustainable healthcare for Singapore, residents in the Central and Northern regions can look forward to purpose-built polyclinics designed to accommodate a patient-centred model of care.

INCREASING OUR PRIMARY CARE CAPACITY

Two polyclinics under the National Healthcare Group underwent redevelopment in FY2017, while three new polyclinics will be launched by 2023.



An aerial view of the redeveloped Ang Mo Kio Polyclinic, which is three times larger than the previous polyclinic.



The new premises offer both staff and patients more integrated spaces for team-based care by our medical and dental staff. We are pleased to have received much positive feedback from patients for our improved clinic.

Dr Christopher Chong

Family Physician,
Associate Consultant and Head,
Ang Mo Kio Polyclinic

RELOCATION OF ANG MO KIO POLYCLINIC

After more than 30 years at Ang Mo Kio Avenue 8, the redeveloped polyclinic moved to its new premises at Ang Mo Kio Central 2 which is larger and co-located with an elder-care centre.

The redeveloped Ang Mo Kio Polyclinic opened its doors on 29 January 2018 to serve the community in Ang Mo Kio, Bishan and Serangoon. During its first week of operations, NHGP staff members from other Polyclinics and Headquarters came together to serve as way-finders to guide patients around the clinic.

To thank nearby residents for their patience while the new Ang Mo Kio Polyclinic was being redeveloped, Ang Mo Kio Polyclinic team visited about 80 households in the area during Lunar New Year.

Improvements for patients introduced by NHGP included two Allied Health Services and enhanced dental capacity at the polyclinic.

New Allied Health Services

NHGP introduced Podiatry and Physiotherapy services to Ang Mo Kio Polyclinic to better serve the needs of residents.

Enhanced Dental Clinic

With the move to the new clinic building, the expanded dental services offer more comfort and convenience to patients. At the new premises, with the dental treatment rooms, registration area and dental X-ray rooms all located on the same floor, the Dental Clinic offers patients more convenience and greater efficiency. Previously, with the Dental Clinic spread over two floors in the Annex wing, staff had to move between the first and second floors to access different treatment rooms.

Ang Mo Kio Polyclinic is also the first polyclinic in Singapore to have a wheelchair tilter in its Dental Clinic. With the tilter, patients can now receive treatment directly from their wheelchairs, and no longer need to be transferred to a dental chair.



An aerial view of the redeveloped Yishun Polyclinic at its new location.

FEATURES OF THE REDEVELOPED ANG MO KIO POLYCLINIC



About 8,800m² integrated clinic, laboratory and admin spaces



Fully automated self-help kiosks



New Podiatry and Physiotherapy services



Elderly-friendly features such as more spacious passages and wider consult rooms

REDEVELOPMENT OF YISHUN POLYCLINIC

Designed to be future-ready and to support NHGP's teamlet model of care, the redeveloped Yishun Polyclinic is on track for its official opening at the end of 2018. The polyclinic was also designed to have sky terraces and lush greenery to provide patients with a healing environment.

WELCOMING GEYLANG POLYCLINIC

On 1 October 2017, NHGP officially welcomed Geylang Polyclinic into its family. The handover of Geylang Polyclinic was part of the Ministry of Health's (MOH) plan to reorganise the public healthcare system into three clusters, in the Western, Central/Northern and Eastern regions.

NEW AND UPCOMING POLYCLINICS

To further strengthen primary healthcare for Singapore's Central and Northern regions, MOH announced the building of new polyclinics in Sembawang, Kallang and Nee Soon Central.

Sembawang Polyclinic

As the first NHG Polyclinic to be sited within a hub of family-friendly sports and recreational facilities, Sembawang Polyclinic will offer a range of medical services to cater to the healthcare needs of residents in Sembawang. NHGP is also collaborating with other agencies to develop and support programmes in the community to promote health and fitness, and prevent disease.

Plans for Sembawang Polyclinic also include purpose-built integrated Family Medicine and medical undergraduate training facilities to support the growth and development of doctors undergoing their residency training in Family Medicine.

Polyclinic in Nee Soon Central

To be ready by 2023, the new polyclinic in Nee Soon Central will expand Singapore's public primary care network to a total of 30 to 32 polyclinics.

STRENGTHENING PRIMARY CARE FOR CENTRAL AND NORTHERN REGIONS

INCREASING OUR PRIMARY CARE CAPACITY

1
OCTOBER
2017

Geylang Polyclinic

- The handover of Geylang Polyclinic to NHGP was part of MOH's plan to reorganise the public healthcare system.

2 JULY
2018

Yishun Polyclinic

- Opened its doors on 2 July 2018 to serve the Yishun community.
- Designed to be future-ready and to support NHGP's teamlet model of care.

29
JANUARY
2018

Ang Mo Kio Polyclinic

- Opened its doors on 29 January 2018 to serve the community in Ang Mo Kio, Bishan and Serangoon.
- Improvements introduced include two Allied Health Services, enhanced dental capacity, a wheelchair tilter, and purpose-built design to facilitate the teamlet model of care at the polyclinic.

2020

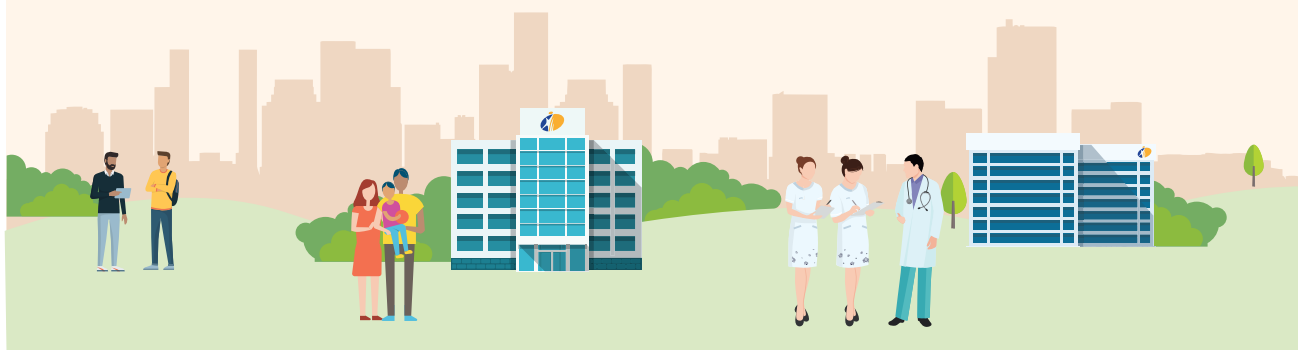
Sembawang and Kallang Polyclinics

- Sembawang and Kallang Polyclinics are scheduled to open by 2020.
- Sembawang Polyclinic will be the first NHG Polyclinic to be sited within an integrated hub.

2023

Polyclinic in Nee Soon Central

- The new polyclinic in Nee Soon Central will expand Singapore's public primary care network to a total of 30 to 32 polyclinics by 2030.



PARTNERING OUR STAKEHOLDERS

Apart from expanding primary care capacity, partnering our stakeholders, both public and private, is also a critical component in catering to Singapore's long-term healthcare needs.

LAUNCH OF THE PRIMARY CARE NETWORK

The National Healthcare Group (NHG) started the first Primary Care Network (PCN), known as the Central North PCN (CN-PCN), on 2 January 2018. Since then, 30 General Practitioners (GPs) in the Northern and Central regions of Singapore have formed a virtual network.

The PCN model is a strategic collaboration that builds on the GPs' existing infrastructure and established doctor-patient relationships. With NHG helping to provide both leadership and clinical

governance, the collaboration will allow for better integration of patient care.

On 10 February 2018, NHGP, together with members of the CN-PCN, welcomed the Lunar New Year with a *Lo Hei* or traditional tossing of fish salad.

NHGP also organised a diabetes-themed sharing session in the first event organised for GPs in the CN-PCN. Three specialists were invited by NHGP's Primary Care Academy to share their expertise on the management of diabetes including diabetic eye complications and renal complications.

PARTNERSHIP TO IMPROVE DIABETES CARE

Under the PCN partnership, National Healthcare Group Diagnostics was able to offer patients with diabetes more convenient on-site retinal eye-checks and foot-screening through its Mobile Community Health Centre.

The proximity of the services to the homes of patients led to an improved uptake of screening for early detection to prevent diabetes-related blindness and amputations. FY2017 saw a 50% increase in screening uptake compared to the previous year.



A lunchtime Continuing Medical Education programme hosted by Professor Philip Choo (third from right), Group Chief Executive Officer (CEO), NHG and Associate Professor (A/Prof) Chong Phui-Nah (second from right), CEO, NHGP & Primary Care.



(From left) A/Prof Chong Phui-Nah, CEO, NHGP & Primary Care, Mdm Kay Kuok, Chairman, NHG, Professor Philip Choo, Group CEO, NHG, Mr Chua Song Khim, CEO, NTUC Health, Ms Tan Hwee Bin, Chairman, NTUC Health and Mr Leon Lui, Head, Clinical Services and Wellness, Head, Residential and Home Care, NTUC Health.

HANDOVER OF UNITY FMC

Unity Family Medicine Clinic (FMC) was set up as part of MOH's Primary Care Master Plan to explore new models of chronic disease management in primary care. Unity FMC was set up in collaboration with NTUC Health, to deliver comprehensive team-based care to the community in Serangoon.

On 5 September 2017, Unity FMC was officially handed over by NHG to NTUC Health, marking a milestone in the partnership. Unity FMC is the second FMC that NHG has handed over to the private sector following an initial collaboration to develop the necessary infrastructure and medical capabilities. The first FMC set up by NHG, Ang Mo Kio FMC, was handed over to Parkway Shenton on 1 March 2016.

The FMC tie-up facilitates seamless care and follow-up treatment in the community for patients from secondary institutions such as

Tan Tock Seng Hospital's Specialist Outpatient Clinics and Accident & Emergency Department, and the Institute of Mental Health.

With MOH's support, these patients continue to receive affordable and accessible care in the community.

UNITY FAMILY MEDICINE CLINIC

Number of patient visits managed by
Unity FMC since 2015:
More than 12,000

Number of patient referrals by NHGP to Unity FMC for follow-up care on chronic conditions:
More than 2,000



With 1.4 million people in the Central region, 15% of which are over the age of 65, this region has the fastest-growing ageing population in Singapore accompanied by a higher prevalence of co-morbid chronic diseases.

Correspondingly, the demand for healthcare services has increased. This thus makes the shift from episodic treatments to sustainable and integrated healthcare all the more critical.

Mdm Kay Kuok

Chairman, National Healthcare Group



The signatories of the MOU at the Sport Singapore Auditorium on 28 July 2017.

SIGNING OF MOU BETWEEN SPORTSG AND NHGP

On 28 July 2017, NHGP was one of the signatories who signed a Memorandum of Understanding (MOU) with Sport Singapore (SportSG).

Part of the Active Health Framework initiated by SportSG to motivate the community to form positive habits towards wellness, the MOU will see NHGP and SportSG develop an Active Health Lab together. The Active Health Lab is to be located where the future Sembawang Polyclinic will be sited.

NHGP's healthcare team at Sembawang Polyclinic will be involved in the design and layout of the new Active Health Lab. In addition, Sembawang Polyclinic will work with SportSG on future areas of collaborations to promote health and wellness.

PROMOTING EARLY DETECTION OF BREAST CANCER

On 1 February 2018, National Healthcare Group Diagnostics, together with the Singapore Cancer Society (SCS) and Breast Cancer

Foundation (BCF), launched the 'Community Mammobus Programme' to encourage more women in workplaces and communities to go for affordable mammogram screening. Under the collaboration, National Healthcare Group Diagnostics subsidised \$10 for all first-time screeners, while SCS and BCF each subsidised up to \$20 per screener.

All mammogram screenings under the programme were done on-board National Healthcare Group Diagnostics' Mammobus. Since the start of the programme, nearly 400 women have been screened. The mammogram take-up rate in FY2017 was more than 40% higher than the same period in FY2016, underscoring the successful deployment of the Mammobus at workplaces and community locations island-wide.

NEW SCOLIOSIS EXAMINATION

As early detection of scoliosis in children is important, National Healthcare Group Diagnostics worked with the Health Promotion Board (HPB) Student Health Centre to provide on-site scoliosis screening for primary and secondary students.



This partnership between NHGP and SportSG will further synergise patient engagement efforts by tapping on our respective expertise to make it easier for people to choose and adopt active and healthy lifestyles.

A/Prof Chong Phui-Nah
CEO, National Healthcare Group
Polyclinics & Primary Care

When detected early, children with scoliosis can be treated with bracing to avoid the need for surgery.

Held at the HPB Building and on-board the National Healthcare Group Diagnostics' Mobile X-ray bus, the on-site service provided one-stop convenience for the students and their parents. Without the mobile service, they would have to travel to the hospital for screening after being seen by doctors at the HPB Student Health Centre.





CHAPTER 3

FROM HEALTHCARE TO HEALTH

To improve healthcare delivery to the population, the National Healthcare Group Polyclinics (NHGP) has been strengthening our community engagement to build a culture of health. From educational programmes to outreach events, NHGP aims to educate the public on the importance of healthy lifestyle choices, and develop a better understanding of common diseases.

SUPPORTING GOOD HEALTH IN THE COMMUNITY

In a bid to improve population health, NHGP collaborated with its community partners for various health promotion efforts to prevent or manage diseases and health conditions in the community.

COMBATING DIABETES

Talks and Workshops on Diabetes

In FY2017, NHGP continued its drive to combat diabetes in support of the Ministry of Health's 'War on Diabetes'. With diabetes becoming increasingly prevalent in Singapore, NHGP was involved in various efforts to combat the disease.

- Senior citizens from the Asian Women's Welfare Association (AWWA) Community Home participated in workshops conducted by NHGP's Clinical Services in April and May 2017. They learnt how to better manage diabetes through understanding normal and diabetic blood sugar levels, and learning about carbohydrate-counting.
- Residents of Toa Payoh West participated in a series of weight and mental health management in diabetes care workshops conducted by NHGP's Primary Care Academy (PCA) from April to June 2017. At the workshops, participants learnt the importance of doing regular exercises and eating healthy. They also received tips on managing stress while dealing with chronic conditions such as diabetes.



Senior Citizens from AWWA Community Home attending a workshop conducted by Senior Dietitian Ms Wong Yuefen to better understand diabetic blood sugar levels and carbohydrate-counting.



Senior Dietitian Mr Won Tin Chiang conducting a talk on 'Eating Well with Diabetes' at Whampoa Community Club.



The attendees at the Central Sikh Temple participating in a workshop on diabetes management conducted by Senior Dietitian Ms Wong Yuefen.



Patients trying out the interactive boards to learn about the rainbow colour concept to manage food portions.



My spouse and I took the opportunity to go for the health screening at the 'Living Well with Diabetes' event as it was held right in our neighbourhood. I am glad we did it. We also learned about the importance of making healthy lifestyle choices to maintain our health.

Mdm Lee Yee Loi

Patient of Woodlands Polyclinic and resident of Kampung Admiralty

- Participants from the Whampoa Diabetes Support Group of Whampoa Community Club attended a talk on 'Eating Well with Diabetes' conducted by Toa Payoh Polyclinic in July 2017.
- A community diabetic support group at the Central Sikh Temple participated in an NHGP workshop conducted by NHGP's PCA in August 2017. The workshop taught participants about healthy eating habits to minimise their risks of complications.
- Residents of Whampoa attended a talk conducted by NHG Pharmacy on the 'Myths and Facts of Diabetes Medication and Insulin' in September 2017.

World Diabetes Day

In support of World Diabetes Day on 14 November 2017, Woodlands and Yishun Polyclinics took part in community events on 12 November 2017 to educate residents in the north about diabetes.



Woodlands Polyclinic staff at the 'Living Well with Diabetes' event held to provide health screening to residents.

Talks were held on:

- 'Why the War on Diabetes'
- Diabetes and Healthy Eating
- Tips on Footwear Selection

Booths on the use of the rainbow colour concept to manage food portions were also set up. A total of about 200 residents attended the talks. In addition, on 14 November 2017, Yishun Polyclinic set up a booth on its premises to educate patients on diabetes, its complications, and to share tips on how patients can manage their condition.

Living Well With Diabetes

Woodlands Polyclinic, in collaboration with Khoo Teck Puat Hospital, provided health screening services at the 'Living Well with Diabetes' event held at Kampung Admiralty on 18 November 2017. Organised by the Admiralty Medical Centre Diabetes Centre, Woodlands Grassroots Organisations (GRO) and People's Association, the event was officiated by Mr Amrin Amin, Grassroots Adviser to Woodlands GRO and Senior Parliamentary Secretary, Ministry of Health and Home Affairs.



Senior Staff Nurse Ms Susan Bay, Infection Control Advocate, assessing a patient's knowledge on hand hygiene at Yishun Polyclinic.

PRACTISING HAND HYGIENE

Maintaining good hand hygiene can potentially reduce the spread of infectious diseases. In FY2017, NHGP held various activities to encourage good hand hygiene habits among patients and the community.

Hand Hygiene Day 2017 and Roadshows

To mark Hand Hygiene Day and raise public awareness of how hand hygiene can help prevent the spread of infectious diseases, NHGP set up information and game booths for patients and their caregivers at all

NHG Polyclinics in May 2017. Patients were invited to take part in games and talks to learn how they could keep their hands clean. The event included a 'glow light' activity where patients placed their hands under fluorescent light to see if spores that could cause infection were detected on their hands.

School Talk on Hand Hygiene

On 27 September 2017, Ang Mo Kio Polyclinic staff comprising doctors, nurses and operations staff conducted a health education session for over 70 Primary 1 students from Pathlight School.

Students were taught through talks and activities the importance of hand hygiene and proper hand-washing techniques to prevent the spread of disease. Together with the nurses and operations staff, the students practised hand-washing techniques and used an ultraviolet light box to assess if they were competent in ensuring hand hygiene.



Dietitian Ms Chow Li Ming delivering her nutrition talk at the Health Fiesta event at Suntec City.

EATING RIGHT

To promote healthy eating in the community and to empower them to maintain and improve their overall health, NHGP organised a series of outreach activities during the year.

Nutrition Talk

NHGP's Dietetic Services delivered a public nutrition talk at the Health Fiesta event organised by Sphere Exhibits Pte Ltd in June 2017. The talk introduced participants to the Dietary Approaches to Stop Hypertension (DASH) diet and the Health Promotion Board's 'Healthy Plate' concept for a balanced diet.

Smart Food Shopping

In conjunction with Dietitians' Day 2018, NHGP's Dietetic Services collaborated with dietitians from Yishun Health Campus to reach out to the community in the Northern region. Held on 10 March 2018 at the Admiralty Medical Centre,



Participants went on a supermarket tour with NHGP's dietitian to learn tips on nutrition label reading.

patients from NHGP and Yishun Health campus, and 40 members of the public attended the 'Be a Smart Shopper' event. Not only did participants learn about healthier

food shopping and eating habits, they were also brought on supermarket tours at NTUC in Kampung Admiralty conducted by dietitians from the two institutions.



NHGP podiatrists guiding participants to stretch their muscles.

ENGAGING PATIENTS AND THE COMMUNITY

In order to reach a wider group of audience in promoting an active lifestyle and spreading the message of preventive care, NHGP works closely with community healthcare partners to organise various outreach activities.

World Podiatry Day 2017

NHGP's Podiatry team celebrated Podiatry Day 2017 with a scenic walk along the Sentosa Boardwalk on 29 April 2017. The walk, organised by the Diabetic Society of Singapore, provided participants with the opportunity to increase their awareness of diabetic foot complications. At the event, NHGP podiatrists conducted a group

stretching exercise for participants at the halfway point of the walk. Participants were given shoe bags with brochures on proper footwear and diabetic foot care at the end of the walk.

World Heart Day 2017

World Heart Day roadshows were conducted at five NHG Polyclinics to promote awareness of heart diseases to about 400 patients in the month of September 2017. The month-long roadshow was a collaboration with the Singapore Heart Foundation. To further spread the heart-health message, NHGP also partnered the National Library Board to conduct a talk at the Ang Mo Kio Library that was attended by about 50 participants.



Health Promoter Ms Babita Kumari doing a food demonstration using high-fibre ingredients at the World Heart Day roadshow at Yishun Polyclinic.



Senior Parliamentary Secretary, Ministry of Health and Home Affairs, Mr Amrin Amin (front row, centre) together with NHGP's Physiotherapy team (front row) and Woodlands residents celebrating World Physiotherapy Day.



Participants using resistance bands to do simple exercises that can be incorporated into their daily activities at the 'Mr & Ms Muscle' event at Woodlands Community Club.

World Physiotherapy Day 2017

On 3 September 2017, in conjunction with World Physiotherapy Day, NHGP's Physiotherapy team, together with the People's Association, organised the 'Mr & Ms Muscle' event at the Woodlands Community Club.

Attended by Senior Parliamentary Secretary, Ministry of Health and

Home Affairs, Mr Amrin Amin, the event sought to raise awareness among its 200 brisk-walking participants of the importance of building and maintaining strong muscles for better health. NHGP Physiotherapists demonstrated simple exercises using resistance bands that participants could include in their daily exercise routines.



Participants who attended our community outreach events shared that our face-to-face interaction with them was very helpful. Learning to take charge of their health together with friends and family made it more fun for them. Through such events, we are able to spread our health promotion messages more effectively.

Ms Cindy Soh
Principal Physiotherapist,
Toa Payoh Polyclinic

World Mental Health Day 2017

NHGP's Psychology Services organised several activities in conjunction with World Mental Health Day 2017. The aim of the events was to raise awareness among healthcare practitioners and the public on managing mental health in primary care.

- **Managing Mental Health in Primary Care**

On 9 September 2017, Dr Winnie Soon, Family Physician and Consultant, gave a talk titled 'An Integrated Approach – Mental Health in Primary Care,' at the Singapore Mental Health Conference on NHGP's management of patients.

- **Managing Insomnia**

NHGP's Psychology Services and Corporate Communications Department collaborated with the Ang Mo Kio-Hougang Active Ageing Committee to organise a talk at Ci Yuan Community Club.

Mr Mah Siew Chung, Clinical Psychologist, Clinical Services, spoke on the use of sleep medication, and non-drug methods to manage poor sleep. The 1 October 2017 talk, 'Kiss Insomnia Goodnight', was attended by about 250 Hougang residents.

- **Managing Stress and Anxiety**

NHGP's Psychology Services and Ang Mo Kio Polyclinic co-organised several talks with TOUCH Home Care for Ang Mo Kio residents. The talk titled 'Manage Your Mind: Fight the Fear' raised awareness of the effect of stress and anxiety on chronic disease and vice versa and offered practical management tips. Another talk titled 'Good Stress, Bad Stress: Is Stress Good for Your Health?' highlighted the benefit of physical activities on physical and mental health.

World Kidney Day 2017

NHGP's Clinical Services organised an educational talk for Geylang Polyclinic patients as well as patient education sessions in the month of March 2018.

In conjunction with World Kidney Day, patients were also given educational materials on the risk factors of chronic kidney disease, and tips on how to keep one's kidneys in good health.

Falls Prevention Education

15 NHGP staff from Yishun Polyclinic participated in the 'Health for All Ages Carnival' organised by Nee Soon South GRC on 10 September 2017. The health carnival promoted healthy, active living and building a dementia-friendly community. Some 300 participants visited the NHGP booth to receive tips on fall prevention, exercises and how to eat a high-calcium diet.

Infection Control

NHGP's Nursing Services conducted a talk on infection control at the St Luke's ElderCare (SLEC) in April 2017. The talk, which was attended by SLEC nurses and allied health professionals, covered the principles of infection control and provided tips for conducting audits and managing multidrug-resistant organisms.



Dr Sim Shin Wei, Medical Officer and Dr Shaik Mohamed, Family Physician, conducting a chronic disease talk in conjunction with World Kidney Day to Geylang Polyclinic patients.



Participants visiting NHGP's Falls in the Elderly booth at the Health for All Ages Carnival to learn about fall prevention, exercises and eating a high-calcium diet.



A behind-the-scenes shot of Dr Gowri Doraisamy, Family Physician, Senior Consultant, with a patient during the Vasantham Tamil News filming.



Assistant Nurse Clinician Ms Du Na assessing a nine-month old child on his motor skill for Channel 8 Morning Express.

Medication Management

National Healthcare Group Pharmacy participated in the Pharmaceutical Society of Singapore Public Education Workgroup's 'Live Healthy, Stay Happy' event in April 2017. The workshop aimed to educate the public on medication adherence, proper storage and safe reliable sources to purchase medicine and supplements.

SPREADING THE HEALTH MESSAGE

To ensure that its health messages reached an even wider audience beyond its patients and the community it serves, NHGP leveraged various media platforms in FY2017:

- 938Now Body & Soul programme interviewed Ms Cheryl Tan, Pharmacist, Ang Mo Kio Polyclinic on 31 May 2017 on common misconceptions regarding smoking cessation.
- Capital 95.8FM interviewed Ms Tan Poh Ching, Senior Pharmacist, Toa Payoh Polyclinic on 13 June 2017. Ms Tan shared about the safe use of common medications and health supplements.
- Berita Harian interviewed Mr Mah Siew Chung, Clinical Psychologist, on 2 July 2017. Mr Mah helped readers understand what festive stress is, its possible causes and how it can be managed effectively during the Hari Raya season.
- Vasantham Tamil Seithi featured Dr Gowri Doraisamy, Family Physician, Senior Consultant, Director, Care Integration on 16 August 2017. Dr Gowri provided viewers with insights on the management of hypertension and highlighted the importance of having a balanced diet and doing regular exercise. She also shared tips on how keeping stress under control can aid in managing hypertension.
- Vasantham Tamil Seithi featured Ms Pradha Rajoo, Senior Physiotherapist, on 26 December 2017. Ms Pradha shared the benefits of strengthening exercises and demonstrated exercises that viewers could incorporate into daily activities.
- 938Now Body & Soul programme interviewed Dr Richard Lee, Family Physician, Consultant, Assistant Director, Family Medicine Development, on a live radio show on 16 January 2018. Dr Lee shared with listeners the differences between the common cold and influenza and how to manage body aches during cold weather.
- Channel 8 Morning Express interviewed Dr Angelia Chua, Family Physician, Consultant, Yishun Polyclinic, and Ms Du Na, Assistant Nurse Clinician, Woodlands Polyclinic, on 16 January 2018. Dr Chua and Ms Du explained to viewers how a child's development is assessed and how early detection of any delays or problems allow for effective intervention.





CHAPTER 4

RISING TO GREATER HEIGHTS

As a primary healthcare provider, the National Healthcare Group Polyclinics (NHGP) believes in the importance of advancing Family Medicine and continuing medical education. Not only are these critical to strengthen staff capabilities, they will also help ensure that healthcare professionals are future-ready.

NHGP's primary care research is another step in advancing Family Medicine. At the heart of NHGP's research and education efforts lies the goal of meeting Singapore's long-term needs for healthcare and wellness.

LEARNING FROM HEALTHCARE EXPERTS

NHGP continued its efforts to advance Family Medicine and further education through several activities in FY2017. These included learning from visiting healthcare experts and going overseas to learn about best practices and new ideas.



Prof Calvin Chou (back row, sixth from left) together with NHGP Senior Management members and staff during his visit.



Dr Katharina Kovacs Burns (front row, fourth from left) together with staff from NHGP and NUHS Department of Social Work during her visit.

LEARNING FROM HMDP VISITING EXPERTS SCHEME

To learn from the international community, NHGP hosted several visiting experts in areas ranging from diabetes management to patient care and communication.

PROF CALVIN CHOU January / February 2018

As part of the Ministry of Health's (MOH) Health Manpower Development Plan (HMDP) Visiting Expert Scheme, NHGP's Family Medicine Development (FMD) Division and Khoo Teck Puat Hospital co-hosted a visit by Professor (Prof) Calvin Chou from 29 January to 2 February 2018.

Prof Chou, a Practicing Physician at Veteran Affairs, the University of California San Francisco, board member and the Faculty of Academy on communication, facilitated communications workshops over

two days attended by healthcare professionals from NHGP and other healthcare institutions.

Participants learned that developing skills in relationship-based communication was akin to acquiring a multi-step skill requiring practice to achieve mastery. Participants also learned that a personable approach to communication could address the needs of patients including those with poor health literacy. Such effective communication could help save consult time, and enhance the development of mutual trust between the patient and the healthcare provider.

DR KATHARINA KOVACS BURNS February / March 2018

Together with the National University Health System's (NUHS) Department of Medical Social Work, NHGP's

Medical Social Services hosted Dr Katharina Kovacs Burns from 26 February to 2 March 2018 to share her expertise on diabetes management. The visit was part of MOH's HMDP Visiting Expert Scheme.

Dr Burns is a Senior Consultant, Manager of Clinical Quality Metrics and Quality and Healthcare Improvement at Alberta Health Services, Canada. She is also an Adjunct Professor at the School of Public Health, University of Alberta, Canada.

As the Co-Investigator of the Diabetes Attitudes Wishes and Needs (DAWN2™) Study, Dr Burns conducted workshops on DAWN2™ Person-Centred Dialogue Tools that could be used to engage patients and family members in conversations about adjusting and coping with the disease. The DAWN2™ study is the largest global study to explore the unmet needs of people with diabetes.



Prof Martin Fortin (back row, fifth from left) held a research session at Woodlands Polyclinic on 11 October 2017.



NHGP hosted Dr Paul Grundy (back row, fourth from left), also known as the 'Godfather' for the PCMH movement, in October 2017.

LEARNING FROM OVERSEAS EXPERTS AND EXPERIENCES

NHGP also hosted two overseas experts, Prof Martin Fortin, Professor and Researcher at the Department of Family Medicine and Emergency Medicine, Université de Sherbrooke, and Dr Paul Grundy, Global Director, Healthcare Transformation, IBM, from 9 to 11 October and 11 to 17 October 2017 respectively.

PROF MARTIN FORTIN October 2017

Prof Fortin met with NHGP staff and Senior Management members to share his expertise on the Quebec health system and multi-morbidity in team-based care and primary care. Through a multi-morbidity research session held at Woodlands Polyclinic on 11 October 2017, participants learned to apply research methodology to complex case scenarios including the use of critical appraisal skills.

DR PAUL GRUNDY October 2017

Known as the 'Godfather' of the Patient-Centred Medical Home (PCMH) movement, Dr Grundy discussed the international movement towards PCMH with NHGP staff and Senior Management members. He also talked about the transformation of care using data and horizontal collaboration and the vertical integration of the healthcare system.



A/Prof Chong (front row, centre) and staff visiting the National Institute for Health and Welfare in Helsinki.

HMDP IN FINLAND

May / June 2017

From 29 May to 9 June 2017, a team of NHGP staff visited Finland as part of a HMDP learning trip. Associate Professor (A/Prof) Chong Phui-Nah, CEO of NHGP & Primary Care, was part of the NHGP delegation visiting Helsinki from 29 May to 2 June 2017.

The team had the opportunity to learn about how the National Institute for Health and Welfare in Helsinki used data from research towards evidence-based application in programmes. This included Stop Dia!, a diabetes management programme.

The HMDP delegation learned much from the sharing sessions with its Finnish counterparts on health policy planning and implementation by the municipality or local government. This provided the team with insights into the development of successful health education, engagement and activation campaigns to improve patients' health in the community.

The HMDP team also visited the North Karelia Centre for Public Health in Joensuu. The team learnt from its hosts how they engage and activate patients, work with volunteers, the community and mass media, and how they leveraged information technology to implement innovative models of care.

The North Karelia Project

- Set up in the 1970s.
- Helps the community lower cardiovascular risks through the management of obesity, BMI and diabetes.
- Collaborates with the Martha Association which has 118 years of history in galvanising volunteers and the community to learn about and adopt healthier eating and cooking habits.

The Joensuu Service Centre

- Staffed by public health nurses who provide the first level of care for patients.
- Each nurse's room is strategically co-located between two primary care physicians' rooms for easy discussion and conference.

During the HMDP learning trip, our Finnish hosts shared many interesting ideas with us. One example is the North Karelia Project that is renowned for its successful public health approach to heart disease prevention. We can learn from their success and galvanise our Singapore communities in our war against diabetes.

Dr Wee Wei Keong

Director, Health Promotion & Preventive Care

The Iso Omena Service Centre

- Housed inside a public library.
- Primary care facilities are in separate clusters for consultation while self-help services and IT tools are available all over the library for patients' use.
- Patient queue system integrated within library electronic screens, offering convenience for patients on appointment information.



The TFI HEAL delegates were hosted by A/Prof Chong, Dr Evan Sim, Head of Woodlands Polyclinic, and NHGP Senior Management members.

HOSTING INTERNATIONAL DELEGATES

In FY2017, NHGP hosted several groups of visitors to exchange ideas and best practices.

DELEGATES FROM TFI HEAL May 2017

On 24 May 2017, NHGP hosted healthcare leaders who were part of the Temasek Foundation International Healthcare Executives in Asia Leadership Programme (TFI HEAL). The TFI HEAL programme is a healthcare governance and leadership executive programme for senior leaders and key appointment holders in healthcare organisations across Asia.

The participants, from countries such as Indonesia, Thailand, Japan and Seychelles, visited Woodlands Polyclinic to better understand Singapore's primary healthcare system and the services provided at Woodlands Polyclinic. A/Prof Chong also shared with the delegates the initiatives undertaken by NHGP to deliver quality patient-centred care for Singapore's population.

NURSING STUDENTS FROM FUDAN UNIVERSITY July 2017

On 7 July 2017, NHGP's Nursing Services hosted 12 nursing students from Fudan University, People's Republic of China at Woodlands Polyclinic.

This was part of a collaborative arrangement with Ngee Ann Polytechnic to provide overseas students with training opportunities to understand primary care nursing in Singapore.

NURSING LEADERS FROM SHAOXING PEOPLE'S HOSPITAL August 2017

Toa Payoh Polyclinic hosted 25 nursing leaders from Shaoxing People's Hospital, Zhejiang, People's Republic of China, on 2 August 2017. The delegation learned about the history and transformation of primary care in Singapore. The visit ended with an interactive discussion and clinic tour.



Participants in a discussion at the 'Management of Joint and Soft Tissue Conditions in Primary Care' workshop in Woodlands Polyclinic.

TRAINING OPPORTUNITIES

NHGP's Primary Care Academy (PCA) conducted several workshops in FY2017, including the following two workshops for doctors and nurses. For the full list of workshops conducted by PCA in FY2017, please refer to Appendix A.

Developmental Paediatrics: Childhood Development and Breastfeeding Updates

Held on 5 August 2017, the workshop saw Dr Wong Chui Mae, Senior Consultant, KK Women's and Children's Hospital (KKH), and Dr Yvonne Ng, Senior Consultant, National University Hospital, share their expertise on childhood developments and breastfeeding issues respectively. Yishun Polyclinic's

Dr Angelia Chua, Family Physician, Consultant, coordinated the workshop attended by 110 staff members.

Management of Joint and Soft Tissue Conditions in Primary Care

On 12 August 2017, Dr Jaganmohan Raja, Family Physician, Associate Consultant and Deputy Head, Woodlands Polyclinic, shared updates on common procedures conducted at polyclinics at a workshop. It was also facilitated by Dr Jeremy Foo, Family Physician, Associate Consultant, Yishun Polyclinic. Ms Cindy Soh, Principal Physiotherapist, Clinical Services and Ms Pauline Ang, Principal Podiatrist, Clinical Services, shared other non-interventional management options with the 25 NHGP doctors who attended the workshop.

**WORKSHOPS
CONDUCTED BY
NHGP'S PRIMARY
CARE ACADEMY IN
FY2017**



47
courses
conducted for
1,300
participants

ACHIEVING PROFESSIONAL STANDARDS

NHGP continues to advance the standards of Family Medicine, through promoting the professional development, education and training of staff.

INAUGURAL NHGP INTER-PROFESSIONAL FACULTY DEVELOPMENT SESSION

The inaugural NHGP Inter-Professional Faculty Development Session, organised by NHG Education Office, was held on 20 January 2018.

A total of 52 educators, comprising NHGP doctors, nurses and Allied Health Professionals attended the session aimed at fostering inter-professional collaboration and learning by professional groups of the same polyclinic. Singapore Institute of Management International Academy's Deputy Principal, Mr John Yeo, conducted the session, 'Applied Creativity in Teaching: Making New Connections'.

The NHGP educators not only shared their teaching methods, but they also learned through hands-on, interactive and collaborative settings to question and challenge themselves when teaching different types of learners.

MASTER OF HEALTH PROFESSIONS EDUCATION

On 21 July 2017, an NHGP family doctor received from Dr Tony Tan Keng Yam, then President of the Republic of Singapore and Patron of the Academy of Medicine, the Master of Science Degree in Health Professions Education by the University of Maastricht in collaboration with the Academy of Medicine.

MASTER OF HEALTH PROFESSIONS EDUCATION

Dr Richard Lee
Family Physician, Consultant

MASTER OF MEDICINE (FM)

In supporting staff development, NHGP has been helping its healthcare professionals enhance their skills and knowledge by attaining higher professional qualifications.

In November 2017, 15 NHGP doctors took their Master of Medicine [Family Medicine] examinations after undergoing a year's training in the Family Medicine Residency or through the College Programme. NHGP doctors achieved a 100% pass-rate and all 15 doctors qualified as Family Physicians.

MASTER OF MEDICINE (FM)

Dr Ong Kah Pieng
Resident Physician,
Ang Mo Kio Polyclinic

Dr Tan Hue Min
Resident Physician,
Ang Mo Kio Polyclinic

Dr Ooi Chung Ping
Resident Physician,
Ang Mo Kio Polyclinic

Dr Su Weicheng
Resident Physician,
Geylang Polyclinic

Dr Jonathan Chong
Family Physician,
Hougang Polyclinic

Dr Yeap Youwen
Family Physician,
Hougang Polyclinic

Dr Eugene Chua
Family Physician,
Hougang Polyclinic

Dr Jeremy Koh
Resident Physician,
Hougang Polyclinic

Dr Tai Zu Huang
Resident Physician,
Hougang Polyclinic

Dr Yong Yan Zhen
MOPEX,
Hougang Polyclinic

Dr Koh Jan Ming Ian
Family Physician,
Toa Payoh Polyclinic

Dr Todd On
Family Physician,
Toa Payoh Polyclinic

Dr Sam Cheng Wei
MOPEX,
Toa Payoh Polyclinic

Dr Chen Shiyun
Resident Physician,
Yishun Polyclinic

Dr Teo Yi Lyn
MOPEX,
Yishun Polyclinic

FELLOWSHIP CONFERMENT

FY2017 saw a number of NHGP's doctors conferred Fellowships, thus enabling them to take on consultant roles in the practice of Family Medicine and in the areas of teaching and research.

FELLOWSHIP OF ACADEMY OF MEDICINE, SINGAPORE

Dr Tung Yew Cheong

Family Physician,
Senior Consultant,
Director, Quality and Patient Safety

Dr Kong Jing Wen

Family Physician,
Associate Consultant,
Deputy Head, Hougang Polyclinic

FELLOWSHIP OF THE COLLEGE OF FAMILY PHYSICIANS OF SINGAPORE

Dr Lim Ziliang

Family Physician,
Associate Consultant,
Deputy Head, Yishun Polyclinic

Dr Koh Li Jia

Family Physician,
Hougang Polyclinic

GRADUATE DIPLOMA IN FAMILY MEDICINE

The Graduate Diploma in Family Medicine (GDFM) is a post-graduate training programme that equips family doctors in Singapore with skills to enhance their level of care to patients. The trainees sat for the GDFM examinations at the end of the programme.

11 doctors passed the Graduate Diploma in Family Medicine (GDFM) examinations in July 2017.

GRADUATE DIPLOMA IN FAMILY MEDICINE

Dr Jonathan Tan

MOPEX,
Ang Mo Kio Polyclinic

Dr Diane Lee

MOPEX,
Toa Payoh Polyclinic

Dr Tan Lye Yoong

Resident Physician,
Toa Payoh Polyclinic

Dr Tay Hu-Lin

Resident Physician,
Toa Payoh Polyclinic

Dr Kee Sor Hann

Resident Physician,
Woodlands Polyclinic

Dr Umakant Nagar

Resident Physician,
Woodlands Polyclinic

Dr Goh Bing Xing

MOPEX,
Yishun Polyclinic

Dr Lawrence Ng

MOPEX,
Yishun Polyclinic

Dr Andrew Lee

MOPEX,
Yishun Polyclinic

Dr Jonathan Foo

MOPEX,
Hougang Polyclinic

Dr Janice Wong

MOPEX,
Hougang Polyclinic

NUSMEDICINE DEAN'S AWARDS 2017

The NUSMedicine Dean's Award for Junior Doctor Teaching Award AY16/17 was given out during the Appreciation for NUSMedicine Clinical Teachers event held on 4 December 2017. This event was organised by NUSMedicine to recognise the hard work that clinical teachers put in for the academic year. An NHGP doctor received the teaching award at the event.

JUNIOR DOCTOR TEACHING AWARD

Dr Sim Sai Zhen

Family Physician,
Hougang Polyclinic

LKCMEDICINE DEAN'S AWARD FOR EXCELLENCE IN TEACHING 2017

The LKCMedicine Dean's Award for Excellence in Teaching was established in February 2017 to give recognition to faculty (both full-time and clinician educator adjunct faculty) and non-faculty educators who have contributed significantly to medical education at the Lee Kong Chian School of Medicine (LKCMedicine). Towards the end of each academic year, the School's award committee, chaired by Dean, Prof James Best, aims to recognise and reward deserving educators for this award. One of our doctors received the excellence in teaching award.

EXCELLENCE IN TEACHING AWARD

Dr Tang Wern Ee

Family Physician, Senior Consultant
Education Director, Family Medicine
Development and
Head, Clinical Research Unit

NHGP BEST FAMILY MEDICINE TRAINERS' AWARD 2017

The NHGP Best Family Medicine Trainers' Award recognises the significant contribution by Family Medicine Trainers for their initiative, passion, and dedication in teaching. Two doctors were awarded the best trainer award in FY2017.

BEST FAMILY MEDICINE TRAINERS' AWARD

Dr Valerie Teo

Family Physician,
Associate Consultant,
Deputy Head, Ang Mo Kio Polyclinic

Dr Nor Izuan Bin Rashid

Family Physician,
Woodlands Polyclinic

NHGP NURSING BEST CLINICAL INSTRUCTOR AWARD 2017

The NHGP Nursing Best Clinical Instructor Award recognises outstanding contribution by nurses in providing effective clinical teaching to students and newly recruited nurses and to help them achieve desired learning goals. An NHGP nurse received the award at the event.

NURSING BEST CLINICAL INSTRUCTOR AWARD

Ms Faridah Akhbar

Senior Staff Nurse,
Woodlands Polyclinic

MOH IN-SERVICE SCHOLARSHIP AND NHGP SCHOLARSHIP

Several NHGP nurses and Allied Health Professionals received the MOH In-Service Scholarship and NHGP Scholarship in FY2017. These scholarships aim to enhance staff qualifications and leadership capabilities.

MOH IN-SERVICE SCHOLARSHIP AND NHGP SCHOLARSHIP

Ms Jayabal Muthulakshmi

Staff Nurse,
Ang Mo Kio Polyclinic

Ms Quilon Karen Adlao

Staff Nurse,
Ang Mo Kio Polyclinic

Ms Lena Chan

Staff Nurse,
Ang Mo Kio Polyclinic

Ms Xie Shuqin

Assistant Nurse Clinician,
Ang Mo Kio Polyclinic

Ms Manimekalai

Senior Assistant Nurse,
Hougang Polyclinic

Ms Chen Guan Ling

Senior Staff Nurse,
Hougang Polyclinic

Ms Ye Ruijing

Senior Staff Nurse,
Hougang Polyclinic

Ms Siok Lai Fong

Principal Assistant Nurse,
Toa Payoh Polyclinic

Ms Rajwant Kaur d/o Gurdev Singh Khakh

Staff Nurse,
Toa Payoh Polyclinic

Ms Chen Yan

Senior Staff Nurse,
Woodlands Polyclinic

Ms Koh Xin Ru

Staff Nurse,
Woodlands Polyclinic

Ms Piloppina d/o Savurimuthoo

Senior Assistant Nurse,
Woodlands Polyclinic

Ms Jayasudha d/o Arumugam

Senior Staff Nurse,
Yishun Polyclinic

FY2017 STRATEGIC NURSING DEVELOPMENT PROGRAMME

Seven NHGP nursing staff members received awards under the Strategic Nursing Development Programme (SNDP). The SNDP awards aim to develop nursing talent to:

- Meet the healthcare needs of an ageing population.
- Implement new healthcare strategies, including early intervention, integrated care, and long-term care for the elderly.
- Build nursing capability in strategic areas of training.

FY2017 STRATEGIC NURSING DEVELOPMENT PROGRAMME

Ms Zel Soh

Senior Staff Nurse,
Woodlands Polyclinic

Ms Nirmala Nair

Senior Nurse Manager,
Head Nurse,
Ang Mo Kio Polyclinic

Ms Ervina Lee

Senior Staff Nurse,
Ang Mo Kio Polyclinic

Ms June Lim

Assistant Nurse Clinician,
Hougang Polyclinic

Ms Elane Zhang

Nurse Manager,
Yishun Polyclinic

Ms Lim Voon Hooi

Senior Nurse Manager,
Nursing Services

Ms Julia Zhu

Assistant Nurse Clinician,
Nursing Services

CREATING A CULTURE OF RESEARCH AND INQUIRY

To effectively partner patients on their healthcare and health journeys, NHGP's healthcare professionals participated in primary care research in FY2017 that further developed their understanding, knowledge and skills.

NHG-LKCMEDICINE CSPP FY2017

In fostering a strong research culture, NHGP continued to groom potential staff for research. The NHG-LKCMedicine Clinician-Scientist Preparatory Programme (CSPP) is a joint programme between NHG and LKCMedicine comprising project funding, sponsored research training, and mentorship.

The programme aims to expose clinicians to research opportunities early in their career through research training and project experience.

The NHGP recipient for FY2017 CSPP was Dr Sim Sai Zhen, Family Physician, Hougang Polyclinic. Dr Sim's research project aims to study multi-morbidity and healthcare utilisation in middle-aged patients in primary care.

HOMER GRANT FY2017

NHGP was a recipient of the NHG-HOMER (Health Outcomes and Medical Education Research) Grant in FY2017. The short-term grant is designed to encourage clinicians, nurses, Allied Health Professionals, and education researchers to embark on health professions education research.

Toa Payoh Polyclinic's Dr Kee Kok Wai, Family Physician, Associate Consultant, received a grant for his study in the research area of work-based learning. Dr Kee's study looked at enhancing family medicine physicians' learning experience.

SEEDCORN FUNDING

The Seedcorn Funding by the Centre for Primary Health Care Research and Innovation, a joint initiative between NHG and LKCMedicine, supports researchers in conducting quality interdisciplinary research. Ms Julia Zhu, Assistant Nurse Clinician, collaborated with LKCMedicine and was successful in obtaining this funding to study patients' perceptions and coping strategies of diabetic lower extremity amputation.

NATIONAL MEDICAL RESEARCH COUNCIL CENTRE GRANT

In FY2017, NHGP's research focus was in the areas of multi-morbidity, understanding and improving treatment-related behaviours in patients with chronic conditions. This work has been supported by funding from the National Medical Research Council (NMRC) Centre Grant.



Dr Darren Seah, (fifth from left) Chairperson, Organising & Scientific Committee, Primary Care Forum 2017 and Guest-of-Honour, Mr Ng How Yue (sixth from left), Second Permanent Secretary, Ministry of Health, together with guest speakers and the organising committee of Primary Care Forum 2017.



(From left) Presenters at the Primary Care Scientific Research Competition 2017, Dr David Ng, Dr Koh Li Jia, Ms Sandra Xu, Dr Sabrina Wong, Dr Richard Hui, Ms Tan Poh Ching.

PRIMARY CARE FORUM 2017

NHGP held its 10th Primary Care Forum (PCF) on 13 and 14 October 2017 in conjunction with the Singapore Health & Biomedical Congress (SHBC) 2017. Themed 'Primary Care: The Cornerstone of Sustainable High Performing Health Systems', the forum focused on the key role played by primary care in supporting health systems through chronic illness prevention measures.

NHGP and National Skin Centre (NSC) also held their first collaborative-interactive symposium which involved dermatologists from NSC discussing dermatology issues faced by primary care physicians.

SINGAPORE PRIMARY CARE SCIENTIFIC RESEARCH COMPETITION

The Singapore Primary Care Scientific Research Competition 2017 was held to foster a culture of research in primary care and recognise the research efforts of healthcare professionals. For the list of abstracts accepted for the SHBC Scientific Competition 2017, please refer to Appendix B.

The following NHGP and National Healthcare Group Pharmacy winners were announced at the opening ceremony of the SHBC 2017 on 12 October 2017.

ORAL CATEGORY



SILVER

Outcomes of using CATCH (Comprehensive Assessment Tool for Coordinated and Holistic Care) in the assessment of patients with poor diabetes control

Dr Sabrina Wong

Family Physician, Consultant
Assistant Director,
Clinical Services



BRONZE

Independent predictors for HbA1c decline with sitagliptin as a third line oral hypoglycemic agent in poorly controlled Type 2 diabetes patients in a Singapore primary care setting

Ms Tan Poh Ching

Senior Pharmacist,
Toa Payoh Polyclinic

POSTER CATEGORY



GOLD

Prevalence of frailty and its epidemiologic risk factors in a panel of older Singaporean adults

Dr Ian Koh

Family Physician,
Toa Payoh Polyclinic



SILVER

Difficulties that patients with chronic conditions face in accessing care in the primary care setting in Singapore: A cross-sectional study

Dr Koh Li Jia

Family Physician,
Hougang Polyclinic



BRONZE

An update of pharmacist-managed anticoagulation clinics in primary care: Evaluation of a collaborative care model

Ms Sandra Xu

Senior Pharmacist,
Hougang Polyclinic

NURSING RESEARCH INITIATIVE

In October 2017, the Nursing Research Community of Practice (CoP) was set up. Under the CoP 'learning by doing' philosophy, NHGP nurses could proactively participate in research to acquire research knowledge and skills. CoP brings together nurses with a passion for research to learn with and from each other through research project work.

The Nursing Research CoP comprises 15 members who were on 12 project teams as at 31 March 2018. The Nursing Research CoP also conducted a series of roadshows from September to December 2017 to interest nurses in supporting and conducting research.

The Nursing Research and Evidence-Based Practice (EBP) CoP also organised a Nursing Research and CoP Forum on 17 March 2018 to share knowledge and skills in research and EBP. This forum also serves as a platform for primary care nurses to share their research findings.

CONTRIBUTIONS TO NEW HEALTHCARE KNOWLEDGE

In FY2017, NHGP staff continued their efforts to actively contribute to new healthcare knowledge. NHGP's Nursing research efforts translated into first-author journal publications while a Pharmacy team's poster submission won the top prize at a competition.

Nursing and Patient Care Research

NHGP's Ms Goh Ling Jia, Senior Staff Nurse, and Ms Julia Zhu, Nurse Clinician, had their research on patient care published in the International Archives of Nursing and Health Care on 22 May 2017 and 14 July 2017, respectively.

Ms Goh's research paper, 'Effectiveness of Telemedicine for Distant Wound Care Advice towards Patient Outcomes: Systematic Review and Meta-Analysis', assessed the effectiveness of telemedicine in wound care management. Ms Zhu's contribution, 'When Can I be Free from My Miserable Leg?' A Qualitative Study of Patients' Experiences of Chronic Leg Ulceration in Primary Healthcare', proposed a bio-psycho-social model of care to meet the needs of patients with chronic leg ulceration.

Pharmacy Operations Research

At the Singapore Healthcare Management Congress 2017 held from 15 to 17 August 2017, National Healthcare Group Pharmacy's Ms Ainolmardziah Yusof and her team won the first prize in the poster competition, under the Supply Chain Management category. The title of National Healthcare Group Pharmacy's poster submission was 'Improving and Sustaining Picking and Packing with Increasing Workload at Central Warehouse'. The annual congress is held to recognise exemplary operations ideas and solutions that enhance patient care.

PUBLICATIONS WITH CONTRIBUTIONS BY NHGP STAFF IN PEER REVIEW JOURNALS

INTERNATIONAL ARCHIVES OF NURSING AND HEALTH CARE

Date: May 2017

Effectiveness of Telemedicine for Distant Wound Care Advice towards Patient Outcomes: Systematic Review and Meta-Analysis.

Ms Goh Ling Jia

Senior Staff Nurse,
Nursing Services

Date: July 2017

'When Can I be Free from My Miserable Leg?' A Qualitative Study of Patients' Experiences of Chronic Leg Ulceration in Primary Healthcare.

Ms Julia Zhu Xiaoli

Nurse Clinician,
Nursing Services

ATHEROSCLEROSIS

Date: May 2017

Baseline predictors of aortic stiffness progression among multi-ethnic Asians with Type 2 diabetes.

Dr Simon Lee

Family Physician, Consultant
Chief Operating Officer and
Chief Medical Informatics Officer

Dr Tang Wern Ee

Family Physician, Senior Consultant
Education Director, Family Medicine
Development and
Head, Clinical Research Unit

JOURNAL OF DIABETES AND ITS COMPLICATIONS

Date: June 2017

Arterial stiffness is an independent predictor for albuminuria progression among Asians with Type 2 diabetes: A prospective cohort study.

Dr Simon Lee

Family Physician, Consultant
Chief Operating Officer and
Chief Medical Informatics Officer

Dr Tang Wern Ee

Family Physician, Senior Consultant
Education Director, Family Medicine
Development and
Head, Clinical Research Unit

**METABOLISM: CLINICAL
AND EXPERIMENTAL**

Date: July 2017

Association of apolipoprotein-CIII
(apoC-III), endothelium-dependent
vasodilation and peripheral
neuropathy in a multi-ethnic
population with Type 2 diabetes.

Dr Simon Lee

Family Physician, Consultant
Chief Operating Officer and
Chief Medical Informatics Officer

Dr Tang Wern Ee

Family Physician, Senior Consultant
Education Director, Family Medicine
Development and
Head, Clinical Research Unit

**JOURNAL OF DIABETES
AND ITS COMPLICATIONS**

Date: July 2017

Association of the anti-angiogenic
factor secreted protein and rich
in cysteine (SPARC) with vascular
complications among Chinese Type 2
diabetic patients in Singapore.

Dr Simon Lee

Family Physician, Consultant
Chief Operating Officer and
Chief Medical Informatics Officer

Dr Tang Wern Ee

Family Physician, Senior Consultant
Education Director, Family Medicine
Development and
Head, Clinical Research Unit

**BMJ OPEN DIABETES
RESEARCH & CARE**

Date: July 2017

Medication adherence and glycemic
control among newly diagnosed
diabetes patients.

A/Prof Chong Phui-Nah

Family Physician, Senior Consultant
Chief Executive Officer,
National Healthcare Group Polyclinics
& Primary Care

**DIABETES RESEARCH AND
CLINICAL PRACTICE**

Date: August 2017

Longitudinal trends in HbA1c
and associations with co-morbidity
and all-cause mortality in Asian
patients with Type 2 diabetes:
A cohort study.

Dr Tang Wern Ee

Family Physician, Senior Consultant
Education Director, Family Medicine
Development and
Head, Clinical Research Unit

**PROCEEDINGS OF
SINGAPORE HEALTHCARE**

Date: September 2017

Do primary care physicians use the
5As in counselling obese patients? A
qualitative study.

Dr Tung Yew Chung

Family Physician, Senior Consultant
Director, Quality and Patient Safety

**NEPHROLOGY DIALYSIS
TRANSPLANTATION**

Date: October 2017

Genetic variants in the receptor for
advanced glycation end products
(RAGE) gene were associated with
circulating soluble RAGE level but
not with renal function among Asians
with Type 2 diabetes: A genome-wide
association study.

Dr Simon Lee

Family Physician, Consultant
Chief Operating Officer and
Chief Medical Informatics Officer

Dr Tang Wern Ee

Family Physician, Senior Consultant
Education Director, Family Medicine
Development and
Head, Clinical Research Unit

GERONTOLOGIST

Date: November 2017

Bilingual text with or without
pictograms improves elderly
Singaporeans' understanding of
prescription medication labels.

Dr Tang Wern Ee

Family Physician, Senior Consultant
Education Director, Family Medicine
Development and
Head, Clinical Research Unit

**SINGAPORE MEDICAL
JOURNAL**

Date: January 2018

Ministry of Health Clinical Practice
Guidelines: Hypertension.

Ms Yeo Loo See

Deputy Director,
Nursing Services

**GERIATRICS &
GERONTOLOGY
INTERNATIONAL**

Date: March 2018

Evaluation of an integrated primary
care-led dementia shared care
programme in Singapore: An
effectiveness and cost-effectiveness
study.

Dr Colin Tan

Family Physician, Senior Consultant
Deputy Director, Clinical Services

Dr Low Kang Yih

Family Physician, Associate Consultant
Ang Mo Kio Polyclinic

IMPARTING KNOWLEDGE

NHGP conducted several training programmes, talks and workshops in FY2017 to share medical knowledge. Several of NHGP's training contributions were recognised at the NHG Teaching Awards.

NHGP MEDICAL TEACHING

In FY2017, NHGP's Family Physicians continued their efforts to impart knowledge to the next generation of practitioners.

Nurturing the Next Generation

In grooming the next generation of doctors, NHGP believes in the importance of starting with an introduction of Family Medicine principles and skills to medical students in the formative years of medical school.

In FY2017, NHGP Family Physicians taught medical undergraduates from NUS Yong Loo Lin School of Medicine (NUSMedicine) and LKCMedicine. NHGP was also the training site for LKCMedicine's newly-launched Student Assistantship Programme (SAP) in Family Medicine, the first such programme in Singapore.

In this experiential learning programme aimed at improving the transition of medical students to doctors, Year 5 students who had passed their final clinical and written examinations were placed in clinic teams to be closely supervised by their clinical teachers. Upon graduation and completion of their Postgraduate Year 1 internship,



An NUSMedicine medical student in a consultation setting as Dr Tang Wern Ee (second from right) looked on.

medical graduates can apply for the NHG Family Medicine Residency Programme. The programme will see them undergo a three-year structured, competency-based training to gain a comprehensive foundation in clinical knowledge and skills essential for the practice of Family Medicine.

Under the NHG Family Medicine Residency Programme, medical graduates run full-day continuity clinics at NHGP with fellow residents to see patients under the supervision of Family Physicians.

Professional Development Opportunities

To ensure its healthcare professionals are kept up-to-date and upskilled, NHGP holds regular in-house continuous medical education learning activities.

In FY2017, NHGP conducted six talks and workshops in areas ranging from dementia to legal matters. For the list of medical forums conducted, please refer to Appendix C. In addition, its Family Physicians continued to lead inter-professional teams in quality improvement projects, research projects within NHGP, with community partners and other healthcare institutions.

Through such diverse professional development opportunities, NHGP aims to equip its staff with the skills to meet current and future primary care needs.

NHG TEACHING AWARDS

NHG Teachers' Day 2017 was held on 15 September 2017. Graced by Professor Philip Choo, Group CEO, NHG, the award presentation was held to recognise the outstanding efforts of nominated teachers in NHG, including NHGP.

The awards recognise educators who have contributed significantly to medical education at LKCMedicine. More than 10 NHGP staff members were honoured with awards at the event.

NHG TEACHING AWARD FOR JUNIOR DOCTORS

Dr Kee Kok Wai

Family Physician, Associate Consultant
Toa Payoh Polyclinic

Dr Sim Sai Zhen

Family Physician,
Hougang Polyclinic

Dr Teh Kailin

Family Physician,
Ang Mo Kio Polyclinic

NHG INTER-PROFESSIONAL TEACHING AWARD

Ms Yeoh Hui Ling

Senior Executive,
Primary Care Academy

NHG OUTSTANDING EDUCATION PARTNERS AWARD

Dr Lee Oh Chong Leng

Locum

NHG OUTSTANDING NURSE TEACHERS

Ms Gao Hua

Senior Staff Nurse,
Yishun Polyclinic

Ms Kang Yimin

Senior Staff Nurse,
Woodlands Polyclinic

NHG OUTSTANDING CITIZENSHIP AWARD

Ms Chan Soo Chung

Executive Director,
NHG Pharmacy

NHG TEACHING AWARD FOR NURSING PRECEPTORS

Ms N Nirmala

Senior Nurse Manager,
Ang Mo Kio Polyclinic

Ms Zaiton Binte Osman

Senior Assistant Nurse,
Yishun Polyclinic

Ms Zel Soh

Senior Staff Nurse,
Woodlands Polyclinic

NHG YOUNG ACHIEVER AWARD

Ms Chong Jiun Yih

Assistant Director,
Pharmacy Services Centre

NHG EDUCATION LEADERS AWARD

Ms Lim Li Ching

Deputy Director,
Pharmacy Practice

NHG TEACHING AWARD FOR PHARMACY SENIOR PRECEPTORS

Ms Sandra Xu

Senior Pharmacist,
Hougang Polyclinic

NHG TEACHING AWARD FOR PHARMACY PRECEPTORS

Mr Gary Wiratama Chandra

Senior Pharmacist,
Toa Payoh Polyclinic

Ms Jen Pei-Hsuan

Senior Pharmacist,
Ang Mo Kio Polyclinic



CHAPTER 5

WORKING TOGETHER AS ONE

Recognising that staff are its pillars of strength, the National Healthcare Group Polyclinics (NHGP) has in place staff development, appreciation and recognition programmes to motivate and inspire employees.

At the same time, NHGP ensures that its staff are supported through efficient work processes and a strong service and safety culture so that they can give their best. NHGP management also regularly engages its healthcare professionals and support staff to instil in them a sense of pride in their achievements.

Together, NHGP is confident that it can excel in its role in primary care.



DOING NHGP PROUD

Beyond the provision of patient-centered care, FY2017 saw NHGP being recognised for its various efforts in innovation and service excellence. This bears testimony to NHGP's on-going efforts to transform primary care and improve population health.



Leveraging technology for the more routine services allows staff to proactively offer help and support to patients and their caregivers. This, in turn, contributes to a more patient-centric experience for everyone.

Dr Simon Lee

Family Physician, Consultant
Chief Operating Officer
and Chief Medical Informatics Officer



(From right) Ms Tracy Gan, Deputy Director, Service Leadership and Patient Relations, and Ms Sherrie Lim, Deputy Director, Operations, receiving the Gold Award at the AHMA 2017 from Dr Cheung Wai-lun former Director of Cluster Services, Hong Kong Hospital Authority, Hong Kong.

GOLD AWARD AT ASIAN HOSPITAL MANAGEMENT AWARDS 2017

For its digital innovation efforts, NHGP was conferred the Gold Award in the 'Cost Reduction' category of the Asian Hospital Management Awards (AHMA) 2017 on 24 August 2017.

Selected from 418 entries submitted from 17 countries, NHGP was recognised for its automation and innovation efforts to enhance patient care while saving more than \$2.3 million a year in manpower cost avoidance. Titled 'Overall Reduction in System Cost — Using Automation & Innovation as Levers for Improved Productivity and Quality of Patient Care', NHGP's entry showed how NHGP's ancillary staff have taken on higher-value work focusing on patient care through the automation of routine duties.

PS21 STAR SERVICE AWARD 2017

Mr Edward Lee, Patient Service Associate, who is also an iCARE Service Leader at Woodlands Polyclinic, was given the PS21 Star Service Award on 19 May 2017 in recognition of his commendable efforts to provide exemplary service to patients.

The PS21 Star Service Award recognises officers who consistently demonstrate high standards of service excellence and is among several award categories under the Excellence in Public Service Awards given out annually by the Public Service.



Mr Edward Lee (left), Patient Service Associate, Woodlands Polyclinic, receiving the PS21 Star Service Award from Mr Peter Ong, Head of Civil Service.

NATIONAL DAY AWARDS

On 5 November 2017, six NHGP and National Healthcare Group Pharmacy staff received the National Day Awards.

PUBLIC ADMINISTRATION MEDAL (BRONZE)

Associate Professor Chong Phui-Nah

CEO, National Healthcare Group
Polyclinics & Primary Care

COMMENDATION MEDAL

Ms Lim Li Ching

Deputy Director, Pharmacy Practice,
National Healthcare Group Pharmacy

THE EFFICIENCY MEDAL AWARD

Ms Er Lian Hwa

Senior Nurse Clinician,
Ang Mo Kio Polyclinic

Ms Lee Yoke Fung

Executive Assistant,
Woodlands Polyclinic

Ms Poon Kam Lai

Assistant Manager,
Human Resources Department

THE LONG SERVICE MEDAL

Ms June Lim

Assistant Nurse Clinician,
Hougang Polyclinic



NHGP Senior Staff showing support to Dr Kee Kok Wai (third from left) and Dr Kwan Pek Yee (fourth from left) at the Healthcare Humanity Awards.



Mr Richard Low, Senior Nurse Manager (centre), receiving the Nurses' Merit Award from Mr Gan Kim Yong, Minister for Health.

HEALTHCARE HUMANITY AWARDS 2017

Also doing NHGP proud were two staff members who were conferred the Healthcare Humanity Awards 2017 to honour healthcare professionals who have gone beyond the call of duty to help others.

Dr Kwan Pek Yee, Family Physician, Principal Staff, and Head of Yishun Polyclinic, and Dr Kee Kok Wai, Family Physician, Associate Consultant, Toa Payoh Polyclinic were among the 43 recipients to receive the Open Category Award.

NURSES' MERIT AWARD 2017

On 7 July 2017, Mr Richard Low, Senior Nurse Manager, Woodlands Polyclinic, received his award from Mr Gan Kim Yong, Minister for Health, at the Nurses' Merit Award 2017 presentation ceremony for his significant contributions to the nursing profession.

This is an annual event held by the Ministry of Health (MOH) in recognition of outstanding performance and contribution to the nursing profession.

Nurses are nominated by their healthcare institutions and selected by a panel set up by MOH. These nominations can come from public healthcare institutions, the intermediate and long-term care sector, and private hospitals.

SINGAPORE HEALTH AWARD 2017

NHGP's efforts to promote health at the workplace were honoured with the Corporate Merit Award at the Singapore HEALTH Award 2017 held on 10 October 2017. NHGP's diverse workplace-health promotion activities organised by its Health Promotion and Preventive Care Department have helped to cultivate a healthy environment for staff.

The biennial Singapore HEALTH Award 2017 is organised by the Health Promotion Board. Four aspects of workplace health promotion such as 'Strategic Positioning and Management', 'Holistic Needs Assessment and Programme Planning', 'Comprehensive Coverage', and 'Monitoring and Evaluation' were considered for the 2017 awards.

NATIONAL HEALTH IT EXCELLENCE AWARDS 2017

Organised by MOH to honour organisations and individuals who have delivered excellence in healthcare services through the strategic application of information technology in their operations, the National Health IT Excellence Awards was held on 30 May 2017.

The National Healthcare Group Pharmacy's submission, the 'Enhanced Convidose System with Medication Packing Engine', won an IT Excellence Award in the 'Beyond Quality to

Value' category. This award category recognises IT initiatives that deliver value to patients through appropriate care and efficient use of clinical resources and manpower.

National Healthcare Group Pharmacy developed the system together with the Institute of Mental Health (IMH) and Integrated Health Information Systems. The system enables automatic transcribing of medication orders from IMH to the National Healthcare Group Pharmacy Services Centre, and automatic transmission of drug items dispensed by National Healthcare Group Pharmacy back to IMH's billing system. This system has helped to reduce the risk of medication errors and billing errors, and also improved medication safety and staff productivity.

SINGAPORE HEALTHCARE MANAGEMENT POSTER COMPETITION

At the annual Singapore Healthcare Management Congress (SHMC) 2017 held from 15 to 17 August 2017, National Healthcare Group Pharmacy's Ms Ainolmardziah Yusof and her team won the first prize in the poster competition, in the Supply Chain Management category. The title of National Healthcare Group Pharmacy's poster submission was 'Improving and Sustaining Picking and Packing with Increasing Workload at Central Warehouse'. The congress is held to recognise exemplary solutions that enhance patient care.



NHG Awards 2017 recipients with A/Prof Chong Phui-Nah, CEO of NHGP & Primary Care (back row, fifth from left).

NHG AWARDS 2017

On 12 July 2017, three NHGP staff members were recognised for their significant contributions to public healthcare at the NHG Awards Ceremony.

NHGP teams who helped raise the quality standards of patient care through projects and initiatives were also honoured with team awards.

Several NHGP staff members also received the Health Manpower Development Plan (HMDP) awards.

NHG OUTSTANDING CITIZENSHIP AWARD

Dr Gowri Doraisamy

Family Physician, Senior Consultant
Director, Care Integration

NHG YOUNG ACHIEVER AWARD

Dr David Ng

Family Physician, Consultant
Head, Toa Payoh Polyclinic

Ms Serene Kho

Manager,
National Healthcare Group Diagnostics

NHG TEAM RECOGNITION AWARD



GOLD

Tele-ECG Collaboration

The Tele-ECG collaboration between NHGP and TTSH Cardiology has helped to reduce avoidable referrals to the cardiology outpatient clinic by right-siting patients.



GOLD

Tele-DERM

The secure web-based platform has allowed NHGP family doctors with training in family practice dermatology to discuss skin care cases and treatment options with National Skin Centre (NSC) dermatologists in a convenient and prompt manner, reducing the need for referrals to NSC.

**NHG TEAM RECOGNITION
AWARD****SILVER
Right-Siting of Chronic
Disease Patients from
Ang Mo Kio Polyclinic to
Raffles Medical Group**

The right-siting of chronic disease patients from Ang Mo Kio Polyclinic to the Raffles Medical Group was made possible by the strong collaborative ties of the two organisations working together to provide seamless care for patients.

**SILVER
Coronary Risk Screening
(CRS) Team**

NHGP's CRS team worked with Nanyang Polytechnic to develop an application software to identify risk profiles of patients for major chronic conditions and provide them with early intervention to better manage population health.

**BRONZE
Nursing Training
Review Committee (NTRC)**

The NTRC has fostered a culture of learning by developing and supporting the training of nurses as part of NHG's journey in the Regional Health System.

**NHG DEVELOPMENTAL
AWARD****HMDP ALLIED HEALTH****Dr Wong Mei Yin**

Principal Clinical Psychologist,
Clinical Services

HMDP TEAM-BASED**Mr Mah Siew Chung**

Clinical Psychologist,
Clinical Services

Ms Ester Zhang

Assistant Nurse Clinician,
Ang Mo Kio Polyclinic

Ms Cindy Soh

Principal Physiotherapist,
Clinical Services

Dr Wee Wei Keong

Director,
Health Promotion & Preventive Care

Dr Donna Tan

Family Physician, Associate Consultant
Assistant Director, Clinical Services

Ms Soh Ying Hua

Executive,
Health Promotion & Preventive Care

Ms Ng Jia Jia

Executive,
Health Promotion & Preventive Care

Ms Nanda Kumari

Nurse Clinician,
Toa Payoh Polyclinic

Ms Cindy Chew

Manager,
Corporate Communications

Ms Chong Hui Jia

Manager, Clinical Operations
Ang Mo Kio Polyclinic

Ms Chia Kai Li

Senior Staff Nurse,
Ang Mo Kio Polyclinic

Ms Ng Sze Ern

Senior Staff Nurse,
Toa Payoh Polyclinic

Ms Cindy Chew

Senior Staff Nurse,
Woodlands Polyclinic

**HMDP MEDICAL -
CONSULTANTS & ABOVE****Dr Tang Wern Ee**

Family Physician, Senior Consultant
Education Director, Family Medicine
Development and
Head, Clinical Research Unit

Dr Darren Seah

Family Physician, Consultant
Director, Family Medicine Development

**HMDP MEDICAL -
REGISTRAR & ASSOCIATE
CONSULTANT****Dr Manojkumar Amarial
Kharbanda**

Family Physician, Associate Consultant
Ang Mo Kio Polyclinic,
Deputy Chief Medical Informatics
Officer, Office of Clinical Informatics

Dr Lim Ziliang

Family Physician, Associate Consultant
Deputy Head, Yishun Polyclinic

Dr Valerie Teo

Family Physician, Associate Consultant
Deputy Head, Ang Mo Kio Polyclinic

Dr Tan Khai Wei

Family Physician, Associate Consultant
Deputy Head, Toa Payoh Polyclinic

ENSURING QUALITY STANDARDS

NHGP regularly organises activities to recognise service excellence and quality standards of care. NHGP also looks at initiatives and innovations that enhance productivity and improve the quality of care.



NHGP award recipients and Senior Management members at the NHG Quality Day 2017.

NHG QUALITY DAY

Themed 'Collaborative Relationships: Co-creating Value in Communities', the NHG Quality Day 2017 focused on the importance of driving quality improvements. Held on 6 October 2017, Guest-of-Honour, Dr Mary Ann Tsao, founding Director of the Tsao Foundation, gave a keynote address on 'Developing Collaborative Relationships in the Community' to about 400 awardees and guests.

Quality improvement and service-related awards were presented to staff. 11 NHGP staff members were conferred the Excellence in Action Award and a caregiver and a patient each received the Exemplary Patient and Caregiver Awards in recognition of their inspiring efforts towards improving quality of care.

Awards were also presented to 13 NHGP staff members who had successfully completed the Clinical Practice Improvement Programme.

Two NHGP projects were shortlisted for poster exhibition during the event. The two posters, 'Improvement in Diabetic Foot screening (DFS) and Diabetic Retinopathy (DRP) Screening Rates among Empanelled Patients' and 'To Reduce Dental Prescribing Errors' were presented by Dr Tricia Chang, Family Physician, Ang Mo Kio Polyclinic and Dr Tan Sze Lin, Senior Dental Surgeon, Toa Payoh Polyclinic.



The NHGP Quality Day 2017 Organising Committee celebrated the theme 'Our Quality Culture - Sustainability and Spread'.

NHGP QUALITY DAY

The NHGP Quality Day 2017, previously known as the Culture DNA Day, was celebrated on 4 October 2017 with the theme 'Our Quality Culture – Sustainability and Spread'. The aim of the event was to spread improvement initiatives and projects to polyclinics that might benefit from transformation in their areas of primary care. NHGP also held a quality improvement workshop on 'Sustainability and Spread' for about 70 staff members.

Seven team and 15 individual awards were given out in six award categories at the event. For the list of quality improvement projects completed in FY2018, please refer to Appendix D.

MOH PATIENT EXPERIENCE SURVEY 2017

NHGP achieved a composite patient satisfaction score of 92% in MOH's Patient Experience Survey 2017. The composite score was 0.9 point higher than the national score for polyclinics in Singapore with Toa Payoh Polyclinic attaining the highest score of 94.5% amongst all of NHG Polyclinics. Held in the month of November 2017, the survey assessed patients' experience at public healthcare institutions and helped identify areas for improvement.

iCARE EXPERIENCE CAMPAIGN

In FY2017, NHGP's Service Leadership & Patient Relations Department planned and developed a host of initiatives including the iCARE Experience Campaign to engage and energise staff. Service education tools were provided for continuous learning and more importantly, for the clinic management team to continue its drive to strengthen service culture.



NHGP Senior Management members and staff with A/Prof Tai Hwei Yee (sixth from left) at the award presentation ceremony.

HEALTH AND SAFETY INITIATIVES

In FY2017, NHGP continued to highlight the importance of a strong awareness of safety and quality via a range of activities such as roadshows and exercises.

Patient Safety Roadshows

NHGP held its Patient Safety Awareness Campaign for the third consecutive year to promote patient safety awareness among staff with the theme, 'Effective Communication Saves Lives'.

Held in March 2018 at eight locations including all six NHG Polyclinics, NHGP Headquarters and Contact Centre, the campaign focused on the importance of effective communication at work

using a scenario-based video and interactive game stations.

NHGP also presented its Patient Safety Star Awards to outstanding staff for advocating a strong safety culture.

Workplace Safety and Health (WSH) Roadshows

To support and enhance the WSH culture at NHGP, the WSH committee organised roadshows across six NHG Polyclinics and NHGP Headquarters from 17 January to 14 February 2018. Maintaining workplace safety and health is an essential aspect of the daily work routine to ensure a safer environment for staff and patients. Topics covered during the roadshows included risk management, handling of sharps, types of infectious diseases and health promotion.



Mr James Tay, Assistant Manager, Operations Support Services, conducting a WSH roadshow for polyclinic staff.



NHGP's healthcare team attending to casualties at the mock-up air crash scene.

Air Crash Exercise

To support the Singapore Airshow 2018, NHGP formed a Field Medical Team comprising two doctors and four nurses who participated in an air crash exercise known as Exercise Vulcan 2018. The exercise was part of the contingency planning by the Singapore Civil Defence Force and was conducted on 19 January 2018.

Pre-Pandemic Vaccination Exercise

As a primary care provider, NHGP plays an important role in ensuring population health.

On 27 January 2018, Woodlands Polyclinic conducted a pre-pandemic vaccination exercise for an H5N1 scenario. Volunteers from NHGP helped by testing out the workflow



A/Prof Benjamin Ong (centre, in grey shirt), Director of Medical Services at MOH observing the exercise.

for a Mass Vaccination Centre (MVC) by role-playing patients based on MOH's clinical guidelines.

The MVC exercise provided good learning points for observers from MOH and NHGP as well as the exercise participants. At the same time, the exercise illustrated NHGP's integral role in supporting MOH during a pandemic outbreak.

Infection Control Orientation for Geylang Polyclinic staff

In order to familiarise Geylang Polyclinic staff with NHGP's Infection Control practices, the Infection Control team from NHGP Headquarters conducted an orientation on 28 February 2018 at the Geylang Polyclinic. Dr Christopher Chong, Family Physician, Associate Consultant, Head of Ang Mo Kio Polyclinic and Chairperson of the Prevention and Control of Infection Committee (PCIC), together with Dr Jonathan Ting, Family Physician, Associate Consultant, and Head of Geylang Polyclinic, conducted the training for more than 100 staff members.



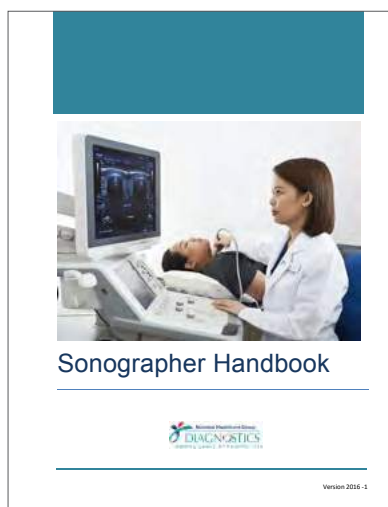
(From left) Dr Jonathan Ting and Dr Christopher Chong conducting a training session on infection control practices at Geylang Polyclinic.

FIRST SONOGRAPHER HANDBOOK

In May 2017, National Healthcare Group Diagnostics published its first Sonographer handbook as a reference guide. Developed by the radiography team, the handbook aims to help sonographers obtain quality ultrasound images to ensure quality of care for patients. The handbook is available at all National Healthcare Group Diagnostics imaging centres.

Features of the Sonographer Handbook:

- 60-pages of ultrasound images and information about ultrasound examinations, useful techniques and protocols.
- Glossary of terms in Mandarin and Malay to aid in communication with patients.
- Useful reference for standards of care and audit purposes.
- Invaluable resource for both new users and experienced sonographers.



The Sonographer handbook aims to help sonographers obtain quality ultrasound images to ensure quality care for patients.



With the expected standard of care spelt out clearly in the book, the Sonographer Handbook serves as a very helpful learning resource for training purposes.

A/P Chong Bee Kiang

Clinical Advisor (Radiography),
National Healthcare Group
Diagnostics

REDESIGNING JOBS

In FY2017, National Healthcare Group Diagnostics embarked on job redesigns across its clinical and ancillary teams. The aim of the job redesign initiative was to facilitate manpower deployment to support capacity expansion and meet the greater demand on primary care resources. At the same time, the job redesign has helped create more value-added jobs for staff.

Upskilling measures were implemented after careful planning. General radiographers were trained to perform ultrasonography and mammography while Patient Service Associates learned to perform phlebotomy. Drivers were given training to provide basic counter services.

Training was in progress in FY2017 to upskill National Healthcare Group Diagnostics Clinical Support Assistants to perform Diabetic Retinal Photography and Diabetic Foot Screening for chronic patients with diabetes.

STRENGTHENING THE NHGP SPIRIT

In a bid to build a strong NHGP culture, several activities were held during the year to engage staff and strengthen the NHGP spirit.



A/Prof Chong Phui-Nah, CEO of NHGP & Primary Care, addressing NHGP HQ staff at the Townhall session.



NHGP continues to enhance the way we deliver holistic primary healthcare to our patients. By leveraging technology, we are able to drive our transformation efforts in an ever-changing healthcare landscape.

A/Prof Chong Phui-Nah
CEO, National Healthcare Group
Polyclinics & Primary Care

CEO TOWNHALL

The CEO Townhall sessions were held for all NHG Polyclinics and NHGP Headquarters staff from 19 October 2017 to early November 2017. At the Townhall, A/Prof Chong shared NHGP's achievements and projects by the Strategic Workgroups to continue NHGP's Primary Care Transformation Journey. A/Prof Chong also updated staff on the progress of the Central North Primary Care Network, the successful handover of Unity Family Medicine Clinic, and progress of the redeveloped Ang Mo Kio and Yishun Polyclinics.

Stemming from NHGP's win at the Asian Hospital Management Award (Gold) for its innovation and automation efforts, A/Prof Chong urged staff to continue leveraging innovative technology to automate labour-intensive activities.

NHG FAMILY APPRECIATION DAY 2017

On 27 November 2017, NHGP held its fourth Family Appreciation Day at its headquarters. A/Prof Chong presented 16 book prizes to children of NHGP's staff and six Stand By Me awards to family members of staff.

The Stand By Me Award was given to appreciate family members for their unwavering care and support to NHGP staff members so that they could have peace of mind at work.

The afternoon saw both staff and their families spending time together at the game booths set up for the day. Staff also shared heartwarming stories on the support they received from their family members.

NHGP ACTIVE DAY FY2017

Close to 600 NHGP, National Healthcare Group Diagnostics and National Healthcare Group Pharmacy staff came together to attend the annual NHGP Active Day at the Woodlands Sports Hall and Stadium on 3 March 2018. The event which promotes an active and healthy lifestyle was packed with a series of activities and staff were led on a mass Zumba workout to kick-start the event. Various aerobic sessions such as Yoga and Taichi were also conducted. There was also the Inter-polyclinics friendly telematches where Polyclinics competed for the CEO Challenge Trophy. The event saw Woodlands Polyclinic walking away with the CEO Challenge Trophy while Ang Mo Kio Polyclinic and NHGP Headquarters won First and Second Runners-Up respectively.



NHGP staff doing stretching exercises during NHGP Active Day.

NHGP DINNER & DANCE 2017

Over 800 staff from NHGP, National Healthcare Group Diagnostics and National Healthcare Group Pharmacy gathered at Marina Bay Sands to celebrate NHGP's annual Dinner & Dance on 11 November 2017. Graced by Guest-of-Honour Professor (Prof) Philip Choo, GCEO, NHG, the night opened with a rousing Samba Dance performance by NHGP Senior Management members. The event's 'Illumination' theme saw staff dressed in bright colours as they enjoyed and cheered for colleagues participating in the performance competition. The event concluded with a mass dance led by Senior Management members and a projection dance performance by the Dinner & Dance Organising Committee. The night ended on a high note as lucky draw winners walked away with attractive prizes.



Prof Philip Choo (centre in blue shirt and tie), with A/Prof Chong Phui-Nah (right) CEO, NHGP & Primary Care and Dr Simon Lee (left in blue shirt), Chief Operating Officer and Chief Medical Informatics Officer, NHGP, participating in the fun and games at NHGP Dinner & Dance 2017.

CELEBRATING STAFF SKILLS AND TALENTS

Recognising that its staff are the pillars of the organisation, NHGP commemorated the respective professionals' days in FY2017 through various ways.



NHGP Senior Management members celebrating World Family Doctor Day over a cake-cutting ceremony at NHGP Headquarters.

WORLD FAMILY DOCTOR DAY 2017

NHGP celebrated the World Family Doctor Day on 19 May 2017 with its doctors at all its polyclinics. Each NHGP doctor was presented with two movie tickets as a token of appreciation.

NHGP Senior Management members also celebrated World Family Doctor Day with a commemorative cake-cutting ceremony during a Family Medicine Board meeting on 5 May 2017.

NURSES DAY 2017

Celebrations were held across all NHG Polyclinics to commemorate Nurses' Day on 31 July and 1 August 2017. Both evenings were filled with fun and laughter as nurses and healthcare teams bonded over good food. NHGP Senior Management members also visited the polyclinics to share their appreciation of the invaluable contributions of nurses.

WORLD RADIOGRAPHY DAY, WORLD LABORATORY DAY AND PATIENT SERVICE DAY

National Healthcare Group Diagnostics celebrated World Laboratory Day, Patient Service Day and World Radiography Day

in April, July and November 2017 respectively. In recognition of the invaluable professional contributions of Diagnostics staff to patient care, National Healthcare Group Diagnostics management team made surprise visits to the polyclinics to personally deliver gifts to show appreciation to staff.

WORLD PHARMACISTS DAY 2017

National Healthcare Group Pharmacy celebrated World Pharmacists Day on 25 September 2017 at The Colonial @ Scotts. It was organised by National Healthcare Group Pharmacy for staff stationed at the polyclinics as well as at Headquarters.



NHGP medical social workers attending the World Social Worker's Day event at Tan Tock Seng Hospital Community Hall.

WORLD ORAL HEALTH DAY 2018

In celebration of World Oral Health Day 2018 on 20 March 2018, NHGP Dental Services organised lunch get-togethers for its staff at the polyclinics.

Prizes and gifts were also presented to staff as a gesture of appreciation for their dedicated service.

WORLD SOCIAL WORKERS' DAY 2018

On 23 March 2018, close to 200 medical social workers and social work assistants got together for an evening of celebration to mark World Social Workers' Day which fell on 20 March 2018.

The theme of the event was 'Working Together as an NHG Family – Collaboration, Integration, and Synergy'.

Graced by A/Prof Chua Hong Choon, Deputy Group Chief Executive Officer (Clinical), NHG, the event celebrated the hard work of the medical social workers. It also included a sharing session of the psycho-social care achievements of each NHG institution. Ms Lilian Mak, Chief of Medical Social Work Department, Institute of Mental Health also spoke at the event.



NHGP volunteers being acknowledged for their contributions on NHGP Volunteers' Appreciation Day.

NHGP VOLUNTEERS' APPRECIATION DAY

On 18 November 2017, NHGP held its annual Volunteers' Appreciation Day at Hougang Polyclinic in conjunction with International Volunteer Day on 5 December 2017.

The theme 'Our Shining Stars' was chosen in honour of the volunteers' contributions and achievements in the past year. Besides thanking the volunteers, A/Prof Chong presented the inaugural iCARE Volunteer Award 2017 to outstanding volunteers who had contributed significantly to their causes. 10 volunteers were also recognised with a Certificate of Appreciation. Specially designed EZ-link cards were presented to all volunteers as appreciation gifts.

The event also saw guest speaker, A/Prof Albert Teo from the National University of Singapore, sharing his 17-year journey of volunteering as well as starting and leading the Touch Therapy Programme at the Communicable Disease Centre at Tan Tock Seng Hospital.

OPERATIONS DAY 2017

NHGP sets aside a day annually to acknowledge the tireless contributions of its Operations staff. Operations staff, usually the first to arrive at the clinics and the last to leave, ensure a caring and conducive environment for both staff and patients. To thank them for their unwavering dedication, more than 400 Operations staff were treated to a scrumptious buffet dinner and movie screening of 'Guardians of the

Galaxy Vol. 2' on 4 May 2017 at Golden Village Vivo City. Lucky draw prizes were presented to 125 staff members while 12 Operations staff received the Outrageously Passionate Staff Awards in recognition of their strong work ethic.



Operations staff enjoying the scrumptious buffet dinner prepared for them in appreciation of their unwavering dedication.

APPENDIX A

LIST OF PRIMARY CARE ACADEMY WORKSHOPS CONDUCTED IN FY2017

MEDICAL KNOWLEDGE

M.Med OSCE Exam Preparation
M.Med Slide Exam Preparation
GDPM OSCE Exam Preparation
Introduction to Research
Research Qualitative Workshop

INTERPERSONAL COMMUNICATION

Facilitation for Effective Clinic Communication
Enhancing Critical Communication Skills that Matter
Basic Communication Skills

PRACTICE-BASED LEARNING

Evidence-Based Medicine – Guide to Critical Appraisal
Teaching 101 for Busy Healthcare Professionals
Mentoring – A Guide by the Side
Advancing Ethics and Professionalism in Primary Care
Healthy Literacy Workshop
Team-Based Care Training
Care Coordinator's Training

COURSES FOR THE PUBLIC AND COMMUNITY

General Practitioner's Assistant Courses – Foundation, Intermediate & Advance
Basic First Aid Workshop
Care for the Elderly
CPR + AED
Falls Prevention & Use of Ambulatory Aids for Diagnostics Staff

PATIENT CARE / CLINICAL & PROCEDURAL SKILLS

Family Planning Workshop
Surgical Procedures for the Primary Healthcare Physician

PATIENT CARE / CLINICAL & PROCEDURAL SKILLS

Management of Joint & Soft Tissues Conditions in Primary Care
Common Eye Conditions Update and Eye Examination Techniques for Family Physicians
Interpretation of Spirometry Results
Foundation Chronic Disease Management
Diabetic Foot Screening
Dermatology Workshop
Advance Wound Management Workshop
Early Childhood Nutrition Workshop
Vaccination Workshop
Infection Control Seminar
Common Issues in Developmental Paediatrics
BCLS & AED Full Certification
BCLS & AED Re-Certification

SUPPORT FOR CLINICAL DELIVERY

Train the Trainer for Essential Skills for Clinical Ancillary Staff
Service Communications Foundation Course for Frontline Clinic Staff
Use of Medical Terminology in Work Activities (WSQ)
Basic Health Parameters for Clinical Ancillary Staff
Assist in Collection of Pap Smear Specimens for Health Attendants
Essential Skills for Clinical Ancillary Staff
Simplified Use of Medical Terminology
English-Chinese Medical Translation Course
Know the Elderly: Workshop for Frontliners
Understanding Diabetes, Hypertension and Lipid Disorders: Workshop for Frontliners
Caring of Older Adults in Primary Care

APPENDIX B

ABSTRACTS BY NHGP STAFF AND COLLABORATORS ACCEPTED BY SHBC 2017 AND PUBLISHED ON SHBC WEBSITE

NO.	ABSTRACT TITLE	AUTHORS
1	Outcomes of Using CATCH (Comprehensive Assessment Tool for Coordinated and Holistic Care) in the Assessment of Patients with Poor Diabetes Control.	Sabrina Wong Kay Wye, Clare Teo Tuan Neng, Tan Sing Ying & Yeo Loo See
2	Prevalence and Pattern of Complementary and Alternative Medicine Use Among Type 2 Diabetes Mellitus Patients in a Primary Care Setting in Singapore: A Cross-Sectional Study.	Richard Hui Jor Yeong, Lee Eng Sing, Tang Wern Ee & Jiang Yilin
3	Evaluating Weight Management Programme: The Answer to Diabetes?	Soh Ying Hua, Jayalakshmy Aarthi Ananthanarayanan & Xie Ying
4	Independent Predictors for HbA1c Decline with Sitagliptin as a Third Line Oral Hypoglycemic Agent in Poorly Controlled Type 2 Diabetes Patients in a Singapore Primary Care Setting.	Tan Poh Ching, David Ng Wei Liang, Tan Khai Wei, Gareth Yeo Yong Tai & Jiang Yilin
5	Is Perceived Continuity of Care Correlated with Hassles Experienced by Patients?	Lee Eng Sing & Jiang Yilin
6	Oral Steroids in the Acute Management of Asthma Exacerbations in the Polyclinic – a Knowledge, Attitude and Practice Pilot.	Kunwar Bir Singh
7	An Evaluation of Nutrition Videos in Patient Education: Engaging the Cognitive Theory of Multimedia Learning Principles.	Won Tin Chiang
8	An Update of Pharmacist-Managed Anticoagulation Clinics in Primary Care: Evaluation of a Collaborative Care Model.	Sandra Xu Jialun
9	Difficulties that Patients with Chronic Conditions Face in Accessing Care in the Primary Care Setting in Singapore: A Cross-Sectional Study.	Koh Li Jia
10	Prevalence of Frailty and its Epidemiologic Risk Factors In a Panel of Older Singaporean Adults.	Ian Koh Jan Ming, Jessica Koh & David Ng Wei Liang
11	Your Perception Predicts Your Anxiety Level: A Preliminary Study in Primary Care in Singapore.	Ooi Say Leong, Mah Siew Chung, Jerlyn Ang Wen Jia, Lim Kok Kwang, Yap Chee Khong & Wong Mei Yin
12	Patient-Defined Recovery from Depression in Primary Care in Singapore.	Soon Jiaying, Benjamin Low, Lim Kok Kwang, Yap Chee Khong & Wong Mei Yin
13	Effectiveness of Pre-Consultation Medication Reconciliation Service (MRS) in Reducing Unintentional Medication Discrepancies during Transition of Care from Hospital Discharge to Primary Care Setting in Singapore – A Randomised Controlled Trial.	Kee Kok Wai, Cheryl Char Wai Teng, Anthony Yip Yew Fei, Angelia Chua Hwee Ling & Lee Eng Sing
14	Knowledge and Confidence in Falls Prevention Education Amongst Visitors to the Ageing-in-Place Studio.	Kee Kok Wai, Soh Ying Hua, Sim Mong Kheng & David Ng Wei Liang
15	Patient Perceived Continuity of Care Among Patients with Chronic Diseases in Singapore.	Lee Eng Sing, Joel Hwang Ern Huei & Koh Li Jia

NO.	ABSTRACT TITLE	AUTHORS
16	A Review on Interventions to Reduce Medication Discrepancies or Errors in Primary or Ambulatory Care Setting During Care Transition from Hospital to Primary Care.	Kee Kok Wai, Cheryl Char Wai Teng & Anthony Yip Yew Fei
17	Evaluation of the Effectiveness of Reduction of Percutaneous Injury in Dental Clinics from 2013 to 2016.	Vivian Wong Yung Yee, Lily Lang Ren Lee, Pearline Lim Su Ching & Kenneth Low Meng Tze
18	Predictors of Motivation for Type-2 Diabetes Mellitus Management for Patients in Primary Care in Singapore.	Soon Jiaying, Joy Chen Jiaoyu, Janice Quek Yan Qi, Grace Tan Xian Shuan, Lim Kok Kwang, Yap Chee Khong & Wong Mei Yin
19	What is the Impact of Seeing a Dedicated Primary Care Team on the Care of Patients with Poorly Controlled Type 2 Diabetes Mellitus?	Kwek Sing Cheer
20	Knowledge on Diabetes Mellitus and Management when Fasting during Ramadan Among Muslim Patients in Primary Care.	Carolyn Chan Mei Fong, Michelle Lee Cai Feng, Winnie Poh Siew Huay, Chan Cheuk Ying & Goh Ling Jia
21	Emerging Nurse Leaders' Perceptions on Their Leadership Roles: Am I a Leader Now?	Christie Anna Money Samuel & Dong Lijuan
22	Telewound Monitoring, a New Wound Care Model for Managing Acute Non-infected Wounds in Primary Healthcare: Current Status and Future Potential.	Zhu Xiaoli, Goh Ling Jia, Lim Voon Hooi, Wan Lili & Chen Yan
23	The Role of the Pharmacist in Telemedicine in Primary Care: A Scoping Review.	Kong Jing Wen
24	Descriptive Study on Trend Analysis of Nebulisation Rates and Prescribing Habits Involving Asthma Patients and Primary Care Physicians in a Polyclinic Setting in Singapore.	Vivek Bansal, Tan En Yu & Wong Theng Theng
25	2-Year Review of the Interventions in Reducing the Number of Dislodged Fillings in Dental Clinics.	Vivian Wong Yung Yee, Chiam Siew Cheng, Pearline Lim Su Ching, Kenneth Low Meng Tze, Tan Sze Lin, Serene Wu Shilin, Patricia Wong Ren Jie, Holy Koh Jr & Serene Zhang Ruping
26	Multimodal Drug and Clinical Habit Adjustment: Effective Tools in Improving Low Density Lipoprotein Cholesterol Levels in a Primary Care Type 2 Diabetes Mellitus Population?	Esther Tan Sein Yong & Wang Li
27	The Impact of Advanced Practice Nurse Led Asthma Clinic in the Follow-Up of Patients After an Acute Exacerbation in Primary Care Setting.	Blessy Koottappal Mathew & Carolyn Chan Mei Fong
28	The Role of the Family Doctor in Telemedicine for the Geriatric population: A Scoping Review.	Kong Jing Wen & Tan Wee Hian
29	Are We Fair in our Teaching Methods? To Compare the Learning Styles of Learners and Trainers Using the VARK Questionnaire.	Angelia Chua Hwee Ling

APPENDIX C

MEDICAL FORUMS AND WORKSHOPS CONDUCTED IN FY2017

DATES	TOPICS	SPEAKERS
18 May 2017	Dementia in Primary Care and the Memory Clinic	Dr Lai Shan Hui Family Physician, Choa Chu Kang Polyclinic, National University Polyclinics Dr Chris Tsoi Consultant, Department of Psychological Medicine, University Medical Cluster, National University Hospital
20 July 2017	'I Can't Fight This Feeling Anymore' – Getting Our Patients Out of Addictions	Dr Lambert Low Associate Consultant, National Addiction Management Service, Institute of Mental Health Mr Lawrence Tan Senior Psychologist, National Addiction Management Service, Institute of Mental Health Ms Nio Yin Ying Senior Assistant Director, Prevention Drug Education Unit, Central Narcotics Bureau
21 September 2017	Altered Medicinal Products with Undeclared Ingredients & Cushing's Syndrome	Ms Patricia Ng Regulatory Specialist, Adverse Event Management Unit, Health Sciences Authority Ms Valerie Wee Regulatory Consultant, Adverse Event Management Unit, Health Sciences Authority Dr Kathleen Sek Associate Consultant, Division of Endocrinology, National University Hospital
16 November 2017	Let's Talk About Legal Matters!	Mr Haryadi Hadi Lawyer, Sim Mong Teck & Partners Dr Lai Siang Hui President, Medico-Legal Society, Singapore Board Member, Centre for Medical Ethics and Professionalism, Singapore Medical Association
1 February 2018	How Does Healthcare Professionals' Awareness of Health Literacy Impact Patients and Healthcare Outcomes in Primary Care	Prof Calvin Chou MD, PhD, FACH; Professor of Clinical Medicine, University of California, San Francisco
22 March 2018	'Doctor, I Always Feel Giddy.' An Approach to Chronic Giddiness	Dr Ho Eu Chin Consultant, Multi-Disciplinary Balance Clinic Department of Otorhinolaryngology Director, Clinical Research, Clinical Research & Innovation Office, Tan Tock Seng Hospital

APPENDIX D

QUALITY IMPROVEMENT PROJECTS COMPLETED IN FY2017

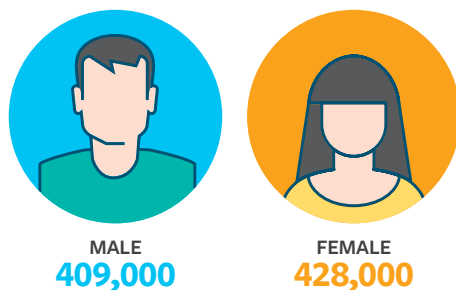
NO.	TITLE	INITIATED BY	LEADERS
1	To decrease the number of potentially inappropriate medication (PIM) prescribed to patients ≥ 65 years old in Ang Mo Kio Polyclinic Teamlet A by 50% from a baseline of 360 PIM prescribed per month, over a period of 6 months.	AMK	Dr Tricia Chang
2	To improve Advanced Practice Nurse appointment uptake rates in Ang Mo Kio Polyclinic.	AMK	Dr Tricia Chang
3	To increase the documentation rate of prescription interventions and near-misses in Ang Mo Kio Pharmacy.	AMK	Ms Thet Htar Sint
4	To improve way-finding experience in Geylang Polyclinic.	GL	Mr Ooi Chai Wah
5	To reduce the proportion of patients seen at Geylang Polyclinic with HbA1c $> 9.5\%$ from 10% to 8.5% over 4 months.	GL	Dr Gabriel Ding
6	To ensure that 70% of Type 2 Diabetes Mellitus patients in Hougang Polyclinic, with prior FBG $> 7\text{mmol/L}$, achieve target FBG $< 7\text{mmol/L}$ within 3 months of starting basal insulin.	HOU	Dr Sim Sai Zhen & Ms Irene Kong
7	To eliminate the incidence of falls for all wheelchair-bound patients in the dressing room at Hougang Polyclinic.	HOU	Ms Sandra Chew
8	To increase the compliance rate to verification of patient's identity by doctors during consultation from 11% to 100% at Hougang Polyclinic in 6 months.	HOU	Ms Wang Qingli
9	To improve dietitian referral rate for newly diagnosed Type 2 Diabetes Mellitus patients in Hougang Polyclinic.	HOU	Ms Sim Shin Yueh & Ms Tan Pei Fen
10	To improve accessibility of fall-risk patients from dental waiting area to treatment room.	HOU	Ms Tan Kaili
11	To reduce time when retrieving oral surgery instruments by Health Attendant at Hougang Dental Sterilisation Room by 50% within 6 months.	HOU	Ms Destinee Yeo
12	To increase off-site medication collection rates at Hougang Pharmacy from < 10 to 50 per month within 6 months.	HOU	Ms Valerie Tan
13	To increase Diabetic Retinal Photography screening rate [^] from 59.9% to 75% at Hougang Polyclinic in 6 months. ([^] screening done within past 12 months)	HOU	Ms Hamha Binte Mohamed Hamzah
14	To increase the annual Diabetic Foot Screening rate at Hougang Polyclinic from 55.7% to 85% within 6 months.	HOU	Ms Santhi d/o Govindan
15	To enhance drug expiry monitoring to reduce wastage in 3 months.	HOU	Ms Jannie Mae
16	To improve the delivery of urinalysis test information to patients prior to their laboratory appointment at Hougang Polyclinic in 6 months.	HOU	Ms Janet Teng
17	To reduce the number of home patients rejected for blood taking due to lack of valid photo identification at Hougang Polyclinic in 6 months.	HOU	Ms Janet Teng
18	To eliminate infection control lapses and to implement equal distribution of work load in immunization room by introducing a daily checklist.	TPY	Ms Jeena Varghese
19	To achieve zero discrepancy in instruments from dressing room.	TPY	Ms Durga Devi d/o Kurusamy

NO.	TITLE	INITIATED BY	LEADERS
20	To reduce clinic turnaround time for walk-in patients obtaining Same Day Appointment slots over a 1-year period.	TPY	Dr Tan Khai Wei
21	To increase the prescriptions of patients with Chronic Kidney Disease stage 4 and 5 checked for renal dose appropriateness during each chronic visits from 4.9% to 100% in Toa Payoh Polyclinic within 6 months.	TPY	Mr Gary Wiratama Chandra
22	To reduce number of sharps injuries caused by matrix bands amongst Woodlands Dental Officers to zero in 6 months.	WDL	Dr Melissa Guay
23	To improve the rate of smoking cessation counselling by healthcare staff given to smokers aged 18 years and above who attend Woodlands Polyclinic from August 2016 – January 2017 to 100%.	WDL	Dr Kung Jian Ming
24	To improve Care Manager's workload in Woodlands Polyclinic.	WDL	Dr Neesha Maganlal
25	To improve the accuracy of stocks received by the retail team.	WDL	Mr Ang Siang Yong
26	To bridge clinical knowledge gaps amongst staff at Woodlands Pharmacy.	WDL	Mr Choong Ying Wen
27	To target poorly controlled diabetics and improve their HbA1c control.	WDL	Dr Chan Hiu Yeung Olivia
28	To increase the actualisation rate of Diabetic Retinal Photography service consumed in Woodlands Polyclinic.	WDL	Dr Nurul Azyan
29	To increase the utilisation of Diabetic Foot Screening appointments amongst Diabetic patients in Woodlands Polyclinic.	WDL	Dr Shauna Sim
30	To increase the percentage of babies weighed from 31.7% to 100% for all neonatal jaundice visits in the first 14 days of life at Yishun Polyclinic in 6 months.	YIS	Dr Rajagopal Ramaswami
31	To reduce time taken to pick and pack loose tablets by 50% in Yishun Pharmacy.	YIS	Ms Eunice Lim
32	To improve patient's adherence to change in medication dose by at least 70%.	YIS	Ms Joyceanne Bagtas
33	To screen for frailty in elderly patients in Yishun Polyclinic.	YIS	Dr Lim Wei Khoon
34	To increase the rate of breast feeding among mothers visiting Yishun Polyclinic.	YIS	Dr Rasminster Kaur
35	To improve medication safety in treatment room.	HQ	Ms Lim Voon Hooi
36	To reduce the waitlist of NHGP's Weight Management Programme (WNMP).	HQ	Ms Jayalakshmy Aarthi Ananthanarayanan & Ms Soh Ying Hua
37	To improve clinical documentation time for Diabetic Foot Screening.	HQ	Ms Lee Ching Lian
38	To reduce out-of-clinic time for healthcare professionals in primary care.	HQ	Ms Yeoh Hui Ling
39	To leverage technology for patients' preventive health needs.	HQ	Ms Aini Alena Kadis
40	To increase the efficiency of PSC Quality Control Process by 30%.	HQ	Ms Selvia Zhang

SNAPSHOTS OF PATIENTS ATTENDANCE AND WORKLOAD IN FY2017

GENDER RATIO OF PATIENTS

NUMBER OF PATIENTS

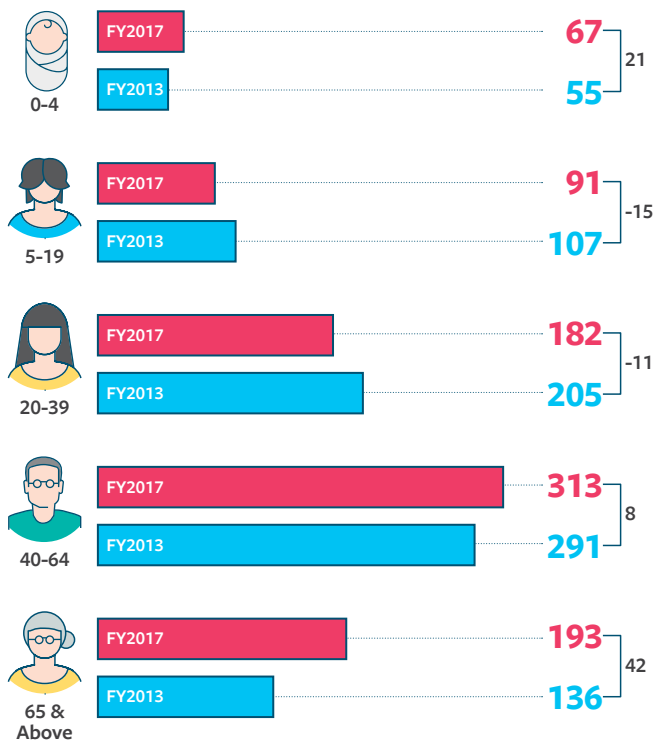


PATIENTS BY DIFFERENT AGE GROUPS

NUMBER OF PATIENTS ('000)

Age Groups (Years)

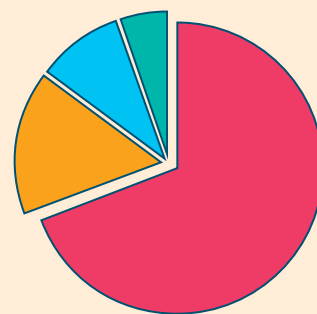
Diff (%)



ETHNIC COMPOSITION OF PATIENTS

TOTAL NUMBER OF PATIENTS

837,000



CHINESE
579,000
69%



MALAY
133,000
16%



INDIAN
79,000
9%



OTHERS
46,000
6%

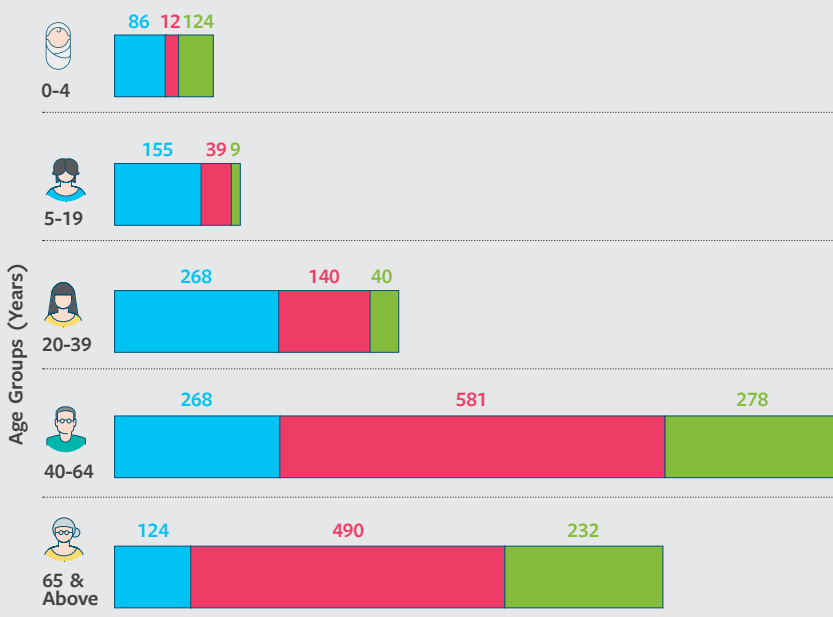


Notes:

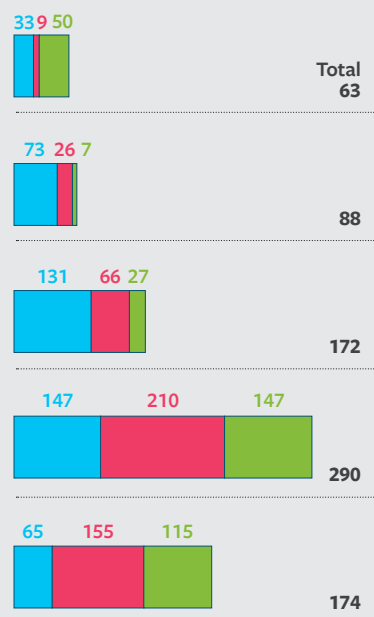
- After the public healthcare restructuring in 2017, NHG Polyclinics in FY2017 comprises Woodlands, Yishun, Ang Mo Kio, Toa Payoh, Hougang and Geylang Polyclinics.
- Geylang Polyclinic joined NHGP on 1 October 2017 so its data has been included for the period of 1 October 2017 to 31 March 2018 unless otherwise stated.
- Pioneer Polyclinic joined National University Polyclinics on 15 July 2017. Its data has been included for the period of 1 April 2017 to 15 July 2017 unless otherwise stated.
- Bukit Batok, Choa Chu Kang, Clementi and Jurong Polyclinics joined National University Polyclinics on 1 October 2017. Its data has been included for the period of 1 April to 30 September 2017 unless otherwise stated.
- As numbers are rounded up for greater clarity, small rounding differences may arise.

TYPES OF VISITS BY DIFFERENT AGE GROUPS

NUMBER OF VISITS ('000)



NUMBER OF PATIENTS ('000)



AVERAGE NUMBER OF VISITS PER PATIENT

	ACUTE	CHRONIC	WELL & OTHER SERVICES	TOTAL
0-4	2.7	1.3	2.6	3.8
5-19	2.2	1.5	1.2	2.4
20-39	2.1	2.1	1.5	2.6
40-64	1.8	3.0	2.0	4.1
65 & Above	1.9	3.4	2.1	5.2

Note:

- Data from Geylang Polyclinic has not been included in the above three sets of information.

- Acute:** Cases with short onset of symptoms such as upper respiratory tract infections and sprains.
- Chronic:** Conditions that require long-term follow-up and, in general, regular medications and management of risk factors. For example, hypertension, asthma, lipid disorders, chronic obstructive lung disease and diabetes.
- Well and Other Services:** Includes non-doctor consultations, development assessment, investigative visits and other administrative procedures.

CHRONIC PATIENTS BY AGE GROUP AND COMPLEXITY

AGE GROUPS (YEARS)	0-4	5-19	20-39	40-64	65 & Above	Total
Simple Chronic	90%	83%	76%	34%	16%	38%
Moderate Chronic	10%	16%	21%	41%	38%	35%
Complex Chronic	0.1%	1%	3%	25%	46%	27%

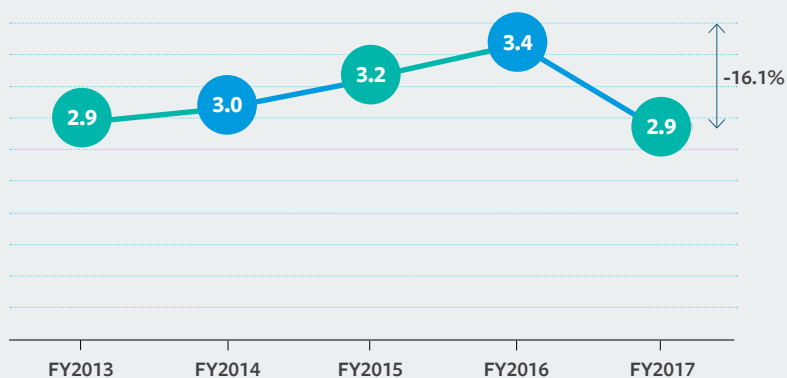
- Simple Chronic:** 1 chronic Primary Diagnosis (PD) or Secondary Diagnosis (SD).
- Moderate Chronic:** 2 - 3 chronic diagnoses (PD & SD).
- Complex Chronic:** 4 or more chronic diagnoses (PD & SD).

Note:

- Data from Geylang Polyclinic has not been included in this table.

ATTENDANCE GROWTH

TOTAL ATTENDANCE (MILLIONS)

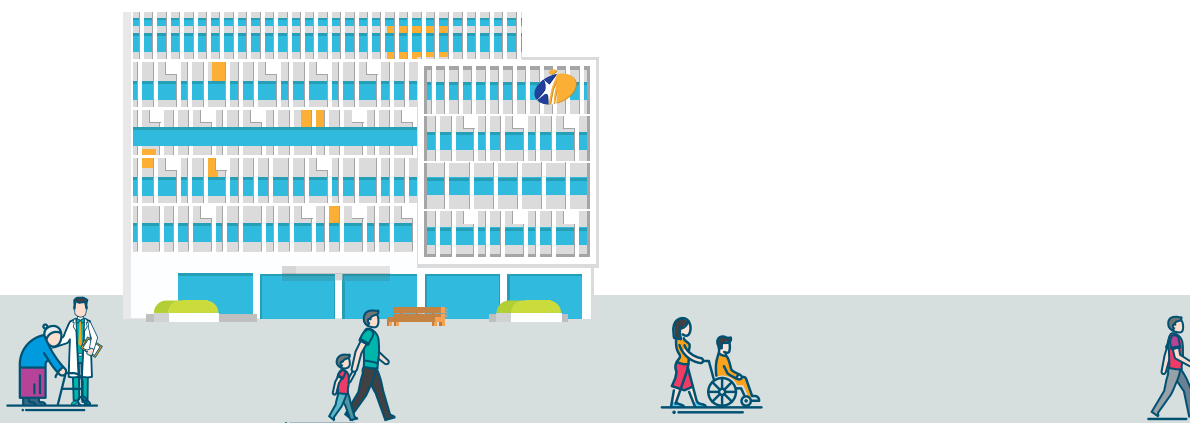


Note:

- The decrease in total attendance from FY2016 to FY2017 is due to the public healthcare restructuring in FY2017. NHGP had six polyclinics at the end of FY2017 as compared to nine polyclinics at the end of FY2016.

DAILY AVERAGE

	FY2013	FY2014	FY2015	FY2016	Before Restructuring FY2017 (Q1 & Q2)	After Restructuring FY2017 (Q3 & Q4)
TOTAL	10,459	10,833	11,719	11,998	12,367	7,994
DOCTOR VISITS	7,222	7,411	8,061	8,213	8,456	5,370
NON-DOCTOR VISITS	3,236	3,422	3,658	3,784	3,911	2,624



TOP 10 PRIMARY DIAGNOSES SEEN IN FY2017

ICD 10	DIAGNOSIS	NO. OF VISITS	% TOTAL CONSULT VISITS
J06.9	Acute Upper Respiratory Infection, Unspecified	347,136	18%
E11.9	Type 2 Diabetes Mellitus Without Complication	282,297	15%
I10	Essential (Primary) Hypertension	225,565	12%
E78.5	Hyperlipidaemia, Unspecified	112,973	6%
R68	Other General Symptoms and Signs	76,859	4%
A09.9	Other Specified Noninfective Gastroenteritis and Colitis	62,508	3%
L98.9	Disorder of Skin and Subcutaneous Tissue, Unspecified	56,227	3%
T14.3	Dislocation, Sprain and Strain of Unspecified Body Region	46,089	2%
Z00.1	Routine Child Health Examination	43,544	2%
R51	Headache	36,553	2%

CONSULT WAITING TIME
IN FY2017 (MINUTES)

VISIT TYPE	Walk-in	Appointment
50 th PERCENTILE	12	7
95 th PERCENTILE	57	49

Note:

- Data from Geylang Polyclinic has not been included in this table.

HEADCOUNT

JOB CATEGORY	FY2016	FY2017	% CHANGE
Ancillary	632	443	-29.9%
Nursing	380	279	-26.6%
NHG Pharmacy	320	320	0%
Medical ¹	296	225	-24.0%
Administrative	186	178	-4.3%
NHG Diagnostics	194	191	-1.5%
Allied Health ¹	58	49	-15.5%
Dental ²	51	50	-1.96%
TOTAL	2,117	1,735	-18.0%

Notes:

- Allied Health category excludes all Pharmacy staff. Pharmacists, pharmacy technicians, pharmacy assistants, pharmacy store keepers, retail pharmacy staff are subsumed under NHG Pharmacy.
- Medical and Dental Categories include Medical Officers and Dental Officers from the Ministry of Health Holdings.



SNAPSHOTS OF DENTAL PATIENTS IN FY2017

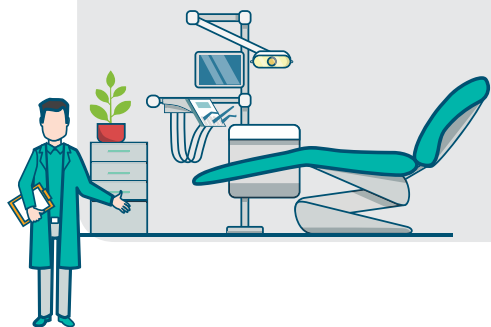
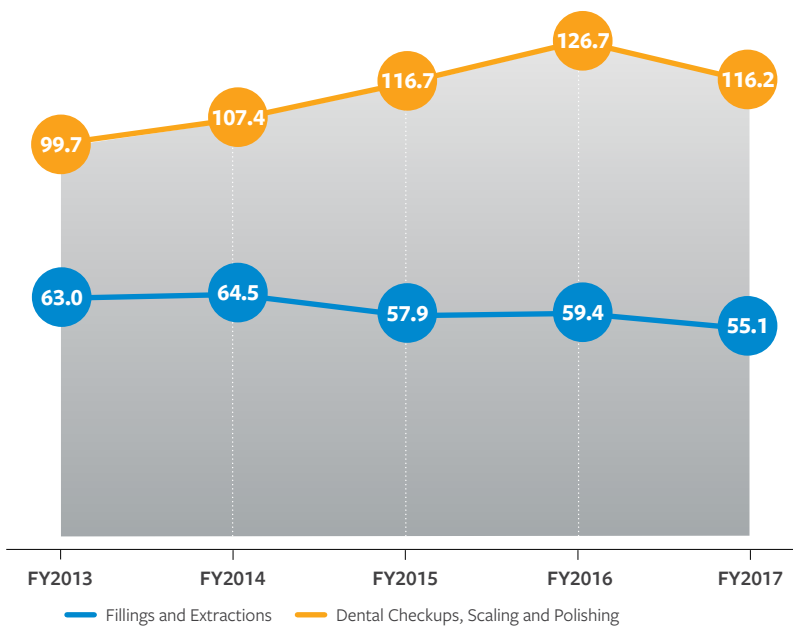
ANNUAL ATTENDANCE

NUMBER OF DENTAL VISITS ('000)

FY	TOTAL
2013	119
2014	125
2015	129
2016	136
2017	135

TYPES OF DENTAL PROCEDURES

NUMBER OF DENTAL PROCEDURES ('000)



BASIC DENTAL PROCEDURES BY NUMBER OF VISITS

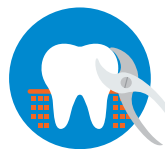
DAILY AVERAGE

Dental Checkups, Scaling and Polishing



FY2013	FY2014	FY2015	FY2016	FY2017
358	391	427	448	415

Fillings and Extractions



FY2013	FY2014	FY2015	FY2016	FY2017
226	235	211	210	197

Note:

- The decrease in total attendance from FY2016 to FY2017 is due to the public healthcare restructuring in FY2017.



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