

BUILDING TODAY FOR TOMORROW



ANNUAL REPORT FY2016



The image of the tree found on the cover and throughout this report symbolises the National Healthcare Group Polyclinics' (NHGP) deep-rooted connection to primary care. The sturdy nature of the tree represents NHGP's commitment to stakeholders to leverage its core competencies in strengthening the primary care landscape for the future. The leaves' kaleidoscope of colours signify NHGP's dynamism in harnessing the diverse capabilities and strengths of its staff to fulfil its multi-faceted role in primary care.

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



“The National Healthcare Group Polyclinics, as a part of National Healthcare Group’s Central Regional Health System, has been working to transform the primary care landscape by developing innovative care models and increasing patient and community engagement to add years of healthy life to the population.”

An efficient and responsive primary care is the bedrock of a sustainable healthcare system. As the first point of contact in the community, Singapore’s primary care network needs to provide a wide range of healthcare services to manage patients with both acute and chronic conditions while championing healthier lifestyles.

The changing demographics of Singapore will see an increasingly ageing population, combined with a growing chronic disease burden which will continue to pose challenges to Singapore’s healthcare landscape. We therefore need to scale up our primary care capacity to address these challenges as well as empower and activate the community to reduce the incidence of chronic diseases.

It is with these objectives in mind that the National Healthcare Group Polyclinics (NHGP), as a part of National Healthcare Group’s (NHG) Central Regional Health System, has been working to transform the primary care landscape by developing innovative care models and increasing patient and community engagement to add years of healthy life to the population.

DEVELOPING RELATIONSHIP-BASED CARE

In managing patients with chronic diseases, it is essential to develop a comprehensive care plan to help them. This includes providing the right medical and lifestyle advice and monitoring complications that may arise on a regular basis. In the primary care setting, NHGP has been proactive in developing a comprehensive relationship-based model of care to ensure these patients’ needs are met in the community.

Within the polyclinics, NHGP’s Patient Empanelment Care Model has been a key transformational innovation that has enabled patients to receive holistic care from a dedicated team of healthcare professionals to help them manage their conditions. NHGP has also been proactive in the community by building relationships with General Practitioners and Family Medicine Centres to build up their capacity to provide holistic and quality care. This has enabled the right-siting of patients in appropriate care settings nearer to the patients’ homes.

INTEGRATING CARE WITH OTHER HEALTHCARE INSTITUTIONS

To further expand its capabilities, NHGP has built strong partnerships with NHG Institutions such as Tan Tock Seng Hospital (TTSH) and the National Skin Centre to leverage technology to bring specialist care closer to the community. These initiatives, which enable NHGP doctors to interact real-time with specialists via online platforms, have allowed more efficient care for patients in the primary care setting.

NHGP works closely with hospitals in NHG’s Central Region, such as TTSH, Khoo Teck Puat Hospital, as well as national centres and hospitals outside of the central region to provide patients with clearly defined care pathways as they transit from tertiary care to primary care. This ensures that our patients receive seamless and continuous care for their recovery.

MOVING FROM HEALTHCARE TO HEALTH

In line with NHG’s shift in approach from illness care to wellness care, NHGP has been tireless in its efforts to activate everyone in the community – at every stage of their lives – to be ambassadors of healthy living. These efforts have focused on the importance of a healthy lifestyle to prevent the onset of chronic diseases and provide those with chronic conditions practical solutions to manage their conditions. NHGP’s team of doctors, nurses and allied health professionals have each brought their respective areas of clinical expertise to the community to offer comprehensive information on how to prevent or manage these conditions. In order for staff to be effective ambassadors in the community, NHGP conducts regular exercise sessions at the workplace as part of its Work Health Promotion initiative. By adopting healthier lifestyles themselves, NHGP staff are indeed well-positioned to be health champions to the population.

LOOKING AHEAD

Thus far, NHGP’s efforts to transform the primary care landscape has brought about better quality care for our patients that is sustainable, affordable and accessible to the community. As a leader in the primary care landscape, I am proud to say that our polyclinics have done sterling work over the years.

As we look to the future, the Ministry of Health’s (MOH) announcement on the reorganisation of the healthcare clusters from six to three in January 2017 will ensure greater integration within each cluster as we develop a seamless model of care that will optimise the health of our population.

NHGP, as the primary care arm of the restructured NHG cluster, will also further develop its capabilities by reviewing its staff development roadmaps. It will increase its capacity to train more Family Physicians to continue providing comprehensive and holistic care to people of all ages in the Central and Northern regions.

I wish to thank our Chairman, Madam Kay Kuok, and our Board of Directors for their visionary leadership and direction in guiding us on developing a better healthcare system for our population. I am also grateful for the support and encouragement of MOH in all our efforts.

Most of all, my sincere appreciation to NHGP Chief Executive Officer, Associate Professor Chong Phui-Nah, for her able leadership and all staff for their continued dedication and commitment to providing our patients with the best care, always.

PROFESSOR PHILIP CHOO
Group Chief Executive Officer
National Healthcare Group

CEO'S MESSAGE



"As we forge ahead to meet the evolving challenges of the primary care landscape, we must fundamentally challenge our current paradigms to achieve a person-centred approach to care."

GETTING READY FOR THE FUTURE

The National Healthcare Group Polyclinics' (NHGP) journey towards transforming the primary care landscape continues in FY2016 with a keen focus on the challenges facing primary care in managing an ageing population with increasingly complex care needs. NHGP has ramped up our capabilities to manage finite resources optimally and develop a relationship-based model of care for the long-term management of chronic conditions. At the same time, NHGP has continued to provide quality healthcare that is both accessible and affordable to improve our population health outcomes.

EXPANDING PRIMARY CARE CAPABILITIES

In line with the Ministry of Health's (MOH) vision of 'One Singaporean, One Family Doctor', NHGP has been partnering General Practitioners (GPs) in the community to build a close working relationship to provide about 25,000 patients with quality and comprehensive care closer to their homes. NHGP regularly engages these GPs via dialogue sessions to address their challenges and offer learning opportunities that focus on the latest developments in the care of chronic diseases. These help create a sustainable environment for comprehensive and holistic care to be provided to patients in the community.

As a leading primary care institution, NHGP also manages in excess of 3 million patients at its polyclinics annually. As the population ages, attendances can be expected to rise. It is therefore essential that some of our older facilities are upgraded to meet this rising demand. NHGP has been working closely with MOH to develop new facilities in mature estates such as Ang Mo Kio and Yishun. The new facilities, which will be ready in FY2018, will enable NHGP to manage a larger patient load and develop innovative care delivery models to provide our patients with a hassle-free experience while at the polyclinic.

DEVELOPING INNOVATIVE CARE MODELS

We have also continued to fine-tune our Patient Empanelment Care Model which has shown to be an effective and sustainable chronic disease care model focused on building a strong relationship between the patient and the healthcare team. This is vital in improving our patients' receptivity to medical advice. Comprehensive engagement empowers patients to take charge of their health and remain well in the community. Since its launch in 2014, patient empanelment has been introduced across all NHGP polyclinics. NHGP reached out to more than 64,000 patients in FY2016.

Another care innovation is NHGP's Nephrology Evaluation Management and Optimisation (NEMO) Programme, a collaboration between NHGP and the National University Health System to slow down the progression of diabetic kidney disease. With an increasing number of patients suffering from kidney complications as a result of diabetes, the NEMO Programme was recognised for its significant clinical efforts at the National Medical Excellence Awards Ceremony in FY2016. MOH has since adapted elements of this programme in the implementation of a 'Holistic Approach in Lowering and Tracking Chronic Kidney Disease' (HALT-CKD) Programme across all polyclinics starting from April 2017.

NHGP has also worked closely with the National Skin Centre (NSC) to develop the Tele-DERM project which clinched the IT Excellence: Beyond Hospital to Community Award at the National Health IT Excellence Awards 2017. This e-consult service, which provides NHGP doctors with access to specialist consults at NSC, has reduced the need for referrals to NSC and enabled patients to be treated sooner. This initiative has strengthened our primary care capabilities and enhanced our care delivery model by bringing specialist care closer to the community.

ENGAGING PATIENTS TO TAKE CHARGE OF THEIR HEALTH

At the Committee of Supply debates in Parliament in April 2016, Minister for Health Mr Gan Kim Yong, highlighted the important role clinicians play in our nation-wide 'War on Diabetes'. Being a primary care institution, we are at the forefront of such efforts to reduce the increasing chronic disease burden in Singapore. We will continue to engage and activate our patients with chronic conditions, to not only help them manage their diseases, but also to reach out to the community at large to encourage them to adopt a healthier lifestyle.

NHGP has engaged about 30,000 patients through opportunistic health screenings for cardiovascular and chronic conditions by the end of FY2016. Of these, more than 40% were advised to seek follow-up care at GPs or polyclinics. NHGP's health promoters also reached out to about a third of these patients with lifestyle interventions to help them manage at-risk behaviours that could increase their chances of suffering from chronic conditions.

Our healthcare teams have also been proactive in the community. Working with the Health Promotion Board and grassroots organisations, our focus is to motivate the population to achieve better health outcomes through targeted workshops, seminars and exercise demonstrations. Such events not only meet the needs of different age groups, they are also tailored for patients at various stages of their chronic conditions.

As a health-promoting organisation, NHGP’s staff have also led by example, actively participating in our Workplace Health Promotion (WHP) activities as well as the annual staff health screening. WHP activities which include regular exercise sessions at all our clinics as well as headquarters, provide our staff with an avenue to pursue a healthy lifestyle for better health.

BUILDING A WORLD CLASS PRIMARY CARE ECOSYSTEM

NHGP invests heavily in medical education and research to develop our healthcare professionals. FY2016 saw four of our doctors formally admitted into the Academy of Medicine, Singapore, as Fellows on 23 April 2016. In addition, all of NHGP’s Family Medicine residents have successfully obtained their Master of Medicine, along with seven Family Physicians who were awarded the pinnacle Fellowship of College of Family Physicians (Singapore).

Our 9th annual Primary Care Forum, ‘World Class Primary Care: Relationships, Partnerships & Innovations’ which was held on 23 and 24 September 2016, discussed global strategies for an enduring and viable healthcare system and included sharing sessions on partnering the community to achieve healthier population outcomes. The forum served as an ideal platform for participants from the primary care sector to gain a better understanding of the essentials of developing a sustainable world class primary care ecosystem.

To further aid the development of a world class primary care ecosystem, NHGP partnered the Institute of Mental Health and Lee Kong Chian School of Medicine to obtain a grant to conduct primary healthcare research in Multi-Morbidity and Mental Health in a Multi-Ethnic Population. The \$5 million grant will focus on three main areas of research: management of chronic diseases and multi-morbidities, evaluation of new technology utilisation to elicit patient involvement and the provision of coordinated care for patients with

mental conditions. These research capabilities will help ensure that our primary care landscape harnesses cutting edge developments in technology and patient care to advance family medicine.

MOVING FORWARD

As we forge ahead to meet the evolving challenges of the primary care landscape, we must fundamentally challenge our current paradigms to achieve a person-centred approach to care. We need to develop new models of care while dynamically refining existing ones to provide value-based care for the population. This will lead us to shift the focus of care from illness to wellness management. We must also further strengthen our patient and community efforts to provide a more coordinated outreach effort to improve overall population health.

I commend the NHGP team for doing an admirable job this past year in furthering our mission to develop the capacity and capabilities of the primary care sector. We have also ensured that care at our polyclinics remains accessible, seamless, comprehensive and affordable. As we look ahead, I am confident that the team at NHGP will rise to the challenge to be future-ready as we carry on our primary care transformation journey.

I wish to take the opportunity to thank our Board and Senior Management of NHGP for their leadership and strategic guidance as we overcome challenges in an ever-changing healthcare landscape. I would also like to express my gratitude to MOH and our partners for supporting and working together with us towards our common goal of providing quality healthcare and improving population health. I am excited about the direction NHGP is heading towards and look forward to catalysing more changes in the evolving primary care landscape.



ASSOCIATE PROFESSOR CHONG PHUI-NAH

Chief Executive Officer
National Healthcare Group Polyclinics & Primary Care

NHGP SENIOR MANAGEMENT

Associate Professor Chong Phui-Nah
Chief Executive Officer

OPERATIONS
Dr Simon Lee
Chief Operating Officer

Dr Peter Chow
Chief Operating Officer
(until 11 October 2017)

CLINICAL SERVICES
Dr Karen Ng
Director

Dr Lew Yii Jen
Senior Director
(until 17 January 2017)

NURSING SERVICES
Ms Chen Yee Chui
Chief Nurse

DENTAL SERVICES
Dr Kenneth Low
Director

OPERATIONAL SUPPORT SERVICES
Ms Doris Liew
Director

OFFICE OF CLINICAL INFORMATICS
Dr Simon Lee
Chief Medical Informatics Officer

PRIMARY CARE ACADEMY
Dr Irwin Chung
Director

Dr Meena Sundram
Director (until 17 January 2017)

CLINICAL RESEARCH UNIT
Dr Tang Wern Ee
Head

Dr Meena Sundram
Director (until 17 January 2017)

HEALTH PROMOTION & PREVENTIVE CARE
Dr Wee Wei Keong
Director

QUALITY & PATIENT SAFETY
Dr Tung Yew Cheong
Director

CORPORATE PLANNING
Ms Jaclyn Fam
Deputy Director

Ms Goh Geok Ngoh
Director (until 30 June 2017)

CORPORATE COMMUNICATIONS
Ms Noraizah Zainal Abidin
Deputy Director

Ms Goh Geok Ngoh
Director (until 6 February 2017)

CARE INTEGRATION ¹
Dr Gowri Doraisamy
Director

PRIMARY CARE TRANSFORMATION OFFICE - ADMIN ¹
Ms Doris Liew
Director (until 30 June 2017)

PRIMARY CARE TRANSFORMATION OFFICE ¹
Dr Karen Ng
Regional Director, Central
(until 17 January 2017)

Dr Gowri Doraisamy
Regional Director, North
(until 17 January 2017)

Dr Meena Sundram
Regional Director, West (Jurong)
(until 17 January 2017)

Dr Keith Tsou
Regional Director, West
(until 17 January 2017)

FINANCE
Mr David Kok
Director

HUMAN RESOURCE
Mr Shawn Phua
Director

Mr Simon Tan
Director (until 17 January 2017)

FAMILY MEDICINE DEVELOPMENT
Dr Darren Seah
Director

NHG PHARMACY
Ms Chan Soo Chung
Executive Director

NHG DIAGNOSTICS
Ms Lim Soh Har
Executive Director

POLYCLINIC HEADS
Dr Christopher Chong
Ang Mo Kio Polyclinic

Dr Lee Eng Sing
Hougang Polyclinic

Dr David Ng
Toa Payoh Polyclinic

Dr Evan Sim
Woodlands Polyclinic

Dr Kwan Pek Yee
Yishun Polyclinic

Dr Jonathan Ting
Geylang Polyclinic ²

Dr Meena Sundram
Jurong Polyclinic ³

Dr David Tan
Pioneer Polyclinic ³

Dr Keith Tsou
Bukit Batok Polyclinic ³

Dr Richard Hui
Choa Chu Kang Polyclinic ³

Dr Steven Chong
Clementi Polyclinic ³

Note
1. Formed on 18 January 2017 and includes Primary Care Transformation Office at present.
2. Joined NHGP on 1 October 2017.
3. Transferred to National University Polyclinics on 1 October 2017.



CHAPTER 1

DELIVERING PATIENT-CENTRED CARE

In the primary care landscape, the National Healthcare Group Polyclinics (NHGP) is one of the first touchpoints for patients with acute and chronic conditions. In managing a variety of such conditions, NHGP constantly evaluates and refines its care delivery model to provide patients with timely and appropriate care.

NHGP's model of care emphasises the building of relationships between patients and the healthcare team to create a sustainable care environment that centres on enhancing the quality of care and treatment outcomes for the patient. NHGP is also committed to providing integrated services that expand primary care capabilities while ensuring healthcare remains accessible to all in the community.

PUTTING PATIENTS FIRST

TEAM-BASED CARE

NHGP's Patient Empanelment Care Model comprising two Family Physicians, a Care Manager, a Care Coordinator and Allied Health Professionals in each team, was first piloted at Toa Payoh Polyclinic in 2014. Patients are risk-stratified by their chronic conditions and assigned to the appropriate care team members. This care model aims to provide comprehensive patient-centric care so that better coordinated chronic disease management can be achieved in the long-term in the primary care setting.

An evaluation of this pilot project conducted over a period of two years showed improved clinical outcomes of the patient panel managed by the care team at Toa Payoh Polyclinic. This personalised model of care has earned the team the NHG Team Recognition Gold Award which was presented at the NHG Awards on 15 July 2016. This new care model provides holistic care that not only improved patients' health outcomes



"My condition has improved. I have built a close relationship with my healthcare team who gives me the right advice since the team is familiar with my condition."

– Mr Arul Ananthan Subramaniam,
patient of Toa Payoh Polyclinic

but also strengthened the patient-doctor relationship and optimised resource utilisation.

To streamline and improve the workflow, regular training and quarterly review sessions are held.

NHGP's Patient Empanelment Care Model has since been implemented at all NHG Polyclinics. As of 31 March 2017, more than 64,000 patients were empaneled under this care model.

Photo

Patient Empanelment Care Model comprises two Family Physicians, one Care Manager and one Care Coordinator.



NEPHROLOGY EVALUATION MANAGEMENT AND OPTIMISATION

The Nephrology Evaluation Management and Optimisation (NEMO) Programme is a collaboration between NHGP and the National University Health System.

From October 2011 to February 2017, NEMO evaluated nearly 121,000 patients with diabetes through regular follow-up at NHGP. Compared to patients with diabetes not enrolled in the programme, NEMO patients had a 23% lower rate of worsening kidney function.

Recognised for its significant clinical efforts to slow the progression of diabetic kidney disease, the NEMO Programme was conferred the National Clinical Excellence Team Award at the National Medical Excellence Awards (NMEA) Ceremony in August 2016.

Following NEMO's positive results, the Ministry of Health (MOH) announced the implementation of a national 'Holistic Approach in Lowering and Tracking Chronic Kidney Disease' (HALT-CKD) Programme across all polyclinics starting from April 2017 during the Committee of Supply debate in March 2017. This programme aims to identify and manage risk factors such as high blood pressure and poor diabetes control which contribute to chronic kidney disease deterioration.

BRINGING MENTAL HEALTH CARE CLOSER TO THE COMMUNITY

To help patients with mental health concerns and provide support for their caregivers, NHGP has spearheaded several initiatives and partnerships for patients to receive appropriate care within the community.



Memory Clinic

Since September 2012 when the first Memory Clinic was piloted at Ang Mo Kio Polyclinic in partnership with Tan Tock Seng Hospital (TTSH), the clinic has been providing step-down care for stable dementia patients. This collaboration facilitates capability-building of NHGP's primary care teams in managing patients with dementia or memory issues.

This programme was accorded the NHG Team Recognition Silver Award on 15 July 2016 for Dementia Care Integration between Primary Care Provider and Tertiary Hospitals.

As of 31 March 2017, the three Memory Clinics at Ang Mo Kio Polyclinic, Yishun Polyclinic and Choa Chu Kang Polyclinic have seen more than 700 patients with dementia and memory issues.

Photos

Top:
Dr Lim Chee Kong, Family Physician, Senior Consultant, Deputy Director of Clinical Services and Co-Director of the NEMO Programme, receiving the National Clinical Excellence Team Award from Mr Gan Kim Yong, Minister for Health, at the NMEA Ceremony on 18 August 2016.

Bottom:
Dr Low Kang Yih, Family Physician, Associate Consultant, Ang Mo Kio Polyclinic, with a patient at the Memory Clinic.



Photo

The ASCAT@Central team receiving the NHG Team Recognition Bronze Award at the NHG Awards Ceremony 2016.

Health and Mind Service Clinic

In October 2012, NHGP and the Institute of Mental Health collaborated to form the Assessment and Shared Care Team or ASCAT@Central project to develop clinical capability in primary care to manage common mental health conditions such as depression, anxiety and insomnia and to reduce referrals to psychiatric Specialist Outpatient Clinics.

The ASCAT@Central was awarded the NHG Team Recognition Bronze Award at the NHG Awards Ceremony held on 15 July 2016. The programme was renamed Health and Mind Service (HMS) in October 2015. HMS is available at Yishun Polyclinic, Ang Mo Kio Polyclinic, Woodlands Polyclinic and Jurong Polyclinic. As of 31 March 2017, more than 3,000 patients have benefitted from this service.

TELE-HEALTH

To enhance its care delivery model, NHGP has in place various Tele-health initiatives. These initiatives help ensure patients receive appropriate and efficient care for their conditions.

Tele-health Services Led by Nurses

Tele-wound Care Monitoring

In June 2016, Tele-wound Care Monitoring was piloted at Yishun Polyclinic. Patients with certain types of wounds were taught how to perform wound dressing on their own and were encouraged to care for their wounds at home. These patients would then send images of their wounds by email to nurses for assessment and follow-up over the phone.

Such an approach helps reduce the need for patients to visit the polyclinics to get their wounds assessed and dressed. This initiative was later implemented at Woodlands Polyclinic in September 2016, Choa Chu Kang Polyclinic in February 2017, and will be implemented across all NHG Polyclinics in FY2017. As of 31 March 2017, nearly 100 patients have benefitted from this programme, with nearly 170 tele-wound consultations done.

Tele-consultations

Tele-health is multi-faceted and has evolved over the years. NHGP's Nursing Services, in collaboration with Clinical Services, has developed services involving telephone consultations. Such consultations involve helping patients monitor their conditions, advising them on insulin titration and offering post-nebulisation follow-ups for patients with asthma.

In FY2016, more than 21,000 tele-consultations were conducted.

Tele-care Programme

NHGP's Tele-care Programme was first piloted in February 2013 and implemented across all NHG Polyclinics in September the same year. The Tele-care Programme is a nurse-led home-monitoring initiative involving patients with stable diabetes, hypertension or lipid disorder (high cholesterol). Patients who opt for this service receive tele-consultations from Care Managers who are nurses trained in chronic disease management.

In this programme, patients monitor their blood glucose (for patients with diabetes), blood pressure and weight, then submit their readings on 'Track Health Vitals' via HealthHub, a one-stop health portal. The Care Managers would then schedule one to two telephone consultations a year to assess patients' control levels and advise on medication refills.

As of 31 March 2017, there were more than 200 patients enrolled in tele-care. Nearly 300 more patients indicated interest in using HealthHub for the recording of their home monitoring readings which could be viewed by doctors and nurses during clinic consultations. Tele-care empowers patients to remain independent in their own homes through standardised care plans, and reduces the number of face-to-face consultations at the clinics. Patients can manage their health conditions better and maintain good clinical outcomes.



Tele-health Services Led by Nurses in FY2016

Nearly
170
tele-wound consultations were held

More than
21,000
tele-consultations were conducted

More than
200
patients were enrolled in NHGP's tele-care



Bringing Specialist Care to the Community in FY2016

Nearly
500
symptomatic patients with abnormal ECG benefitted from Tele-ECG

Nearly
300
patients with skin conditions were managed through Tele-DERM

Bringing Specialist Care to the Community Tele-ECG

In April 2016, the Tele-ECG initiative for asymptomatic patients with abnormal Electrocardiograms (ECGs) was launched at Ang Mo Kio Polyclinic, Toa Payoh Polyclinic and Hougang Polyclinic, in collaboration with the Department of Cardiology at TTSH. A common information technology platform shared by TTSH and the three polyclinics enabled TTSH cardiologists to review ECGs remotely. This collaboration allows patients to receive specialist cardiology opinions promptly, thus reducing the need for referrals. As of 31 March 2017, nearly 500 patients have benefitted from this programme.

Tele-DERM

In January 2016, NHGP and the National Skin Centre (NSC) embarked on a pilot at Hougang Polyclinic to provide Tele-DERM services to patients. An e-consult service, Tele-DERM facilitates timely discussion between primary care physicians and NSC dermatologists on patients' skin conditions and treatment options. The service has since been implemented at all NHG Polyclinics.

Tele-DERM brings specialist skin care closer to the community and enables patients to have their skin conditions managed during the same visit. This reduces the need for additional follow-up appointments by patients at NSC and allows them to receive prompt review at the polyclinics.

As of 31 March 2017, NHGP's dermatologically-trained family doctors were activated for more than 800 cases, of which nearly 300 were directly managed at the NHG Polyclinics.

Open Access To Specialists

NHGP has worked with MOH to adopt standardised Open Access protocols for Gastroenterology and Cardiology to reduce unnecessary referrals to Specialist Outpatient Clinics (SOCs) at the public hospitals. With open access referrals, NHGP doctors are able to refer patients with gastroenterology or cardiac conditions directly for further laboratory investigations without the need for them to visit a specialist to request such investigations. This programme has allowed the facilitation of appropriate referrals to SOC's and maintained the management of patients within primary care where possible.

WOMEN AND CHILDREN HEALTH SERVICES

The women and children health services at NHGP are mainly led by well-trained nurses. Women Health Services (WHS) includes antenatal care, family planning and women's health screening while Children Health Services (CHS) encompasses immunisation and child development assessment which monitor the growth of children from birth to four years of age at regular intervals.

In FY2016, more than 24,000 visits were recorded for WHS while nearly 350,000 visits were recorded for CHS.

ADVANCED PRACTICE NURSES

Since the concept of Advanced Practice Nurses (APN) was introduced in 2009, NHGP has (as of 31 March 2017) 10 APNs of which nine are trained in Chronic Disease Management while one is trained in Women's Health. In FY2016 alone, APNs conducted over 20,000 consultations. APNs are registered nurses who hold master-level qualifications and who are trained to diagnose and manage common medical conditions, including chronic illnesses. They work collaboratively with doctors, nurses and allied health professionals to deliver advanced nursing care to patients, thereby providing holistic person-centred care. The introduction of APNs has allowed doctors to focus on more complex cases.

DIABETES COMPLICATIONS PREVENTION

Singapore Integrated Diabetic Retinopathy Programme

NHGP collaborated with NHG Eye Institute (NHGEI) to launch the Singapore Integrated Diabetic Retinopathy Programme (SiDRP) in April 2011. Although diabetic retinopathy is a leading cause of blindness in Singapore, vision loss from diabetic retinopathy is preventable if diagnosed early and treated appropriately.

An important benefit of SiDRP is the provision of standardised care to patients with diabetes. Through the establishment of uniform referral guidelines, patients are promptly and appropriately referred to the SOC's or Accident & Emergency department.

As of 31 March 2017, more than 44,000 patients have benefitted from SiDRP.



Diabetic Foot Screening Services

As part of the 'War on Diabetes', NHGP has been focusing on screening and early treatment of complications resulting from diabetes. Apart from screening for diabetic retinopathy, NHGP has stepped up its efforts to increase diabetic foot screening among patients with diabetes. The screening which includes regular surveillance of patients at risk of foot ulcers, enables patients to receive early wound treatment to prevent complications. NHGP has also instituted a framework for follow-ups for patients who require additional foot care. These efforts help prevent and manage diabetic foot ulcers to avoid the risk of amputation, which is one of the major complications arising from poor diabetes control.

Photo

An APN explaining X-ray readings to her patient.



APNs work collaboratively with doctors, nurses and allied health professionals to deliver advanced nursing care to patients, thereby providing holistic person-centred care. The introduction of APNs has allowed doctors to focus on more complex cases.

ENSURING QUALITY CARE AND SAFETY FOR PATIENTS



Clinical Care and
Patient Safety Initiatives
in FY2016

53

Completed projects

48

Ongoing projects

22

Projects showcased
at local and overseas
conferences

CLINICAL CARE AND PATIENT SAFETY INITIATIVES

In FY2016, NHGP completed 53 projects that were aimed at improving the quality of patient care and enhancing patient safety while another 48 projects were ongoing (refer to Appendix A on Pages 87 to 89 for the list of Quality Improvement projects completed in FY2016).

In addition, 22 of these projects were showcased at local and overseas conferences.

BMJ International Forum on Quality and Safety in Healthcare

Gothenburg, Sweden

Outcome: Poster
Organiser: BMJ
Date: 12-15 April 2016

To improve the percentage of patients on preventer therapy who were on Written Asthma Action Plan

Dr Valerie Teo

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

BMJ International Forum on Quality and Safety in Healthcare

Singapore

Outcome: Poster
Organiser: BMJ (Asia)
Date: 26-28 September 2016

To increase the percentage of Diabetic Foot Ulcer patients who have received Ankle-Brachial Index Assessment within two weeks of diagnosis from 0% to 80%

Dr Tan Lye Yoong

Resident Physician
Toa Payoh Polyclinic

To achieve 95% uptake of Pneumococcal Vaccination in children aged 3-4 months during their 5-in-1 vaccination visits to Yishun Polyclinic

Ms Tan Pek Hoon

Senior Nurse Manager
Yishun Polyclinic

To improve accessibility of high risk patients requiring acute podiatric management to NHGP Podiatry Services

Ms Kathlyn Xu

Senior Executive
Clinical Services

To reduce waiting time of dressing patients in Jurong Polyclinic

Ms Evonne Ho

Executive, Clinic Operations
Jurong Polyclinic

Annual National Forum on Quality Improvement in Health Care (IHI)

Orlando, Florida

Outcome: Poster
Organiser: IHI
Date: 4-7 December 2016

To improve early access for high-risk patients requiring acute podiatric management to primary care podiatry services

Dr Donna Tan

Family Physician, Associate Consultant
Clinical Services

To increase the rate of Ankle-Brachial Index Assessment of newly diagnosed Diabetic Foot Ulcers in the primary care setting

Dr Tan Lye Yoong

Resident Physician
Toa Payoh Polyclinic

To redesign the abnormal lab results recall process

Dr George Chua

Yishun Polyclinic

To reduce motion waste by Dental Assistants when retrieving instruments

Ms Wu Yangmei

Oral Health Therapist
Woodlands Polyclinic

To increase the percentage of patients with a change in preventer therapy who received Written Asthma Action Plan from 27% to 80% at Ang Mo Kio Polyclinic

Ms Evonne Oh

Senior Staff Nurse I
Ang Mo Kio Polyclinic

To improve the management of patients on Warfarin through the use of pharmacist-led Anti Coagulation Clinic at polyclinics

Mr Gary Wiratama

Senior Pharmacist
National Healthcare Group Pharmacy

To improve Medical Report workflows in Ang Mo Kio Polyclinic

Dr Tricia Chang

Family Physician
Ang Mo Kio Polyclinic

To reduce Physiotherapy appointment default rates for Bukit Batok Polyclinic from 33% to 20% in six months

Mr Kwok Boon Chong

Senior Physiotherapist
Clinical Services

To achieve 100% of patients with newly diagnosed Impaired Fasting Glucose or Impaired Glucose Tolerance at Bukit Batok Polyclinic to receive intensive lifestyle education within two months

Ms Bian Li

Assistant Nurse Clinician
Bukit Batok Polyclinic

To produce a multi-faceted hand hygiene intervention programme

Ms Yan Chau Chain

Senior Nurse Manager
Nursing Services

To target specific sharps safety measures for pharmacy and diagnostic services in primary care

Ms Nisha Menon

Senior Staff Nurse II
Nursing Services

NHG Quality Day Singapore

Outcome: Poster
Organiser: NHG QD
Date: 19 August 2016

To improve the management of patients on Warfarin through the use of pharmacist-led Anti Coagulation Clinic at polyclinics

Dr Tan Khai Wei

Family Physician, Associate Consultant
Deputy Head, Toa Payoh Polyclinic

Mr Gary Wiratama

Senior Pharmacist
National Healthcare Group Pharmacy

To reduce the incidence of medication errors among patients discharged from hospitals at Toa Payoh Polyclinic

Dr Ian Koh

Family Physician
Toa Payoh Polyclinic

To reduce the number of Dislodged Restorations in Woodlands Polyclinic's Dental Clinic to zero in six months (Phase 1)

To reduce the number of Dislodged Restorations in Dental Clinics at Ang Mo Kio Polyclinic, Hougang Polyclinic, Jurong Polyclinic and Toa Payoh Polyclinic to zero in six months (Phase 2)

Dr Kenneth Low

Director
Dental Services

To improve consumable store management processes

Mr Liaw Desheng

Senior Executive
Operations

Ms Ng Poh Ling

Senior Executive
Operations

To increase Ankle Brachial Index Assessment for Newly Diagnosed Diabetic Foot Ulcers

Dr Tan Lye Yoong

Resident Physician
Toa Payoh Polyclinic

Ms Julia Zhu

Nurse Clinician II
Nursing Services

To enhance patient experience during payment processes

Ms Chang Lee Peng

Senior Manager
Finance

Mr Phil Cheng

Manager, Clinical Operations
Pioneer Polyclinic

Ms Evonne Ho

Executive, Clinic Operations
Jurong Polyclinic

Mr Benjamin Ho

Senior Executive
IT Operations

NHGP PATIENT SAFETY AWARENESS CAMPAIGN

NHGP held its second Patient Safety Awareness campaign from 17 February to 10 March 2017 across all NHG Polyclinics. The campaign sought to inculcate a culture of patient safety and educate staff on the use of NHGP's Incident Reporting Information System (IRIS) to report incidents. This system would enable NHGP to evaluate and identify patient safety issues and facilitate the clinic teams' efforts in enhancing patient safety. The campaign proved successful with staff demonstrating a clearer understanding of IRIS and its benefits.

NHG PATIENT SAFETY CULTURE SURVEY

NHGP participated in NHG's Patient Safety Climate Survey from 16 January to 13 February 2017. The survey aimed to determine staff awareness levels about patient safety as well as diagnose and assess patient safety culture at all NHG institutions. With the survey findings, NHGP has identified its strengths and areas for improvement to develop a stronger culture of patient safety.

STAFF WORKSHOPS

Improving Quality of Clinical Care and Patient Safety



FMEA Workshop

The 'Failure Mode Effect Analysis (FMEA)' workshop was conducted during the Operations Summit Learning Sessions on 20 January 2017. This workshop focused on the use of key tools to assess and mitigate risks for better patient safety.



QI Booster Workshops

Quality Improvement (QI) Boosters served as a refresher on essential QI concepts and simple QI tools for staff to improve care and service delivery. These lunchtime sessions were conducted at all NHG Polyclinics.



Kaizen Workshops

Two Kaizen workshops were conducted by the Urgent Care Workgroup in April and May 2016 to develop a framework for the management of patients requiring urgent care. The workshops ensured the streamlining of work processes across clinics and established evidence-based recommendations and protocols for such patients.

PATIENT SAFETY FORUMS

On 24 January 2017, NHGP Nursing Services held a Patients Safety Forum where nurses gained a better understanding of the role of human factors and confirmation bias in the prevention of medication errors. The 160 nurses who attended the forum learned about the possible causes of medication, vaccine safety incidents and the appropriate corrective actions through case studies.

The inaugural Evidence-Based Nursing, Innovations and Research Development Forum organised by Nursing Services, was held on 11 March 2017 to encourage nurses to use evidence-based research in their practice to improve the quality and safety of patient care. About 100 nurses from NHGP attended the bi-annual forum at the Primary Care Academy at Choa Chu Kang Polyclinic. Besides a lively talk by Professor Doris Young, Research Advisor to NHGP, on the trends and direction for nursing research in primary care, nurses presented their research projects and shared their findings.

Photo

NHGP staff with Professor Doris Young (front row, centre in blue dress and scarf) at the Evidence-Based Nursing, Innovations and Research Development Forum on 11 March 2017.





CHAPTER 2

EXPANDING CAPACITY FOR CARE

At the forefront of Singapore's healthcare system is primary care, providing accessible, affordable and quality care to the community. In an evolving healthcare landscape, Singapore's growing and rapidly ageing population is a strong driver for healthcare demand. More than just providing greater infrastructural development, effective management of chronic diseases in a sustainable care environment is needed in the long-term.

In line with one of the Ministry of Health's (MOH) key shifts to move beyond hospital to community, the National Healthcare Group Polyclinics (NHGP) has been building new healthcare facilities to address the needs of the future. At the same time, NHGP has expanded the reach and capabilities of the primary care sector by developing relationships with General Practitioners to ensure patients continue to receive quality care.

INCREASING PRIMARY CARE CAPACITY

CONSTRUCTION OF PIONEER POLYCLINIC

During the construction of Pioneer Polyclinic, NHGP started the operation of a temporary polyclinic on 1 July 2016 at the Jurong Medical Centre. The temporary Pioneer Polyclinic provided primary care to the population in the region and served as a testbed for new workflows involving patient empanelment and team-based care.

Construction work on the seven-storey Pioneer Polyclinic started in 2013. On 13 March 2017, the Temporary Occupation Permit was obtained.

Before the handover of Pioneer Polyclinic to the National University Polyclinics (NUP), a tour of the development was arranged for National Healthcare Group Board of Directors, members from the Ministry of Health Holdings, stakeholders and staff of NHGP and NUP on 16 May 2017. On 27 June 2017,

Mr Gan Kim Yong, Minister for Health, and Associate Professor (A/Prof) Benjamin Ong, Director of Medical Services, MOH, also visited Pioneer Polyclinic to gain insights on its operational and clinical aspects. Pioneer Polyclinic opened its doors on 17 July 2017.

REDEVELOPMENT OF ANG MO KIO POLYCLINIC AND YISHUN POLYCLINIC

Ang Mo Kio Polyclinic and Yishun Polyclinic are currently undergoing redevelopment. These redeveloped clinics are expected to be operational in the first half and second half of 2018 respectively.

The redeveloped polyclinics are designed to accommodate bigger patient loads and provide integrated spaces for team-based care. These new facilities would enable NHGP to meet the growing healthcare needs of the population in the central and northern regions of Singapore.

Photo

A clinic tour by NHGP and NUP was conducted for Mr Gan Kim Yong, Minister for Health, and A/Prof Benjamin Ong, Director of Medical Services, MOH, on 27 June 2017.



Photo

A networking session with Hougang Polyclinic patients at the Hougang Family Medicine Clinic on 18 November 2016.

PARTNERING FAMILY MEDICINE CLINICS WITH GENERAL PRACTITIONERS

Engaging General Practitioner (GP) and Family Medicine Clinic (FMC) partners to care for patients with chronic conditions in the community is part of NHGP's primary care transformation efforts.

With a growing number of chronic diseases suffered by an ageing population, NHGP is committed to work closely with GP and FMC partners to co-manage patients. Through engagement sessions, NHGP hopes to forge closer ties between the public and private sectors to provide quality and seamless care to patients in the community. This includes working with GPs and FMCs in the vicinity of NHG Polyclinics to transfer NHGP patients eligible for Community Health Assist Scheme (CHAS) to their care. In addition, the Unity FMC set up in collaboration with NTUC Health in March 2014 and the Hougang FMC set up in collaboration with solo GPs in September 2015 have enabled residents in the community to receive seamless care closer to their homes.

As of 31 March 2017, NHGP has successfully transferred the care of nearly 25,000 chronic patients and more than 15,000 dental patients to FMC and GP partners in the community.

Since 2015, the Central Fill Pharmacy located at the Pharmacy Services Centre has been receiving prescriptions directly from six GPs. With this service, NHG Polyclinics patients who have been right-sited to these GPs continue to receive medication at subsidised cost and enjoy the convenience of community-based healthcare providers. This effort complements NHGP's primary care transformation efforts in right-siting patients to GPs.



**Number of Patients
Transferred to GP
and FMC Partners as
of 31 March 2017**

Nearly
25,000
chronic patients

More than
15,000
dental patients

OPERATIONAL CERTIFICATIONS

RENEWAL OF BS OHSAS 18001:2007 CERTIFICATION

NHGP renewed its BS OHSAS 18001:2007 certification for fulfilling its Occupational Health and Safety Management System requirements. Both Jurong Polyclinic and Woodlands Polyclinic were audited on 30 June 2016 while the remaining seven clinics conducted internal audits. The renewal of BS OHSAS 18001:2007 recognises NHGP's commitment to Occupational Health and Safety systems at the workplace for staff, patients and visitors.

ISO15189 RE-ACCREDITATION FOR NHG DIAGNOSTICS

In April 2016, NHG Diagnostics (NHGD) successfully attained the ISO15189 re-accreditation. This certification is an international benchmark for quality and competency for medical laboratories. The reaccreditation is an affirmation of the quality, reliability and accuracy of NHGD's laboratory processes and results.

Photo

The Woodlands Polyclinic team after the OHSAS 1800:2007 audit.



Operational certifications help ensure occupational health and safety systems at the workplace



IMPROVING SERVICE DELIVERY



Savings in procedural time with the upgrading of conventional X-ray systems



Mobile Ultrasound Service launched in October 2016



Photo

NHG Diagnostics Mobile Ultrasound Service.

UPGRADING OF CONVENTIONAL X-RAY SYSTEMS

NHGP patients who had their X-rays done at the polyclinic's laboratory were served faster with the new digital radiography system. This system eliminates the use of cassettes allowing X-ray images to be seamlessly transferred to radiologists for reporting in six seconds. The automation saw an estimated 20% savings in procedural time.

INTRODUCTION OF MOBILE ULTRASOUND SERVICE

NHGD launched the Mobile Ultrasound Service in October 2016. This service, the first-of-its-kind in Singapore, allows more patients to receive ultrasound services at any one time. Deployed at Hougang Polyclinic and Jurong Polyclinic, the service has ensured that patients from these polyclinics need not travel to a hospital for ultrasound services. The Mobile Ultrasound Service has reduced the waiting time for appointments from 10 weeks to less than two weeks.



CHAPTER 3

EMPOWERING AND EDUCATING PATIENTS

Preventive care is essential in helping the population manage its health in the long-term. To ensure better health outcomes for all, the National Healthcare Group Polyclinics (NHGP) has been actively reaching out to the community at different levels to empower and educate them on making wise lifestyle choices and improving their knowledge of chronic conditions and other diseases.

NHGP's health promotion efforts include activities held on a national scale as well as grassroots and community events, all of which are integrated into NHGP's model of care as part of the primary care transformation journey.

ACTIVATING THE COMMUNITY

WAR ON DIABETES

With the increasing prevalence of diabetes among Singaporeans, the Ministry of Health (MOH) started a nationwide 'War on Diabetes' in April 2016. As one of the first points of contact for Singaporeans seeking care for the management of their chronic conditions, NHGP plays a critical role in supporting this national effort.

To help patients and the community take charge of their health and improve their efforts in preventing or managing the disease, several activities were held in FY2016 such as talks and workshops as well as support group activities.



As one of the first points of contact for Singaporeans seeking care for the management of their chronic conditions, NHGP plays a critical role in supporting the national 'War on Diabetes' effort.



Photo

Participants at the diabetes medication management talk at Woodlands Polyclinic on 14 May 2016.

2016

Apr

Diabetes education for newly diagnosed patients with diabetes at Bukit Batok Polyclinic (first run).

May

Diabetes medication management during the fasting month of Ramadan for the Malay Diabetes Support Group at Woodlands Polyclinic.

Jun

Diabetes education for newly diagnosed patients with diabetes at Bukit Batok Polyclinic (second run).

Talk on understanding glycemic index for the Ang Mo Kio Diabetes Support Group at Ang Mo Kio Polyclinic.

Jul

Mental health talk on the psychological management of diabetes for Whampoa residents at Whampoa Community Centre.

Aug

Supermarket tour to learn food label reading for patients of Bukit Batok Polyclinic, Clementi Polyclinic and Jurong Polyclinic.

Sep

Talk on eating well with diabetes for Whampoa Active Ageing Group at Toa Payoh Polyclinic.

Care tips on preventing diabetic complications for Registered Nurses at Tembusu Home.

Tips on preventing diabetes and identifying symptoms of diabetes for Ace the Place Community Club's Indian Activities Executive Committee and Women's Interest Group at Woodlands Polyclinic.

Oct

Talk on managing mental health issues when dealing with diabetes for Yishun Diabetes Support Group at Yishun Polyclinic.

Nov

Nutrition tips and healthy cooking demonstrations using whole grains and oats for patients at Ang Mo Kio Polyclinic, Yishun Polyclinic, Hougang Polyclinic and Jurong Polyclinic.

Healthy meal planning using HPB's 'My Healthy Plate' concept for Malay Diabetes Support Group at Bukit Batok Polyclinic.

Meal planning and food label reading for patients of Ang Mo Kio Polyclinic.

Talk on maintaining good blood sugar control and understanding the importance of daily physical activity in managing diabetes for residents at Clementi.



Photo

Participants at the talk on carbohydrate counting for meal planning and food label reading at Ang Mo Kio Polyclinic on 4 June 2016.



2017

Jan

Talk on adopting healthier eating habits based on HPB's 'My Healthy Plate' concept for patients of Yishun Polyclinic.

Workshop on educating and empowering Sikh community leaders as community health ambassadors to educate the community on diabetes management.

Talk on healthy eating to manage diabetes for residents of AWWA Community Home (first run).

Feb

Diabetes education for newly diagnosed patients with diabetes at Bukit Batok Polyclinic (third run).

Mar

Talk on healthy eating to manage diabetes for residents of AWWA Community Home (second run).

Photo

Participants at the workshop for Sikh community leaders on 9 January 2017.

SCREENING FOR HEALTH

NHGP's early intervention efforts aim to empower patients and the community to make healthier lifestyle choices for their well-being. In FY2016, NHGP held several activities to spread the message on preventive care in the community.

NHGP has embarked on opportunistic Coronary Risk Screening (CRS) at seven of its polyclinics since 1 April 2016 to help eligible patients identify their risks of developing cardiovascular disease and to seek follow-up for at-risk patients. As of 31 March 2017, CRS has screened close to 30,000 patients.

As part of its 'Disease Day' initiative, NHGP's Dietetics Services and Health Promotion and Preventive Care (HPPC) department collaborated with the Singapore Cancer Society (SCS) to raise awareness on colorectal cancer.

A month-long roadshow on colorectal cancer prevention was held at all NHG Polyclinics in March 2017. The roadshows reached out to about 900 people who signed-up for colorectal cancer screening. High-fibre recipes for healthier eating were shared by HPPC at the roadshows and weekend talks were organised by SCS, HPPC and Dietetics Services for patients from Hougang Polyclinic and Yishun Polyclinic.

EARLY INTERVENTION PROGRAMME

NHGP's 'Weight No More' Programme was established at Choa Chu Kang Polyclinic in 2012 to help overweight patients manage their weight by changing their diet and lifestyle. Since April 2016, the programme had been made available at Woodlands Polyclinic, Hougang Polyclinic and Choa Chu Kang Polyclinic. Over the three-month period of each run, about 30% of participants lost at least 5% of their body weight.



ENCOURAGING HEALTHIER LIFESTYLES THROUGH MASS MEDIA

As a health-promoting institution, NHGP actively explores different ways to spread the health message to the population. In FY2016, NHGP's Corporate Communications Department (CCD) worked closely with the healthcare team including Family Physicians, nurses and allied health professionals to provide health advice via broadcast and print media. Chronic disease management and adopting healthier lifestyles were major focus areas of the media engagement strategy.

Photos

Top: HPPC staff distributing high fibre food samples to patients at Hougang Polyclinic during the colorectal cancer prevention roadshow.

Bottom: Ms Elaine Tan, Family Physician, Associate Consultant, Toa Payoh Polyclinic (second from left) and Mr Tan Liang Sheng, Senior Podiatrist, Clinical Services (third from left), on Channel 8 TV interview on diabetes management on 10 November 2016. This was one of the many ways NHGP empowers the population to stay healthy.

ENGAGING PATIENTS AND THE COMMUNITY

International Women's Day

On 5 March 2017, NHGP's Clinical Services joined hands with Nee Soon Group Representation Constituency (GRC) to support its International Women's Day 2017 Dialogue. The team conducted a health talk on obesity among women and demonstrated exercises for weight management during the session. Our dietitians also educated participants on ways to cut down their calories through controlling their food portions using 'My Healthy Plate' concept, and provided tips on choosing healthier foods and beverages with less fat and sugar.

Psychologists' Outreach Efforts

In FY2016, NHGP Psychology Services reached out to patients and the community through numerous talks and events. This included a public education event held on 2 October 2016 at Yio Chu Kang Community Club in conjunction with World Mental Health Day. The event, jointly organised by NHGP's CCD and Ang Mo Kio Polyclinic, comprised a series of Mandarin talks on the impact of stress in managing a chronic condition.



Graced by Guest-of-Honour Dr Koh Poh Koon, Minister for Trade and Industry and National Development and Member of Parliament for Ang Mo Kio GRC, the event was attended by 350 participants. The presenters included a clinical psychologist, a Family Physician and a physiotherapist from NHGP. Speakers from ClubHeal, Mindcare Ang Mo Kio Family Service Centre Community Services Ltd and the Singapore Association of Mental Health were also invited.

Physiotherapists' Outreach Efforts

NHGP Physiotherapy Services commemorated World Physiotherapy Day 2016 with a series of exercise sessions for patients and the elderly in the community. The first set of exercise sessions was conducted at Bukit Batok Polyclinic, Toa Payoh Polyclinic and Woodlands Polyclinic. This was followed by a series of sessions for elderly clients attending the Care Corner Seniors Activity Centre in Toa Payoh. These sessions aimed to educate the seniors on the importance of regular exercise in the management of age-related health problems.

Photos

Top:
Participants with NHGP Physiotherapists and Social Workers after the exercise session at the Care Corner Seniors Activity Centre on 28 September 2016.

Bottom:
Participants relaxing their minds at the 'Release Stress Now: Take Charge of Chronic Disease' event in conjunction with World Mental Health Day on 2 October 2016. The event was graced by Dr Koh Poh Koon, MP for Ang Mo Kio GRC (second from left).



NHGP Dietetics Services Outreach Programmes in FY2016



Talks



Cooking Demonstrations



Supermarket Tours



Public Forums



Support Group Sessions

Photos

Top:
At the 'Feed Me, Fight Malnutrition' event on 12 March 2017 to commemorate Dietitians' Day.

Bottom:
MSF booths were set up at NHG Polyclinics to raise awareness on family violence.



Dietitians' Outreach Efforts

In FY2016, NHGP Dietetics Services conducted outreach programmes which included talks, cooking demonstrations, supermarket tours, public forums and support group sessions for patients with chronic diseases at various NHG Polyclinics. NHGP's dietitians also participated in group education programmes such as the diabetes prevention programme and weight management programmes for patients and staff.

To commemorate Dietitians' Day 2017, NHGP Dietetics Services set up nutrition booths at NHG Polyclinics from 6 to 10 March 2017. The theme, 'Eat a Rainbow - 2+2 Fruit and Vegetables Daily', aimed to encourage staff and patients to eat healthily. On 12 March 2017, NHGP Dietetics Services and Tan Tock Seng Hospital (TTSH) Dietetics Services conducted the 'Feed Me, Fight Malnutrition' event

for Teck Ghee residents, as well as TTSH patients and their caregivers.

Medical Social Workers' Outreach Efforts

As part of its community efforts, NHGP's Medical Social Services collaborated with the Ministry of Social and Family Development (MSF) to raise awareness of family violence. NHGP Medical Social Workers held lunchtime talks at all nine NHG Polyclinics from September to November 2016 to guide staff on how to recognise victims of abuse and enable them to get help. To further raise awareness of family violence, information panels and game booths were set up by MSF at the patient waiting areas. The objective of the joint education campaign was to help the community not only understand family violence but to encourage victims to seek help.





Nurses' Outreach Efforts Global Hand Hygiene Day

NHGP Infection Control Advisor Representatives (ICAR) held lunchtime roadshows at all nine NHG Polyclinics to commemorate Global Hand Hygiene Day on 5 May 2016. The roadshows focused on fostering and supporting a general culture of good hand hygiene among healthcare workers. Among the fun learning activities were interactive booths for patients and healthcare staff to learn about the importance of hand hygiene which included glow-light activities, crossword puzzles and word search games to reinforce the message that hand hygiene offered a simple and effective means of preventing the spread of infection.

Besides the outreach activities, clinic staff who had demonstrated exemplary hand hygiene practices received the Healing Hands Award 2016 from the Prevention & Control of Infection Committee (PCIC).

International Infection Prevention and Control Week

In conjunction with the International Infection Prevention and Control Week, Nursing Services held a seminar at Yio Chu Kang Grassroots Club on 22 October 2016. The event, attended by 160 participants, included lunch, games, skits, and a talk by invited guest speaker, Professor Paul A Tambyah, Department of Medicine, National University of Singapore, who shared the importance of keeping healthcare equipment and surfaces clean to prevent the spread of harmful microorganisms. Prizes were also given out to recognise and reward all groups in the 'Infection Control Bulletin Board Contest'.



Interactive booths were set up for patients and healthcare staff to reinforce the message that hand hygiene offered a simple and effective means of preventing the spread of infection.

Photos

Top:
An Infection Control Advocate engaging a participant in a glow-light activity at the hand hygiene roadshow on 5 May 2016.

Bottom:
NHGP's Infection Control Advisor Representatives, Infection Control Advocates and members of the Prevention and Control of Infection Committee at the Infection Prevention and Control Seminar held at Yio Chu Kang Grassroots Club on 22 October 2016.



Through NHGP outreach efforts, the community learned how to take charge of their health and got to know their healthcare professionals better.

Pharmacists' Outreach Efforts

NHG Pharmacy (NHGPh) conducted a series of Mandarin talks on gastrointestinal problems. The talks held at Toa Payoh Polyclinic on 9 July 2016, at Jurong Polyclinic on 26 November 2016 and at Ang Mo Kio Polyclinic on 18 February 2017 benefitted more than 60 patients.

In addition, NHGPh celebrated the nationwide Pharmacy Week with health-quiz posters displayed at NHG Polyclinics on 16 October 2016. The posters aimed to engage patients to understand their own health.



Polyclinics' Outreach Efforts Choa Chu Kang Polyclinic

Choa Chu Kang Polyclinic conducted a series of health talks for the Zumba community at the Choa Chua Kang Community Club over three consecutive Saturdays in March 2017. The talks jointly organised by Choa Chu Kang Polyclinic, NHGP allied health professionals and People's Association, included health topics such as management of fatigue and mental health, basic stretching exercises to alleviate muscle cramps and pointers for buying proper footwear. Through these talks, not only did residents learn how to

take charge of their health but they also got to know their community healthcare professionals better.

Yishun Polyclinic

Yishun Polyclinic participated in the Nee Soon Community Health Fair 2016 on 31 July 2016 to engage elderly residents in the region. The event was graced by Er Dr Lee Bee Wah, Member of Parliament for Nee Soon GRC and Mr K Shanmugam, Minister for Home Affairs and Minister for Law and Member of Parliament for Nee Soon GRC. Organised by Nee Soon South Community Club, NHGP podiatrists and Yishun Polyclinic, the event also included exhibits on foot care and an interactive health quiz.

Photos

Top:
Health talks conducted by NHGP allied health professionals for the Zumba community at Choa Chu Kang Community Club in March 2017.

Bottom:
Yishun Polyclinic staff sharing tips on foot care with residents at the Nee Soon Community Health Fair 2016 on 31 July 2016.



CHAPTER 4

STRENGTHENING FAMILY MEDICINE AND CONTINUING EDUCATION

Singapore's ageing population and growing prevalence of chronic medical conditions pose challenges for healthcare institutions to provide continual long-term care. The National Healthcare Group Polyclinics (NHGP) sees itself playing an important role in partnering patients on their journey from disease management to wellness.

The advancement of Family Medicine and continuing medical education are integral aspects in strengthening the capabilities of our staff to help patients on their journey to wellness. NHGP has been actively investing in research and education to enable our multi-disciplinary healthcare teams to learn from one another, gain new insights on best practices and keep up with the latest advancements. Through capability building, NHGP aims to transform the primary care landscape and improve quality of care.

ENCOURAGING CONTINUAL LEARNING

Photo

NHGP's 9th Primary Care Forum graced by Dr Lam Pin Min, Senior Minister of State, Ministry of Health, Ministry of Transport (sixth from left), on 23 September 2016.



PRIMARY CARE FORUM 2016

NHGP held its 9th Primary Care Forum on 23 and 24 September 2016 in conjunction with the Singapore Healthcare and Biomedical Congress (SHBC).

An important event for primary care professionals and experts, the theme of the forum was 'World Class Primary Care: Relationships, Partnerships and Innovations'. The annual forum focused on relationship-based care, community partnerships and innovative care programmes. More than 900 local and overseas speakers at the forum discussed the importance of a holistic care environment for patients in an evolving primary healthcare landscape.

MEDICAL FORUMS AND WORKSHOPS

Regular medical forums and workshops are held to ensure that NHGP healthcare professionals are kept up-to-date with the latest advancements in healthcare. Bi-monthly medical forums also help to equip Family Physicians with the key competencies under the Accreditation Council for Graduate Medical Education (ACGME) framework.

In addition, quarterly research forums are organised to foster a research culture among staff and Family Medicine Residents. These research forums also provide a platform for research presentations and discussions (refer to Appendix B on Page 90 for the list of medical forums conducted).

LEARNING FROM VISITING EXPERTS

To gain global perspectives on healthcare systems, NHGP Senior Management and working groups welcomed overseas experts:



Discussions were held from 20 to 22 September 2016 with Professor Jan De Maeseneer, Family Physician and Head, Department of Family Medicine & Primary Health Care, Ghent University, Belgium, and Chairman, European Forum for Primary Care on the Belgian healthcare system and its medical education system.



From 22 to 26 September 2016, NHGP also met with Professor Kamlesh Khunti, Professor of Primary Care Diabetes and Vascular Medicine, University of Leicester, United Kingdom, a world-renowned researcher in diabetes to discuss the importance of early identification and interventions for people with diabetes and those at risk of developing diabetes.



A sharing session was held on 21 March 2017 with Professor Eric Bateman, a renowned Pulmonologist, clinician scientist and board member of the Science Committee of the Global Initiative for Asthma on the optimisation of asthma care and guiding selection for at-risk patients. The session was also webcast live to doctors in Jurong Polyclinic and Woodlands Polyclinic.



Photos

Top:
NHGP Senior Management and working group participants with Professor Jan De Maeseneer (back row, fifth from left) during his visit from 20 to 22 September 2016.

Bottom:
NHGP Senior Management and working group participants with Professor Kamlesh Khunti (centre) during the discussions held from 22 to 26 September 2016.



Regular medical forums and workshops are organised to ensure that NHGP healthcare professionals are kept up-to-date with the latest advancements in healthcare.



Photos

Top:
Participants at the workshop on research methodologies conducted by Professor Kurt Stange from 13 to 17 February 2017.

Bottom:
Dr Andrew Brown (second from right) with NHGPh staff at Bukit Batok Polyclinic on 6 October 2016.

HMDP VISITING EXPERTS SCHEME

Lectures and Workshops on Research Methodologies

As part of the Ministry of Health's (MOH) Health Manpower Development Plan (HMDP) Visiting Experts scheme, Professor Kurt Stange, editor of the leading family medicine journal, the 'Annals of Family Medicine' visited NHGP from 13 to 17 February 2017. During his five-day visit, Professor Stange conducted lectures and workshops on research methodologies and medical writing. He also engaged staff in project discussions, with the aim of imparting skills necessary to develop successful and sustainable research in primary care.

Development of Pharmacy Support Workforce

NHG Pharmacy (NHGPh) hosted Dr Andrew Brown, an expert in pharmacy and health supply chains, at Bukit Batok Polyclinic on 6 October 2016. Dr Brown, who was in Singapore as the HMDP Visiting Expert for Pharmacy Technicians Workforce and Training Development, shared his views on the Australian Pharmacy Technician Competency and Registration Model. He also introduced the needs-based approach to education where learning is service-driven and competence-based.



Photo

HMDP Visit to the Veterans Health Administration Primary Care Services hosted by Dr Angela Denietolis (third from right).



HMDP Visits in FY2016

HMDP VISITS

To Oregon and Alaska

In June 2016, a team from NHGP visited two American agencies, Care Oregon in Oregon and the South Central Foundation in Alaska, to learn about the care models practised at these institutions. The NHGP team took back useful ideas from the person-centred care model of the two institutions to be adapted to Singapore's healthcare context for the management of patients under the team-based care programme.

University of California's Center for Excellence in Primary Care. The trip provided the team with practical ideas on best practices in building strong teams.

TRAINING OPPORTUNITIES PROVIDED BY PRIMARY CARE ACADEMY

The Primary Care Academy (PCA) has been strengthening its role to improve the skills and capacity of primary care professionals. In FY2016, PCA conducted courses covering both soft and technical skills, including General Practitioner's Assistant training, and workshops covering fall risks and preventive care. Forty-five courses were conducted in FY2016 (refer to Appendix C on Page 91 for the list of courses conducted by PCA).

To Wisconsin and Florida

Five NHGP staff members went on a three-week study trip to learn about the team-based care model of two world-renowned healthcare systems, Bellin Health at Green Bay, Wisconsin, and Veterans Health Administration Primary Care Services at Tampa, Florida, in November 2016. The objective of the study trip was to expand the team's knowledge in team-based care and aid NHGP's efforts in transforming the primary care ecosystem in Singapore.

To California and Washington

In February 2017, four NHGP staff members went on a two-week study trip to California and Washington as part of the HMDP Fellowship Programme. The trip included visits to several renowned healthcare and academic institutions such as the

June 2016

- Care Oregon, Oregon
- South Central Foundation, Alaska

November 2016

- Bellin Health, Green Bay, Wisconsin
- Veterans Health Administration Primary Care Services at Primary Care Annex, Tampa, Florida

February 2017

- Center for Excellence in Primary Care, University of California, San Francisco
- San Francisco Health Network, San Francisco Department of Public Health, San Francisco
- School of Optometry, University of California, Berkeley
- Iora Primary Care, Iora Health, Seattle
- Qliance, Seattle

VISITS TO NHGP

In FY2016, NHGP hosted numerous visits by local government officials and healthcare institutions as part of its efforts to share knowledge and ideas. During the year, NHGP also hosted visitors from various countries to exchange ideas and knowledge of primary healthcare services in Singapore and NHGP's efforts in transforming the primary care landscape.



MINISTRY OF HEALTH

Mr Chan Heng Kee, Permanent Secretary (PS), MOH, visited Bukit Batok Polyclinic on 29 July 2016. Associate Professor (A/Prof) Chong Phui-Nah, CEO, NHGP, and Senior Management hosted Mr Chan. The tour, which included a visit to the Family Medicine Academy located at Bukit Batok Polyclinic, provided insights into how team-based care delivery model provides better care for patients with chronic conditions.

PCA hosted a group of MOH officers at Choa Chu Kang Polyclinic and Woodlands Polyclinic on 2 June and 20 October 2016 respectively. The visits provided MOH officers with a macro view of the primary healthcare landscape, a better understanding about the implementation of healthcare policies on the ground and an introduction to NHGP's team-based care delivery model.



LOCAL HEALTHCARE INSTITUTIONS

Jurong Polyclinic hosted a team from KK Women's and Children's Hospital on 7 October 2016 to learn about NHGP's Cash Management System.

Toa Payoh Polyclinic hosted A/Prof Ong Biauwei Chi, Chief Medical Board, Sengkang Health, Professor Christopher Cheng, Chief Executive Officer, Sengkang Health, and the team from Sengkang Health on 7 November 2016 to share the setup of NHGP's team-based care model and operations model at the clinic.

Jurong Polyclinic hosted a team from Tan Tock Seng Hospital on 6 December 2016 to share about the enhanced operational efficiency achieved with NHGP's Self-Payment Kiosk.

Toa Payoh Polyclinic hosted Professor Helen Smith, Professor of Primary Care, Lee Kong Chian School of Medicine (LKC Medicine) from 12 to 14 December 2016 to provide insights on the operational aspects of the polyclinic's operations.



Photos

Top:
Choa Chu Kang Polyclinic welcomed a group of MOH officers on 2 June 2016.

Bottom:
Woodlands Polyclinic welcomed a group of MOH officers on 20 October 2016.





SHINe PROGRAMME

The Singapore Healthcare Improvement Network (SHINe) faculty made two visits to Clementi Polyclinic, on 14 July 2016 and 7 February 2017. The clinic team gave an update of the work done to reduce hypoglycemia among patients with diabetes in Clementi Polyclinic which had served as the pilot site for this programme.



INTERNATIONAL HEALTHCARE DELEGATES

Choa Chu Kang Polyclinic hosted a group of 20 nurses from Sri Lanka on 7 April 2016. The delegates were in Singapore to learn about Singapore's healthcare system as part of a nursing programme organised by Nanyang Polytechnic.

Yishun Polyclinic hosted a group of 10 pre-registration/post-graduate nursing students from Taiwan's Central Taiwan University of Science and Technology on 12 July 2016.

Jurong Polyclinic hosted 16 nursing directors and lecturers from China's Xiangyang Health School Hubei on 5 August 2016. The participants were in Singapore on a three-week nursing pedagogy course at Nanyang Polytechnic.

Choa Chu Kang Polyclinic hosted a group of 20 nursing leaders, educators and specialists from China's Hebei/Tianjin universities and its affiliated hospitals on 7 September 2016. They were in Singapore to attend a seven-day training programme at Ngee Ann Polytechnic.

Yishun Polyclinic hosted 20 nursing leaders and educators from China's Hebei/Tianjin universities and hospitals on 22 September 2016.

Woodlands Polyclinic hosted a visit by Western Australia's Deputy Leader of the Opposition and Shadow Minister for Health, Mr Roger Cook, and his delegation on 30 September 2016.

PCA and Hougang Polyclinic hosted a delegation of 22 General Practitioners from Ningbo, China, on 18 October 2016. The visit was part of the delegates' two-week exchange programme in Singapore.

Photo

Woodlands Polyclinic welcomed a group of delegates from Western Australia on 30 September 2016.



Bukit Batok Polyclinic welcomed a delegation of international healthcare leaders on 19 October 2016 as a lead-up to the first National Seminar on Productivity in Healthcare on 20 and 21 October 2016. The delegates from Sweden, New Zealand and Thailand met with A/Prof Chong, Dr Keith Tsou, Regional Director (West) of Primary Care Transformation Office, Family Physician, Senior Consultant and Head of Bukit Batok Polyclinic, and NHGP Senior Management.

Bukit Batok Polyclinic hosted a four-member delegation led by the Chief of Service, Hospital Authority of Hong Kong, on 8 November 2016.

Jurong Polyclinic hosted 24 nursing directors and managers from Shaanxi on 15 February 2017. This was part of the Executive Nursing Management Programme organised by Nanyang Polytechnic, School of Health Sciences (Nursing).

Photos

Top:
General Practitioners from Ningbo, China, visited Hougang Polyclinic on 18 October 2016.

Bottom:
The delegation of international healthcare leaders with NHGP Senior Management at Bukit Batok Polyclinic on 19 October 2016.



NHG EDUCATION AWARDS NUS Medicine Dean's Awards 2016

Two NHGP Family Physicians were recognised for their contributions as clinical teachers at NUS Yong Loo Lin School of Medicine. The awards were presented at the NUS Medicine Clinical Teachers' event held on 22 November 2016.



Dean's Award for Teaching Excellence

Dr David Tan
Family Physician, Consultant
Head, Pioneer Polyclinic

Junior Doctor Teaching Award

Dr Zhang Zhi Peng
Family Physician
Deputy Head, Choa Chu Kang
Polyclinic

NHG Teaching Awards

The annual NHG Teaching Excellence Awards (or Teachers' Day Awards ceremony) was held on 2 September 2016 to recognise exemplary teachers and educators across all NHG institutions for their dedication to the professional development of healthcare staff.

NHG Education Leaders Award 2016

Dr Tang Wern Ee
Family Physician, Senior Consultant
Education Director, Family Medicine
Development
Head, Clinical Research Unit

NHG Teaching Award for Junior Clinicians 2016

Dr Tan Wee Hian
Family Physician, Associate Consultant
Deputy Head (Designate),
Pioneer Polyclinic

Dr Jaganmohan Raja Ramasamy
Family Physician
Woodlands Polyclinic

NHG Outstanding Nurse Teachers 2016

Ms Chan Su Sie
Senior Staff Nurse I
Bukit Batok Polyclinic

Ms Srimathi Litshumanan
Senior Staff Nurse II
Toa Payoh Polyclinic

NHG Teaching Award for Nursing Preceptors 2016

Ms Lee Ching Lian
Senior Nurse Clinician
Hougang Polyclinic

NHG Inter-Professional Teaching Award 2016

Ms Estonie Yuen Wing Ting
Senior Dietitian
Clinical Services

Ms Kau Chung Ping
Senior Medical Social Worker
Clinical Services

Ms Wong Yuefen
Senior Dietitian
Clinical Services

Ms Goh Khoon Chin
Senior Nurse Clinician
Bukit Batok Polyclinic

Pharmacy Senior Preceptors

Ms Kim Tan
Senior Pharmacist
Jurong Polyclinic

Pharmacy Preceptors

Mr Gavin Cheah
Senior Pharmacist
Woodlands Polyclinic

Ms Lee Poh Ling
Senior Pharmacist
Jurong Polyclinic

PROFESSIONAL ADVANCEMENT OF OUR STAFF

NHGP recognises our staff for their work in Family Medicine by investing in the development of their knowledge and skills throughout the course of their careers.

Master of Medicine (Family Medicine)

Dr Grace Chew
Resident Physician
Bukit Batok Polyclinic

Dr Jessica Tang Hay
Resident Physician
Clementi Polyclinic

Dr Ibkaar Darke
Resident Physician
Choa Chu Kang Polyclinic

Dr Teo Zhi Han
Resident Physician
Hougang Polyclinic

Dr Justin Chong
Family Physician, Senior Staff
Jurong Polyclinic

Dr Chu Chun Hong
Resident Physician
Toa Payoh Polyclinic

Dr Steven Chao
Resident Physician
Toa Payoh Polyclinic

Dr Arvin Mahavijiyan
Resident Physician
Yishun Polyclinic

Dr Vivek Bansal
Resident Physician
Woodlands Polyclinic

Fellowship of Academy of Medicine, Singapore

A/Prof Chong Phui-Nah
Family Physician, Senior Consultant
Chief Executive Officer, NHGP

Dr Doraisamy Gowri
Family Physician, Senior Consultant
Woodlands Polyclinic

Dr Keith Tsou
Family Physician, Senior Consultant
Bukit Batok Polyclinic

Dr Angelia Chua
Family Physician, Consultant
Yishun Polyclinic

Fellowship of College of Family Physicians (Singapore)

Dr Manojkumar Kharbanda
Family Physician, Associate Consultant
Deputy Chief Medical Informatics
Officer, Office of Clinical Informatics

Dr Valerie Teo
Family Physician, Associate Consultant
Deputy Head, Ang Mo Kio Polyclinic

Dr Lim Chee Kong
Family Physician, Consultant
Deputy Director (Medical Manpower)
Clinical Services

Dr Kong Jing Wen
Family Physician, Associate Consultant
Deputy Head, Hougang Polyclinic

Dr Desmond Ong
Family Physician, Associate Consultant
Jurong Polyclinic

Dr Franco Wong
Family Physician, Associate Consultant
Deputy Head, Jurong Polyclinic

Dr Tan Wee Hian
Family Physician, Associate Consultant
Deputy Head (Designate),
Pioneer Polyclinic

Graduate Diploma in Family Medicine

Dr Lee Tong Chsia
Resident Physician, Senior Staff
Ang Mo Kio Polyclinic

Dr Olivia Tian
Resident Physician
Yishun Polyclinic

Dr Choong Siew Li
Resident Physician
Yishun Polyclinic

Dr Candice Lee Wei Zhen
Resident Physician
Woodlands Polyclinic

Dr Ismail Afzana
Resident Physician
Hougang Polyclinic

Dr Claire See
Resident Physician
Hougang Polyclinic

Dr Yeap Youwen
Resident Physician
Hougang Polyclinic

Dr Chua Ying Xian
Resident Physician
Jurong Polyclinic

Dr Evelyn Chua
Resident Physician
Jurong Polyclinic

Dr Alexandra Lau
Resident Physician
Jurong Polyclinic

Dr Chie Zhi Ying
MOPEX
Woodlands Polyclinic

Master of Nursing

Ms Chan Cheuk Ying
Senior Staff Nurse I, APN Intern,
Nursing Services



Advancement of NHGP Staff in FY2016

4

NHGP doctors were conferred Fellowship to Academy of Medicine, Singapore

9

NHGP doctors obtained their Master of Medicine (Family Medicine)

11

NHGP doctors obtained their Graduate Diploma in Family Medicine

7

NHGP doctors were conferred Fellowship to College of Family Physicians, Singapore

1

NHGP nurse obtained Master of Nursing

MINISTRY OF HEALTH IN-SERVICE SCHOLARSHIP

In FY2016, 11 NHGP nurses were awarded the MOH In-Service Scholarship (MOH ISS).

Ms Siti Aisah Binte Mustafah
Assistant Nurse I
Jurong Polyclinic

Ms Vasanthi d/o Ganesan
Principal Assistant Nurse
Hougang Polyclinic

Ms Sa'adiah Bte Ramlee
Senior Assistant Nurse I
Ang Mo Kio Polyclinic

Ms Cheok Yew Kian
Senior Assistant Nurse I
Woodlands Polyclinic

Ms Katrina Pereira d/o Antony Pereira
Senior Assistant Nurse I
Woodlands Polyclinic

Ms Tian Qiu Ming
Staff Nurse I
Choa Chu Kang Polyclinic

Ms Ang Xu Yin
Senior Staff Nurse II
Woodlands Polyclinic

The MOH ISS aims to enhance the capabilities of our nurses to develop their leadership and professional qualities to build the next generation of leaders.

Ms Vincent Jeya Chandra Constant Seleena
Staff Nurse I
Woodlands Polyclinic

Ms Chen Hongye
Staff Nurse I
Ang Mo Kio Polyclinic

Ms Li Shen
Staff Nurse I
Ang Mo Kio Polyclinic

Ms Daphne Kuok Hui Na
Staff Nurse I
Woodlands Polyclinic

MASTER OF CLINICAL PHARMACY

In FY2016, Ms Xu Jialun, Sandra, Senior Pharmacist, Hougang Polyclinic, NHGPh completed her Master of Clinical Pharmacy, bringing the total number of clinical pharmacists to 12.

CREATING A CULTURE OF RESEARCH AND INQUIRY



NHGP secured a \$5-million National Medical Research Council Centre Grant together with the Institute of Mental Health and Lee Kong Chian School of Medicine to increase research capacity and capability in primary care in Singapore.

Photo

Signatories and Witnesses at the Primary Health Care Research & Innovation MOU signing ceremony held at SHBC 2016 on 23 September 2016. (Photo Credit: SHBC 2016)

RESEARCH ACHIEVEMENTS

In March 2017, NHGP secured a \$5-million National Medical Research Council Centre Grant together with the Institute of Mental Health and LKC Medicine to increase research capacity and capability in primary care in Singapore. The grant funding will cover the period from May 2017 to April 2021. The grant application, titled 'Primary Health Care Research in Multi-Morbidity and Mental Health in a Multi-Ethnic Population' sets to establish an internationally-recognised primary healthcare research centre of excellence that informs policy-makers, practitioners and programme planners.

On 23 September 2016, NHGP entered into a Memorandum of Understanding (MOU) with LKC Medicine to set up a research centre, Primary Health Care Research and Innovation. The research centre will look to introduce new technologies and creative ways to manage patients with one or more chronic conditions and provide support for their caregivers. It will develop medical practitioners who are active in research as well as increase their awareness and knowledge of the latest healthcare developments.

RESEARCH PUBLICATIONS, PRESENTATIONS AND AWARDS

Engaging in research is important in the advancement of family medicine. The culture of research ensures that NHGP staff continue to adopt the best practices in healthcare that is supported by evidence, to further improve the health outcomes of patients and raise the overall standard of primary care in Singapore.

NHG Clinician-Scientist Preparatory Programme (CSPP)

Dr Kee Kok Wai, Family Physician, Consultant, Toa Payoh Polyclinic, and Assistant Director, Family Medicine Development Department, successfully attained the FY2016 NHG Clinician-Scientist Preparatory Programme (CSPP) award. The CSPP, which comprises project funding, sponsored research training and mentorship, aims to expose clinicians to research opportunities in the early phase of their career through research training and project experience.



Contributions by NHGP Staff to New Medical Knowledge

The following pages highlight the various research programmes undertaken by NHGP staff that have been presented in journal publications as well as local and international conferences in FY2016.



Publications with Contributions by NHGP Staff in Peer Review Journals

Diabetes & Vascular Disease Research

Date: April 2016

Central arterial stiffness is associated with systemic inflammation among Asians with Type 2 Diabetes

Dr Simon Lee

Family Physician, Consultant
Chief Medical Informatics Officer,
Office of Clinical Informatics

Dr Tang Wern Ee

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

Journal of Clinical Nursing

Date: June 2016

Correlates of attitudes and perceived behavioural control towards oral care provision among trained and untrained nursing home caregivers in Singapore

Dr Melissa Guay Peiru

Dental Surgeon
Woodlands Polyclinic

British Journal of General Practice

Date: June 2016

Evolving health policy for primary care in the Asia Pacific region

A/Prof Chong Phui-Nah

Family Physician, Senior Consultant
Chief Executive Officer, NHGP

Journal of Inter-professional Care

Date: June 2016

Attitudes towards inter-professional collaboration among primary care physicians and nurses in Singapore

Dr Ruth Zheng Mingli (first author)

Family Physician, Consultant
Bukit Batok Polyclinic

Age and Ageing

Date: June 2016

Effects of WiiActive exercises on fear of falling and functional outcomes in community-dwelling older adults: a randomised control trial

Mr Kwok Boon Chong (first author)

Senior Physiotherapist
Clinical Services

Nephrology, Dialysis, Transplantation

Date: July 2016

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 Medical Informatics Officer,
Office of Clinical Informatics

Dr Tang Wern Ee

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

Journal of Thoracic Disease

Date: July 2016

Ethnic disparity in central arterial stiffness and its determinants among Asians with Type 2 Diabetes

Dr Simon Lee

Family Physician, Consultant
Chief Medical Informatics Officer,
Office of Clinical Informatics

Dr Tang Wern Ee

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

The Journal of Infection

Date: September 2016

Respiratory viruses and influenza-like illness: epidemiology and outcomes in children aged 6 months to 10 years in a multi-country population sample

Dr Lim Fong Seng

Family Physician, Senior Consultant
Choa Chu Kang Polyclinic

British Food Journal

Date: October 2016

Effectiveness of nutrition education accompanied by cooking demonstration

Ms Lynette Goh Mei Lim

Senior Dietitian
Clinical Services

Atherosclerosis

Date: January 2017

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

Dr Simon Lee

Family Physician, Consultant
Chief Medical Informatics Officer,
Office of Clinical Informatics

Dr Tang Wern Ee

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

Journal of Diabetes and its Complications

Date: February 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 Medical Informatics Officer,
Office of Clinical Informatics

Dr Tang Wern Ee

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

Oral and Poster Presentations by NHGP Staff at Local and International Conferences

33rd National Conference – Dietitians Association of Australia

Melbourne, Australia

Date: May 2016

Great Simple Tasty (GST) Corner: An innovative primary care health promotion initiative to encourage healthy eating practices

Ms Lynette Goh Mei Lim

Senior Dietitian
Clinical Services

21st World Organisation of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians (WONCA) Europe Conference

Copenhagen, Denmark

Date: June 2016

Primary care physicians' knowledge of ACGME core competencies

Dr Angelia Chua

Family Physician, Consultant
Yishun Polyclinic

Attitudes towards interprofessional collaborative practice among primary care physicians and nurses in Singapore

Dr Ruth Zheng Mingli

Family Physician, Consultant
Bukit Batok Polyclinic

International Symposium on Dental Hygiene

Basel, Switzerland

Date: June 2016

To increase patients' awareness on post-operative care of fillings

Ms Ang Wei Wei

Oral Health Therapist
Woodlands Polyclinic

Association for Medical Education in Europe (AMEE) Conference

Barcelona, Spain

Date: August 2016

Limited health literacy in patients: how do educators address the issue in practice?

Dr Tang Wern Ee

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

14th Asia Pacific Medical Education Conference (APMEC) Singapore

Date: January 2017

Patterns of reflective thinking and its association with clinical teaching

Ms Christie Anna

Nurse Educator II
Nursing Services

Learning from inter-professional collaborative practice among teamlets in primary care

Dr Predeebha Kannan

Deputy Director
Primary Care Academy and Family
Medicine Development



Photo
Ms Lily Lang (right) receiving the Best Oral Paper at the International Congress of Infection Control (Singapore) held at Mandarin Orchard on 21 October 2016.

NHG-HOMER GRANT

Ms Yan Chau Chain, Senior Nurse Manager, Nursing Services, received the NHG-HOMER (Health Outcomes and Medical Education Research) Grant FY2016 Award to further her research to advance the 'Helping Hands' Programme.

The 'Helping Hands' Programme aims to use self-determination theory to promote nurses' knowledge, beliefs, attitudes and compliance on hand hygiene in primary care.

DENTAL RESEARCH ACHIEVEMENTS

Ms Lily Lang, Infection Control Nurse Manager, Dental Services, was awarded the Best Oral Presentation Award at the International Congress of Infection Control (Singapore) which was held from 19 to 21 October 2016. Ms Lang's oral poster presentation addressed the risk of exposure to blood-borne pathogens among dental staff and emphasised the need for collaboration with different stakeholders and for multi-pronged targeted interventions.

SHBC POSTER PRESENTATIONS

The annual Singapore Primary Care Research Scientific Competition was held at the Primary Care Academy Learning Centre, Choa Chu Kang Polyclinic, on 14 September 2016. The competition which received 55 submissions served as a platform for primary care professionals to showcase their research outcomes to help medical professionals improve their knowledge in the field of primary care (refer to Appendix D on Page 92 to 94 for the list of abstracts accepted for the SHBC Scientific Competition 2016).

Several NHGP staff were winners of the Singapore Primary Care Research Scientific Competition 2016 as listed below:



Photo
Winners of the Singapore Primary Care Research Scientific Competition 2016: (from left) Dr Lim Ziliang, Dr Ian Koh, Dr Wong Mei Yin, Ms Soh Ying Hua, Dr Sabrina Wong, Dr Richard Lee.

ORAL



GOLD

Factors associated with avoidable admissions for diabetes in a primary care population

Dr Sabrina Wong Kay Wye
Family Physician, Consultant
Assistant Director, Clinical Services



SILVER

Preventing diabetes: Enabling pre-diabetic adults to make lifestyle modifications

Ms Soh Ying Hua
Executive
Health Promotion and Preventive Care



BRONZE

Multi-morbidity and its impact on patients' anxiety and depression status in the primary care setting

Dr Richard Lee Meng Kam
Family Physician, Consultant
Clementi Polyclinic

POSTER



GOLD

Differences in health concerns among patients with well-controlled and poorly-controlled Type II Diabetes Mellitus

Dr Ian Koh Jan Ming
Family Physician
Toa Payoh Polyclinic



SILVER

Comparison between acarbose and sitagliptin as a third-line treatment for patients with poorly controlled diabetes in National Healthcare Group Polyclinics in Singapore

Dr Lim Ziliang
Family Physician, Associate Consultant
Deputy Head, Yishun Polyclinic



BRONZE

Validation of Client Satisfaction Questionnaire (CSQ-8): A study on primary care mental health services in Singapore

Dr Wong Mei Yin
Principal Clinical Psychologist
Clinical Services



CHAPTER 5

CULTIVATING A FUTURE-READY WORKFORCE

As primary care providers, National Healthcare Group Polyclinics (NHGP) staff play a critical role in managing the healthcare needs of the population. As we work towards transforming primary care and improving population health, NHGP continues to engage our staff and grow their potential to develop a strong culture of excellence to reach our goals.

Through continuous investment in staff training, we hope to energise staff to be at the forefront of healthcare developments to be ready for future challenges. Complementing training is regular engagement by management to inspire and encourage staff to keep improving work processes to help us better serve our patients.

In recognising and celebrating the achievements of our staff, NHGP aims to foster a sense of camaraderie within the team while inspiring staff to achieve even greater heights in our primary care transformation journey to meet the evolving needs of the population.

CEO TOWNHALL

CEO TOWNHALL

Associate Professor (A/Prof) Chong Phui-Nah, CEO, NHGP, kicked-off the annual CEO Townhall series on 5 April 2016. At the sessions, A/Prof Chong provided insights on the overarching strategy that drives

NHGP's Primary Care 2025 Vision and Mission. These regular interactions also aim to engage staff to have a better understanding on how their daily work and projects contribute to achieving NHGP's goals.



Photos

Top:
A/Prof Chong, CEO, NHGP,
engaging staff at Ang Mo Kio
Polyclinic on 7 November 2016.

Bottom:
CEO engaging staff at the CEO
Townhall session held at
HQ-Nexus on 17 October 2016.



STRENGTHENING THE NHGP CULTURE

NHGP CULTURE DNA CELEBRATION 2016

On 6 October 2016, NHGP celebrated Culture DNA (CDNA) 2016 with creative flair at NHGP HQ. Some 200 staff from NHGP, NHG Pharmacy (NHGPh) and NHG Diagnostics (NHGD) gathered for the event which featured the CDNA 'Recipe' competition. 'NHGP Chefs', from 11 participating teams with representatives from HQ and nine

polyclinics, put up creations based on what they felt best represented NHGP's CDNA and 4P7R elements, NHGP's four principles and seven rules that guide staff on achieving the next level of performance, quality and care.

Awards such as iCARE, Way of Being, My Bright Ideas and OurCare, were presented to exemplary staff for embodying NHGP values.



Photo

Hougang Polyclinic team
presenting their CDNA 'recipe' to
an appreciative audience at
the CDNA celebration on
6 October 2016.



Photos

Top to Bottom:
Winners of the iCARE Champion Awards and iCARE HQ Partners Award at the CDNA celebration on 6 October 2016.

OurCare Awards and My Bright Ideas Contributor Award winners at the same event.

Way of Being Award winners at the CDNA celebration.



Photos

Top:
Staff with their unsung heroes at the Family Appreciation Day organised at NHGP HQ on 15 December 2016.

Bottom:
The Inter-Polyclinic Captain's Ball Preliminary Rounds were held at Ang Mo Kio Secondary School on 21 January 2017.



NHGP FAMILY APPRECIATION DAY

NHGP held its annual Family Appreciation Day on 15 December 2016 at NHGP HQ. The event, graced by A/Prof Chong, CEO, NHGP, and Senior Management, was organised to give thanks to family members of staff.

A/Prof Chong also presented the 'Stand By Me' Awards and Book Prizes to 32 staff and family members in recognition of their unwavering support. The Book Prizes were presented to children of staff to help them with their education needs. The funds for the Book Prizes were raised by NHGP HQ team in August 2016.

NHGP ACTIVE DAY

More than 950 staff from NHGP, NHGPh and NHGD attended the NHGP Active Day at the Singapore University of Technology and Design on 25 February 2017. The event started on a high note with an energising mass Zumba workout while the rest of the activities, Annual Staff Fitness assessment (2-km walk or 2.4-km run), inter-polyclinic Bubble Bump Soccer competition and mass aerobics took place concurrently. The inter-polyclinic Captain's Ball competition semi-finals and finals also took place at the event. Fringe activities such as Yoga and Tai Chi were also lined up for staff participation.

TOP 3 WINNING TEAMS FOR NHGP ACTIVE DAY

Active Day CEO Challenge

 **CHAMPION**
Ang Mo Kio Polyclinic

 **FIRST RUNNER UP**
Woodlands Polyclinic

 **SECOND RUNNER UP**
Clementi Polyclinic

Bubble Bump Soccer

 **CHAMPION**
Ang Mo Kio Polyclinic

 **FIRST RUNNER UP**
Woodlands Polyclinic

 **SECOND RUNNER UP**
Bukit Batok Polyclinic

Captain's Ball

 **CHAMPION**
Woodlands Polyclinic

 **FIRST RUNNER UP**
Ang Mo Kio Polyclinic

 **SECOND RUNNER UP**
Hougang Polyclinic

TEAM BUILDING INITIATIVES

At NHGP, building an effective team is key to our efforts to achieving our common goal. In FY2016, several activities were organised to build and foster strong relationships among staff to achieve a shared purpose.



Photos

Top:
Staff from Jurong Polyclinic and Pioneer Polyclinic had an enjoyable team building at SAFRA on 16 July 2016.

Bottom:
Staff from Toa Payoh Polyclinic held their team building at Keppel Club on 23 July 2016.



Photos

Top:
Team building for Yishun Polyclinic took place at Cookyn@NSHomeTeam Clubhouse on 13 August 2016.

Bottom:
Ang Mo Kio Polyclinic had their team building at Focus Adventure on 1 October 2016.



INCULCATING NHG CULTURE

NHG QUALITY DAY 2016

The 16th National Healthcare Group (NHG) Quality Day was celebrated on 19 August 2016 to recognise efforts across NHG institutions to enhance quality and provide a platform for knowledge-sharing. A total of 13 staff members and service teams from NHGP, NHGPh and NHGD were recognised for providing quality and service excellence.

Mr Shaik Hussein, a patient at the Clementi Polyclinic and also an NHGP Tele-care Programme patient, was awarded the Exemplary Patient and Caregiver Award 2016, for improving his blood pressure reading with the guidance of NHGP Care Managers. Mr Shaik's improved reading enabled him to reduce his polyclinic visits from three or four times a year to only twice annually.

EXCELLENCE IN ACTION AWARDS (EIAA)

Individual (Allied Health)

Mdm Charito C. Dolojan
Medical Technologist
NHGD

Ms Char Wai Teng Cheryl
Senior Pharmacist
NHGPh

Ms Ei Phyu Khaing
Pharmacy Technician
NHGPh

Ms Ong Soo Im
Principal Pharmacist
NHGPh

Individual (Ancillary/Support)

Ms Lau Siew Hoon
Senior Patient Service Associate
NHGD

Individual (Executive/ Administration)

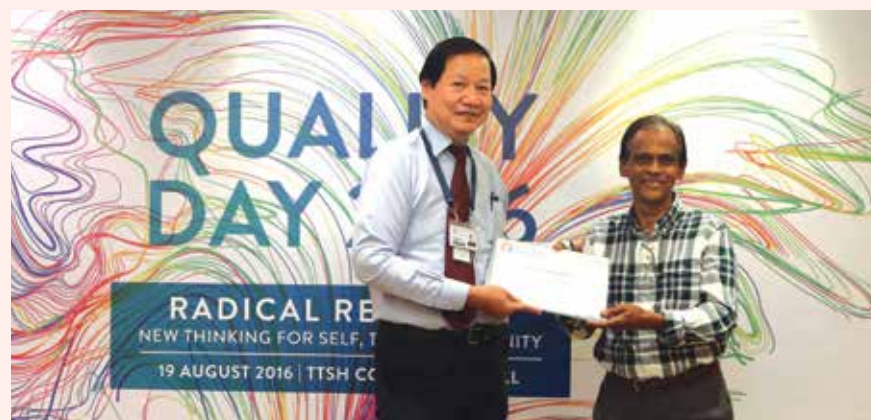
Ms Ho Mee Nah
Executive
NHGPh

Ms Tan Li Ling
Senior Executive
NHGPh

Individual (Nursing)

Ms Du Na
Senior Staff Nurse
Woodlands Polyclinic

Team Public Education Workgroup NHGPh



Photo

Mr Shaik Hussien (right) receiving the Exemplary Patient and Caregiver Award from NHG GCEO Prof Choo at the NHG Quality Day on 19 August 2016.

QUALITY IMPROVEMENT AWARDS (QIA)

Improving and Sustaining Quality and Safety

To improve the management of patients on Warfarin through the use of Pharmacist-Led Anti-Coagulation Clinics (ACC) in the Polyclinics.
NHGP

To achieve 100% Tracking of Critical Results in NHGD Diagnostics Laboratories within six months
NHGD

To reduce the incidence of returned medications during dispensing at Clementi Polyclinic Pharmacy
NHGPh

Developing a Flexible and Sustainable Workforce

To improve consumable store management processes at NHG Polyclinics
NHGP

NHG 4P7R SYMPOSIUM

Staff from NHGP, NHGPh and NHGD joined other institutions from the NHG family at the NHG 4P7R Symposium Day 2016 on 25 November 2016. Professor (Prof) Philip Choo, Group Chief Executive Officer (GCEO), NHG, spoke about the milestones NHG

had achieved as a Regional Health System, highlighting the shared culture among institutions that had made these achievements possible.

NHGP and NHG staff received several team and individual awards at the symposium.

INDIVIDUAL CATEGORY

SILVER

Ms Goh Min Lee Josephine
Senior Medical Social Worker
Clinical Services

BRONZE

Ms Pauline Xie
Senior Dietitian
Clinical Services

Ms Fion Yap
Pharmacy Technician
NHGPh

Merit

Ms Padincharayil Shima
Senior Pharmacy Technician
NHGPh

Ms Choo Poh Neo, Linda
Health Attendant
Dental Services
Hougang Polyclinic

TEAM CATEGORY

GOLD

Centralised Supply of Medication to Nursing Homes
NHGPh

SILVER

NHGP Nesting Site at Jurong Medical Centre Pioneer Polyclinic

BRONZE

Development and Implementation of Inter-Professional Leadership Programme (IPLP) by the IPLP Curriculum Development Team
NHGP HQ

WAY OF BEING AWARD

Ms Goh Min Lee Josephine
Senior Medical Social Worker
Clinical Services

Ms Pauline Xie
Senior Dietitian
Clinical Services

PATIENT SAFETY AWARD

Star Award, Allied Health

Ms Fong Mei Kiu
Podiatry Assistant
Clinical Services



Photos

Top to Bottom:
Representatives of the NHGPh
team receiving the 4P7R Team
Category, Gold Award from
Professor Lim Tock Han,
Deputy GCEO (Education and
Research), NHG.

Pioneer Polyclinic representatives
receiving their 4P7R Team
Category, Silver Award from
Professor Lim.

Professor Lim presenting
the 4P7R Team Category,
Bronze Award to NHGP HQ
representatives.



RECOGNISING OUR STAFF

Photos

Top:
Ms Chen Yee Chui receiving the
President's Award for Nurses from
President Dr Tony Tan Keng Yam
at the reception held at the Istana
on 28 July 2016.

Bottom:
Ms Yeo Loo See (left) and
Ms Lee Foong Lan, recipients of
the National Day Awards 2016.



PRESIDENT'S AWARD FOR NURSES 2016

NHGP's Chief Nurse Ms Chen Yee Chui was one of the seven recipients of the President's Award for Nurses. The awards were presented by President Dr Tony Tan Keng Yam at the Nurses' Day Reception held at the Istana on 28 July 2016. The award is the highest accolade of the nursing profession in Singapore and recognises the country's most outstanding nurses who had shown sustained exceptional performance in their contributions to areas such as patient care, education, leadership, research and administration.

NATIONAL DAY AWARDS 2016

Two NHGP staff and one NHGPh staff received the National Day Awards 2016 in recognition of their significant contributions to public service.

Ms Yeo Loo See, Deputy Director, Nursing Services was awarded the Long Service Medal. Ms Lee Foong Lan, Senior Dental Assistant, Woodlands Polyclinic, and Ms Surinder Kaur Basra, Retail Executive, Jurong Polyclinic, NHGPh, were both conferred the Efficiency Medal.



Photos

Top:
Ms Sharon Foo Chee Ling (left)
and Ms Dong Lijuan (right) with
Prof Choo at the Ministry of
Health Presentation Ceremony
and Luncheon on 19 July 2016.

Bottom:
Ms Anna Liew receiving the
PS21 Star Service Award from
Mr Peter Ong, Head of Civil
Service, at the Excellence in
Public Service Awards 2016
ceremony on 20 May 2016.



NURSES MERIT AWARD 2016

Two NHGP nurses, Ms Dong Lijuan, Assistant Director, Nursing Services and Ms Sharon Foo Chee Ling, Nurse Clinician II, Hougang Polyclinic, received the Nurses Merit Award 2016 from Mr Gan Kim Yong, Minister for Health, on 19 July 2016 in recognition of their commendable performance and dedication to the nursing profession.

PS21 STAR SERVICE AWARD

Ms Anna Liew, Principal Pharmacist, Toa Payoh Polyclinic, NHGPh, was awarded the PS21 Star Service Award for her service excellence. Mr Peter Ong, Head of Civil Service, presented her with the award at the Excellence in Public Service Awards 2016 Ceremony on 20 May 2016. The PS21 Star Awards is a national award that recognises individuals who have delivered quality service and seeks to develop service models for staff to emulate and to create service champions in the public sector.



HEALTHCARE HUMANITY AWARDS 2016

Dr Chua Ying Xian, Resident Physician, Jurong Polyclinic, and Mr Mah Choon Siong, Senior Pharmacist, NHGPh, were recognised at the Healthcare Humanity Awards 2016. The award ceremony administered by the Courage Fund recognises outstanding healthcare workers who go the extra mile to offer care and comfort to patients.



NHG AWARDS 2016

The annual NHG Awards Ceremony, an event that recognises staff across all NHG institutions who have made significant contributions to public healthcare, was held on 15 July 2016. NHGP won four NHG Team Recognition Awards, three Young Achiever Awards, and three NHG Education Leaders Awards. 27 individual staff also received the MOH Health Manpower Development Programme (HMDP) Award.



NHG TEAM RECOGNITION AWARD

GOLD

Patient Empanelment at Ang Mo Kio Polyclinic to Ang Mo Kio Family Medicine Clinic
The team comprising NHGP and Parkway Shenton embraces the NHG core values of collegiality, respect and integrity.

Toa Payoh Polyclinic Care Transformation Team
Team-based care model piloted by Toa Payoh Polyclinic proved its feasibility and provided better care to patients.

SILVER

Dementia Care Integration between Primary Care Provider and Tertiary Hospitalist
Ang Mo Kio Polyclinic piloted the Primary Care Dementia Clinic with Tan Tock Seng Hospital to provide dementia treatment in the community.

BRONZE

Health and Mind Service at Ang Mo Kio Polyclinic
NHGP collaborated with the Institute of Mental Health to develop the multi-disciplinary Health & Mind Service to provide community mental healthcare in a primary care setting.

Photos

Top:
Dr Chua Ying Xian (second
from left) with NHGP's senior
management members at the
Healthcare Humanity Award
2016 ceremony.

Bottom:
Mr Mah Choon Siong (second
from left) with NHGPh's senior
management members at the
Healthcare Humanity Award
2016 ceremony.

YOUNG ACHIEVER AWARD

Dr Darren Seah Ee-Jin
Family Physician, Consultant
Director, Family Medicine
Development Programme
Director, NHG-AHPL Family
Medicine Residency Programme

Dr Steven Chong Shih Tsze
Family Physician, Principal Staff
Head, Clementi Polyclinic

Ms Lai Phui Ching
Assistant Director
Primary Care Transformation Office

NHG EDUCATION LEADERS AWARD 2016

Dr Wong Mei Yin
Principal Clinical Psychologist
Clinical Services

Dr Darren Seah Ee-Jin
Family Physician, Consultant
Director, Family Medicine
Development Programme
Director, NHG-AHPL Family
Medicine Residency Programme

Dr Tang Wern Ee
Family Physician, Senior Consultant
Education Director, Family Medicine
Development
Head, Clinical Research Unit

HMDP MEDICAL – REGISTRAR AND ASSOCIATE CONSULTANT

Ms Ruth Zheng Mingli
Family Physician, Consultant
Bukit Batok Polyclinic

Dr Kong Jing Wen
Family Physician, Associate Consultant
Deputy Head, Hougang Polyclinic

Dr Tan Wee Hian
Family Physician, Associate Consultant
Deputy Head (Designate),
Pioneer Polyclinic

HMDP ADMIN

Dr Simon Lee
Family Physician, Consultant
Chief Medical Informatics Officer
Office of Clinical Informatics

Dr Kwan Pek Yee
Family Physician, Principal Staff
Head, Yishun Polyclinic

Dr Tan Yong Hui Colin
Family Physician, Senior Consultant
Clinical Services

HMDP NURSING – POSTGRADUATE PROGRAMME

Ms Wan Li Li
Senior Staff Nurse I
Yishun Polyclinic

HMDP TEAM BASED

**Dr Jaganmohan Raja
Ramasamy**
Family Physician, Associate Consultant
Deputy Head, Woodlands Polyclinic

Ms Jancy Mathews
Deputy Director
Nursing Services

Ms Dong Lijuan
Assistant Director
Nursing Services

Ms Evonne Oh Siew Gek
Senior Staff Nurse I
Ang Mo Kio Polyclinic

Mr Teoh Liang Peng Gus
Deputy Director
Operations

Ms Lim See Yee
Senior Executive
Operations

Ms Teo Lay See
Nurse Manager I
Jurong Polyclinic

Ms Yap Hwee Luan
Senior Staff Nurse I
Jurong Polyclinic

Dr Lew Yii Jen
Senior Director
Clinical Services

Ms Sherrie Lim
Assistant Director
Operations

Ms Er Lian Hwa
Senior Nurse Clinician
Ang Mo Kio Polyclinic

**Ms Chern Win Fah
Christine**
Deputy Director
Nursing Services

Ms Karmini Binte Sechan
Senior Staff Nurse I
Woodlands Polyclinic

Dr Tung Yew Cheong
Family Physician, Senior Consultant
Director, Quality & Patient Safety

Ms Yeo Loo See
Deputy Director
Nursing Services

Ms Goh Poh Suan
Nurse Clinician I
Yishun Polyclinic

Mr Phil Cheng Liyan
Manager
Operations

Ms Ng Poh Ling
Executive
Operations

Ms Yan Chau Chain
Senior Nurse Manager
Nursing Services

Ms Polly Yeung
Manager
Development & Planning Office



NUHS RHS AWARD

Dr Wee Wei Keong, Director, Health Promotion and Preventive Care Department, was presented a token of appreciation in recognition of his coronary risk screening efforts in the community at the inaugural National University Health System (NUHS) Regional Health System (RHS) Appreciation Day on 14 September 2016. The event was held to show appreciation and recognition of those who collaborated towards delivering person-centric and integrated care to our community in the western region of Singapore.

NHGP RECOGNISED AS CERTIFIED ON-THE-JOB TRAINING CENTRE (COJTC)

NHGP Clinic Operations was accorded COJTC status on 1 January 2016 by the Institute of Technical Education (ITE). The COJTC achievement is in line with NHGP's efforts to institutionalise a structured in-house On-the-Job Training (OJT) system to develop its staff through quality workforce training practices.

Comprehensive OJT programmes have also been planned for our Patient Service Associates and Health Attendants to help them perform their core duties competently and with confidence. The OJT programme not only ensures a consistent quality of training and adherence to standards across all NHG Polyclinics but also helps to nurture staff in their core competencies and develop their career pathways.

Photo

Dr Wee Wei Keong receiving a token of appreciation from Mr Chee Hong Tat, Minister of State, Ministry of Communications and Information and Ministry of Health, at the NUHS RHS Appreciation Day on 14 September 2016.



CHAPTER 6

ACHIEVING A BRIGHTER FUTURE

To meet growing healthcare needs and to better provide seamless care for the nation, the Ministry of Health (MOH) announced the reorganisation of the regional health system in January 2017. The restructuring will see primary care systems reorganised into three clusters to provide more patient-centric care in the community.

As a primary care provider, the National Healthcare Group Polyclinics (NHGP) has been putting in place measures to strengthen its patient-provider relationships. These include the adoption of best practices from relevant industries and the harnessing of technology to improve operations and services. As part of its continual efforts to ensure greater efficiency in care delivery, these improvements will help NHGP in its mission to advance Family Medicine and transform primary healthcare in Singapore.

ENSURING SUSTAINABLE GROWTH

IMPROVING PATIENT EXPERIENCES AT NHGP

Besides regularly assessing patients' needs, NHGP actively reviews and improves processes to ensure patient care remains a top priority. In addition, NHGP faces the challenge of increasing attendances and a shrinking workforce. To meet this challenge, NHGP has been focusing on productivity improvements to automate and innovate services. These offer convenience and accessibility to patients, while ensuring that healthcare remains affordable.

The use of technology has helped improve patient satisfaction and enabled staff to perform more value-added work such as building

relationships with patients and focusing on delivering more patient-centric care. These ongoing initiatives are part of NHGP's efforts to provide a pleasant experience for patients, reflecting our commitment to be a patient-centred primary healthcare provider.

NHGP's productivity improvement efforts have seen NHGP scoring 70.3 points, an increase from 69.6 points in 2015, in the Singapore Management University's Institute of Service Excellence Customer Satisfaction Index of Singapore (CSISG). The CSISG results were derived from face-to-face interviews with nearly 200 NHGP patients between October 2016 and January 2017.

IMPROVING STAFF PRODUCTIVITY

To help improve accuracy of cash count and increase manpower productivity, NHGP introduced the cash management machine. In this way, the tasks of daily counting of cash takings and cash float preparation, previously done manually by Patient Service Associates, have become automated. The machines have been installed at all NHG Polyclinics since July 2016.

ENHANCING PATIENT REFERRALS

Since November 2016, referrals from Tan Tock Seng Hospital (TTSH) to NHGP have been effectively done through a Primary Care e-Referral Reply Form. With this e-service, specialists at TTSH can write e-referral notes to NHGP doctors on the suggested follow-up care and diagnosis, and other related information of the patient. Besides being available in the clinical documentation, such information is now shared in the National Electronic Health Records (NEHR) system.

UPSKILLING OF ANCILLARY STAFF

The Service Ambassador (SA) concept was introduced by NHGP in January 2016 to offer personalised assistance to patients in the clinics to exemplify service excellence. An NHGP Service Ambassador Appointment and Recognition Ceremony was held on 3 October 2016 at Choa Chu Kang Polyclinic where Dr Peter Chow, Chief Operating Officer, NHGP, presented 12 SAs with badges and appointment letters.

The SA concept is part of NHGP's transformation journey to upskill ancillary staff to take on roles that were previously performed by nurses.

A TYPICAL PATIENT'S JOURNEY AT THE POLYCLINIC



1

Online Appointment System

In order to offer patients the flexibility to self-manage their appointment schedules, NHGP introduced the Online Appointment System (OAS). OAS offers patients with acute conditions the ability to book same-day appointments online or via the miHealthcare mobile application and arrive at the polyclinic closer to the appointed time. Patients with scheduled lab or doctor's appointments can also view and reschedule their appointments. This service has reduced patients' overall wait-time for visits by appointment and freed up staff to take on higher-value work.



2

Self-Registration Kiosks

Patients with appointments can quickly register themselves at the kiosks upon arrival at the polyclinic. This self-registration service helps reduce the time patients spend waiting to be registered at the counter.



3

In-Queue Status Checker

As part of its efforts to improve productivity, NHGP introduced the In-Queue Status Checker in September 2016. The application allows patients to use their mobile phones to scan the Quick Response Code (QR Code) to find out the number of people waiting in line before them.



4

Self-Payment Kiosks

After their consultation, patients can proceed directly to the Self-Payment Kiosks to complete their visit. This allows them to skip the queue to make payment at the counters. In FY2016, the Self-Payment Kiosks were enhanced to accept cash and cashless payment modes such as Visa Paywave, Android Pay and Apple Pay. They also feature multiple languages that are patient-friendly and convenient to use. With new features added to the kiosks, each transaction takes less than a minute to process.



5

Pharmacy Patient Arrival Kiosks

With the Pharmacy Patient Arrival Kiosks (PAK) piloted at Choa Chua Kang Polyclinic on 3 March 2017, patients could skip the queue at the reception counter to self-register their arrival at the kiosks. The PAK is expected to be implemented progressively across all NHG Polyclinics by the end of FY2018.

REORGANISATION OF THE PUBLIC HEALTHCARE SYSTEM

A RESTRUCTURED NHGP

In January 2017, MOH announced that Singapore's public healthcare system would be reorganised from six regional health systems into three integrated clusters to meet future healthcare needs. The reorganisation will provide a higher level of integrated care by offering a broader range of services, and more seamless care to patients.

At the primary care level, some of the polyclinics have been reorganised. On 1 October 2017, NHGP welcomed Geylang Polyclinic into its family while Bukit Batok Polyclinic, Choa Chua Kang Polyclinic, Clementi Polyclinic and Jurong Polyclinic were reorganised to be part of the newly formed National University Polyclinics. The reorganisation of the public healthcare system will also see NHGP developing the upcoming Sembawang Polyclinic.

The newly integrated cluster will further strengthen NHGP's efforts in transforming primary healthcare and providing quality primary care to patients. This will translate

into closer collaboration with grassroots organisations and General Practitioners (GPs) to reach out to patients and the community to deliver more holistic care.



"NHGP sees the reorganisation of the public healthcare system as benefitting the population and important to drive care transformation and integration to help achieve our vision of becoming a world-class relationship-based primary care ecosystem."

*– Associate Professor Chong Phui-Nah,
CEO, NHGP*

Restructured NHGP Family

Woodlands Polyclinic

Yishun Polyclinic

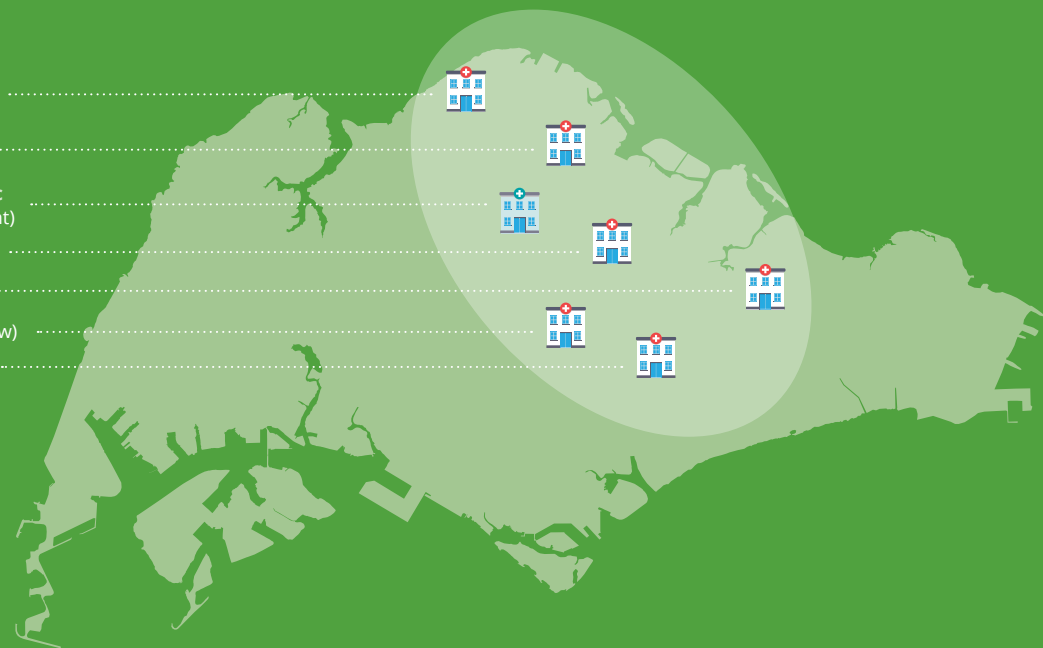
Sembawang Polyclinic
(upcoming development)

Ang Mo Kio Polyclinic

Hougang Polyclinic

Geylang Polyclinic (new)

Toa Payoh Polyclinic



REALISING OUR VISION: THE NEXT LAP

NHGP's Primary Care 2025 vision, to develop a world-class relationship-based primary care ecosystem, drives its efforts to transform the primary care landscape. To meet the evolving challenges of a rapidly ageing population, growing prevalence of chronic diseases, rising healthcare costs and shortage of healthcare manpower, a sustainable primary healthcare system that continues to provide accessible, affordable and quality care for the population is crucial.

A critical part of NHGP's transformation journey is the expansion of primary care capacity. This is closely aligned to MOH's strategic shift, 'Beyond Hospital to the Community', that envisions healthcare delivery models based in primary and community care settings.

NHGP continues to forge close relationships with our colleagues in the primary care landscape such as GPs, Family Medicine Centres and private practice dentists to develop their capabilities to manage patients with chronic diseases within the community. These partnerships have enabled NHGP to right-site patients with complex chronic diseases in the community to ensure patients continue to receive long-term quality care in the primary care environment.

NHGP has also been actively facilitating the creation of a Primary Care Network (PCN). The PCN will enable NHGP to work with GPs to pool resources and deliver care through teams comprising doctors, nurses and allied health professionals. Such a collaboration will empower our colleagues in the primary care sector to manage the patients' needs more holistically and effectively to achieve better health outcomes.

In expanding primary care capacity and capabilities, it is also essential for care delivery models to remain effective in helping patients transition from reactive care to wellness management. NHGP's teamlet care model aims to develop a relationship between a dedicated, multi-disciplinary healthcare team and a patient who has one or more chronic diseases. This initiative has shown promise with positive results in patient health outcomes.

Such a relationship-based care model, where the healthcare team proactively engages patients, is a key element that can make a difference to population health in the years to come. Having reached out to over 60,000 patients since the pilot run in 2014, NHGP aims to empanel more patients with multiple chronic diseases into the teamlet care model in the future. Patients will be grouped based on the number of chronic diseases they have and their control of these chronic diseases. This form of customised care empowers each and every patient to achieve the best clinical results to manage their conditions.



NHGP's Primary Care 2025 vision, to develop a world-class relationship-based primary care ecosystem, drives its efforts to transform the primary care landscape.



Besides engaging staff with regular training programmes, NHGP aims to develop the potential of all staff via competency frameworks and groom future healthcare leaders to lead the transformation journey in the next lap.

To develop a future-ready primary healthcare landscape, NHGP is cognisant of the need to seek solutions for the issues of tomorrow, today. It is also committed to developing a culture of research and inquiry to adopt and implement technologies and evidence-based medical care programmes that will enhance the care provided to patients. This is an important aspect of NHGP's focus on ensuring our healthcare team is prepared to meet the evolving healthcare needs of the population.

With more Singaporeans living with multiple chronic diseases, NHGP has embarked on research to examine the challenges faced in managing such patients. The research, jointly conducted by NHGP and the National Healthcare Group - Lee Kong Chian School of Medicine Joint Centre for Primary Health Care Centre Research and Innovation, will study the care-coordination between different institutions and care providers from a patient's perspective. The centre will also evaluate available care technologies to improve care delivery. This research will help clinicians gain a better understanding of the myriad of interrelated factors in caring for patients with multiple chronic diseases.

To reduce the growing chronic disease burden, NHGP has also been an active advocate in engaging and activating our patients to make healthy living a habit. NHGP has been reaching out to patients to spread the healthy lifestyle message via workshops, cooking and exercise demonstrations as well as talks on the importance of living well to cope with their conditions.

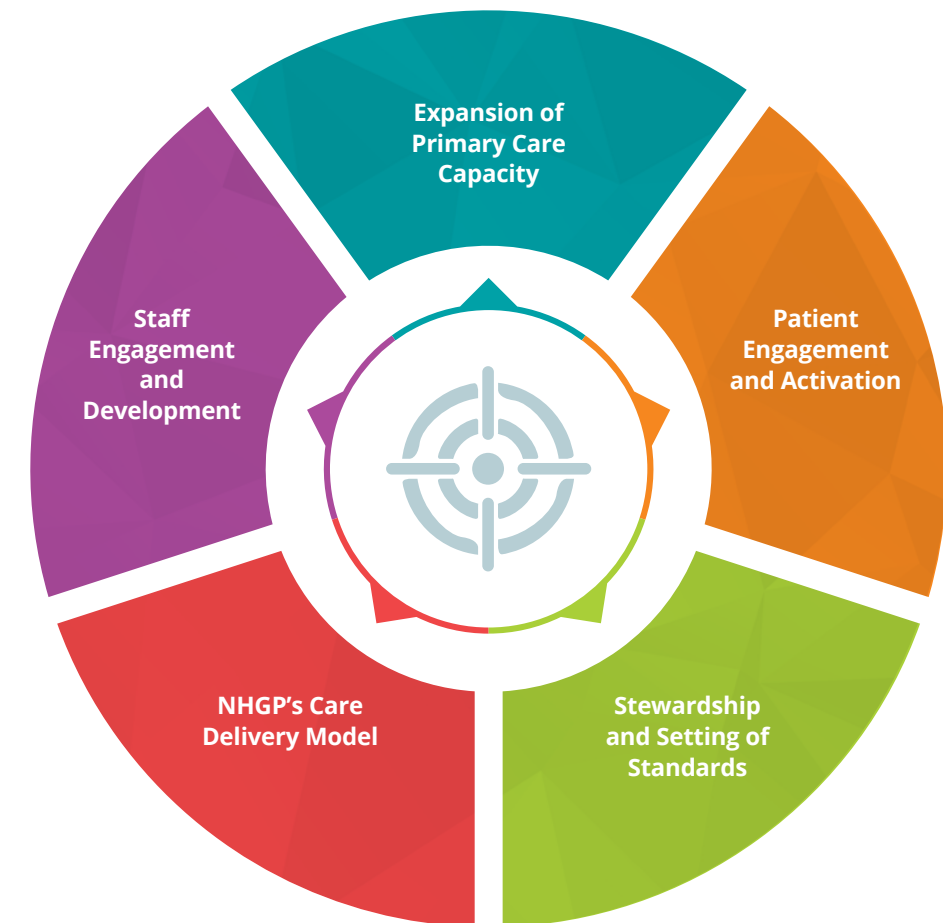
NHGP will further fine-tune its outreach efforts to patients and those in the community and encourage healthy individuals to continue choosing a healthy lifestyle. For those with chronic diseases, NHGP will offer practical interventions designed to help them make conscious healthy lifestyle choices based on their health status.

The driving force behind these efforts is NHGP staff, the 'heartware' of NHGP with the power to positively impact our patients' health. A motivated and engaged workforce plays a vital part in NHGP's transformation journey.

Besides engaging staff with regular training programmes, NHGP aims to develop the potential of all staff via competency frameworks and groom future healthcare leaders to lead the transformation journey in the next lap.

Moving forward, NHGP will press on with its efforts to build on its achievements of today to continue caring for the population of tomorrow in the primary care landscape.

NHGP'S FIVE STRATEGIC OBJECTIVES



PATIENT PROFILE AND OUR WORKLOAD



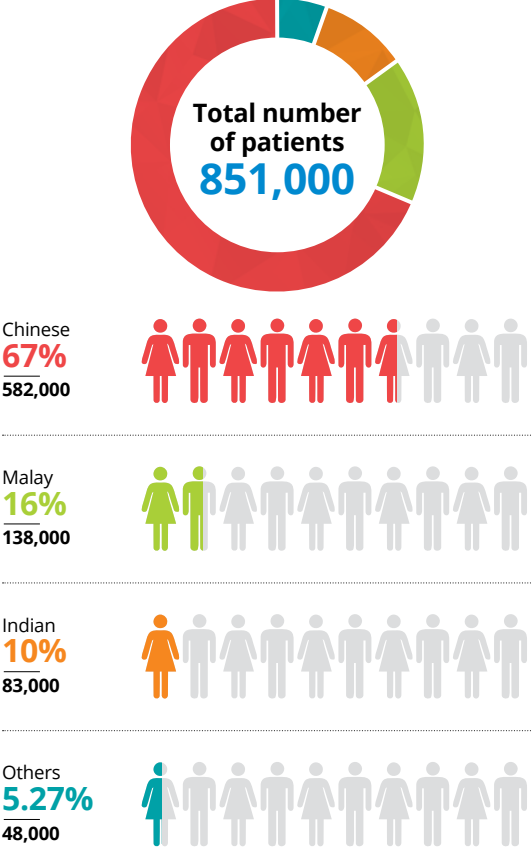
PATIENT PROFILE IN FY2016

GENDER RATIO OF PATIENTS IN FY2016

Number of Patients

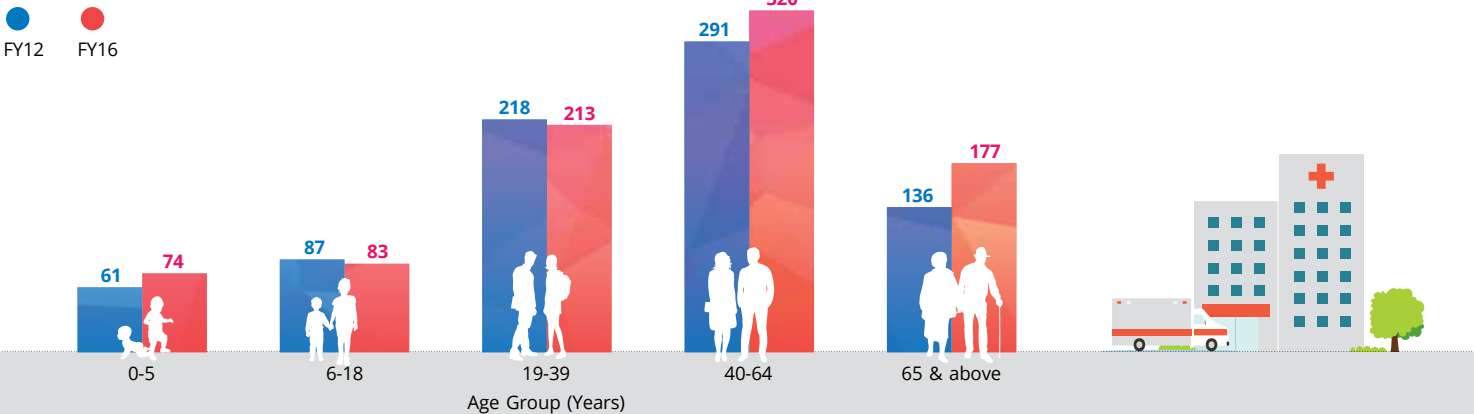


ETHNIC COMPOSITION OF PATIENTS IN FY2016



PATIENTS BY DIFFERENT AGE GROUPS

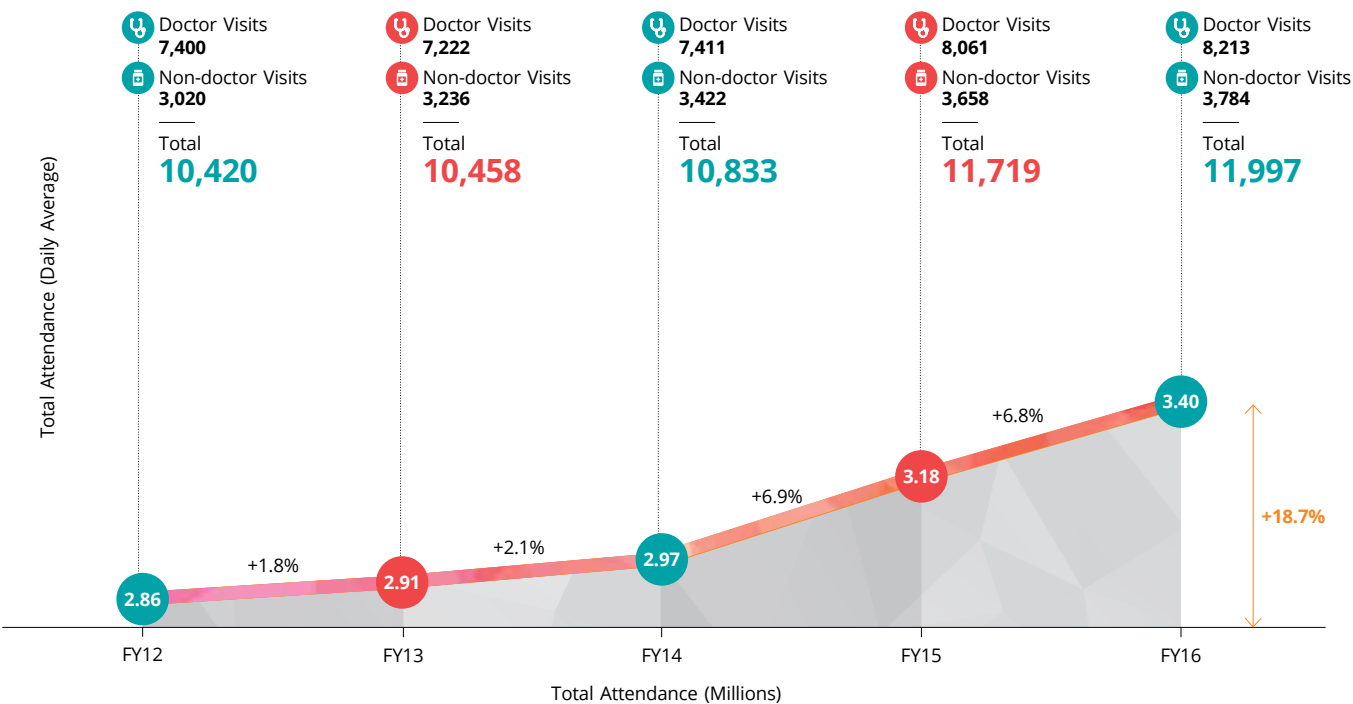
Number of Patients ('000)



Note: As numbers are rounded up for greater clarity; small rounding differences may arise.

SNAPSHOTS OF OUR WORKLOAD AND PATIENTS

ATTENDANCE GROWTH



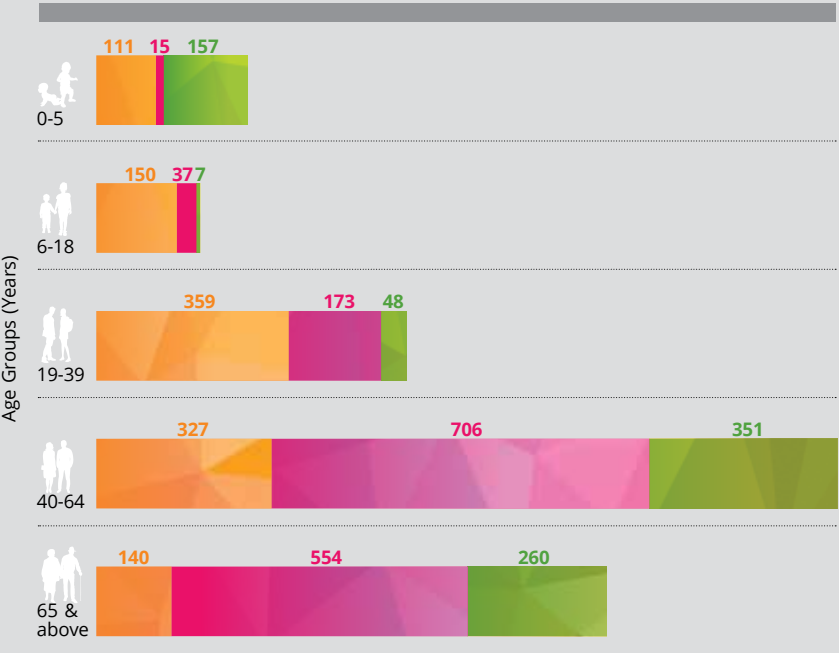
TOP 10 PRIMARY DIAGNOSES SEEN IN FY2016

ICD 10	J06.9	E11.9	I10	E78.5	R68
Diagnosis	Acute upper respiratory infection, unspecified	Type 2 diabetes mellitus without complication	Essential (primary) hypertension	Hyperlipidaemia, unspecified	Other general symptoms and signs
Number of Visits	414,919	338,508	248,260	111,452	94,742
Percentage Total FY2016 Consult Visits	18.0%	14.7%	10.8%	4.8%	4.1%

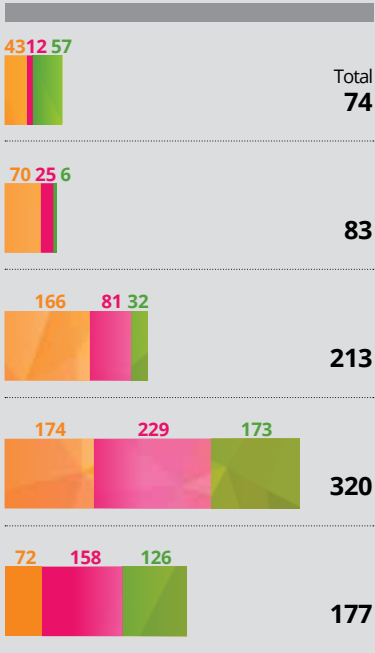
ICD 10	A09.9	L98.9	T14.3	Z00.1	R51
Diagnosis	Other specified noninfective gastroenteritis and colitis	Disorder of skin and subcutaneous tissue, unspecified	Dislocation, sprain and strain of unspecified body region	Routine child health examination	Headache
Number of Visits	78,987	64,753	55,479	53,042	44,174
Percentage Total FY2016 Consult Visits	3.4%	2.8%	2.4%	2.3%	1.9%

VISITS BY DIFFERENT AGE GROUPS AND TYPES IN FY2016

Number of Visits ('000)



Number of Patients ('000)



Total
74

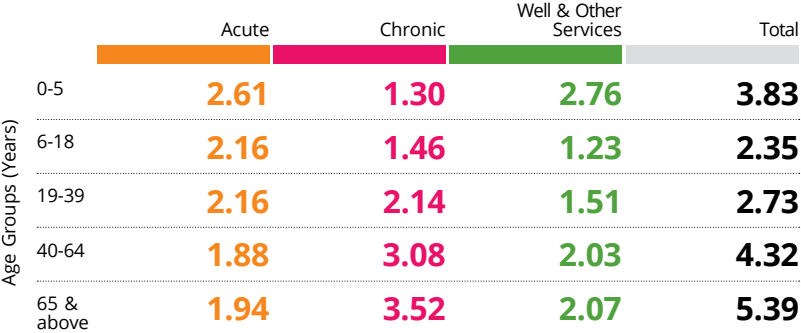
83

213

320

177

Average Number of Visits Per Patient

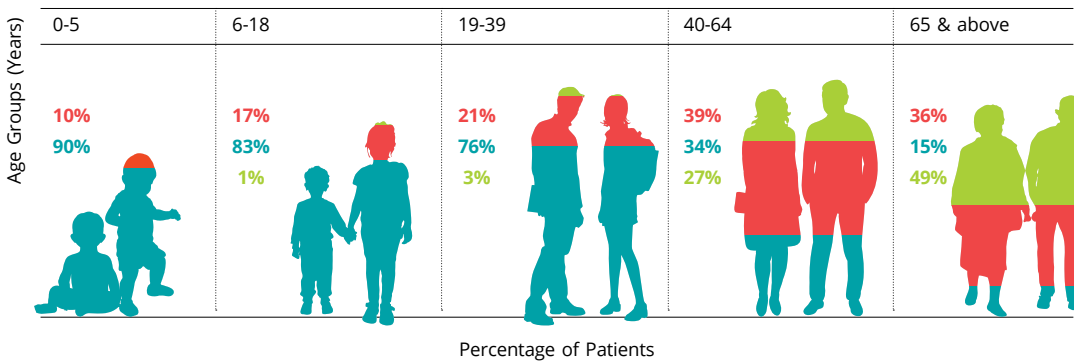


Note: As numbers are rounded up for greater clarity; small rounding differences may arise.

DEFINITIONS:

- Acute:** Cases with short onset of symptoms such as upper respiratory tract infections, diarrheal diseases 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, lab-only visits and other administrative procedures.

CHRONIC PATIENTS BY AGE GROUP AND COMPLEXITY IN FY2016



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

WORKLOAD MANAGEMENT IN FY2016

NHGP CONSULT WAIT TIME (MINUTES)

VISIT TYPE	PERCENTILE	FY15	FY16	% CHANGE
Walk-in	50 th	13	11	-15.4
	95 th	59	57	-3.4
Appointment	50 th	8	7	-12.5
	95 th	51	49	-3.9

STAFF HEADCOUNT BY JOB CATEGORY

JOB CATEGORY	FY15	FY16	% CHANGE
Ancillary	595	632	6.2
Nursing	347	380	9.5
NHG Pharmacy	289	320	10.7
Medical ¹	255	296	16.1
Administrative	189	186	-1.6
NHG Diagnostics	219	194	-11.4
Allied Health ²	56	58	3.6
Dental ¹	48	51	6.3
Total	1,998	2,117	6.0

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

OUR DENTAL PATIENTS

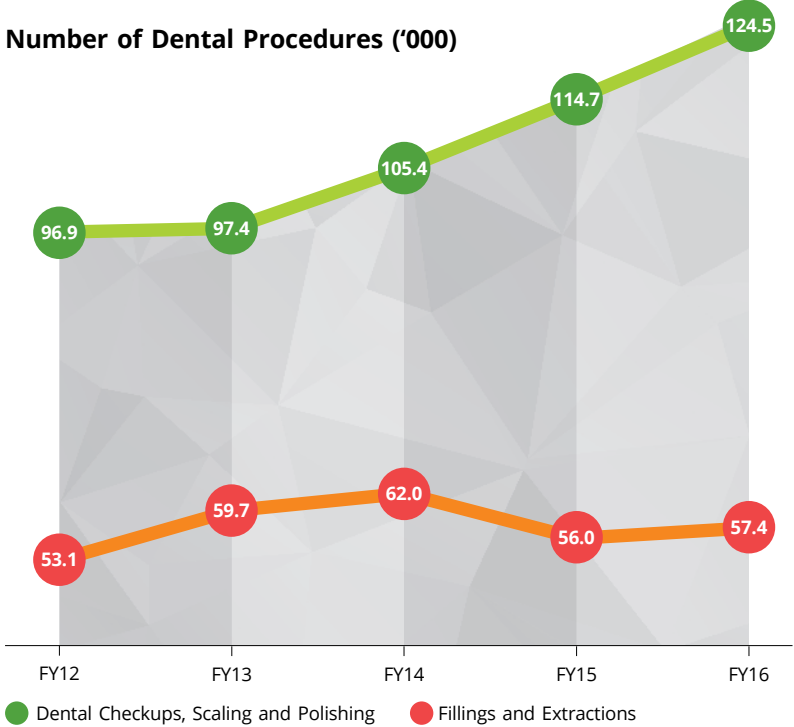
DENTAL VISIT BY TYPE

Number of Dental Visits ('000)

	Subsidised	Private	Total
FY12	102.4	6.1	108.5
FY13	111.8	7.4	119.2
FY14	118.9	6.3	125.2
FY15	123.7	5.1	128.8
FY16	130.9	5.4	136.3

DENTAL VISITS BY SUBSIDISED PATIENTS

Number of Dental Procedures ('000)



BASIC DENTAL PROCEDURES BY NUMBER OF VISITS

Daily Average

Dental Checkups, Scaling and Polishing



FY12	FY13	FY14	FY15	FY16
353.0	350.0	384.0	422.8	439.9

Fillings and Extractions



FY12	FY13	FY14	FY15	FY16
194.0	214.0	226.0	206.4	202.8

Notes

The number of subsidised dental visits has increased over the years. We have also seen growth in the daily averages of dental procedures done at our polyclinics.

Of the dental procedures performed, a larger proportion was made up of preventive procedures (i.e. polishing and scaling). The proportion of preventive procedures has also grown over the years, signifying greater emphasis on preventive care at NHGP.

APPENDIX A
QUALITY IMPROVEMENT PROJECTS
COMPLETED IN FY2016

NO.	TITLE	INITIATED	LEADERS
1.	To increase follow-up rate of asthmatic patients who are treated with nebulisation at Toa Payoh Polyclinic from 35% to 100% within 6 months	TPY	Blessy Koottappal Mathew
2.	To improve blood pressure control in patients with early Diabetic Kidney Disease	JUR	Christine Choo An-Qi Sabrina Ho Wei Ling
3.	To reduce dental prescribing errors in NHGP Toa Payoh Polyclinic Dental Clinic	TPY	Dr Tan Sze Lin
4.	To increase the productivity of Automatic Tablet Dispensing & Packaging System (ATDPS) at Pharmacy Services Centre (PSC) by 20%	HQ	Fanny Tan Chin Mang
5.	To reduce incidence of non-adherence to newly started medication due to failure to collect partial balance by 50% in Ang Mo Kio Polyclinic Pharmacy	AMK	Cheryl Tan
6.	To adopt a holistic approach in redesigning the Outpatient Pharmacy Automated System (OPAS) repackaging workflow at Woodlands Polyclinic Pharmacy to achieve a consistent monthly OPAS Multiplier Score of ≥ 0.8	WDL	Gavin Cheah
7.	To improve the efficiency and productivity of the Outpatient Pharmacy Automated System (OPAS) repackaging workflows in Bukit Batok Polyclinic Pharmacy	BBK	Nur'Ain Bte Abdul Manan Tan Lay Khim
8.	To improve Asthma Control Test (ACT) utilisation for the assessment of asthma control in chronic asthma patients in Jurong Polyclinic	JUR	Dr Justin Chong
9.	To increase the uptake of Tele-care Programme by eligible patients at Bukit Batok Polyclinic	BBK	Dr Taiju Rangpa
10.	To attain panel size of 5,800 and a care continuity of 80% for Yishun Polyclinic Teamlet A patients over a period of 6 months	YIS	Dr Lim Ziliang
11.	To increase the number of Diabetes Mellitus patients screened annually for Diabetic Retinal Photography (DRP) and Diabetic Foot Screening (DFS) at Toa Payoh Polyclinic by 50%	TPY	Dr Elaine Tan
12.	To reduce patient waiting time by improving the workflow efficiency (Ipharm and Rxpress) in Clementi Polyclinic Pharmacy in 9 months	CLE	Lee Yuit Jiet Esther Wu Yunting
13.	To achieve 100% Dental Handpiece stock take in Hougang Polyclinic Dental Clinic in 6 months	HOU	Tay Hwee Leng
14.	To optimise repackaging to improve automation utilisation rate	HOU	Anthony Yip Yew Fei
15.	To improve the medication collection experience for patients at Toa Payoh Polyclinic Pharmacy in 3 months	TPY	Yep Lee Fang
16.	To improve the process of consumable ordering by establishing a system to track the demand of consumables in Jurong Polyclinic Dental Clinic	JUR	Dr Patricia Wong Dr Lim Suq Ping

NO.	TITLE	INITIATED	LEADERS
17.	To reduce the processing steps and time required in Prothrombin Test Analysis in NHG Diagnostics Lab	HQ	Lee Hoong Fatt Janet Teng
18.	To develop an online repository for Patient Education Materials – My Diabetes Booklet	HQ	Sherry Koh June Sulastri
19.	To e-order without fuss, achieving 100% accurate appointment always	HOU	Sandra Chew Santhi Govindan
20.	To improve Diabetic Foot Screening (DFS)/ Diabetic Retinal Photography (DRP) screening rates in Ang Mo Kio Polyclinic Teamlet A	AMK	Dr Tricia Chang
21.	To achieve waiting time KPI (95% patients served within 25 minutes) in Choa Chu Kang Polyclinic Pharmacy	CCK	Thng Hwee Ling
22.	To reduce the rate of medication packing near misses in Jurong Polyclinic Pharmacy	JUR	Anna Liew Chia Hui Shan
23.	To streamline Electrocardiogram (ECG) process in Jurong Polyclinic Laboratory within 6 months	JUR	Dhanam Raghupathy Catherine Fungo Gregorio
24.	To increase the Hand Hygiene compliance rate among the Health Attendants working at the Blood Pressure Stations in Toa Payoh Polyclinic from current average 46.6% to 100% within 6 months	TPY	Jane Fung Tracy Gan
25.	To reduce the number of patients waiting at the wrong place after registering at the Laboratory Counter within 3 months at Hougang Polyclinic Laboratory	HOU	Teng Janet Zuliana binte Zulkifli
26.	To improve the prescription filling experience at Jurong Polyclinic Pharmacy	JUR	Sim Jun Long Marvin
27.	To increase productivity in packaging of sets and instruments in Dental Clinics	HQ	Lily Lang
28.	To increase the use of Angiotensin-Converting Enzyme (ACE) inhibitor and Angiotensin Receptor Blocker (ARB) in Diabetes Mellitus Type 2 patients with Mircroalbumunuria/Proteinuria	JUR	Tan Hue Min
29.	To increase empanelment patients from 4,073 To 5,500 in 6 months	BBK	Dr Kwek Sing Cheer
30.	To achieve 100% compliance using two Primary Identifier (Name and UIN) at registration in Clementi Polyclinic	CLE	April Koh
31.	To increase the Woodlands Polyclinic Teamlet A Care Manager's workload from 7/Day to 15/Day, over a period of 6 months from May 2016 to November 2016	WDL	Dr Jaganmohan Raja Ramasamy
32.	To increase screening for Autism Spectrum Disorder (ASD) in children presenting to Choa Chu Kang Polyclinic for their 18 months Development Assessment by 75% in the next 6 months	CCK	Dr Abiramy Anathan
33.	To improve utilisation of Asthma Control Test (ACT) for patients with Asthma from 50% to 100% in Hougang Polyclinic over 6 months	HOU	Dr Yong Yan Zhen
34.	To improve Dietitian referral rate for newly diagnosed Diabetes Mellitus patients from 10% to 50% in Jurong Polyclinic within 6 months	JUR	Dr Loh Goh Chor Phun Lai Teng
35.	To reduce incidences of unhealthy catering	HQ	Ng Jia Jia

NO.	TITLE	INITIATED	LEADERS
36.	To improve uptake rate of Bone Mineral Density (BMD) Screening for women at high risk of Osteoporosis in Hougang Polyclinic	HOU	Dr Tau Zu Huang
37.	To increase the use of Chronic Obstructive Pulmonary Disease Assessment Test (CAT) in Chronic Obstructive Pulmonary Disease (COPD) patients in Yishun Polyclinic	YIS	Dr Chen Shiyun
38.	To utilise 6S methodology for medication storage in chiller	HQ	Sim Kok Huay
39.	To reduce Hypoglycemia in diabetes patients coming for Fasting Blood Tests in a primary care setting over 6 months	BBK	Dr Heng Yan Shan
40.	To improve the percentage of patients who receive screening for Postpartum Depression (PPD) using the Edinburgh Postnatal Depression Scale (EPDS) at the 6th Week Postpartum Checkup	YIS	Dr Teo Yi Lyn
41.	To increase the uptake of Human Papillomavirus (HPV) vaccine among female patients aged 9 to 26 years old in Choa Chu Kang Polyclinic	CCK	Dr Christine Ng
42.	To improve accuracy and confidence level in assisting with Minor Procedures (MP) in Non-MP trained nurses	HOU	Justicia Phuang Santhi d/o Govindan
43.	To improve patients' checkout experiences	CCK	Gus Teoh
44.	To increase same-day and outstanding bills collection	HQ	Mok Zi Yin Aw Siow Mey
45.	To improve Influenza vaccine uptake rate in asthma patients	TPY	Dr Sam Cheng Wei
46.	To reduce prescription errors among patients aged 12 years old and below in Woodlands Polyclinic	WDL	Dr Ooi Chung Ping
47.	To improve the rate of Metabolic Syndrome Screening among patients diagnosed with Gout in Hougang Polyclinic	HOU	Dr Jeremy Koh
48.	To reduce Fasting Hypoglycemic events at Choa Chu Kang Polyclinic	CCK	Dr Amith Sebastian
49.	To improve Tele-developmental Surveillance for 2-year old children in Yishun Polyclinic	YIS	Dr Angelia Chua Tan Pek Hoon
50.	To reduce unintentional prescription errors among chronic patients who are in transition of care at Jurong Polyclinic	JUR	Dr Ong Kah Pieng
51.	To eliminate infection control lapses and ensure equal distribution of work load in Immunisation Room by introducing a daily checklist	TPY	Jeena Varghese Lia Hnem Par
52.	To optimise resources at Blood Pressure Station	TPY	Goh Sixuan
53.	To increase the percentage of obese Type 2 Diabetes patients in Woodlands Polyclinic who have received Individualised Dietary Intervention in Obesity Management from 11.93% to 50% in the next 6 months	WDL	Dr Nagar Umakant

LEGEND

AMK - Ang Mo Kio Polyclinic
BBK - Bukit Batok Polyclinic
CCK - Choa Chu Kang Polyclinic
CLE - Clementi Polyclinic

JUR - Jurong Polyclinic
HOU - Hougang Polyclinic
TPY - Toa Payoh Polyclinic
WDL - Woodlands Polyclinic

YIS - Yishun Polyclinic
HQ - NHGP Headquarters

APPENDIX B
MEDICAL FORUMS AND WORKSHOPS
CONDUCTED IN FY2016

DATE	TITLE	SPEAKER / TRAINER
19 May 2016	Helping Patients Change Using Motivational Interviewing	Adjunct Associate Professor Joseph Leong Jern-Yi Senior Consultant; Community Psychiatry/ Rehabilitation Psychiatry Service, Institute of Mental Health
21 July 2016	Adolescent Health Screening, Counselling and Support Services	Prof Doris Young Chair of General Practice, Associate Dean (Academic) and Assistant Dean (China) in the Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne
1 September 2016	Professionalism in Primary Care – The Makings of the Family Physician NOW!	Dr Aaron Ang Senior Consultant; Head, Department of Psychological Medicine, Tan Tock Seng Hospital
17 November 2016	Diabetic Foot Care	Dr Eric Khoo Senior Consultant; Head, Division of Endocrinology, National University Hospital
23 March 2017	Diabetes: Latest in Diabetes Care and Implications for Practice	Dr Seow Cherng Jye Consultant, Endocrine & Diabetes, Tan Tock Seng Hospital

APPENDIX C
LIST OF PRIMARY CARE ACADEMY WORKSHOPS

MEDICAL KNOWLEDGE	PATIENT CARE / CLINICAL & PROCEDURAL SKILLS
M.Med OSCE Exam Preparation	Surgical Procedures for the Primary Healthcare Physician
M.Med Slide Exam Preparation	Orthopaedic Procedures for the Primary Healthcare Physician
GDFM OSCE Exam Preparation	Common Eye Conditions Update and Eye Examination Techniques for Family Physicians
Introduction to Research	Interpretation of Spirometry Results
	Diabetic Foot Screening
	Dermatology Workshop: Updates on the Management of Acne
	Advance Wound Management Workshop
	Caring of Older Adults in Primary Care
	AED Certification
	BCLS Full Certification
	BCLS Re-Certification
PRACTICE-BASED LEARNING	SUPPORT FOR CLINICAL DELIVERY
Evidence Based Medicine – Guide to Critical Appraisal	Use of Medical Terminology in Work Activities (WSQ)
Teaching 101 for Busy Healthcare Professionals	Basic Health Parameters for Clinical Ancillary Staff
Advancing Ethics and Professionalism in Primary Care	Assist in Collection of Pap Smear Specimens for Health Attendants
Foundation Chronic Disease Management	Essential Skills for Clinical Ancillary Staff
Health Literacy Workshop	Train the Trainer for Essential Skills: Clinical Ancillary Staff (New)
Team-Based Care Training	Simplified Use of Medical Terminology
Adult Vaccination Workshop	English-Chinese Medical Translation Course
Infection Control Seminar	Know the Elderly: Workshop for Frontliners
Common Issues in Developmental Paediatrics	Understanding Diabetes, Hypertension and Lipid Disorders: Workshop for Frontliners
Early Childhood Nutrition Workshop	Service Communications Foundation Course for Frontline Clinic Staff (New)
Dermatology Workshop: Updates on the Management of Acne	
COURSES FOR THE PUBLIC AND COMMUNITY	INTERPERSONAL COMMUNICATION
For Public	Enhancing Critical Communication Skills that Matter
General Practitioner’s Assistant Courses – Foundation, Intermediate, Advance	Basic Communication Skills
Basic First Aid Workshop	Mentoring – A Guide by the Side
Care for the Elderly	
CPR + AED	
Community Diabetic Health Ambassador (New)	
Public Health Talks	
NHG Diagnostics	
Falls Prevention & Use of Ambulatory Aids (New)	
For the Agency for Integrated Care (AIC)	
Infection Control Workshop	

APPENDIX D
ABSTRACTS BY NHGP STAFF AND COLLABORATORS
PUBLISHED IN ANNALS OF THE ACADEMY OF MEDICINE,
SINGAPORE – PROCEEDINGS OF SHBC 2016,
SEPTEMBER 2016, VOL. 45 (SUPPL) NO. 9.

NO.	ABSTRACT TITLE	AUTHORS
1.	Multi-morbidity and its Impact on Patients' Anxiety and Depression Status in the Primary Care Setting	Richard Lee Meng Kam, Lee Eng Sing, Mythily Subramaniam, Janhavi Ajit Vaingankar, Teo Sok Huang, Zhang Yunjue
2.	Preventing Diabetes: Enabling Pre-Diabetic Adults to Make Lifestyle Modifications	Soh Ying Hua, Audrey Tan Siok Ling, Ng Chiew Leng, Wee Wei Keong
3.	Factors Associated with Avoidable Admissions for Diabetes in a Primary Care Population	Sabrina Wong Kay Wye, Sim Yu Fan, Tan Sing Ying, David Ng Wei Liang
4.	Comparison Between Acarbose and Sitagliptin as a Third-line Treatment for Patients with Poorly Controlled Diabetes in National Healthcare Group Polyclinics in Singapore	Lim Ziliang, Kong Jing Wen, Sim Yu Fan
5.	Differences in Health Concerns Among Patients with Well-Controlled and Poorly-Controlled Type 2 Diabetes Mellitus	Ian Koh Jan Ming, Christine Chern Win Fah, Jessica Koh, Alice Watt Yim Pek, Revathy d/o Rajatelsingh, Fadzlina Binte Sujak, Jessica Zhu Hui, Chen Meihua, Nor Shawiyah Binte Haron, David Ng Wei Liang
6.	Validation of Client Satisfaction Questionnaire (CSQ-8): A Study on Primary Care Mental Health Services in Singapore	Wong Mei Yin, Yap Chee Khong
7.	To Increase Patients' Awareness on Post-Operative Care of Dental Fillings	Ang Wei Wei, Serene Zhang Ruping, Shirlena Chiam Siew Cheng, Daniel Tan, Tan Keng Wee, Siti Rahmah Binte Kamaruddin, Lee Foong Lan
8.	An Update of Clinical Outcomes from Pharmacist-managed Hypertension, Diabetes and Lipids Clinic in Primary Care	Esther Bek Siew Joo
9.	Pharmacy Technicians' Satisfaction with Job Scope and Impact of Career Framework Redesign in Primary Care	Esther Bek Siew Joo, Ong Soo Im
10.	Healthcare Closer to You – National Healthcare Group Mobile Community Health Centres for Diabetes	Chang Xiaopei
11.	Validating the Interventions in Reducing the Number of Dislodged Fillings in Dental Clinics as Being Effective	Shirlena Chiam Siew Cheng, Sharon Koo Li Gjin, Serene Zhang Ruping, Daniel Tan, Tan Keng Wee, Ang Wei Wei, Lee Foong Lan, Siti Rahmah Binte Kamaruddin, Kenneth Low Meng Tze
12.	ACGME Core Competencies – How Much do Primary Care Physicians Know in Singapore?	Angelia Chua Hwee Ling

NO.	ABSTRACT TITLE	AUTHORS
13.	Reducing Asthma Exacerbations in Yishun Polyclinic	Foo Fung Yee, Wang Na
14.	Effectiveness of Tele-Medicine for Distant Wound Care Advice towards Patient Outcomes: Systematic Review and Meta-Analysis	Goh Ling Jia, Julia Zhu Xiaoli
15.	Exploring Patients' and Caregivers' Perceptions of Managing Wound at Home for Patients with Simple Acute Wound in the Primary Healthcare Sector	Goh Ling Jia, Ann-Louise Caress, Lee Eng Sing, Julia Zhu Xiaoli
16.	Effectiveness of Nutrition Education Accompanied by Cooking Demonstration on Healthy Eating Behaviour: A Follow-up Study	Lynette Goh Mei Lim, Agnes Wong Xiao Yan, Gary Ang Yee
17.	Behavioural Determinants of a Patient's Expectation of a Good Consultation in Polyclinic	Kee Kok Wai, David Ng Wei Liang, Samuel Tay Rong Yao, Jessica Lim Wan Xuan
18.	Temporary Use of Basal Insulin at Different Time-Point Postdiabetes Diagnosis and Pancreatic Beta-Cells Function Maintenance – A Case Series	Kee Kok Wai
19.	Primary Care Practitioners' Perspectives of Using Electronic Medical Records in Their Daily Practice	Manojkumar Amarlal Kharbanda, Lee Eng Sing, Teo Sok Huang
20.	Simulated Clinical Documentation Audit Process to Evaluate Clinicians' Agreement and Differences (Phase 1)	Kwok Boon Chong, Justin Lim Xuan Li
21.	Achieving Optimal Storage Temperature for Medications	Jancy Mathews, Joelle Seah Wan Yin, Lim Voon Hooi
22.	Effectiveness of Follow-up Telephone Call to Improve Asthma Patients' Appointment Uptake	Blessy Koottappal Mathew, K Nanda Kumari, Rajwant Kaur, Norhafiza Binti Md Nor, Alice Watt Yim Pek, Lia Siang Hnem Par
23.	An Evidenced-based Project to Enhance Registered Nurses Care for Neonatal Umbilical Cord Stump in Hougang Polyclinic	Hamha Mohamed Hamzah
24.	Evaluation on the Effectiveness of Group Diabetes Education Compared to Individual Diabetes Education	Ng Soh Mui
25.	The Usefulness of Health and General Clinic Information Topics in Polyclinic TV Screens for Patient Education	Ng Jia Jia
26.	Work Motivation and Job Satisfaction Among Doctors Working in the Polyclinic – A Mixed-Methods Pilot Study	David Ng Wei Liang
27.	Unravelling Factors that Promote Relationship Building in Primary Care Teamlets	Predeebha Kannan, Teo Sok Huang, Sabrina Wong Kay Wye, Yeo Loo See, Tang Wern Ee
28.	Evaluating the Correlation Between Roland Morris Disability Questionnaire and the Bournemouth Questionnaire in Patients with Low Back Pain: A Prospective Pragmatic Randomised Study	Cindy Soh Seok Chin, Kwok Boon Chong

NO.	ABSTRACT TITLE	AUTHORS
29.	Effectiveness of Lifestyle Weight Management Programme in Primary Healthcare	Soh Ying Hua, Audrey Tan Siok Ling, Estonie Yuen Wing Ting, Wee Wei Keong
30.	Analysis of Patient Demographics for Woodlands Polyclinic	Bobby Rico Stryker, Evan Sim Chin Sing
31.	Improving Diabetes Control Through a Low Carbohydrate, High Fat Diet Approach	Bobby Rico Stryker
32.	Evaluation of New Family Medicine Postgraduate Training Using a Standardised Patient Satisfaction Questionnaire	Meena Sundram, Kee Kok Wai
33.	Improving the Uptake of Pneumococcal Vaccination in Children Aged Three to Four Months in a Primary Care Clinic	Tan Pek Hoon, Angelia Chua Hwee Ling
34.	Combination Therapy with Alpha-Adrenergic Blocker and 5-Alpha-Reductase Inhibitor for Lower Urinary Tract Symptoms in Benign Prostatic Hyperplasia: A Review	Tan Wee Hian
35.	The Use of Manual Therapy, a Possibility for Tension Type Headache Management in Primary Care?	Valerie Teo Hui Ying
36.	A Cross-Sectional Questionnaire Study: Patients' Attitudes Towards End-of-Life Care in a Singapore Public Primary Healthcare System	Valerie Teo Hui Ying, Alvin Ong Cong Wei, Teo Sok Huang, Michelle Lee Cai Feng, Evonne Oh Siew Gek, Sabrina Wong Kay Wye
37.	Prevalent Cardiovascular Conditions and Degree of Risk Factor Control Among Prediabetes Patients Attending Polyclinics in Singapore	Matthias Paul Toh Han Sim, Darren Seah Ee-Jin, Lee Lin Jen, Linus Tham
38.	Evaluating the Preceptorship Programme at National Healthcare Group Polyclinics	Tong Ling Hoh, Dong Lijuan
39.	Predictor of Satisfaction with Primary Care Mental Healthcare Services in Singapore	Wong Mei Yin, Yap Chee Khong
40.	First Year Outcomes of the NHGP Patient Empanelment Care Model at Toa Payoh Polyclinic	Sabrina Wong Kay Wye, Sim Yu Fan, Tan Sing Ying, Alan Pui Wee Ming, David Ng Wei Liang
41.	Reviewing the Need to Screen for Urinary Tract Infection in Asymptomatic Prolonged Neonatal Jaundice in the Primary Care Setting in Singapore	Franco Wong Pey Gein
42.	Evaluation of Advanced Wound Management Course for Registered Nurse at Primary Care Setting	Julia Zhu Xiaoli, Dong Lijuan
43.	Putting Feet First, Are People Doing All They Can? A Diabetic Foot Disease Review at Primary Care	Julia Zhu Xiaoli, Tan Lye Yoong
44.	The Effectiveness of Structured Clinical Education on Pharmacist Competency Assessment Scores and Satisfaction with Training	Esther Bek Siew Joo, Ong Soo Im, Evonne Lee Yan Qun
45.	The Application of Quality Thinking Through the Employment of Ergonomics to Improve Service Quality	Grace Ir-Ving Yeap

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NATIONAL HEALTHCARE GROUP POLYCLINICS

3 Fusionopolis Link
Nexus @ one-north
#05-10 South Tower
Singapore 138543

Contact Centre: (65) 6355 3000
Email: enquiries@nhgp.com.sg
Website: www.nhgp.com.sg