

## MEDIA RELEASE

### **POLYCLINIC TELE-HEALTH PILOT BRINGS CARE FOR CHRONIC CONDITIONS CLOSER TO HOME**

*Patients are empowered to manage chronic conditions better and more conveniently, with simple-to-use technologies and support by the care team.*

**Friday, 12 July 2019** - The MOH Office for Healthcare Transformation (MOHT) and the National Healthcare Group Polyclinics (NHGP) are collaborating on a series of Primary Tech-Enhanced Care (PTEC) initiatives that provide care support and simple-to-use technologies that enable patients with chronic diseases to self-manage their condition and improve their health. A hypertension management tele-health pilot has started at Ang Mo Kio Polyclinic, and will be extended to diabetes management in the next six months.

#### **Details on Ongoing Pilot**

2 **Remote Monitoring.** Hypertension affects 21.5%<sup>1</sup> of the population in Singapore. In the pilot for hypertension, patients measure their blood pressure (BP) weekly at home using a BP monitoring device which automatically transmits the readings to their polyclinic care team. With this, patients can save at least one clinic visit in a year by monitoring and managing their condition from home. If their BP levels are not well-controlled, they will receive additional tele-consultation advice from their nurse and medication adjusted when required.

3 **SMS Chatbot.** As part of the pilot, the first SMS chatbot on mobile phones co-developed with a polyclinic care team is being trialled. This is based on Singapore's clinical practice guidelines for hypertension. The chatbot provides more timely and interactive advice for patients, and prompts patients who have missed checking their weekly BP reading. It also guides patients towards appropriate self-care, by providing advice on how to keep their BP under control and guidance on what to do when they experience high BP readings, as well as encourages healthy lifestyles. Patients who have tested the bilingual chatbot found the simple messages easy to understand and helpful, and said that it provided positive reinforcement for

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<sup>1</sup> National Population Health Survey 2016/2017

them to adhere to the care protocol. The chatbot, currently available in English and Chinese, will soon be expanded to include Malay and Tamil.

4 **Initial Result.** The overall aim of PTEC is to achieve and maintain optimal BP among hypertensive patients. All 120 patients in the pilot intervention group would have completed at least six months of monitoring by the end of this year, when a formal evaluation will be carried out. Early results are encouraging, as the mean BP levels of patients on the pilot who have finished their first six months of treatment have improved<sup>2</sup>. The group with poorly controlled hypertension<sup>3</sup> at the start of the pilot saw the highest benefit. Systolic BP<sup>4</sup> measurements improved by at least 10mmHg in 42% of these patients at the end of six months, while diastolic BP<sup>5</sup> improved by a similar degree in 32% of patients.

5 **Patient Feedback.** The intention of PTEC is also to cater to as wide a range of patients as possible. The ages of participants in the pilot range from 20s to 80s, with about 40% of them being 60 and above. About 50% reported primary and secondary education as the highest educational level attained. Despite the differences in age and educational levels of the patients, almost 90% of the participants agreed that it was easy to submit their BP measurements to the polyclinic care team as it only required a simple click of a button, and that the medical advice they received through tele-consultation was useful. Patients shared at interview sessions that the PTEC pilot has increased their understanding of BP management and empowered them to self-manage. They also found it convenient as it saved them time from needing to visit the polyclinic as frequently.

6 **Care Team Enablement.** The pilot builds on NHGP's teamlet care model, where chronic disease patients are looked after by a dedicated primary care team and receive support to take more ownership of the management of their chronic conditions. For the polyclinic care teams, the connected system enabled them to better monitor their patients and provide support in between polyclinic visits. It also allowed nurses to attend to patients with more complex conditions.

## **Plans to Benefit More Patients & Expansion to Diabetes Management**

7 Patients with chronic diseases require long-term care to prevent disease progression and avoid complications. They therefore need timely and convenient support that will enable them to self-manage their conditions more effectively. PTEC aims to benefit patients who want better control of their chronic diseases, but have a busy lifestyle and / or are less ambulant.

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<sup>2</sup> Based on interim evaluation data of 54 patients who completed the six-month pilot as of 7 June 2019.

<sup>3</sup> Poorly controlled is defined as patients who has systolic BP that is above 140mmHg and/or diastolic BP that is above 90mmHg

<sup>4</sup> Systolic BP represents the pressure while the heart is beating. A normal systolic BP is 140mmHg or below.

<sup>5</sup> Diastolic BP represents the pressure when the heart is resting between beats. A normal diastolic BP is between 50mmHg and 90mmHg.

8 Building on the encouraging early results and acceptance of PTEC for hypertension management by both patients and clinicians, MOHT will be rolling out new PTEC pilots for diabetes management in the second half of this year with NHGP and other primary care partners. These pilots will adopt similar concepts of remote vital signs monitoring, feedback to the care teams and timely support of patients. The protocols for the pilots on diabetes coaching based on home blood glucose measurements, as well as the use of simple and safe self-testing of HbAa1c levels<sup>6</sup> from home, are being developed by clinician teams for launch over the next six months.

9 Said Associate Professor Chong Phui-Nah, Chief Executive Officer of NHGP and Primary Care, "Primary healthcare is the cornerstone for better population health. NHGP is committed to improving the way we deliver care and empowering patients to take charge of their own health. PTEC is thus aligned to our commitment and is one of the various ways that NHGP is exploring to help our patients. Remote monitoring and tele-consultation can potentially substitute some clinic visits and thus save time for and provide convenience to patients while ensuring quality care. Healthcare providers also feel more confident about replacing a physical visit by the patient with a tele-consultation because of remote monitoring and continual engagement."

10 Professor Tan Chorh Chuan, Executive Director of MOHT, said "The high and rising prevalence of chronic diseases means we have to shift care out of hospitals to primary care, and beyond that, into patients' homes. This is because good control of chronic diseases needs the active participation of the patients, to adhere to care protocols and adapt their lifestyle choices. The PTEC initiatives are important because they present a package of care and technology support which helps make it easier for patients to do so. It is also critical that PTEC simplifies the work processes for the care teams so they can focus on assisting and advising patients more effectively. Our goal is to extend our excellent collaboration with NHGP, and to test-bed more solutions with other primary care partners, including the private GP partners, with the longer-term goal of scaling PTEC to benefit more patients within the primary care sector."

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<sup>6</sup> The HbA1c (Haemoglobin A1c) is a blood test that is read as a percentage, and gives an indication of your average blood glucose levels over the past three months.

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**About the MOH Office for Healthcare Transformation (MOHT)**

MOHT was established in January 2018 to address fundamental and longer-term issues critical for healthcare transformation to meet the changing demography and disease burdens in Singapore. MOHT provides macro-level data analytics and scans globally and locally for new capabilities and health-technologies for trials in actual healthcare settings via an agile and design focused approach, involving both patients and the healthcare teams to test-bed if such solutions can benefit patients in Singapore and the adaptations required for the local environment and care standards.

MOHT takes a value-based healthcare approach that endeavours to achieve better health and clinical outcomes by taking a longer-term and broader perspective in identifying system-wide changes, with a view to advance the following three goals:

- Longitudinal, holistic care across persons' entire life course;
- Increase the focus on wellness and prevention of chronic disease; and
- Empowerment of individuals and patients for better self-management.

MOHT partners stakeholders from the Government, public health institutions, private industry and academia to identify and develop collaborations that support its key programmes and complement ongoing work at MOH and clusters / institutions.

Each collaboration will be orchestrated as an agile implementation with rapid build-measure-learn cycles, anchored by care redesign and supported by process improvements, analytics, technologies and workforce transformations. From these collaborations, MOHT will develop frameworks, methodologies and toolkits to enable effective solutions to be scaled further.

For more information, visit [www.moht.com.sg](http://www.moht.com.sg).

## **About National Healthcare Group Polyclinics (NHGP)**

National Healthcare Group Polyclinics (NHGP) forms the primary healthcare arm of the National Healthcare Group (NHG). Its six polyclinics serve a significant proportion of the population in the central and northern parts of Singapore.

NHGP provides a comprehensive range of health services for the family, functioning as a one-stop health service centre providing treatment for acute medical conditions, management of chronic diseases, women & child health services and dental care. The focus of NHGP's care is on health promotion and disease prevention, early and accurate diagnosis, disease management through physician led team-based care as well as enhancing the capability of Family Medicine through research and teaching. Through the Family Medicine Academy and the NHG Family Medicine Residency Programme, NHGP plays an integral role in the delivery of primary care training at medical undergraduate and post-graduate levels. With the Primary Care Academy, NHGP provides training to caregivers and other primary care counterparts in the community sector.

More information is available at [www.nhgp.com.sg](http://www.nhgp.com.sg).

## **About the Future Primary Care (FPC) Programme in MOHT**

Primary Care is a key pillar of the Singapore healthcare system. Given our rapidly ageing population and the rise in the incidence of chronic diseases, it is critical that we strengthen Primary Care and make it the centre of gravity of our healthcare system to bring healthcare closer to home in the community. Effective management in the Primary Care setting will allow Singaporeans to maintain their health and, where possible, prevent or delay the onset or progression of diseases. This will allow Singaporeans to stay healthier longer.

Some of the biggest challenges for Primary Care are the growing patient load, where attendance is expected to rise and the increased complexity of care with increasing social needs and multi-morbidity. For Primary Care to perform its core function of ensuring that patients stay well in the community amidst these challenges, the FPC Programme has started partnering primary care providers, with a first PTEC pilot with NHGP, to achieve a few key goals:

- Develop consistent good quality in primary care
- Enable patient trust and empowerment
- Enable each patient with chronic disease to have a dedicate care team for better long-term support

- Enhance collaboration in primary care with both public polyclinics and private GPs
- Enhance integrated community care among primary health and social services for holistic care for population with more complex needs
- Introduce the right incentives and enablers for the right-siting of care