MEDIA RELEASE

NHG POLYCLINICS CHARTS NEW MILESTONES IN PRIMARY CARE THROUGH TECHNOLOGY

Employing emergent technologies to transform care delivery

Singapore, 25 February 2025 – To address the challenges of an ageing population and the corresponding increase in the complexity of care, the National Healthcare Group Polyclinics (NHG Polyclinics) is innovating and introducing new models of care with the use of technological solutions to provide more personalised clinical and accessible care to patients.

2   This year, NHG Polyclinics is marking its 25th anniversary in conjunction with the National Healthcare Group's (NHG) 25th year of providing quality care for the 1.5 million residents in Central and North Singapore.

3   Group Chief Executive Officer of NHG, Professor Joe Sim, said, "As we celebrate 25 years of health together, we also reflect on our journey of care. I am heartened by the efforts of NHG Polyclinics together with our hospitals and specialty centres in strengthening the primary care ecosystem in our region. Over the years we have introduced new models of care, embraced more innovation, progressively adopted AI in clinical care, and fostered strategic partnerships with our GPs and community partners. Working together as one integrated healthcare system has enabled us to better meet the diverse needs of the population we serve. Our One NHG efforts with partners have resulted in more timely access to medical care with positive health outcomes for our patients and residents."

4   Chief Executive Officer of NHG Polyclinics, Dr Karen Ng said, "An essential pre-requisite of quality primary care is staying responsive to the evolving healthcare needs of our community. NHG Polyclinics is constantly innovating, using artificial intelligence (AI) and technology to improve the way we deliver care and ensuring our patients receive timely care for improved patient outcomes. Technology has enabled us to focus on identifying patients that require immediate care and attention via AI triaging, and improve productivity through technology solutions that automate tasks which are repetitive and manual."

Providing Access to Timely Care Through the Use of Technology

Tele-Atrial Fibrillation (Tele-AF)
5   With safety and timeliness of care for patients in mind, NHG Polyclinics together with NHG's general hospitals, Tan Tock Seng Hospital (TTSH) and Khoo Teck Puat Hospital (KTPH), spearheaded the **Tele-Atrial Fibrillation (Tele-AF)** programme in 2019, bringing together family physicians from polyclinics and cardiologists from hospitals to care for patients with irregular (or abnormal) heart rhythm.

6   Atrial fibrillation is an uncommon heart condition with risk of complications such as stroke and heart failure. Before the introduction of Tele-AF, patients with newly diagnosed atrial fibrillation condition were referred by the polyclinics to the hospital for further management. Recognising how some patients with late treatment of atrial fibrillation have significant risk of stroke, the clinical team piloted a workflow where after their initial assessment, family physicians were able to discuss a patient's case with the cardiologists in the hospitals. With the specialist opinion obtained by family physicians, patients enjoyed faster and more accessible one-stop care, closer to the community.

7   Today, Tele-AF is available at all NHG Polyclinics. Family physicians at the polyclinics together with cardiologists from all three NHG hospitals are able to provide optimal and timely care to patients with atrial fibrillation. Patients found to have irregular pulse will have an Electrocardiogram and blood test done at the polyclinic on the same day to confirm the diagnosis and be referred to the hospital for an Echocardiogram for further evaluation. Under this programme, family physicians, with support from the cardiologists, are able to prescribe anticoagulants, a medication usually started by specialists. Additionally, a pharmacist provides detailed counselling to the patient on this new medication in the pharmacy. As a result, the time taken to identify irregular pulse to anticoagulation has shortened by 44%, with most patients receiving this treatment in two weeks. As of 31 January 2025, NHG Polyclinics has managed more than 160 patients under its Tele-AF initiative.

Prioritisation and Redistribution of Imaging for Medical Evaluation of Chest X-Ray (PRIME-CXR)

8   A chest X-ray is typically done for patients to evaluate respiratory symptoms such as breathlessness and chronic cough, and other non-respiratory conditions where clinically indicated. Another milestone transformation for NHG's primary care is the integration of an AI powered chest X-ray solution for triage **– Prioritisation and Redistribution of Imaging for Medical Evaluation of Chest X-Ray (PRIME-CXR)**. PRIME-CXR is a collaboration involving NHG Polyclinics, TTSH, NHG Diagnostics, and Synapxe.

9   PRIME-CXR, leveraging AI for prioritisation of chest X-ray reporting, is currently piloted at Geylang Polyclinic. When PRIME-CXR is officially made available at Geylang Polyclinic in March 2025, radiologists and family physicians at the polyclinic will have additional support in identifying which chest X-rays to prioritise for earlier review. This means unwell patients with abnormal chest X-rays are reviewed quicker and provided with early intervention. While the turnaround time for the scan result is still being evaluated in this pilot phase, the waiting time for the abnormal chest X-ray report can potentially be halved.

Automating Work Processes to Increase Efficiency and Productivity

Emergency Trolley (E-Trolley)

10   NHG Polyclinics is also using automation technology to streamline processes, boost efficiency, and increase productivity. Since December 2024, the nurses at NHG Polyclinics automated the process of checking the **Emergency Trolley (E-Trolley) for expiring items using Robotic Process Automation (RPA)**.

11   Previously, nurses had to check and manually record all the expiry dates of emergency items stored in the E-Trolley once a month. The process of checking the expiry dates, documenting the dates manually, and replacing the near-to-expiry items takes an average of 45 minutes for each E-Trolley every month. This repetitive task takes up 1,440 minutes/month of the nurses' time to check a total of 32 trolleys across nine polyclinics.

12   With the adoption of RPA at all nine NHG polyclinics, the 'software robot' now handles the manual checking of E-Trolleys at all nine polyclinics and prompts the nurses to replace items that are expiring. This automation has reduced close to 80% (equivalent to 224 hours a year) of the nurses' time spent on checking the E-Trolley manually, enabling them to focus on direct patient care.

Looking Ahead

13   "Technology and automated solutions enhance our work processes, helping us meet the increasing healthcare needs of our population, while improving patient outcomes. Now, our clinicians can focus on the clinical consultation with the patient, with the repetitive administrative tasks taken up by the automated solutions," said Dr Lim Chee Kong, Director of Clinical Services, NHG Polyclinics.

14   "With AI transforming the way we live and work, primary care is no exception. As NHG Polyclinics celebrates our 25th Anniversary, we will continue to invest in AI-powered solutions in areas such as weight management, patient medication adherence, staff training, vaccines demand forecasting and more, to improve access to timely care and increase productivity and efficiency to benefit our patients. Only by constantly innovating can we fulfil our mission to deliver quality and person-centred primary care to our residents and patients in the next 25 years and beyond," added Dr Karen Ng.

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About National Healthcare Group Polyclinics
National Healthcare Group Polyclinics (NHG Polyclinics) is part of the primary healthcare arm of the Population Health Campus (PHC) under the NHG, the regional health manager for the 1.5 million residents of central and north Singapore.

NHG Polyclinics provides a comprehensive range of health services for the family, functioning as a one-stop health centre providing treatment for acute medical conditions, management of chronic diseases, women and children health services and dental care. The focus of NHG Polyclinics' 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, NHG Polyclinics plays an integral role in the delivery of primary care training at medical undergraduate and post-graduate levels. The Primary Care Academy provides a one-stop primary care training centre for primary healthcare professionals and the community.

PHC cares for central and north residents with a full range of healthcare services across Primary Care, Community Care, and Population Health Management. Working closely with hospitals, general practitioners, and community partners, PHC joins up health and social care for our residents to keep them healthy and well.

Read more about the Population Health Campus.