

FACT SHEET

7 IN 20 NEWLY-DIAGNOSED DIABETES PATIENTS DO NOT ADHERE TO MEDICATION **Lower adherence is associated with higher hospitalisation risk and poorer glycaemic control**

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Immediate Release

OVERVIEW

Researchers from National Healthcare Group's (NHG) Health Services & Outcomes Research (HSOR) department have found that seven in 20 newly-diagnosed diabetes patients do not adhere to medication. The study recruited newly-diagnosed diabetes patients from National Healthcare Group Polyclinics (NHGP) between 2005 and 2010, who were subsequently followed up for five years. The study showed:

- **35% of respondents** among newly-diagnosed diabetes patients in Singapore **did not adhere to their medication**; while the remaining 65% did.
- The **HbA1c level** of diabetes patients with poor adherence **increased by 0.4** over the two years compared to the fully-adherent group, and they were also more likely to be hospitalised or to visit the emergency department when compared with fully-adherent patients.
- **Males, Indians, or patients without any chronic co-morbid conditions** were more likely to have poor medication adherence.

But with improved medication adherence, newly-diagnosed diabetes patients can achieve better health outcomes and which will result in longer-term sustainability of the healthcare system.

MEDICATION NON-ADHERENCE AND HOW RAISING PHARMACEUTICAL LITERACY CAN HELP

Reasons for medication non-adherence include the following:

1) Lack of understanding and knowledge about diabetes medication

- Newly-diagnosed patients may think it is not important to take the medication as instructed if they do not feel or see the medication as having an effect on their condition.

Pharmacists can educate patients on how medicines for diabetes help to maintain good control of sugar level in the blood, and the importance of meticulous self-management to prevent long-term complications to the organs, such as the heart and kidneys, etc. For example, home blood glucose monitoring helps to track and provide patients and caregivers with visible information of blood sugar control.

2) Side-effects

- While adjusting to new anti-diabetes medication, patients may experience side effects due to low blood sugar. As a result, some may stop taking their medication without informing their doctors.

Pharmacists can help to explain the potential side effects, enabling patients to better manage the side effects. They can advise patients how to recognise and manage low blood sugar symptoms, and how to regulate their medication in relation to their eating habits. Some side-effects may also lessen with continued use of medication.

3) Cultural beliefs

- Some patients may opt to take various supplements instead of their prescribed medication.

Pharmacists can address the effectiveness of these supplements and their effects in relation to their current medication. Patients are then empowered to make more informed decisions about their health.

- Some newly-diagnosed patients have misconceptions regarding the use of insulin and oral medication.

For insulin use, Pharmacists can discuss with patients to raise or deepen their understanding of the treatment process. This way, patients are encouraged to practise more effective self-management of their condition and overall health.

MANAGING DIABETES IN THE COMMUNITY

To better manage diabetes in the community for pre-stage and early stage diabetes, NHG has increased the number of Community Health Posts (CHP) to 21 since its launch in November 2016. The CHPs are located at various Resident Committee Centres in Toa Payoh, MacPherson, Whompoa, Kolam Ayer and Bishan North. NHG hopes to have at least one CHP in every constituency within the next three years.

Additionally, National Healthcare Group Polyclinics (NHGP) has in place programmes to help patients better manage their diabetes.

▪ Team-Based Care

This team-based model of care provides patients with chronic conditions such as diabetes, access to a dedicated team of healthcare professionals (i.e. dietitians, medical social workers, physiotherapists, podiatrists and psychologists) focused on each patient's medical and social needs. This care model seeks to create a bond of trust between a patient and the healthcare team where the patient and team "co-own" the patient's health.

- **Telecare**

NHGP's Telecare Programme involves patients with diabetes, high blood pressure or cholesterol problems receiving teleconsultations by our Care Managers, in place of doctors' clinic consultations. Under this programme, patients share their home-monitoring readings with our Care Managers, who then advise them on their medication dosages or lifestyle modifications.

- **Other Programmes**

Together with NHG, NHGP has programmes for those with pre-diabetes who are managed in the community, as well as those who are **newly-diagnosed with diabetes** to be managed in the polyclinics. This includes the Start Right programme, a 2½ hour structured interactive nutrition programme for those newly-diagnosed with diabetes. Facilitated by a dietitian, it is designed to help newly-diagnosed patients eat right to manage their conditions and prevent complications.

NHGP also provides a spectrum of standardised diabetes dietetic services for patients on different treatment and disease stages. These programmes aim to enhance patient care through a coordinated and integrated approach, and to make quality programmes accessible to our population.

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About Health Services and Outcomes Research (HSOR)

Aligned with NHG's vision of "*Adding years of healthy life*" to the people of Singapore, the Health Services & Outcomes Research (HSOR) department was set up in 2005 to improve the quality of healthcare in NHG by providing the best available evidence for decision making and knowledge translation, building capacity and advancing knowledge in health services research. The multi-disciplinary team of 20 specialists and researchers from diverse backgrounds work closely with clinical heads and managers on the ground to formulate questions and translate evidence into decisions and practice.

Using a range of techniques ranging from surveys, risk adjustment and predictive modelling, data-mining, cost-analysis, simulation and programming, the team supports stakeholders in answering questions on micro-level issues (e.g. outcomes of a specific disease management programme) to more system-level issues (for example, continuity of care programmes in the community), and provide evidence-base that has a wider impact.

To build capacity in health services research, HSOR also conducts introductory workshops on topics such as survey research, health programme evaluation, research methods, operations research, health technology assessment, qualitative research, health economics, analytical and predictive methods, and risk adjustment.

The department continues to publish in local and international peer-reviewed journals, and present in local and international scientific meetings and conferences, to contribute and share new knowledge. The publications, conference presentations and awards, and research grants attest to the strength that is only possible with collaborations with partners from various NHG departments and institutions and with agencies outside of NHG.

About the National Healthcare Group

The National Healthcare Group (NHG) is a leader in public healthcare in Singapore, recognised at home and abroad for the quality of its medical expertise and facilities. Care is provided through an integrated network of six primary care polyclinics, acute care and tertiary hospitals, national specialty centres and business divisions. Together they bring a rich legacy of medical expertise to our philosophy of integrated patient-centred care.

NHG's vision is "Adding Years of Healthy Life". This vision goes beyond merely healing the sick to the more difficult and infinitely more rewarding task of preventing illness and preserving health and quality of life. With some 18,000 staff, NHG aims to provide care that is patient-centric, accessible, seamless, comprehensive, appropriate and cost-effective.

As the Regional Health System (RHS) for Central Singapore, it is vital for NHG to partner and collaborate with stakeholders, community advisors, and voluntary welfare organisations. Together with our patients, their families and caregivers, we aim to deliver integrated healthcare services and programmes that help in Adding Years of Healthy Life to all concerned.

More information is available at www.nhg.com.sg.

Mandarin Glossary:

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Medication Adherence Medication Non-Adherence	服药依从性，药物治疗依从性 药物治疗不依从性
Glycaemic Control	血糖控制