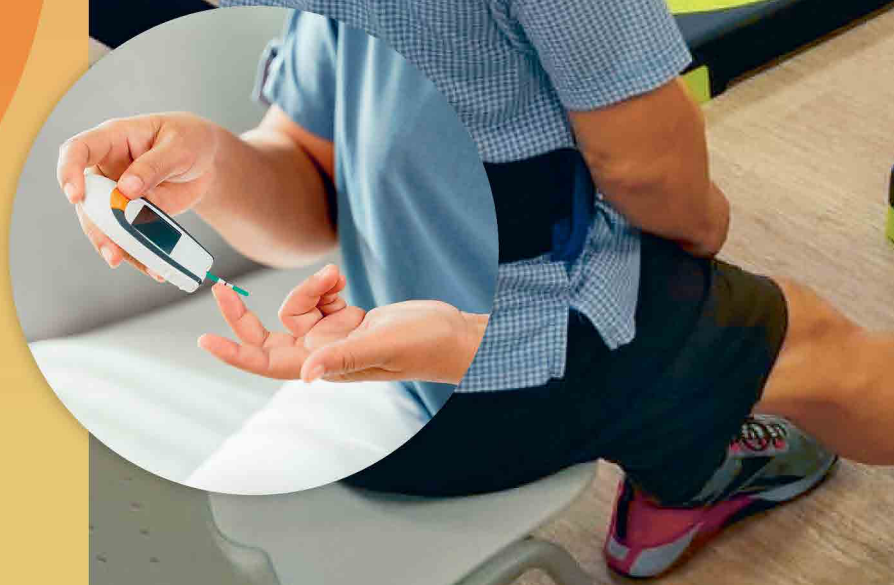
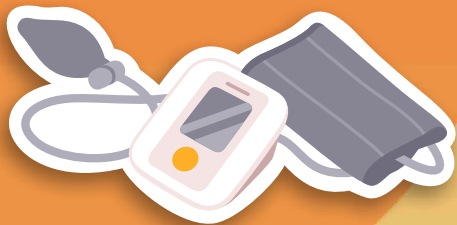


Living With Illness



NHG continues to work on bringing care closer to home. By raising health literacy, activating community partners, and leveraging innovation and technology, we hope to empower our residents with chronic conditions to lead fulfilling lives.







LIVING WITH ILLNESS



LIVING WITH ILLNESS

BOLSTERING CARE IN THE COMMUNITY

CONNECT PLUS

Knee osteoarthritis is a progressive condition, in which symptoms can present early before the need for surgical intervention. Although surgical intervention is common and surgical sites mostly recover without complications, these do not address the underlying risk factors. To enhance care for seniors with knee osteoarthritis, NHG partnered community care providers, such

as St Luke's ElderCare (SLEC) on the Collaborative Model of Care between Orthopaedics and Allied Healthcare Professionals (CONNECT Plus) programme.

The 12-week programme aims to address these underlying issues — weight management and appropriate physical activity, paired with diet counselling and physical therapy, to slow down the progress of knee osteoarthritis. A first in Singapore, CONNECT Plus focuses on maximising rehabilitation outcomes and optimising non-surgical treatment for affected



individuals in the community. Since its implementation in May 2021, 96 patients have benefitted from the CONNECT Plus programme and have shown improved clinical outcomes, such as reduced pain and increased physical activity levels. Other outcomes include a reduction in hospital visits and improvements in productivity among patients.

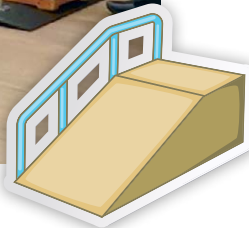
HbA1c Point-Of-Care Testing Kit
The HbA1c Rapid Analysis System, a point-of-care test (POCT) kit, was conceptualised in November 2022 by National Healthcare

SG Diagnostics
Committed to Quality of Health

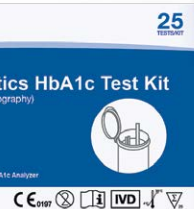
SG Diagnostics
(Biosense Affinity Chromatography)



For use only with SG Diagnostics HbA1c



Group Polyclinics (NHGP) and SG Diagnostics, supported by Khoo Teck Puat Hospital (KTPH) and National Healthcare Group Diagnostics (NHGD), to bring diabetes management closer to patients. Designed to be portable and user-friendly, the POCT kit only requires a finger prick to obtain blood samples, with results attained within six minutes. The system has also obtained Health Sciences Authority (HSA) approval and has been piloted in NHG polyclinics since November 2023.



PROMOTING SAFE USE OF MEDICATION

Understanding Medication Non-Adherence Among Young And Older Adults

NHG's Health Services and Outcomes Research (HSOR) conducted a population-based survey in 2018 and 2019 on 1,528 residents living in Central and North Singapore, who were on long-term medication. Respondents were surveyed on their frequency and reasons for forgetting to take their medications (unintentional), deliberately missing a dose of medication (intentional), or adjusting it to suit their needs (intentional). Responses for young

adults (21-64 years old) and older adults (65 years old and above) were examined separately.

Non-adherence rates in young and older adults were 20.0% and 10.4% respectively, with a larger proportion of young adults reporting both unintentional (17.4% vs 7.8%) and intentional non-adherence (8.3% vs 3.5%). In analyses adjusted for respondents' socio-demographic characteristics and medical history, the presence of depressive symptoms was associated with higher odds of non-adherence in both young (odds ratio [95% confidence interval]: 3.0 [1.8, 5.0]) and older adults (4.2 [1.0, 7.5]).

Across both groups, the most common reasons for non-adherence were the fear of developing a drug dependence, forgetting to take their medication, and having issues with taking their medication at a specific timing (Table 1). However, older adults were more likely to report lack of understanding of medication labels as a reason. Understanding reasons and inclinations for non-adherence could guide strategies to ensure patients are able to take their medication as prescribed.

Medication Coach To Boost Health Literacy

Developed in July 2022, the Medication Coach project is a cross-institution effort between Tan Tock Seng Hospital (TTSH), NHGP, National Healthcare Group Pharmacy (NHGPh), and a tech collaborator (MeshBio) to co-develop a versatile modular Artificial Intelligence-Machine Learning engine, coupled with Optical Character Recognition and Computer

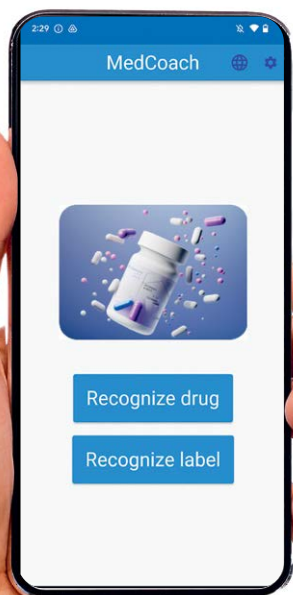
Table 1. The Top 3 Reasons Of Medication Non-adherence In Young And Older Adults

Reasons of medication non-adherence	Young adults (n=766)	Older adults (n=762)	p-value*
Afraid of developing drug dependence / worry about long-term effects	107 (36.4)	55 (32.4)	0.42
"I just forgot"	45 (15.3)	23 (13.5)	0.68
Had problems with taking medication at a specific timing	45 (15.3)	18 (10.6)	0.16

* Differences between groups were tested using Chi-square tests



LIVING WITH ILLNESS



Vision Technology. The team has achieved a proof-of-concept (POC) engine, which can identify medications by the medication packaging or drug instruction labels. It provides detailed comprehensive drug information (in the four national languages), drawing from a reliable source developed by pharmacists. This initiative aims to increase medication literacy for patients and reduces the risk of taking medication wrongly, towards better overall health outcomes.

New Counselling Service For Topical Corticosteroid Use

The National Skin Centre (NSC) Pharmacy launched the Enhanced Topical Steroid Counselling Service in October 2022 to help patients adhere to their treatment plans amid widespread steroid phobia. The service sees pharmacists or trained pharmacy technicians counselling patients on how topical steroids work, as well as on appropriate and inappropriate use of the drugs. In addition to preventing drug-related problems associated



with inappropriate topical corticosteroid use in chronic skin conditions, the service also educates patients on how to boost the efficacy of steroids and how these could be used to minimise flares. For further guidance, prescriptions are labelled with coloured stickers to indicate steroid strength.

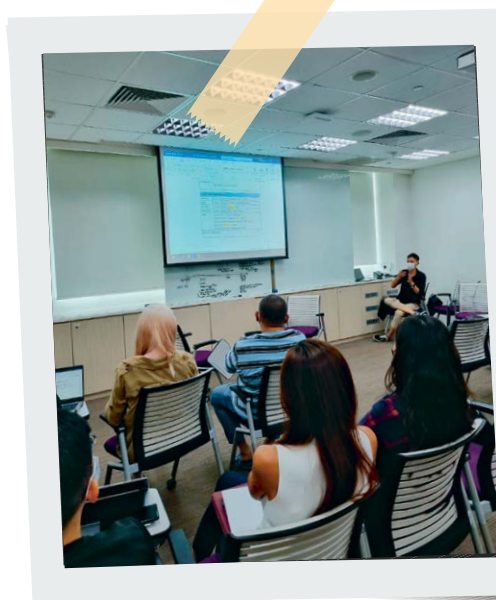
STRENGTHENING PSYCHOSOCIAL SUPPORT ACROSS SETTINGS

Boosting Community-Based Mental Health Support For Youth

The Institute of Mental Health (IMH) has been collaborating with Ministry of Health (MOH) and the Agency for Integrated Care (AIC) to train Youth Community Outreach teams (CREST-Youth) and Youth Integrated Teams (YITs) to conduct mental health screening and assessment for youths since 2020. In 2023 and 2024, the focus will be on developing a standardised national training curriculum to be used with youths who have mild to moderate mental health conditions. This will be done using Community Health Assessment Team's (CHAT) mental

health screening and assessment curriculum for CREST-Youth and YITs, as well as the Supporting Youth in Community (SYiNC) training curriculum as reference.

SYiNC is a three-year President's Challenge-IMH pilot project, where IMH will partner and refer cases to four Social Service Agencies (SSAs), namely Club HEAL, Singapore Association for Mental Health, Singapore Children's Society, and TOUCH Community Services, providing evidence-based intervention and psychosocial support to youths aged between



13 and 19 with mild to moderate mental health conditions: (i) those whose needs are not severe enough to be admitted into IMH but who still require community support; and (ii) those who require care after discharge from IMH.

Integrating Mental Health Into Eczema Care

About a third of dermatology patients experience some degree of mental health struggles, which include depression or anxiety. This can in turn worsen patients' skin conditions or affect their compliance with treatment. Recognising the heavy mental health burden of eczema, a multidisciplinary team at NSC introduced an initiative in August 2022 to better identify eczema patients who may benefit from psychosocial interventions. This was part of a Clinical Practice Improvement Programme (CPIP) led by a doctor, supported

by a multidisciplinary team comprising members from Pharmacy, Clinic Operations, and Care & Counselling. Following the CPIP initiative, there are plans to make depression screening a part of clinic workflows, so that patients who need help can be identified early and referred to NSC's Psychodermatology Clinic.

One-To-One Patient Peer Support

The National Centre for Infectious Diseases (NCID) launched a pilot one-to-one patient peer support programme between August 2022 and July 2023, to enhance the socio-emotional coping of patients living with HIV. Since its inception, three patient peer leaders have been recruited and a few patients have agreed to participate in the programme. The programme is jointly led by NCID's Care and Counselling department and HIV Programme.



OPTIMISING RESOURCES FOR VALUE-ADDED CARE

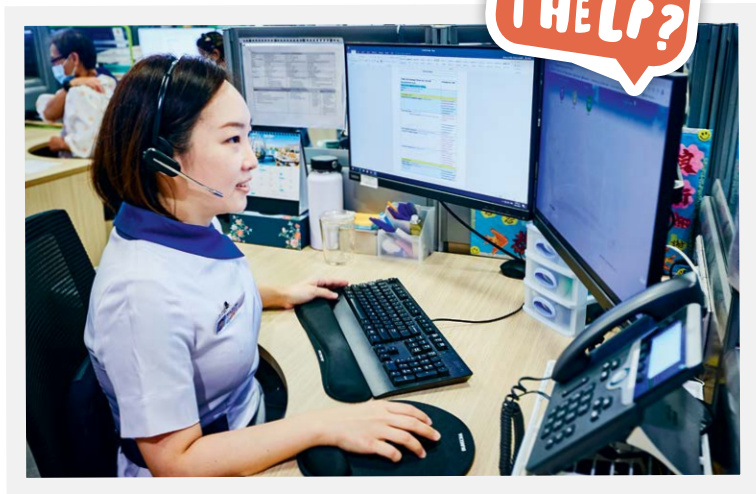
Telehealth & Integrated Network (THINK) Centre

For patients who have been discharged from a hospital stay, transiting home may sometimes be challenging. To support them on their journey to recovery, Yishun





LIVING WITH ILLNESS



GOING 3D

In November 2022, TTSH officially launched the Medical 3D Printing Centre. Equipped with more than 10 machines, the centre enhances patient care and medical education through the creation of surgical jigs, anatomical models, and prostheses. Meeting diverse and unique needs of patients, it developed Singapore's first 3D-printed nose prosthesis for a patient who had skin cancer on the nose, a functional 3D-printed finger prosthesis for a patient who lost his last finger in an accident, and cranial caps for patients who have undergone craniotomy.

Health launched the Telehealth & Integrated Network (THINK) Centre in November 2020.

THINK Centre is a nurse-led service, which augments Yishun Health's existing hospital-to-home programme and supports post-discharge patients who do not require home visits and can be supported through telephone calls. It provides a supportive framework that includes health status monitoring, patient enablement, and case management. Through its 24/7 tele-triage hotline, THINK Centre staff direct patients to accessible, appropriate, and timely care.

As such, the centre facilitates appropriate utilisation of healthcare resources at the system level, by reducing unnecessary Acute & Emergency Care attendances for non-emergency scenarios, freeing capacity for those who need it more, and ensuring that patients who develop serious adverse events seek timely and appropriate care. THINK Centre has since managed a total of 4,769 patients as of July 2023.

Cancer Care Line

The Cancer Care Line, operationalised at TTSH in October 2022, is a phone service that allows cancer patients to receive timely advice

from oncology-trained nurses on their symptom-related enquiries during clinic operation hours. Nurses can make referrals to other healthcare professionals, such as dietitians and medical social workers, to support patients' cancer treatment, where required.

This service is focused on educating and empowering patients with self-care skills, and improving turnaround time for timely symptomatic management without the need to escalate queries to doctors. With this channel, unnecessary visits to the ED could be reduced while facilitating necessary urgent emergency care.

NSC Pharmacist Clinics Reduce Patients' Out-Of-Pocket Costs In Chronic Disease Management

NSC Pharmacist Clinics, which bring together clinical pharmacists and specialists to co-manage chronic dermatology patients, was introduced in 2021 to improve care and optimise healthcare resource utilisation. These clinics review patients who have chronic stable eczema, mild acne, mild urticaria,



and mild psoriasis, as well as eczema patients newly-initiated on dupilumab therapy, and acne patients stable on isotretinoin treatment. Collaborative practice agreements have been established to ensure consistent, high-quality care delivery.

Since its launch, Pharmacist Clinics have demonstrated improvements in healthcare manpower resource allocation. Clinical pharmacists assess patients, engage them in shared decision-making on treatments, prescribe medications, and monitor for efficacy and adverse effects. As a result, each Pharmacist Clinic consultation opens up one dermatology specialist appointment for complex cases. This interprofessional co-management care model has reduced patients' out-of-pocket payments by about 45 per cent.

By the end of FY2022, the clinical pharmacists co-managed a total of 82 patients, with Patient Reported Outcome Measures (PROM) at Pharmacist Clinics similar to those at dermatologist clinics. Patient Reported Experience Measures (PREM) — that includes patient satisfaction with the care experience — were also positive.

Nurse-led Service For Oncology Care

The Oncology Care Service at TTSH led by Specialty Nurse Clinicians delivers holistic, integrated supportive care across the oncology care continuum. The care team includes surgeons,



oncologists, nurses, and allied health professionals, who collectively oversees the progress and identify patients' unmet needs to facilitate seamless continuity of care and interventions for complex head and neck cancer cases. The chairside and tele-reviews of this service started in September 2021, with clinic sessions operationalising in October 2022. Services include pre-chemotherapy counselling, symptoms review, post-treatment follow-ups, and Advance Care Planning (ACP) discussions for patients undergoing chemotherapy treatment.

Minimally Invasive Surgical Therapy (MIST) For Benign Prostatic Hyperplasia

The Urology department at KTPH introduced Minimally Invasive Surgical Therapy (MIST) — REZUM therapy — for Benign Prostatic Hyperplasia (BPH) in 2021, and since

2022, a full suite of MIST with the addition of Prostatic Urethral Lift (UroLIFT) has been made available. These low-morbidity procedures allow patients to be discharged on the same day and negate the need for frequent follow-ups, without medication side effects such as postural hypotension and sexual dysfunction.

Furthermore, these procedures can be performed under local anaesthesia, and thus, are suitable for patients who are unfit for general anaesthesia. By the end of 2022, 18 patients with BPH had experienced MIST without major complications. Importantly, all patients showed improvement in their lower urinary tract symptoms and urinary flow rate. These outcomes were comparable to standards reported in landmark publications.



SINGAPORE PRIMARY CARE CONFERENCE 2023

Held in March 2023, the inaugural Singapore Primary Care Conference (SPCC) 2023 covered a spectrum of topics relevant to primary care practice. Themed 'Strength in Unity: New Frontiers in Primary Care', the hybrid conference was co-organised by NHGP, the College of Family Physicians Singapore,

National University Polyclinics, and SingHealth Polyclinics.

Attended by more than 700 participants, the event featured four plenary lectures, five symposiums, and pre-conference workshops. A polyclinic learning visit was also organised for General Practitioners to gain a

better understanding of the multidisciplinary team-based approach for the delivery of patient care. Another key component of the conference was the research competition, which saw NHGP clinch six out of the top nine prizes under the Oral and Poster Presentation categories.