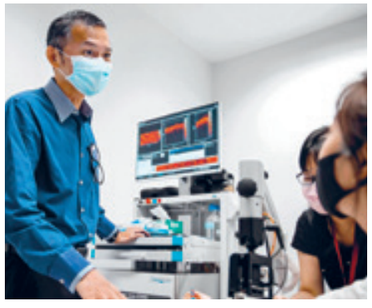
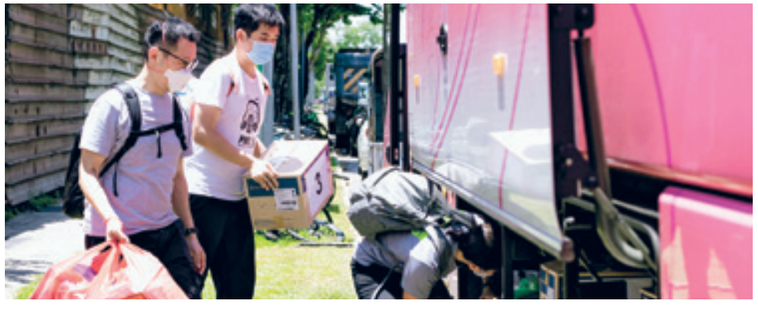
"MANY PEOPLE ASK ME, 'DID YOU EXPECT EVERYONE TO DO THEIR JOB?' MY ANSWER IS, 'YES'. **WHEN WE ARE GIVEN A MISSION AT NHG, EVERYONE STEPS UP.** THIS CRISIS HAS SHOWN THAT WE HAVE A VERY GOOD TEAM ON THE GROUND — GOOD LEADERSHIP AT EVERY LEVEL. I AM VERY THANKFUL FOR THAT."

Professor Philip Choo Group CEO, NHG

NATIONAL HEALTHCARE GROUP HQ



POPULATION HEALTH

NHG is committed to fostering and improving the overall health outcomes of over two million residents in Central Singapore. At the height of the COVID-19 pandemic, NHG leveraged on technology and used innovative approaches to ensure residents received integrated care.

TRANSFORMING DIABETES CARE

PUTTING A 'DEFINITE' FOOT FORWARD

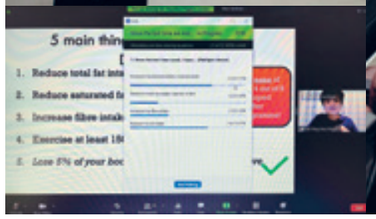
In June 2020, the **D**iab**e**tic **F**oot **in** Pr**i**mary and **Te**rtiary (DEFINITE) Care programme was launched with funding from the Population Health Grant. DEFINITE Care is a first-of-its-kind programme that aims to coordinate multidisciplinary care across Primary and Tertiary clinical settings for patients with diabetic foot ulcers (DFU) to prevent diabetes-related lower limb amputations. This in turn lowers the disease burden of DFU within NHG and Singapore. Services for patients with DFU are integrated across National Healthcare Group Polyclinics (NHGP), Tan Tock Seng Hospital (TTSH), Khoo Teck Puat Hospital (KTPH) and the upcoming Woodlands Health (WH).

The DEFINITE Care team engaged more than 60 healthcare professionals from NHG Institutions to form a multidisciplinary DFU care team (comprising Vascular Surgery, Endocrinology, Orthopaedics Surgery, Primary Care, Podiatry, and Nursing). Under the programme, a new role, Diabetic Foot Coordinator (DFC), will ensure care integration, improved monitoring and patient adherence, and improved patient outcomes across primary and tertiary care. A DEFINITE Registry was established, in collaboration with NHG's Health Services & Outcomes Research (HSOR) Department, which analysed the cost-effectiveness, cost-utility, and long-term sustainability of the programme. This would help facilitate the scale and spread of the model beyond NHG to other clusters. The DEFINITE Care programme partnered the Lee Kong Chian School of Medicine (LKCMedicine), Skin Research Institute of Singapore (SRIS), Agency for Science, Technology and Research (A*STAR), and industry collaborators to study the efficacy of a patient-centric wound care app. This enabled the tracking and monitoring of wounds, and early detection of deterioration by leveraging Artificial Intelligence (AI) and deep learning via wound image analysis, in order to prevent diabetes-related amputations.

Preliminary data showed more than 2,800 patients benefitting from the programme to-date. Minor and major amputation rates have dropped, and diabetes and hyperlipidaemia control among DEFINITE patients has improved.

Top: A multidisciplinary team from KTPH, including vascular surgeons and podiatrists, help evaluate and care for patients with diabetic foot ulcers.

Above: A podiatrist from NHGP educating a patient with diabetes on foot health.



WAR ON DIABETES COMMUNITY INTERVENTION PROGRAMME

Since the COVID-19 pandemic, the War on Diabetes (WOD) Community Intervention Programmes (CIP) team has re-organised its programmes and adopted digital tools to pivot to online learning. This included adjusting the structure, timing, duration, and content of the programmes, to heighten engagement and ensure desired outcomes.

WOD CIPs are now conducted onsite and online.

A COMMUNITY APPROACH TO MANAGING POPULATION HEALTH

CONTINUING CARE WITH TELEHEALTH SERVICES

Yishun Health's Population Health and Community Transformation (PHCT) team continued to help residents manage their chronic conditions by increasing the number of Community Nurse Post (CNP) sessions, leveraging technology, and conducting teleconsultations. The service catered to two groups of resident patients: seniors with stable long-term conditions, and seniors with more complex issues who required closer medical supervision. The PHCT team also piloted a Telehealth Kit for residents who did not have digital devices. The kit consists of a tablet and health monitoring devices, such as automated blood pressure monitors, thermometers, and weighing scales. This allowed residents to consult nurses on their conditions remotely.

Between April and September 2020, PHCT reached out to 1,330 residents.

FOSTERING SOCIAL CONNECTEDNESS

Yishun Health collaborates with the health and social service sector to address critical health determinants so that targeted efforts are made to sustain capacity and cost, and facilitate community re-integration. Its Regional Teams, consisting of community nurses, regional connectors, Allied Health Professionals, administrators, and local community partners, engage residents where they live, work, and play. These Regional Teams build connections with residents, facilitate sustainable community-driven programmes, and activate and empower residents to take ownership of their health and well-being. The Regional Teams also identify potential areas of health inequity using population and health utilisation data.

Seniors monitor their chronic conditions and participate in activities at the Wellness Kampung.

Building a Culture of Self-help and Mutual Care

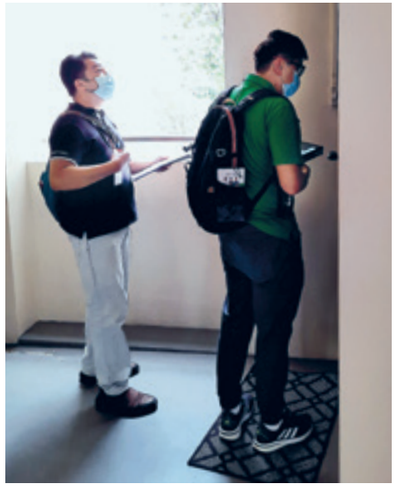
A culture of self-help and mutual care, where residents actively participate in community activities, elicits a sense of belonging, develops social connectedness, and invokes pride and ownership. Such a community grows in resilience and is equipped to respond to crisis effectively.

CARING FOR PATIENTS AT HOME

To continue caring for patients transiting from hospital to home and relieve the surging demand for hospital beds, the Yishun Health Ageing-In-Place Community Care Team (AIP-CCT) ramped up its capacity to care for more patients with medical needs at home. The AIP-CCT redesigned its service to include intensive and continuing home rehabilitation for Hip Fracture, Orthopaedic, Neurology, and General Medicine patients. From April to September 2020, there was a 21 per cent increase in patient enrolment, as well as a 30 per cent increase in home visits made by the team as compared to FY2019.

SUPPORTING THE ELDERLY AND VULNERABLE

In April 2020, the Yishun Health PHCT team partnered GeriCare and various departments to manage COVID-19 cases among the frail and vulnerable in nursing and welfare homes. The team trained staff in swabbing, outbreak management, and infection control, and helped these homes implement safety measures against COVID-19 transmission. At the height of the pandemic, about 1,400 swab tests were conducted on residents and staff of these homes.



The WH team doing house visits and conducting health and wellness talks via Zoom.

BUILDING PARTNERSHIPS

WH has been serving and engaging residents in Northern Singapore since 2016. During the Circuit Breaker in 2020, WH collaborated with community partners to stay connected with patients and monitor their health.

Partners included the Ministry of Social and Family Development (MSF), SATA CommHealth, the Asian Women's Welfare Association (AWWA), Muis, MENDAKI, MESRA (M3), Masjid Yusof Ishak, and schools such as Christ Church Secondary School, Riverside Secondary School, as well as Republic Polytechnic and Nanyang Polytechnic.

Through these collaborations, WH reached out to more than 500 residents and 2,000 students virtually and through house visits in 2020. Residents who needed support were referred for follow-up at Community Nurse Posts (CNPs). SATA CommHealth's Doctors-On-Wheels sessions were introduced to make primary care easily accessible to the neighbourhoods.

MINI MEDICAL SCHOOL WEBINAR

Yishun Health's long-running Mini Medical School (MMS) reached one of its largest audiences to-date via its first online forum. Some 341 "students" signed up for the *Covid-19, 20-21…* webinars held in December 2020, which covered risk factors in COVID-19 transmission, public health measures to curtail its spread in Singapore, the psychological resilience of community, as well as community preparedness in growing safer together. The event featured speakers from the National Centre for Infectious Diseases (NCID) and the National University of Singapore (NUS) Saw Swee Hock School of Public Health.

PROVIDING BETTER ACCESS TO CARE

ANG MO KIO SPECIALIST CENTRE

Nestled in Central Zone, the Ang Mo Kio Specialist Centre (AMKSC), set up by TTSH in close collaboration with primary care and community partners, opened in December 2019. AMKSC provides holistic specialist care that includes:

- An eye clinic that accepts referrals from GPs for patients with stable chronic eye conditions.
- Additional diagnostic hearing tests for residents who have abnormal hearing results, following basic functional screening.
- Integrated musculoskeletal services where patients from polyclinics or GPs are triaged to consult occupational therapists/ physiotherapists for timely treatment before their Specialist Outpatient Clinic (SOC) appointment.
- Trans-disciplinary care where clinical diabetes educators, as well as GPs, collaborate to support patients with Diabetes Mellitus (DM).
- Co-located integrated health and social care services.

AUGMENTING CARE AND EMPOWERING RESIDENTS

WH introduced several initiatives to augment care in the community and empower residents to take charge of their own health.

- The Urgent Care Centre (UCC) at Kampung Admiralty (UCC@Admiralty) is equipped to handle urgent and acute conditions, reducing the need for residents to visit the hospital emergency department. It has seen more than 4,000 patients between September 2020 and April 2021.
- In September 2020, WH launched its GPFirst Programme in the North to encourage residents to first seek care for non-emergency conditions from their family doctor. To-date, WH in partnership with Yishun Health has engaged 139 GPs in Woodlands, Sembawang, and Yishun, and recruited 81 for the programme as of June 2021. Between September 2020 and February 2021, 1,205 GPFirst referrals were made to the UCC@Admiralty and KTPH's A&E.
- In FY2020, WH Community Nurses provided care to more than 240 unique residents at the eight CNPs. Five CNPs have started to offer teleconsultation.

ADVOCATING MENTAL WELLNESS

EQUIPPING COMMUNITY PARTNERS

The **A**ssessment **S**hared **Ca**re **T**eam (ASCAT) is an adult community psychiatric programme which manages patients in the community with mild to moderate mental health conditions. The Institute of Mental Health (IMH) ASCAT team, comprising doctors, nurses, Medical Social Workers (MSWs), and case managers, trains and supports polyclinic doctors through co-consultations.

In FY2020, ASCAT hosted one training workshop and numerous case discussions with community partners. 88 per cent of the community partners reported they achieved an 80 per cent improvement in their understanding on mental health. 100 per cent of clients who were enrolled in the ASCAT programme reported an increase in their quality of life as compared with 63 per cent of clients in FY2019.

SUPPORTING SENIORS WITH MENTAL HEALTH ISSUES

In FY2020, the Aged Psychiatry Community Assessment and Treatment Service (APCATS) — a community-oriented psycho-geriatric outreach service that promotes ageing-in-place for seniors with mental health issues — conducted 75 first visits and 881 repeat visits to seniors who faced challenges accessing mental health services. This helped reduce caregiver burden and prevented unnecessary admissions, especially during the COVID-19 pandemic.

The team implemented virtual consultations with patients at home or in nursing homes. In addition, community partners were equipped with knowledge and skills in depression and dementia care.

HELPING PATIENTS TO REINTEGRATE INTO THE COMMUNITY

In 2015, IMH collaborated with the Agency for Integrated Care (AIC) and started the *Aftercare Programme* for one pilot site and one community partner to provide intensive case management and care planning for cases in the community with complex needs. In tandem with close monitoring, patients adhered more to treatment and sustained good mental health. As a result, readmission rates and emergency room visits declined. IMH also worked with community partners to ensure patients stayed on track to recovery.

As of March 2021, IMH collaborated with five community partners and enrolled 1,842 patients in the programme, as compared to 1,540 patients in FY2019.

PROMOTING HEALTH EDUCATION FOR THE POPULATION

To encourage people to embrace healthier lifestyles, National Healthcare Group Polyclinics (NHGP) continued to organise several virtual events to engage and educate patients and the population.

FRAILTY MANAGEMENT WEBINAR

In September 2020, NHGP held its first live webinar, titled *Living Well in Your Golden Years*, sharing tips on improving nutrition and recommended appropriate physical activities to help seniors keep frailty at bay.

INTEGRATING MENTAL HEALTH INTO PRIMARY CARE

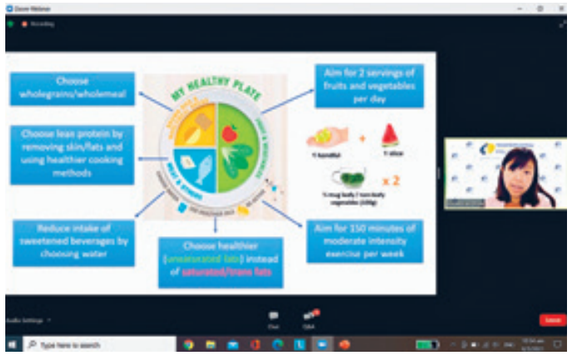
On World Mental Health Day in October 2020, NHGP partnered the Women's Executive Committee of Nee Soon East Community Club and the People's Association (PA) Women's Integration Network (WIN) Council to conduct a talk, *Manage Your Mind & Fight the Fear*. It discussed management of individual mental health and anxiety.

NHGP also worked with TOUCH Community Services (TCS) between October and December 2020 to organise a series of talks, *The 2 Challenges in Senior Years — Dementia and Depression*. Conducted in English, Mandarin, and Malay, the session covered how to enhance quality of life and age healthily in the community in spite of these two conditions.

RAISING AWARENESS OF CHRONIC ILLNESSES

In December 2020, NHGP partnered TCS to organise a session on diabetes management. Titled *Better Sleep for Better Diabetes Management*, it provided insights into the inter-relationship between stress, sleep, and diabetes, and tips on sleep hygiene.

To commemorate World Obesity Day 2021, NHGP collaborated with KTPH and TTSH to host a webinar, *Health 4 Life*. The webinar shared the weight management programmes provided by NHGP, such as *Lighter Life and FitterLife*, and the role of nutrition and sustainable eating habits in maintaining a healthy weight.



COLORECTAL CANCER AWARENESS MONTH 2021

In March 2021, in conjunction with *Colorectal Cancer Awareness Month*, NHGP held a webinar, supported by the Singapore Cancer Society (SCS), on how to lower one's risk for the condition by adopting healthy lifestyle habits and going for regular screening. The session discussed the symptoms and risk factors for colorectal cancer, and shared the importance of diet and exercise in helping reduce the risk.

Below: Speakers sharing tips on managing mental health during the *Manage Your Mind & Fight the Fear* virtual talk.

BOOSTING ACCESS TO DIAGNOSTIC SERVICES

IMPROVING AWARENESS ON MAMMOGRAM SCREENING

In November 2020, National Healthcare Group Diagnostics (NHGD) created a "three-bead keychain" as a visual tool to educate and promote the importance of early detection of breast cancer through mammogram screening. NHGD also implemented a new self-service appointment system that improved community access to mammograms. The new E-bookings increased by 70 per cent within the first month of the launch.

BONE MINERAL DENSITY SCREENING IN THE COMMUNITY

NHGD collaborated with the People's Association (PA) and SportSG to provide Bone Mineral Density (BMD) services in the community. Residents of Yishun, Woodlands, and Geylang could go for scans on-board NHGD's Mobile BMD conveniently located at Nee Soon East Community Club (CC), Fuchun CC, and Geylang East Swimming Complex. The BMD scan aids in the early detection, diagnosis, and treatment of osteoporosis and risk of bone fracture.

GUARD AGAINST THE

3 SILENT KILLERS

HOW LHS CAN DAMAGE YOUR HEALTH.

+ DYSLIPIDAEMIA

An abnormal amount of lipids (fats) in the blood. The most common type is hyperlipidaemia – a condition where there is an elevated level of triglycerides, consisting of low-density lipoprotein (LDL, the 'bad' cholesterol) and high-density lipoprotein (HDL, the 'good' cholesterol).

+ HYPERTENSION

When your blood pressure reading shows 130/90 mmHg or higher. A 2017 Guidelines published by the American College of Cardiology and the American Heart Association, classify readings above 140/90 mmHg as Stage 2 hypertension.

+ SMOKING

Is not good for you, even casually. A 2018 study in the British Medical Journal (BMJ) found that people who smoke one cigarette a day carry a greater risk of developing coronary heart disease and stroke than expected.

Why are LHS called SILENT KILLERS?

LHS are considered chronic diseases that collectively increase the risk of **stroke, heart disease, diabetes, and kidney disease**. If not managed well, LHS can result in long-term disability and even death. These diseases do not present any visible signs or symptoms even when they are quite severe, and hence are called 'silent killers'. For example, causes of most cases of 'sudden' heart attacks are usually linked to LHS and in truth, do not actually come suddenly. They can be traced back to long-term struggle with dysLipidaemia, Hypertension and/or Smoking (LHS).

Uncontrolled LHS can lead to major health damages.

- **Coronary Artery Disease (CAD)**
  Major blood vessels to the heart become damaged or diseased. If severe, this condition can cause a heart attack.
- **Heart failure**
  The heart becomes weakened after long periods of pumping harder against a high-pressure system in the blood vessels.
- **Stroke**
  It is caused by the narrowing of blood vessels to the brain. The most common type, ischaemic stroke, occurs when a blood clot blocks the flow of blood and oxygen to brain cells. In other cases, a weakened blood vessel may burst and bleed into the brain causing a haemorrhagic stroke.
- **Peripheral artery disease**
  The narrowing of blood vessels decreases the oxygen supply to tissue in the arms and legs, potentially leading to skin ulcers, infections, poor wound healing, or the need to have a leg or foot amputated.
- **Kidney failure**
  Caused by damage to tiny blood vessels within the kidney filtration system.

KNOW YOUR READINGS:	SYSTOLIC TOP NUMBER	mmHg	DIASTOLIC BOTTOM NUMBER
Normal	BELOW 120	AND	BELOW 80
Elevated	120-129	AND	BELOW 80
High blood pressure STAGE 1	130-139	OR	80-89
High blood pressure STAGE 2	140 OR HIGHER	OR	90 OR HIGHER
Hypertensive crisis	ABOVE 180	AND/OR CONSULT YOUR DOCTOR IMMEDIATELY	ABOVE 120

Produced by NHG Group Corporate Communications

Prevent LHS from creeping into your life

KNOW YOUR READINGS

When you undergo a lipid panel, which is a set of tests that checks the amount of lipids in your blood, you will receive four measurements, including your total cholesterol level. That in itself is less important than the other three readings, which show you the breakdown of the levels of good and bad lipids. Below are the optimal lipid levels recommended by the Health Promotion Board (HPB) for the general population:

- TOTAL CHOLESTEROL: less than 200 mg/dL or 5.2 mmol/L
- LDL CHOLESTEROL: less than 130 mg/dL or 3.3 mmol/L
- HDL CHOLESTEROL: more than 40 mg/dL or 1.0 mmol/L
- TRIGLYCERIDES: less than 2.3 mmol/L

ADOPT A HEALTHY LIFESTYLE

- **Eat a healthy diet that meets your nutritional needs.**
  - Include a variety of fruits and vegetables that make up the colours of the rainbow. They are high in potassium, magnesium, and fibre, all of which can help lower blood pressure.

- **Limit salt intake**
  - The recommended daily salt intake is 2,000 mg (1 teaspoon).
- **Moderate alcohol consumption**
  - Apart from raising blood pressure, the calories in alcohol can lead to weight gain – a known risk factor for high blood pressure.
  - Limit intake to no more than two standard drinks a day for men, and no more than one standard drink a day for women.
    -A standard drink translates to 330 ml of beer, 100 ml of wine or 30 ml of hard liquor.
- **Incorporate a regular routine for physical activities that you enjoy**
  - Just 30 minutes of moderate exercise five to seven days a week can help to lower your blood pressure.
    -Exercises include, a brisk walk, a swim, or even some very diligent mopping.
  - By maintaining a body mass index (BMI) of 23 kg/m² or lower, you can lower your risk of high blood pressure significantly.

- **Quit smoking**
  - Nicotine raises your heart rate and blood pressure. If you don't smoke, don't take it up. If you are a smoker, here is another reason to quit. See below on 'Tips to Stop Smoking'.

KNOW YOUR RISK LEVEL THROUGH REGULAR HEALTH SCREENING

- **Your family physician can advise you on proper management and/or treatment, as hypertension and hyperlipidaemia can be effectively managed with medication, as well as adopting a healthy lifestyle.**

REDUCE STRESS AND PREVENT BURNOUT

- Get enough sleep.
- Practise self-care – spend time on your hobbies and take time to rest.
- Find trusted friends, family, or colleagues and talk out your problems.
- Manage your time – set clear boundaries between work and personal time. For example, limit the hours of overtime and place restrictions on how often you check on your work email.
- Take heed of warning signs of burnout, and slow down.
- Take part in an employee assistance programme.

TIPS TO STOP SMOKING

- **DECIDE TO QUIT.** Choosing to quit is a good first step.
- **GET PROFESSIONAL HELP.** Speak to a pharmacist to get advice on your "quit smoking" journey.
- **TELL YOUR FRIENDS AND FAMILY.** Get the encouragement you need by sharing your decision to quit smoking with your loved ones.
- **KNOW WHY YOU NEED TO STOP.** Write down your reasons for quitting, such as the arrival of a baby or for your family's health. This can sustain your motivation during tough times.
- **BE REALISTIC.** Quitting smoking is a process, and it will take time. Be open to various smoking cessation methods that can help curb withdrawal symptoms.

National Healthcare Group
Adding years of healthy life

Tan Tock Seng Hospital
Khoo Teck Puat Hospital
Woodlands Health
Institute of Mental Health
Yishun Community Hospital
National Healthcare Group Polyclinics
National Skin Centre
National Centre for Infectious Diseases
Admiralty Medical Centre
Urgent Care Centre @ Admiralty
National Healthcare Group Pharmacy
National Healthcare Group Diagnostics
NHG College