

# Bring Manuel Community

Yearbook 2020/2021





### FOREWORD BY CHAIRMAN

Woodlands Health (WH) was formed six years ago, with a vision to create a new health ecosystem that will serve residents in the North. I am encouraged by the progress we have made so far, from infrastructure development to the work that has already started to build a progressive model of care. Working alongside our partners and the community, we will provide support to residents and empower them to maintain good health and to live well. In a changing landscape arising from a rapidly ageing population and with a growing prevalence of chronic medical conditions such

as diabetes, we aim to develop greater healthcare capabilities. This will enable WH to cater

to our residents' future health needs, from hospital to home.

2020 was undoubtedly a most challenging year. The worldwide pandemic which unfolded and hit our shores in early 2020 required us to marshal all our resources to contribute to the national solidarity and resilience efforts, even before we opened our hospital and healthcare facilities. These included the rapid set-up and scaling up of the Community Care Facility (CCF) at D'Resort and Singapore EXPO, and doing our part in the screening and patient care efforts at the various Public Health Institutions where we are stationed. At the same time, we continued to look after our WH Family in the midst of disruptions and changes which

COVID-19 brought upon on all aspects of our lives.

It was a trial by fire for our young organisation, and I am heartened to see everyone rallying and pulling through as ONE WH Family. I am proud of WH's agile and positive responses, as well as grateful to agencies, organisations and persons who have supported and guided us.

The pandemic has taken its toll on the world but we have also not wasted the opportunity to learn from this crisis, apply the lessons learnt to improve our care model, and ensure that we are better prepared to look after our patients when we open.

#### **Jennie Chua**

Chairman, Woodlands Health Campus Development Board Committee

### **MESSAGE FROM GCEO**

The National Healthcare Group (NHG) marked its 20th anniversary on 1 April 2020 at an unprecedented time when the COVID-19 pandemic hit our shores. In response, the NHG Family rallied as one, breaking new ground under extraordinary circumstances and transforming the way we deliver care.

When COVID-19 outbreaks were detected among the migrant worker population in Singapore, Woodlands Health (WH) rose up to the national call to set up the first of its kind Community Care Facility (CCF) at Singapore EXPO.

Medical teams at the CCF helped manage thousands of cases with mild symptoms and eased the load of hospitals across Singapore. With WH as the medical lead, supported by public and private partners, expertise and capabilities were harnessed and synergised across NHG. These ranged from clinical and diagnostic services, to procurement, manpower, logistics, and administration support.

I recall visiting the CCF at Singapore EXPO just before it received the first patient. The experience was surreal as I witnessed what was usually an event hall bustling with exhibitors, converted to accommodate and treat COVID-19 patients. I am grateful for the staff's hard work, commitment and late nights that enabled the CCF to be set up in a record time of just five days - it was a tremendous feat and I am proud of all of you. The CCF was a team effort and resolutely demonstrated our collective leadership, resilience, and grit. This remains the DNA of NHG - we met the

crisis undaunted, and emerged stronger as one united healthcare family.

Over the past year, the whole-of-nation response has kept Singapore's COVID-19 mortality low. Though the situation is currently under control, we cannot rest on our laurels. Let us continue to stay vigilant and practise good social responsibility even as more of our population receive their COVID-19 vaccination. This battle is far from over, but I am confident that WH, together with other NHG Family members, are girded and ready for any challenges that lie ahead.

Professor Philip Choo Group Chief Executive Officer National Healthcare Group



### **MESSAGE FROM CEO**

In a year that has been defined by the coronavirus pandemic, it had also presented us with a rare opportunity to witness how the WH Family rose to the challenge when called upon. From setting up the first Community Care Facility (CCF) at D'Resort and later the Singapore EXPO, to our pre-operations wards and at our various nested locations, everyone worked tirelessly to ensure the wellness of patients and the community. Our pre-opening team may be young but we stood strong with our healthcare family during our time of need.

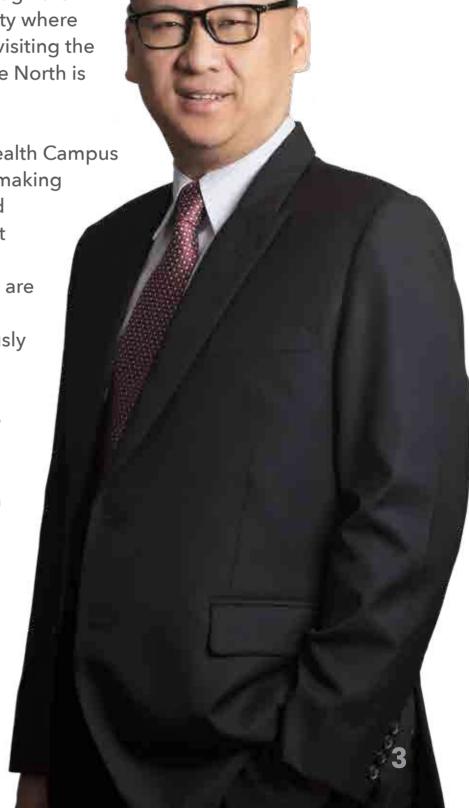
Indeed, the work we did this year embraces our values of People Centredness, Integrity, Compassion, and Stewardship. It is in this spirit that WH has continuously adapted to the evolving landscape to reach out to the community.

In view of safe distancing measures, we adopted digital technologies for virtual consultations and conducted exercise sessions and community talks to make sure that no one gets left behind in this crisis of a generation. We pushed ahead with our plans to expand the care ecosystem for residents in the North by collaborating closely with General Practitioners (GP) through the GPFirst programme, and the opening of the Urgent Care Centre at Kampung Admiralty where patients with non-life threatening urgent conditions can receive treatment instead of visiting the emergency department. Our mandate to provide good health to the community in the North is already ongoing.

The big challenge before us is to establish a safe, integrated, effective and efficient health Campus and health system for all patients we serve in the northern part of Singapore. We are making good progress towards our Campus opening in 2023. Construction has re-started and our contractors are pushing as hard and fast as possible. We have also made excellent progress on the recruitment front, achieving more than 90% of our target for the year despite the many challenges we faced. As a very young and forming organisation, we are focusing heavily on training, development and culture building within the WH Family. This will be critical as we prepare for the Campus opening, which will be a tremendously complex undertaking.

I am very thankful for the wonderful and tremendous guidance and support which we have received from our Woodlands Health Campus Development Board Committee, led by our Chairman Jennie Chua. There have also been numerous individuals who have voluntarily come forward to help WH in many ways. Your contributions are much appreciated. Last but not least, I'd like to thank and express my deepest appreciation to the collective leadership of WH, many of whom have stepped forward and have been courageous enough to start a new team from scratch, and forge a new future that will shape the way we deliver healthcare in the North.

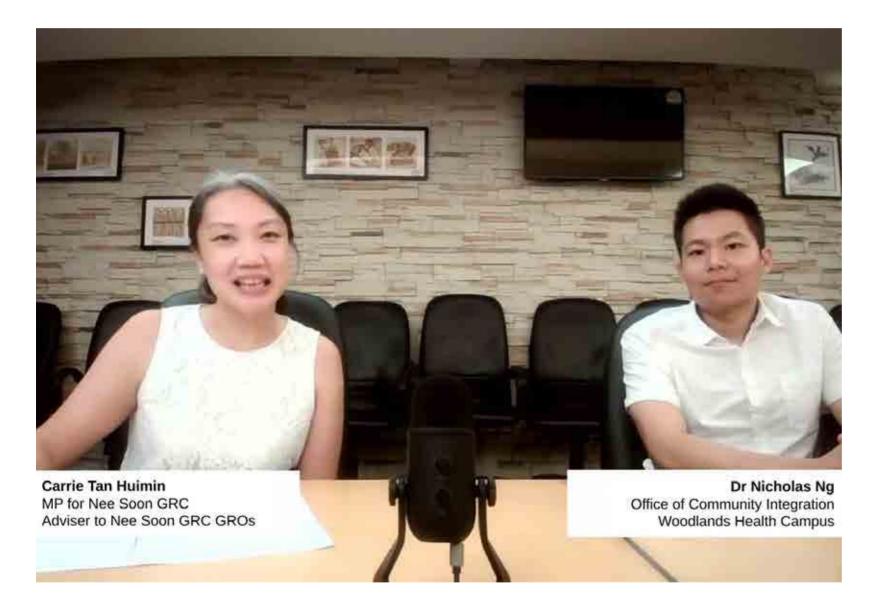
**Dr Jason Cheah**Chief Executive Officer
Woodlands Health



### COMMUNITY OUTREACH

Even before WH opens, we have been serving and engaging residents in the North since 2016. Community care and outreach is a key aspect of our care model that aims to provide care beyond hospital walls. During the circuit-breaker period, although face-to-face interactions were restricted, we continued to collaborate with partners to connect and engage with residents.

We collaborated with partners such as the Ministry of Social and Family Development, SATA CommHealth, AWWA, M³ (Muis, MENDAKI, MESRA), Masjid Yusof Ishak and seven schools, including Christ Church Secondary School, Riverside Secondary School, Republic Polytechnic and Nanyang Polytechnic. In total, we reached out to **more than 500 residents and 2,000 students** through webinars, digital engagement sessions, and house visits during the year.

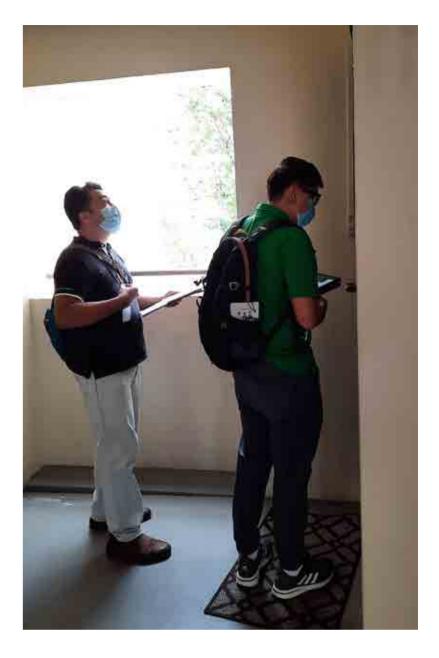




17 health and wellness talks were conducted via Zoom with the WH team providing insights on nutrition, wellness tips and exercise activities to help seniors stay active and connected.



WH and its partners visited about **120 households in the North** to better understand their health status and needs, while adhering to safe distancing measures. Residents who needed support were referred for follow-up at our Community Nurse Posts. SATA CommHealth's Doctors-On-Wheels sessions were introduced into neighbourhoods for those who needed primary care closer to home.





**40 participants** from acute and community hospitals, nursing homes, community partners and organisations from disability sectors were trained in a behavioural health course developed by WH's Medical Social Work team and Care Corner Family Service Centre.

### ACCESS TO CARE

To empower residents to take charge of their health needs, WH introduced the GPFirst Programme in the North and opened the first community-based Urgent Care Centre (UCC) at Kampung Admiralty in September 2020. Together with eight Community Nursing Posts, these initiatives help to encourage the right health-seeking behaviours by providing residents with more healthcare options and resources sited within easy reach.



The UCC makes urgent care more accessible for residents living nearby, reducing the need to visit the hospital emergency department. The UCC is equipped to handle urgent and acute conditions, and has seen **more than 3200** patients since it opened.

WH worked with General Practitioners (GPs) in the North to launch the GPFirst Programme which encourages residents to consult their family doctor first for non-emergency conditions. WH has engaged all 139 GPs in the North (Woodlands, Sembawang and Yishun). Together with Yishun Health, we recruited 68 GPs into the programme within six months. A total of 1,205 GPFirst referrals have been made to Urgent Care Centre@Admiralty (UCC@ Admiralty) and KTPH A&E from September 2020 to February 2021.







WH's Community Nurses have provided care to more than 240 residents at the eight Community Nurse Posts (CNP) throughout FY2020. Due to the pandemic restrictions, five out of the eight CNPs have resumed activities and the team has started to offer teleconsultations.

### READINESS

Across WH, everyone stepped forward to contribute to the nationwide fight against COVID-19. Our doctors, nurses, allied health professionals, as well as laboratory and pharmacy teams who are nested in various Public Healthcare Institutions (PHIs) helped to care for COVID-19 patients and supported screening and swabbing efforts. WH was called upon to set up the Community Care Facilities for COVID-19 patients at D'Resort NTUC and Singapore EXPO, which at its peak housed more than 8,000 patients, helping to alleviate the load at the acute hospitals (read about the set-up of the CCF@EXPO in the special section).





When cases of COVID-19 first emerged at nursing homes in the North, WH Community, People, Partnerships (CPP) team supported Yishun Health to perform swab tests on residents and staff.





The WH team quickly converted two of our pre-ops wards at Yishun Community Hospital to COVID-19 wards in response to the surge in patients.



When COVID-19 vaccines became available to healthcare workers, a Townhall session was held for the WH Family to provide information, address questions and allay concerns regarding the vaccine. As of March 2021, about 70% of our colleagues have completed their COVID-19 vaccination.



The Physiotherapy team worked together with colleagues from Khoo Teck Puat Hospital to produce videos to help COVID-19 patients in their recovery, including a video demonstrating sleeping in a prone position to improve breathing and oxygen level.



WH nurses trained in ICU Nursing Care volunteered and were selected to be deployed to NCID ICU to care for COVID-19 patients over a three-month stint.

### **EXCELLING IN CARE**

We continued to strive towards improving care delivery and patient experience, and are proud that our colleagues were recognised for their outstanding work and contributions.



WH organised its **first INSPIRE Congress** (INnovation, Safety, Performance, Improvement, REsearch Congress) on 6 February 2021. The Congress, which brought together teams from different specialities, discussed the importance of taking a multi-disciplinary and team-based approach to achieve survival and best outcomes for trauma patients.



The SPROUTS (Small PROjects Utilising TeamS) research grant was created to drive studies aimed at improving processes in various specialties, and to identify and tighten gaps in the patient journey which will help guide our future practice. **12 teams** were awarded this grant, receiving up to \$10,000 funding per successful application.







The Quarterly Staff Awards was launched in December 2020 to recognise colleagues who have been exemplary and had received compliments from patients and and their caregiver/family.

#### **AWARDS AND ACCOLADES:**

Dr Nicholas Chew, Chairman, Medical Board National Outstanding Clinician Educator Award

Kala D/O Narayanasamy,
Deputy Director of Nursing
President's Award for Nurses

Dr Koh Kwong Fah, Clinical Director for Training and Education **Distinguished Senior Clinician Award** 

Tan Siew Peng, Senior Nurse Clinician Nurses' Merit Award 2020

WH is proud to have six colleagues who were recognised at the National Day Awards 2020, and **71** colleagues who received awards for their service in public healthcare roles for five years and beyond.









### **GO-LIVE UPDATE**

Due to the impact of the pandemic on the construction industry, our campus construction was similarly affected and **will open progressively from 2023 onwards**. Despite the challenges in ramping up worksite manpower while observing COVID-safe measures, the construction of our campus has resumed and regained momentum.



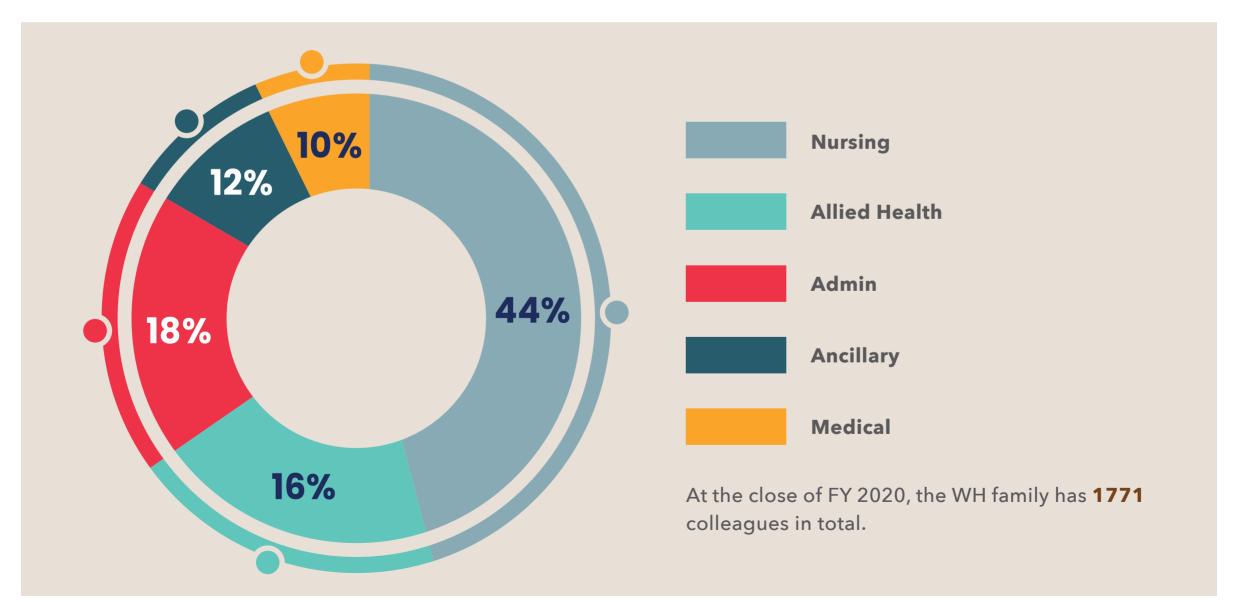




While this delay was unexpected, we are using the opportunity to refine our critical clinical and operational processes further and test them through various scenarios including pandemics. The learnings from this pandemic will help improve our readiness in dealing with future infectious disease outbreaks, while ensuring the safety of patients and everyone working within the campus.



In the lead-up to our opening in 2023, we are building a team committed to providing value-added and quality care. As part of our efforts to develop a strong Singaporean core, we have been actively engaging residents in Woodlands and its surrounding region; and participated in job fairs to attract Singaporeans who are seeking to take on roles in healthcare. They include mature workers, PMETs and recently retrenched workers. WH was able to tap on the various SGUnited initiatives to sponsor these Singaporeans to be re-skilled as healthcare workers.





# COVID-19 Special

Caring for patients at the Community Care Facility at Singapore EXPO



### INTRODUCTION

When Singapore started to see an increase in COVID-19 cases linked to the foreign workers' dormitories, the Multi-Ministry Taskforce and related agencies moved quickly to convert existing buildings into temporary accommodation for COVID-19 patients.

These were initially called Community Isolation Facilities (CIF), and Woodlands Health (WH) was involved in helping to set up one of the first CIFs at D'Resort NTUC in Pasir Ris. As case numbers grew, larger facilities were needed and the Singapore EXPO was identified as a possible venue to cohort COVID-19 positive patients with low to moderate risk. WH was called upon to be part of the multi-agency team to repurpose the EXPO and to be the medical lead for the first large-scale Community Care Facility (CCF) in Singapore.

At the time, the WH Family was either nested across various Public Healthcare Institutions or were in the midst of planning for the new Campus. When the COVID-19 crisis hit, our teams redirected focus, manpower and resources to contribute to the national pandemic efforts.

This special section pieces together the story of how the CCF@EXPO was set up in record time with the grit and determination of all parties and agencies involved, and of the multi-institutional medical team that came together despite uncertainties and unknowns to care for thousands of patients.

### A WHOLE-OF-SINGAPORE EFFORT

On Saturday (4 April 2020), a team from WH was activated to attend a meeting with Ministry of Health officials the next day. The meeting discussed plans for the CCF@EXPO, which would house and treat COVID-19 positive patients with mild symptoms until they were well enough to be transferred to a Community Recovery Facility (CRF). There was urgency for the CCF@EXPO to be set up, to alleviate the increasing patient load at the acute hospitals due to the surge in cases from the foreign workers' dormitories.

The EXPO was chosen as each hall had its own air-handling unit and its scale meant that it could eventually be able to house thousands of patients. The open concept coupled with existing essential utilities such as potable water, toilets, electricity and Internet connection allowed for flexibility and speed in converting it into a care facility. Easy access

to each hall was available via restricted-access roads, facilitating transfers while allowing strict traffic control.

A Taskforce was formed, bringing together the varied expertise and massive resources required for this mammoth task. It was made up of representatives from PSA International, Surbana Jurong, SingEx, Certis, Resorts World Sentosa (RWS), MOH, and Woodlands Health. All agencies came together with the single purpose of getting the EXPO ready as quickly as possible, and everyone understood the urgency.

For WH, there was much to do within days - from procuring medical supplies and equipment, gathering and rostering medical personnel, to establishing workflows and conducting infection control refreshers and briefings.



The WH team discussing set-up requirements at one of the EXPO halls



EXPO halls being set-up to house patients

We never had a doubt that the facility can be completed in five days - whatever was needed, happened

#### - Dr Nicholas Chew, Chairman, Medical Board

The WH team tapped on the experience of setting up the CIF at D'Resort, but one of the challenges of setting up at EXPO was the scale that was required. Besides the support of the Taskforce partners, we were also fortunate to have the assistance of our healthcare family, from the Integrated Health Information Systems (IHiS) team, to ALPS for procurement matters, NHG Diagnostics which deployed a mobile X-ray trailer on-site, as well as medical laboratories across other Public Health Institutions which responded to our requests to examine and process swab samples despite having a higher workload at the time.



The team during one of the operations briefings and huddles



NHG Diagnostics deployed a mobile X-ray trailer on-site at the CCF@EXPO

The IHiS team was crucial to the process and they were on the ground throughout, providing training and solutions which include ways to aggregate data for analysis. They developed a system where charting and prescribing could be done on an adapted electronic clinical record system that was linked to a nationwide computerised database to ensure continuity of care. IHiS also brought in and configured more than a hundred Computer on Wheels (COWS), printers, laptops and barcode scanners to provide the nursing team with guick and mobile access to the systems.

Despite being hesitant about the risks, they were constantly on the ground to troubleshoot any IT-related matter and readily assisted the clinical and nursing teams, even taking on shift hours.

As the Managing Agent, RWS applied its deep experience and capabilities in non-medical large-scale facilities management to provide a comfortable environment for patients to rest and recover. They set up a 24/7 operation command centre, with one-stop residency services which included patient admission and discharge, attending to nonmedical needs, meals arrangement and housekeeping, and supply of daily necessities for the patients. Over 2,000 RWS team member volunteers joined the medical teams in providing care for the patients.

With everyone pulling in the same direction and an unspoken understanding among partners to do everything it takes to open fast, it took just five days for two halls to be converted from scratch and ready to house up to 950 patients. The first patients were admitted on 10 April 2020, Good Friday.

It was a long but fruitful week of preparation. I'm very thankful for all the people who came together - doctors, nurses, operations, allied health, pharmacy, and external parties – and the extra hours and sleepless nights they had put in.

-Dr Wong Kirk Chuan, Chief Operating Officer

### **GETTING THE FACILITY READY**

As part of the repurposing works to prepare the halls to accommodate patients, PSA International and Surbana Jurong set about procuring and installing the necessary infrastructure to house patients such as beds, partitions, toilets and laundry areas. Doing these on a large scale in the middle of a circuit-breaker was no mean feat indeed.



Washing point for the patients

Even as the EXPO halls were quickly reconfigured from an events space to house patients, an Infection Prevention and Control (IPC) team was concurrently making sure that the facility would adhere to strict IPC standards. Not much was known about IPC in a non-hospital setting. With no IPC standard playbook to refer to, WH took guidance from Dr Kalisvar Marimuthu (Senior Consultant, Infectious Disease) from the National Centre for Infectious Diseases (NCID). As the WH IPC Chair, Dr Kalisvar had worked closely with WH IPC nurses - Ms Zhang Wei (Nurse Clinician) and Ms Wang Yang (Nurse Clinician) - to put in place the IPC measures at D'Resort. They now had to tweak and multiply those measures for the EXPO setting. They worked with all teams involved to coordinate the infrastructure and operation needs, considering how staff, patients, supply and wastes would flow through the facility.



Team discussing operating workflows

Dr Kalisvar recalled discussing with Professor Leo Yee Sin (Executive Director, NCID) about IPC plans for the EXPO, and he also sought suggestions from international colleagues with whom he had been communicating with for COVID-19 IPC guidelines. Topmost on everyone's mind was building a facility that would be safe for staff to work in and for patients to recover at, and it was not going to be an easy task.

One of the challenges was creating a unidirectional airflow in the EXPO patient halls to ensure that the clean zone is safe. This meant installing huge exhaust fans with High-Efficiency Particulate Air (HEPA) filters which had never been done before. Thanks to the ingenuity and efforts by Surbana Jurong and SingEx, the exhaust fans were installed, making it possible for the halls to receive patients.



(From left to right) Dr Jason Cheah, Dr Wong Kirk Chuan, Prof Philip Choo, Dr Nicholas Chew



Dr Kalisvar Marimuthu discussing infection control measures with the team (picture by Dr Nicholas Chew)

Once the infrastructure was in place, Dr Kalisvar and the IPC team's attention turned to managing behaviour and mindsets towards IPC practices. For the non-medical personnel working at the EXPO such as security or hospitality staff with no prior experience with IPC measures, it was necessary to provide briefings, mask fittings and PPE trainings. For example, the cleaning team going into the halls to perform their tasks were taught the correct way of wearing PPE and the proper way to dispose of waste. IPC nurses led the efforts to review and monitor IPC-related processes continuously and ensure that all staff were briefed and abided strictly by the established IPC protocols. The IPC team also received support from the WH Nursing and Ops team, as well as the IPC teams from TTSH and NCID.

#### **OBTAINING THE LICENSE TO OPERATE**

Before the CCF@EXPO received its first patient, the team had to pass the final inspection in order to obtain a medical license granted by MOH, to operate the facility. The inspection process included a walkthrough with the MOH team. All issues were addressed on the spot, and the medical license was issued to WH the next day.



The team that coordinated the MOH inspection before the medical license was issued

Coming from NCID, I recall the palpable sense of relief when the CCF@EXPO opened to receive stable patients. The EXPO model later became the guiding template for the set-up of the other CCFs.

- Dr Kalisvar Marimuthu, Senior Consultant, Infectious Disease

#### **ZONING**

The clean zone was an all access area where all staff were based and where the command centre, staff rest areas, training areas and storage rooms were located. All personnel had to wear a surgical mask in this zone.

The dirty zone was located within the halls and housed the patients. Full PPE, including an N95 mask, eye protection (e.g. goggle, faceshield, etc.), gloves, protective gown and shower cap had to be worn at all times in this zone. Equipment that had been brought into the dirty zone could not be removed without cleaning and disinfection. Before leaving the dirty zone, the staff adhered to a strict protocol including the doffing of gloves, protective gowns and caps, hand hygiene, and disinfection of their personal mobile phone if used in dirty zone. Staff had to pass through a positively-pressured area equipped with HEPA filter when leaving the dirty zone, creating a safe buffer zone.

The semi-clean zone was a buffer between the dirty and clean zones. It was a single passageway with restricted access at two entry points in the EXPO. It was mandatory to wear an N95 mask and eye protection here.

### **PULLING TOGETHER A TEAM**

While the EXPO set-up was underway, WH also set about the enormous task of gathering a team of medical professionals and operations staff to provide 24/7 care. Doctors and nurses were needed to work on 12-hour shifts to manage admission and triage, conduct swab tests, monitor patients' vital signs and provide treatment where necessary. Operations staff were needed to ensure the smooth running of the halls. As the patient numbers grew and more halls opened, staff recruitment had to be ramped up.

Many partners and organisations responded positively to support this mission. The Health Promotion Board was one of the first to respond by sending in 60 nurses and dental therapists from the School Health Service to help with the initial opening phase of the CCF@EXPO. Nurses from our sister institutions such as the Institute of Mental Health and National Skin Centre also joined in the efforts, along with private, freelance and retired nurses who responded through the SG Healthcare Corps. The medical team tapped on their own personal contacts and networks, and in the midst of a pandemic, the response and support was ready and forthcoming.

Since the call was made to open the Community Care Facility, we've been very touched by the spontaneous offers of support and help from all walks of public and private sector. They have actually made a lot of sacrifices, both in their family lives and their professional lives.

- Dr Howard Foo, Chief Human Resource Officer The operations team was led by Mr Chen Shunfu (Director, Campus Operations SOC & Ambulatory, Strategic Futures Office and Department of Knowledge & Innovation) and Mr Eric Ho (Acting Director, Allied Health Services). Dr Toh Han (Consultant, Department of Anaesthesia) was tapped to lead the medical team on the ground. At the start of the pandemic, she was in Australia for her Healthcare Manpower Development Plan (HMDP) but she returned to Singapore to do her part in the pandemic efforts. Upon arrival back in Singapore, she was roped in to plan for the EXPO operations while under quarantine and hit the ground running the day the CCF@ EXPO took in its first patients. Working closely with Dr Mohan Tiru (Deputy Chairman, Medical Board, Surgical & Ambulatory Services), they mapped out the plan for the doctors coming from different backgrounds and specialisations. The doctors were split into two tiers - one for general monitoring, and another where specialists provided leadership and managed cases which required escalated care.



Nursing team at CCF@EXPO



Dr Mohan Tiru doing final checks on medical equipment before the CCF@EXPO opened



(From left to right) Dr Nicholas Chew, Dr Jason Cheah, Dr Toh Han. Prof Philip Choo, Dr Wong Kirk Chuan

- The various doctors that came forward from the public and private sector taught me much more about community medicine than what I learnt in medical school, and they also touched me with the sacrifices that they had to make in volunteering at EXPO.
- Dr Toh Han, Consultant, Department of Anaesthesia
  - What keeps all of us motivated is that we work together as a team. There are many of us from different disciplines and different support sites but we are all working towards a common goal which is helping with this pandemic at this moment.
    - Dr Huang Yixi, a medical officer who was serving a dermatology posting at the National Skin Centre
- In times of uncertainty, it was the certainty of kinship within the fraternity that supported us mentally and physically. I have worked with migrant workers before, but working at CCF@EXPO, has humbled me even further. Learning the hardship workers faced, being separated from their loved ones for a prolonged time with their freedom curtailed, has made me appreciate what we have.
- Dr Aziz Noordin, Family Physician, a locum at the CCF@EXPO



Nurses gowning up



Training for infection control procedures



Refresher training for infection control procedures

#### **RESPONDING AS ONE WH FAMILY**

Non-clinical staff from WH also provided logistical and administrative support at the CCF@EXPO to ensure smooth operations, and helped to set up new halls when required.



Organisation Development was one of the non-clinical departments that came in to support operations (picture by Dr Nicholas Chew)

The Organisation Development team helped us to accomplish a lot within the limited time we were given. Together, we have worked 12 hours daily for two consecutive weeks. In this trying process, we have also come to know a lot of people who have been very helpful to us and being able to contribute together makes me feel proud to be part of WH.

- Jessica Wong, Physiotherapist (responding to the support from non-clinical staff two weeks after CCF@EXPO opened)

The nurses also came from different backgrounds - at its peak about 70% of the nurses were locums. The Nursing team, led by Chief Nurse Pua Lay Hoon ensured that each of them went through various trainings including infection control, swab-taking, documentation system training and equipment familiarisation. Planning the nurses' roster and duties also posed challenges as the right skill mix was needed on the ground each day.

To alleviate the load on the nurses, the role of Operations Support Associates (OSAs) was created to help with the day-to-day running of the halls. Their role was to help with admissions, administrative duties, sending samples to the laboratory, and guiding patients on how to record their vital signs. The WH Human Resource team worked with the Employment and Employability Institute (e2i) and various agencies to source for potential candidates. The newly-created role also helped to provide short-term and meaningful employment for those whose income was disrupted during the circuit-breaker period.

In terms of health safety, what made me feel secure was also the smooth training process, safety measures and onthe-job guidance that were put in place - right down to minute details.

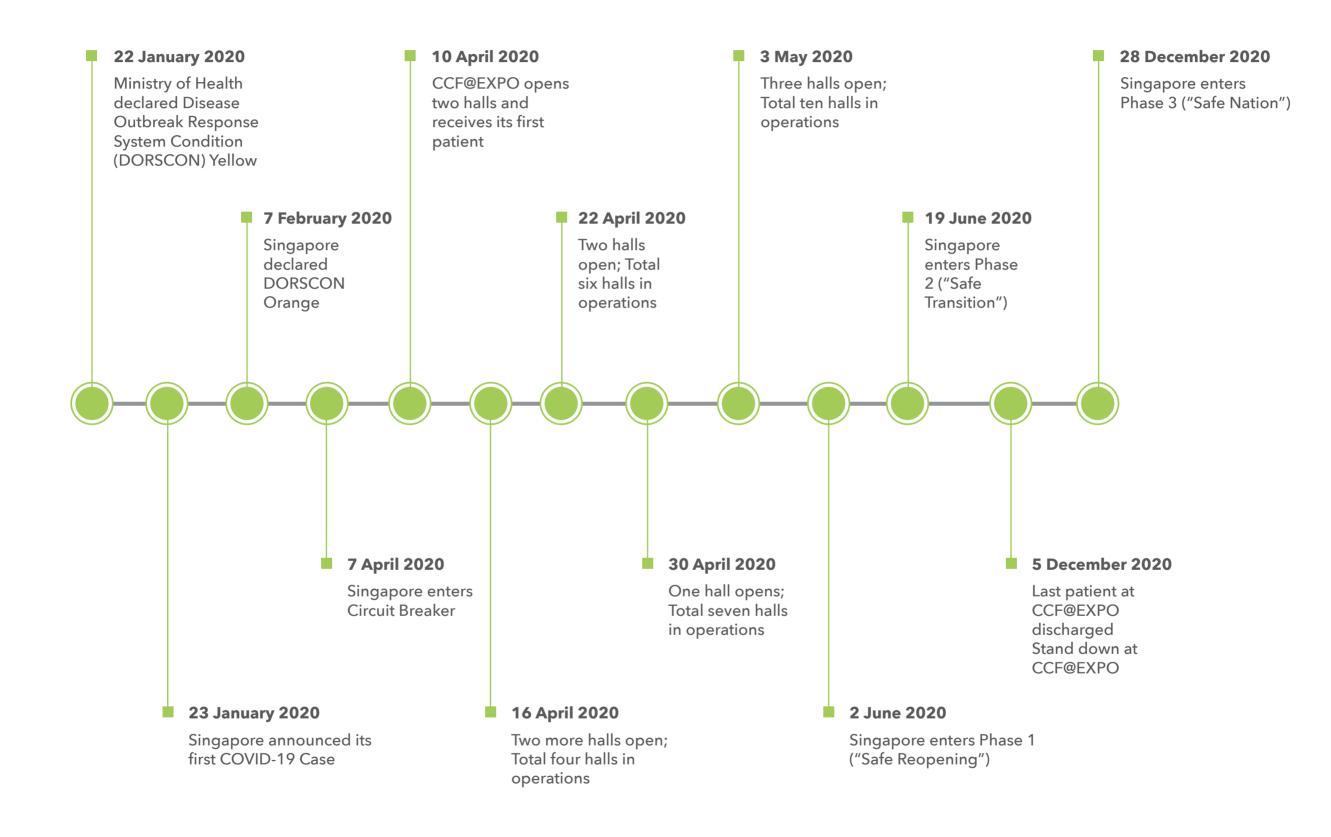
It felt like family there - we were all working towards one common goal - to take care of the patients and help them to recover as soon as possible. I felt fortunate to have met Sister Pua Lay Hoon through this stint. She is an inspiration and she told me, "It is not about how much we give, but how much love we put into giving." She was a real morale booster who made me feel that I should not give up.

- Michael Francis, 53, a property agent who worked as an OSA

As patient numbers grew and more halls had to be opened, we were grateful to have the support of the Singapore Armed Forces Medical Corps and SingHealth, who stepped in to manage two and four halls respectively, while WH managed four halls.

#### **Evolving protocols in response to a new and unknown virus**

As not much was known about the coronavirus then, the team had to stay responsive to the evolving situation as more information became available. Dr Nicholas Chew (Chairman, Medical Board) was in constant contact with MOH for the latest updates, medical guidelines and protocols. Regular communications as well as daily huddles with on-ground staff and partners were important to keep everyone apprised of changes such as new criteria for discharge.



### **STOCKING UP**

Another mammoth task confronting the team was obtaining sufficient medical supplies and equipment, down to stationery, for the CCF@EXPO. Procuring medical supplies in the midst of a circuit-breaker and disruption to the global supply chain was not easy but the team was grateful for the help of partners and institutions who contributed what they could.

Ms Pua Lay Hoon (Chief Nurse) recalled that colleagues from sister institutions readily provided assistance and their excess supplies with no questions asked. Mr Tan Lai Hong (Deputy Director, Nursing) also approached a few polytechnics to borrow equipment such as wheelchairs. Ms Yong Pei Chean (Head, Pharmacy) scrambled to obtain medications, then together with her team acted quickly to pack them and find adequate storage space. The team also diverted equipment and supplies from the Urgent Care Centre at Kampung Admiralty, which had been stocked up in preparation for opening.

The Procurement, or Material Management team, led by Ms Ng Choo Choo (Assistant Director, ALPS) turned to creative ways to acquire medical supplies (such as PPE and swab consumables) and equipment. Given that there was a global shortage of medical equipment, it was expensive to purchase new devices so the team negotiated and secured equipment through lease arrangements with vendors. Due to the urgency of the situation, some leeway was given to complete the paperwork after purchase. At times, Ms Ng and her team even had to pick up supplies across the island with their own transport.



Pharmacy team packing medications at the Urgent Care Centre

#### 10,000 FACE MASKS

Ms Ng recalled an instance when Dr Wong Kirk Chuan (Chief Operating Officer) texted her to ask if she knew where the team can get fabric face masks for the patients. The team had not procured fabric face masks before, but Ms Ng recalled her mum had told her about fabric masks being sold at the market. She roped in her mum to take a photo and sent it to Dr Wong to ask how many he needed.

Can you get us 10,000 pieces, he asked.

Ms Ng and her team quickly fanned out to markets across the island, snapping up fabric face masks while others started "hunting" online.

#### **Managing Teething Problems**

The stage was set for the first two halls to open. On 10 April 2020, Good Friday, the WH team including Dr Nicholas Chew (Chairman, Medical Board), Dr Wong Kirk Chuan (Chief Operating Officer), Dr Mohan Tiru (Deputy Chairman, Medical Board, Surgical & Ambulatory Services) and Ms Pua Lay Hoon (Chief Nurse) waited inside the halls for the first patients to be admitted. It turned out that there was an admission delay because the patients' IDs could not be scanned. While IHiS worked feverishly to resolve the issue, the Nursing team registered each patient manually.

The initial plan was to issue each patient with an iPad for them to record their vital signs so that the Nursing team could monitor their condition remotely. However, it later became unrealistic to procure large numbers of devices. With the increasing patient load and as more halls opened which meant a larger footprint to be covered, another solution was required. Monitoring kiosks were then set up at central locations within each hall, and patients were taught to record their own vitals such as temperature, blood pressure and oxygen saturation readings on an IHiS developed solution, Health Discovery. The data



Patient taking his blood pressure at monitoring

was then sent to a central smart dashboard where the Nursing team could monitor centrally and remotely, and patients that require follow up would be flagged.

Along the way, the team refined operational processes to improve efficiency. Initially, on a few occasions, patient arrivals were delayed resulting in patients arriving late in the night without having had dinner. The Operations team proactively reached out to hospitals and worked together to improve the scheduling of patient arrivals to the CCF@EXPO, with better communications.

For some of the patients, getting the all-clear to be discharged presented problems as they had no place to stay after discharge. The Nursing team and Managing Agent stepped in to help these patients, and contacted relevant agencies and VWOs to make arrangements.

Our learnings were shared with the teams who were tasked with setting up subsequent Community Care Facilities such as Big Box and Changi Exhibition Centre. The WH team hosted delegations at the EXPO to view the set-up and share our experience, which were used to further improve on the processes at subsequent CCFs. A virtual Continuing Medical Education (CME) seminar, "Tackling COVID-19 in a Community Care Facility", was also conducted in June 2020 to share the experience and learnings from running the CCF@EXPO which attracted more than 600 attendees.



CME webinar sharing experience and learnings at CCF@EXPO

#### **SOUNDING THE ALARM**

Given the huge footprint of each hall, one concern was how patients could call for help, and for the medical team to be able to pinpoint the location and reach the patient quickly to provide assistance. Mr Glenn Neo (Chief Information Officer) came up with an easy and innovative fix - an off-the-shelf call button used in restaurants. Mr Ang Kian Ann (Assistant Director, Informations Technology Department) was mobilised to study the technical feasibility and deployment approach. Within hours after the decision was made to deploy this solution, the

team installed and hooked the call buttons up to a central system mapped to the halls' layout so that the medical team could locate the patient easily.

Then Senior Minister of State for Health, Dr Lam Pin Min and Senior Parliamentary Secretary for Health, Mr Amrin Amin visited the CCF@EXPO on 9 May 2020 to show their appreciation for the team.

I take pride in our Community Care Facilities. Strict infection control measures, including no staff intermingling across medical clusters, safe distancing measures and physical protective screens at rest / dining areas to prevent droplets transmission are in place. The CCF team is doing a fine job. This is an enormous effort by multiple groups, complex coordination. Thank you. Please take care. And get well soon, CCF patients!

- Facebook Post by Mr Amrin Amin, Senior Parliamentary Secretary for Health in 2020



Then Senior Miniser of State for Health Dr Lam Pin Min (Left) and Senior Parliamentary Secretary for Health Mr Amrin Amin (second from left) visiting the CCF@EXPO

### PATIENT-CENTRIC CARE

Most of the patients at CCF@EXPO understood basic English, but were more comfortable with their native languages. To facilitate communications, colleagues from Allied Health, Nursing, Ops and Corporate Communications worked together to have key information translated into Bengali, Tamil and Hindi. Health booklets, videos and posters which contained useful information such as common medical terms and information as well as helplines were produced.

"

When there is no cure, there must be care

- Ms Pua Lay Hoon, Chief Nurse

Apart from recording their vital signs at the self-monitoring stations, patients were also taught to perform a 6-minute walk test on their own. These checks provided timely indicators of when medical assistance may be required, and helped to reduce the load on the nurses, allowing them to attend to patients requiring urgent care more effectively. Along the way, the Nursing team found that the patients had other chronic conditions which they had ignored or did not know how to manage. The nurses took the opportunity to educate patients on how they can take charge of their health and manage these chronic diseases even after their discharge.



The care team taking temperature for a patient

The Nursing team also worked with Allied Health to design activities to keep patients engaged and empowered throughout their recovery. Mass exercise sessions led by the nurses and OSAs became a daily highlight for the patients, and they were also guided to perform simple exercises that they could do on their own through instructional videos. These efforts helped to keep patients active and mentally engaged.



Daily mass exercise sessions

In providing holistic care, the team organised social activities such as festive celebrations, games and art competitions. The team was also sensitive towards religious requirements, for example, meals were specially catered for at break fast timings during Ramadan. The Managing Agent also organised a dinner celebration for the patients to mark the final day of Ramadan.

- So far, my favourite memory on this job was when the OSAs initiated a Hari Raya activity for the residents which included a colouring contest and movie. I was deeply touched when the residents wrote or drew on letters to express their gratitude to us for taking care of them. Many of them, being separated from their families during this time formed close bonds with us their 'new family' in the isolation facilities.
  - Muhlissa Binti Haji Samsidi, Female, 24, Retail Assistant, an OSA at the CCF@EXPO



An art competition was held as part of the Hari Raya Celebrations

On National Day, the care team showed their appreciation to the patients for their contribution to Singapore and distributed local snack packs, out of their own initiative.



Team packing care packs for the patients on National Day with items they purchased through their own donated funds

The residents at the EXPO facility are no less excited about Singapore's birthday despite most of them being non-Singaporean. They often express their thanks to Singapore for providing them with medical care in these difficult times.

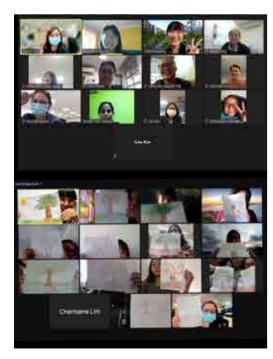
But surely we owe this to the people who have been essential in building Singapore. The unkempt lawns, half-built structures and delayed openings of infrastructural projects are testament to the importance of their work. While there will be no grand parades through the EXPO halls on 9 August, we hope to celebrate the occasion with them in small ways. We even have an EXPO-exclusive version of the National Day Parade goodie bag.

- Dr Teresa Wong, Associate Consultant, Department of Anaesthesia

### TAKING CARE OF OUR OWN

The Staff Resilience and Organisational Growth (STRONG) Taskforce was formed to promote collective resilience in individuals and teams during the COVID-19 pandemic. Driven by Human Resource (including WellCARE) and Organisation Development, STRONG included representatives from every department for a collective voice in staff support. The Taskforce developed a series of toolkits to help individuals and teams recognise burnout, promote adaptive coping and access additional support resources. Psychological support and resources were made available at all nesting sites and the CCF@EXPO.

The STRONG Taskforce reflected an interwoven tapestry of efforts from all parts of the WH family. Mr Ooi Say Leong (Senior Clinical Psychologist, Allied Health) and Ms Roxanne Chew (Art Therapist, Allied Health) developed just-in-time training materials. Ms Dawn Chia (Senior Clinical Psychologist, Allied Health) coordinated huddle groups with peer supporters, supported by our Medical Social Work colleagues. Ms Dorothy Wong (Executive, Organisation Development) and the Organisation Development team conducted ground-sensing sessions to identify pain points faced by WH staff. Dr Lim Wen Phei (Consultant, Medical Psychiatry) developed a psychological preparedness toolkit to educate staff in TTSH/NCID and the CCF@EXPO on stress management.



Activities organised by the STRONG team



Together We Will Overcome badges were distributed to rally and encourage the team

#### **RALLYING THE WH FAMILY**

During a time of uncertainty, senior management rallied the WH Family through frequent and regular communications. A weekly message from Dr Jason Cheah (Chief Executive Officer) and Dr Nicholas Chew (Chairman, Medical Board) provided regular updates on the latest situation, and how WH was contributing towards the pandemic efforts across the different family groups and sites. The senior leaders also had several on-ground engagement sessions and a virtual Townhall was held to address any questions or concerns from colleagues.

No one was spared from the effects of the pandemic - parents had to make arrangements for their children's home schooling while continuing shift work or work-from-home arrangements; colleagues who were from overseas were unable to travel home to visit their families, and some had to urgently find accommodation to stay in Singapore when our borders were closed. As it became clear that the pandemic would be a long-drawn fight, there were concerns that our colleagues may become fatigued or burnt out. The Human Resource team provided support for such colleagues, and issued regular advisories on latest policies, guidelines and avenues for support.



Hari Raya meal packs sponsored by Dr Jason Cheah

As this virus was very new with a lot of uncertainties at the beginning, policies and processes were changing constantly in the first three to four months. It was very difficult sometimes for many people on the ground to understand and grasp and as leaders, we need to be empathetic towards them and to be able to connect with them not just at a personal level but also to ensure that the messages that are sent to them made sense to them.

- Dr Jason Cheah, Chief Executive Officer

- Personally, I was disappointed when I learnt that I would not be able to go back to my hometown of Kuala Lumpur for at least a few more months. I am alone in Singapore and really miss my family. I have not seen them since March this year. However, I'm thankful for my senior colleagues who never fail to guide and encourage me, especially when it comes to understanding on-the-ground issues and workflow.
  - Ms Vaitheswary Krishnan, Staff Nurse

#### **FALSE POSITIVES**

On 2 May 2020, a 34 year-old nurse working at the CCF@EXPO tested positive for COVID-19 after visiting the GP for runny nose. The team responded swiftly with contact tracing and testing for personnel who were identified to be close contacts. As a result of the extensive testing, three other healthcare workers from the CCF@EXPO were found to be COVID-19 positive.

All four cases were admitted to NCID. The WH team including Ms Pua Lay Hoon (Chief Nurse) were in constant contact to reassure them and provide assistance. Further swabs were sent to the National Public Health Laboratory (NHPL) for retesting, and three of the cases were subsequently reclassified as negative. The false positive results came about due to an apparatus calibration issue at the lab that did the initial testing, which resulted in a total of 33 false positive results.

Throughout the period, the teams remained resolute and committed to their tasks. Senior leadership were on ground to address any issues and concerns, and regular updates were provided to the entire team. IPC measures were reviewed and reinforced - screen dividers were installed at the common areas; staggered mealtimes were implemented; and safe distancing ambassadors were deployed to remind the team to stay vigilant even during rest times.

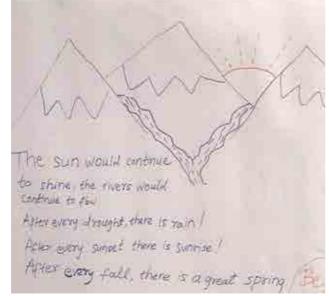
## APPRECIATION FROM PUBLIC

Through the gruelling 12-hour shifts fully decked in PPE, what kept the team's spirits up were the seemingly endless stream of food and treats arriving at the CCF@EXPO from all across the island. Businesses and communities came together to show their appreciation for healthcare and essential workers at the frontlines of the COVID-19 fight. From ice cream, bubble tea, cakes, pastries, face masks to skincare (for the faces pinched by N95 masks and hands peeling from the constant use of sanitiser), these small treats brought joy to the team and represented Singaporeans' solidarity and support.



Board members and senior management sponsored food items to the team















The National Day Mobile Column paying tribute to frontline workers at CCF@EXPO



Nurses' Day celebrations at the CCF@EXPO



National Day celebrations at CCF@EXPO (picture by Dr Nicholas Chew)

### STANDING DOWN

The WH team had been tasked to set up an additional Community Care Facility to ensure sufficient treatment capacity should the situation call for it. A team led by Dr Elton Tay (Chief, Department of Ophthalmology), Dr Jeremiah Chng (Head, Occupational Medicine) and Mary Neo (Deputy Director, Nursing) readied a 1,500-bed facility in another location for this purpose. As the pandemic situation began to stabilise at the time, the additional facility was not required and the operations at CCF@EXPO was gradually scaled down. WH maintained a presence at the CCF@EXPO until the last patient was discharged on 5 December 2020. The WH team returned to Business As Usual (BAU) operations, and construction of the new campus resumed gradually.

The pandemic had galvanised the WH Family - while being a young team, we were more than ready to respond to a national crisis and stand shoulder to shoulder with our fellow healthcare family. The experience also left our teams assured and ready for the opening of a safe and efficient hospital and Campus come 2023.



It made me very proud and happy to see all our various teams coming together to work for a common cause. That gave me a lot of assurance when it comes to the new campus that we will create and open. This was probably the first major test for us in terms of coming together to actually create and make something happen of our own.

- Dr Jason Cheah, Chief Executive Officer

Getting the CCF@EXPO up and running required everyone to be on our toes and be on problem-solving mode 24/7 to address changes and obstacles that came in all shapes and sizes. I think that if we have the strong team that we have now, we won't have any problems when we go live at our future hospitals.

- Dr Mohan Tiru, Deputy Chairman, Medical Board, Surgical & Ambulatory Services
  - It felt like we were long-lost friends striving for a common cause. It was exciting to work closely together and bond with one another before the completion of our campus.
    - Mr Jeremiah Loh, Senior Nurse Clinician

This is a global pandemic where cases are still spiking in many countries including those with excellent health care systems. Personally, this (working in CCF) is my form of "national service". We are all in this together as one healthcare family and one country regardless of whether you are local or a foreigner.

- Ram Peruvemba, Manager, Rehabilitation Services
  - Our leadership was with us every step of the way; our nursing sister in charge was tireless; and our operations manager might as well have taken up residence in Expo. Everyone was wary of getting Covid, but that did not prevent them from being with our patients and going the extra mile to care for not just their physical well-being but also their mental well-being. There's something inherently uplifting about being part of a group that works relentlessly towards a common goal.
    - Dr Teresa Wong, Associate Consultant, Department of Anaesthesia

### **ACKNOWLEDGEMENTS FROM OUR PARTNERS**

It has been a memorable and wonderful experience to be working alongside WH in these facilities. The medical staff from WH has been very attentive, patient and caring often going the extra mile, such as assisting our officers in wearing of PPEs and sharing of good hygiene practices to protect themselves.

- Certis



We've been humbled to be a part of this nationwide project and it is our priority to provide our colleagues from the healthcare sector the same level of care they in turn give to the COVID-19 patients at the facility. Caregivers also need care and our way of providing care to the healthcare teams working tirelessly at the facility is by providing our fullest support and best services day in and day out.

- Tan Beng Hwee, Deputy Director, Operations, SingEx Venues



RWS was able to smoothly carry out our duties largely due to the generous understanding of the WH management team. WH's medical staff were instrumental in diligently and rigorously training our volunteers on safety protocols and procedures which safeguarded their health and gave them peace of mind as they went about their work. The commitment and passion of WH staff have been of great comfort to patients, and absolute inspiration to us. It has been our honour to work with WH, and we stand united with WH and the Singapore Government in working towards the recovery of all COVID-19 patients in Singapore.

- Mr Tan Hee Teck, Chief Executive Officer, Resorts World Sentosa



Since early April, we have been working closely with colleagues from Woodlands Health to set up the HealthTech infrastructure in CCF@EXPO. For many of us, this is the first time setting up such a facility in a short period of time and serving a large number of patients. This is made possible with the close partnership between IHiS and WH colleagues. As we journeyed on, workflows and processes evolved. Together with WH, we anticipated, adapted and responded to changes rapidly to provide improved capabilities to our clinicians to better care for the patients.

- Ms Hooi Ka Mei, Director, Delivery Group, IHiS



# WOODLANDS HEALTH CAMPUS DEVELOPMENT BOARD COMMITTEE



1 Dr Jason Cheah

- 3 Dr Benjamin Koh
- 5 Robert Chew

- 2 Prof Philip Choo
- 4 Jennie Chua

**6** Sajeev Jesudas



- 1 Lock Wai Han
- 2 Er. Prof Lau Joo Ming
- 3 Ramlee Buang
- 4 Simon Yong

- 5 Tony Tan
- 6 Anthony Seah

### **CAMPUS LEADERSHIP**



- Yan Yan

  Executive Director, Regional Health Office &
  Director, Development Secretariat
- Chow Siew Ying
  Chief Financial Officer
- Or Wong Kirk Chuan
  Campus Chief Operating Officer

- 4 Dr Jason Cheah Chief Executive Officer
- Dr Nicholas Chew Chairman, Medical Board
- Yeh Huei Chen
  Director, Clinical Operations (Medicine) &
  Campus Operations (Inpatient)
- Pua Lay Hoon
  Chief Nurse
- 8 Dr Howard Foo Chief Human Resource Officer



- Dr Koh Kwong Fah
  Clinical Director, Training Education &
  Clinical Privileging / Organization Culture
- Caren Tan Director, Clinical Operations (Pre-Hospital & Surgical)

- Glenn Neo
  Chief Information Officer
- Chen Shun Fu
  Director, Campus Operations
  (SOC & Ambulatory) &
  Department of Knowledge
  and Innovation
- Chong Pue Kim
  Director, Value and Safety Office
- Or Wong Sweet Fun
  Clinical Director,
  Community Medical Lead



- Dr Stephen Chan
  Chief Medical Informatics Officer
- 4 Lau Wing Chew
  Chief, Community Integration
- **Tan Nam Ann**Director, Operations Support Services

- Janet Teo
  Director, Patient Billing Services
- 5 Lim Soon Hua
  Director, Corporate Communications
- Yvonne Ng
  Director, Organisation Development
- **Stephanie Lim**Director, Human Resource

### **CLINICAL LEADERSHIP**



- Dr Mohan Tiru
  Deputy Chairman, Medical Board
  (Surgical & Ambulatory Services)
- Pua Lay Hoon
  Chief Nurse
- 3 Dr Aisha Lateef Chief, Department of Medicine

- Dr Jason Cheah
  Chief Executive Officer
- Dr Nicholas Chew Chairman, Medical Board
- Or John Tey
  Chief, Department of Anaesthesia
- 7 Dr Tan Thai Lian
  Deputy Chairman, Medical Board
  (Medicine & Community Services)
- 8 Dr Ernest Kwek
  Chief, Department of Orthopaedic
  Surgery



- 1 Dr Raymond Ng
  Head, Palliative Medicine
  Department of Integrated Care
- Ram Peruvemba
  Manager, Rehabilitation Services
- 3 Dr Chew Aik Phon Head, Geriatric Medicine, Department of Integrated Care

- 4 Dr Lim Tze Chwan
  Chief, Department of
  Diagnostic Radiology
- Dr Elton Tay
  Chief, Department of Ophthalmology
- 6 Eric Ho Chun Keong Head, Allied Health

7 Dr David Loke
Pro-tem Chief, Department of
Ear Nose Throat (ENT)



- **Dr Ray Lin**Head, Infectious Diseases
- **Dr Vincent Ng**Head, Neurosurgery

- 3 Dr Rabind Anthony Charles
  Chief, Department of Emergency
  Medicine
- Yong Pei Chean Head, Pharmacy

- Melissa Chew
  Head, Medical Social Services
- Or Mark Boxall
  Head, Renal Medicine, Department
  of Medicine



- **Dr Chua Wei Chong**Chief, Department of Surgery
- 2 Dr Lim Tiek Whai Chief, Department of Intensive Care Medicine
- 3 Dr Andrew Li Head, Respiratory Medicine
- 4 Dr Hoi Wai Han
  Head, Endocrinology
  Department of Medicine
- Dr Wu Huei Yaw
  Chief, Department of Integrated Care
- 6 Dr Ben Wong
  Head, Laboratory Medicine and
  Pathology



- 1 Dr Lee Jer En Head, Post Acute and Rehabilitative Care
- **Dr Stephen Tsao**Pro-Tem Head, Gastroenterology
- 3 Dr Eugene Poh Head, Dental Surgery

- 4 Dr Rochelle Melina Kinson Head, Medical Psychiatry Department of Integrated Care
- Dr Tay Kay Yaw Head, Neurology
- **Dr David Foo**Pro-tem Chief, Department of Cardiology
- **Dr Jeremiah Chng**Head, Occupational Medicine



### **About Woodlands Health**

Woodlands Health (WH) provides care for the North-Western population in Singapore. We will operate a purpose-built integrated Campus set to open progressively from 2023. The Campus will include a fully integrated acute and community hospital, specialist outpatient clinics, intermediate and long-term care facilities and green healing spaces. We will offer a comprehensive range of acute, sub-acute, rehabilitative and transitional care services, working closely with partners to deliver seamless care within and beyond our Campus. Since 2016, WH has started serving and empowering residents in their health journey through our Community Nurse Posts and outreach efforts. In September 2020, WH introduced the GPFirst Programme in the North and opened the first community-based Urgent Care Centre at Kampung Admiralty making urgent care more accessible to residents living nearby.



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