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CU **Medicine**

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Still in the **GAME**

—CU Medicine vs COVID-19—



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Still But Not Silent

The inauguration issue of this publication came out when Hong Kong was in the grip of the third wave of the COVID-19 pandemic. A blow was dealt to the city's confidence and preparedness to get back to a normal way of life.

CU Medicine has not sat still. Our colleagues tackled the disease in all of its manifestations. Our staff, students and alumni volunteered in community testing and other relief programmes. Our fresh graduates lost no time in getting to the hotspots in the community to offer help and care.

Members of CU Medicine have proved to be a match for the ever-elusive and treacherous foe that is COVID-19. The stories told in this issue are only a fraction of the testimonies of their resilience and ingenuity. Until an effective vaccine is found, we will still be in the game with this adversary. But we will ride out the challenges. We will triumph.



A stylized, handwritten signature in black ink, appearing to read 'Francis Chan'.

Prof. Francis Chan

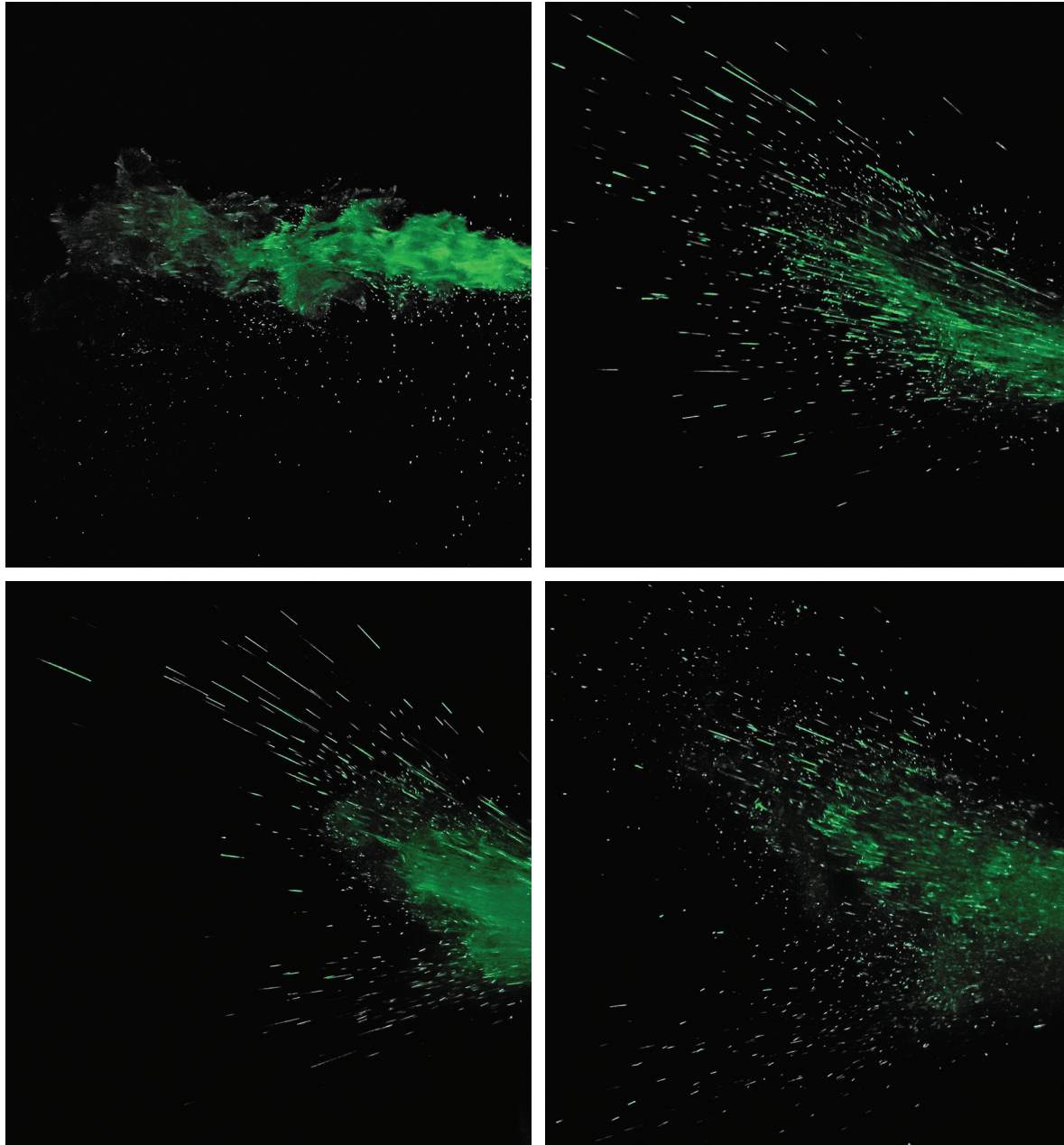
Dean

Choh-Ming Li Professor of Medicine and Therapeutics



Our Serve

We go head to head with COVID-19



Dr. Jason Chan attempts to understand the spread of aerosols in ear, nose and throat procedures through the use of lasers

Protecting Ear, Nose and Throat Specialists

Jason Chan lends a strong shoulder

Otolaryngology, head and neck surgery specialists are at the front line of defense against COVID-19. Unfortunately these ear, nose and throat doctors are also at great risk of the disease given the high viral loads in Asia.

Dr. **Jason Chan** of the Department of Otorhinolaryngology, Head & Neck Surgery was one of the first medics to recognize the risk to otolaryngologists. Drawing on the experience of SARS, Dr. Chan drew up the earliest protocols, ultimately implemented internationally, as to how to protect these medical professionals.

Dr. Chan was interviewed by the leading journal in his field, providing advice on modifications to outpatient clinics such as creating separate gown-up and gown-down areas to prevent cross-contamination. He was also one of the first doctors to recommend temperature checks and travel histories for all new clinic patients. Since asymptomatic cases are common, he



advocated for head and neck physicians to wear at a minimum an N95 respirator, gown, cap, eye protection, and gloves during most head and neck examinations.

Dr. Chan noted that in order to mitigate the risk of patients cross-contaminating others following tracheostomy surgery, the tracheostomy should occur in a closed system identical to when a patient is on a mechanical ventilator.



Why Do Children Suffer Less From COVID-19? Gary Wong learns from little patients

Children have been less likely to contract COVID-19, and less likely to get sick when they do. Prof. **Gary Wong** of the Department of Paediatrics wants to know why.

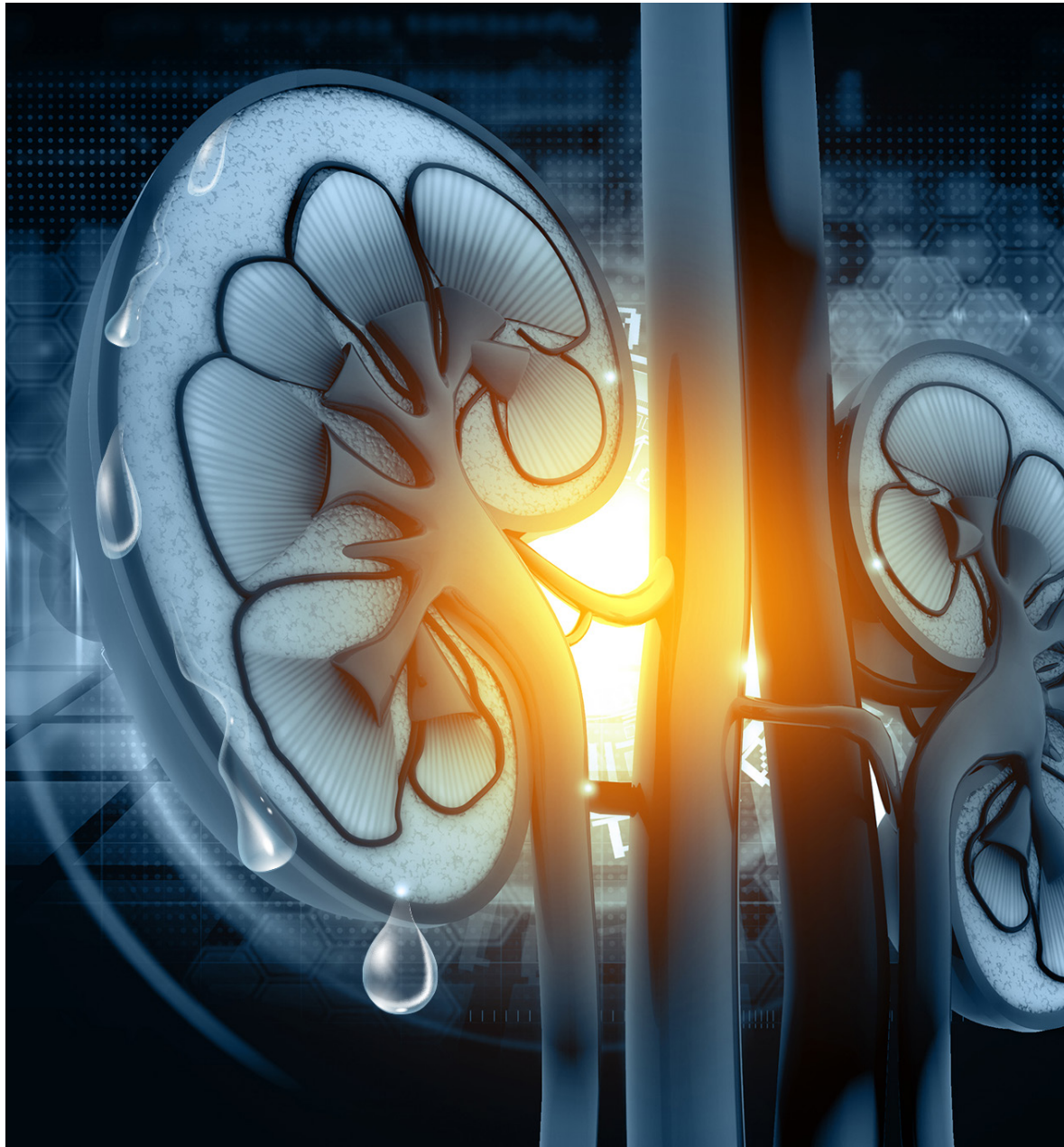
Noticing these trends early in the outbreak, Professor Wong early in the pandemic headed

the first study team to examine how the disease was affecting infected children.

The Chinese Paediatric Novel Coronavirus study team led by Professor Wong looked at the epidemiologic characteristics, clinical features and radiologic findings of infected children at the early stages of the pandemic.



The epidemiology of juvenile cases of COVID-19 helped deliver insights into the underlying immune response to the SARS-CoV-2 virus and its severity. In contrast with adults, most infected children have a milder clinical course typified by cough, fatigue, muscle pain, vomiting and diarrhea. Fever is only found in about half of the infected children. Professor Wong saw his findings published in *The New England Journal of Medicine*. He then took his study further, providing recommendations on how to manage and treat children with pre-existing conditions such as asthma.



Drips, Drops, Disrupts, Delays

Jeremy Teoh studies COVID-19's impact on urological care

The COVID-19 pandemic has severely disrupted the delivery of health care globally. Resources have been prioritized to manage COVID-19 patients, while elective healthcare services are often delayed to minimize risk of infection.

Dr. **Jeremy Teoh** of the Department of Surgery undertook the first global survey to examine the impact of the pandemic on urological care. He surveyed more than 1,000 urology professionals on six continents, and found that the degree of reduction in urological services corresponded to the degree of COVID-19 outbreak worldwide.

Dr. Teoh found that 30% of outpatient investigations and procedures, and 31% of urological surgeries had a delay of more than eight weeks. COVID-19 presents an unprecedented challenge to urologists, who must balance between providing optimal urological care to patients and mitigating the risks of infection among patients and healthcare workers.

Dr. Teoh also carried out the first systematic review to investigate the effects of COVID-19 on the urinary tract. The team studied 25 reports, highlighting the clinical manifestations of this novel coronavirus from a urologist's perspective.





Treating Dementia in a Pandemic

Vincent Mok's special delivery to the most vulnerable

People with dementia are particularly vulnerable to infection from SARS-CoV-2. Not only are they directly at high risk of contracting COVID-19, they are also hurt by the physical distancing necessary and isolation often created when implementing countermeasures against this infectious disease.

Prof. **Vincent Mok** of the Division of Neurology in the Department of Medicine and Therapeutics led an international team to devise strategies for the elderly and patients with dementia so that they can receive appropriate treatment during the pandemic. The team advocates measures such as the use of telemedicine to ensure delivery of care, with online consultations and remote medical advice. Other measures applied first and foremost to group-living facilities for people with dementia, but could in many cases be applied to the care of older people in general.



The team brought together experts from 29 universities in 16 countries around the world, including the University of Oxford, the University of Cambridge, the Vrije University of Amsterdam, Harvard University, and the Karolinska Institute. They published their recommendations in *Alzheimer's & Dementia*, the official journal of the international Alzheimer's Association.



Lights Back On

The pitch is readied for the new game

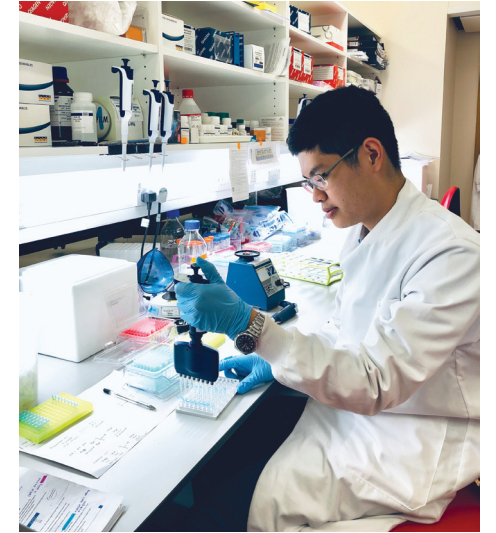


What It Means to Become a Doctor

Hear what Timothy Liong Tipoe says

The slight bags under the eyes of Dr. **Timothy Liong Tipoe** betray his exhaustion, but the physician is in demeanour a picture of vim and vigour. His energy brightens a drizzly day in Hong Kong, with grey skies patched with blue overhead.

After graduating from CU Medicine, Dr. Tipoe spent a full year training as a House Officer at both Queen Mary Hospital and Prince of Wales Hospital. During that time, he won the Esther Yewpick Lee Millennium Scholarship to pursue a doctorate in clinical medicine at the University of Oxford. He left for Oxford in October to begin his doctoral studies.



Dr. Tipoe admits that the path of becoming a physician is certainly an arduous one. It is no exaggeration that a medical resident has to run a shift of 30 hours straight at times when duty calls. That's not to mention the snap medical judgments that a doctor has to make, meaning it's vital to maintain a clear mind. Last but not least, there's the human emotional side of the job, which can take a toll. There's a constant bombardment of feelings that a doctor will have to handle and sustain.

He recalls with pride the day in February when he was called to join the 'Dirty Team' treating COVID-19 cases.

One of Dr. Tipoe's earliest coronavirus cases sticks with him. An elderly man was waiting for his coronavirus-test results to come back, and was very worried.

"He feebly grabbed my hand and asked me in a trembling voice, 'Doctor, will I die from the disease?'" Honestly, the new medic was unsure how to answer, although he reassured his patient

that he would do his level best to protect him. For the first time, Dr. Tipoe realized that the stethoscope around his neck could become a heavy weight that can drag any compassionate soul down.

'A doctor doesn't always have all the answers,' Dr. Tipoe admits, even though you may want nothing more than to resolve the doubts and questions in your patient's mind, to be the rock for your patients and their families.

'All you can do is reach a diagnosis based on your experience, come to your best conclusion, and use the right words to convey the result to your patients,' he explains.

A Cautious Start to a Medical Curriculum



On 25 August, new medical students attended the Academic Counselling Session to get familiar with the MBChB curriculum and the programme requirements. Precautionary measures including face masks and the special seating arrangements ensured a safe initiation for these future doctors.



Her Father's Daughter

Alcina Kong inherits goggles and duty from father

Dr. **Alcina Kong** only met her father once during her two-week stint on the 'Dirty Team'. Having cleaned up after her shift, she met him outside the hospital quarters. The pair stood just close enough for their extended hands to meet. He handed her a bag of oranges, reminded her to eat fruit, and left.

Her father knew what Alcina, a 2019 graduate of CU Medicine, was going through. As a paediatrician, he too volunteered to join the 'Dirty Team', only back in 2003, to care for patients during the SARS outbreak.

Alcina was a seven-year-old primary student at the time, and didn't know why her father would be away. She was ecstatic to skip school due to SARS. But she eventually asked her family where he had gone.

Alcina's father drew up his last testament. He had come into close contact with the virus, intubating a patient later diagnosed with SARS. He was then quarantined for 14 days. The father wasn't so quick to accept the daughter's decision to volunteer for the COVID-19 'Dirty Team'. He tried hard to talk her out of it, and

came up with a different reason every day as to why she shouldn't go.

'I do understand but, after all, you are my daughter,' he told her. 'What father would want his daughter to be on the front line?' Her father considered his own decision a rash, spur-of-the-moment move, since he had kids.

He finally realized Alcina was committed. Alcina says she and her father look alike, and share similar personalities. Once they have made up their minds, that decision is final.

Right before she moved to the hospital quarters, he gave her the pair of goggles he had used on the SARS front lines. 'I know you guys have your own gear, but this would serve as a sort of lucky charm to help you get out of it all in one piece,' he told her.

'That brought me close to tears,' Alcina says. 'I was quite touched.'



Developing an Attachment

CU Medicine creates an app to get students back in the clinic



The coronavirus has temporarily forced most face-to-face teaching to go online, while clinical attachments designed to give students practical experience have been suspended. In response, CU Medicine has designed an app to facilitate the learning of medical students in this new environment.

'MyMBChB' is a mobile application specifically developed to facilitate learning at CU Medicine. Medical students can use the app to view their course schedule and instructor roster, as well as to get updates on teaching arrangements from the Faculty.

The app is also designed with getting the students back in the clinic in mind. Once

clinical training resumes for the medical students, the app will log clinical activity so students can easily record the details of each teaching session wherever it occurs.

The log provides essential information such as the date and time of the activities, the specifics of the hospital or clinic, details of the ward, the hospital number of all the patients involved, and the tutor's information. All these data are connected to a back-end contact-tracing platform managed by the Faculty, to enhance the safety of all involved.

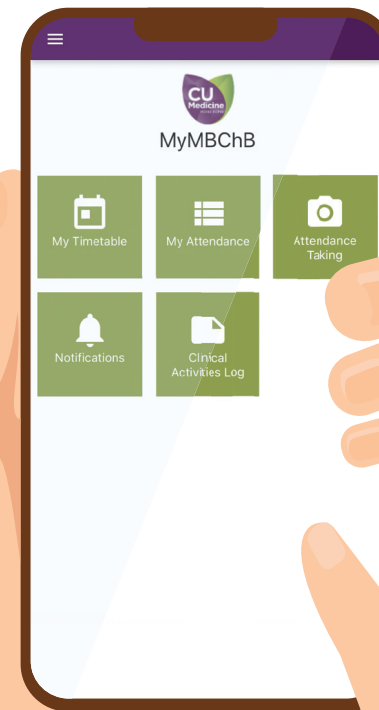
That could prove essential if there are new infections of the coronavirus. If the Hospital Authority triggers a contact-tracing alert

following a case of COVID-19 in any of the wards, the system will allow a rapid response to trace and communicate with any students who visited the areas involved or who had contact with the affected patients.

CU Medicine is working with stakeholders such as the Hospital Authority to arrange for the resumption of normal teaching activities. With the MyMBChB app in operation, it will

be far easier to ensure that the necessary infection precautions are in place. This should allow for clinical attachments to resume for medical students serving in Hong Kong hospitals and clinics. The medical world is having to craft its 'new normal', and the new app will help shape what that might look like.

'Clinical attachment is essential in medical-student training,' **Eddie Ng**, the head of education and academic affairs at CU Medicine, says. 'To resume clinical training, we need to establish a protocol that can minimize the risk of infection and ensure the safety of patients, students, and staff.'





Holding Ground

We give no ground to SARS-CoV-2



Powerful Radar for Stealth Threats

CU Medicine's gut reaction to silent coronavirus carriers

The realization that the SARS-CoV-2 virus infects not only the respiratory system but also the digestive tract has been a lightbulb moment. Patients with the coronavirus have an active and prolonged viral infection of the gut, even in the absence of gastrointestinal symptoms. What's more, the gut infection continues long after the coronavirus has been cleared out of the respiratory tract.

It was researchers from CU Medicine who made the discovery, findings that were published in the medical journal *Gut*. The insights have also been used to improve the clinical management of COVID-19 patients, and testing.

Prof. **Siew Ng**, Associate Director of the Centre for Gut Microbiota Research, says the active and prolonged viral activity in the gut of COVID-19 patients occurs even after they appear to have recovered, highlighting the importance of long-term coronavirus and health surveillance. What's more, there's an elevated threat of faecal-oral viral transmissions.

'Stool specimens are more convenient, safe and non-invasive to collect in the paediatric population, and can give accurate results,' explains Prof. **Paul Chan**, Chairman of the Department of Microbiology. 'This makes the stool test a better option for COVID-19 screening in babies, young children and those whose respiratory samples are difficult to collect.'

Starting from 7 September, 2020, CU Medicine began running as many as 2,000 COVID-19 tests per day in the city as a whole. This includes stool screening of specific groups targeted by the Department of Health: local high-risk babies and young children, the paediatric population returning to Hong Kong from high-risk areas, and adults who have difficulties

in providing specimens for sputum, nasal and throat swabs. The aim is to identify asymptomatic carriers of the COVID-19 virus as early as possible to cut off its spread in the community.

Prof. **Francis Chan**, Dean of Medicine and Director of the Centre for Gut Microbiota Research, says, 'Stool test is accurate and safe. Authorities such as the US Food and Drug Administration are currently working with CU Medicine to perfect stool-test sampling for COVID-19.'



Nursing Teachers and Students Test Community, and Themselves

Coronavirus testing gives nursing students vital hands-on experience

Under normal circumstances, **Christy Cheng**, a senior nursing student of The Nethersole School of Nursing, would be closing in on her degree with a placement in a hospital, working the wards. But under COVID-19, nothing is normal.

With all hospital placements suspended, Christy instead found herself spending two days taking nasal and throat swabs from 'regular' Hongkongers, as part of the voluntary coronavirus testing scheme rolled out to all the city's residents.

'This was a chance for me to practise my clinical nursing skills,' Christy says of the testing programme, which ran from 1–14 September 2020. In all, 1.7 million Hongkongers got tested, yielding 42 asymptomatic cases.

Although the number of COVID-positive tests was tiny, the process showed there were not significant numbers of 'hidden' cases. The spectre

of asymptomatic patients wandering the streets was dispelled. This enabled the city to ease lockdown restrictions.

'There could be 42,000 or 42, you never know,' Prof. **Janita Chau** of The Nethersole School of Nursing says. The reassurance was both citywide and personal. 'People want to go out and meet their family. But if they are worried, how can they live a normal life?' Professor Chau participated for 10 long days as a supervisor.



Janita Chau
Assistant Dean of Alumni Affairs, Professor,
Nethersole School of Nursing,
Faculty of Medicine



Aileen Chan
Associate Professor, Practice in Nursing,
Nethersole School of Nursing,
Faculty of Medicine



Christy Cheng
4th Year Nursing Student

CUHK's Nethersole School of Nursing oversaw one of the testing centres, inviting nursing alumni as well as current students and teachers to take part. The nurses conducted 2,000 tests per day, and served an estimated 20,000 citizens in all.

Prof. **Aileen Chan** points out that the practical experience was unusual in that nursing students normally work only with sick patients during their hospital placement.

In one instance, a woman who was a 'difficult client' arrived with a hostile expression. It transpired that she had already been tested at another centre but still had no result a week later.

CUHK student nurses tended to her, explaining the process step by step, and with increasing

confidence. The client conducted her second test, and left with a smile.

'We not only served the community but also learnt a caring attitude,' Professor Chan says. Students also learnt how to maintain a controlled infection-free environment.

'It was suffocating sometimes. The mask is so tight to your face and the face shield is covering your whole airway,' Christy says. She had to demonstrate 'tender loving care' through eye contact and tone of voice, an entirely new skill.

One elderly lady came back to Hong Kong from mainland China to get a COVID test. 'She believed in our quality, and that's why she came,' Christy says. 'It reminded me to study well.'



Ensuring a Safe Passage to Motherhood

Liona Poon supervises successful COVID-19 births

As of October 2020, there were 19 pregnant women in Hong Kong who had contracted COVID-19. Under the careful guidance of Prof. **Liona Poon** of the Department of Obstetrics and Gynaecology who has drawn up global guidelines for managing pregnant women affected by COVID-19, most of them have successfully given birth, and some have returned to their home countries.

Professor Poon hazards an informed guess that mask-wearing has partly contributed to the control of COVID-19 and that the protection has resulted in less-severe disease in affected pregnant women.

Professor Poon and her team handled the first instance of COVID-19 pregnancy, an imported case of a Pakistani mother returning to Hong Kong who was separated from her husband and young children, and with limited English. 'It was quite a challenging situation for this mother,' Professor Poon notes.

The mother was guided through to a normal birth. Professor Poon and her team oversaw the infection protocols necessary and shared that across all Hong Kong hospitals.

Pregnancy itself is a risk factor for viral respiratory infection and developing severe pneumonia due to physiologic changes in the immune and cardiopulmonary systems. There have been no confirmed cases of 'vertical' mother-child transmission of the virus in Hong Kong.

Professor Poon has screened and managed all three pregnant mothers with the disease treated at Prince of Wales Hospital. She saw their pregnancies through to their conclusion. It is a point of pride that with a negative-pressure room and staff in full protective gear, the mothers had vaginal deliveries.

'They all had natural births. I think that was quite nice. To pregnant women, COVID-19 means fear. The key was to normalize their pregnancy,' Professor Poon says. She also

followed up the recovered COVID-19 pregnant cases to ensure their babies were fine during the pregnancy.

Professor Poon's colleagues also contributed to the fight against COVID-19. Prof. **Leung Tak-yeung**, chairman of the Department of Obstetrics and Gynaecology, took it upon himself to embark on the sole care of eight pregnant women who returned to Hong Kong from Wuhan. With the group interned in a quarantine camp near CUHK, Professor Leung decided he alone would carry out the first antenatal check-up for the women, to minimize the risk of exposure for his department.

Fortunately, all eight pregnant women proved negative for the virus in the end. Professor Poon considers the act of her chairman very magnanimous in the fight against COVID-19.





Light Blue is the New White

Simon Lam treats the kids and houses the parents

Prof. **Simon Lam** is almost always seen in light-blue scrubs on the hospital wards. It has been many years since he was spotted in a white coat. His reluctance to don a white coat started with his paediatric training in England when he learned that white coats not only spread pathogens between patients but could also increase levels of anxiety in children.

In paediatrics, doctors should focus not only on the physical health of sick children but also their psychosocial needs. By the end of

October 2020, the total number of children with COVID-19 in Hong Kong had reached 428. In addition, there were several babies born to mothers with history of COVID-19. While these children were mostly asymptomatic or at most exhibiting only mild symptoms, many children still required prolonged hospitalization and isolation. The separation between these children and their families was obviously stressful for all concerned.

To Professor Lam, one of the greatest challenges was how to minimize the adverse psychological impact of hospitalization on the affected children and their families. 'One of our primary goals is to prevent the virus from spreading,' Professor Lam says, 'But can you imagine the mental stress of prolonged hospitalization on adolescents and the psychological scars we potentially cause in young infants and their mothers because of prolonged separation, especially if the children who are physically well?'

While adults can while away their time online or via video chat, young children need close physical contact with their families. One way to handle this has been to allow family members

to stay and care for young children on a compassionate basis after balancing the risk of infection posed to the carer. Fortunately, none of those parents who stayed with their children in the isolation wards became infected.

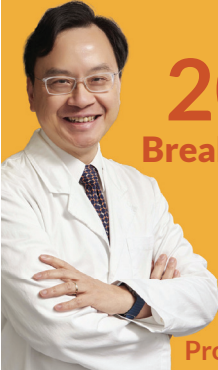
During the SARS outbreak in 2003, Professor Lam was already working in paediatrics at Prince of Wales Hospital. Although he was not part of the 'Dirty Team', he did tend to children with SARS while serving as a junior doctor on nights. However, even these experiences from 17 years ago could not fully prepare him for the complex and pervasive challenges brought on by COVID-19.



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Prof. Dennis Lo

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Submucosal Dissection

performed with new flexible
endoscopic robotic system

Giant
of Cancer Care



Prof. Tony Mok

World's **1st**
Thoracic Surgery
of Lung Tumours

with non-invasive BMA and uVATS done
in hybrid operating room

Asia's **1st**
in Gastroenterology
& Hepatology and
in Endocrinology
& Metabolism

in US News & World Report's 2021
Best Global Universities



Prof. Dennis Lo and
Prof. Jiang Peiyong
— join —

World's 'Top 20
Translational
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2020
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Dr. Carmen Wong