

THE STRAITS TIMES

# Asia report

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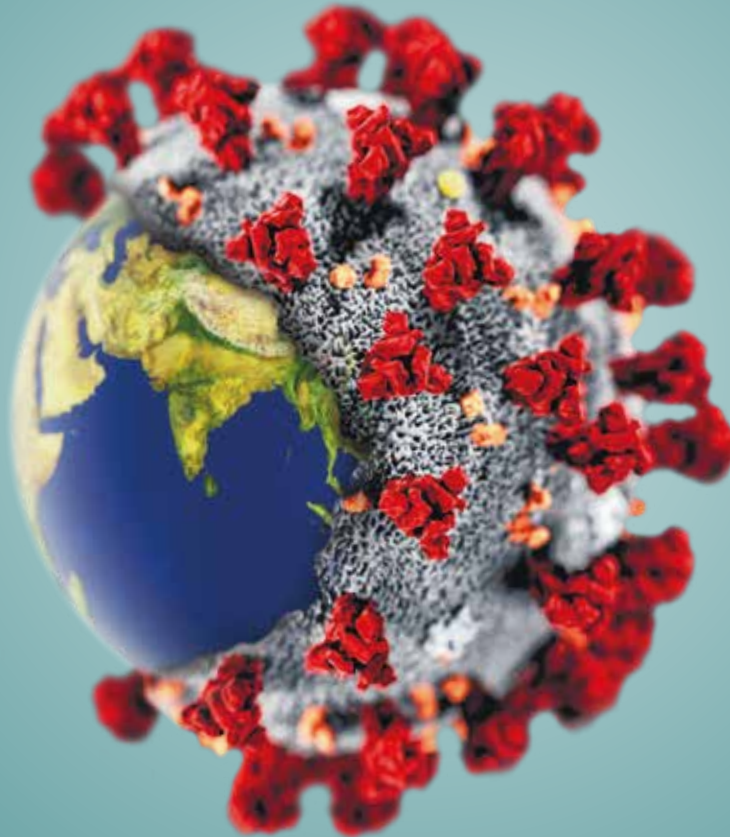
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# Battle against the bug

Asia's fight to contain Covid-19



Countries race against time to contain the spread of coronavirus infections as fears mount of further escalation, with no sign of a vaccine or cure yet

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# Bats: furry friends or calamitous carriers?

SUPPOSEDLY ORIGINATING IN THE HUANAN WHOLESALE Seafood Market in Wuhan, the deadly Covid-19 outbreak has opened a pandora's box around the trade of illegal wildlife and the sale of exotic animals.

Live wolf pups, civets, hedgehogs, salamanders and crocodiles were among many listed on an inventory at one of the market's shops, said The Guardian newspaper.

Apart from the trading of animals, the market was an abattoir, exposing stallholders to their blood, bodily fluids and excrement, all of which can be laden with pathogens that can jump from animal to human.

While the coronavirus has been found in pangolins, which are widely trafficked for their scales, bats have also elicited much flak for having supposedly originated the coronavirus - which is a zoonotic disease, a term meaning that it can be spread from animals to humans.

On Jan 23, a team led by coronavirus specialist Shi Zheng-Li at the Wuhan Institute of Virology, reported on life science archive bioRxiv that the Covid-19 sequence was 96.2 per cent similar to a bat virus and had 79.5 per cent similarity to the coronavirus that caused severe acute respiratory syndrome (Sars).

Further findings in the Chinese Medical Journal also discovered that the virus' genome sequence is about 87.6 per cent to 87.7 per cent similar to other coronaviruses that originated from Chinese horseshoe bats.

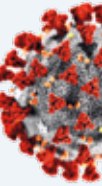
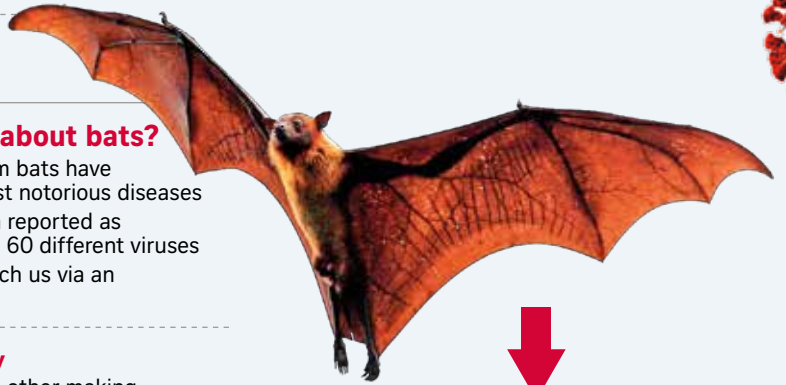
Meanwhile, the outbreak has triggered a wave of sinophobia on social media with a viral video of a woman eating a bat in soup evoking hateful comments on Twitter while the hashtag #ChinaPneumonia has been making its rounds.

While hard evidence has yet to emerge proving that the tiny animal caused the outbreak, here's what we know about the tube-nosed mammal.

- Dominique Nelson

## Bats as a reservoir for deadly viruses

COVID-19 is 96% identical at the whole-genome level to a bat coronavirus



### Zoonotic diseases



- Viruses are normally dependent on specific species



- Nearly all viruses that infect other organisms are harmless to people



- A tiny proportion can jump species and infect us with zoonotic diseases



- Though not all zoonotic diseases cause serious illness, they make around 2.5 billion people sick every year and kill 2.7 million, according to New Scientist magazine

### What's so special about bats?

- Viruses that come from bats have caused some of the most notorious diseases
- In fact bats have been reported as reservoirs for more than 60 different viruses
- Many such viruses reach us via an intermediary species

### Close-knit community

Bats roost close to each other making it easier to pass viruses along

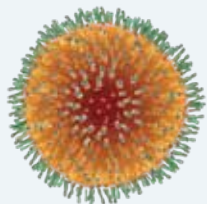
### Strong flyers live longer

The vigorous activity of flying is thought to trigger physiological mechanisms to protect from inflammation and strengthen their immune system

### Immunity arms race

Their very effective immune system allows them to live with viruses, and may drive those viruses to become stronger

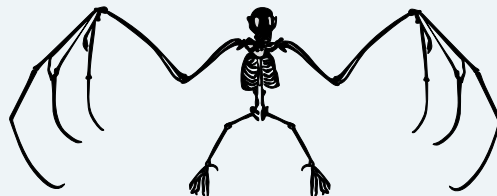
### Ebola SARS MERS COVID-19



One reason a virus that crosses species can be deadly is that the new host lacks pre-existing immunity

### Don't shoot the messenger

Bats are a crucial part of the environment. There are over 1,300 identified species, representing 20 per cent of mammals, and we have always lived close to them.



Bat skeletons are homologous with ours, showing evidence of our shared ancestry

### Pollination

Over 500 plant species rely on bats to pollinate their flowers

### Insect control

In the US alone bats are worth an estimated US\$3.7 billion a year in reduced crop damage and pesticide use

### Seed dispersal

Night-foraging fruit-bats cover large distances scattering seeds as they go

### Fertiliser production

Bat droppings, or guano, are valuable as a rich natural fertiliser

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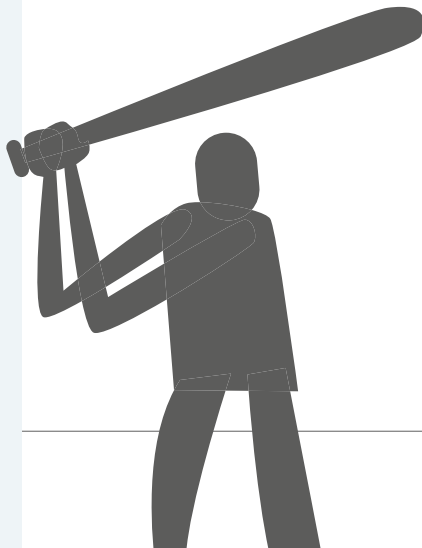
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## Thinking Aloud

Fighting the coronavirus, with openness and information



PHOTO: AGENCE FRANCE-PRESSE



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All hands on deck at public hospitals

MOH team races against time to trace links and stop spread

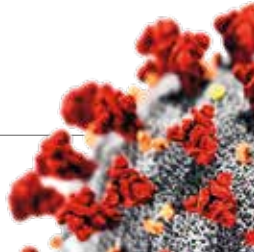
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PHOTO: EPA-EFE

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# 5 turning points in Singapore's fight against the coronavirus

**SUMIKO TAN**  
Executive Editor



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The coronavirus – or Covid-19 – that emerged from the Chinese city of Wuhan has killed more than 2,800 people worldwide, with more than 2,700 in China alone. Within the first eight weeks, the Singapore Government had already rolled out a steady stream of measures to curb its spread here.

AT THE CRIMINAL INVESTIGATION DEPARTMENT'S Command Centre in Outram on Feb 13 afternoon, 20 police officers were hunched in front of their computers, trying to make sense of how the coronavirus is spreading in Singapore.

Working with the Ministry of Health (MOH) – which is in charge of contact tracing – as well as detectives on the ground, they have been helping to piece together the movements of those infected.

People who had been in close contact with a patient will be traced. If they are well, they will be put under quarantine for 14 days. If they show

symptoms, they will be treated as a suspected case, hospitalised and looked after.

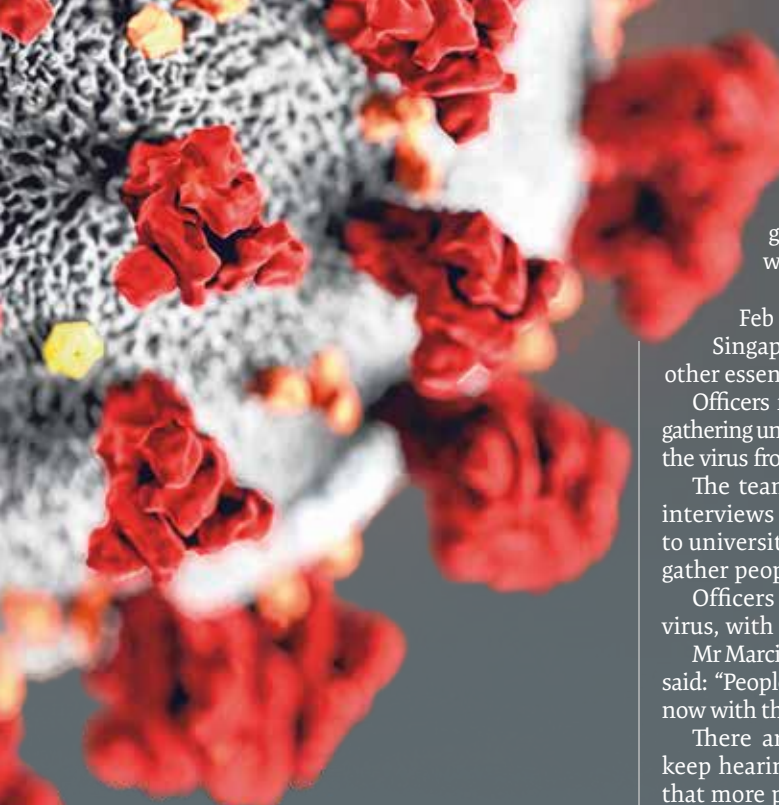
The officers are part of the government machinery that has kicked in to manage the outbreak.

Their mission: treat patients, contain the spread, allay the fears of Singaporeans and help businesses that have been hit.

Outside the public sector, thousands have also been mobilised to the front lines.

They include private general practitioners who are often the first medical contact a patient has, security firms helping to serve quarantine orders,





cleaners who disinfect places that patients had been to, and even religious leaders who have control over mass gatherings.

## REALITY STRIKES

The coronavirus emerged in Wuhan late last year. On Dec 31, the Chinese health authorities reported it to the World Health Organisation (WHO), which then told the world.

WHO has since named the virus Sars-CoV-2. The disease it brings – characterised by fever and cough and in severe cases, pneumonia that can be fatal – is now called Covid-19.

As of Feb 27, China had more than 78,000 reported cases with more than 2,700 reported deaths, mostly in the province of Hubei where Wuhan is.

Globally, there are more than 82,000 reported cases and, outside of China, more than 50 reported deaths. As of Feb 27 Singapore has 96 confirmed cases.

It has been a period of heightened caution and nervousness for the Republic since the first case here was discovered on Jan 23, the Thursday before the long Chinese New Year weekend.

In that time, Singaporeans have gone from being concerned to alarmed, to now accepting, with a growing sense of realisation that the virus will be around for some months yet.

There were irrational moments, like on Feb 8 when shoppers were seized by fear that Singapore would run out of toilet paper and other essentials, and emptied supermarket shelves.

Officers from Reach, the Government's feedback gathering unit, have been talking to Singaporeans about the virus from around the Chinese New Year period.

The team of about 25 officers do face-to-face interviews in places ranging from the heartland to universities. They also conduct online polls and gather people to chat via WhatsApp.

Officers say there is very high interest in the virus, with people eager to find out more.

Mr Marcius Sim, 27, an assistant manager at Reach, said: "People aren't always willing to talk to us, but now with the virus, they are happy to give feedback."

There are three concerns the Reach officers keep hearing: fear of contracting the virus, worry that more people will get it, and its impact on the economy and businesses.

Ms Hillary Lau, 28, also an assistant manager at Reach, said a common sentiment she hears in the 200 or so face-to-face interviews she has done, is this: "I just want this to be over soon."

## KEY MOMENTS

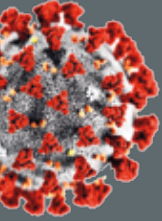
There were five key dates in the early stages of Singapore's fight against the virus:

- Jan 23 when the first case – a 66-year-old man from Wuhan – was detected here.
- Jan 28 when a travel ban was imposed on visitors with recent travel history to Hubei, or those with Chinese passports issued there.
- Feb 1 when travel restrictions were expanded to include those with recent travel history to China, or those who have Chinese passports.
- Feb 4 when the first locally transmitted cases were announced.
- Feb 7 when the Government raised its risk assessment of the outbreak from yellow to orange. The first case here emerged a day after the setting up of the multi-ministerial task force to contain the virus.

From far left: Singapore Armed Forces (SAF) personnel having their temperatures taken as they report for duty after the SAF was activated to pack the masks, and logistics were put in place to distribute them at residents' committee centres and community centres. On Jan 30, the Government announced that all 1.37 million households would be given four surgical masks each from Feb 1. Singaporeans were advised that only those who were sick should wear a mask, and people in the Republic have gone from being concerned to alarmed, to now accepting, with a growing sense of realisation that the virus will be around for some months yet.

PHOTOS: KEVIN LIM, CMG





Helmed by Health Minister Gan Kim Yong and National Development Minister Lawrence Wong, the group is advised by Deputy Prime Minister Heng Swee Keat, who is also Finance Minister.

The task force has held several press conferences together with medical experts from MOH. Starting last week, these briefings became more frequent.

Up until the Chinese New Year weekend from Jan 25, Singaporeans were concerned about the virus but not overly so.

The early cases were confined to tourists from China whose movements were largely around touristic areas.

On Jan 27, however, it was reported that one of the visitors from Wuhan had stayed with her family in the residential Ceylon Road.

The next day came news that a male patient from Wuhan had stayed in a condominium in Pasir Ris. The virus, it appeared, had moved to the heartland.

In the days that followed, stories of suspected cases at malls with GP clinics started being shared.

At pharmacies, the demand for face masks began to escalate. As people shared images of queues, it had a knock-on effect and more started queuing,

despite reassurances by the Government that it had released five million masks to retailers.

At online mall Qoo10, a listing advertised 30 “anti-coronavirus” masks for sale at \$10,000. It was removed on Jan 29.

The Government knew something had to be done to stem the feverish demand for masks.

On Jan 30, it announced that all 1.37 million households will be given four surgical masks each from Feb 1. It also drummed into Singaporeans the message that only those who were sick should wear a mask.

The Singapore Armed Forces was activated to pack the masks and logistics were put in place to distribute them at residents’ committee centres and community centres.

The move calmed the panic. When the actual distribution of masks started on Feb 1, there were no queues.

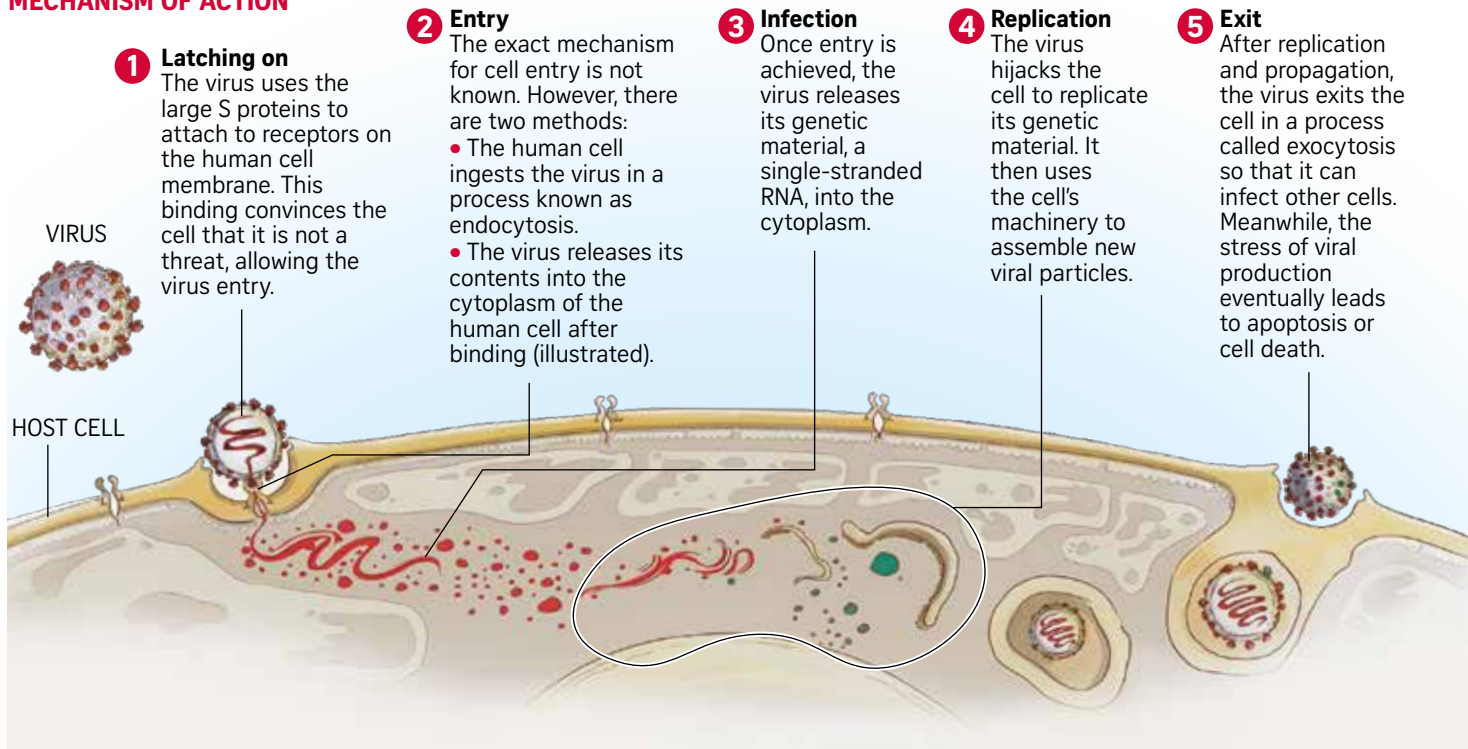
### FIGHTING XENOPHOBIA

By the weekend of Feb 1, it was also becoming clear that fear of the virus was turning into discrimination against Chinese nationals.

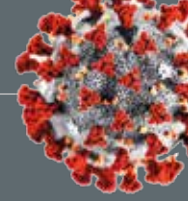
## Coronavirus: Infecting humans

Humans have long been infected by the coronavirus family, which is responsible for mild illnesses like the common cold as well as more serious epidemics like Mers and Sars. The coronavirus that emerged late last year is a newly discovered strain, and the seventh in the family. Its mechanism of action is currently unknown, and more research is being done. However, we can obtain clues about it by looking at how the family behaves.

### MECHANISM OF ACTION







Stories started emerging of how Singaporean landlords were telling their Chinese tenants returning from the new year to stay away.

The Government nipped this in the bud.

On Feb 3, the Manpower, Education and National Development ministries said landlords found to have irresponsibly evicted their residents may face restrictions and even be barred from renting out their flats to foreign work pass holders in future.

On the business front, it was also clear that the travel restrictions to stem the spread of the virus were hurting businesses, especially those in the tourism industry.

On Feb 1, DPM Heng said the Government would provide targeted support to sectors directly affected by the virus.

The next day, Minister for Trade and Industry Chan Chun Sing said the Singapore Tourism Board will be implementing targeted measures such as waiving the licence fees for hotels.

As these measures were being rolled out, the Government was also preparing the ground for the possibility of local community spread.

On Feb 3, Mr Gan spoke of this. The next day,

it was announced that Singapore had seen its first local transmission of the virus.

Four people connected to the Yong Thai Hang health products shop in Cavan Road were infected without having travelled to China. Their infection, though, could be traced to a Chinese tour group that had visited the shop. The authorities termed this a "local limited transmission."

Following this case, the task force decided that schools would implement staggered recess times and stop certain activities.

On the ground, people started becoming more fearful of picking up the virus. Cleaning products were snapped up at shops.

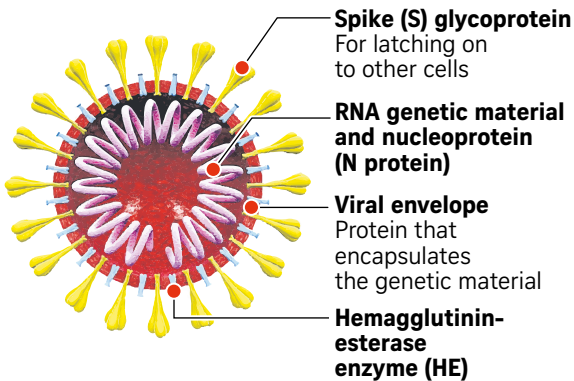
### CODE ORANGE

On Feb 7, rumours went around that the Government would be raising its risk assessment from yellow to orange. True enough, this was announced at a press conference in the afternoon.

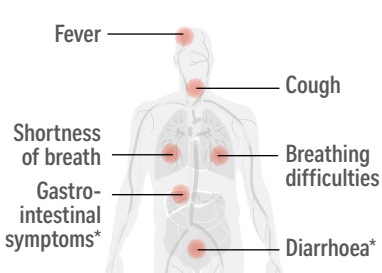
Under the orange alert, temperature taking is instituted at buildings. The Ministry of Education also suspended all inter-school and external activities till the end of the March school holidays.

### STRUCTURE

The virus contains multiple parts. Some of note are:



### COMMON SIGNS OF INFECTION



#### Severe cases

- Pneumonia
- Urinary tract infection, which could lead to kidney failure.
- Sepsis or organ failure
- Death

#### Treatment

- No vaccines available yet for these viruses
- Symptoms can be treated
- No specific antiviral drugs available for the coronavirus

NOTE: \* To a lesser extent



SCAN TO WATCH ANIMATION  
<https://str.sg/infect>

### CORONAVIRUSES: FROM ANIMALS TO HUMANS

- In the case of Sars, the virus jumped from bats to civet cats before gaining the ability to infect humans. For Mers, camels served as the intermediate host.
- Researchers are not sure how the coronavirus first infected people in China, but the viruses that cause Sars and Mers, which originated in bats, provide clues.

#### Animal respiratory tract

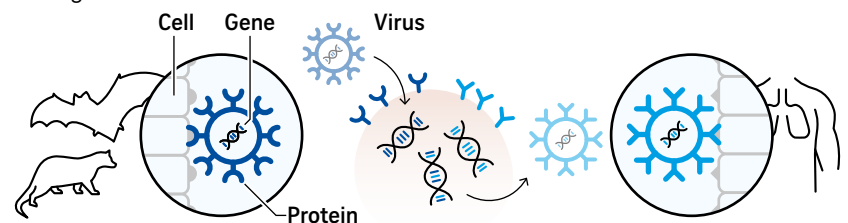
- Proteins on the outer shell of the virus allow it to latch on to cells in the host's respiratory tract. The proteins' shapes are determined by the virus' genes.

#### Mutation

- When the virus' genes undergo mutations, its surface proteins are altered.

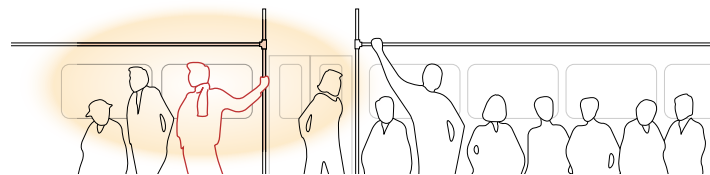
#### Human respiratory tract

- This allows them to latch on to the cells of new species.



### HOW FAR VIRUSES TRAVEL

Coronaviruses can travel only about 1.8m from the infected person. It is unknown how long they remain infectious.



Sources: REUTERS, AGENCE FRANCE-PRESSE, SCIENTIFIC ANIMATIONS, AMERICAN SOCIETY FOR MICROBIOLOGY, CENTRES FOR DISEASE CONTROL AND PREVENTION, NYTIMES, THE WALL STREET JOURNAL

STRAIT TIMES GRAPHICS

The alert, however, led to a round of frenzied shopping at supermarkets from Feb 7 through to the next day. Some calm was restored on the evening of Feb 8 when Prime Minister Lee Hsien Loong addressed the nation in a video telecast.

He spoke of how Singapore was much better prepared to deal with the new virus because of its experience in tackling the severe acute respiratory syndrome (Sars) outbreak 17 years ago. Fear and panic, he said, would do more harm than the virus.

The team from Reach said its surveys showed that 80 per cent of those who heard PM Lee's message felt more reassured by it.

Later, another large cluster emerged around the Grace Assembly of God church. Across the island, mass and some services were cancelled as a precautionary measure.

It is clear the current orange alert may be around for some months yet.

On Feb 14, PM Lee noted that what Singapore is seeing is a "very intense outbreak" and the impact of the coronavirus was much more than Sars. It took five months to eradicate Sars.

"That was, I think, very fast. I expect it not to be so fast this time," he said of the new threat.

Like the rest of the world, Singapore will have to learn to deal with the coronavirus till it, hopefully, goes away. [St](#)

## THE REAL TEST

**I am confident of the medical outcome of this outbreak. Most Singaporeans should remain well, and of those who get ill, most should expect to recover.**

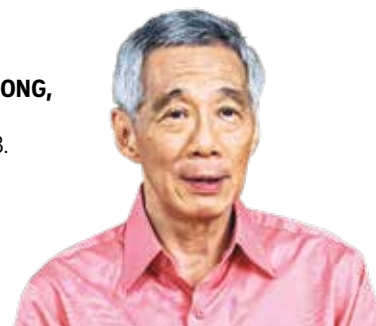
**Among those who have been hospitalised so far, most are stable or improving. Several have already recovered and been discharged, although a few remain in critical condition.**

**But the real test is to our social cohesion and psychological resilience. Fear and anxiety are natural human reactions. We all want to protect ourselves and our families from what is still a new and unknown disease.**

**But fear can do more harm than the virus itself. It can make us panic, or do things which make matters worse, like circulating rumours online, hoarding face masks or food, or blaming particular groups for the outbreak. We should take courage and see through this stressful time together.**



**– PRIME MINISTER LEE HSIEN LOONG,**  
speaking on the coronavirus in a  
video-recorded message on Feb 8.



## \$6.4b to deal with virus crisis, economic uncertainties

### ROYSTON SIM

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SOME \$6.4 BILLION HAS BEEN SET ASIDE IN THE Budget to support businesses, workers, families and front-line agencies, as Singapore grapples with the economic fallout from the ongoing coronavirus outbreak.

Deputy Prime Minister Heng Swee Keat announced various measures on Feb 18 to stabilise the country's economy and cushion the impact of the outbreak, which has hit tourism arrivals and disrupted global supply chains.

A \$4 billion package will be rolled out to keep workers in jobs, help companies with their cash flow and provide additional support for sectors directly affected by the coronavirus disease, known as Covid-19.

Households will get additional help with the cost of living from a special \$1.6 billion package, with those less well-off receiving more.

This includes a one-off cash payout ranging from \$100 to \$300 for every Singaporean aged 21 and above.

Apart from this, \$800 million in extra funding will be given to front-line agencies fighting the outbreak, taking the support kitty to \$6.4 billion.

"We will put in every effort to slow down the spread of the virus," pledged Mr Heng, who is also

Finance Minister.

The measures are part of a \$106 billion Budget that aims to position Singapore for the future, while helping its people navigate the near-term challenges posed by the outbreak.

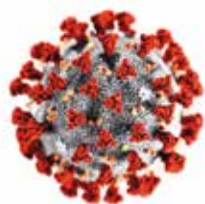
Mr Heng made plain that the coronavirus outbreak will certainly impact Singapore's economy, which has seen declining visitor arrivals and air traffic through Changi Airport, along with falling hotel occupancy rates.

While it is not clear how badly the outbreak will hit the global economy, he added that "we must be prepared that the economic impact may be worse than we projected."

The measures to deal with immediate economic uncertainties include a Jobs Support Scheme that will offset 8 per cent of every employed local worker's wages for three months, capped at \$3,600 a month, per worker. This will benefit all firms, and cost \$1.3 billion.

There will be additional support for sectors directly affected by the outbreak, such as tourism, aviation and retail. These include property tax and rental rebates.

"We will continue to monitor the situation closely. If needed, we can and are prepared to do more," Mr Heng said. [St](#)





**On the Frontlines**

ST PHOTO: JASON QUAH

# All hands on deck at public hospitals

A doctor tells of seeing her young daughters for only half an hour each day, while others share the challenges and fears they face in the fight against the coronavirus

AT THE HEART OF THE OUTBREAK BATTLE, THE National Centre for Infectious Diseases (NCID), where most coronavirus patients have been taken, senior consultant Monica Chan reflects on what it has meant to her family.

Since late January, as the number of suspected and confirmed coronavirus cases grew, Dr Chan has managed to see her two daughters, aged nine and 11, for only about half an hour each day before they sleep.

When she is unable to do so, she stays in touch through a video call.

A check of Singapore's public hospitals shows the challenges and fears faced by healthcare staff in the line of duty, who put in extra work hours as days turn into weeks and possibly into months.

Of Singapore's scores of cases, several are in

critical condition, while some have been discharged, and for every confirmed case, there are more suspected ones.

Patients started checking in to the 330-bed NCID at the start of the year. Some sought help at hospitals including Changi General Hospital (CGH), National University Hospital (NUH) and Sengkang General Hospital.

Singapore's first confirmed case, a Chinese tourist from Wuhan, went to Singapore General Hospital on his own as that was the nearest one from his hotel in Sentosa.

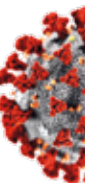
NCID's first confirmed case, and Singapore's second, was announced on Jan 24. The patient had sought help at a hospital and was subsequently transferred to the centre.

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Dr Monica Chan says it was “anxiety-provoking” when the National Centre for Infectious Diseases confirmed its first coronavirus case.

ST PHOTO: JASON QUAH

While all major hospitals in Singapore have isolation rooms for patients with suspected infectious diseases, NCID, which opened last year, was built specifically to combat outbreaks such as the current coronavirus outbreak.

It has the largest number of special isolation rooms among Singapore’s healthcare facilities, and also houses the National Public Health Laboratory, where swabs are sent to check if a patient has the coronavirus infection.

As patient numbers rise, NCID has deployed more medical teams on the ground. Dr Chan says doctors from neighbouring Tan Tock Seng Hospital (TTSH) have been roped in to help out, leave has been frozen and most training has been cancelled.

Regular patients at NCID have been transferred to TTSH as the centre prepares to handle more coronavirus patients, if needed.

Each day now, a team of two or three doctors may see 10 to 20 patients who have or are suspected of having the coronavirus disease, up from five to 10 patients normally before the outbreak, says Dr Chan.

They must wear personal protective equipment (PPE) each time they go into an isolation room to see a patient. That was not always the case previously.

Dr Chan says it can take five to 10 minutes to put on the gear, which includes an N95 mask, a visor, a gown and gloves, and another five to 10 minutes to remove it very carefully.

“We minimise unnecessary entry into a patient’s room, and so it’s probably twice a day,” she says.

Before the coronavirus reached Singapore, NCID had done a lot of outbreak planning and training, and conducted drills, she says.

She adds that despite the preparations, when the first patient at NCID tested positive in a preliminary test on the evening of Jan 23, it was “anxiety-provoking”. It was about 5pm when the medical team received the results and they had to go back to the ward to announce the news.

In the wards, they monitor each patient closely, as a patient’s condition can worsen at the end of the first week, when shortness of breath can progress quite rapidly, Dr Chan says.

“I’m never sure what the day will bring because you don’t know where the next new patient will be found, and whether there will be an increase in the number of patients coming in,” she says.

Direct confirmatory testing for the virus by the laboratory at NCID became available from the second week of January, which helped to cut down the time that doctors took to diagnose a patient.

“This reduced the uncertainty and waiting to see if symptoms worsen,” says Dr Chan.

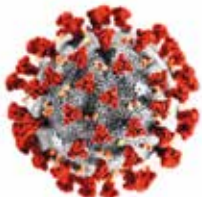
“As symptoms of the coronavirus are similar to the common cold and flu, the direct confirmatory testing allowed NCID to quickly sift out those who did not have the virus.”

Dr Kelvin Kuan, a consultant at CGH’s accident and emergency department, says any initial fear among medical staff diminished as the hospital infection control put them through a refresher course on using PPE, “which was uncomfortable but something we could trust in providing us with protection from the virus.”



As patient numbers rise, NCID has deployed more medical teams on the ground. Dr Chan says doctors from neighbouring Tan Tock Seng Hospital (TTSH) have been roped in to help out, leave has been frozen and most training has been cancelled.

ST PHOTO: JASON QUAH



One of the challenges was getting patients' travel history. "While being led to the isolation room, some patients expressed regret at revealing their travel history," he says.

Then, as the travel ban took effect and cases of local spread were reported, the medical team knew that they had to be even more vigilant. "Now, anyone can be a patient," Dr Kuan says.

"Despite that, we had already planned ahead with this scenario in mind, and the A&E was split into different sections to prevent the mingling of those at a higher risk of the virus with those at a lower risk."

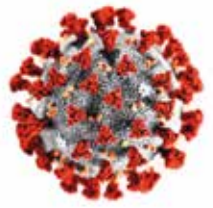
Dr Tan Seow Yen, a consultant at CGH's infectious diseases department, admits: "When treating an

infected patient, I did worry about potentially infecting my family. But I kept telling myself that the PPE would protect me adequately."

Dr Ian Mathews, a consultant at NUH's emergency department, says: "New work flows that we have implemented for affected patients will change frequently the more we discover about the disease."

Staff who see patients with fever and respiratory illness on the front line and in high-risk areas put on PPE for the majority of their shift, which ranges from eight to 12 hours, he says.

In some cases, they have to wear the full PPE for a prolonged period. "We are drenched (in sweat) after minutes of use." **ST**



# MOH team races against time to trace links and stop spread

While his team has to identify and serve quarantine notices to all close contacts of an infected patient, work is made more difficult by misinformation spread on social media, says director of communicable diseases Dr Vernon Lee.

## SALMA KHALIK

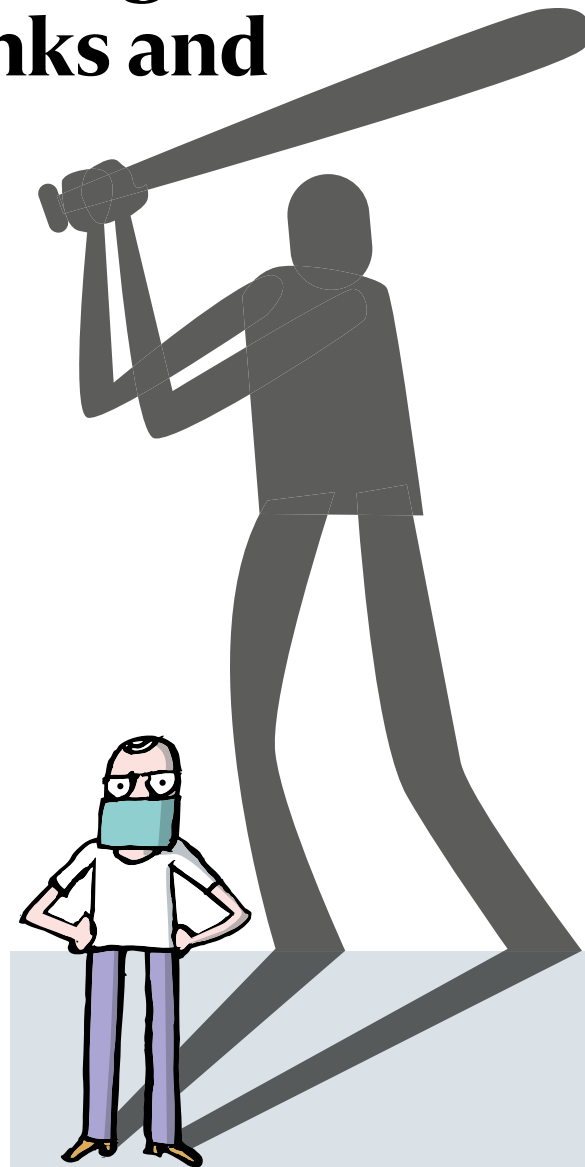
Senior Health Correspondent

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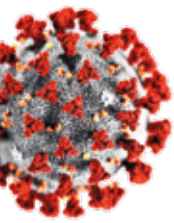
THE HIGHS AND LOWS IN LIFE TODAY FOR Dr Vernon Lee, 42, are tied closely to whether his team is able to find the source of coronavirus infection in patients who caught the disease locally.

As he is the director of communicable diseases at the Ministry of Health (MOH), it is his team that has to identify - and serve quarantine notices to - all close contacts of someone who is infected. They aim to do all this within 24 hours, to minimise spread of the virus.



ST ILLUSTRATION:  
MANNY FRANCISCO

*Manny Francisco*



ST ILLUSTRATION: CEL GULAPA

The first cases were all visitors from Wuhan whose contacts were fairly limited. Although the visitors went sightseeing, they would have had only brief contact with people here, and so had little danger of spreading the virus to them.

The difficulty came when local cases with no known sources emerged.

Dr Lee says: "The most challenging part is to incorporate the many streams of information coming from various sources, and to piece together the picture of how the Covid-19 cases could have been infected."

It can be frustrating when faced with new cases for which it is difficult to find links.

Dr Vernon Lee finds it most rewarding at this time when his team's contact tracing prevents further spread of the coronavirus. He adds that encouraging messages from friends also give him strength.

ST PHOTO: JASON QUAH

But his team managed to trace some – they discovered that three people here had most likely contracted the infection at The Life Church and Missions, which a couple from Wuhan had attended. The China couple were confirmed to have the coronavirus infection.

"The most rewarding is when we are able to find a link, and when our contact tracing and containment measures are able to prevent further spread from the particular case," says Dr Lee.

That, and encouraging messages from friends and even mere acquaintances "has warmed my heart and gives me strength to carry on the fight", he said.


He had been all set to go on a holiday to Bangkok with his family over the Chinese New Year long weekend when Singapore reported its first coronavirus case, a visitor from Wuhan.

He recalls: "My family was very understanding. I told them to carry on with their trip, as my work shouldn't affect their plans. But I had to miss the reunion dinner and precious time with my family."

Dr Lee has been involved in epidemiological investigations for the severe acute respiratory syndrome (Sars), as well as bird flu in Indonesia when he was seconded by the MOH to the World Health Organisation to help with the outbreak there.

He has also worked on the swine flu and Zika outbreaks.

"A lot of the investigation work requires experience to have a feel of where and what to investigate to maximise success," he says.

But he says his work is made more difficult by rumours and misinformation spread on social media: "That undermines the real information that we are putting out. Addressing this misinformation takes time and draws us away from the important work." 





A press conference by the Multi-Ministry Taskforce chaired by Taskforce Co-Chairs, Minister of Health, Mr Gan Kim Yong (centre) and Minister for National Development Mr Lawrence Wong. Director of Medical Services Associate Professor Kenneth Mak (right) accompanied them on the panel.

ST PHOTO: DESMOND FOO

## Top medical official's long hours on job

Despite past month of intensive work, what is most challenging is understanding the behaviour of this virus, says Associate Professor Kenneth Mak.

**TALK ABOUT LANDING IN THE HOT SEAT.** Singapore's top medical authority, the director of medical services (DMS) at the Ministry of Health, is Associate Professor Kenneth Mak. And he took up the post only at the start of February.

Prof Mak, 53, now finds himself dealing with the biggest national medical emergency since Sars: the coronavirus outbreak.

"We work every day. Even Chinese New Year was an ordinary working day for most of us," says Prof Mak, who even in the fortnight before formally taking up his position was leading the medical effort. He was previously chairman of the medical board at Khoo Teck Puat Hospital (KTPH).

Vested in him is the full authority from the Infectious Diseases Act which allows him to quarantine people or get personal data that will help in controlling an outbreak. During the severe acute respiratory syndrome (Sars) outbreak in



2003, the then DMS Tan Chorh Chuan closed one of Singapore's busiest hospitals, Tan Tock Seng, to all but Sars patients.

The DMS is the person to whom other doctors, such as Professor Leo Yee Sin who heads the National Centre for Infectious Diseases, report to.

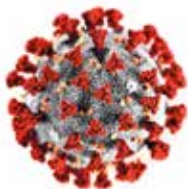
In turn, he has to advise the country's political leaders on the situation and steps that need to be

Nurse clinician Priscilla Fu from the National Centre for Infectious Diseases, going through the first steps in the process of donning personal protective equipment – putting on an N95 mask, goggles and shower cap.

ST PHOTO: JASON QUAH



Professor Kenneth Mak says the most rewarding experiences are the opportunities to reach out to people who are on the front lines, in both the hospitals and clinics, to appreciate how driven and committed they are in providing the best care for their patients. ST PHOTO: JASON QUAH



taken to keep people here safe.

Of the past month of intensive work, Prof Mak says: “The most challenging part of the work is to understand the behaviour of this virus, how it infects people and how it spreads from one person to another.”

Prof Mak is a surgeon by training, so infectious diseases are not his forte. He says: “I’m grateful for

having many experts in different areas who have been very willing to share their knowledge and this has been most helpful.”

But in his previous position at KTPH, he learnt to see the big picture. And with 30 years as a doctor behind him, he says: “The work pressure is something that I’ve learnt to handle through the years.”

Of the long hours, the many meetings and the almost daily press briefings, he says: “I’ve learnt to rest whenever I can, in order to have enough energy to deal with the many different issues.”

His wife and three daughters are understanding about the time he has been spending on this outbreak. He says: “I regret having to spend so much time away from home. These days, I return home sometimes well past 9pm and they’d have to have dinner without me.”

What is most worrying, he says, is the little knowledge there is of the virus. “But we are beginning to understand better how the virus spreads and how the infection manifests.”

And the most rewarding experiences: “The opportunities to reach out to people who are on the front lines, in both the hospitals and clinics, to appreciate how driven and committed they are to providing the best care they can provide for their patients.” **ST**

– Salma Khalik, Senior Health Correspondent



A room in the National Centre for Infectious Diseases. PHOTO: CMG



# Keeping the spirit alive as the battle continues

Positive stories of healthcare workers in China aim to turn the tide of public opinion

**TAN DAWN WEI**

China Bureau Chief in Beijing

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IN THE ANNUAL LANTERN FESTIVAL SHOW on China's state television two weeks into the Chinese New Year, doctors in white robes stood on stage with celebrities like Ulan Tuya, Qu Dan and Wei Yunxi, waving the national flag and joining in the popular patriotic song, *Me And My Motherland*.

In fact, one could say the true celebrities of the extravaganza were the medical professionals, who were being hailed for their bravery and sacrifice in facing down the coronavirus that had taken hold of the nation.

Since the disease began spreading like wildfire across the city of Wuhan, social and state media has been flooded with images and stories of overburdened healthcare workers whose lives have been consumed by taking care of a seemingly endless number of the ill.

There is the video of a doctor who, fearing she will infect her husband by being in the same car, walks in the rain to the hospital for her shift at 3am, as he drives slowly behind her to make sure she is safe.

There are the pictures of numerous nurses with deep goggle and face-mask imprints on their faces after wearing them for hours on end, and the tales of big-hearted volunteers who offer free meals to medical workers or ferry them to and from the hospitals.

There are stories of healthcare workers who will not eat, drink or go to the toilet during their shift in order not to compromise their protective suits.

Such anecdotes and optics have done a fine job in galvanising a country traumatised by this sudden

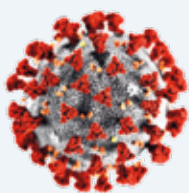


From top: A doctor being disinfected by his colleague in a quarantine zone in Wuhan; Dr Wen Yuanyuan of Zhejiang Zhoushan Hospital on a Valentine's Day video call with her husband, Dr Yang Zhiqiang, who was among the second batch of medical workers dispatched to Wuhan; and a man passing groceries over a temporary wall around a residential block in the Hubei city. PHOTOS: AFP, XINHUA, EPA-EFE



Medical personnel working in the intensive care unit of a hospital designated for Covid-19 patients in Wuhan, Hubei province. Three weeks after officials went public with the outbreak, thousands of medics poured into Wuhan from various provinces as well as from the People's Liberation Army, carrying with them much-needed supplies and equipment. PHOTO: EPA-EFE

## *A Wuhan patient's experience: At first it didn't seem serious*



ON THE NIGHT OF FEB 2, WUHAN NATIVE DING Hui started developing chills and a high fever. He pulled himself out of bed in the middle of the night and made his way to the emergency department of a hospital, where he was given a CT scan and some blood tests.

The doctor on duty said it did not look like he was infected with the new coronavirus, which had started spreading like wildfire across the city.

Just a week before, the Chinese government had ordered a lockdown of Wuhan in a bid to contain the spread of the virus.

From the scan, the doctor deduced that Mr Ding had bronchitis, and sent him home after giving him some IV fluids and medication to bring his temperature down.

"I had bronchitis and normal pneumonia just three months before, and I didn't think this was the new virus either," said the 40-year-old university lecturer.

"At that time, hospital emergency departments mainly did blood tests and CT scans. I showed other doctors my CT scan result afterwards, and they all said the same thing."

Still, to protect his 10-week pregnant wife, he left his parents-in-law's home, where he was staying, and moved back to his parents' place.

For days, his fever came and went.

On Feb 8, he went back to the hospital and was given a nucleic acid test, which confirmed he had the disease now known as Covid-19.

The CT scans he did one week apart looked remarkably different. The second one displayed multiple white patches described by physicians as "ground glass", a sign of fluid in the lungs. The patches extended to the edges of his lungs, a trademark of the virus infection.

The first few days were rough: Fever, breathlessness and an unstoppable cough.

outbreak and its government's sweeping draconian measures in response to the virus. It has locked down cities, enforced quarantines and mandated face masks.

President Xi Jinping declared this fight against the spread of the coronavirus a "people's war", vowing to win it, mere months after state media had vowed that there would be another "people's war" at the height of United States-China trade tensions.

Perhaps the state propaganda machinery thought the positive narratives would help turn the tide of public opinion, which soured dramatically following the death from the virus of Dr Li Wenliang, a 34-year-old doctor who was initially silenced by the police after warning of an outbreak late last December.

Local officials and even the country's top leaders have acknowledged their shortcomings in the handling of the crisis in the early days.

Doctors who sounded the alert when the outbreak was still in its early stages were ignored.

"Our management didn't take it seriously. In simple terms, it was an issue of bureaucracy; in deeper terms, it is a problem of human literacy," says a 52-year-old physician who declined to be named.

Even as the number of infected cases grew, and one man died, the Wuhan mayor still let 40,000 residents gather for a Chinese New Year potluck feast, while the authorities assured people repeatedly that the disease was preventable, controllable and could not be spread through human contact.

When The Straits Times reported from Wuhan on Jan 10, after Hong Kong and Singapore had begun

fever screening passengers from the city, residents interviewed thought nothing of the outbreak.

"We trust our government, and if it's serious, they'll be telling us about it and shutting down places, but look, everything is going on normally," said one woman.

It took eminent infectious disease expert Zhong Nanshan's visit to the city in the middle of January for the facts to finally surface: The virus can spread from human to human, he told reporters on Jan 20. Just as alarming was his revelation that 14 medical workers had been infected by a single carrier.

Doctors had, since the beginning of last month, complained that the screening criteria for patients were too stringent, allowing many cases to fall through the cracks.

Bureaucracy also stood in the way: Confirmation could come only from the national-level Centre for Disease Control and Prevention, which slowed the process of identification.

Those problems have since been resolved, but if there had been expectations that China would have learnt valuable lessons from the 2003 severe acute respiratory syndrome (Sars) pandemic, it has proven the hopeful wrong on a few counts.

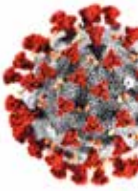
The instinct to cover up, the compulsion to control information, the pattern of scapegoating local officials and a fragmented bureaucratic system plague this viral outbreak as they did the one 17 years ago.

Local authorities, not wanting to spoil two of their biggest political meetings from Jan 5 to 11, hit the mute button on public information during that window.

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**The finance ministry has allocated 80.55 billion yuan (\$16 billion) to fighting the epidemic, while the central bank on Feb 15 promised that the country's lenders would tolerate higher levels of bad loans to help businesses hit by the outbreak.**

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His 35-year-old wife was hospitalised a few days after him – she on the fourth floor, and he on the seventh floor, of Union Hospital in Wuhan's south-western suburbs.

"Her condition is worse than mine and she still needs oxygen. She said she had to reduce the number of visits to the toilet as she gets very breathless from just taking a few steps," said Mr Ding, who teaches computer science at a local university.

The couple are not allowed to see each other as the hospital's isolation measures are strict, and patients cannot leave their wards at will. Instead, husband and wife speak to each other via messaging app WeChat's video call.

But doctors have given them some bad news: His wife may lose their unborn child, their first.

"We don't yet know. We will have to take one step at a time," he said.

"All I can hope for is for my wife to be fine."

The couple's parents are now under strict quarantine – Mr Ding's parents at home, and his in-laws at a designated hotel.

Mr Ding thinks he could have caught the virus when he accompanied his wife to a hospital last

month for an ultrasound for the baby.

"At that time, the outbreak did not seem particularly serious, and no one wore a mask."


His recovery days are spent listening in on his company's daily staff meetings – he also runs a firm that offers coding courses to children – and watching drama series on his phone.

"Time passes quickly. I am actually fine being in the hospital," said Mr Ding.

His floor is mostly staffed by medical workers who have been deployed from Guangzhou, and he gets an infusion of potassium chloride and ambroxol for his phlegm, as well as oral medication daily.

A nurse takes his blood every three days, and he gets a CT scan once a week.

"My greatest feeling now is that we should pay attention to our physical health and spend more time with our family," he said.

"I used to pour my energy into my work, but this illness has made me think, what if I was a little less lucky and had died? Who is going to take care of my wife and my elderly parents?" 

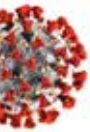
– Tan Dawn Wei, China Bureau Chief

University lecturer and Wuhan native Ding Hui, 40, was hospitalised on Feb 9 for Covid-19. His wife followed suit a few days later. PHOTO: COURTESY OF DING HUI





A woman wearing a face mask, goggles and a plastic bag, riding a bicycle in the Guangdong city of Guangzhou. Jianxi, Shanghai, Nanjing and Guangdong are among the places in China where wearing a face mask in public is mandatory. PHOTO: EPA-EFE



Dr Huang Yanzhong, a senior fellow for global health at the Council on Foreign Relations who studied China's response to the Sars epidemic, says the Chinese government had, after that crisis, invested in its disease surveillance response capacity and built a Web-based reporting system that would allow grassroots officials to report an unusual disease outbreak to the central authorities.

"Yet, at the local level, the pattern of inaction has not changed," says Dr Huang, who is also a professor at Seton Hall University's School of Diplomacy and International Relations.

## MEASURES TO CURB OUTBREAK

### QUARANTINES

Wuhan residents are not allowed to leave their neighbourhoods unless it is to see a doctor or be involved in work related to curbing the outbreak.

The city of Xiaogan, one of the worst-hit in Hubei province, on Feb 14 also started disallowing residents from leaving their communities, and arranging for daily necessities to be delivered to them.

Other cities have introduced measures such as allowing one member of a household to go out to buy necessities once every five days.

Beijing on Feb 14 announced that anyone returning to the city would be subject to a 14-day quarantine or face punishment.

### LOCKDOWNS

Wuhan continues to be sealed off, with all public transport suspended and shops shuttered. More than 80 cities around the country have imposed partial lockdowns.

### MASKS

Guangdong, Jianxi, Shanghai and Nanjing are among provinces and cities where wearing a face mask in public is mandatory.

### GATHERINGS

Beijing banned restaurants from serving groups of more than three diners, while in Sichuan province, famed for its hotpot, dinner gatherings have been barred since Jan 25.

In the wake of the Sars outbreak, as many as 1,000 officials were punished; this epidemic has already witnessed the sacking of the Hubei and Wuhan party chiefs, provincial health officials and the disciplining of hundreds of others across the province.

A brief respite that saw Internet users given free rein to criticise these local officials ended when censors returned to work after the Chinese New Year holidays, suspending accounts and scrubbing social media clean.

"You're muzzled in a very blunt way," says 27-year-old postgraduate student Shan He in Beijing. "In fact, everyone has only good intentions, and even criticisms are simply a desire for improvement. But it makes us feel awful when information is constantly being blocked or taken down."

Still, China has been praised by the World Health Organisation for its swift and decisive response to the epidemic. It has also been lauded for having quickly isolated and sequenced the virus, and sharing the information with the international scientific community.

Three weeks after officials went public with the outbreak, the central government threw its weight behind the battle, launching an all-out campaign to contain its spread.

Thousands of medics poured into Wuhan from various provinces as well as from the People's Liberation Army, carrying with them much-needed supplies and equipment.

Beijing dug deep into its reserves, releasing medical supplies and food stock while importing millions of face masks and protective suits that the country was woefully short of.

Thousands of construction workers toiled night and day to complete two makeshift hospitals with a total of 2,600 beds in 10 days.

The finance ministry has allocated 80.55 billion yuan (\$16 billion) to fighting the epidemic, while the central bank on Feb 15 promised that the country's lenders would tolerate higher levels of bad loans to help businesses hit by the outbreak.

Significantly, even before other countries began barring Chinese passport holders from entry, Beijing took the first step of locking down Wuhan and its surrounding cities. It then banned outbound tour groups, essentially stopping tens of thousands of Chinese from leaving the country and potentially spreading the disease worldwide.

How this epidemic pans out will have implications for President Xi and the Chinese Communist Party's authority.

"It could help boost his legitimacy if he fights a victorious war against the virus," says Dr Huang, who cited a survey done after the Sars outbreak that showed increased confidence in the government.

But the impact of this crisis on an already slowing economy will also weigh on the party's legitimacy, an entitlement that is performance-based and rooted in delivering economic growth. **ST**

# Crisis a chance for TCM to go global

It is China's opportunity to project soft power if traditional medicine's efficacy is confirmed



## WHAT'S IN A NAME?

When China first wowed the world with an announcement that it would build a 1,000-bed hospital in 10 days on the outskirts of Wuhan, the epicentre of the coronavirus epidemic, the authorities did not have a name for it.

Days later, they revealed that the hospital would be named Huoshenshan, or Fire God Mountain, ostensibly taking their cue from millennia-old traditional Chinese medicine (TCM).

A second hospital with 1,600 beds was completed in similar breathtaking speed and called Leishenshan, or Thunder God Mountain.

Why “fire” and “thunder”?

TCM practitioners postulate that metal – one of the Five Elements along with wood, fire, earth and water – corresponds to the lungs, and that fire can help cure lung infections as it is the nemesis of metal.

China has turned to TCM alongside Western treatment such as plasma therapy and anti-HIV drugs as part of clinical trials to overcome the epidemic.

China's National Health Commission has recommended TCM treatment plans which include multiple herbal prescriptions targeting fever, heavy coughing, loss of appetite, nausea, vomiting, diarrhoea, shortness of breath and tiredness, the Xinhua news agency reported.

The treatment covers five stages – medical observation, early, mid-term, critical and recovery.

Acupuncture and massage have also been used to treat patients.

“TCM has been our first choice in combating the epidemic,” Dr Li Guangxi, respiratory chief at Guang'anmen TCM Hospital in Beijing, wrote in an essay circulated on social media platform WeChat.

The first group of patients who recovered were discharged from Jinyintan Hospital in Wuhan, provincial capital of Hubei, on Feb 3, and all were “cured” using an East meets West combination of TCM and Western medicine, reported Xinhua.

But it was unclear if those discharged could infect others or suffer a relapse.

The epidemic is indisputably the worst to have hit China, but it is also seen as an opportunity for TCM to truly go global and for China to further project its soft power if the efficacy of indigenous medicine is confirmed.

“President Xi Jinping has described TCM as ‘the gem of ancient Chinese science’,” said a Communist Party source, who requested anonymity.

“If TCM is eventually proven to be effective, it would become one of our major cultural exports,” the source said.

The World Health Organisation did not respond to an e-mail seeking comment about TCM's efficacy against the coronavirus.

Traditional medicine has been used to treat more than half of the confirmed cases in Hubei, according to Mr Wang Hesheng, the new provincial health chief whose immediate predecessor was sacked.

“Our efforts have shown some good results,” he told reporters, giving scant details.

TCM can help alleviate fever, contain the progress of the coronavirus, and reduce complications and

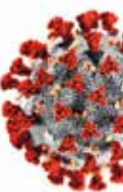
A staff member preparing traditional Chinese medicine at a Liaoning hospital. China has turned to TCM along with Western treatment as part of clinical trials to overcome the coronavirus epidemic. PHOTO: AGENCE FRANCE-PRESSE

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ST ILLUSTRATION: MANNY FRANCISCO

Medical workers of a traditional Chinese medicine (TCM) hospital preparing TCM sachets in Fuzhou, China, in efforts to fight against the coronavirus. China has turned to TCM alongside Western treatment such as plasma therapy and anti-HIV drugs as part of clinical trials to overcome the epidemic. PHOTO: REUTERS

**TCM is an enormous industry in China worth more than US\$130 billion in 2016 – a third of the country’s entire medical industry, reported Xinhua.**



Traditional Chinese medicine (TCM) practitioners prescribe remedies such as taking Five Flower Tea (above) made of monk fruit, dried chrysanthemum flowers, prunella spike and mulberry leaf twice a week to boost one’s immunity.

ST PHOTO: HEDY KHOO

the dosage of corticosteroids – a drug that lowers inflammation in the body, Xinhua quoted Dr Zhang Boli, one of 14 members of a national research team tasked with controlling the coronavirus outbreak, as saying.

It can also help negate the side effects of anti-HIV medication which have been prescribed to patients, practitioners say.

About 20,000 doctors and nurses, including 3,100 TCM practitioners, from around China have been sent to reinforce Hubei’s stretched medical resources.

TCM is an enormous industry in China worth more than US\$130 billion in 2016 – a third of the country’s entire medical industry, reported Xinhua.

With the exception of acupuncture and other non-herbal therapy, many Western medicine researchers and doctors have written off TCM as pseudoscience, if not quackery.

Xinhua did not do TCM any favours when it reported last month that two state-funded research institutes had discovered that shuanghuanglian could “inhibit” the coronavirus, sparking frenzied buying.

Days later, other state media played down the

magical effects of shuanghuanglian – an oral liquid formula made with honeysuckle that was concocted in the 1960s to relieve symptoms such as fever, cough and sore throat.

For all the scepticism, TCM got a shot in the arm when scientist Tu Youyou won the 2015 Nobel Prize in Physiology or Medicine for discovering the anti-malarial drug artemisinin – a herb used in TCM derived from sweet wormwood.

Olympic gold medallist Michael Phelps also raised eyebrows when he showed up for a swimming event during the 2016 Rio Olympics with purple marks on his back after undergoing cupping, an ancient non-herbal TCM therapy to relieve muscle pain, reduce inflammation and help blood flow.

TCM’s history goes back more than 3,000 years and still retains a special place in the hearts of many ordinary Chinese today, serving as a popular alternative medicine to relatively exorbitant Western drugs and treatment.

But it faces an uphill battle in gaining more respect and recognition from the rest of the world, especially the West.

If and when China bounces back from the contagion, TCM no doubt will claim some credit for winning the battle against the disease, like it has so often in the past.

“TCM has been around for thousands of years before Western medicine arrived in China,” a retired Health Ministry official said.

“We had plagues and other diseases, but Chinese civilisation was not wiped out, owing to TCM.” [ST](#)



# Did Japan miss the boat in containing Diamond Princess outbreak?

AS THE FIRST PASSENGERS CLEARED OF THE coronavirus began disembarking the Diamond Princess cruise ship off Yokohama on Feb 19, experts piled in on the Japanese government's handling as a bureaucratic bungle that led to the huge surge in cases on the ship.

About 440 passengers, out of 3,000 or so on board, were allowed to leave the ship at the close of a 14-day quarantine period that began on Feb 5.

Another 79 confirmed on Feb 19 brought the total number of cases to 621. This has fuelled concerns that the ship was effectively an incubator for the coronavirus. More than half of the positive cases, or 322, were asymptomatic.

Dr Kentaro Iwata, an infectious diseases expert at Kobe University who worked on the severe acute respiratory syndrome (Sars) in China and Ebola in Africa, said he was asked to leave the ship on Feb 18 after he had raised concerns with the way things had been done.

He said in a widely shared YouTube video later that the Diamond Princess had effectively become a "Covid-19 mill"

"The cruise ship was completely inadequate in terms of infection control. There was no distinction between 'green' zones that are free of infection and

'red' zones, which are potentially contaminated by the virus," he said.

He added that it was "completely chaotic", with some medical staff and government officials showing absolutely no regard for health and safety protocol. This meant they could have caught the virus, and spread it further to other people.

At least two government officials who worked on board the cruise liner have tested positive despite wearing personal protective equipment, and Dr Iwata has quarantined himself for two weeks.

Health Minister Katsunobu Kato told the Diet, Japan's Parliament, in response to the video: "We

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Passengers arriving at a checkpoint after they disembarked the Diamond Princess cruise ship at the Daikoku Pier Cruise Terminal in Yokohama, south of Tokyo, Japan, on Feb 21. About 440 passengers, out of 3,000 or so on board, were allowed to leave the ship at the close of a 14-day quarantine period that began on Feb 5.

PHOTO: EPA-EFE



As the number of coronavirus cases continues to rise in Japan, criticism is also mounting over the government's response to the outbreak both on land and on board the Diamond Princess cruise liner. PHOTO: REUTERS





Buses leaving the Daikoku Pier Cruise Terminal, where the Diamond Princess cruise ship is docked. Since Feb 19, passengers of the cruise ship have been disembarking, after going through a two-week-long quarantine period following the Covid-19 coronavirus outbreak.  
PHOTO: EPA-EFE

address issues on the same day if they are raised by specialist physicians who are members of the infection prevention team after they check the ship.”

The Japanese authorities, on their part, also insist that most infections had occurred before the ship’s quarantine period began on Feb 5, with the exception of some crew members as well as some family members who live together in a cabin.

The steady rise in cases, it reasoned, was because of the gradual testing of more passengers on board the ship.

“The decline in the number of confirmed cases, based on reported onset dates, implies that the quarantine intervention was effective in reducing transmission among passengers,” the National Institute of Infectious Diseases said.

“Transmission towards the end of the quarantine period, which is scheduled to end for most passengers on Feb 19, appears to have occurred mostly among crew or within passenger cabins,” it added.

This reassurance appeared to hold little weight with foreign governments that are arranging chartered flights home for their citizens, who will go through another 14-day quarantine.

While the United States Centres for Disease Control and Prevention had said on Feb 8 that “remaining in your room on the ship is the safest option to minimise your risk of infection”, it now cites the “dynamic nature of the outbreak” as the reason the Americans on board should be on a chartered flight home.

An elderly couple on the ship who live in Hiroshima told the Tokyo Shimbun newspaper that

they had been tested on Feb 4. Their results came back negative three days later.

But they are not being tested again before they leave the ship – as government officials say the risk is “extremely low” of their being infected after the quarantine period began.

Still, they told the newspaper that they felt uneasy about not being retested: “The government has not been able to put the situation under control and are acting too casually. We do not even know how the virus is being spread.”

Dr Iwata, on his part, said in the video: “I never had fear of getting infection myself because I know how to protect myself and how to protect others and how infection control should be.”

He added: “But inside the Diamond Princess I was so scared, I was so scared of getting Covid-19 because there was no way to tell where the virus is. There was no green zone, no red zone, the virus could be everywhere and everybody was not careful about it.”

This led renowned Japanese neuroscientist Kenichiro Mogi to comment on Twitter: “It’s a pandemic on board because we don’t do what we need to do in response and data collection.”

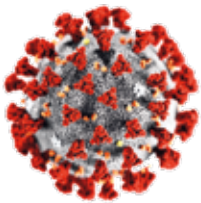
Dr Michael Ryan, the director of the World Health Organisation’s (WHO) health emergencies programme, also acknowledged that there had been “much more transmission than expected” on the Diamond Princess.

“It’s very easy in retrospect to make judgments on public health decisions made at a certain point,” he said, adding: “The authorities in Japan are adjusting to that reality now and taking the necessary public health measures with other countries to evacuate people and deal with their follow-up in a different way.”

Dr Hitoshi Oshitani of the Tohoku University Graduate School of Medicine, a former expert with the WHO who was in Singapore recently to meet Ministry of Health officials, wondered if Japan had missed the boat to control the outbreak.

He told a media briefing in response to a question by The Straits Times: “Everybody has been too late in countermeasures – Japan, China, the WHO.”

He said many governments had resorted to the “very basic, 19th century strategy” of containing the outbreak – which has proved ineffective in the




Workers wearing protective suits walk away from the cruise ship Diamond Princess, as they prepare to transfer passengers tested positive for the novel coronavirus on Feb 10, at Daikoku Pier Cruise Terminal in Yokohama.  
PHOTO: REUTERS





face of a new threat in which asymptomatic patients may also spread the illness.

He added that this was likely why Japan has not managed to trace the root cause of all its cases, with at least four loose chains of transmission.

“My major concern is that in coming weeks, we may see very large outbreaks somewhere in Asia or Africa,” he said. “If this does happen, we will continue to have imported cases from different sources, not just from Wuhan but from other places.” 



An Indonesian navy officer preparing medical equipment at an Indonesian Navy ship hospital in Surabaya, East Java, on Feb 20, in preparation for a decision on the evacuation of Indonesians aboard the Diamond Princess cruise ship. PHOTO: AFP

## Japan struggles with contact tracing as coronavirus infections grow

THE SAPPORO SNOW FESTIVAL HAS BEEN pinpointed as among a growing cluster of coronavirus infections across Japan, adding at least 26 new cases.

In many of the cases, the authorities are struggling with contact tracing as the number of domestic infections soars.

Separately, Japan’s decision to release close to 1,000 passengers on board the Diamond Princess cruise ship after their two-week quarantine ended is being severely tested.

Unlike other governments which have chartered flights to bring their citizens home, Japan insists that there is no need for another compulsory quarantine and instead has called on the passengers to practise “voluntary home isolation”

There are more than 600 confirmed cases on the cruise ship – a figure that does not include the 18 Americans, six Australians and one Israeli who were given a clean bill of health to go home, only to test positive for the coronavirus later.

Domestically, Tochigi prefecture also recorded its first case – a former passenger on board the Diamond Princess.

These developments have raised questions about the reliability of Japan’s testing. And amid scrutiny that the quarantine may have failed, Health Minister Katsunobu Kato apologised for what he described as a “mistake” after 23 passengers were released without being tested during isolation.

Concerns have also emerged about the ability of the nation’s healthcare system to cope with the growing outbreak. The Health Ministry issued an advisory last week for people to stay home if they develop symptoms and to see a doctor only if they have a fever of at least 37.5 deg C for four days or more and have breathing difficulties or lethargy.

But Dr Hitoshi Oshitani of Tohoku University Graduate School of Medicine, who sits on a government panel, has noted Japan’s limited testing capability – which means that not everybody can be screened.

There already have been several misdiagnoses, including a junior high school teacher in Chiba who

was told that she had the common cold on Feb 12 and went back to work until Feb 19. She tested positive for the coronavirus, and the school was being closed for at least a week.

In another case, a Tokyo man in his 60s, who works at an old-age home, first saw a doctor for a cough on Feb 12. He was prescribed medicine and sent home.


He went to work the next day, and then visited Indonesia with his family for a holiday from Feb 15 to 19.

He has been warded in intensive care with breathing difficulties after testing positive for the virus.

Meanwhile, Japan’s efforts at contact tracing have linked several cases to the Sapporo Snow Festival at Odori Park from Feb 4 to Feb 11 that drew two million visitors.

It has been linked to a municipal assembly member and two young boys among several others in Hokkaido, as well as a man in south-western Kumamoto and a woman in Chiba.

Other cases were linked to a yakatabune boat on the Sumida River in Tokyo, where a taxi association held a party on Jan 18.

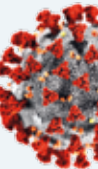
A waiter on the boat who had served passengers from Wuhan passed the virus on to at least 10 others at the party, including a taxi driver in his 70s who spread the bug to his mother-in-law. She is Japan’s first coronavirus death. 

### WALTER SIM

Japan Correspondent  
In Tokyo

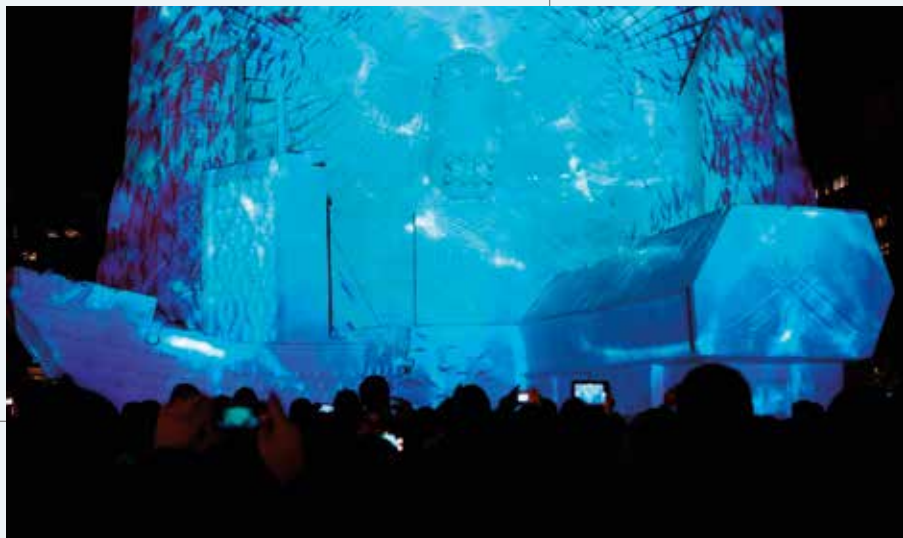


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Japan’s efforts at contact tracing have linked several cases to the Sapporo Snow Festival at Odori Park, in early February, that drew two million visitors.

PHOTO: AFP





Workers from a disinfection service company sanitising a street in front of a branch of the Shincheonji Church of Jesus the Temple of the Tabernacle of the Testimony. PHOTO: REUTERS



Residents sanitising the interior of a church in Seoul. PHOTO: REUTERS



Medical workers transferring a suspected coronavirus patient from Daenam Hospital in Cheongdo to another hospital. PHOTO: AFP

### Inside South Korea

# Crazy auntie and clusters trigger fears of mass infections in South Korea

In addition to Daegu, which saw a skyrocketing number of cases after a church member tested positive for the virus on Feb 18, community outbreak clusters have emerged in a church and a hospital in Seoul, and also a church in Busan.

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MORE COMMUNITY CLUSTERS OF CORONAVIRUS infections have emerged in South Korea, triggering concerns of mass infections, even as the health authorities test more than 200,000 members of the Shincheonji Church of Jesus.

There were 2,200 cases in Daegu as of Feb 29, with the country's total number of infections now exceeding 3,100.

More than 600 of the patients are followers of the Shincheonji Church of Jesus in the south-eastern city of Daegu, with a "crazy auntie" super spreader at the centre of the spread of the coronavirus.

Known as Patient No. 31, the church member tested positive for the virus on Feb 18, after which infection figures in Daegu skyrocketed and the authorities started labelling her as a "super spreader".

Angry netizens, however, are calling her "crazy ajumma" (auntie in Korean) for the way she refused twice to test for the coronavirus despite developing symptoms such as a sore throat and fever, then

attending church twice despite her condition worsening, and how she roamed freely even though she was warned for 10 days in a hospital after a car accident.

People familiar with the Shincheonji church, however, know that illness is no excuse for followers to neglect their duties.

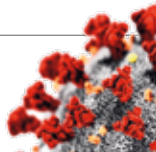
Founded in 1984 by religious leader Lee Man-hee, the church has 12 branches in South Korea and claims to have some 200,000 followers.

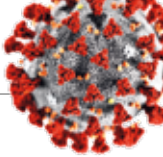
It has expanded overseas and set up a branch last year in the central Chinese city of Wuhan – the epicentre of the coronavirus outbreak.

The church claimed on its website that it recruited 103,764 members in just 10 months.

Shincheonji, which means "new heaven and earth" in Korean, has been described as an apocalyptic Christian group and branded a cult.

Observers say the church's unorthodox practices could have contributed to the rapid spread of the virus.





A former member, who left the church in December 2018, told JoongAng Sunday newspaper that he was required to kneel on floor cushions placed 10cm apart and hold hands with the people around him during regular church services, which lasted two hours.

Another former member, who left the church in 2015, told the New York Times that they were trained to sing hymns loudly and not wear anything on their faces, such as glasses or masks. They were also trained not to fear illnesses, he added.

Church founder Lee has called the coronavirus “an act of the devil who saw the rapid growth of Shincheonji and wants to destroy our advancement.”

In a message sent to church members via an app, he also said members should avoid meeting for the time being but continue to communicate in matters of education.

The church has suspended worship services and gatherings nationwide.

The branch in Daegu has been shut down and the city authorities have been given a list of 9,300 people who regularly attend services.

In a statement, Shincheonji said it was “deeply sorry that because of one of our members, who thought of her condition as a cold because she had not travelled abroad, (it) led to many in our church being infected and thereby caused concern to the local community”.

Student Kim Je-yeon, 19, told The Straits Times that fewer people were on the streets of Daegu now, and that tuition centres and study rooms which he frequented had closed temporarily.

In addition to Daegu, community outbreak clusters have emerged in a church and a hospital in Seoul, and also a church in Busan.

The ruling Democratic Party said on Feb 25 that it would take “maximum containment” measures, but ruled out a lockdown of the epicentre of Daegu and nearby Cheongdo, both in the south-east. About 70 per cent of the cases are in these two places.

A team of 750 public doctors will also be dispatched to Daegu – on top of 325 military doctors already sent there and the surrounding North Gyeongsang province, which has the second largest cluster.

President Moon Jae-in, who made a trip to Daegu, said the situation was “very grave” but not enough to declare the city a special disaster zone, which would allow it to get financial and administrative support quickly with little red tape.

Meanwhile, South Korea has been hit with more travel restrictions, with the United States and Taiwan advising their people against all non-essential travel to the country. Singapore also banned visitors from Daegu and Cheongdo from 11.59pm on Feb 26

A total of 505 new cases were announced on Feb 27. The death toll hit 13, mostly linked to Daenam Hospital in Cheongdo, while 24 people have recovered.

Concern is rising that smaller clusters have emerged and could potentially grow out of hand.

Eunpyeong St Mary’s Hospital in north-western Seoul has reported its fifth case – a 57-year-old woman caring for her husband warded at the hospital. He also tested positive for the virus.

Myungsung Church in eastern Seoul is also a potential hotbed for the virus.

It was revealed that a pastor there tested positive after attending the funeral service of the elder brother of Shincheonji’s founder, held at Daenam Hospital on Feb 14.

A relative of the pastor also tested positive, and numbers are expected to grow as the pastor had attended a church service with 2,000 followers on Feb 16.

Infections at the Oncheon Church in Busan and the Miral House of Love in Chilgok, north of Daegu, are also expected to grow. The church has 23 cases, mostly people in their 20s and 30s who attended a camp, while Miral, a welfare facility for the severely disabled, has 22 cases. **ST**

**Founded in 1984 by religious leader Lee Man-hee, the church has 12 branches in South Korea and claims to have some 200,000 followers. It has expanded overseas and set up a branch last year in the central Chinese city of Wuhan – the epicentre of the coronavirus outbreak that has infected more than 82,000 people worldwide, the vast majority of them in China.**



## 869,000 sign petition calling for Moon to be impeached



South Korean President Moon Jae-in speaks during a government meeting on the COVID-19 epidemic at a government complex in Seoul. PHOTO: AFP

CLOSE TO 869,000 PEOPLE IN SOUTH Korea have signed a petition to impeach President Moon Jae-in over what they claim is the government’s mishandling of the outbreak of Covid-19 in the country.

The petition criticised Mr Moon for not banning all visitors from China, where the coronavirus originated, and for sending three million face masks to the country. Only visitors from China’s Hubei province are barred.

As of Feb 29, the death tally stood at 17, including a 36-year-old Mongolian who flew in for a liver transplant but became infected in hospital.

A total of 284 new cases were reported

on Feb 26 – 505 more were reported the next day – with most of them linked to two clusters of infections in Daegu and Cheongdo.

Even as the government goes all out to curb the spread of the virus, such as revising an infectious disease Act to fine people up to three million won (\$3,450) for refusing a virus test, and limiting the export of face masks to 10 per cent of the output, criticism of the Moon administration has grown.

The petition calling for his impeachment was filed with the presidential Blue House on Feb 4. The petitioner wrote: “We cannot just watch this catastrophe anymore... I call for impeachment.” **ST**

# Teaching us a bit about disease, and a lot about ourselves

The frightening thing is that no region – not even North America – is fully equipped to handle an outbreak of this magnitude

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IF, AS THEY SAY, WHERE YOU STAND DEPENDS on where you sit, there was little doubt where Cambodian Prime Minister Hun Sen has chosen to place himself.

On Feb 14, he showed up at the seaport in Sihanoukville to receive the cruise liner Westerdam that had been turned away by five countries, including Thailand which dispatched a battleship to escort it out of the Gulf of Thailand.

Not a man known for softness, Mr Hun Sen, China's staunchest friend in Asean, showed up portside holding roses for the 1,455 disembarking passengers since it was Valentine's Day.

Cambodians "who are currently working or studying in China, including those in Wuhan, have to remain there and join the Chinese people to fight this disease", Mr Hun Sen was quoted saying earlier, in a speech in Phnom Penh on Jan 30. "Don't run away from the Chinese people during this difficult time."

True friendship emerges in times of adversity, Chinese Foreign Ministry spokesman Hua Chunying had said repeatedly. Yet, not all countries – North Korea and Russia included, surprisingly – have been quite so considerate about Chinese feelings.

Thailand, whose tourism is critically dependent on China, turned away the vessel although there was no known case of the coronavirus disease, Covid-19, on board. It has banned exports of face masks, standing



Cambodia's Prime Minister Hun Sen welcoming the passengers and crew of MS Westerdam.  
PHOTO: REUTERS

Volunteers wearing protective facemasks, amid fears of the spread of the Covid-19 novel coronavirus, gather to disinfect a pedestrian bridge in Bangkok.  
PHOTOS: AFP

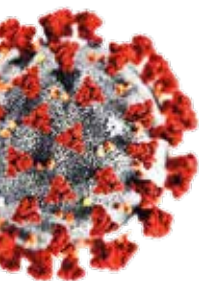
against manufacturers who shipped 226 million masks last year, three times the previous year's figure.

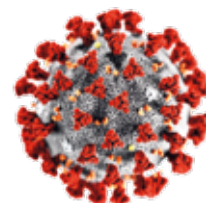
Some countries have been simply tactless; after the US announced severe restrictions on travellers from China and put it on a par with Afghanistan and Syria on a "Do Not Travel" advisory, Beijing officially complained of overreaction.

In this digital age, when first mentions of viruses draw visions of smartphones and electronic tablets, it is startling to find ourselves recoiling at the thought of actual germs that might have jumped from animal species to us, and which attack our respiratory systems, sometimes leading to death. But there you have it.

The World Health Organisation (WHO) now calls the Covid-19 outbreak a global health emergency.

The frightening thing about the outbreak is that no region – not even North America – is fully equipped to handle an outbreak of this magnitude. It gets worse when it comes to regions like Africa, home to 1.2 billion people, including a million Chinese, yet with only six laboratories with the capability to detect the coronavirus.





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**True friendship emerges in times of adversity, Chinese Foreign Ministry spokesman Hua Chunying had said repeatedly. Yet, not all countries – North Korea and Russia included, surprisingly – have been quite so considerate about Chinese feeling.**



An equal worry is densely populated South Asia, particularly the swathe of territory from Karachi in Pakistan to India's Gangetic delta where government doctors often have poor attendance records, and onwards to Bangladesh.

When United States Senator Tom Cotton, who sits on the Senate Armed Services Committee, asked the top brass in charge of each US command about how prepared nations in their areas of responsibility were to combat a virulent disease outbreak, each officer at the hearing stressed how unready these nations were.

WHO director-general Tedros Adhanom Ghebreyesus said: "My biggest worry is that there are countries today who do not have the systems in place to detect people who have contracted the virus, even if it were to emerge. Urgent support is needed to bolster weak health systems to detect, diagnose and care for people with the virus to prevent further human-to-human transmission and protect health workers."

It is not that we have not seen this coming. Three years ago, Microsoft founder Bill Gates, who has

funded one of the world's biggest philanthropies active in public health, told the Munich security conference that whether it occurs by a quirk of nature or at the hand of a terrorist, epidemiologists believe that a fast-moving airborne pathogen could kill more than 30 million people in less than a year.

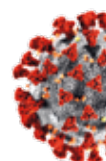
"And they say there is a reasonable probability the world will experience such an outbreak in the next 10 to 15 years," Mr Gates added.

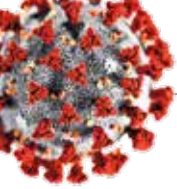
Scientists in Wuhan, epicentre of the outbreak, have been aware of dangers for years.

In November 2015, the respected scientific magazine Nature published a report titled "A Sars-like cluster of circulating bat coronaviruses shows potential for human emergence"

It talked of the work of an expert group, including the highly respected Dr Shi Zhengli of the Wuhan Institute of Virology, and went on to say: "Our work suggests a potential risk of Sars-CoV re-emergence from viruses currently circulating in bat populations."

Ironically, we still do not know enough of the disease. On Feb 15, the China Daily reported that





**My biggest worry is that there are countries today who do not have the systems in place to detect people who have contracted the virus, even if it were to emerge. Urgent support is needed to bolster weak health systems to detect, diagnose and care for people with the virus to prevent further human-to-human transmission and protect health workers.**



— WHO director-general  
Tedros Adhanom  
Ghebreyesus  
PHOTO: BLOOMBERG



confirmed transmission routes of the coronavirus include direct transmission, contact transmission and aerosol transmission.

“Aerosol transmission refers to the mixing of the virus with droplets in the air to form aerosols, which causes infection after inhalation, according to medical experts,” Mr Zeng Qun, deputy head of the Shanghai Civil Affairs Bureau, “We have called on the public to raise their awareness of the prevention and control of the disease caused by family gatherings.”

The next day, a medical expert from China’s Centre for Disease Control and Prevention seemed to reverse that position, saying there is no definitive answer to whether the virus can be spread through aerosol form. In Singapore, the director of medical services at the Ministry of Health, Associate Professor Kenneth Mak, seems to tilt the same way, saying the virus is spread by droplets with no evidence that it is airborne.

China has been blamed – fairly or unfairly – for hiding the extent of the outbreak. However, deaths are harder to conceal than disease. In a perverse way, therefore, if the disease is much wider than thought, but the mortality figures more accurate, it could imply the bug is not as virulent as currently thought.

#### BEST AND WORST

One of the memorable shots following the Great Sendai earthquake and tsunami of 2011 was the sight of the patience and consideration that Japanese showed fellow sufferers who were short of food and petrol as they queued for supplies. Some survivors who had been left with only two bottles of water surrendered one to the needy. With public utilities stricken, many homes voluntarily cut electricity use so there was enough power to go round.

The run on Singapore supermarket shelves after the outbreak alert level was raised to orange on Feb 7 suggests that this country, which today exceeds Japan in average life expectancy and income levels, has a way to go to reach those standards of public behaviour.

Neither is Britain, Singapore’s former colonial master, too different. The government announcement of an imminent health emergency touched off a wave of panic buying of masks and hoarding of canned foods and instant noodles. In the land of the British bulldog and stiff upper lip, many switched from public transport to their own cars, cycling, or just walking.

Virus outbreaks are class-neutral, but how societies react can depend on their individual circumstances. Fully a third of Japan’s 30 million tourists are Chinese, and Tokyo has assiduously wooed them in



ST ILLUSTRATION: CEL GULAPA

recent years for both economic and strategic reasons. Last week, Japan, which along with the Philippines and Hong Kong is among the three foreign territories where there have been coronavirus-related deaths, was bracing itself for an epidemic with two taxi drivers and a doctor among the victims.

Eyes now turn to Africa, which has yet to report a confirmed coronavirus case. The continent has the weakest health systems and is only just managing to contain a hugely debilitating Ebola outbreak. In the Congo, for instance, Ebola deaths have come down from the hundreds to dozens and could spread again if attention is diverted to another disease. Nigeria, Ethiopia, Angola, Tanzania, Ghana and Kenya figure in the list of 14 African nations that the WHO has identified as at increased risk from the coronavirus because they either have direct air connections to China or receive a lot of Chinese visitors.

Meanwhile, Asean, where the quality of public health services can vary from Singapore and Thailand at the top, to some Indochinese states which could use substantial improvement, is gathering its own response.

During the Sars outbreak in 2003, whose peak impact was a five-month period from February to July, ministers of affected Asean states met to discuss a coordinated response. This time around, Asean chair Vietnam is coordinating a response.

“We need to exchange information and cooperate with one another to avoid working at cross purposes,” Prime Minister Lee Hsien Loong said while touring Changi Airport’s Terminal 3 on Feb 14. “We did that in Sars, the ministers met. This time, I think we should do something similar. If the region has a problem, it’s going to be very, very difficult for Singapore to isolate ourselves and to keep the problem outside of our boundaries.” **ST**

# Fighting the coronavirus, with openness and information

Fostering confidence and trust in public institutions over the years has helped enable Singapore to respond sensibly to the present outbreak

IT WAS JUST BEFORE NOON, BUT THE STRAITS Times newsroom was deserted.

The multimedia hub – the operational nerve centre of the revamped ST newsroom – usually abuzz with activity, had fallen silent. Only a handful of my colleagues were about, staring intently at their screens.

Like in many organisations across the island, most of our staff had been told to stay at home, after we made a decision to move into a virtual, distributed mode of operations.

The purpose: To ensure that ST would be able to continue to serve our readers, with the latest news and analysis, across all our platforms, come what may, as the coronavirus outbreak unfolds.

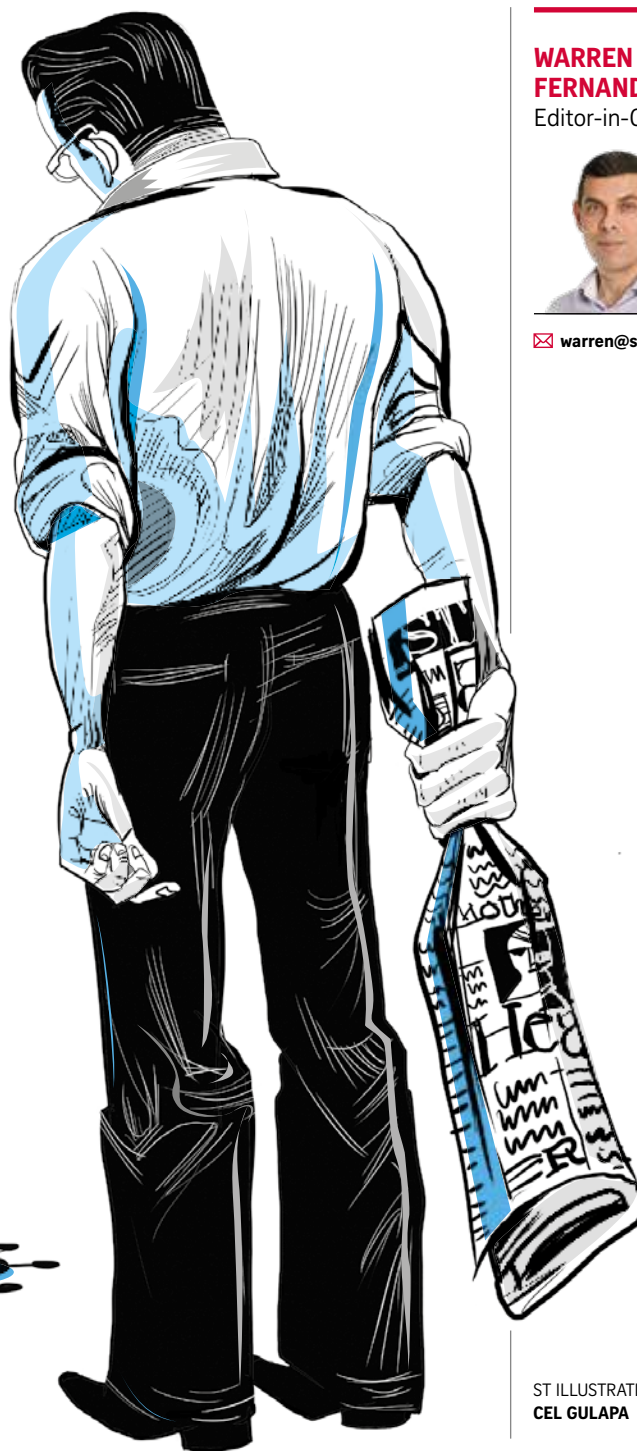
If you have not noticed any difference to your paper or our website, that is thanks to the efforts of the ST team, working doubly hard to stay connected despite the disrupted operations, through a flurry of phone calls and Google Hangouts sessions. Reporters continue to do their jobs, with precautions, filing remotely from the field.

In times like these, with so much fake news swirling about, people look to trusted sources of information to help them make sense of developments and how to respond. Indeed, ST's page and video views have seen a surge these past weeks.

Information – timely, reliable and trusted – might be the best antidote to an outbreak, both of viruses and viral rumours, and the panic and anxiety these can engender.

In the absence of this, the vacuum is inevitably filled by falsehoods and misinformation, spread deliberately or otherwise.

To try to counter these, Health Minister Gan Kim Yong and National Development Minister Lawrence Wong, who co-chair the Covid-19 response task force, have been tireless in addressing queries from the media, openly and transparently, with briefings held almost daily in recent weeks.



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ST ILLUSTRATION:  
CEL GULAPA



A medical worker in protective suit moves a novel coronavirus patient in a wheelchair at a hospital in Wuhan. Hubei's decision to change the way in which a patient would be counted as infected by the coronavirus or not has led to doubts about the accuracy of figures from the province.

PHOTO: REUTERS

**The upshot of this is clear: trust is critical, especially in a crisis, which could be exacerbated if the public loses confidence in those charged with managing it.**



Health Minister Gan Kim Yong at a media briefing. He and National Development Minister Lawrence Wong, who co-chair the Covid-19 response task force, have been tireless in addressing queries from the media, openly and transparently, with briefings held almost daily.

ST PHOTO: KUA CHEE SIONG

Their explanations have been detailed and nuanced, rather than trying to oversimplify the complexities of the situation.

Take, for example, the burning question of whether to wear a mask or not.

Now, the idea that donning a mask might help keep the bug at bay seems intuitive. After all, some barrier should be better than none.

Yet, the authorities here have taken the harder line to explain – that while a mask might be useful in some circumstances, such as when you are sick, wearing one when you are not does not provide all that much of a defence, since the virus is more likely to be picked up when you touch your face with your hands, which might have come into contact with droplets of the virus left on surfaces around you.

The stocks of masks, which can't possibly be infinite, might then be better used by those who need them most – healthcare workers and those who are ill.

To my mind, while this might be harder to communicate, it makes for greater credibility in our public health officials' statements. Similar positions have been taken by top medical officials in the United States, Australia and elsewhere.

Then, there is Prime Minister Lee Hsien Loong, who drew attention from the foreign media for the frank and direct way in which he addressed Singaporeans on the outbreak recently.

A report by the Bloomberg news agency, titled "As Asia panics, one country wins praise for approach to virus", said: "The speech, posted on social media in three languages, appeared to have an immediate impact: The long queues at supermarkets throughout the city-state on Friday night returned to normal levels as of Sunday.

"That alone proved notable in a region where governments have struggled to get the message right, spurring panic buying and confusion over how to protect themselves from the outbreak."

In his video message, PM Lee went on to alert Singaporeans to the possibility that the present approach of trying to contain the virus might need to be changed at some point if it was found

to be spreading widely in the community, without traceable sources.

An alternative stance of mitigation might then be more appropriate, with mild cases sent home to recuperate, allowing hospitals to focus on those who were most at risk. But this depended on the mortality rate of the virus remaining relatively low, closer to the seasonal flu rather than the higher rates seen during the Sars outbreak, he made plain.

This tell-it-like-it-is-to-the-grown-ups approach prompted Professor Thomas Abraham, author of *Twenty First Century Plague, The Story Of Sars*, and a risk communication consultant for the World Health Organisation, to note in the Bloomberg report: "Prime Minister Lee does not hide any facts. Nor does he hesitate to talk about how the situation might worsen."

Now, set this against the recent study by Harvard University, which modelled how the outbreak might be expected to play out, given the region's strong business and travel links to China.

Alarmed by what they saw, they warned that there might be further waves of the current outbreak as countries such as Indonesia, Cambodia and Thailand had reported lower number of cases than might be expected.

"Indonesia has reported zero cases and you would expect to have seen several already," said Professor Marc Lipsitch of Harvard's T.H. Chan School of Public Health, who co-authored the study, which Indonesian officials dismissed as "insulting"

Similarly, in Japan, experts are warning of a "stealth outbreak" with patients having been infected by some whom they are unable to trace, as all efforts to do so run into a dead end for a lack of information on possible sources, including perhaps those from abroad.

Then, there is China, which has drawn much flak for its initial efforts to downplay the severity of the outbreak.

For weeks, experts said they feared that the numbers of infections and deaths being reported were a gross underestimate – perhaps by as much as tenfold – with reports emerging of sick patients being sent home because of a lack of facilities to test them, potentially spreading the disease to their families and those around them.





Then, out of the blue, came news on Feb 13 that some Chinese provinces had decided to revise their numbers. One, near Russia, is reported to have cut its numbers by reclassifying patients who had tested positive for the coronavirus but did not have symptoms, taking them out of the total count of confirmed cases.

“The documents offered little detail or explanation, and scepticism was immediate. A Hong Kong newspaper called the decision a ‘disguise,’” reported The New York Times.

Meanwhile, in Hubei, the epicentre of the current outbreak, officials went the other way. They announced that nearly 15,000 new cases and 242 new deaths were recorded in a single day. This was largely because the authorities decided to accept doctors’ “clinical confirmation” of cases suspected to have the virus, without the need for a lab test, since these were in short supply.

While many experts from around the world welcomed the move since it enabled patients who needed medical care to receive it, doubts were inevitably raised about the numbers and the motives behind these sudden revisions.

“It’s pretty clear that there is an issue with trust about whatever the Chinese government comes out with at the moment,” Professor Kerry Brown, director of the Lau China Institute at King’s College, London, was quoted as saying.

“That may be terribly unfair,” he said, adding: “To redefine things – even legitimately – at a moment like this is always going to be a presentational challenge, because people are going to be very sensitive, and they’re going to suspect there’s another agenda.”

For its part, Singapore’s Health Ministry has said it sees no reason to change its protocols and will continue to classify people as having coronavirus only after a lab test, given that its capacity to carry out such tests remains robust.

The upshot of this is clear: trust is critical, especially in a crisis, which could be exacerbated if the public loses confidence in those charged with managing it.

But trust cannot be whipped up on demand, nor can it be mandated or handed down. As in a bank account, trust has to be earned, painstakingly chalked up over the years, to be available to be drawn on when the chips are down.

And let’s be clear: The main beneficiaries of such high-trust societies or systems are not just the political players or public officials, but also the community itself, as it enables everyone to take practical steps on the basis of what is most sensible and sound.

Those who seek to undermine that trust, for whatever reasons, and beat the “drums” – as Defence Minister Ng Eng Hen put it, spreading distortions, rumours, untruths, misinformation and smears – are the ones that society most needs inoculation against, in good times and in bad.

Thankfully, by most accounts, Singapore has



managed to foster trust in its key institutions – the political leadership, public services and also the media – in large part because of the open and transparent way it has dealt with such crises in the past.

This was on display, for example, during the Sars outbreak in 2003, when many of us journalists would recall how then Health Minister Lim Hng Kiang would sit patiently answering each and every question reporters threw at him late into the evening, until everyone in the room ran out of steam.

“There was nothing to hide, so it’s best to be open,” he said with a laugh, when I asked him about his approach some time afterwards.

Wittingly or otherwise, Mr Lim and his successors have been drawing on an old playbook that was first framed by Singapore’s founding Prime Minister Lee Kuan Yew.


Indeed, some years ago, when my colleagues Han Fook Kwang, Sumiko Tan and I were working on the book, Lee Kuan Yew: The Man And His Ideas, we chanced upon a speech in which Mr Lee spoke on how best to deal with a major outbreak of disease in Singapore.

He was addressing community leaders on the 1967 swine flu. Wild rumours had spread that men who ate meat from pigs that had been inoculated against the disease might lose their manhood, quite literally, causing a panic. (Fake news, even then.)

Mr Lee declared: “In other parts of the world, when their pigs suffer from swine flu, they hush it up. They pretend they do not have it. Net result: All pigs get infected, the position becomes permanently chronic.

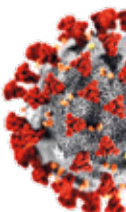
“We can do likewise, but we will become a permanently chronic society: sick. So when we get swine fever, we announce it, alert everyone so that we can arrest the spread of the disease and bring back normalcy.”

Ever one to rally his people, he added that Singapore had to keep pressing forward, come what may.

“This is what is required of this community... we must have an awareness of the realities of life. A good striving, hardy people cannot be kept down.” 

Chinese tourists wearing facemasks arrive from Nusa Penida at a fast boat pier in Serangan island in Denpasar, on Indonesia’s resort island of Bali. Harvard University warned that there might be further waves of the current outbreak as countries such as Indonesia, Cambodia and Thailand had reported lower number of cases than might be expected. PHOTO: AGENCE FRANCE-PRESSE

**But trust cannot be whipped up on demand, nor can it be mandated or handed down. As in a bank account, trust has to be earned, painstakingly chalked up over the years, to be available to be drawn on when the chips are down.**





## Racing Against Time

Senior principal investigator Professor Lisa Ng (second from right) with her group of research scientists at Agency for Science, Technology and Research (A\*STAR).  
ST PHOTO: KELVIN CHNG

# Singapore labs join global race to learn about virus

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Having made a diagnostic test kit, scientists here now hope to develop a possible cure

HOW DOES THE FIGHT AGAINST THE SPREAD OF a disease begin, if the virus causing it is something that no one has seen or heard of before?

As with most mysteries, it starts with first seeking answers to the most basic of questions: What is it? How does it spread? How severe is the infection it causes?

Enter the scientists, the detectives of the microbe world.

Working in laboratories, away from the glare of the public spotlight, scientists are in a race against time to answer these questions – answers that others could build upon to save lives, improve patient care and boost public health through developing diagnostic test kits, drugs and even a vaccine.

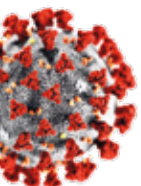
As the Health Ministry's chief health scientist, Professor Tan Chorh Chuan, told the media: "To fight a war, you must know your enemy."

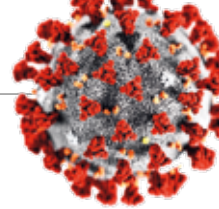
The mystery virus first surfaced in Wuhan, China, late last December, with those infected exhibiting pneumonia-like symptoms. Since then, the virus – now identified as Sars-CoV-2 (the disease itself is Covid-19) – has spread around the globe, including in Singapore.

Many unknowns remain about it, although scientists around the world were handed an important clue when Chinese scientists first uploaded the genome of the coronavirus on a public database in January.

It allowed scientists to determine that it was related to the one that caused the severe acute respiratory syndrome (Sars) in 2003.

The availability of the genome was also a good starting point for scientists in Singapore, paving the way for the development of a diagnostic test kit, enabling clinicians to quickly screen for patients





infected with the coronavirus, with high accuracy.

Developed by experts from the Agency for Science, Technology and Research (A\*Star) and Tan Tock Seng Hospital, the kit has been rolled out at a number of public hospitals here and also delivered to China.

A diagnostic test “flags” parts of the viral genome unique to Sars-CoV-2 in a patient sample.

Care is taken to ensure the genetic sequence flagged is the more stable part that is less prone to mutation. But this does not rule out mutation occurring, which viruses are prone to doing.

If it does, the test has to be modified quickly. Says Dr Masafumi Inoue, co-developer of the diagnostic test kit, who is also head of the diagnostics group in the translational sciences division at A\*Star’s Experimental Drug Development Centre: “This is why we have to work closely with the A\*Star researchers at the Bioinformatics Institute who study the genome of the virus.

“The latest analyses show that the virus has not mutated in our targeted region of its genome.”

With Singapore already having the capability to quickly screen patients for the virus, the next step is to find out how they can be treated.

This is what Professor Lisa Ng, senior principal investigator at A\*Star’s Singapore Immunology Network, aims to find out.

She studies how the virus works, and how the human body reacts to it, by analysing samples from patients in Singapore, and by working closely with clinicians and healthcare workers who interact directly with patients.

“In the presence of a virus, the immune system will mount a protective response. By studying these mechanisms, it could pave the way for the development of therapies and even a possible vaccine,” says Prof Ng.

Since the Sars outbreak, the research community has become more organised over the past 17 years, notes Prof Tan, and advancements in technology have also yielded new capabilities, such as rapid whole genome sequencing.

He adds: “R&D is integral to preparedness and effective response.”

## SEARCH FOR CURE LIKE FINDING NEEDLE IN A HAYSTACK: INVESTIGATOR

Professor Lisa Ng, 46, is part of a team searching for a cure for Covid-19 – the “mystery” disease with pneumonia-like symptoms originating from Wuhan, China, that only recently got a name.

It is a noble task, but one that can feel like searching for a needle in a haystack, says Prof Ng, senior principal investigator with the Agency for Science, Technology and Research’s (A\*Star) Singapore Immunology Network.

Before a cure or vaccine can be developed for Covid-19, scientists must first understand how the human body responds to the virus infection.

This is necessary in order to develop immune-

based therapies that can stimulate the body’s natural protective response against the virus, which provides a longer-term protection for the patient than drugs.

But studying how the body responds to the virus is a long process. The first step entails the search for immune system indicators – such as protein levels and the presence of antibodies – in samples taken from patients who have recovered.

As there can be thousands of such indicators present in a human body at any given time, it can be challenging to identify the specific elements of the immune system mounting the defence against the virus causing Covid-19, says Prof Ng.

The immune system comprises many different elements which all work together to rid the body of bacteria, parasites and viruses.

An important component of this system is antibodies, which are found in the blood. They detect the presence of a virus and latch on to the infected cell, flagging it so other elements of the immune system can kick in to destroy it.

When faced with a new or previously unidentified threat, the body will typically manufacture new antibodies to get rid of it.

“So, when it comes to searching for clues to how a person’s immune system mounts a defence against this specific virus, which is so new, it sometimes feels like we are going in blind,” Prof Ng said.

“But we are guided by certain basic understanding of biology, immunology and patient physiology,” says the viral immunologist, who studies how humans respond to other vector-borne diseases such as chikungunya and Zika.

Though she had always been interested in the study of diseases in humans, Prof Ng says it was her experience during the severe acute respiratory syndrome (Sars) outbreak that changed her perception of the role of scientists in such outbreaks.


She was part of a team at A\*Star that developed a kit which could test for the Sars virus in patient blood samples back in 2003.

At that time, the most common way to test for the presence of viruses that cause respiratory diseases in patients was to first collect nasal samples from them.

But Prof Ng had learnt that this method could expose healthcare workers to infection risk. In the early days of Sars, clinical sample collection equipment for infectious pathogens was not as sophisticated as it currently is.

The development of a diagnostic test that could detect the presence of the virus in blood samples – which have lower levels of the virus than nasal samples – was a breakthrough that also gave healthcare workers some peace of mind.

Prof Ng says: “That experience taught me that being a scientist is not just about hiding in the lab, looking at cells and then just about publishing papers about it.

“It’s also about how we can help to improve and save lives.” 

## NO MUTATION SO FAR

**The latest analyses show that the virus has not mutated in our targeted region of its genome.**



– DR MASAFUMI INOUE, head of the diagnostics group in the translational sciences division at A\*Star’s Experimental Drug Development Centre, on how the diagnostic test would have to be modified quickly if mutation occurs.

# Racing towards a cure

Scientists around the world are looking to develop a cure for Covid-19, the disease with pneumonia-like symptoms caused by a novel coronavirus originating from Wuhan, China. Audrey Tan speaks to Singapore scientists to learn more about therapeutics – the branch of medicine that looks at treatment methods used to alleviate or prevent a particular disease.

To tackle the current outbreak, scientists are looking to develop three broad categories of therapeutics.

## TREATMENT

### 1 ANTIVIRAL DRUGS

#### How they work:

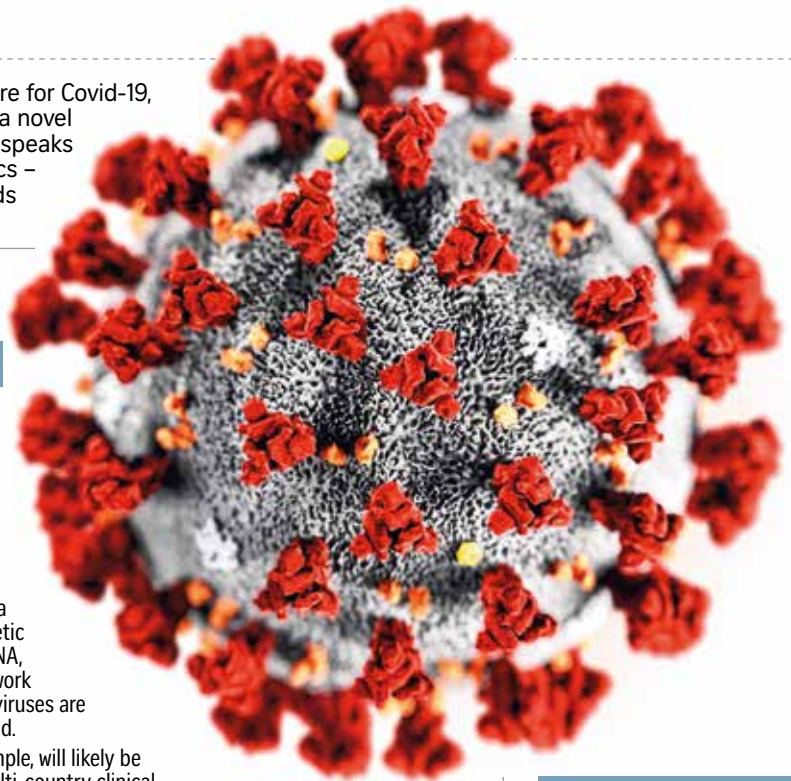
- These drugs work by preventing the development of the virus inside the human body.
- Just like a guided missile, these drugs target viruses at different stages of their life cycles in order to disable and block their development.
- By doing so, these drugs ultimately reduce the number of virus particles in the body, and prevent them from spreading.
- This could help shorten the length of symptoms and give the body's immune system time to fight off existing virus particles in the body.

#### Current status:

- Most antiviral drugs are specific to one or, at most, a handful of similar viruses. A few are "broad-spectrum" and are able to

target a wide range of viruses.

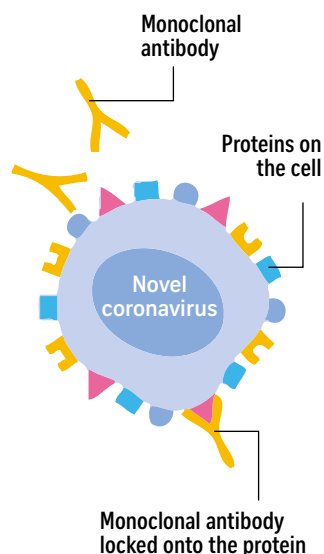
- As the novel coronavirus at the centre of the current outbreak comprises a single strand of genetic material known as RNA, antiviral drugs that work against similar RNA viruses are currently being tested.
- Singapore, for example, will likely be participating in a multi-country clinical trial testing a variety of antiviral drugs, including the combination pill lopinavir/ritonavir, which is used to treat the human immunodeficiency virus, which is also an RNA virus, said Associate Professor Hsu Li Yang from the National University of Singapore's Saw Swee Hock School of Public Health and programme leader for infectious diseases.



### 2 MONOCLONAL ANTIBODY THERAPY

#### How they work:

- Monoclonal antibody therapy essentially works by flagging the presence of the virus in the body, so that the immune system can work to get rid of it.
- The immune system comprises many different elements which all work together to rid the body of bacteria or viruses. An important component of this system is antibodies, which are found in the blood.
- When antibodies detect the presence of a virus, they latch on to the infected cell. By doing so, the presence of the problem cell is flagged, and other elements of the immune system can kick in to destroy it.
- In such therapy, laboratory-produced antibodies, known as monoclonal antibodies, are injected into the patient's bloodstream.
- They serve as substitute antibodies that mimic the immune system's attack on infected cells.



#### Current status:

- Monoclonal antibody therapy is a more specific type of treatment compared with antiviral medication.
- This is because scientists need to find out how exactly antibodies in an infected patient latch on to the virus cells. This latching on is usually done via a lock-and-key approach – the antibodies usually have to take on a certain "shape" before they can bind with the virus.
- As the virus is so new, research is still under way to understand this mechanism, before monoclonal antibodies can be generated in a laboratory, said Professor Lisa Ng, senior principal investigator from the Agency for Science, Technology and Research's Singapore Immunology Network.

## PREVENTIVE

### 3 VACCINES

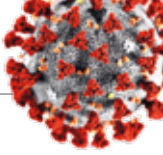
#### How they work:

- Vaccines are a preventive strategy that could inoculate the vast majority of the population before they get infected.
- There are two main types of vaccines – live vaccines and inactivated vaccines.
- Both types essentially involve injecting a tiny amount of a less- or non-infectious strain of the virus into the patient, to kick-start the body's protective response to it.
- That way, if the patient later gets infected by the virus, he would already have sufficient levels of antibodies in his blood to get rid of the virus before symptoms develop.

#### Current status:

- Scientists are now trying to understand more about the virus and how the human immune system responds to it. Such information will help in the development of a vaccine.

Sources: LISA NG, HSU LI YANG, CANCER RESEARCH UK PHOTO: EPA-EFE STRAITS TIMES GRAPHICS



## CORONAVIRUS

# Efforts elsewhere to know more about the virus

### Scientists announce 'breakthrough' atomic map of coronavirus

UNITED STATES SCIENTISTS ANNOUNCED on Feb 19 that they had created the first 3D atomic scale map of the part of the coronavirus that attaches to and infects human cells, a critical step towards developing a vaccine and treatments. The team from the University of Texas at Austin and the National Institutes of Health (NIH) first studied the genetic code of the virus made publicly available by Chinese researchers, and used it to develop a stabilised sample of a key part called the spike protein. They then imaged the spike protein using cutting-edge technology known as cryogenic electron microscopy, publishing their findings in the journal Science. The model can also help scientists develop new proteins to bind to different parts of the spike and prevent it from functioning, to treat those already infected.

### Getting to know the virus

First 3D atomic scale map of a key part of COVID-19 is published



- ▶ Known as the spike protein
- ▶ Attaches to and infects human cells with the virus
- ▶ Understanding the spike is a critical step for developing vaccines for immunity
- ▶ It can also lead to the development of antivirals to treat people already infected

### China to start coronavirus vaccine trials in late April

CHINA COULD START CLINICAL TRIALS for a potential vaccine for the novel coronavirus around late April, an official said on Feb 21. Mr Xu Nanping, vice-minister for science and technology, said that several research teams were trying different techniques to develop a potential vaccine, and the earliest vaccine is expected to be submitted for clinical trials around late April. In Singapore, the Duke-NUS Medical School is working with the Coalition for Epidemic Preparedness Innovations to roll out a vaccine trial in as soon as four months. Meanwhile, US biotech firm Moderna Therapeutics has shipped the first

batch of an experimental coronavirus vaccine to US government researchers just 42 days after the genetic sequence of the Covid-19 virus was released by Chinese researchers in mid-January, reported Time. The first vials were sent to the National Institute of Allergy and Infectious Diseases, which will also ready the vaccine for human testing as early as April. Additionally, Indian company Serum Institute of India announced in mid-February that a vaccine candidate they developed in partnership with American Biotechnology firm Codagenix is expected to progress to human trials phase within six months, said India Today.

### Japan plans HIV drug trials to fight Covid-19 infection

JAPAN PLANS TO START TRIALS OF HIV medications to treat coronavirus patients as an increase in the number of cases poses a growing threat to the economy and public health, the government's top spokesman said on Feb 18. The government is making "preparations so that clinical trials using HIV medication on the novel coronavirus can start as soon as possible", Yoshihide Suga told a briefing, but added that he could not say how long it might take to approve a drug's use. As the contracting economy deepens recession fears, the spread of the virus has prompted Tokyo to curb the size of public gatherings, while some companies are telling employees to work from home. – Business Times



The spread of the virus has prompted Tokyo to curb the size of public gatherings, while some companies are telling employees to work from home. PHOTO: REUTERS

### Antiviral cocktail a possible cure for novel coronavirus

A COCKTAIL OF ANTIVIRAL DRUGS appeared effective in treating a seriously ill patient infected with the novel coronavirus spreading around the world, a Thai health official said. According to the Bangkok Post, a 74-year-old Chinese woman who received a mixture of HIV and flu drugs as treatment for severe Covid-19-related pneumonia left Bangkok's Rajvithi Hospital on Feb 18 after making a full recovery. Deputy Public Health

Minister Sathit Pitutecha told reporters that the woman was first treated with two anti-HIV medications - lopinavir and ritonavir - for the first five days. The flu drug oseltamivir was later added to her prescription after which her severe pneumonia abated in 8-12 hours, and after 48 hours she tested negative for Covid-19. She was given the cocktail of drugs for the next 10 days, and no trace of the virus was found in four subsequent tests over 20 days.

# Malaysia's long week of politics – and what's next

**LESLIE LOPEZ**

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The Straits Times spoke with politicians and operatives from both sides of the country's political divide, to reconstruct the events leading to Muhyiddin Yassin becoming Prime Minister. Here are insights into what to expect next

THE CHAOTIC EVENTS OF THAT WEEK BEGAN AT a Pakatan Harapan (PH) meeting on Feb 21 where Parti Pribumi Bersatu Malaysia (Bersatu) leaders declared that they would pull out of the coalition should Datuk Seri Anwar Ibrahim's allies in PH press ahead with a plan to force then Prime Minister Mahathir Mohamad to provide a firm timeframe for handing over power.

Although the meeting appeared to end with an agreement that Tun Dr Mahathir would be allowed to decide when to pass the baton, the acrimony of that discussion rankled some of the key players at the session.

Political operatives from both sides of the divide said the rising tension in PH prompted forces aligned to Bersatu president Muhyiddin Yassin and Datuk Seri Azmin Ali, a leader of a group of dissidents within Mr Anwar's Parti Keadilan Rakyat (PKR), to decide to set in motion an audacious gambit to unseat the coalition government by teaming up with the parties in the opposition led by Umno and Parti Islam SeMalaysia (PAS).

The plan, the way Mr Azmin and Tan Sri Muhyiddin saw it, would lead to the formation of an alternative government with Dr Mahathir still at the helm, but with Mr Anwar and the Democratic Action Party (DAP) sidelined.

Mr Muhyiddin and Mr Azmin would then have a clear shot at the leadership succession when Dr Mahathir eventually stepped down.

The tense meeting was the culmination of strife built up since the PH coalition unseated the long-time ruling Barisan Nasional in 2018.

While there was no shortage of grouches and grudges among members of the newly formed



Malaysia's former interior minister Muhyiddin Yassin waving to reporters before his inauguration as the 8th Prime Minister, outside his residence in Kuala Lumpur. PHOTO: REUTERS

grouping, three would prove particularly sticky.

The first was what some saw as an overzealous push by the Anwar camp to get Dr Mahathir to hand over the reins. When the two joined forces at the polls, Dr Mahathir had agreed that Mr Anwar would succeed him.

Since the elections, it has been unclear when that succession would actually take place. Some within PH had been unhappy that the succession issue would be raised every so often by those pushing for Mr Anwar to take over.

The second problem was a growing rift between Mr Anwar and his deputy in PKR, Mr Azmin. Mr Azmin appeared to have aspirations of his own for the premiership, and his supporters blame Mr Anwar's camp for a sex video scandal that grabbed the headlines last year.

Mr Azmin's supporters believe it was the Anwar camp that released a video purportedly showing the then Economic Affairs Minister in bed with another man to damage him politically.

The enmity between the two camps had already boiled over once, when delegates allied to Mr Azmin

staged a boycott of the PKR Congress last December.

The third issue was the role of the Chinese-dominated DAP in the coalition.

In mid-February, Mr Anwar held talks with Mr Muhyiddin amid speculation that he would be leading a faction to break away from PH.

According to political aides familiar with the meetings, Mr Muhyiddin was very candid about his party's deep unease with the PH coalition. They said that he singled out leaders from the DAP, particularly Finance Minister Lim Guan Eng, for allegedly dominating government affairs and neglecting to channel adequate financial resources to the Malay community that makes up more than 60 per cent of the population.

Mr Anwar acknowledged that the growing unease with the DAP leaders was palpable within the PH coalition, but the problem was "manageable", according to two people who were briefed about the meeting by the PKR leader.

All three issues would shape the dramatic events that followed.

## THE COUP IS ON

By Feb 23 (a Sunday), the political coup was on. A series of highly choreographed meetings by Dr Mahathir's Bersatu, Umno, PAS and forces aligned to Mr Azmin sparked speculation that the PH government would lose its majority in Parliament, and that Bersatu and Mr Azmin's group of unhappy PKR members would break away to team up with the opposition to form a new coalition government.

The only problem seemed to be Dr Mahathir.

Even if the 94-year-old leader had been aware of the grievances of some in his party, and heeded their gripes over it, he appeared to be a reluctant participant in the so-called "democratic coup".

"The whole plan was driven by Mr Muhyiddin, and Dr Mahathir was against going into any cooperation with Umno and PAS," said one Bersatu official who attended the meeting that he described as "often heated".

Dr Mahathir's reluctance to sanction the gambit threw a spanner into the audacious plans forged by Mr Muhyiddin and Mr Azmin with key supporters in Umno, not least Umno president Zahid Hamidi, and PAS president Hadi Awang.

To keep the plan for a new coalition government alive, Mr Azmin leveraged on his close ties to the palace to arrange for meetings between the various parties seeking a change of government and the Malaysian King, Sultan Abdullah Ri'ayatuddin.

The audiences with the King, which were closely watched by everyone, gave the impression that the plotters were making headway with their plans.

Even Mr Anwar fell for it. After evening prayers on Sunday with close supporters at his home in the leafy suburbs of Segambut in Kuala Lumpur, a despondent Mr Anwar acknowledged that a change of government might be afoot. He charged that leaders in Bersatu and "traitors" within his own PKR were plotting to undo the PH ruling coalition.

But the momentum for the coup would grind to a halt the next day when Mr Anwar met Dr Mahathir.

Political operatives who were briefed on the episode said Dr Mahathir insisted that he was not aware of the plan by Mr Muhyiddin to break away from PH and form a new coalition government.

The usually unflappable leader became very emotional about being misled by his own party, said one CEO of a boutique financial consultancy who was briefed about the meeting by PH-aligned Parti Amanah Negara chief Mohamad Sabu, who was present at the meeting with Dr Mahathir.

Shortly afterwards, Dr Mahathir resigned from his Bersatu party and went to see the King to hand in his resignation as premier.

With the country's ruling coalition in disarray, Sultan Abdullah urged Dr Mahathir to stay on as interim premier until he could determine just who among the various party leaders enjoyed majority support in Parliament, or whether fresh elections should be called.

The King then took the unprecedented step of asking to meet personally with elected Members of Parliament to hear directly from them, in an effort to break the political deadlock.

By Wednesday (Feb 26) afternoon, the word among party leaders and political aides of all stripes was that Malaysia's political impasse looked set to end with Mr Anwar taking over as premier, having secured the most support from the MPs. The talk among Mr Anwar's aides and supporters was that Dr Mahathir would be stepping aside.

## THE BACKTRACK

But the saga did not end there. In a live address on national media that day, Dr Mahathir made it clear that he had no plans to give up his post. He announced his wish to form a non-partisan unity government – even though that idea had already been rejected by several parties behind closed doors.

His statement came just before Mr Anwar took his turn and addressed a news conference to confirm that he had the support needed to form a government, and called on everyone to abide by the decision of the King.

That left matters up in the air until the next day when, following an audience with the King, Dr Mahathir pushed his new gambit further. He announced that since no clear leader had emerged from the King's meetings with MPs, a special session would be held in Parliament to determine which party leader enjoyed majority support to form the government.

His move set in motion a major regrouping among key players and further jockeying for power.

It pushed politicians and their parties that had earlier lined up behind Dr Mahathir to consider their options.

Mr Anwar and his allies in the PH coalition objected to the planned meeting of Parliament, as did Umno, a party Dr Mahathir had led during his first 22-year premiership.

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**The whole plan was driven by Mr Muhyiddin, and Dr Mahathir was against going into any cooperation with Umno and PAS, said one Bersatu official who attended the meeting that he described as "often heated".**

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They saw it as no more than a ploy for him to push through his goal of establishing a unity government that would keep him in power.

Umno secretary-general Annuar Musa said on Friday that the proposed session was “unconstitutional, procedurally improper” and showed disrespect for the King.

Then, in further twists to the continuing saga, Dr Mahathir suffered more setbacks. On Friday, the Speaker of Parliament rejected his proposal for a special session of Parliament, saying that parliamentary rules had not been followed in calling for it.

Later that afternoon, after an emergency meeting with other sultans who make up the Conference of Rulers, the King declared that no leader had obtained a clear majority from his meetings with MPs.

In a fresh attempt to break the protracted impasse, the King said he would meet the leaders of the political parties separately to determine who among them had majority support.

Almost immediately, the parties involved in the proposed coup began lining up behind Mr Muhyiddin – believing this was their best shot to secure the premiership given Dr Mahathir’s reluctance to cooperate.

By Friday evening, Mr Muhyiddin had received pledges of support from 96 MPs from Umno, PAS and Bersatu, trumping Mr Anwar, who had bagged support from 92 MPs in what remained of the PH coalition.

Mr Muhyiddin’s faction lacked only the support of the Sabah and Sarawak parties, which Umno leaders were confident of securing before the weekend was up.

The growing prospect of a nearly all-Malay or all-bumiputera government prompted PH leaders to reach out to Dr Mahathir, to try to thwart that.

After a series of meetings that went on late into Friday night, the PH component members changed tack and declared support for Dr Mahathir instead of Mr Anwar. Dr Mahathir also pledged to convince the Sabah and Sarawak parties to back him for premier.

## MORE SURPRISES

There were to be more surprises, though, when an announcement from the palace declared that the King had decided on Mr Muhyiddin as the country’s next leader, and said he would swear him on Sunday (March 1) at 10.30am.

That was despite insistent claims from Pakatan Harapan leaders that they had the numbers to reform their collapsed government.

A week in politics, they say, can be a long time. And this has been a very long and unusual week in Kuala Lumpur. But few observers believe the drama is over.

Throughout the week, each of the contenders to be Malaysia’s eighth PM – Dr Mahathir, Mr Anwar and Mr Muhyiddin – have taken turns to appear to be within grasp of securing the post.

But what this frenzied week has shown is that in Malaysian politics, being up or down one day is hardly any guarantee of a lasting hold on power. **SI**

# 7 days of twists & turns

**Malaysia’s King, Sultan Abdullah Ri’ayatuddin named Bersatu president Muhyiddin Yassin on Feb 29 as the next prime minister, after a week of political tumult, with surprising twists and turns. It remains unclear if the appointment will resolve the entanglement, because Pakatan Harapan, which suddenly finds itself out of power, wants to appeal against the decision to the King.**

## SUNDAY, FEB 23

Tun Dr Mahathir Mohamad’s Bersatu, Umno and then PKR deputy president Azmin Ali and his supporters hold separate meetings, sparking speculation that they are planning to form a backdoor government, to exclude the remaining three PH parties. This follows unending bickering over when Dr Mahathir (right) should hand over the Malaysian prime ministership to Datuk Seri Anwar Ibrahim.



## MONDAY

Bersatu, with 26 MPs then, quits the ruling PH coalition and 11 PKR MPs leave the party. PH collapses as it needs at least 112 of the total 222 lawmakers in Parliament to remain as the government.

Dr Mahathir resigns as prime minister and Bersatu chairman. The King accepts his resignation but appoints him interim prime minister until a new leader is chosen. The King, on the advice of the Prime Minister, dissolves all Cabinet appointments.

PH leaders announce their support for Dr Mahathir to remain as prime minister. Mr Anwar says Dr Mahathir was not involved in the political plot.

## TUESDAY

The King, Sultan Abdullah Ri’ayatuddin (below), begins one-on-one interviews with lawmakers to determine whom they want as the next prime minister, and whether Parliament should be dissolved or a new government allowed to be formed.

Opposition parties BN and PAS say they want a fresh election.



## WEDNESDAY

Even as the King meets the remaining MPs at the National Palace, Dr Mahathir appears on national television and says he is seeking to form a unity government of individuals who will set aside party politics and ideology.

But Mr Anwar says all 92 PH MPs back him as premier candidate, distancing the coalition from Dr Mahathir’s plan for a government that includes all parties.

## THURSDAY

Dr Mahathir agrees to return as Bersatu chairman, and says Parliament would meet on March 2 to allow lawmakers to vote on whether they want him or Mr Anwar to be the prime minister. Dr Mahathir says he is confident he has the minimum support from 112 MPs to continue as premier.

PH, meanwhile, rejects Dr Mahathir’s plan for a government that abandons PH’s coalition manifesto, while Umno briefs its 191 divisional chiefs on preparations for fresh polls.



Protesters at a demonstration in Kuala Lumpur on Sunday against the naming of Tan Sri Muhyiddin Yassin as Malaysia's next prime minister.



## POLITICAL FACTIONS

- Pakatan Harapan (PH), three-party coalition that won power in May 2018. PH consists of:
  - Parti Keadilan Rakyat (PKR), led by Datuk Seri Anwar Ibrahim.
  - Democratic Action Party (DAP), led by Mr Lim Guan Eng.
  - Parti Amanah Negara (Amanah), led by Mr Mohamad Sabu.
- PH's former fourth member was Parti Pribumi Bersatu Malaysia (Bersatu), whose president is Tan Sri Muhyiddin Yassin. There is an internal tussle over whether Tun Dr Mahathir Mohamad is still Bersatu's chairman. Former minister Azmin Ali left PKR with nine other MPs to join Bersatu.
- Barisan Nasional (BN) is a three-party coalition led by Umno. The BN chairman and Umno president is Mr Ahmad Zahid Hamidi.
- BN's other members are the Malaysian Chinese Association (MCA) and the Malaysian Indian Congress (MIC).
- Parti Islam SeMalaysia (PAS) has a political pact with BN. PAS is led by president Abdul Hadi Awang.
- Gabungan Parti Sarawak (GPS) is an alliance of four parties in the East Malaysian state. GPS is led by chairman Abang Johari Openg.
- Parti Warisan Sabah (Warisan) was an ally of PH when it was in power and controls Sabah state, and is led by president Shafie Apdal.

## FRIDAY

### Morning

The Conference of Rulers meets the King to discuss the political crisis. The King, by this time, has the numbers on how many MPs support Dr Mahathir or Mr Anwar, and how many MPs have told him to dissolve Parliament for new elections to be called to resolve the impasse.

### Afternoon

Malaysia's Parliament Speaker Mohamad Ariff Mohamad Yusof (right), dismissing Dr Mahathir's call for a special session for March 2, says there will not be any Parliament sitting that day unless the King says otherwise.

In a rebuff to Dr Mahathir, Malaysia's King says he, and not Parliament, will decide on the next PM. The King also says he does not have confidence that any MP has majority support to form a new government, after meeting all lawmakers.



Bersatu says it will nominate Tan Sri Muhyiddin Yassin as its prime minister candidate.

BN and PAS, with a total of 60 MPs, back Mr Muhyiddin as PM. With Bersatu's 36, this means Mr Muhyiddin has 96 lawmakers backing him.

But Mr Anwar says he has the numbers to form the government. He already has 92 MPs from the PH but indicates that others are ready to defect to his side.

Tan Sri Muhyiddin Yassin (on the phone) with several political leaders gathering at his home yesterday before heading to the palace for his meeting with the King.



## SATURDAY

9.24 AM

Interim PM Mahathir says he is confident he has the numbers needed to garner majority support in Parliament.

9.30 AM

PH coalition declares its support for Dr Mahathir as its candidate for prime minister, decrying efforts to install a "backdoor government involving kleptocrats and traitors".

10.00 AM

Bersatu's Mr Muhyiddin, PAS chief Abdul Hadi Awang, PAS secretary-general Takiyuddin Hassan and Umno president Ahmad Zahid Hamidi head to the National Palace for an audience with the King. They leave after 40 minutes.

1.52 PM

Mr Anwar enters the National Palace, leaving 10 minutes later.

2.30 PM

Mr Anwar tweets that he has handed over a letter to the Palace stating that PH now supports Dr Mahathir instead of Mr Anwar for the position of PM.

4.33 PM

The King announces that he appoints Mr Muhyiddin (right) as Malaysia's 8th prime minister.

5.30 PM

Amanah deputy president Salahuddin Ayub says PH will appeal against the King's decision.





## Country Report

Rohingya refugees at a mass prayer session, marking the second anniversary of their exodus at the Kutupalong camp in Cox's Bazar, Bangladesh, last August. PHOTO: REUTERS

# Conditions get worse for Rohingya in Rakhine state despite world court ruling to protect them

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PHOTO: AFP

While UN agencies face mounting hurdles trying to provide food aid, healthcare services and education support in Rakhine state, more are attempting to smuggle themselves abroad, landing them in the clutches of human traffickers.

A MONTH AFTER THE INTERNATIONAL COURT of Justice's historic ruling ordering Myanmar to protect its Rohingya people from genocidal violence, conditions in Rakhine state, where most of this minority live, have only become grimmer.

While airstrikes and landmines used in the war between Myanmar military and ethnic Rakhine Arakan Army are imposing a heavy civilian toll, a government-imposed blackout on mobile Internet coverage is hampering aid and preventing locals from accessing information needed to protect themselves, say organisations monitoring the situation.

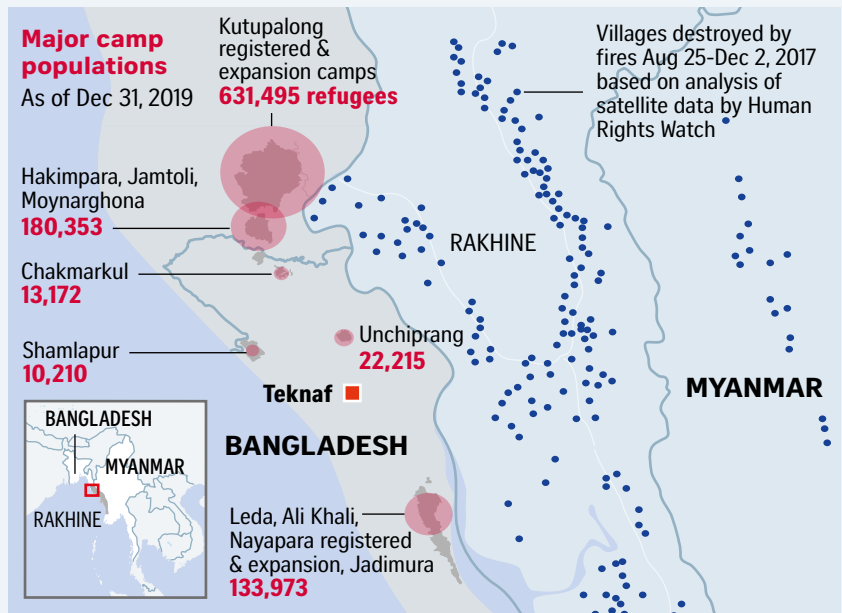
Heavy restrictions on Rohingya movement within Rakhine state, as well as bleak conditions in the refugee camps of Bangladesh where more than 700,000 Rohingya refugees live, have bred despair.

The situation is also prompting more to attempt



## Rohingya refugee camps in Bangladesh

Over 740,000\* Rohingya Muslims fled into Bangladesh after violence started in August 2017



NOTE: \*Joined about 170,000 who fled earlier violence in Myanmar

Source: AFP STRAITS TIMES GRAPHICS

to smuggle themselves abroad, landing them in the clutches of human traffickers.

“There was a slowing of trafficking of Rohingya in the years following 2014 and again following the (Rohingya militants’ attacks in Myanmar) in 2016 and 2017. This year has had far more activity,” says Mr Kyaw Win, executive director of London-based Burma Human Rights Network who coordinates research from Myanmar-based teams.

“The (trafficking) networks are not being thwarted as often by the authorities in Bangladesh and Burma,” said Mr Kyaw Win, referring to Myanmar by its former name.

On Feb 11, at least 15 Rohingya drowned after an overloaded boat on its way to Malaysia sank off Bangladesh.

The next day, 48 Rohingya on a similar journey were detained by the Myanmar navy in the sea.

In an urgent statement issued on Feb 18, independent experts appointed by the United Nations (UN) Human Rights Council sounded the alarm about the mounting civilian death toll and displacement caused by fighting between the military and the Arakan Army.

“We are gravely concerned that children are being killed and injured, and that reports suggest weapons are being used indiscriminately, and precautions are not being taken to protect civilians and civilian objects such as schools and monasteries, in violation of international humanitarian law,” the experts said in the statement.

“We note that the International Court of Justice ordered the provisional measures in relation to the Rohingya minority and they must be followed.”

Rohingya Muslims, rejected in Myanmar as colonial-era interlopers from present-day Bangladesh, cannot travel freely around Rakhine state and the country, which severely limits their access to health facilities, education opportunities and livelihoods.

In 2017, Rohingya insurgents attacked security bases, triggering a brutal crackdown by the Myanmar military likened to ethnic cleansing which forced more than 700,000 Rohingya to flee to Bangladesh.

Last year, the mostly Muslim African nation Gambia lodged a case with the International Court of Justice alleging that Myanmar committed genocide.

While the case may take years to conclude, the court in January ruled in favour of Gambia’s request for provisional measures to require Myanmar to protect the Rohingya from more harm.

Myanmar has acknowledged that war crimes took place, but insisted there was no genocide.

Myanmar’s Ministry of Transport and Communications, citing “security requirements and public interest”, suspended mobile Internet services in Maungdaw, Buthidaung, Rathedaung and Myebon in Rakhine State and in Paletwa in Chin State on Feb 3.

The suspension widened an Internet blackout that already applied to four other townships in Rakhine state.

Since then, the experts noted, at least seven civilians have been killed, including three Rohingya in Buthidaung, and up to 50 injured.

Those injured included 21 children who came under fire while at their school in Buthidaung.

More than 660,000 of around 850,000 people identified by the UN Humanitarian Coordinator in need of humanitarian assistance this year live in Rakhine state.

UN agencies face mounting hurdles trying to provide emergency food aid, primary healthcare services and education support in Rakhine state.

“Access to people in need is often constrained due to insecurity or bureaucratic issues, which complicates efforts to carry out assessments, provide assistance and monitor impact,” the UN told The Straits Times.

Meanwhile, restrictions on movement mean that the Rohingya are less likely than other groups to get the help they need.

“It’s been getting worse these two years,” said Mr Hla Tun, 35, a Rohingya living in Maungdaw, speaking on the phone with ST.

“When the Rohingya get caught in the crossfire, we don’t even have the chance to send injured villagers to the hospital in time.” **ST**

**More than 660,000 of around 850,000 people identified by the UN Humanitarian Coordinator in need of humanitarian assistance this year live in Rakhine state.**

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Rohingya refugees watch on a mobile phone a live feed of Myanmar’s State Counsellor Aung San Suu Kyi’s appearance at the UN’s International Court of Justice in the Hague in the Netherlands, on the second day of her hearing on the Rohingya genocide case.

PHOTO: AFP



# United States of India? Not quite

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## The US flags India's minorities policy and waning tolerance as a strategic worry

IT WAS SAID OF MR RICHARD NIXON, THE LAST Republican United States president before Mr Donald Trump to face an impeachment threat, that he often found solace in overseas travel as the Watergate scandal closed in on him. Being feted by national leaders equally eager to imply to home audiences that they share a special friendship with the most powerful man on the planet worked well for all.

Against that background, Mr Trump's two-day trip to India last month – travelling through most of his Sunday (Feb 23) to get to Ahmedabad, Gujarat, on Monday morning – was more of a celebration than an escape act.

Fresh off prevailing in the impeachment trial brought by Democratic lawmakers, Mr Trump's ego was brilliantly massaged by Indian Prime Minister Narendra Modi, who ensured his home state provided the biggest welcoming turnout accorded a visitor.

That was followed by a "Welcome, Trump" reception at a 100,000-seat cricket stadium touted as the world's largest such facility, possibly the biggest rally addressed by the American leader. The Taj Mahal in Agra was cleared of tourists to host the Trump family and in New Delhi the next day, Mr Trump, whose motorcade was escorted in by the magnificent cavalry of the President's Bodyguard, got a red carpet welcome.

To be seen receiving such warmth abroad must have been a bracing experience for Mr Trump ahead of elections in his bitterly polarised nation in November.

In turn, there was special meaning for his hosts to get a diplomatic endorsement from Mr Trump.

The Indian Prime Minister had faced a decade-long ban from entering the US after mishandling communal rioting in 2002, early in his tenure as chief minister of Gujarat. His Home Minister, Mr Amit Shah, was once banned by court orders in India from entering the state over allegations that he ordered the extrajudicial killings of a mobster and his wife when he was the provincial home minister – charges he was cleared of. It must have delighted Mr Modi that the germophobic Trump accepted his repeated embraces.

### TURNING POINTS

State visits by themselves are seldom turning points in history, except in rare instances such as Mr Nixon's trip to China in 1972. In India, one such watershed moment was the visit to Kolkata in 1955 of Soviet Communist Party Secretary Nikita Khrushchev and Prime Minister Nikolai Bulganin.

Half a million people – India then had fewer than 400 million compared with 1.3 billion today – jostled on the streets to welcome them. The visit thereafter produced a solid relationship that has endured even after the Soviet collapse.

The modern US account for India began with a 1982 trip to the Reagan White House by the Mrs Indira Gandhi and New Delhi allowing the refuelling of American warplanes headed to the first Gulf War. A Bill Clinton visit to India in 2000 is also regarded as a milestone.

Until that point, only three US presidents had visited India – Dwight Eisenhower, Richard Nixon and Jimmy Carter. Since Mr Clinton, every US leader has made the trip and the operative description for the relationship these days, warmed by mutual distrust of China, is "natural allies".

Indeed, it is instructive that Mr Trump made the trip despite Indian stalling on a matter close to his heart – trade.

Under Mr Modi, India has reversed two decades of increasingly liberal trade policies and last November, withdrew from Regional Comprehensive Economic Partnership (RCEP) negotiations, saying its farmers and industry were not ready to take on the full blast of competition.

The country was hit by Mr Trump's steel and aluminium tariffs in March 2018. India retaliated a year later by targeting iconic American products such as apples from Washington state, needed by the US decision to deny India preferential access under the World Trade Organisation's Generalised System of Preferences (GSP).

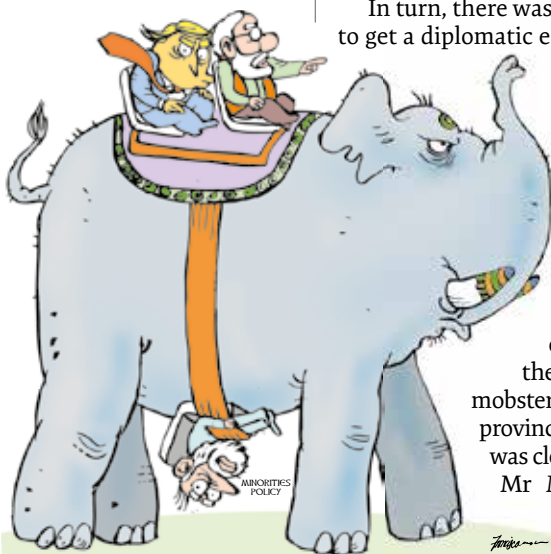
While the two leaders are said to be working towards what Mr Trump called "a big trade deal", New Delhi is in no hurry, partly because it wants to assess Mr Trump's re-election prospects before making commitments.

### LIMITATIONS

The headline number from the summit – US\$3 billion (S\$4.2 billion) of military helicopter sales to India – is a bit of a yawn for the scale that Mr Trump usually likes to play in.

While two-way investments are slated to expand considerably, including large Indian investments in the US energy sector, trade is the part of the puzzle most difficult to patch in. The US-India

ST ILLUSTRATION:  
MANNY FRANCISCO



Comprehensive Strategic Global Partnership, therefore, has severe limitations.

Mumbai-based economist and commentator Rupa Subramanya says the superficial similarity of Mr Trump and Mr Modi as conservative nationalists disguises far more significant differences. Mr Trump is a free market capitalist who has cut regulations while Mr Modi, as an economic nationalist, has done exactly the opposite in India, worsening the regulatory burden on firms and doing nothing to lessen the outsized role of the government in the overall economy.

Tellingly, Mr Trump's entourage, which included his daughter Ivanka and her husband Jared Kushner, both of whom play advisory roles in the presidency, did not include US Trade Representative Robert Lighthizer. Likewise, Home Minister Shah, whose pressure was said to have caused India's RCEP withdrawal, was not involved in delegation-level talks, even though homeland security was a key part of discussions.

Still, the last has not been heard on that account. Some years ago, a senior figure from Mr Modi's Bharatiya Janata Party mooted a free trade area linking democratic states, an euphemism for excluding China. And while Mr Trump publicly praised Mr Modi as a "very tough guy, a very tough negotiator", the Indian leader referred to Mr Kushner as a "quiet worker". That suggests the Trump son-in-law has been involved in serious backroom negotiations with India.

## MINORITY RIGHTS

Those of us who live to the east of India need to take note of a few things emerging from the Trump state visit.

First, already strong US-India military ties are set to deepen exponentially, with special focus on the maritime and space domains in the Indo-Pacific. With foundational agreements in place for logistics and communication exchanges, the two will soon sign another enabling agreement, Beca, short for Basic Exchange and Cooperation Agreement.

Second, even as the US and India continue to pay lip service to "Asean centrality", one of Mr Trump's clear purposes was to prod New Delhi to move faster on the Quadrilateral Dialogue that groups the US and India with Japan and Australia.

New Delhi seems receptive after deliberately keeping things on a slow burn so as not to upset Beijing, which has resisted what it calls an "Asian Nato". The Quad had its first ministerial meeting last year and is set to pick up pace.

Meanwhile, the US is planning regular trilateral summits with India and Japan. Washington and New Delhi are also telling Asean that its talks with China aimed at reaching a meaningful Code of Conduct in the South China Sea must ensure their sensitivities are taken into account and "not prejudice the legitimate rights and interests of all nations according to international law".

Third, it appears that Mr Trump pressed for, and possibly secured, Indian commitment to drop Chinese vendors from helping build 5G networks.

A joint statement issued at the end of the visit said the two nations are committed to an "open, reliable, and secure Internet" that facilitates trade and communication.

Although the two spoke of "independently evaluating the risk associated with emerging technologies" and the Indian telecom minister has previously said that 5G trials will be done "with all vendors and operators", New Delhi has come under heightened pressure on this account after Britain stood up to Mr Trump and said it would allow Huawei to build a part of its network. An Australian communications intelligence team has already been in New Delhi to brief their counterparts on the potential threats from allowing Huawei in.

At a business meeting addressed by Mr Trump, Indian tycoon Mukesh Ambani, who is investing US\$7 billion in an energy project in the US, told Mr Trump meaningfully that his own Reliance Jio, India's top telecom service provider, was the only network that "doesn't have a single Chinese equipment manufacturer" for the 5G trials.

For all that, a final point merits mention – America's increasing unease about the trajectory of New Delhi's minority policies. Washington possibly assesses they may trigger social unrest that could affect India's stride and ability to be a regional security provider.

Mr Modi's policies since his thumping re-election last May suggest he is in a hurry to undo the secular norms, however unevenly applied, that have characterised India's nation-building of the past seven decades. While Mr Trump visited, more than 30 people died in rioting in a corner of the national capital, a result of tensions building for two months over a controversial amendment to the citizenship Act that was seen as unfriendly to Muslims.

Mr Trump suggested that he had discussed India's treatment of minorities for a "long time", even as he seemed to accept the Indian leader's explanations. In his arrival speech in Ahmedabad, he surprised many by bringing up the issue of tolerance, taking the risk of echoing sentiments expressed in India earlier by Mr Barack Obama, the predecessor for whom he has deep antipathy.

"India's rise as a prosperous and independent nation is an example to every nation all over the world and one of the most outstanding achievements of our century," Mr Trump said. "It is all the more inspiring because you have done it as a democratic country, you have done it as a peaceful country, you have done it as a tolerant country, and you have done it as a great, free country."

From the isthmus of Kra down the Malay peninsula and onwards to Indonesia, people are watching India's commitment to liberal values carefully. By implying that such shared values as tolerance are as much a part of their comprehensive global strategic partnership as common weapons platforms, Mr Trump may have done India, and its Asian neighbours, the biggest favour. [ST](#)

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**Tellingly, Mr Trump's entourage, which included his daughter Ivanka and her husband Jared Kushner, both of whom play advisory roles in the presidency, did not include US Trade Representative Robert Lighthizer. Likewise, Home Minister Shah, whose pressure was said to have caused India's RCEP withdrawal, was not involved in delegation-level talks, even though homeland security was a key part of discussions.**

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Female members of the National Cadet Corps in the front row watching the Republic Day parade on Jan 26. India's army allows women in 10 non-combat roles – in the Judge Advocate General, Army Educational Corps, Signals, Engineer and Army Services Corps – among others.  
PHOTO: AFP

## Country Report

# Barred from combat, Indian women seek greater role in army

Women officers in the Indian army are fighting against the denial of Permanent Commission to females despite government claims that “troops are not yet mentally schooled to accept women officers in command”.

WHEN CAPTAIN RUCHI SHARMA JOINED THE army at the age of 20, she often faced questions on her career choice, as people wondered if women had a place in the Indian Army.

Yet, she overcame doubts even among her superiors within the army, to become India's first female operational paratrooper in 1996, four years after women were allowed into select non-combat roles on an “experimental basis”.

Now, 24 years later and retired, Ms Sharma harbours dreams of seeing her daughter in the army, but cannot believe the needle still has not moved with regard to perceptions of women in the military.

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Women have been allowed to join the army as Short Service Commission (SSC) officers. This entails a limited number of years of service.

The government last year allowed Permanent Commission – tenures until the age of retirement – in all 10 branches of the Indian Army open to women, but with riders, denying it to women SSC officers who have served for more than 14 years.

Now, the Supreme Court is hearing a case over this denial of Permanent Commissions, where a group of women officers are fighting for the same opportunities for promotion as their male counterparts.

The government, however, responded earlier this month that “troops are not yet mentally schooled to accept women officers in command.”

The government, which in a later hearing attempted to clarify that there was no discrimination against women in the army, triggered controversy by further citing challenges of motherhood, difference in physical standards between men and women and dangers for women taken as prisoners of war.

“I felt so bad when I heard this. What is this mindset? I am a big proponent of induction of women in the Indian Army. Yes, we bear children, but have your rules and regulations in place. It can’t be a reason for exclusion,” Ms Sharma told The Straits Times.

Among its many observations during the hearings of the case that began last year, the Supreme Court has also wondered why women were not given more opportunities in the army: “Test them on the same footing as men. Do not exclude them as a class. A change of mindset is required.”

The army allows women in 10 non-combat roles – in the Judge Advocate General, Army Educational Corps, Signals, Engineer and Army Services Corps – among others.

In 2015, the government said that women would be allowed into the military police. The first batch of 100 are undergoing training. But women officers want more – commanding officer roles, for instance.

“You can’t say you are allowing women to come into the office but

they can’t sit on the swivel chair or at the main table. You are rendering women as second-class citizens,” said lawyer Aishwarya Bhati, who is representing 45 serving women officers in the case before the Supreme Court.

“They (women officers) are disappointed by the stand the union (government) is taking. They say we have been standing shoulder to shoulder with the men. These women are working as company and platoon commanders. They have no problem with the men, and men have no problem with them. These arguments (by the government) is a bogey being raised to deny them leadership.”

Women were first inducted into the armed forces in India in 1992. They form 13.09 per cent of the air force and 6 per cent of the navy, but a mere 3.8 per cent of the army’s strength.

At present, there are women fighter pilots in the air force, and the Indian Navy inducted its first woman transport and maritime reconnaissance pilot last December.


In January, Captain Tania Shergill became the first woman officer to lead an all-male contingent at the army parade to salute fallen soldiers.

The Indian Army, when contacted, preferred to look at progress made by women in the army.

“Indian women have been making great strides in the Indian Army and further opportunities are opening up for them,” said spokesman Aman Anand. “Through sheer hard work and professionalism, many women officers have earned respect from all.”

This perseverance will have to be matched by other systemic changes, say others.

“When they took in women in 1992, they thought it will be a cosmetic affair. They laid down very poor physical standards. First and foremost, the army should revise its standards for physical requisites. If (women) measure up to it, there should be no problem,” said Lt-Gen (retired) H.S. Panag.

“There is no such thing as troops not being ready to accept women in a country that has accepted a woman prime minister. Women have continued to set new standards.” 

**You can’t say you are allowing women to come into the office but they can’t sit on the swivel chair or at the main table. You are rendering women as second-class citizens.**

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– Lawyer Aishwarya Bhati who is representing 45 serving women officers in the case before the Supreme Court.

Female Indian Border Security Force personnel take part in the Beating Retreat ceremony on the occasion of India’s Republic Day at the India-Pakistan Wagah border post. PHOTO: AFP



# ST Singaporean of the Year 2019 helps others overcome mental health woes

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Mindfulness centre founder Angie Chew started Brahm Centre to provide free mental health education for seniors, after years of emotional bullying at work and grappling with depression.

AFTER GOING THROUGH HER OWN STRUGGLES, Ms Angie Chew, 56, channelled her efforts towards helping many others by setting up centres that provide emotional and mental support.

For her contributions to society in helping those with mental health issues, as well as the elderly, Ms Chew was named The Straits Times Singaporean of the Year 2019 on Feb 11 at the Istana, the official residence and office of the President of Singapore.

She said receiving the award was “a real win for mental health” as it is an under-recognised area that is under-invested, with more resources devoted to physical ailments than mental health problems.

She added: “I hope that this will also inspire more people to talk about their mental illness and also give support to people who have mental illness, because it’s not an easy journey (and is) often misunderstood.”

Ms Chew started Brahm Centre in 2012 to provide free health education, as well as other services such as befriending, counselling and dementia screenings for seniors who are frail and lonely. There are now three centres, with a fourth to open later this year.

The centres also teach mindfulness skills to help people better cope with stress.

Ms Chew, a former computer professional, also conducts mindfulness courses for companies as well as a graded module on the subject for undergraduates at the National University of Singapore. Her fees are donated to Brahm Centre.

Last year, in response to increased rates of depression and suicide among the young, Brahm Centre launched AssistLine, a hotline to offer support to students and parents in distress.

Ms Angie Chew was named The Straits Times Singaporean of the Year 2019 for her contributions to society in helping those with mental health issues, as well as the elderly.



Ms Chew said her own struggles in life gave her the strength to help others. She cared for her mother with dementia, endured years of emotional bullying at work and grappled with depression.

She turned to mindfulness – the practice of paying attention to the present moment in a non-judgmental way – in a bid to refocus her life.

Realising there was a gap in support for those who were struggling emotionally or mentally, she decided to “light a candle” for others who were going through similar dark times.

Ms Chew received a trophy and a \$20,000 cash prize from President Halimah Yacob.

She said that with the current circumstances, it is a time to be mentally resilient and resolute, which links back to being mentally healthy.

Amid the coronavirus outbreak, she has started a one-hour mindfulness session for viewers to destress on the Brahm Centre Facebook page from 12.30pm to 1.30pm on weekdays.

“As a nation, let’s not just be wealthy, but be happy,” said Ms Chew.



There were 11 finalists in the running for the award this year, and the other 10 finalists received \$5,000 each.

In her speech, Madam Halimah said all the finalists were deserving for their efforts and contributions in the various areas they serve.

She said: "Among the 11 finalists, some are everyday regular Singaporeans who performed an extraordinary act, while others have built up a body of work, whether it is offering mental health support, feeding the homeless, or improving eldercare with technology.

"Some of this year's nominees have made great strides to alleviate issues that have become more prominent over the years, such as mental health, sustainability and the emphasis on grades and examinations."

Also shortlisted for The Straits Times Singaporean of the Year 2019 were education consultant Chalmers Chin; delivery rider Muhammad Riau Alfian; entrepreneur Gillian Tee; policeman Ahmad Fauzi Sani; hedge-fund founder Danny Yong; Carousell founders Quek Siu Rui, Marcus Tan and Lucas Ngoo; students Seng Ian Hao and Seng Ing Le; Abraham Yeo and Homeless Hearts of Singapore; civil servant Sarabjeet Singh; and botanist Veera Sekaran.

The cash prizes were sponsored by UBS Singapore. Among the other prizes from the award sponsors were a pair of business class tickets for Ms Chew, and a pair of economy class tickets for each for the other finalists, sponsored by Singapore Airlines.

Ms Chew also received a five-night stay in any of the global properties owned and managed by Millennium Hotels and Resorts. The other finalists will each enjoy a three-night stay.

Osim also presented Ms Chew with a uDiva Star Massage Sofa and uJolly Back Massagers to the others.

The final decision was made by a judging panel of 14 who were guided by online voting by members of the public.

Judges included editors from The Straits Times, social entrepreneur and activist Saleemah Ismail, civil servant Aaron Maniam, Singapore Airlines chief executive Goh Choon Phong and Institute of Technical Education chief executive Low Khah Gek.

The 2018 award was given to Ms Siti Noor

Mastura, who co-founded non-profit organisation Interfaith Youth Circle, which promotes a better understanding of the role that faith groups can play in an increasingly complex and divided world.

Previous recipients of the award, which began in 2015, include Dr Goh Wei Leong and Healthserve, an organisation that provides migrant workers with affordable healthcare; Olympic gold medallist Joseph Schooling and his parents May and Colin; and Madam Noriza A. Mansor, who won hearts when she helped an elderly man who had soiled himself in public.

Madam Noriza, 55, said of Ms Chew: "Addressing mental health challenges is not easy. It takes a lot of patience and passion. Ms Angie Chew is a very inspiring figure to many people. She has done a great job with the opening of Brahm Centres across Singapore."


Mr Edmund Koh, president of UBS Asia-Pacific, noted that all finalists had in common "wide and open hearts to care for all in the community, friends and strangers alike"

"This quality is all the more important in today's context as Singaporeans stand united and help one another in battling the recent coronavirus outbreak," he said.

Mr Koh added: "This year, we would like to congratulate Angie Chew for her positive and selfless perspective, motivating many others in their own journeys. Our finalists continue to do us proud with their extraordinary strength of character, acts of bravery and kindness. We congratulate all the finalists as they are each deserving in their own way."

Mr Warren Fernandez, editor-in-chief of Singapore Press Holdings' English/Malay/Tamil Media Group and editor of The Straits Times, said: "Mental health and well-being, not least among our young, is a growing issue of concern, in Singapore as well as around the world.

"As the world grows more complex and seems to move ever faster, everyone could do with some help in slowing things down and finding a little peace and quiet in our minds and lives.

"The Brahm Centre, founded by Angie Chew, has been a source of help and comfort for many grappling with this in our society. For her leadership, kindness and inspiration to others, she is a worthy winner of the Straits Times Singaporean of the Year award." 

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**As the world grows more complex and seems to move ever faster, everyone could do with some help in slowing things down and finding a little peace and quiet in our minds and lives. The Brahm Centre, founded by Angie Chew, has been a source of help and comfort for many grappling with this in our society.**

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– Mr Warren Fernandez, editor-in-chief of Singapore Press Holdings' English/Malay/Tamil Media Group and editor of The Straits Times.



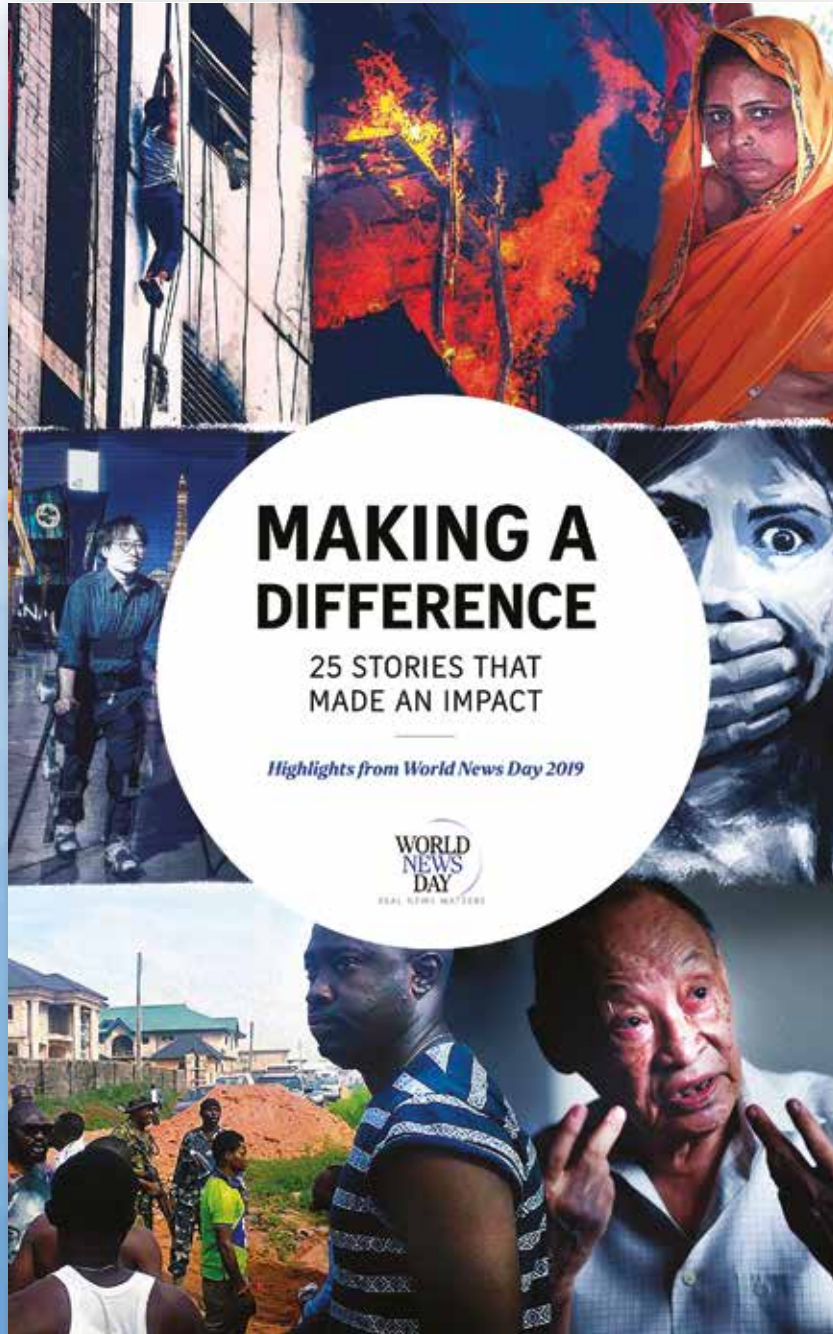
President Halimah Yacob and Ms Angie Chew, flanked by SPH chairman Lee Boon Yang (2nd from left) and Mr Warren Fernandez, with the other finalists of The Straits Times Singaporean of the Year 2019. Also in the front row are (from left) UBS' Mr Edmund Koh, Ms Yeoh Choo Guan and Mr August Hatecke.  
ST PHOTOS: ARIFFIN JAMAR

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**Lifestyle**

# Parasite makes Oscar history

South Korean film Parasite's success might be due to director Bong Joon-ho's Golden Globes speech about the American dislike for subtitled movies, which was echoed in the media as an example of insularity.

EVEN AS STUNNED SOUTH KOREANS CELEBRATE the history-making Oscar victories by Parasite and its director Bong Joon-ho at the Academy Awards on Feb 9, those who live and work in Hollywood must be scratching their heads and wondering: "What happened?"

Why did the mostly American academy voters give its top awards to a movie that is entirely in the Korean language?

The South Korean black comedy Parasite beat British war drama 1917, to walk away with Oscars for Best Picture and Best Director for Bong.

The 50-year-old film-maker also won an Academy Award for Best Original Screenplay.

Parasite is the first Asian film to win Best Picture and Bong is the second film-maker from the region to win Best Director, after Taiwan's Lee Ang, who picked up the award twice - for the allegorical Life of Pi (2012) and the western drama Brokeback Mountain (2005).

But neither of Lee's films won Best Picture. The wins in three of the academy's most prestigious categories make Bong and Parasite the highest-honoured Asian film-maker and film in Oscar history.

The South Korean film about two families, one rich and the other poor, was the underdog just before the Academy Awards that Sunday night.

How did a film with so much non-English dialogue win Best Picture?

The first foreign film to win that award was the French comedy-drama The Artist (2011), but it was nearly all silent, making Parasite's feat all the more remarkable.

The reason might be Bong's Golden Globes speech about the American dislike for subtitled movies, which was echoed in the media as an example of insularity.

Also, in an interview some weeks ago, he famously called the Oscars a "very local" event in which voters give prizes to those in their clique. In recent years, thanks to the #OscarSoWhite online campaign, the

A scene from the South Korean film, Parasite, which won in three of the Academy Awards' most prestigious categories, making it and director Bong Joon-ho the highest-honoured Asian film and film-maker in Oscar history.  
PHOTO: NEON

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**Parasite's upset wins in the most prestigious categories were the big story of the night. It was nominated in six categories and went home with four of them, in the exalted categories of Best Picture, Best Director, Best Original Screenplay and Best International Feature.**



academy has been made aware of its racial and gender biases and he and the film seem to be riding on a genuine desire to change.

It also helps that Parasite is a movie Hollywood veterans wish they could make now, when it seems that only comic-book films get funded. It is a lavishly produced social comedy that deals with topical issues of the sort of film that major Western studios used to make before the age of the summer blockbuster.

Lastly, there is Bong's reputation and personality. His Korean films, such as crime thriller Memories Of Murder (2003), the mystery Mother (2009) and monster film The Host (2006), have moved from being cult favourites to mainstream recognition. His Western movies, like the food-industry satire Okja (2017) and science-fiction piece Snowpiercer (2013), both starring Hollywood figures, have raised his profile.

That, and his puckish sense of humour that official interpreter Sharon Choi takes pains to convey in clear English, has endeared the film-maker to voters. When picking up his prize for Best International Feature, he could not resist saying: "I'm ready to drink tonight, until next morning."

#### A MOSTLY PREDICTABLE AWARDS SHOW

Parasite's upset wins in the most prestigious categories were the big story of the night. It was nominated in six categories and went home with four of them, in the exalted categories of Best Picture, Best Director, Best Original Screenplay and Best International Feature.

Otherwise, the night went mostly as predicted.

The British war drama 1917, a favourite to win both Best Picture and Best Director for Sam Mendes before it was pipped by Parasite, went home with three awards - for Best Cinematography for Roger Deakins, Best Sound Mixing and Best Visual Effects.

Joker, the origin story of the DC Comics villain, had 11 nominations going into the night, the most of any picture this year. Joaquin Phoenix, as expected, took the Best Actor award for playing the anti-hero while Icelandic musician Hildur Gudnadottir's score took the Best Original Score award. [SI](#)

## The key to Parasite's win

WINNING FOUR HONOURS AT THE 92ND Academy Awards, Bong Joon-ho's Parasite was the first non-English language film to win best picture earning a staggering US\$8.8 million worth of ticket sales in America, according to CNBC.

While the BBC reported that South Korea's film industry is the fifth biggest worldwide in terms of box office sales, the movie's paramount success can also be attributed to its ability to overcome a challenge that Asian cinema has yet to conquer: subtitling.

"Once you overcome the one-inch-tall barrier of subtitles, you will be introduced to so many more amazing films," Bong said in his acceptance speech at the Golden Globe awards in January.

English-language subtitles for Parasite were provided by Seoul-based American film scholar Darcy Paquet, said The Korea Herald, who succinctly translated traditionally Korean words such as "jjapaguri" and "Seoul National University" to "ramdon" and "Oxford".

Global audiences were thus able to follow along with the foreign film despite its linguistic and cultural differences.

Sadly, most filmmakers do not have a standard for translations, causing foreign-language subtitles to suffer from a lack of professional expertise, said culture critic Kim Heon-sik.

Speaking to The Korea Herald, he said "the creation of subtitles is the start and essence of making Korean films known in other countries. But, right now, most filmmakers don't share a general standard in employing translators."

In the same vein, Parasite's success marks not only a historic win for South Korea, but also a turning point for Asian cinema that has now recognised the importance of overcoming a "one-inch tall" subtitling barrier.

One can only hope that rising Asian directors will continue Parasite's winning streak and do enough to break through to an international audience. [SI](#)

- Dominique Nelson



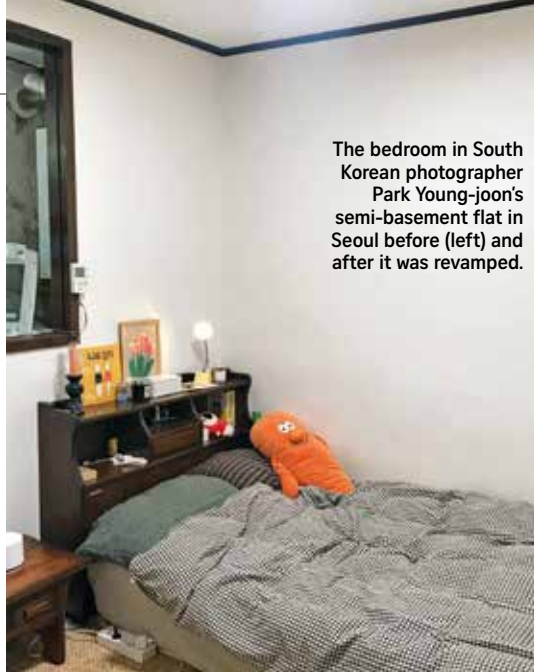
Awards galore for Bong Joon-ho - Best Director and Best Original Screenplay, to go with Best Picture and Best International Feature for his black comedy Parasite.

PHOTO: REUTERS

## SOUTH KOREAN DIRECTOR OF PARASITE

- Grew up in an elite artistic family in Seoul, studied sociology at Yonsei University
- **2003 1st success** with the thriller Memories Of Murder, based on real-life serial killings that rattled the nation in 1980s
- **2006 1st "blockbuster"**, The Host, about an incompetent government left helpless in the wake of a disaster
- **2013** Snowpiercer, a science-fiction epic inspired by the French novel Le Transperceneige, **opens the Hollywood doors** for him
- **2020 Parasite wins 4 Oscars:** Best Picture, Best Director, Best Original Screenplay and Best International Feature, the first non-English language film to win the Oscar top prize

SOURCE: AFP



The bedroom in South Korean photographer Park Young-joon's semi-basement flat in Seoul before (left) and after it was revamped.

Another room in Mr Park's flat before (below) and after (bottom) it was renovated.  
PHOTOS: PARK YOUNG-JOON



## For some, semi-basement flats in S. Korea are seeing brighter days

Perception of 1970s housing legacy improving among youth who view them as low-cost temporary homes

SOUTH KOREAN PHOTOGRAPHER PARK YOUNG-joon lives and works in a "banjiha" – a semi-basement apartment unit – that is bright, cosy and filled with aromatic scents.

It is nothing like the dark and dirty home portrayed in Oscar-winning film *Parasite*, which follows the lives of two families, one living in a spacious bungalow, and the other, in a cramped semi-basement flat.

Even in real life, banjiha homes, where little sunlight comes in through their tiny windows, are stigmatised as a symbol of hardship and reek of poverty.

But perceptions are changing for a small number of young people who view banjiha units as an affordable temporary home until they have the means to move upwards.

Mr Park, 26, takes pride in the fact that visitors to his home office get a pleasant surprise when they step in, with some exclaiming that it does not feel like a banjiha.

"My male friends who live in a smaller flat and pay higher rent in Seoul say they should have chosen a semi-basement flat, seeing how spacious my house is," he told *The Straits Times*.

It took him and his girlfriend a month to remodel the place. The journey is captured in a video posted on their YouTube channel *Minkam Couple*. "The banjiha flat in *Parasite* is in the worst possible condition. Of course there is some reality in it, and there are indeed some banjiha that are not taken care of and are in very bad condition. But my place does not feel dark at all because of natural lighting and we renovated it so it's pleasant to live in," said Mr Park.

A housing legacy from an era of rocky inter-Korea ties in the 1970s, banjiha units – half above ground and half below – were built as emergency shelters in case of a North Korean attack.


While they were left empty in the beginning owing to laws prohibiting people from living there, rules were eventually relaxed to cope with a surge in housing demand as the population grew in the 1980s.

Banjiha homes have "subtle nuances" in South Korea, according to *Parasite* director Bong Joon-ho.

"People live underground but want to believe that they are above the ground... But at the same time, they are afraid of falling into a complete underground situation if things get worse," he was quoted as saying by Yonhap news agency.

Latest figures from the Korean Statistical Information Service show there were 363,896 households living in basement or semi-basement units in 2015. They account for 1.9 per cent of all households.

Banjiha units can cost around 500,000 won (\$590) a month to rent, or less than 100 million won for those under *jeonse*, a two-year rental scheme that requires the tenant to pay up front a lump-sum deposit that is 50 per cent to 80 per cent of the purchase price.

In a country where the minimum monthly wage is 1.8 million won but where apartments in Seoul cost an average of 600 million won to buy, banjiha units have become an affordable option for young people. 

– Additional reporting by Kim Yeo-joo

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PHOTO: AFP

## Big Picture

# You been to U Bein – the bridge on 1,000 teak pillars?

STRETCHING 1.2KM ACROSS THE TAUNGTHAMAN Lake near Mandalay, Myanmar, the U Bein Bridge is believed to be the oldest and longest teakwood bridge in the world.

It was built more than 150 years ago by local mayor U Bein, after whom the bridge is named.

It is said that the mayor salvaged teak from a dismantled palace to construct the bridge.

It stands on about 1,000 pillars, but some of the original teak pillars have since been replaced.

The bridge still plays an important part in the everyday lives of locals, with many still crossing it daily – either on foot or bicycle.

The bridge is also a popular tourist attraction and is one of the most photographed sites in the South-east Asian country. [ST](#)

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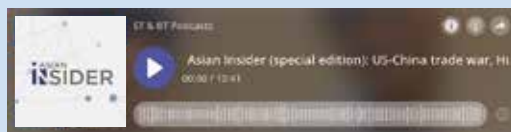
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