SARS
Focusing on Singapore
In Singapore, the first three cases of SARS were reported on 13 March. However, they were however not immediately linked to the outbreak in Hong Kong, Vietnam and Guangzhou despite the fact that all three struck down with the illness had just returned from Hong Kong.

By March 14, six more people were diagnosed with the same condition, two of whom were hospital staff. This made the government take immediate action to monitor closely all close contacts of the case and hospital staff who have attended to the cases. By March 17, the number of cases was climbing fast to 21. As of 2 May, the disease had already claimed 25 lives in Singapore, with more than 200 people infected.

The outbreak of SARS has created public anxiety and taken a toll on businesses. The hardest and most directly hit are tourism and transport-related industries like airline, cruise, hotel, restaurant, travel agent, retail and taxi services. Other sectors like manufacturing are less affected.

Visitor arrivals have dropped by 15 percent in March and 61 percent in the first 13 days in April. This sharp fall in inbound travelers has caused average hotel occupancy rates to fall to 20 to 30 percent, compared to normal levels of 70 percent or above. Sales at retail outlets have declined by between 10 to 50 percent. Revenues at some restaurants have halved. Taxi drivers are carrying fewer passengers, and earning less.

The country’s previous estimate of two to five percent GDP growth for 2003 is no longer realistic. The forecast for GDP growth this year was revised to 0.5 to 2.5 percent, assuming that the country is successful in its effort to control the disease, and that the outbreak does not grow into a global pandemic, which would bring world economic growth to a halt.

In the midst of this gloom, there appears to be a silver lining. On 29 April, the World Health Organization said that the worst of the SARS outbreak was over for Singapore, Hong Kong and Canada and declared Vietnam SARS-free, but warned that the virus
was continuing to spread in China and Taiwan.

As of 5 May, there were 16 days of no new infections in hospitals and no new cases for two days running. But Health Minister Lim Hng Kiang said that it was too early to say if the outbreak had peaked here.

He said that the next two to three weeks will be a critical period for Singapore and urged Singaporeans to continue “to be extra careful, extra vigilant and if anything, to err on the safe side”.

To urge Singaporeans on in the battle against SARS, the country’s Prime Minister Goh Chok Tong wrote an open three-page letter to all his people.

In his letter, Goh noted that even though he had appealed to Singaporeans to exercise personal responsibility and follow the advice given by the health officials, some people are irresponsible by breaking the Home Quarantine Orders served on them, while others are irrational because of their fear of SARS.

Apart from the quarantine breakers, Goh said that others have refused to cooperate, not answered phone calls, or told officials not to bother them.

So the government is taking a tougher approach to enforcing Home Quarantine Orders. From now on, if a person on home quarantine does not answer the telephone, officials will immediately electronically-tag them, whether or not they have broken quarantine.

The country also plans to urgently amend the Infectious Diseases Act in Parliament. The changes will allow those who breach quarantine to be fined without having to be charged in court. The amendments will also provide for jail terms for those who repeatedly breach quarantine orders.

On the scientific front, Singapore would soon have its very own SARS diagnostic kit, which can detect virus in its early stages. This was revealed by Dr. Ling Ai Ee, a virologist heading the SARS investigation team in Singapore.

The Genomics Institute of Singapore is close to completing a kit. Even though the number of cases may be winding down, Dr. Ling said that having such a kit is still important. She said, “Even though we turn the corner, it does not mean that the whole world has turned the corner. Also, we do not know if we are ever going to get a re-introduction of this virus.”

Dr. Ling said, “We do not know many things, so there are many reasons why it will resurface and then we have to be ready for it.”
Dear Fellow Singaporeans and Residents,

Fighting SARS Together

On Saturday, I appealed to Singaporeans to exercise personal responsibility in our fight against SARS. Only when you follow faithfully all the rules, procedures and recommendations we have put in place to contain the outbreak, will we win the fight. You must all play your part to ensure that there are no holes in our ring-fence against SARS.

Unfortunately, there are still some Singaporeans who do not follow the advice given by our health officials. Some are irresponsible. Others are irrational because of their fear of SARS. Whatever the reasons, they pose a danger to themselves and to the wider community.

The cases of infection at the Pasir Panjang Wholesale Centre show the danger of such behaviour. The family of eight related to the 72-year old man who works at the centre went to see a general practitioner (GP) when they came down with fever. The GP rightly suspected that they could be SARS cases. He called for the special ambulance service.

While waiting for the ambulance, he provided the family with masks, and instructed them to wear the masks. He placed chairs in a designated area outside his clinic and instructed them to remain there till the ambulance arrived. However, when the doctor came out later to check on the family, to his horror, they had removed their masks and had wandered off to a nearby food centre and a Chinese medical hall. By not obeying the GP’s instructions, the family had put the people around them at risk.

The other case of infection at the Pasir Panjang Wholesale Centre is another example of irresponsible behaviour. The man who worked at the centre had had a fever for a few days. He visited a GP, a polyclinic and two sinsehs before going to Changi General Hospital, where he was transferred to Tan Tock Seng Hospital. His actions have created a big pool of people who could potentially have been infected by him.

My advice is, if you are unwell, see a doctor immediately. If you continue to be unwell, go back to the same doctor. The doctor would know that your condition has worsened and would act accordingly. On the other hand, if you doctor-hop or hospital-hop, the new doctor would not know about the progression of your illness and you would not get the best treatment. Along the way, you may infect many other people, including your family and friends.

And be truthful with your doctor. Do not hide your symptoms and history of contacts. He is there to help you. In fact, if you have SARS symptoms such as fever, cough, breathing difficulties and muscle aches and you suspect that you may have come into contact with a SARS patient, you should request for a special ambulance to send you to Tan Tock Seng Hospital for a checkup. Early detection and treatment will help you to recover. As of today, some 110 SARS patients have recovered and have been discharged.
There is no reason to be fearful about going to Tan Tock Seng Hospital. On the contrary, you may be making a fatal mistake by not going there when you suspect you have SARS. You will not catch SARS by going to Tan Tock Seng Hospital for SARS screening or for follow-up. The hospital is safe because stringent infection controls have been introduced. Indeed, as a result of these stringent measures, since 31 March, no patient of Tan Tock Seng Hospital has fallen ill from SARS as a result of being infected in the hospital.

I am also deeply concerned about the behaviour of some persons served with Home Quarantine Orders. They refused to cooperate. They did not answer telephone calls by our officials, or told our officials not to bother them. Also, 14 persons are known to have broken their Orders.

Apart from protecting the public, Home Quarantine Orders are also to protect those served such Orders, as well as their family. The telephone calls by our officials are to detect any signs of the disease, and to commence early treatment.

For the wider good, we now have to take a tougher approach in enforcing Home Quarantine Orders. We simply cannot afford to have those on home quarantine breach it, and run the risk of going undetected for SARS, or worse, infecting others. For once SARS spreads through the community, we risk losing control of it, and will not be able to isolate and contain it. Therefore, from now on, when a person on home quarantine does not answer the telephone calls from our officials, CISCO officers will immediately proceed to electronically-tag them, whether or not they have broken the quarantine.

In addition, at the next Parliamentary sitting on 24 April, we will be putting through amendments to the Infectious Diseases Act. The amendments are to provide for composition fines, so that those who breach Home Quarantine Orders can be fined without having to be charged in court. The amendments will also provide for jail terms for those who repeatedly breach the Orders. Given the critical SARS situation, we will be putting through the amendments on a Certificate of Urgency, which will allow all three readings of the Amendment Bill to be effected at the 24 April Parliament sitting.

These measures may be harsh, but they are necessary. Taking a lenient attitude will not help us break the cycle of infection. Instead, it may undermine the stringent infection controls we have painstakingly put in place to protect Singaporeans from SARS.

To succeed in containing SARS in Singapore, everyone must cooperate and play his part. We can overcome this latest crisis if we work together, as we have done in previous crises.

Yours sincerely

GOH CHOK TONG
Coping with the Disease

Government Unveils SARS Relief Package

The Singapore government recently unveiled a relief package to help its people and business cope with the burden of SARS. The measures include:

- Additional property tax rebate of S$2000 plus 10 percent of balance payable in 2003 for commercial properties
- 50 percent reduction in foreign worker levy for unskilled workers in gazetted tourist hotels
- 100 percent rebate of TV license fees for gazetted tourist hotels
- Bridging loans for tourism-related SMEs of up to S$100,000
- Diesel tax for taxis cut by S$2000 to S$2700 per year
- S$25 taxi operator license fee to be deferred till 31 December
- 20 percent road tax rebate for all excursion buses from 1 May to 31 Dec
- Additional 30 percent rebate on aircraft landing fees
- Additional 10 percent rental rebates for all tenants at Changi, Seletar airports
- 50 percent reduction in port dues for cruise ships
- Government to donate S$1 million to Courage Fund and dollar-for-dollar matching for donations to the fund

This relief package will cost the Singapore government S$230 million. It is a focussed effort to provide immediate relief for the most directly and adversely hit sectors, namely, the tourism and transport-related sectors. It is not intended as a general stimulus package for the whole economy.

Emergency Housing Prepared In Case of Amoy Gardens Outbreak

Singapore has prepared at least 200 flats in move-in condition, ready to provide emergency housing in the event that what happened recently in Hong Kong’s Amoy Gardens apartment complex occurs in the country.

All the flats have water and electricity supply, and the rooms are furnished with basics such as beds and chairs.

In the Amoy Gardens complex, more than 300 residents, most living in one particular block had come down with SARS. The block was quarantined and its residents were moved to two government holiday camps, in an effort to contain the spread of the virus.

Between two and four blocks have been picked across Singapore for this purpose. However, officials are quick to emphasize that the setting aside of the blocks is just a contingency plan. It will allow people to be moved out of their homes while the authorities check on what was happening. Anyone relocated would only be under home quarantine, not ill, infectious or stricken with SARS.
Allowance for People with Home Quarantine Order

Singapore has set up a new allowance scheme for those served with Home Quarantine Orders (HQOs) to defray some of the manpower costs, especially for small businesses.

The move comes after large groups at the Pasir Panjang Wholesale Center were quarantined.

For employees, the allowance will be their daily salary, up to a maximum of S$70 a day.

Small businesses with fewer than 50 full-time staff will get a bigger helping hand. If the whole firm is shut for a period, it will receive this ex-gratia payment for all employees, including those not on home quarantine.

For the self-employed, the allowance is a flat rate of S$70 a day during the home quarantine period.

Markets and Food Centers to have Twice Daily Temperature Checks

All markets and food centers across the country will require stallholders to check their body temperature twice a day. This move comes after infected stallholders at the Pasir Panjang Wholesale Center passed on the virus to customers and visitors to the market.

Having their temperatures checked will make customers feel safe to do their shopping in the premises.

Similarly, another wholesale market, the Jurong Port Fish Market will take the temperatures of those working there too. This market handles 80 percent of the distribution of fresh seafood in Singapore.

The specter of a 10-day closure, which happened to the Pasir Panjang Wholesale Center, has galvanized the fish merchants into action. More than 3000 people visit Jurong Port Fish Market everyday, more than those at the Pasir Panjang Wholesale Center.

Courage Fund Launched to Help SARS Victims

The Courage Fund was launched on 11 Apr through a collaborative effort by various groups in Singapore, including the National Healthcare Group, Singapore Health Services, Singapore Medical Association, Singapore Nurses’ Association and Singapore Press Holdings, to provide relief to the families of needy SARS patients.

It provides a rallying point for Singaporeans to make a tangible gesture to help the victims of SARS, and to show their appreciation, respect and support for the dedication and sacrifices of healthcare workers.

So far, the fund has exceeded S$6 million. To encourage more donations, the government has pledged to make an upfront S$1 million contribution to the Courage Fund, plus dollar-for-dollar matching for all donations to the fund.
Special Report on SARS

Fever Checks and Declarations at Sea Ports

Singapore now requires all ship masters to make a health declaration four hours before arrival, and to say if they have offloaded passengers suspected of having SARS at earlier ports of call.

Two thermal scanners have been installed at the Singapore Cruise Center and a thermal scanner has also been installed at the Tanah Merah Ferry Terminal. Ear thermometer checks will be carried out at Changi Ferry Terminal, Changi Immigration Checkpoint, West Coast Pier and Clifford Pier.

Besides the checks, travellers also have to fill in health-declaration forms.

Motorists who travel through the Woodlands and Tuas checkpoints are still not being checked for their temperatures. The authorities are still trying to install thermal scanners that will function outdoors at the checkpoints. Around 100,000 people travel in both directions across the border every day and only about 30,000 of them who travel on buses now have their temperatures checked.

No Visitors at Public Hospitals

Patients at all six public hospitals in Singapore will not be allowed any visitors, one of the moves to stop the spread of SARS. This tightens the earlier restriction on hospital visits, with only one visitor allowed per patient.

The hospitals had asked for the added precaution, but would make exceptions on compassionate grounds. Those who can continue to receive a visitor a day are children, women under the care of obstetricians, and the seriously ill.

The hospitals affected are the Singapore General Hospital, National University Hospital, Tan Tock Seng Hospital, Changi General Hospital, Alexandra Hospital and KK Women’s and Children’s Hospital.

Private hospitals have not asked for a ban on visitors yet.

About 44 per cent of SARS cases were family and friends of people who were warded and some may have visited the hospitals.

However, in the latest development, the no-visitor rule at public hospitals will probably be relaxed by the end of the month if the SARS situation stays stable. As of 5 May, no one has caught the virus in a hospital for the past 16 days, and the number of SARS cases has been declining.
Markets and Food Stalls Disinfected

Cleaners were despatched to disinfect and fumigate food stalls in all of Singapore's open-air markets, involving 134 food centers and 80 markets across the country, hoping to prevent the spread of SARS.

Hundreds of cleaners and stall owners cleared drains, sprayed for mosquitoes and disinfected tables, chairs, lighting fixtures and corridors. Stray cats were captured and taken to shelters.

The authorities said that this clean-up is “essential to improve personal and environmental standards to minimize the risk of transmission”.

Private Sector Doctor to Work in One Hospital

The Singapore Health Ministry laid out precautions for private hospitals to minimize the risk of cross infection from SARS. All doctors who are employed or work in the private hospital have to register to work in only one hospital.

This would also apply to nurses who are self-employed or from private nursing agencies, as well as locum doctors.

The ministry also said that, with immediate effect, inter-hospital transfer of inpatients is to stop. However, any patients who require specialized care that is not being provided by the hospital in which they have been warded can be transferred to the appropriate public sector hospital for management.

But for emergency medical situations, hospitals may call upon the services of the specialists required, even if they are not on the registered list for the hospital.

And if a patient needs urgent transfer to another medical facility, public or private, for emergency treatment, this can proceed.

Thermometers for Students from Primary to Pre-University

All students from primary, secondary to pre-university will each get a thermometer from the Singapore government.

With their personal thermometer, teachers will guide the students to check their own temperatures twice a day and to record them in a log book which parents can monitor.

Minister for Education, Rear Admiral Teo Chee Hean said, “If any student develops a fever, we will know very quickly. Therefore the chance of the student with fever coming into contact with other students would be minimized.”

The thermometers will be supplied in stages, starting with students from primary one to four. Students from primary to pre-university should get theirs by the third week of May.
A signage put up by Singapore’s Changi Airport in response to the WHO’s recommendation of screening passengers at airports.

World Health Organisation
Recommended Screening

In the interest of Health Safety for all our Passengers, please answer the following questions:

1 Have you had contact with any person suspected of Severe Acute Respiratory Syndrome (SARS)?

2 Do you have any of the following SARS symptoms?
   a) High Fever, b) Dry Cough, c) Flu-like Symptoms

3 Have you any reason to suspect that any of your family members are either suffering from SARS or come into contact with person suffering from SARS?

Please inform the Ground Staff Immediately if you have answered Yes to any of the questions above.

Thank you for your kind understanding.
Scientists Attend WHO meeting on Diagnostic Kit

Singapore had three representatives attending a meeting of the World Health Organization in Geneva on the diagnostic kit for SARS.

Among those attending were Dr. Ling Ai Ee, an Singapore General Hospital virologist who had been growing the virus in her laboratory, and Dr. Edison Liu, executive director of the Genome Institute of Singapore.

Dr. Liu had been tackling the sequencing of the SARS genome.

Doctors and scientists Join Hands Against Virus

An email discussion on SARS among doctors and researchers in Singapore, has snowballed into an action group that brings together Singapore’s scientific and medical community.

The Singapore SARS Clinical Consortium, chaired by Prof. John Wong, comprises a group of doctors, scientists and researchers from 15 institutions, such as John Hopkins Singapore, the DSO National Laboratories and the Agency for Science Technology and Research.

The researchers and scientists have pledged whatever manpower and resources necessary to fight the virus.

Prof. Wong, a cancer specialist and head of the Office of Life Sciences at the National University of Singapore, said, “The Ministry of Health had its hands full tackling the immediate issues of patients and what had to be done there and then, but some of us, through email discussions, realized that we had to fight the virus from the other end as well.”

The first job is to make sure that the tests, currently being worked on by the Genome Institute of Singapore, are as accurate and sensitive as possible.

Some of the logistical problems encountered by the group include setting up a bar code system to track and transport patients’ samples coming in and out. The group also needs to build up a database about the samples and the patients, so as to find clues as to why some people seem to do worse than other people.

There is also a team in charge of screening the SARS virus against the established libraries of medical compounds and natural substances. If this search gets a “hit”, it may mean that the substance can fight the disease.
The SARS virus can survive on common surfaces at room temperature for hours or even days, scientists have found.

This finding, based on experiments in Hong Kong, Japan, Beijing and Germany, could explain how people could catch the deadly lung infection without face-to-face contact with a sick person.

The laboratory studies, to be released by the World Health Organization, have produced the first scientific data on how long the SARS virus can live in various places and conditions.

One study, conducted independently in Germany and in Hong Kong, showed the virus surviving for at least 24 hours on a plastic surface at room temperature, suggesting it might be possible to become infected from touching a tabletop, doorknob or other objects.

Another found the deadly microbe remaining viable for as long as four days in human waste, a crucial finding that could clarify how the virus can spread through apartment buildings, hospitals and other facilities.

In another set of studies, scientists in Japan concluded that the virus could live for extended periods in the cold, suggesting it could survive the winter.

The virus died at 37 deg C and above, started to deteriorate at 4.4 deg C but seemed to remain viable indefinitely when temperatures dropped to 0 deg C. Scientists in Beijing produced similar results.

Other medical teams in Singapore and Hong Kong have also been testing the virus's ability to survive in various temperatures and levels of humidity; in blood; and on metals, plastics, paper and cotton.

Singapore to have Own Diagnostics Kit Soon

Singapore would soon have its very own SARS diagnostic kit, which can detect virus in its early stages. This was revealed by Dr. Ling Ai Ee, a virologist heading the SARS investigation team in Singapore.

The Genomics Institute of Singapore is close to completing a kit. Even though the number of cases may be winding down, Dr. Ling said that having such a kit is still important. She said, “Even though we turn the corner, it does not mean that the whole world has turned the corner. Also, we do not know if we are ever going to get a re-introduction of this virus.”
Singapore-Malaysia Working Group Discusses SARS

The Singapore-Malaysia Technical Working Group comprising health, immigration and other officials met in Johor Bahru to discuss areas of cooperation on controlling SARS.

The Group would put into action some issues outlined earlier by top health officials in Malaysia. The meeting discussed possible measures like pre-departure checks, distribution of Health Declaration Cards and temperature checks for all travelers from land, sea and air ports.

Both countries would also adopt a common protocol on the referral of suspected SARS travelers across land border between Singapore and Malaysia. The medical information of probable and suspected SARS cases would also be shared between the Health Ministries.

Both countries’ health and immigration officials would meet regularly to update each other on the SARS situation.

Land Travelers to be Checked for Fever

Bus travelers plying between Singapore and Malaysia through the Causeway and Tuas Checkpoints will have their temperatures scanned by thermal scanners.

These two land border checkpoints see over a hundred thousand travelers each day. So, Singapore has deployed one thermal scanner at Tuas Checkpoint and two at the Causeway.

At Tuas only arriving bus passengers will be scanned while at Woodlands, which sees ten times the traffic, both arriving and departing passengers will be scanned.

Using infra-red technology, the heat detector can spot travelers with a fever who appear red on the monitor. They will then be checked again by nurses from Tan Tock Seng Hospital and referred to a doctor if necessary.

Immigration authorities have invited their Malaysian counterparts to visit and observe Singapore’s latest checks.

All Air Travelers to be Screened

All passengers departing from Singapore’s Changi Airport would be thermally screened for fever in a bid to stop the spread of SARS. Before, Singapore had only been scanning passengers arriving from Hong Kong and China. The thermal scanning of arriving passengers has also been extended to all SARS-hit areas.

It is all part of the effort to make Changi Airport a safe place to fly to or to transit through for all international travelers.

Transport Minister Yeo Cheow Tong said, “This is a major boost to Changi Airport’s immunity system. With this measure, Singapore will also be playing its part to prevent the exportation of SARS cases to other countries.”

Twenty-six thermal scanners at the airport will scan all incoming flights, not just those from SARS-hit areas.

The Transport Minister also revealed that connections to six cities have also been lost, including those to Riyadh, Fuzhou, Mauritius and Hatyai.

Singapore-Malaysia Working Group Discusses SARS

The Singapore-Malaysia Technical Working Group comprising health, immigration and other officials met in Johor Bahru to discuss areas of cooperation on controlling SARS.

The Group would put into action some issues outlined earlier by top health officials in Malaysia. The meeting discussed possible measures like pre-departure checks, distribution of Health Declaration Cards and temperature checks for all travelers from land, sea and air ports.

Both countries would also adopt a common protocol on the referral of suspected SARS travelers across land border between Singapore and Malaysia. The medical information of probable and suspected SARS cases would also be shared between the Health Ministries.

Both countries’ health and immigration officials would meet regularly to update each other on the SARS situation.

Land Travelers to be Checked for Fever

Bus travelers plying between Singapore and Malaysia through the Causeway and Tuas Checkpoints will have their temperatures scanned by thermal scanners.

These two land border checkpoints see over a hundred thousand travelers each day. So, Singapore has deployed one thermal scanner at Tuas Checkpoint and two at the Causeway.

At Tuas only arriving bus passengers will be scanned while at Woodlands, which sees ten times the traffic, both arriving and departing passengers will be scanned.

Using infra-red technology, the heat detector can spot travelers with a fever who appear red on the monitor. They will then be checked again by nurses from Tan Tock Seng Hospital and referred to a doctor if necessary.

Immigration authorities have invited their Malaysian counterparts to visit and observe Singapore’s latest checks.

All Air Travelers to be Screened

All passengers departing from Singapore’s Changi Airport would be thermally screened for fever in a bid to stop the spread of SARS. Before, Singapore had only been scanning passengers arriving from Hong Kong and China. The thermal scanning of arriving passengers has also been extended to all SARS-hit areas.

It is all part of the effort to make Changi Airport a safe place to fly to or to transit through for all international travelers.

Transport Minister Yeo Cheow Tong said, “This is a major boost to Changi Airport’s immunity system. With this measure, Singapore will also be playing its part to prevent the exportation of SARS cases to other countries.”

Twenty-six thermal scanners at the airport will scan all incoming flights, not just those from SARS-hit areas.

The Transport Minister also revealed that connections to six cities have also been lost, including those to Riyadh, Fuzhou, Mauritius and Hatyai.
WHO Says Worst is Over for Singapore

The World Health Organization (WHO) said on 29 April that the worst of the SARS outbreak is over for Singapore, Hong Kong and Canada and declared Vietnam SARS-free, but warned that the virus continues to spread in China and Taiwan.

Dr. David Heymann, executive director of WHO’s communicable diseases cluster, said, “It appears from reports we have from Hong Kong, Singapore, Toronto and Vietnam that the epidemic has peaked in those countries and now they are having fewer cases every day, and in some countries, no new cases, such as Vietnam.”

He said, “In most countries now, they have had one or two peaks and they are on the way down. We believe they will stay down.” A “peak” is the point when an outbreak hit a maximum number of cases per day.

As of 5 May in Singapore, there has been 16 days of no new infections in hospitals and no new cases for two days running. The number of people in hospital with SARS dropped to 30 on 3 and 4 May, the lowest figure in almost a month. That number included 14 who are still seriously ill.

The previous low was on 7 April, when there were 32 people hospitalized, 12 of them seriously ill.

But Health Minister Lim Hng Kiang said that it was too early to say if the outbreak had peaked. He said, “The next two, three weeks will continue to be a critical period for us. Our basic tone must be to be extra careful, extra vigilant and if anything, to err on the safe side.”

Acting Prime Minister Lee Hsien Loong point out that from now, it is better to over-react than under-react. There will be no victory parade, as Singapore has waged only the first battle in a long campaign, in which vigilance is of the utmost importance because there will “definitely” be more SARS cases.

It is inevitable as Singapore woos tourists, Singaporeans continue to travel for business, and hundreds of thousands cross the country’s borders each day. He said, “We have to find a way to keep our guard up for a long time.”

Dr. Heymann was in Bangkok to brief a Asean leaders meeting. He said, “I think we will be able to tell them that we are very happy with the way that Asian countries have responded to the outbreak, and we are very hopeful this continued response and continued hard work and some sacrifices by these countries will prevent this disease from becoming a disease which is endemic throughout the world.”
Case Update

Overview of SARS Cases in Singapore

Source: Ministry of Health, Singapore
SARS Suspects
Source: Ministry of Health, Singapore

People Under Home Quarantine Order
Source: Ministry of Health, Singapore
Percentage of Family/Friends and Hospital Staff Infected
4 May 2003
Source: Ministry of Health, Singapore

Percentage of Discharged Patients, Hospitalized Patients and Deaths
4 May 2003
Source: Ministry of Health, Singapore
### Daily Update of SARS Cases in Singapore

#### 13 - 20 Mar

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Infected</th>
<th>Index Case</th>
<th>Discharged</th>
<th>Hospitalized</th>
<th>ICU</th>
<th>Death</th>
<th>Suspect</th>
<th>Home Quarantine Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-Mar</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>14-Mar</td>
<td>9</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15-Mar</td>
<td>16</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>16-Mar</td>
<td>20</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>17-Mar</td>
<td>21</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>19-Mar</td>
<td>31</td>
<td>3</td>
<td>2</td>
<td>29</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20-Mar</td>
<td>34</td>
<td>3</td>
<td>2</td>
<td>32</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

#### 21 - 28 Mar

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Infected</th>
<th>Index Case</th>
<th>Discharged</th>
<th>Hospitalized</th>
<th>ICU</th>
<th>Death</th>
<th>Suspect</th>
<th>Home Quarantine Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-Mar</td>
<td>39</td>
<td>3</td>
<td>3</td>
<td>36</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>22-Mar</td>
<td>44</td>
<td>3</td>
<td>3</td>
<td>41</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>23-Mar</td>
<td>51</td>
<td>3</td>
<td>3</td>
<td>48</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>24-Mar</td>
<td>65</td>
<td>3</td>
<td>5</td>
<td>60</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>25-Mar</td>
<td>69</td>
<td>3</td>
<td>13</td>
<td>56</td>
<td>11</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>26-Mar</td>
<td>74</td>
<td>3</td>
<td>13</td>
<td>60</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>27-Mar</td>
<td>78</td>
<td>3</td>
<td>16</td>
<td>60</td>
<td>11</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

#### 26 Mar - 5 Apr

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Infected</th>
<th>Index Case</th>
<th>Discharged</th>
<th>Hospitalized</th>
<th>ICU</th>
<th>Death</th>
<th>Suspect</th>
<th>Home Quarantine Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>28-Mar</td>
<td>86</td>
<td>4</td>
<td>25</td>
<td>59</td>
<td>12</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>31-Mar</td>
<td>92</td>
<td>5</td>
<td>41</td>
<td>47</td>
<td>13</td>
<td>4</td>
<td>36</td>
<td>0</td>
</tr>
<tr>
<td>1-Apr</td>
<td>95</td>
<td>6</td>
<td>52</td>
<td>39</td>
<td>13</td>
<td>4</td>
<td>42</td>
<td>0</td>
</tr>
<tr>
<td>2-Apr</td>
<td>98</td>
<td>7</td>
<td>57</td>
<td>37</td>
<td>11</td>
<td>4</td>
<td>47</td>
<td>0</td>
</tr>
<tr>
<td>3-Apr</td>
<td>100</td>
<td>7</td>
<td>63</td>
<td>32</td>
<td>12</td>
<td>5</td>
<td>38</td>
<td>0</td>
</tr>
<tr>
<td>4-Apr</td>
<td>101</td>
<td>7</td>
<td>69</td>
<td>26</td>
<td>12</td>
<td>6</td>
<td>45</td>
<td>0</td>
</tr>
<tr>
<td>5-Apr</td>
<td>103</td>
<td>7</td>
<td>72</td>
<td>25</td>
<td>14</td>
<td>6</td>
<td>57</td>
<td>196</td>
</tr>
</tbody>
</table>

#### 7 - 14 Apr

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Infected</th>
<th>Index Case</th>
<th>Discharged</th>
<th>Hospitalized</th>
<th>ICU</th>
<th>Death</th>
<th>Suspect</th>
<th>Home Quarantine Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-Apr</td>
<td>113</td>
<td>7</td>
<td>73</td>
<td>31</td>
<td>12</td>
<td>8</td>
<td>73</td>
<td>133</td>
</tr>
<tr>
<td>8-Apr</td>
<td>118</td>
<td>7</td>
<td>74</td>
<td>34</td>
<td>12</td>
<td>9</td>
<td>82</td>
<td>228</td>
</tr>
<tr>
<td>9-Apr</td>
<td>126</td>
<td>7</td>
<td>75</td>
<td>42</td>
<td>14</td>
<td>9</td>
<td>82</td>
<td>286</td>
</tr>
<tr>
<td>10-Apr</td>
<td>133</td>
<td>7</td>
<td>77</td>
<td>47</td>
<td>13</td>
<td>9</td>
<td>82</td>
<td>490</td>
</tr>
<tr>
<td>11-Apr</td>
<td>140</td>
<td>7</td>
<td>77</td>
<td>54</td>
<td>14</td>
<td>9</td>
<td>75</td>
<td>534</td>
</tr>
<tr>
<td>12-Apr</td>
<td>147</td>
<td>7</td>
<td>78</td>
<td>60</td>
<td>15</td>
<td>9</td>
<td>84</td>
<td>558</td>
</tr>
<tr>
<td>14-Apr</td>
<td>158</td>
<td>7</td>
<td>84</td>
<td>62</td>
<td>18</td>
<td>10</td>
<td>72</td>
<td>599</td>
</tr>
</tbody>
</table>
### Special Report on SARS

#### 16 - 22 Apr

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Infected</th>
<th>Index Case</th>
<th>Discharged</th>
<th>Hospitalized</th>
<th>ICU</th>
<th>Death</th>
<th>Suspect</th>
<th>Home Quarantine Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-Apr</td>
<td>167</td>
<td>7</td>
<td>91</td>
<td>61</td>
<td>16</td>
<td>13</td>
<td>91</td>
<td>582</td>
</tr>
<tr>
<td>17-Apr</td>
<td>171</td>
<td>7</td>
<td>95</td>
<td>61</td>
<td>17</td>
<td>13</td>
<td>80</td>
<td>467</td>
</tr>
<tr>
<td>18-Apr</td>
<td>172</td>
<td>7</td>
<td>97</td>
<td>59</td>
<td>17</td>
<td>14</td>
<td>80</td>
<td>444</td>
</tr>
<tr>
<td>19-Apr</td>
<td>177</td>
<td>7</td>
<td>100</td>
<td>61</td>
<td>17</td>
<td>14</td>
<td>77</td>
<td>387</td>
</tr>
<tr>
<td>20-Apr</td>
<td>178</td>
<td>7</td>
<td>104</td>
<td>58</td>
<td>19</td>
<td>14</td>
<td>87</td>
<td>467</td>
</tr>
<tr>
<td>21-Apr</td>
<td>184</td>
<td>7</td>
<td>104</td>
<td>64</td>
<td>18</td>
<td>14</td>
<td>82</td>
<td>793</td>
</tr>
<tr>
<td>22-Apr</td>
<td>186</td>
<td>7</td>
<td>110</td>
<td>60</td>
<td>19</td>
<td>14</td>
<td>87</td>
<td>1798</td>
</tr>
</tbody>
</table>

#### 23 - 30 Apr

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Infected</th>
<th>Index Case</th>
<th>Discharged</th>
<th>Hospitalized</th>
<th>ICU</th>
<th>Death</th>
<th>Suspect</th>
<th>Home Quarantine Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>23-Apr</td>
<td>189</td>
<td>7</td>
<td>114</td>
<td>58</td>
<td>18</td>
<td>15</td>
<td>95</td>
<td>2467</td>
</tr>
<tr>
<td>25-Apr</td>
<td>195</td>
<td>7</td>
<td>126</td>
<td>50</td>
<td>19</td>
<td>17</td>
<td>99</td>
<td>2729</td>
</tr>
<tr>
<td>26-Apr</td>
<td>198</td>
<td>7</td>
<td>128</td>
<td>49</td>
<td>17</td>
<td>19</td>
<td>102</td>
<td>2876</td>
</tr>
<tr>
<td>27-Apr</td>
<td>199</td>
<td>7</td>
<td>131</td>
<td>47</td>
<td>17</td>
<td>21</td>
<td>111</td>
<td>2836</td>
</tr>
<tr>
<td>28-Apr</td>
<td>198</td>
<td>7</td>
<td>137</td>
<td>39</td>
<td>15</td>
<td>22</td>
<td>123</td>
<td>2807</td>
</tr>
<tr>
<td>29-Apr</td>
<td>201</td>
<td>7</td>
<td>139</td>
<td>38</td>
<td>16</td>
<td>23</td>
<td>116</td>
<td>3001</td>
</tr>
<tr>
<td>30-Apr</td>
<td>201</td>
<td>7</td>
<td>141</td>
<td>35</td>
<td>15</td>
<td>24</td>
<td>105</td>
<td>2890</td>
</tr>
</tbody>
</table>

#### 1 - 4 May

<table>
<thead>
<tr>
<th>Date</th>
<th>Total Infected</th>
<th>Index Case</th>
<th>Discharged</th>
<th>Hospitalized</th>
<th>ICU</th>
<th>Death</th>
<th>Suspect</th>
<th>Home Quarantine Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-May</td>
<td>201</td>
<td>7</td>
<td>143</td>
<td>33</td>
<td>15</td>
<td>24</td>
<td>78</td>
<td>3078</td>
</tr>
<tr>
<td>2-May</td>
<td>203</td>
<td>7</td>
<td>146</td>
<td>31</td>
<td>15</td>
<td>25</td>
<td>76</td>
<td>3035</td>
</tr>
<tr>
<td>3-May</td>
<td>203</td>
<td>7</td>
<td>147</td>
<td>30</td>
<td>14</td>
<td>26</td>
<td>60</td>
<td>3154</td>
</tr>
<tr>
<td>4-May</td>
<td>203</td>
<td>7</td>
<td>147</td>
<td>30</td>
<td>14</td>
<td>26</td>
<td>50</td>
<td>3034</td>
</tr>
</tbody>
</table>