Reflections on the Singapore SARS Outbreak

By A/Prof Goh Lee Gan

A NEW INFECTION

The SARS outbreak entered Singapore through three young women, who were in Hong Kong from 20 to 24 February this year. They were infected by a doctor from Guangzhou by a chance encounter in the lift lobby on the 9th floor of the Metropole Hotel in Mongkok in Hong Kong. In that chance encounter, the Chinese doctor was also to spread the disease to four other people besides the three Singaporeans. One was a local Hong Kong resident who visited a friend at the hotel, another was a 55-year-old Vancouver man, the third was a 78-year-old Toronto woman, and the fourth was a 48-year-old American businessman. *(Source: http://straitstimes.asia1.com.sg/columnist/0,1886,56-178860,00.html)*

The local Hongkonger became ill, and for a time was erroneously designated the index case in Hong Kong until the story of the real index case – the Guangzhou professor – surfaced. The rest returned home to become the index cases in Toronto and Vancouver, Hanoi, and Singapore.

Singapore, as at 30 March 2003, had 91 cases and three deaths. The secondary cases were hospital doctors, nurses, and family members of the index cases. There are thankfully no cases out in the community, meaning those cases with no known source.

This is a new viral infection and its infective capability is still being inferred from the cohort of infected cases in Singapore, Hong Kong and elsewhere. From the Singapore and Hong Kong experiences, the victims shed viruses when they are very ill. This will explain the secondary cases occurring among the healthcare providers in hospitals. Also, the virus is spread to those in close contact with the cases. It also appears that some cases are "Super Infectors", meaning that these cases are more able to spread the infection to others around them.

REFLECTION 1: FAST SPREAD

It is clear with present day travel that a bug can spread very rapidly across countries. As has occurred with the SARS outbreak, the spread to Hong Kong, Vietnam, Canada and Singapore came from one case coming across Guangzhou to Hong Kong. The WHO report dated 29 March showed a tally of 37 cases with 470 cases and 10 deaths in Hong Kong, 58 cases and 4 deaths in Vietnam, 3 deaths in Canada, and 89 cases with 2 deaths in Singapore. *(Source: http://www.who.int/csr/sarscountry/2003_03_29/en/)*

REFLECTION 2: EARLY REPORTING

An epidemiological network for early reporting remains the best way to limit the global spread. The doctors in Hanoi were fast to report its index case to WHO as a baffling case. This is a judgment call that requires clinical acumen to spot the index case to be unusual. Not always easy, but nevertheless, an important skill.

The doctor who did that in Hanoi was Carlo Urbani. "Because of his early detection of SARS, global surveillance was heightened and many new cases have been identified and isolated before they infected hospital staff," said the Geneva-based UN health agency in a statement. Unfortunately, this doctor succumbed to SARS. He was infected in the process of caring for the index case in Hanoi, and eventually died in Bangkok on 29 March, where he had gone for a meeting. *(Source: http://www.channelnewsasia.com/stories/southeastasia/view/36120/1/.html)*

REFLECTION 3: KEEPING THE EPIDEMIOLOGICAL NETWORK IN FIGHTING TRIM

The present outbreak in Singapore and in the region, demonstrates the importance of a global and national network of epidemiological collection, investigation, processing, and disseminating points. The WHO, the CDCs and laboratories are crucial in providing the information and in advising communities what need to be done. Obviously, the close cooperation between WHO, countries, centres, and scientists remain paramount. The adequate funding of such a network both locally and globally is good investment for mankind.

REFLECTION 4: COOPERATION WITH CONTROL MEASURES

The cooperation of the community in control measures, like the closing of schools and other activities likely to allow transmission, is crucial. And it is a fine judgment between being too restrictive and too liberal. Until more is known about the ability of the disease to spread, it is safer to take more steps that may turn out to be not necessary later.

REFLECTION 5: ADEQUATE OPERATING INFORMATION

Having adequate operating information for the public and medical practitioners will help to restore calm and behaviour that will be productive in bringing the infection under control.

REFLECTION 6: THE VULNERABILITY OF THE HUMAN RACE

Each emerging infection that tests the defence network of the human race also reminds us of the great vulnerability of the human race. The possibility of a virulent superbug beyond the grip of medical science and technology is there. All this underscores the importance of the study and practice of communicable disease control, including drastic quarantine measures. It is important not to be lulled into complacency because infectious diseases have receded into the background from the top causes of death of many countries. Each of us is a stakeholder, and if each of us remembers that, the battle is more likely to be won with the least number of victims.

CONCLUSION

The SARS outbreak is a timely reminder of the importance of being prepared against communicable diseases, and where the control of a mysterious bug requires the stakeholder mentality that we are all vulnerable. There is also the confidence that together, we can erect a strong defence against the onslaught of the invisible invader. ■