SARS, 10 years on

The deadly disease that killed more than 300 people in Singapore spurred SGH to make many changes to prevent or limit future outbreaks

With the same rapidity that it appeared, the pandemic dissipated. On May 30, WHO took Singapore off the SARS list, although we officially stepped down to green alert only on April 1, 2004, one year later.

We won. How did we do it? Administrative firmness and social cohesion helped to limit the spread of the disease, as did the professionalism and sacrifice of healthcare staff. The way the Singapore Government handled SARS has become an administrative model for managing an epidemic. But all those would have come to nothing if academic clinicians from other departments had failed. Many more lives would have been lost and the pandemic would almost certainly have been protracted.

SARS was not the last pandemic to hit Singapore. We are an international travel hub and will always be among the first to get in harm’s way. If another pandemic hits Singapore and SingHealth tomorrow, will we be more prepared? As we build our research capabilities, perhaps, the next time round, we will not have to depend on people from other places to do the important research that would save the lives of our patients, colleagues and families. We will be working with international collaborators as equal partners.

BATS 1, HUMANS 0

Bats have one significant advantage over humans: They can carry and spread deadly infectious diseases such as Ebola or SARS without being affected by them. A team of scientists headed by Professor Wong Lai-fong, Director, Emerging Infectious Diseases Programme, Duke-NUS Graduate Medical School, studied the genome of two types of bats. They found that a new coronavirus was responsible for the disease. This was confirmed by data from laboratories, General Surgery staff established that most of our practices were well adapted to the human condition – while case mortality rate was high, the disease did not last latent in humans. In that sense, we were lucky.

The rapid transmission of a severe novel infectious disease had been matched by an equally rapid collaborative scientific response. At SGH, staff worked with magnificently professional, often at great personal risk and cost. Faced with the threat of infection, many of us had to make the difficult decision of whether to continue staying with our families at that time. Some of us remember any colleague who asked from what he or she had to do. A number of us caught SARS in the course of duty and some of us died. But we never stopped looking after our patients.

Toronto, Hong Kong and Singapore were the first cities to be hit by SARS. Primary scientific and clinical data to help the rest of the world would have to come from academic clinicians from these three places.

Better prepared

“The amount of patient and laboratory data we had to track, and the lessons we had to slowly involved partners about during the SARS epidemic overwhelmed us at a time when we needed to focus on lab investigations. We improved our communication, established a teleconferencing system and implemented a distributed communication process with colleagues from other departments. The SARS epidemic highlighted the need for preparedness training to tough us up to anticipate sudden surges in demand for manpower, laboratory resources and supplies. Laboratory equipment, personal protective equipment and laboratory space. We definitely look different now in space when the departments moves to its new building.”

Dr Chan Hsiang Peng, Senior Consultant, Department of Pathology, Singapore General Hospital

Better processes

“During the SARS outbreak, the Singapore General Hospital developed an automated visitor-management system which allowed us to screen visitors efficiently and contact them in the event of contagions. We installed thermal scanners and stationery such as the entrance of all lift lobbies to ensure everyone was scanned for fever. Since then, an automated visitor management system has been installed in every visitor area. In the event of another outbreak, the system will allow SGH to quickly trace patients and visitors who had contact with an infected person. After SARS, regular training and refresher courses were conducted among all staff to ensure that protocols were followed. Staff were also updated on new disease outbreak response strategies.”

Mr Desmond Khoo, Senior Manager (Operations), Operations Division, Singapore General Hospital

Better equipment

“As with nurses, hospital housekeepers – who do work much of the cleaning the wards and changing the beds – were trained in infection-control practices. They are required to wear a properly fitted mask. When fitted closely, the mask can prevent the user from breathing in very small particles. Before SARS, there were no hand rub dispensers in common areas. Now, we have 11,200 dispensers in common areas, replenished with an average of 200 bottles of hand rub a month. Every bed at the hospital is also equipped with a bottle of hand rub. The use of paper hand towels has also increased – a sign that hand hygiene is practised rigorously.”

Dr Tracy Carol Ayre, Director, Infection Control, Singapore General Hospital

Better hygiene

“A greater emphasis on adherence to hygiene practices is among the more significant changes made by nursing practice after SARS. Upon admission, nurses assessed patients about the importance of handwashing. They would ask patients if they washed their noses or mouths when sneezing or coughing. Alcohol-based hand rubs are made easily available in common corridors and lift lobbies, at the front of patients’ beds and in other areas. Patients are monitored regularly for fever. If there’s suspicion of an infection among groups of patients the nurses will report to the hospital’s Infection Control Team.”

Dr Tracy Carol Ayre, Director, Infection Control, Singapore General Hospital

New labs

SGH’s pathology services, together with SingHealth’s research, education and training facilities, will soon be housed in the two-storey building known as The Academy. The new facility is much larger than the Pathology Department’s current space and will use the latest technology to improve patient care. It will provide better diagnostic accuracy and reliability. This means patients will get their test results faster.

Better wents

Four wards in SGH’s General Medicine were converted to contain patients with a low risk of spreading a potentially harmful infection to other staff, patients and visitors.

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