

Introduction

Once in a while, an infectious disease emerges that severely threatens our health and economy, like SARS, MERS, H1N1 and now SARS-CoV-2. These test both the resilience of our public health response but also our very character as a nation. Singapore rises to these challenges in a whole-of-society effort and has done well so far.

Our experience with SARS in 2003 and H1N1 in 2009 has led to significant preparedness and investment in infectious disease public health, for example, in surveillance and detection systems at borders and through regional networks, the training of health workers, expanded capabilities in public hospitals, and the building of the National Centre for Infectious Diseases. SARS raised the public awareness of infectious diseases and the important role that primary care and the public themselves play in assisting with the fight against such diseases.

SARS-CoV-2 is a coronavirus and COVID-19 is the infection. SARS-CoV-2 is thought to have emerged in Hubei, China in November or December 2019. This was likely a spill-over from animals. Coronaviruses are common in many different species of animals, including camels, cattle, cats, and bats. Once in humans, there was rapid transmission within Hubei, which was accelerated across China and beyond by travel during Chinese New Year.

Although we are learning more about COVID-19 by the day (and hour!), it is not yet fully understood. Singapore's first COVID-19 case was diagnosed on January 23, 2020. A number of containment and control measures were rolled out in response to the evolving situation and as we learnt more about the disease.

Singapore has put in place multiple measures to control COVID-19, these have been introduced based on carefully considered risk assessments. Measures included screening travellers entering Singapore, early case identification, contact tracing, the quarantine of potential cases, leaves of absence for persons who may have been exposed, the distribution of masks, shutting bars and clubs, limiting numbers of people gathering, and the ongoing promotion of basic hygiene.

Relevant evidence on previous coronaviruses and the new SARS-CoV-2 is critical for policy making and public health strategies. The Saw Swee Hock School of Public Health was asked by the Chief Health Scientist of the Ministry of Health to collate relevant literature to support the national response to the outbreak.

The COVID-19 Science Report started with a review of the diagnostics, therapeutics and vaccines available around the world. It then expanded to include clinical characteristics, containment measures, social distancing and lockdowns.

With the fifth weekly edition, we made the COVID-19 Science Report available on the School's website. Rapidly sharing information and learning in an ever-changing situation and working together is critical to address the challenges of the outbreak. We hope that the COVID-19 Science Report will be of use to the wider research community and to countries around the world in partnership against the virus.

This is an ongoing project and we welcome input from the wider research community. Given the rapid and iterative nature of the COVID-19 Science Report, there may be the occasional error or inaccuracy. Please let us know at sshsph_pht@nus.edu.sg and we will correct them at the next opportunity.

SSHSPH Public Health Translational Team

- A/Prof Jason CH Yap
- Dr Ian Ang Yi Han
- Dr Sharon Tan Hui Xuan
- Ms Ruth Frances Lewis
- Ms Jacinta Chen I-Pei
- Ms Yang Qian
- Ms Rowena Yap Kah Sin
- Mr Bob Ng Xian Yi
- Mr Tan Hao Yi

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