

Lessons from SARS

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Although efforts to contain the spread of severe acute respiratory syndrome have succeeded remarkably well in some countries it seems unlikely that SARS will be deleted from the planet any time soon. In China the number of new cases rises unabated and threatens to overwhelm local public health capacity. Global eradication may have to await the development of a vaccine.

And yet, as we go to press, the situation in Canada seems more hopeful than it has for some time. The apparent containment of the outbreaks in Toronto and Vancouver can be attributed to astute clinicians who recognized the unusual features of the first cases and were alert to early warnings of an emerging atypical pneumonia in the Far East.¹ We should also be thankful for the hard work of public health officials who, notwithstanding concerns about public health preparedness that have been raised in recent times (including in this column),² have done a superb job.

Nonetheless, the blame game has begun: provincial ministers criticize their federal counterparts, and federal politicians snipe at one another. Ontario's premier has explained that he viewed SARS as a matter for medical experts, not politicians. Certainly, one would not want the response to a public health crisis to become distorted by political agendas. But it is still important to ask whether we have the right structures in place to enable adequate leadership, both medical and political, at such a time. We need to ensure we have the capacity to detect and manage emerging infectious diseases. We need to take seriously the epidemiologic implications of international air travel, the globalization and industrialization of our food supply, and climate change.

Historically, the spread of contagious disease followed the routes of commerce and exploration. Now, imported infectious agents may be as close as the local supermarket, or among the next arrivals at any international airport. During the year 2000 almost 100 million nonresident passengers arrived in China, Hong Kong and Vietnam, and almost 500 000 residents of these countries travelled to the United States.³ Less than 6 weeks after the first SARS cases were officially reported in Guangdong Province, China, the world map was dotted with SARS outbreaks in 27 countries.

The initial cases of SARS appeared in Guangdong Province no later than Nov. 16, 2002. The World Health Organization was notified by the Chinese Ministry of Health 3 months later, on Feb. 11, of an outbreak affecting 305 individuals, with 5 deaths.³ It was not until Mar. 12, when the disease had reached Hong Kong, that WHO issued a global alert. As new infectious threats emerge we will need a better early detection and warning system, one that will also work in overcrowded (and usually poor) regions

with limited resources. We have arms detectors; perhaps we need an equally determined corps of disease detectors.

The first case of SARS in Canada was diagnosed on Mar. 13, the day after WHO issued the global alert.⁴ Yet, 2 weeks later, some patients with SARS were not being managed in isolation, perhaps contributing to the widespread outbreak in Toronto, particularly among health care professionals.^{5,6} Is our surveillance and reporting system adequate? Are front-line clinicians getting the information they need, when they need it? Do local and provincial public health officials have the training and resources they need to carry out effective surveillance and disease control? Even in the pre-SARS era, there was considerable evidence that they don't.²

And, finally, there is the vexing problem in Canada of public health leadership and jurisdiction. Is federal-provincial public health collaboration adequate? Should Health Canada be leading, or coaching? Many politicians are discovering what an epidemic curve looks like and why it is important. They have attempted to respond to an epidemic of fear by dining out conspicuously in Toronto's Chinatown and by releasing short-term financial assistance to affected individuals and hospitals. What we need now is a hard look at public health responsiveness in the long term. The next "SARS" could easily be more contagious and more virulent. We were lucky that the initial outbreak of SARS was in Toronto, a city with excellent and abundant clinical and public health resources. But this is not true everywhere in Canada.² We need to question (again) the wisdom of embedding our national public health system of disease control and prevention in a large government bureaucracy. Our governments should look beyond today's epidemic curves and prepare for the next. A good first step would be the creation of a Canadian Office of Disease Control and Prevention. — *CMAJ*

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