

SARS: the struggle for containment

As we write, over 3200 cases of severe acute respiratory syndrome (SARS) have been reported officially in 23 different countries. In Canada, 13 (12.4%) of 105 people with “probable” SARS have died.¹ It is possible that milder cases are occurring without being reported, but it is too early to tell whether such cases might serve as a source of infection, further fuelling the epidemic.

A coronavirus, now named SARS virus, has been confirmed as the cause. Like sister coronaviruses known to cause the common cold, the SARS virus appears to be spread easily by droplet exposure. There are reports of single people infecting up to 112 others. As health officials in Toronto continue to add cases to the SARS list, and quarantine hundreds of potential contacts, years of warnings about the implications of an easily travelled earth for infectious disease control have hit home. David Patrick’s account in this issue underscores the value of vigilance.²

Initial efforts to stop the spread of the disease consisted of hospital isolation of infected people and voluntary home quarantine of close contacts; home quarantine was soon expanded to include anyone potentially exposed. Various jurisdictions, including Ontario, Hong Kong, Singapore and the United States, have now invoked statutory powers to permit involuntary quarantine. Although these efforts may have slowed the epidemic they have not stopped it. In Hong Kong, so many people have been exposed to SARS that the public health system appears to be overwhelmed. In Singapore, Health Minister Lim Hng Kiang has conceded, “We are in this for the long haul.” China has come under heavy criticism for underreporting of cases, and the WHO’s recent estimate of as many as 200 cases in Beijing is worrisome.

But the story of SARS in a globalized world also includes several successes. In an effort to disseminate information as quickly as possible, researchers and clinicians around the world have worked collaboratively and sought rapid publication for their findings. Medical journals have responded to this urgency. The initial case reports were available on the Internet less than 4 weeks after the first people became ill in Hong Kong and in Toronto.^{3,4} Shortly after, RNA fragment sequences were made available on the WHO Web site (www.who.int/csr/sars/primers/en/) to allow laboratories to carry out PCR testing for the implicated virus. Most recently, the entire genetic sequence of the SARS coronavirus has been completed at the Genome Sciences Centre in Vancouver and released online to enable rapid development of a diagnostic test (www.bcgsc.ca/bioinfo/SARS/). As scientists around the world hasten to develop a vaccine or treatment, physicians with SARS patients are sharing their clinical experience. Such capacity must be commensurate with hope.

In this issue we publish a report by Robert Maunder and colleagues on their experience in managing 19 patients with SARS at Mount Sinai Hospital in Toronto.⁵ Their report, which should be useful to other hospitals yet to experience SARS, describes the organization of care, what was done to help staff and patients cope with the illness, and the broader effects of quarantine and isolation.

Because of their close contact with SARS patients, health care workers are particularly vulnerable to infection. Also in this issue, Elizabeth VanDenKerkhof and colleagues in Kingston⁶ describe how they rapidly developed and implemented a real-time, Web-based, screening and tracking mechanism for hospital staff. They report on the first week of operation and offer their software free to other hospitals.

As we wait for specific treatments to be developed, initial management of SARS patients, particularly those with pneumonia, has been with broad-spectrum antibiotics and ribavirin, an antiviral agent available in this country only under Health Canada’s early release program. In this issue, on behalf of the Canadian Society for Clinical Pharmacology, Gideon Koren and colleagues provide a short review of the drug along with practical advice on how to obtain it for patients.⁷

We will continue to track developments. SARS might indeed be here for the “long haul.” For now, we will continue to use our home page (www.cmaj.ca) for updates on the global SARS situation and to provide links to all available published articles. In the coming weeks we will fast-track suitable submissions and release them early on *eCMAJ*. It is our sincere hope that the success of the international response will equal the talent and commitment of scientists and health professionals on the front lines. — *CMAJ*

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