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Editorial

Was SARS a mental health catastrophe?

A few months after the resolution of the 2003 outbreak of Severe Acute Respiratory Syndrome (SARS), I was at an international meeting presenting some observations of the psychological impact of SARS in Toronto, Canada. I was met with two starkly contrasting responses. An infectious disease expert from the southern United States told me that she had no idea that the outbreak had been so serious. Later, another infectious disease expert from Hong Kong, which had been much more hardly hit than Toronto, sniffed that our results were interesting but we “hardly had any cases.” The severity of a natural disaster is in the eyes of the beholder.

In this issue, Mak et al. [1] report that among 90 residents of Hong Kong who were infected with SARS and survived, 23 (25.6%) had posttraumatic stress disorder (PTSD) and 14 (15.6%) had depressive disorders 30 months after their infection (a total of 27 people, 30%, had at least one of these diagnoses). The authors refer to this as a “mental health catastrophe.” What are we to make of this report? The first thing to note is that these results are consistent with previous studies that have reported persistent psychological symptoms in 41–65% of SARS survivors [2–4], although the previous studies were not designed to diagnose psychiatric illness. The finding that SARS patients who were healthcare workers are at increased risk of PTSD (40.7%) is also consistent with one previous report [2] and with the finding that healthcare workers who cared for SARS patients but were not infected continued to experience substantial psychological distress [5], if not mental illness [6], 1–2 years after the outbreak.

These observations need to be taken in the context of expected responses to other kinds of disasters. A wide-ranging review of this literature summarizes that “the prevalence of PTSD among direct victims of disasters ranges between 30% and 40%; the range of PTSD prevalence among rescue workers is lower, ranging between 10% and 20%, while the range of PTSD rates in the general population is the lowest and expected to be between 5% and 10%” [7]. Thus, the study of Mak et al. [1] finds a prevalence of PTSD following SARS that is either higher than or somewhat lower than has been found in other disasters, depending on whether one counts the cumulative proportion of patients with PTSD (47.8%) or only those who continue to meet criteria at 30 weeks (25.5%). It is reassuring that almost half of patients

who met criteria for PTSD after SARS had recovered within this time frame.

The SARS outbreak was contained within a few months primarily because of two features of the SARS-coronavirus which were very lucky for human beings and very unlucky for an emerging pathogen. The first is that the coronavirus is a large virus which is not prone to viable mutations. The second is that infected humans did not shed the virus before they were symptomatic, which made effective case identification and isolation possible. As a result and with the benefit of hindsight, SARS is *not* considered to have been a highly contagious disease [8,9]. If we had been dealing instead with an influenza-like virus, which mutates as a matter of course and leaves its victims at their most contagious before they know they are ill, it would have been a very different story. In this sense, although the human cost of the SARS outbreak was great, it was not a mental health catastrophe in the usual meaning of this word. It was perhaps a dress rehearsal for the catastrophe that could emerge with the long-overdue influenza pandemic [10] or some similar emergent infectious disease, if we are not better prepared next time.

On the other hand, the SARS outbreak demonstrated how the metaphor of catastrophe may apply to the psychological cost of an infectious disease in another more technical sense of the word which refers to “systems which display abrupt discontinuous change” (Oxford English Dictionary). We learned from SARS that the stressful impact of an infectious disease may be qualitatively distinct from the stress of other disasters, especially for healthcare workers. In particular, two unusual aspects of being exposed to a new and dangerous pathogen contribute to the stress that is experienced by those who are exposed. The first is that exposure to contagion brings social isolation. Interpersonal isolation in an infectious disease outbreak is the result of multiple interacting forces: the necessity to use personal protective equipment and physical distance to control the spread of disease, the strong tendency for those who are exposed to cope with this stress with interpersonal and psychological avoidance and the tendency of others to fear, avoid and stigmatize those who have been exposed [5,11,12]. The second unusual characteristic of infectious exposure is that the exposed person is likely to fear not only for his or her own safety but also for the safety of loved ones. Health care professionals, in

particular, may be more concerned about infecting family members than they are about becoming infected themselves [13]. Both of these unusual features of exposure to infectious disease reduce the availability of social support, especially support from family, to buffer the impact of stress.

Now that we know more about the psychological impact of a dramatic outbreak of infectious disease, we are in a much better position to prepare effectively for future events. Now is the time to build the resilience of health care workers and healthcare organizations in order to reduce the impact of pandemic influenza or other unforeseen outbreaks. This is an especially important goal when one considers the potential for health care catastrophe that could result from lost surge capacity resulting from health care workers choosing not to work in a crisis or functioning far below their personal capacity due to the effects of stress. A recent study, for example, found that up to 53% of healthcare workers indicated that they would not report to work if multiple victims of an influenza pandemic were admitted to their hospital [14].

Fortunately, our experience with SARS has provided valuable information about how to build organizational and personal resilience. An evidence-based approach to that challenge suggests that resilience can be supported at an organizational level by effective training and support, development of material and relational reserves, effective leadership and incorporating characteristics of “magnet hospitals” and principles of organizational justice into healthcare organizations before the emergence of the next infectious threat [15]. Effective preparation before the event is likely to enhance the benefits of postdisaster interventions such as effective risk communication and the provision of psychological first aid [16].

SARS was a very serious but containable outbreak of an emerging infectious disease. Its most salient characteristic, in the long run, may be that it has provided us with the information and the motivation that we need to avoid a true catastrophe in the future.

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