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Protecting healthcare workers

On the front line of patient care, they are vulnerable to catching the coronavirus they are fighting. What are the physical and mental healthcare steps to keep them safe?

Gan Wee Hoe and Chia Kee Seng

For The Straits Times

The severe acute respiratory syndrome (Sars) outbreak in 2003 had a profound effect on Singapore's healthcare system. Ninety-seven healthcare workers contracted Sars, of whom three died.

Singapore has gained valuable lessons in pandemic preparedness and management from the Sars experience, enabling the Republic to develop and regularly exercise plans for future – and current – public health crises.

In this disease containment phase of the coronavirus disease (Covid-19) in Singapore, all patients diagnosed with it are hospitalised for treatment. So how are we protecting our healthcare workers?

PHYSICAL HEALTH AND SAFETY

By the end of Sars, about 21 per cent of over 8,400 cases of infection worldwide occurred among healthcare workers. The incidence of occupational infection was nearly double in Singapore, with intra-hospital transmission identified as a key factor in amplifying the number of Sars cases.

Based on occupational health principles, every case can potentially be prevented.

Experts agree that the main mode of transmission of the coronavirus is through respiratory droplets, which are generated when coughing, sneezing or talking. Inhaling infected droplets can cause transmission to other individuals who are in close proximity (within one metre) and in close contact (living with, or caring for, the infected person).

The similarity in the mechanism of transmission to Sars allows key lessons learnt in disease containment strategies to be applied in this public health crisis.

First, there should be a rigorous system to contain the disease within hospitals.

Patients with the coronavirus are treated in negative-pressure isolation rooms. These special rooms maintain a negative pressure gradient, which contains the infectious pathogens within the room and confer effective protection to other healthcare workers in the same ward environment.

Second, conditions should be made unfavourable and near impossible for diseases to be transmitted and to propagate within the healthcare environment.

Respiratory protection is key to break the chain of transmission.

Enforced use of masks among healthcare workers, in combination with other personal protective equipment (PPE) and infection control measures, is key to preventing the spread and formation of clusters of cases among healthcare workers.

Both N95 masks and surgical masks form part of Singapore's pandemic preparedness stockpile. Since the start of the coronavirus outbreak, these are among the PPE stockpile that have been progressively released for use by healthcare workers in hospitals and Public Health Preparedness Clinics.

N95 masks need to be fit-tested for optimal effectiveness. They are used by healthcare workers exposed to very small droplets (aerosol) generated from medical procedures such as airway suctioning.

Some members of the public have been donning N95 masks. This is generally not recommended. The heavier "workload" of breathing may also result in these masks not being properly and consistently worn – and, ironically, reduces the level of protection compared with wearing a surgical mask.

Good hand hygiene complements the use of PPE as an effective infection control measure. Whether applied using an alcohol-based hand rub, or hand washing, it takes all of 30 seconds to curb the spread of the coronavirus, which has been shown to survive on surfaces for two to three days. Over this period, healthcare institutions have stepped up audits to ensure rigorous compliance by all front-line workers.

Third, there should be a system of surveillance and early identification of healthcare workers who develop symptoms.

Even before the Disease Outbreak Response System Condition (Dorscon) was stepped up to orange on Feb 7, many healthcare institutions had already implemented temperature monitoring of all healthcare workers. There are also hospitals with dedicated clinics to review staff with fever and respiratory symptoms, enabling early detection and removal of unwell healthcare workers for clinical evaluation.

Enforced use of masks among healthcare workers, in combination with other measures, is key to preventing the spread and formation of clusters of cases among healthcare workers. ST PHOTO: KUA CHEE SIONG

This assurance of occupational health and safety, through a combination of infrastructural, procedural and PPE measures, is important. It helps healthcare workers cope with their personal fears and knowledge gaps when dealing with a very new infectious disease.

PSYCHOLOGICAL WELL-BEING

Healthcare workers work harder and longer in a public health crisis.

As an infection control measure, healthcare teams are segregated to look after either infected patients or non-infected patients. This reduces operational efficiency in manpower resource allocation. Fatigue builds up and reduces individual capacity to cope.

Over the last weeks, there have been reports of healthcare workers in uniform being ostracised in day-to-day interactions. This compounds the psychological stress on front-line workers.

In a study of more than 15,000 Singapore healthcare workers during Sars, 76 per cent perceived a great personal risk of falling ill with the disease. What is disconcerting is that about half the healthcare workers experienced some degree of social stigmatisation, and almost one in three reported ostracism by family members.

Another study in Canada, conducted one to two years after Sars, showed that compared with healthcare workers who did not treat Sars patients, those who did had significantly higher levels of burnout, psychological stress and post-traumatic stress.

Acute stress reaction during a crisis can result in one of two outcomes. The stress may be well managed, leading to a unifying focus and motivation to address the challenges at hand.

However, if the stress levels exceed the ability of the individual to cope in a healthy way, distress sets in, affecting optimal functioning at a time when it is most needed.

Organisationally, strong leadership support, clear directions and a collaborative team spirit are all important to reduce and diffuse tensions. Facilitating access to resources – including manpower and PPE – bolsters confidence and resilience.

At the personal level, front-line workers are provided channels to provide feedback, ask questions and share their concerns. Many hospitals use institutional-based social media platforms, such as Workplace from Facebook, to reach out. Ranging from human resource policies to provision of thermometers for healthcare workers, questions are posted and answered promptly and squarely, providing assurance.

Peer support programmes provide those experiencing stress an outlet for their reactions to be acknowledged, normalised and managed. Often, it involves more senior healthcare workers reaching out to provide encouragement, self-care tips and psychological first-aid for those in need.

WHAT'S NEXT?

While organisational measures and systems are in place to safeguard front-line healthcare workers, it is also incumbent upon each and every member on the ground to look after themselves and fellow co-workers.

They need to keep channels of communications open and highlight areas of concern.

Follow standard operating procedures in infection control measures and never compromise, no matter how tired. Never be ashamed to seek help if they feel physically or psychologically overwhelmed. To do so is not a sign of weakness, but a demonstration of responsibility towards patients, teammates and themselves.

Singapore has done well in learning from lessons of the past, such as from Sars, to prepare for the tests of the present and the future. Planning, preparation, drilling, validation and refining strategies and plans are an ongoing journey, especially in battling the coronavirus, an invisible enemy across boundaries.

stopinion@sph.com.sg

• Dr Gan Wee Hoe is head of the department of occupational and environmental medicine at Singapore General Hospital and Adjunct Assistant Professor at the Saw Swee Hock School of Public Health, National University of Singapore. Dr Chia Kee Seng is professor at the same school.

Commentary: Contributed by Dr Gan Wee Hoe and Dr Chia Kee Seng, NUS Saw Swee Hock School of Public Health
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