



# Heroes of SARS: professional roles and ethics of health care workers

Dena Hsin-Chen Hsin<sup>a,b</sup>, Darryl R.J. Macer<sup>b,\*</sup>

<sup>a</sup>China Medical University, 91 Hsueh-Shin Road, Taichung 40421, Taiwan, ROC

<sup>b</sup>Doctoral Program in Life and Environmental Sciences, Institute in Biological Sciences, University of Tsukuba, Tsukuba Science City 305-8572, Japan

Accepted 16 June 2004  
Available online 27 July 2004

## KEYWORDS

SARS (severe acute respiratory syndrome);  
Policy;  
Medical ethics;  
Health care professionals;  
China;  
Taiwan

**Summary Objectives.** To examine the professional moral duty of health care workers (HCWs) in the outbreak of severe acute respiratory syndrome (SARS) in 2003.

**Methods.** Descriptive discussion of media reports, analysis of ethical principles and political decisions discussed in the outbreak, with particular emphasis on the events in mainland China and Taiwan.

**Results.** There were differences in the way that Taiwan and mainland China responded to the SARS epidemic, however, both employed techniques of hospital quarantine. After early policy mistakes in both countries HCWs were called heroes. The label 'hero' may not be appropriate for the average HCW when faced with the SARS epidemic, although a number of self-less acts can be found. The label was also politically convenient.

**Conclusions.** A middle ground for reasonable expectations from HCW when treating diseases that have serious risk of infection should be expected. While all should act according to the ethic of beneficence not all persons should be expected to be martyrs for society.

© 2004 The British Infection Society. Published by Elsevier Ltd. All rights reserved.

## Introduction

It was too heavy to be called as a hero; I just do what I should do.

—doctor facing SARS in Taiwan, May 2003.

Severe acute respiratory syndrome (SARS) will go into the medical records as the first new panic disease that has swept international society in the 21st century. Although the number of persons who died from the disease is currently less than a thousand,<sup>1</sup> it affected the lives of millions of persons in 2003. We want to discuss the important lessons that it raises for medical professionals—the 'heroes' of SARS.

The focus on SARS was so high in the media that news of SARS overshadowed the outbreak of another panic disease, Ebola virus, that killed

\* Corresponding author. Address: Institute in Biological Sciences, University of Tsukuba, Tsukuba Science City 305-8572, Japan. Tel.: +81-29-853-6614; fax: +81-29-853-4662.  
E-mail address: macer@biol.tsukuba.ac.jp (D.R.J. Macer).

more than 100 persons in March 2003 in Congo. The attention paid on SARS meant less attention was given to disease outbreaks like Ebola.<sup>2</sup> SARS is the latest of more than 35 new or reemerged infectious diseases over the last 30 years. The difference was that most people in the world, especially in safe and secure social settings felt protected from Ebola virus of Africa, and even the global pandemic of HIV seems distant from most people who donned masks to avoid SARS. SARS infected and killed young and old, healthy and unhealthy, making everyone seem vulnerable.

In Taiwan, the SARS outbreak started from the time a hospital was detected to have a widespread hospital infection. The hospital was sealed as an emergency and patients and staffs were all locked up inside the hospital building to isolate them from outside, to spread the disease. The quarantine order was announced without any warning and preparation, which caused a massive panic.<sup>3</sup> Similar quarantine emergencies were reported in other places also.<sup>4</sup> HCWs who were placed in working quarantine experienced fear, depression, anxiety, anger and frustration. There will be long-term psychological consequences for some of these persons. This paper discusses some of the ethical lessons of the first SARS outbreak in early 2003, with a hope that lessons will be learnt in time for the next outbreak of SARS, or similar new diseases that face those working in the field of infectious diseases control.

## Heroes and duties

During the international battle against SARS one of the features was the proportion of frontline health care workers (HCW) who were infected and who died. According to the data compiled from the WHO until the 7 August 2003,<sup>1</sup> 20% of all persons affected with SARS were HCWs (1725/8422). The percentage of HCW was highest in Canada (43% with 3/41 deaths), and Singapore (41%), higher than that reported for mainland China (19%), Hong Kong (22%) and Taiwan (13% with 6/180 deaths).

In the early stages of the outbreak, they had all unknowingly treated patients with SARS. Even for the latter stages in the outbreak in the first half of 2003, there were several HCW who became ill with SARS in spite of 'full' precautions. When nurses and doctors see their colleagues being critically ill around them, dying or on ventilators, when just few days ago they seemed so robust and well, they realized the dangers of being a professional.

Despite the rapid advancement of knowledge

with the intense research, and papers appearing in all major medical journals,<sup>5</sup> the threat of the disease to HCW will remain for some time. Before a vaccine is made, there will always be a threat of being infected and killed on duty as a HCW. We witnessed a number of HCW who started to think about withdrawing from their post. It is ethically unacceptable to abandon patients. However, beyond the duty of a HCW, should we demand (or even expect) that HCW should be ready to sacrifice their lives for our society in severe pandemics, like the outbreak of SARS. As one doctor in Taiwan said: 'It too heavy to be called as a hero; I just did what I should'.

We understand that even a virtuous doctor or nurse might not be willing to die for a patient. Does the accepted norm of responsibility mean they must put their own lives at risk? One important point is that the social function of medical professionals can not be replaced by others. Even in times of peace, we should always remember the reality that being a helper of sickness will always present a certain risk of being infected. Medical professions have been well-rewarded by the society not only because they are competent in operating medicine but they chose the work of being a 'life saver'.

In a number of countries in order to encourage HCW, the government and the public started to give the title of 'hero' to nurses and doctors who are working in the frontline of SARS outbreak. On the other hand, some suggested to punish those who were afraid of treating SARS patients. In Taiwan this included threats of retracting their professional license. There are memories of the AIDS scars in the 1980s when some hospitals in Asia refused to admit patients with HIV. In a 1992 survey by the Japan Hospital Association it was found that 40% of hospitals refused HIV positive patients.<sup>6</sup> Currently refusals are not permitted.

## Enforced heroes?

Can someone who makes an involuntary sacrifice be called as a hero? Most nurses and doctors actually died from taking care of SARS patients involuntarily. Except for those on international teams who actively sought out SARS patients, most did not choose to do so. In large scale hospital quarantines in Beijing and Taiwan the hospitals were encircled and no one could leave. Many HCW in Taiwan thus denied the title of hero. Some said the more people call them in this way, the more they fear they are in danger.

We could even imagine that the spiritual inspiration of being a 'hero' even lessens the

implementation of good clinical precautions. In Taiwan four nurses and two doctors sacrificed their life in taking care of SARS patients. The numbers for other countries are not clear, but one can expect it to be higher for Hong Kong and mainland China, based on the proportion of infected HCWs quoted above. In Taiwan, a doctor died from giving airway intubations to a terminal old woman even with the protection of masks and glove; he was so young to graduate from medical school a few months ago and got married only 4 months before. A nurse died with her 7 month old fetus just because of a short contact with an undiagnosed SARS patient in the emergency room. As those scary stories are repeated numerous times among HCWs, can medical ethics overcome their emotions?

In facing the crisis of SARS, health professionals may make efforts to combat the enemy like in the war. However, could we regard the HCW as a soldier in an army, as quoted in a China Daily report?<sup>7</sup> When the health staffs or soldiers decided to resign from their job just in the moment of crisis/war, some cultures attempt to remind the persons of their sworn duties to contribute to national security by giving the person a feather (sign of shame). While the ethical ideal of self-less sacrifice of life for curing disease is promoted in the public image and media, discussions with HCW in several countries suggests that being a hero is not what modern medical practice is for some HCWs.

Most HCWs in Taiwan are working in the commercial hospital, where the hirer pushes them to focus their effort of work on business competition rather than the basic role of helpers to human's health. Beside academic achievement, the profit they can make for their institute is the element to promote their position in their profession. It is easy to lose the ideas of being heroes that is part of the intrinsic nature of being doctors or nurses. Most modern hospitals there are designed under the intention of attracting people to visit frequently. Besides for a commercial hospital, the most effective way to limit the budget is to reduce labour costs. To use part time staffs saves much money from less benefit and salary pay. Could we expect nurses who were called when they are needed and paid by working hour to devote themselves to the full professional code and make all efforts when their life is threatened? It is obvious that the feeling of belonging and sense of nobility are essential for a professional worker, the problem is do we really respect those health worker as health profession to supply the components to achieve the sense of a professional.

## Duties to patient versus family

Many HCW in modern times have only faced remote fears of death, and it is a shock for many to realize that their own lives are in danger. When they considered that even with necessary precaution; they still had to run a certain amount of risk, their duties of being a wife/husband, mother/father or daughter/son will call them home. Although SARS was reported to have a relatively low mortality rate, it attacks the young and healthy as well as the old and frail. Moreover, this is a totally new disease, we know very little about it. The fear and worry of being infected will always be a shadow to their care. Will the public accept a health professional to exercise their right to remain off the job in this critical moment?

Every person of any profession has their personal role in a family to be a father, mother, spouse and child, in addition to their professional roles. The constitution of most countries respect a person's human rights and ego (beyond the superego) i.e. ego is the basic human nature which should be honored too. Part of the love of life that makes a bioethics of an ethical person in ethical theories is self-love, not just love of others. Those medical practitioners who stick to their post should be respected; however, those who need to take a break to recover themselves would also be acting within their human rights and what is expected of a reasonable citizen. There are cases recorded where doctors spent weeks continuously battling the disease, and there is need for a proper assessment of how fatigue may have led to mistakes in care for patients and mistakes in precautions of carers. There is a human limit for everyone to cope with. Those who battled self-lessly are called exceptions, for example, Ye Xin, 47, head nurse at the Guangdong Hospital of Traditional Chinese Medicine, died in March after contracting SARS while treating patients infected with the virus. Ye, together with nine other nurses, was posthumously awarded the Florence Nightingale Prize by the International Committee of the Red Cross in May for 'courage and dedication in the line of duty'.<sup>8</sup>

## Media responsibility

In carrying out the responsibility of reporting the truth, the media created the SARS panic. In most of the infected areas, the government had no control over the media. Under the pressure of commercial competition, those narratives reported by media could be exaggerated which cause mass panic and

changed the relationships between people. On the contrary there was a lack of information in mainland China especially until 20 April, when the government was attempting to limit panic by controlling the media. However, when the epidemic was revealed, the following month saw panic there also. Everywhere society has to pay a price for liberty of the media, and to deal with the result of transparent reporting. There were also rumours spread through the Internet that generated fear.<sup>9</sup> There are reports that in China 117 people were charged with spreading 'SARS-related rumours', though the exact nature of the types of Email they were sending is doubted.<sup>10</sup> However, without media reporting as a way to educate society, the death toll everywhere would have been higher.

The media generated fear, stigma and discrimination, but also showed the evil sides of the panics. People who were subjects of discrimination included those working in the hospital or entering and coming back from infected areas, suspected SARS patients and their family. Even those with very common syndromes of cold (cough, fever, etc.) were psychologically and socially isolated by their friends and relatives. From the narratives reported by media, the mass panic caused by SARS has changed the relationships between people.

## Political convenience

In certain cases by calling health professionals 'heroes' policy makers in government wanted to escape from their guilt of policy mistakes by giving ambiguous honors. Governments had to face up to the mass fear that SARS created, and any target could be chosen. There were scapegoats in mainland China on the 20 April with the firing of the Health Minister. In many countries affected by SARS, and neighbours like Japan, one of the usual targets for blame is foreigners. Persons from distant lands have always been blamed in cases of disease.<sup>11</sup>

In early April, a Hong Kong resident came to Taiwan to visit his younger brother despite being supposed to be under home isolation in Hong Kong due to the spread of the disease in his apartment building, Amoy Garden. His brother was infected by him and it was the first fatal case of SARS in Taiwan. One woman, who took the same train with him, was highly suspected to be the source of a major hospital outbreak. At first, the doctors were not sensitive about her case since she had no contact history to match the susceptible criteria for SARS.

Thus, she spread SARS in the hospital before she was diagnosed.

Many hospital staff, patients and patients' families were infected at the same time. The hospital was able to detect this spread and sealed its premises entirely without good preparation. Four thousand people were locked inside the building to prevent further spread of the disease; and more than 30 000 people were isolated in their homes. This strong measure resulted in a mass panic. But it was too late. The numbers of infected cases increased exponentially.

Inside China, the people in Guangzhou province are blamed. When one of us was in Beijing on 19 April, 2003, some experts said 'The people in Guangzhou eat anything that moves. It is their fault.' People in Hong Kong may have blamed the Chinese. People in Taiwan or Canada blamed those from Hong Kong. People in Japan in May blamed a doctor who traveled from Taiwan who later came down with SARS. All the people they blamed were just being human, but foreigners are convenient targets. The Chinese government was so concerned about the image of China that it is rumoured that persons were threatened by death in case they transmitted the disease to foreign countries.<sup>10</sup>

If we view the work of medicine a sacred vocation, an inner calling to dedicate and care for the sick, it is contradictory to imagine some medical doctors may be accused of giving rise to a great loss of our society. Taiwanese society decided to punish some of the head doctors who did not detect and report the hospital infection in the early stage. The final decision was to give the very tough punishment of retracting their professional license. Ethically a wrong decision should not be punished as a crime of that magnitude unless the health profession had a criminal intention (motivation). Although the consequences were a great loss for society it is not a wise move for the future to punish physicians for making mistaken decisions in emergency circumstances over public health if they were not intending any cover-up. There seems to be a threat of political scapegoats in every health crisis. We can expect future HCWs to move for greater self-protection and hesitance in making decisions that are necessary for public health crises like emerging diseases.

## Discussion: a middle ground

Between the Hero and the Coward, there must have some space where people can be humane. It is normal and proper for people to be scared to die yet

fulfill their duty in the frontline. Except for special 'danger pay' or another kind of reimbursement, a calling for increased emphasis on workplace safety and a review of precautions is most important for this critical situation. A well trained and equipped health worker also needs to prepare for the frontline of possible bioterrorism, which may be similar to what we saw with SARS. We need a well prepared expert more than a hero. There were cases reported where proper diagnosis of other diseases was hindered by the infection prevention measures being applied to treat all patients from SARS infected areas as potential SARS victims.<sup>12</sup> Spiritual motivation should not slacken the implementation of sound precautionary measures.

As the WHO Director-General said 'The containment of SARS required heroic efforts and extraordinary measures that are difficult to sustain over time'.<sup>13</sup> A Taiwanese study of nurses in May-June 2003 found that nurses' agreement with the government control measures was a predictor of the extent to which they fulfilled their professional care obligation.<sup>14</sup> This suggests that having the support of the healthcare professions in policy is essential for everyone to work wholeheartedly. Before the next outbreak, we need long-term planning and humane intervention to prepare a better response for the expected return of the disease. In the future if some repressive regimes are hit by SARS they might employ brutal tactics to quarantine and isolate people, possibly sowing division among outside countries and multilateral organizations over how to respond to apparent human rights violations.<sup>15</sup> Calls for development of effective Centers for Disease Control in other regions of the world, including Europe, have been made in response to the ways SARS was fought.<sup>16</sup> The intention of calling for HCWs to above all do good should not be blurred by wrong planning.

With SARS as with other severe infectious diseases that are readily transmitted, the manner that home and work isolation is handled is a key ethical issue. If people were diagnosed to be suspect or probable cases, all the people around them may as well be suspected of having been contaminated by them. Consequently, the persons they have been in close contact with, for example, families, colleagues or schoolmates may be isolated to avoid further possible spread of the disease. Such home isolation has serious social and psychological influences. In some cases, those who break home isolation may be punished by imposing a fine. People who were victims of SARS in 2003 were accused of hindering the prevention or treatment of sudden disease outbreaks if they broke such isolation. It

is normal to expect that quarantine will cause fears, and people will lose their patience and self-restraint, but we should assume that all people were originally infected by others with a few recent exceptions infected by laboratory medical research. Persons should be taken care of better than being totally restricted to avoid them inflicting possible harm on others. With the policy of respecting human individuals complete needs for physical and mental well being, more people will be motivated not just to protect themselves, but to contribute to the macro well-being of the society. There are still lessons for all in society about the ethics of quarantine. Modern society has forgotten the past risks of infectious disease outbreaks.

We would suggest to respect health worker's autonomy of making their own choice to take a break from intensive physical or emotional loading or to accomplish the historical mission of coping with SARS. A well developed society that we live in should have sufficient space to practice humanism to everyone in any kind of situation including a public health crisis. This is one of the lessons, we should learn in preparation for the next crisis of infectious disease.

## References

1. Communicable Disease Surveillance and Response (CSR), World Health Organization, Summary table of SARS cases by country, 1 November 2002-7 August 2003; <http://www.who.int/csr/sars/en/index.html> (accessed 15 August 2003).
2. Thacker PD. An Ebola epidemic simmers in Africa. *JAMA* 2003;290:317-9.
3. Hsin DH-C. SARS: an Asian catastrophe which has challenged the relationships between people in society—my experience in Taiwan. *Eubios J Asian Int Bioethics* 2003;13:107-8.
4. Su BQ. What have we experienced and learned from the outbreak of SARS in Beijing?. *Eubios J Asian Int Bioethics* 2003;13:106-7.
5. Kamps BS, Hoffmann C, editors. *SARS reference*, 2nd edn. Flying Publisher; 2003. Available to download free at <http://SARSreference.com/>.
6. *Yomui Shinbun* (16 Feb 1993), 26 (in Japanese).
7. China Daily (27 August 2003) [http://english.peopledaily.com.cn/200308/27/eng20030827\\_123140.shtml](http://english.peopledaily.com.cn/200308/27/eng20030827_123140.shtml) (accessed on 5 September 2003).
8. Xinhua News Agency (6 August, 2003) <http://www.china.org.cn/english/2003/Aug/71742.htm> (accessed on 5 September 2003).
9. Editorial: Three lessons of SARS. *Scientific American* July 2003; 4.
10. Nowak D, Mackenzie D. Too soon to celebrate. *New Scientist* 2003;5:10-11.
11. Markel H, Stern AM. The foreignness of germs: the persistent association of immigrants and disease in American Society. *The Millbank Quart* 2002;80:757-88.

12. Bouadma L, Noel V, Schortgen F. Managing SARS. *N Engl J Med* 2003;349:707.
13. WHO press release. 5 July, 2003.
14. Tzeng H-M. Nurses' professional care obligation and their attitudes towards SARS infection control measures in Taiwan during and after the 2003 epidemic. *Nursing Ethics* 2004;11: 277-89.
15. Monaghan K. SARS: Down But Still a Threat. Scope Note (U). United States National Intelligence Center. NIC ICA 2003-09 (Available to download at [www.odci.gov/nic](http://www.odci.gov/nic)).
16. Levett J. Severe acute respiratory syndrome (SARS): loud clang of the Leper's Bell. *Croat Med J* 2003;44:674-80.