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Uniformed Service Nurses' Experiences with the Severe Acute Respiratory Syndrome Outbreak and Response in Taiwan

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- Response • Taiwan

Severe Acute Respiratory Syndrome (SARS) began with an outbreak in Guangdong Province of mainland China in mid-November 2002. The epidemic almost immediately became a global crisis as it spread with lightning speed to places, such as Hong Kong, Canada, Singapore, and Vietnam. The rapid spread was primarily caused by advances in worldwide travel where the virus was carried by people via airplane. Frequent travel

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between Taiwan and mainland China caused Taiwan to also become involved in this crisis.^{1,2}

The first SARS case in Taiwan was discovered on March 14, 2003 when six employees from CTCI Corporation were infected with SARS while on a business trip to mainland China. Only then did the Taiwanese government begin to institute international epidemic prevention measures and take steps to isolate and quarantine those who were infected. However, those steps were not taken in time to prevent further outbreaks of nosocomial SARS infection in several Taiwanese hospitals. In total, there were 3021 suspected cases of SARS; 346 were confirmed and there were 73 deaths. Many more people were placed in home quarantine. There were two classes of home quarantine. The 50,319 individuals placed in Level A home quarantine had been in close contact with a patient with SARS and were quarantined for 10 to 14 days. Another 80,813 individuals were placed in Level B quarantine. These individuals were travelers arriving on flights from World Health Organization (WHO)-designated SARS-affected areas; they were quarantined for 10 days either at home, airport hotels, or government quarantine centers.¹ The events related to the SARS outbreak had an enormous impact on the public health and economy of Taiwan.¹ In this article, the authors describe the Taiwanese efforts to stem the spread of the disease and the role of Taiwan's military nurses during the epidemic. The authors discuss the public and private impact on the Taiwanese people and those military nurses who cared for patients with SARS or suspected SARS.

IMPACT OF SEVERE ACUTE RESPIRATORY SYNDROME ON TAIWAN'S SOCIETY

Although the first cases of SARS in Taiwan occurred in March, the first nosocomial case of SARS occurred in a hospital in Taipei city on April 24, 2003.¹ Continuous mass media reporting of the spread of the SARS epidemic created much fear and widespread hysteria among the people of Taiwan. At the beginning of the outbreak, SARS was an unknown infectious disease and the modes of transmission and methods of treatment were unclear. In addition, the mortality rate was also unknown. This lack of information had a significant impact on many aspects of the Taiwanese society, including health care, lifestyle, interpersonal interactions, education, and the economy of the country.

Health Care

Because of the threat of SARS, many patients were afraid to go to the hospital, even for reasons other than SARS-like symptoms. This resulted in a 51.6% decrease in emergency room visits,³ and a 19.9% to 52.5% decrease in the number of in-patients⁴ in hospitals across the country. Community residents were opposed to establishing SARS-dedicated clinics and SARS-dedicated hospitals in their locales. This opposition manifested itself in actions and words with local people blocking their roads to prevent the entry of patients with SARS. Waste disposal services refused to remove SARS medical wastes, creating a pile up of infectious materials. In addition, mortuary owners were reluctant to undertake those who had died of SARS for fear of contracting the disease themselves.⁵

Lifestyle and Interpersonal Interactions

At the beginning of the epidemic, the mode of SARS transmission was not known. People began to change their normal behaviors to include avoiding close contact with others, staying at home to minimize their interactions with others, wearing face-masks in confined spaces, greatly increasing the use of household disinfectant,

measuring their body temperature every day, and isolating themselves if they had a fever. These changes had a critical impact on people's lifestyle, leisure activities, personal behaviors, social life, and interpersonal relationships. Societal perceptions toward the status and role of health care workers also changed during that time. First-line SARS health care workers, such as medical and nursing staff, were shunned by the community.

Education

School systems were also heavily affected by the SARS epidemic. The children of first-line SARS health care workers were asked not to attend primary and secondary schools. In addition, some parents kept their children home from school to minimize their chance of getting infected with SARS. At the university level, student nurses did not attend clinical practice in the hospitals during the SARS epidemic period.¹

The Economy

The SARS epidemic had a direct and negative influence on the nation's financial stability. People in Taiwan stayed as close to home as possible to avoid getting infected. This isolation resulted in a large decline in commercial trading activities, greatly effecting Taiwan's economy, including manufacturing, commerce, the service industry, finance, and foreign investment. In addition, the epidemic had an undesirable effect on Taiwan's travel-related industries, such as tourism, transportation, hotel, and catering. As a result of declining tourism, sales decreased from 10% to 90%.⁶⁻⁸

GOVERNMENT'S CONTROL MEASURES

To prevent the spread of the SARS epidemic and minimize its impact on the Taiwanese society, the government implemented strategies and interventions in an attempt to control the epidemic. These strategies included establishing a SARS-epidemic operation center by the Center for Disease Control, Republic of China (CDC, ROC), Department of Health on March 17, 2003. The purpose of this SARS center was to propose infection preventive interventions and health education advocacy.

On March 28, 2003, 4 months after its first appearance on mainland China, the CDC announced SARS as a new and previously unknown communicable disease. This recognition of SARS as a new communicable disease bolstered support to apply different epidemic preventative measures. Because of the seriousness of the epidemic, the Committee of SARS prevention, treatment, and bailout was also established on March 28, 2003.

The premier of Taiwan led the establishment of the SARS prevention and treatment policy. The interim regulations of SARS prevention, treatment, and bailout were announced by the president of Taiwan on May 2, 2003; they remained in effect until December 31, 2003. A total of 50 billion Taiwanese dollars (Approximately \$1.5 billion) were allocated to cover all the required expenses requested by local governments for the management of SARS prevention, treatment, and bailout.⁹

Several measures were put into place to manage personnel entering and leaving the country. Prompt updates on epidemic source information were needed to prevent community-acquired SARS. Strict quarantine measures and isolation facilities were established to decrease the impact of diseases brought into the country and to strengthen quarantine management for potential isolated carriers. As previously noted, domestic, at-home isolation measures were instituted to avoid a wider spread of the epidemic. Individuals entering Taiwan from other epidemic regions were also quarantined. Living arrangements were made for those who were responsible for

implementing isolation procedures. There was coordination with vendors to ensure an adequate supply of medical goods to care for isolated patients. Medical supply manufacturers were given assistance so they could improve their capacity to provide the supplies needed for treatment and prevention measures associated with the epidemic.

To effectively prevent the spread of SARS, epidemic-prevention measures were strongly emphasized. Hospitals dedicated solely to SARS were established in certain geographic areas for intensive treatment and an epidemic prevention Web site network for the public was constructed. Interventions of market and finance stabilization were adapted to provide bailout assistance for the industries that were adversely affected by the epidemic, and a fund was established to provide financial support for persons in quarantine.^{1,10,11}

In coordination with the government's epidemic prevention policy, The Ministry of National Defense Republic of China established a "National Defense Emergency Response Team for SARS Prevention and Treatment." It also fully supported the government's epidemic prevention by mobilizing human and material resources. This mobilization included activating military medical resources and medical care manpower from the Medical Affairs Bureau, Ministry of National Defense. In addition, special troops were designated to support environmental chemical disinfection. In all, a total of 32,809 military personnel provided support during the epidemic. They contributed greatly toward SARS prevention in Taiwan. Local military barracks were even used to house health care workers working with isolated patients and to store first-line SARS preventive and health care products. Military personnel also intensively monitored the epidemic situation and the military troops providing care.⁵

ROLES AND FUNCTIONS OF THE MILITARY DURING THE SEVERE ACUTE RESPIRATORY SYNDROME OUTBREAK

Under the plan executed by Department of Health, Executive Yuan and the Ministry of National Defense, the SongShan Armed Forces Hospital received an emergency order from the Ministry of National Defense on the night of April 25, 2003 to immediately activate their crisis management plan. SongShan Armed Forces Hospital was officially designated to create the first isolation wards for receiving suspected SARS carriers from Ho-Ping Hospital. The hospital initiated an emergency call to all the military and civilian medical staff. The nursing department was given responsibility for planning the implementation of designated SARS wards and the patients' care. The nursing department immediately began to scrutinize the current operations and assess existing patients in all hospital wards. They arranged for next day discharge for patients whose conditions permitted them to leave the hospital. Those patients requiring continued hospitalization were transferred to specified wards.

On April 26, the designated SARS wards were completely vacated; they were cleaned, disinfected, and setup to receive patients with SARS. That same afternoon, SongShan Armed Forces Hospital and medical staff from the six municipal Taipei Hospitals discussed their planned mode of operation for these wards. The discussion focused on an integrated approach of the isolation wards' facilities, ventilation, protective interventions, and the priority of patients requiring more intense care. A decision was made to use the hospital's nursing care operation form as the key point record of nursing care histories. Admission of patients with SARS began in the early morning the next day.

To alleviate the severe epidemic situation in the northern region of Taiwan, on May 2, 2003, SongShan Armed Forces Hospital expanded its mission to become Taiwan's

first dedicated hospital for day-care treatment of patients with SARS. The hospital set up 102 negative-pressure isolation rooms in the medical building. These included examination rooms, the operating room, intensive care center, dialysis room, delivery room, and the nursery. This action was taken to provide comprehensive management to the problems patients with SARS had. While the negative pressure system was constructed, the nursing staff was given education in the areas of SARS and its treatments and the nursing care standards that had been developed. Psychological counseling was also available for the staff to ease their anxiety associated with caring for patients with SARS. Staff working hours were minimized to reduce the physical load and the demands of working on the negative pressure wards.

Once the wards were cleaned and prepared for operation, the nursing department received the order to begin transferring or discharging patients. This order was communicated to the patients and their families, and on May 5, those patients who could safely go home were discharged and others were transferred. On May 21, the inpatients with SARS were admitted to the negative-pressure wards at SongShan for treatment. The rest of the 17 military hospitals in Taiwan were placed on standby, ready for the transfer of patients with SARS if necessary. This isolation measure was the most critical medical service provided for patients with SARS during that period of time.⁵

Roles of the Military Nurses

SongShan Armed Forces Hospital designated 188 nursing staff to care for patients with SARS. The nurses cared for 302 suspected patients with SARS. The process for isolating and caring for these patients relieved the epidemic situation of other hospitals and contributed significantly to the prevention and control of SARS for Taipei City. During the SARS outbreak, nurses fulfilled six different roles and functions in the SARS-dedicated hospitals: manager, caregiver, comfort provider, coordinator, advocate, and consultant.

Manager

The nurse managers were responsible for patient placement in the wards, ensuring infection control and disinfection measures were properly implemented. They also ensured that isolation interventions of the infectious patients were properly performed and that adequate supplies were available to maintain epidemic prevention strategies.

Caregiver

Usual nursing practices had to be altered because of the high infectious potential of SARS with close contact and within confined spaces. Nurses were required to wear full protection, which included a sealed protective gown, goggles, and N95 or P100 face masks and gloves whenever they were performing duties that required them to come in close contact with patients. Such duties covered a range of common nursing procedures, such as giving injections, administering other medications, turning patients, initiating nasogastric feedings, and providing assistance for toileting.

Comfort provider

Strict quarantine interventions were required for the patients with SARS. To avoid the risk of cross-infection, visiting hours were shortened and efforts were taken to minimize the frequency with which doors to the wards and rooms were opened. As a consequence, patients often spent less time with the nursing staff, friends, and relatives. The patients experienced a sense of enormous pressure and anxiety from the fear of the unknown associated with SARS, which resulted in many patients having issues with panic and insomnia. Some patients were even reluctant about cooperating

with the idea of isolation. Nurses, therefore, spent much time trying to understand the patients' emotional issues so they could provide them the comfort and support they needed. Often times, because of the limitations of isolation, this had to be accomplished over the patients' phone.

Coordinator

Nurses who were in the coordinator role communicated with patients and their families during the restructuring to a hospital dedicated exclusively to patients with SARS. The nurse coordinators also provided assistance during the transferring of inpatients so as not to interrupt their care. In the isolation wards, coordinators helped the nursing staff provide essential information to the mental health team who offered patients consultation, psychological counseling, appropriate information, necessary assistance, and relevant social resources. Coordinators contacted patients' family members and passed on messages related to their needs.

Infection control promotion

The nursing staff was also responsible for ensuring that medical staff members caring for patients on the wards were in full compliance with infection-control procedures, which included everyone from physicians and radiologists to the cleaning staff.

Consultant

The nursing staff served as consultants to educate patients about SARS, with the goal of reducing their fear of the disease. Education was tailored to the individual patient's needs. There were also many family members who felt anxious because they were not able to stay with patients on the wards. The nursing staff took a very proactive stance to try to reduce their anxiety by calling family members to keep them informed.

STRESS AND COPING OF UNIFORMED SERVICE NURSES ASSOCIATED WITH SEVERE ACUTE RESPIRATORY SYNDROME

The SARS epidemic rapidly spread within the medical institutions. There were incidents where medical and nursing staff died from the SARS infection, which had a profound effect on other front-line health care team members because they were very close to those who died. Deaths of staff and patients created an enormous amount of stress. Findings from a study by Yu and colleagues¹² showed that 50% of nursing staff felt a high degree of stress from working with patients during the SARS epidemic. The stress was experienced on many levels; there were many contributing factors. The nurses coped with this stress in various ways.

Stress

Staff members experienced physical stress as a result of caring for patients with SARS. As previously mentioned, the nursing staff was required to wear multiple layers of protective clothing when caring for patients. They were in the protective garb for long periods during their working hours. Air conditioners and electric fans, however, were prohibited on the wards housing the patients with SARS to reduce the spread of the virus, which made working conditions hot and humid. The combination of heavy protective clothing and the hot environmental conditions made it awkward to move, difficult to breathe, hard to hear, and left the nurses covered with sweat they were unable to wipe off. They also experienced urinary retention discomfort caused by limitations in going in and out of patients' rooms and not being able to easily remove the protective clothing.¹³⁻¹⁵

The caregivers also experienced significant psychological stressors. The SARS epidemic caused much fear within the Taiwanese society, but this was particularly felt among the nursing staff on several levels. They experienced fear of getting infected themselves. At the time, little was known about the SARS virus, including its lethality or how to best care for these patients. Nursing staff were very afraid of catching the SARS virus. Findings from studies done after the epidemic indicated the nursing staff believed their probability of getting infected by the SARS virus was between 53.85% to 71.9%.^{16,17} The fear of being infected was not simply imagined because a member of the nursing staff in this hospital died from SARS.

The nurses also experienced fear of spreading the infection to their family members. Nursing staff were afraid if they became infected by SARS, they would pass on the virus to their family members. Based on findings from the study by Lin and colleagues,¹⁸ 60% of the hospital staff, especially the nursing staff, thought people surrounding them did have a higher risk for becoming infected by SARS.

Fear of having to be isolated was another psychological stressor experienced by the nurses. There were two nurses from SongShan suspected of contracting the SARS virus; they were immediately admitted to isolation wards. These two nurses had been in contact with approximately 70 other nursing staff who were also placed on isolation. This frightened the rest of the nursing staff at the hospital. As a result, many of them prepared lists of things their family needed to do should they also be isolated. Some even prepared or passed on a will to their family members. According to a study by Chi and colleagues,¹⁶ 52.35% of emergency health care staff feared that they would end up being isolated.

Another source of psychological stress surfaced from conflicts with professional ethics. At the beginning of the transfer of patients from Taipei hospitals to SongShan Armed Forces Hospital, nursing staff from both institutions found themselves at odds with the mission of containing the SARS epidemic and usual standards of nursing practice. Many usual patient care treatments were delayed or not done because of the environmental conditions (lack of air conditioning, discomfort, and protective clothing impediment); strict isolation measures; and the procedures put into place to handle the crisis. For example, nursing staff could not provide nebulizer inhalation treatments because of the restrictions in place to prevent the spread of SARS. Thus, there were limited treatment options when patients with SARS, who were too weak to cough and clear their airways, became short of breath from obstructed airways, which conflicted with what the nurses believed was ethical nursing practice. The nursing staff experienced a sense of severe powerlessness and guilt from these conflicts.¹⁹⁻²²

There was also stress associated with caring for isolated and frightened patients. Patients with SARS were very frightened because of the strict quarantine interventions and because of the unknown characteristics of the virus itself. The patients exhibited symptoms of panic, emotional instability, and insomnia. Some even refused to cooperate with preventative isolation interventions, such as wearing facemasks. Some patients left the hospital without permission. The nursing staff was required to deal with these patients' fears and issues on a daily basis. The stress felt by the nursing staff exceeded the usual day-to-day stressors of nursing. There was a documented increase in the incidence of mental illness among the nursing staff involved with patients with SARS.²³

Social stressors experienced by medical caregivers were especially heightened. The SARS outbreak was so terrifying that no one wanted family members to risk their lives caring for patients with SARS. Families also did not want to risk possible exposure to themselves by having a member working in the SARS hospitals. Consequently, some families refused to support the nurses' work. Not only

did they try to stop the nurses from going to work but some even threatened the nurses with termination of their kin relationship. This added a social stress for the nurses.

Nurses caring for patients with SARS were also shunned by the public and people surrounding them. No restaurant would provide delivery service to the hospital. The nurses' family members were also shunned. For example, their spouses were forced to take temporary leave from work and their children were asked not to come to school during the SARS outbreak. These social phenomena gave the perception of discrediting the nursing profession. The military nursing staff at SongShan Armed Forces hospital had no choice but to go to work, and as a result they felt extremely frustrated and wronged.^{13,14,21}

Similarly, the nursing staff was afraid of passing on the SARS virus to their family if they became infected. As a result, the nurses tried to avoid close contact with their family members and children as much as possible. They took the same precautions with their friends. These actions negatively affected their social lives and interpersonal relationships, leaving the nurses feeling isolated with little support.

Environmentally, because SARS was an emerging infectious disease with many unknowns, everyone involved was learning the latest preventative knowledge for the epidemic as they were experiencing it. Protective interventions and operating procedures were frequently changed during the course of the SARS epidemic adding further stress to an already stretched staff. Changes to government policies on SARS, such as sample collection, preventive measures, and medical procedures, occurred within short periods of time. Some of the logistical staff were afraid to enter the isolation wards during the outbreak, which meant normal repairs, such as replacement of broken equipment, was delayed or not done. This environmental stress added to the nurses' sense of helplessness and frustration.²¹

COPING

In 1984, Lazarus and Folkman²⁴ described emotion-oriented and problem-oriented coping behaviors. The emotion-oriented behaviors include adjusting one's coping mechanisms, such as seeking help to decrease reactions to added pressure. Problem-oriented behaviors include goal setting, gaining new knowledge about a situation, and learning new skills to directly decrease the pressure and therefore stress. The coping skills of the nursing staff at SongShan Armed Force Hospital are described based on this framework.

Emotion-oriented Behaviors

Maintaining a positive attitude

The nurses who worked during the SARS epidemic recognized their own professionalism during a time of stress. They felt proud of their abilities and their willingness to put aside some of their own fears to be on the front line of treating the patients with SARS and of preventing further illness and death.

Getting support from someone important

Support from family was valued most of all. Findings from a study conducted at SongShan Armed Forces Hospital showed that the support or non-support from family affected the staff members' willingness to care for patients with SARS.²⁵ Peer support among colleagues was also important to the nursing staff. Sharing emotional experiences with each other decreased their stress burden and helped them persevere during the epidemic.^{13,20,21}

Hiding their feelings

During the epidemic, the nursing staff did not dare tell others about the kind of nursing work they were doing. They wanted to prevent fear and protect family members from the isolating actions of the general public. The results of a study by Lin and colleagues (2006) showed that 25% of health care staff avoided talking about the details of their work during the SARS outbreak.

Refraining from watching media coverage of the epidemic

SARS-related news adversely affected the emotions of the nursing staff. In addition to avoiding news and media reports, nursing staff tried to regulate their daily routine and lifestyle to also avoid contact and interaction with their neighbors and communities.¹⁴

Seeking spiritual support or accepting everything optimistically

The Taiwanese culture affected the nursing staff in that they believed caring for the patients with SARS was the right thing to do. The duty of nursing was to provide caring service for the patients. The nurses therefore believed the patients should not be abandoned no matter what happened. In performing this duty, they believed the end result would be good fortune and happiness.

Problem-oriented Behaviors

Seeking information

Nursing staff attended SARS training courses or they took the initiative to search for SARS-related information from the Internet. The hospital had an information board for SARS-related information and it held multidisciplinary discussion groups to ensure staff had accurate information about the virus, its characteristics, and symptoms. This sharing of information served to alleviate the stress levels of the staff.^{13,15,20}

Using physical protection measures

The nurses used every standard infection-control measure available to prevent further spread of the infection. In addition to their protective clothing, they practiced diligent hand washing before, after, and between contacts with patients.

Balancing physiologic needs

Nurses minimized removing their protective clothing to attend to their own physiologic needs, which meant they decreased their water intake to avoid the need to use the bathroom. In addition, they consolidated tasks as much as possible to decrease energy expenditure and moving around while wearing the hot, heavy protective clothing in the hot, humid environment.

Maximizing health

The nurses realized they needed to ensure their own health so they attended to practices to increase their immunity. For example, they ensured they were eating a healthy diet and supplemented this with vitamins. In addition, they also tried to get as much sleep as possible and exercised daily.

Protecting family

The nursing staff believed they needed to keep their distance from family members and children when interacting with them. Many nurses simply temporarily stayed in the hostel that was provided by the hospital and settled family affairs either before moving to the hostel or via cell phone. This way they could care for the patients with SARS without having to worry about their family members getting the virus.

Adjusting daily activities

The nursing staff staying at the hostel also found ways to adjust their activities by such things as reading, watching television, and surfing the Internet. They used their cell phones for contact with their friends and family members. In this way, they were able to keep busy, yet still maintain their important social networks.

Evidence reflects that the better individuals adjust and optimize their own psychological and physical needs, the more effective they are during pressures like those accompanying an epidemic, such as SARS.¹² SARS-education training reduced the nursing staff's fear of becoming infected with SARS themselves or of infecting family members. This training also helped the staff reduce their negative feelings so they could engage in more healthy behaviors and maintain a positive attitude toward their patients' care.^{26,27}

EVALUATION AND REVOLUTION AFTER SEVERE ACUTE RESPIRATORY SYNDROME ERA

The WHO removed Taiwan from its list of epidemic regions on July 5, 2003, which was only 4 months after Taiwan had its first case of SARS on March 14, 2003. There was still concern that with the arrival of fall and winter, SARS might make a comeback and overlap with the usual influenza season. There was fear that this potential overlap could again overwhelm the health care system. As a result, the Taiwanese government took the steps to prepare for this potential crisis.¹

Fever screening was initiated. Because it was difficult to differentiate usual influenza and SARS, anyone with a fever was evaluated for SARS. Starting on August 19, 2003, any patients presenting to the emergency room with a fever was tested to rule out the SARS virus. Data as to virus types was used as a reference to making prevention and control policies.

An aggressive influenza vaccine program was started on September 15, 2003 to reduce the chance of pandemic influenza. All persons over the age of 65 years and all health care workers received free influenza vaccinations.

Patients with fevers were placed on isolation. The Centers for Disease Control set up a specified telephone line for fever consultation.¹ Patients with a fever were encouraged to wear masks and immediately isolate themselves at home for 3 days to avoid spreading their virus to other family members and the public.

The hospitals in Taiwan instituted fever surveillance systems for early detection of patients with fever and to take immediate precautionary interventions. Fever surveillance was also done in densely populated institutions, such as sanatoriums, preschools, and prisons. Information notification systems were implemented to track fever and disease patterns and to quickly notify the appropriate authorities of possible outbreaks of respiratory syndromes.

Border-control measures involving strict quarantine interventions were adopted on October 15, 2003 in an attempt to prevent another SARS or SARS-like epidemic from entering the country again. All incoming travelers who had fevers (body temperature over 38°C or 100.4°F) were immediately quarantined. This was reevaluated in November of the same year to determine if the practice should be continued.

Infection Control Teams were established to ensure patients did not develop nosocomial infection. The teams checked ventilation equipment, infection-control procedures, and participated in nosocomial prevention planning. The government performed 486 spot checks to ensure infection-control measures were properly implemented and any nosocomial infections appropriately treated.

The Taiwanese Center for Disease Control organized a National Infection Control network. The purpose of the network was to be ready to effectively use medical

resources and the established institute infection-control mechanisms in the event of an epidemic. A total of 23 hospitals, distributed in different geographic areas throughout the country, were responsible for implementing the infection control policies.

On January 20, 2004, the Center for Disease Control disseminated the new version of the Communicable Disease Control Act. This Act defined infectious diseases and subdivided them into five categories. The categories were determined by degrees of risk, speed of transmission and mortality rates. SARS was placed in the first category, making it comparable to smallpox and plague. Other categories include specified infectious diseases, such as the avian flu and unknown emerging infectious.²⁸ The Act also spells out hospital related duties and implementation of control and preventive practices.^{28,29} All the policies put into place after the SARS epidemic highlight the importance of hospital infection control they have permanently changed practices of health care providers. Some protective strategies include hand-washing habits, proper use of protective equipment, management of visitors and private duty nursing assistants, use of specific cleaning and disinfecting solutions, medical waste disposal, and safeguarding the environment.^{1,30}

There were many lessons learned from the SARS epidemic in Taiwan. Because of the flexibility and sense of duty common among military personnel, SongShan Armed Forces General Hospital was able to quickly change its mission to provide first-line health care to patients with SARS during the epidemic. The value shown by the military nursing staff in the fight against SARS significantly impressed the citizens of the Taiwanese nation. The roles and mission that uniformed service nurses performed was impressive. Their experiences and the hardships they endured provided valuable lessons for future health care crises. Although the impact of SARS greatly affected nursing staff physically and psychologically, it also provided them the opportunity to reflect on issues related to the nursing profession. With regard to nursing practice, nurses should have an increased awareness of emerging infectious diseases. Stress-management methods can help them deal with some of the difficulties experienced during public health crises. The authors think these lessons can only strengthen the dignity of the profession and enhance nurses' abilities for future emergent events.²⁰ The SARS epidemic in Taiwan ushered in a new era for infectious-disease treatment and prevention in epidemic control and the development of specific management strategies.

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