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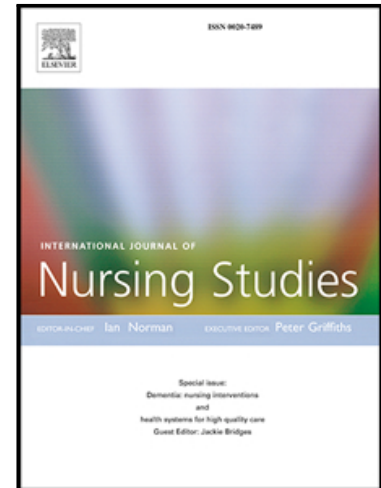
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Nursing's Response to COVID-19: Lessons Learned from SARS in Taiwan

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Guest Editorial

Nursing's Response to COVID-19: Lessons Learned from SARS in Taiwan

Nurses are always on the front lines of health care crises, including the COVID-19 pandemic. To recognize the vital service of nurses to health care, the World Health Organization designated 2020 as the International Year of the Nurse and Midwife, and in this year, worldwide, nurses are facing enormous challenges from the COVID-19 pandemic. Nurses are confronting not only the overwhelming number of illnesses that stress nursing care capacity but are facing infectious risk to themselves. The severe acute respiratory syndrome (SARS) epidemic in 2003 taught nurses in Taiwan approaches useful in viral outbreaks for protecting public health through nursing leadership, policy making, coordination between government and hospitals, the provision of skilled care and trusted resources, and the establishment of the nurse-led quarantine care call center.

As of March 20th, Taiwan had recorded 135 cases of COVID-19, a relatively low number given the island's proximity to China and compared to the more than 80,000 in China and the tens of thousands in Europe. When the COVID-19 virus originated and became epidemic in Wuhan, China in 2019, Taiwan, because of its close geographic proximity to China, was expected to have the second highest number of cases.¹ However, Taiwan was successful in preventing this occurrence by deploying a combination of big data, transparency, and central command.² These measures, while strict, were combined with a high degree of sensitive and professional nursing care provided by front line nurses. Immediately after COVID-19 occurred in Wuhan, China before the Lunar New Year, nursing leaders of government, national nursing organizations, and hospitals, together with the Taiwanese government, quickly mobilized resources to protect nurses on the frontlines, to implement approaches to provide skilled nursing care in infection control units and negative-pressure wards, and to protect public health, The experiences and actions

taken by nurses in Taiwan can provide valuable information for other countries in their response to COVID-19.

Supporting and protecting nurses on the front lines: coordination between government and hospitals

Protection of nurses on the front lines is imperative so that nurses can protect public health. Learning from the SARS experience in Taiwan, prevention of nosocomial infection from COVID is one of the most important measures to contain viral spread.³ As reported widely on international media, Taiwan's government took an active role in resource allocation, including setting the price of masks and using government funds and military personnel to increase mask production. At the beginning of the outbreak, the government educated the public about the appropriate timing of wearing masks. The government has been buying all domestic mask production and rationing purchases to three masks per person per week to ensure that the supply to nurses and other front line health workers is top priority.

The Taiwan Union of Nurses Association and Taiwan Nurses Association, the two major nursing associations, jointly advocated for nurses to ensure that nurses are provided with adequate personal protective equipment and fair treatment. The Taiwan Union of Nurses Association issued a letter to all hospitals and urged them to supply effective and adequate numbers of protective equipment to nurses, to ensure appropriate nurse manpower, to allow enough rest and break time, and to provide transparent information. Nursing organizations jointly requested special subsidies to those front line nurses and this request has been approved by the government for the nurses and physicians involved, with additional same subsidies between nurses and physicians starting in early March. At the government level, the Department of Nursing and Health Care under the Ministry of Health and Welfare has also established an internet platform to allow nurses to file complaints if their hospitals do not provide adequate protective measures or if their hospitals have not acted in line with

government guidelines. This platform helps to ensure coordination between government and hospitals.

Quick response from well-trained and experienced teams of infection control nurses and preparation for manpower supply

Taiwan has been equipped with 134 isolation hospitals and 1,100 negative-pressure isolation rooms to swiftly respond to infectious disease outbreak after the SARS epidemic in 2003. In these designated hospitals, nurses receive regular training on up-to-date infection control measures. These expert nurses have also served as important mentors and consultants to the public and other hospitals during the COVID epidemic. The Taiwan Nurses Association has taken an initiative to ask nurses in these designated hospitals to produce videos to educate nurses and the public about infection control measures and about provision of care to infected or suspected patients through on line platforms and social media.

The Taiwan Union of Nurses Association and the Taiwan Nurses Association have jointly published an article on social media calling for the public to practice social distancing and to cancel large events. In February, the organizer of DaJia Mazu Pilgrimage, the largest cultural event in Taiwan, annually attracting hundreds of thousands of people, announced the event would go on as scheduled. The two nursing associations jointly urged the organizer to call off the event in order to decrease the spread of virus, and the event was postponed.

Nursing leaders are vigilant about taking steps to prevent a nursing shortage if a large volume of patients is admitted into hospitals. As the outbreak was beginning in China, the Department of Nursing and Health Care issued a call back for nurses who were not currently practicing. A large number of nurses responded and indicated their wishes to return to workforce if there is a shortage of manpower.

Nurse-led quarantine care call center

Established in February by the Department of Nursing and Health Care, a nurse-led quarantine care call center is being run by more than 500 compassionate nurse volunteers who are currently not practicing or practicing nurses at off time. By merging databases they can collect information on every citizen's 14-day travel history and ask those who visited high-risk areas to self-quarantine. Mobile phones are tracked to ensure people stayed at home. People receive a text warning if they have gone too far from the accommodation and will be fined if they do not return immediately. Using phone tracking to enforce mandatory quarantine is one example of how Taiwan has managed to contain the spread of coronavirus. In addition to the strict measure, it is important to follow up with those people under self-quarantine about their mental and physical health and to provide immediate support or referrals. This is also imperative to ensure people under self-quarantine follow the guidelines and practice appropriate infection control measures to prevent spread of virus. So far, the nurse-led quarantine care call center has reached out to more than 30,000 cases and has identified important issues to be addressed and has made almost 4,000 referrals in order to early diagnose or provide timely management of symptoms.

Nurses are the backbone of the response to the COVID-19 pandemic crisis in the health care system. Nursing leaders in Taiwan work collectively with government to ensure good coordination among government, hospitals, and community. Well-trained teams of nurses were quick to respond to the crisis and provide trusted resources. In this International Year of the Nurse and Midwife, the contributions of nurses in managing the pandemic crisis at this most challenging time should especially be recognized and applauded.

Declaration of Competing Interest

The authors declare that they have no competing interests.

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