

EDITORIAL**Strengthening the power of nurses in combating COVID-19**

In December 2019, several novel coronavirus infections were firstly reported in Wuhan, Hubei Province in China, and the outbreak is quickly expanding locally and globally. World Health Organization (World Health Organization, 2020b) announced the coronavirus epidemic as an 'International Public Health Emergency of International Concern (PHEIC)' on 30 January 2020. Later officially named as coronavirus disease 2019 (COVID-19), it has been recognized by WHO (World Health Organization, 2020c) as a global pandemic on 11 March 2020. As of March 27, there have been more than 82,000 confirmed cases in China and more than 520,000 outside China. Hospitals serve as the outpost and main battlefield for prevention and control of emerging infectious diseases (EID) like COVID-19. Since the very beginning of the outbreak, nurses in China have been playing a vital role in combating the pandemic. Echoing calls for mobilization from National Health Commission of China, up to 1 March 2020, totally 28.6 thousand nurses were deployed to support Hubei Province, accounting for 68% of all frontline medical workforce (China, 2020). Meanwhile, we should also realize that nurses in hospitals outside the centre of the outbreak make great contributions to epidemic control.

As the sentinel hospital, Zhongshan Hospital affiliated to Fudan University is a 2000-bed tertiary general hospital located in Shanghai, with more than 2000 practising nurses. Our nursing team has made great efforts during the outbreak and achieved remarkable effects. Since January 2020, a total of 4,675 patients visited fever clinic in our hospital, and 53 suspected cases of COVID-19 were monitored, of which three were confirmed and transferred to Shanghai Public Health Medical Centre for further standard treatments of COVID-19. With effective countermeasures against the outbreak, usual health care services have been gradually restored. Patient safety was assured in our hospital with no nosocomial infection. It is a challenge for hospitals to balance the routine work and outbreak control. As the director of nursing department, I would like to share our experience in combating COVID-19.

1 | WHAT WE HAVE DONE?**1.1 | Frontline fighters to support outbreak areas**

As one of first-tier medical centres in China, the first task during the COVID-19 outbreak was to select and reallocate capable nurses to support outbreak areas: Wuhan, Hubei Province. In compliance with urgent deployment from the National Health Commission, our hospital was requested to assign three teams with 102 nurses

in total to support the hospitals in Wuhan. Our nursing department conducted a review of existing staff capacity in each department to build up a COVID-19 Rapid Response Team (C-RRT). The criteria for nurses recruited into the C-RRT were as follows: (a) more than three-year work experience; (b) work capabilities in emergency, critical care, respiratory and infection departments; and (c) based on a voluntary principle. The selected nurses were listed in a staff roster, which was dispatched and assigned by the COVID-19 hospital committee directly. During their practice in Wuhan, they are tasked with making real-time difficult decisions in rapidly evolving, uncertain circumstances. Full-scale support is essential to our nurses. Our hospital in Shanghai not only provided adequate medical supplies to ensure their work under full protection, but also timely monitored their mental well-being and initiated psychological support by Balint group consultant if needed (Abeni et al., 2014). The above supportive strategies ensured our frontline nurses practise in best conditions, and empowered them to provide the best health care services to COVID-19 patients.

1.2 | Gatekeepers to screen suspected patients

As the sentinel hospital, nurses are the first line to screen suspected patients in outpatient and emergency departments. Well-trained nurses were allocated to these departments. For the convenience of management, we decreased the number of hospital entrances and implemented one-way exit. At the entrances, all patients and visitors were required to take temperature check and epidemiological interview. In order to decrease cross-infection, two fever clinics were set up to separate patients with and without an epidemiological history. Patients with symptoms of fever or cough and an epidemiological history in epidemic area were sent to the first fever clinic accompanied by nurses to receive CT examination and laboratory tests. For patients only having fever or cough but without an epidemiological history, they were sent to the second fever clinic for corresponding treatment. If patients showed unstable vital signs without an epidemiological history, they were sent to the emergency rooms for urgent treatment.

1.3 | Supervisors to prevent intra-hospital infection

Led by head nurses in each department, nurses contributed to supervising the compliance of protection measures. A temporary isolation room was set up in each ward and ICU in order to timely isolate

suspected patients. Additionally, private interview room equipped with protective supplies was established for doctors and patients' families to communicate. Because the outbreak occurred during Spring Festival holidays, medical staff and workers travelled back from their hometowns or vacations also increased the risks of coronavirus spreading in hospital. Thus, medical staff and workers in our hospital who recently returned to Shanghai must self-quarantine at home for two weeks, and temperature must be reported once per day. Those who have temperatures above 37.3°C have to go to fever clinics for further examination.

1.4 | Practitioners to ensure clinical safety

During the COVID-19 outbreak, nurses not only ensured the quality of patient care, but also prevented infection outbreak in the hospital. We classified the different clinical procedures into three risk levels according to the degree of exposure; thus, we were able to allocate protective materials reasonably. Hand hygiene and medical protection were strengthened in daily practice (Di Muzio, Cammilletti, Petrelli, & Di Simone, 2015). Patients who need intra-hospital transportation were protected by wearing surgical masks. We upgraded the protective level for newly admitted patients with fever during the outbreak considering the incubation period. For example, medical staff should wear protective clothes and goggles for procedures like intubation for critical patients, and closed suction system was applied. To avoid people gathering, we established new visiting policies with strict visiting time (10:00–12:00 hr and 14:00–16:00 hr), and only one visitor was allowed for each patient.

1.5 | Educators and companions for patients and families

Nurses were uniquely positioned to educate patients and the public, dispel rumours and misconceptions, and provide valuable, trusted resources. During the outbreak, information sheet was delivered to the public, including self-protection, hand hygiene and avoiding gathering. Moreover, precautions for hospital visiting were explained by nurses, including keeping social distance, wearing mask correctly and cough etiquette. To reduce waiting time, outpatient appointment and online medical consultation were initiated. Due to traffic control and home isolation, some patients' families could not visit and accompany patients; thus, nurses became important companions to reduce anxiety and loneliness for in-hospital patients. Nurses also assisted to provide the daily necessities for patients in need.


2 | WHAT WE HAVE LEARNT?

It is imperative to recognize that nurses are our most valuable resources in fighting this pandemic. We conclude that a preparatory

framework must be established that can be initiated anytime to ensure hospital running in an orderly manner. At the beginning of the outbreak, coordination with different departments is critical to ensure efficient and seamless functioning of the system. Our nursing department rapidly reallocates the nursing resources after full assessment and ensures adequate number of nurses in key areas including fever clinics, emergency department and ICUs. The training for nurses is also necessary to improve their preparedness in epidemiology, infection control, donning and doffing of protective equipment. Nurses must remain vigilant and maintain a high level of awareness during epidemics. Our frontline nurses contributed greatly in screening suspected patients and cutting off the source of nosocomial infection. Furthermore, nurses were exclusively important to provide health education and improve patient adherence, while reducing anxiety during the outbreak. In addition to professional knowledge and skills, nurses should show love, empathy and compassion to relieve patients' physical and psychological pain.

3 | CONCLUSION

2020 celebrates the bicentenary of Florence Nightingale's birth and is designated by World Health Organization as the first ever Year of the Nurse and Midwife (World Health Organization, 2020a). In this unprecedented outbreak, the nursing department in our hospital demonstrated great power to sustain normal running of the hospital and showed effectiveness in preventing hospital infection. There is no one-size-fits-all set of management model across all settings, but core elements of our successful response would be beneficial, which consists of strong leadership, effective precaution mechanism, standard preventing and controlling protocols, ability for in-time execution and adequate supervision. We hope sharing our management and practice experience with other institutions to enhance their preparedness for the outbreak and promote professional performance in battle against COVID-19.

Yuxia Zhang RN, PhD, FAAN, Director 

Department of Nursing, Zhongshan Hospital, Fudan University, Shanghai, China

Correspondence

Yuxia Zhang, No. 180 Fenglin Road, Shanghai 200032, China.
Email: zhang.yuxia@zs-hospital.sh.cn

ORCID

Yuxia Zhang  <https://orcid.org/0000-0003-4419-7004>

REFERENCES

- Abeni, M. S., Magni, M., Conte, M., Mangiacavalli, S., Pochintesta, L., Vicenzi, G., ... Corso, A. (2014). Psychological care of caregivers, nurses and physicians: A study of a new approach. *Cancer Medicine*, 3(1), 101–110. <https://doi.org/10.1002/cam4.163>

- Di Muzio, M., Cammilletti, V., Petrelli, E., & Di Simone, E. (2015). Hand hygiene in preventing nosocomial infections: A nursing research. *Annali Di Igiene*, 27(2), 485–491. <https://doi.org/10.7416/ai.2015.2035>
- Government of Hubei Province, China (2020). 28,600 nurses supporting Hubei Province played an important role in treatment. Retrieved from http://www.hubei.gov.cn/zhuanti/2020/gzxxgzbd/qfqk/202003/t20200301_2164990.shtml
- World Health Organization (2020a). *Year of the Nurse and the Midwife 2020*. Retrieved from <https://www.who.int/news-room/campaigns/year-of-the-nurse-and-the-midwife-2020>
- World Health Organization. (2020b). Emergency Committee. In *Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV)*. Retrieved from [https://www.who.int/news-room/detail/23-01-2020-statement-on-the-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/23-01-2020-statement-on-the-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov))
- World Health Organization. (2020c, 11 March 2020). *WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020*. Retrieved from <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19--11-march-2020>