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Research Paper

Nursing ethics for prevention and control of major infectious disease outbreaks: Chinese expert consensus

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ABSTRACT

Objectives: Major infectious disease has become a serious threat to people's health worldwide. As the world's largest healthcare workforce and the core forces fighting against the epidemic, nurses are on the frontline of this battle. A number of ethical issues have given rise to numerous concerns that have largely affected nurses in different ways as they respond to the epidemic. In addition, excessive expectations from people can exert undue pressure, which can easily lead to burnout in nurses.

Methods: In this consensus, the expert panel method was used to develop and reach a consensus. The members involved in the formation of the consensus included an expert discussion panel and a consensus writing expert group, a methodologist, and four secretaries. After 16 rounds of online expert consultation and two rounds of expert panel meetings, the writing team analyzed and reviewed the 78 amendments suggested by the experts to develop a consensus on nursing ethics for prevention and control of major infectious disease outbreaks based on the ethical vision of life care.

Results: This expert consensus focuses on five essential domains: the responsibilities and rights of nurses, the nurse-patient relationship, the doctor-nurse relationship, and the relationship between society and nurses throughout the epidemic.

Conclusions: We hope this consensus can help nurses better understand and respond to the ethical issues and challenges in public health emergencies, and raise reasonable public expectations of the roles and responsibilities of nurses in these situations.

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What is known?

- Nurses are the core forces in fighting against epidemics. They save lives, care for those infected with the virus, and educate the public about the measures to prevent the spread of the virus during an epidemic.
- Nurses are suffering physical and emotional stress, and their health and well-being are at great risk in the fight against epidemics, which may lead to pressing and complex ethical issues in practice.

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What is new?

- This article focused on practical ethical issues for nurses caring for people with major infectious diseases.
- To cope with the ethical dilemma, it was proposed that relevant support and assistance should be provided to nurses from the public, policymakers, and colleagues in the healthcare system.
- Nurses should seek resources of self-care and protection during infectious disease outbreaks.

1. Introduction

Global pandemics of infectious diseases, such as smallpox, cholera, and influenza, were responsible for the largest global burden of death and disability until the end of the twentieth century [1]. Although the increasing availability of vaccines and antibiotics has reduced the mortality from infectious diseases in the past few years [2], the outbreak of an emerging pandemic viral infection can still be a public health emergency of international concern. The most recent infections include MERS, Ebola, COVID-19 and so on, posing a serious threat in worldwide [3,4]. For example, globally, as of November 13, 2021, there have been 251,788,329 confirmed cases of COVID-19, involving 5,077,907 deaths [5].

Nurses are the world's largest healthcare workforce [6], and as the core forces in China's fight against the epidemic of major infectious diseases, they have frequent contact with patients and face the greatest risks. Given that the health and well-being of nurses are at great risk in the fight against this epidemic, which may become a pressing ethical concern, the National Health Commission of the People's Republic of China (NHCPRC) and two other Chinese ministries have introduced social support and protective measures for frontline nurses [7]. However, nurses are not only exposed to the immense pressure that the disease places on their nursing care capacity but also face the risk of infection [8]; moreover, nurses are faced with several ethical problems while caring for patients with infectious diseases, and these issues affect them in many ways. In addition, although the public regards nurses as heroes and hails them in this pandemic, this can easily lead to excessive expectations and undue pressure for nurses or burnout of nurses [9]. Furthermore, although several relevant codes of nursing ethics have already been published both in China and overseas, how nurses can protect patients and themselves from ethical dilemmas during the major infectious disease outbreaks is worth exploring.

In order to better summarize the practical experience of nurses in fighting against the epidemic, focus on the common characteristics of major infectious diseases, show concern for the life safety of both patients and nurses themselves, embody a close cooperative relationship among doctors, nurses and patients, and advocate the concepts of respecting life and people-orientation in occupational safety and professional values, the Humanistic Nursing Committee under the Chinese Association for Life Care (CALC), which is supervised by the NHCPRC and aims to promote the quality of life care services provided by nurses, solicited opinions and advice from frontline nurses, organized the committee members and relevant inter-disciplinary experts to conduct multiple rounds of research and debate, and drafted a new consensus on nursing ethics during the prevention and control of major infectious disease outbreaks based on the ethical vision of life care.

The Humanistic Nursing Committee under the Chinese Association for Life Care Position Statement: Expert Consensus on Nursing Ethics for Prevention and Control of Major Infectious Disease Outbreaks was prepared by an expert humanistic and ethical writing group, comprising medical ethicists and members of the

Humanistic Nursing Committee under CALC. An exposure draft of the expert consensus (<http://yxllx.xjtu.edu.cn/info/4164/9928.htm>) and its interpretation version (<http://yxllx.xjtu.edu.cn/info/4203/10187.htm>) were first published in Chinese in the *Journal of Chinese Medical Ethics*. The final version was eventually formed on the basis of rounds of expert consultation included details on the consensus development process and approached the ethical issues from an international perspective, hoping to share with nurses across the world.

2. Methods

The expert panel method was used to develop and reach a consensus on nursing ethics during the prevention and control of major infectious disease outbreaks.

2.1. Formation of the expert panel

The expert panel was selected based on the following criteria: experts (i) whose field of expertise was nursing or ethics, (ii) with >10 years of professional experience, (iii) with a bachelor's degree or higher, (iv) whose professional title was associate professor of nursing or higher, and (v) who voluntarily participated in the study. Before discussing the consensus, an email or a WeChat message was sent to the potential experts who met the inclusion criteria to recruit them and obtain their informed consent. A WeChat expert group was set up to facilitate free exchange and discussion on this consensus among the experts. A total of 60 experts from different areas in China participated in the study, of whom 49 had advanced qualifications, and 18 were nurse specialists who worked in the frontline of the fight against the epidemic in Wuhan, Hubei Province. The total age of the experts ranged from 30 to 75 years, with an average age of 52.3 years.

A consensus writing expert group was also established, consisting of 26 members from a variety of backgrounds, including clinical nurse specialists, nursing educators, frontline nursing managers, and ethics experts (See Appendix A), of whom H. Li, H. Sun, C. Yuan, H. Xie, Y. Li, and Q. Jia were the core members of the writing team, responsible for reviewing domestic and foreign literature, defining the themes of consensus and the main contents, identifying the ethical areas to be addressed by the consensus, organizing expert judgments, collecting and classifying the detailed statements to be voted, and developing the final draft to be discussed with the entire expert group. A methodologist provided advice throughout the consensus formation process. Four secretaries, F. Zhou, Y. Yang, Y. Wang, and Y. Li (one with a master's degree in nursing and three with a doctoral degree in nursing), were responsible for analyzing and summarizing the relevant literature, organizing meeting minutes, and writing the first draft of the interpretation of the consensus.

2.2. Construction of consensus draft

With referring the topics to be addressed, each senior member of the committee indicated the most relevant and uncovered areas of interest about nursing ethics during the prevention and control of major infectious disease outbreaks and decided to form a draft based on the relevant information and the four fundamental ethical principles. Later, based on the framework and principles of the *Ethical Code for Nurses in China* [10], a preliminary consensus was developed, and five themes were discussed, including the responsibilities and rights of nurses, the relationship between patients and nurses, the relationship between doctors and nurses, and the relationship between society and nurses during epidemic prevention and control.

Based on a comprehensive review of practical nursing

experiences in the fight against the epidemic and a summary of the common characteristics of major epidemics, the writing team also consulted and interviewed other related experts, and referred to precious clinical ethical experiences of the frontline nurses in the fight against the epidemic. Ultimately, after analyzing, organizing, and summarizing all the materials as well as 16 rounds of online expert consultations, the first draft of the consensus on nursing ethics was formed.

2.3. Expert group meeting rounds

From March 2020 to May 2020, two rounds of expert review meetings were conducted. Each participant had an opportunity to give suggestions and comments on the draft. Both meetings were audio-recorded, and the minutes of the meeting were documented by the secretaries. In the first round, the consensus writing expert group had a full-day online video conference (through Tencent meeting platform) to discuss the first round of expert panel opinions about the consensus on nursing ethics and provided recommendations for further revision. After the first expert group meeting, the manuscript was circulated to all group members for further review, revision, and approval, after which the writing team analyzed the 78 revision suggestions and comments made by the experts and reviewed the objective evidence to substantiate them. In the second round, all experts met online, and the revised version of consensus was submitted to the expert panel for review. Eventually, the consensus was reached based on the discussion of removing inappropriate content and adding new recommendations. The members of the writing team cautiously rephrased each statement of the final revised consensus by the expert panel. Whenever the writing team encountered any contradictions, they reviewed the literature until agreement on the consensus was reached in the team.

3. Results

After 16 rounds of online expert consultation and two rounds of online expert review meetings, the committee then summarized the statements that reached a high level of consensus and discussed the relevant comments at the expert panel meetings. In general, all proposed statements reached a defined level of consensus; the main outcomes of the expert panel meetings are presented in the following sections.

Determining the target groups of the expert consensus. This expert consensus applies primarily to nurses, nursing managers, health administrators at all levels, patients, the public, news media, and other groups in society.

3.1. Chapter 1: General principles

The principles of nursing ethics were formed based on the general framework and principles of the codes of ethics for nurses, with the aim of summarizing the experience of nursing practice and better performing the role of nurses in the prevention and control of major infectious disease outbreaks. Furthermore, the expert consensus was reached to provide ethical suggestions and references for the nursing community and to communicate the professional values of nursing to the public, the news media, and the decision-making and management departments in the government.

3.2. Chapter 2: Responsibilities and rights of nurses during epidemic prevention and control

3.2.1. Responsibilities of nurses

3.2.1.1. Obligation to provide medical assistance during epidemic prevention and control. During the epidemic prevention and control of major infectious disease outbreaks, nurses should provide medical assistance and on-site resuscitation for patients with confirmed or suspected diseases in accordance with institutional regulations. Every nurse should assume their social responsibility and commitment, and not refuse to perform tasks because of the dangerous nature of the disease (except in pregnancy, childbirth, or illness). Resuscitation of patients should take precedence over other non-emergency duties.

3.2.1.2. Obligation to stick to one's post during epidemic prevention and control. Average frontline nurses in the clinical and community settings should fulfill their professional responsibilities conscientiously in accordance with the regulations and norms, but with strict adherence to self-protection protocols.

In addition to maintaining good communication and exchange of information with patients, doctors, and nurses themselves, nurses should also build a community of common destiny among doctors, nurses and patients in order to provide patients with holistic nursing care of physical, psychological, social, cultural, and developmental perspectives. Nurses should gain the knowledge and skills for epidemic prevention and control, and adhere to the concept of "educate, help, and guidance." In addition, nurses should try to find a better insight into the problems by using critical thinking to analyze the problems, identify and timely summarize nursing experience and achievements in the process of epidemic prevention and control, and participate in the formulation of nursing criteria and professional standards related to epidemic prevention.

3.2.2. Rights and interests of nurses

The principle of "It is our responsibility to prevent and control it (the epidemic)" should be encouraged to achieve the goal of "zero infection" among the frontline nurses. Moreover, frontline nurses fighting against the epidemic should have priority access to essential and scarce supplies. In principle, nurses should adhere to the principles of "no operation without essential protection" and "no entry into dangerous areas without qualified disinfection and isolation training" to ensure the safety of nurses. Nurses infected with the disease should be managed in strict accordance with the government regulations while making full use of their rescue function and ensuring that their own health is protected to the fullest extent, which includes timely self-reporting, active cooperation with treatment, strict prevention of cross-infection and return to work after recovery. Nursing managers should not only focus on the nurses' health and needs, but also arrange human resources and working hours rationally, propagate and encourage the provision of excellent nursing care and acknowledge outstanding nursing performance in a timely manner.

3.3. Chapter 3: Maintaining a harmonious nurse-patient relationship during epidemic prevention and control

3.3.1. Principle of respect

Nurses should hold firm to the principle of "caring for life and putting people first, not discriminating or giving up on patients," following the aim of healing the wounded and rescuing the dying while caring for patients' physical and mental needs. Nurses should also protect the patients' right to informed consent; informed consent must be obtained before performing each nursing

procedure, especially when planning for invasive procedures, to promote respect for patients and reduce their feelings of panic or anxiety.

3.3.2. Principle of equality

Nurses should provide equal treatment and care to all patients, regardless of gender, age, fortune, occupation, region, social status, or education background during the epidemic. Moreover, both nursing programs and technological resources should be used in accordance with the guidelines of fair treatment in order to fully embody humanistic values.

3.3.3. Principle of confidentiality

Nurses ought to abide by the professional ethics of honesty, discretion and self-discipline, while also observing the principle of confidentiality to protect the privacy of patients. During nursing resuscitation or research, and when publishing relevant articles on nursing prevention and control, nurses should also take necessary measures to protect the privacy of patients and their families. Where state secrets and confidential information are involved, they should be handled in accordance with the relevant state regulations.

3.3.4. Principle of caring

Nurses are required to recognize ethical issues in nursing care and actively practice humanistic nursing care during the epidemic. Moreover, nurses should not only take care of patients' physical health, but also pay attention to their psychological and emotional changes, and provide comfort, psychological guidance, and encouragement the patients to build confidence to fight against the disease, especially when patients are unable to receive support from their family.

3.4. Chapter 4: Doctor-nurse relationship during epidemic prevention and control

3.4.1. Principle of equality and mutual respect

Nurses and doctors should respect each other's professional expertise. Nurses should execute all medical orders quickly, efficiently, and carefully. Doctors should carefully listen to nurses' reports on patients' conditions and respect nurses' clinical decision-making. Nurses also have the right to develop nursing projects that are incorporated with professional nursing values to meet the patients' needs based on their knowledge, experience, and expertise, such as clinical observation and monitoring, disinfection and isolation measures, health education, rehabilitation instruction, and nutritional and psychological support.

3.4.2. Principle of tacit cooperation

There should be close collaboration, mutual concern and supervision among medical and nursing staff, and effective protective measures should be implemented to achieve a tacit state of coordinated treatment. Doctors and other technical professionals should respect the professional competence of nurses and give them professional autonomy in decision-making. The treatment plan for patients in this particular context requires full communication and consensus between doctors and nurses.

3.4.3. Principle of unity and cooperation

Nurses and their colleagues need to develop close and unified working relationships during an epidemic, especially in times of severe epidemics when nurses may be overworked, exhausted, and under stress and mental strain. Therefore, it is important for nurses to help and care for each other, be sensitive to each other's needs and conditions, establish effective peer support, and be concerned

with the physical and mental well-being of the healthcare team to get through the crisis.

3.5. Chapter 5: Relationship between society and nurses during epidemic prevention and control

Relationship of harmony and mutual assistance. During an epidemic, nurses can be more involved in commonweal publicity activities and health education activities. Nurses on the frontline can also collaborate with backline institutions to use their nursing expertise to disseminate scientific knowledge about epidemic prevention to the public through the Internet and social media platforms. Similarly, well-targeted psychological counseling and stress reduction training ought to be performed by relevant departments to fully embody nursing humanistic care and social responsibility during the epidemic. All sectors of society should respect and protect the rights and interests of nurses; show love, care, and concern for nurses and their families; and provide relevant support and assistance to nurses at the same time. Furthermore, the professionalism and value of nurses should be promoted through publicity in the mainstream media, while any interference with the provision of medical services or workplace violence should be properly dealt with and condemned in accordance with the law.

4. Discussion

Nurses are making a nursing history with their ongoing work in major infectious disease outbreaks [11]. Undoubtedly, nurses have been and will continue to be on the frontline during infectious disease outbreaks, providing vital services to patients, families, and communities [12]. However, clinical nurses are faced with several ethical and moral dilemmas while coping with major infectious disease outbreaks. Although the *ICN Code of Ethics for Nurses* [13], and other codes on the ethical preparedness of nurses during public health emergencies and healthcare disasters have been released [14], and the American Nurses Association (ANA) has also made some progress in the ethical response of nurses to the infectious disease pandemic, emerging of new major infectious disease outbreaks requires more exploring and deeper understanding [15]. We need to learn from the pandemic of COVID-19, find better ways to cope with complex ethical problems associated with nursing practice during public health emergencies, and contribute to future nursing practice and education.

In addition, due to the relatively limited research on the principles of nursing ethics, it is necessary to revise or formulate the relevant ethical framework while high-quality studies in this regard are still not available. Therefore, an expert consensus has been formed to better prepare nurses to respond to ethical issues and challenges during public health emergencies.

In some countries, nurses face greater challenges while responding to major infectious disease outbreaks, such as inadequate resources or personal protective equipment, overwhelming numbers of patients, shortages of nursing staff, poorly prepared health systems and supply chain failures. As a result, nurses are at higher risk of infection, experience physical and psychological stress, and suffer moral distress due to conflicting professional values [11]. Based on the existing *Ethical Code for Nurses in China* [10], our consensus focused on solving practical ethical issues for nurses caring for people with major infectious diseases, also for those related to the nurses' self-care and protection. Lack of support and protection for nurses during major infectious disease outbreaks is a global problem. For example, a study reported that the nurses responded negatively to ethical dilemmas and tension during this outbreak, and about one-third of them feared going to work

because of potential conflicts and feeling inadequately protected [16].

Policymakers must therefore ensure that voices and perspectives of nurses are integrated when making decisions to address local and global issues in order to minimize the potential risks and harms that many nurses may have faced to date [17]. Humanistic care is not only about nurses caring for their patients, but also about nurses themselves. More attention should be paid to the physical and mental health of nurses and create a comfortable, fair, and harmonious interpersonal environment for them. Society should understand the professional values of nursing and the important roles of nurses. Relevant government departments should earnestly take effective measures for frontline nurses, such as raising nurses' salary, so as to nourish public awareness of the work of nurses and respect for nurses. Finally, nurses should seek sources of support during infectious disease outbreaks. For nurses in North America, many healthcare systems have combined clinical ethics consultation services with ethicists to identify and untangle the complex ethical issues that cause moral distress and to help mitigate the negative effects of such distress occurring during an epidemic [17]. It should be convenient for nurses to seek psychological assistance, including consultation with clinical psychologists, chaplaincy services, and mental health hotspots to solve psychological problems or other problems that might arise.

Lastly, due to the limited time for consensus development, there are still some shortcomings and limitations in this consensus, and further efforts and improvement are needed in the future. This study is hereby published in English with the hope of aligning it with the *ICN Code of Ethics for Nurses* [13,18] and the *Ethical Code for Nurses in China* [10]. At the same time, due to language barriers, much of the research on the fight against infectious disease with respect to nursing remains unknown to the international nursing community. We also hope to facilitate international academic exchange, especially in the challenging time, to better respond to the epidemic and protect public health.

5. Conclusion

We hope that this consensus can provide recommendations for the public, policymakers, and colleagues in the healthcare system to have reasonable expectations for the roles and responsibilities of nurses during public health emergencies. We also hope that the consensus will encourage concern and support for nurses from different groups in society, and protect and maintain the health and competency of nurses to provide safe and cost-effective care to patients in the event of similar incidents.

Expert consensus panel on nursing ethics for prevention and control of major infectious disease outbreaks (in alphabetical order of surnames)

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Credit authorship contribution statement

Yaling Wang: Data curation, Formal analysis, Funding acquisition, Writing original draft, Writing - review & editing. **Yuchen Li:** Data curation, Formal analysis, Writing - original draft. **Biyu Shen:** Formal analysis, Writing - original draft. **Huiling Li:** Conceptualization, Methodology, Formal analysis, Project administration, Funding acquisition, Writing - original draft, Writing - review & editing. **Hongyu Sun:** Conceptualization, Methodology, Writing - original draft, Writing - review & editing. **Changrong Yuan:** Validation, Writing - review & editing. **Hongzhen Xie:** Validation, Writing - review & editing. **Xiaomei Li:** Supervision, Writing - review & editing. **Yinglan Li:** Supervision, Writing - review & editing. **Jian Guan:** Supervision, Writing - review & editing. **Qi'ai Jia:** Supervision, Writing - review & editing. **Xinqing Zhang:** Methodology, Writing - review & editing.

Authors' roles

Yaling Wang, Yuchen Li, Biyu Shen, Huiling Li, Hongyu Sun, Changrong Yuan, Hongzhen Xie, Xiaomei Li, Yinglan Li, Jian Guan, Qi'ai Jia and Xinqing Zhang accept full authorship responsibility on

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Ethics approval and consent to participate

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Declaration of competing interest

The authors have declared no conflict of interest.

Data availability statement

The authors declare the absence of shared data in the present study.

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Appendices. Supplementary data

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