

COVID-19: a time to focus on nurses, hand hygiene and infection prevention and control

Nasim Lotfinejad¹
Alexandra Peters², Didier Pittet²

¹Department of Research, Faculty of Medicine, Mashhad
University of Medical Sciences, Mashhad, Iran

²Infection Control Program, University of Geneva Hospitals and
Faculty of Medicine, Geneva, Switzerland

DOI: 10.3396/ijicv16i1.001.20

Abstract

With the global concern of the 2019 novel coronavirus (COVID-19), infection prevention and control (IPC) is increasingly perceived as a major contributor to achieve a highly effective response to the outbreak and to prevent or limit transmission in healthcare settings. Improving health results is highly reliant on well-trained nurses especially during unexpected infectious disease outbreaks. The World Health Organization (WHO) promotes hand hygiene, which is the cornerstone of infection prevention, through its annual global campaign on 5 May every year. The 2020 campaign targets nurses and midwives with the overall theme “Nurses and Midwives: CLEAN CARE is in YOUR HANDS”.

Keywords: COVID-19, infection prevention and control, hand hygiene, nurses, World Health Organization

Corresponding Author

Professor Didier Pittet, Infection Control Programme and WHO Collaborating Centre on Patient Safety,
University of Geneva Hospitals and Faculty of Medicine, 4 Rue Gabrielle-Perret-Gentil,
1211 Geneva 14, Switzerland.

Tel: +41 22 372 9828 /+41 22 372 9833 (direct);

E-mail: Didier.pittet@hcuge.ch

Following the outbreak of the 2019 novel coronavirus (COVID-19) in December 2019 in Wuhan, China, infection prevention and control (IPC) strategies to prevent or limit disease transmission in healthcare settings have become of utmost importance.^{1,2} Nurses are the healthcare workers (HCWs) with the most patient contact in the fight against the virus, and their adherence to IPC practices is crucial for fighting the epidemic.³ Since COVID-19 spreads from one person to another similarly to influenza and other respiratory viruses, it is thus recommended to clean hands with alcohol-based hand rub or soap and water, cover the nose and mouth when coughing and sneezing, and avoid close contact with those who have fever and cough.³ Both HCWs and the public must be aware of IPC principles in order to be prepared for infectious disease outbreaks.⁴ Hand hygiene with an alcohol-based hand rub is well-known as one of the most important procedures to prevent disease transmission in health-care facilities in general, and in particular for preventing COVID-19 cross-transmission.^{2,5} Although hand hygiene seems like a very simple measure, compliance rates are still worrisome, even with regular global campaigns to improve this behavior.⁶

Nurses are constantly exposed to the virus and this, coupled with long working hours and an often stressful work environment, puts them at an increased risk for acquiring COVID-19 as well as becoming a source of transmission to others.^{3,7} The increasing number of infected HCWs during this epidemic⁸ highlights the necessity of compliance with the World Health Organization (WHO) multimodal hand hygiene improvement strategy to support HCWs in improving hand hygiene at their facilities, especially in developing countries where compliance rates are generally lower.^{5,9} Moreover, the growing rate of nosocomial transmission of COVID-19 underlines the importance of the implementation of IPC core components in all healthcare facilities around the world, including outpatient care and primary care.² Most healthcare-acquired infections are preventable, and associated with HCWs' hand hygiene.^{10,11}

A sufficient number of well-trained and prepared HCWs is necessary to provide optimal healthcare, especially during unexpected infectious disease outbreaks.¹² Nurses play a major role in the infection

control and disease surveillance that is essential to manage epidemics.¹³ According to the WHO, there is a global shortage of nurses which is considered a threat to achieve universal health coverage.¹⁴ Nurses' work overload and fatigue during outbreaks are recognized as a risk factor for healthcare-associated infections.^{4,15} During infection outbreaks, it is very important to provide a safe work environment that requires adequate nurse staffing levels, availability of high-quality protective equipment, and effective communication to ensure both safety and quality of care.⁴

The WHO declared 2020 the Year of the Nurse and the Midwife. It is crucial, especially in times of outbreaks or other major global health challenges, to make sure we remember and honor the work and responsibility performed by this often underappreciated group of HCWs. Please join us in recognizing their role in providing and improving health services. "Nurses and Midwives: CLEAN CARE is in YOUR HANDS"!

Disclaimer

The views expressed in this article are those of the authors alone and do not necessarily represent the views, decisions, or policies of the institutions with which the authors are affiliated. The World Health Organization (WHO) takes no responsibility for the information provided or the views expressed in this article.

Financial support

This work is supported by WHO, Geneva, Switzerland, and the Infection Control Program, University of Geneva Hospitals and Faculty of Medicine, Geneva, Switzerland; hand hygiene research activities at the SPCI/WCC are also supported by the Swiss National Science Foundation (grant number 32003B_163262). Potential conflicts of interest.

All authors

No reported conflicts of interest. All authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed

References

- Centers for Disease Control and Prevention. Coronavirus. <https://www.cdc.gov/coronavirus/about/index.html>. (Accessed February 21, 2020).
- WHO. Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected. Interim guidance. 25 January 2020. WHO 2020. (Accessed February 21, 2020)
- World Health Organization. Coronavirus disease (COVID-19) outbreak: rights, roles and responsibilities of health workers, including key considerations for occupational safety and health.
- Kang HS, Son YD, Chae SM, Corte C. Working experiences of nurses during the Middle East respiratory syndrome outbreak. *Int J Nurs Pract* 2018; **24**(5): e12664. <https://doi.org/10.1111/ijn.12664>
- World Health Organization. Guidelines on hand hygiene in health care. First global patient safety challenge clean care is safer care. https://apps.who.int/iris/bitstream/handle/10665/44102/9789241597906_eng.pdf?sequence=1. (Accessed February 21, 2020)
- Luangsanatip N, Hongsuwan M, Limmathurotsakul D, et al. Comparative efficacy of interventions to promote hand hygiene in hospital: systematic review and network meta-analysis. *BMJ* 2015; **351**: h3728. <https://doi.org/10.1136/bmj.h3728>
- Heymann DL, Shindo N. COVID-19: what is next for public health? *The Lancet* 2020; **395**(10224): 542-545. [https://doi.org/10.1016/S0140-6736\(20\)30374-3](https://doi.org/10.1016/S0140-6736(20)30374-3)
- Chan JF-W, Yuan S, Kok K-H, et al. A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. *The Lancet* 2020; **395**(10223): 514-523. [https://doi.org/10.1016/S0140-6736\(20\)30154-9](https://doi.org/10.1016/S0140-6736(20)30154-9)
- World Health Organization. Guide to implementation: a guide to the implementation of the WHO Multimodal Hand Hygiene Improvement Strategy. http://www.who.int/gpsc/5may/Guide_to_Implementation.pdf. (Accessed February 21, 2020)
- Storr J, Topley K, Privett S. The ward nurse's role in infection control. *Nurs Stand* 2005; **19**(41): 56-64; quiz 6. <https://doi.org/10.7748/ns2005.06.19.41.56.c3897>
- GWA/WHO. Mid-level health providers: a promising resource to achieve the health Millennium Development Goals. Geneva: Global Health Workforce Alliance, World Health Organization; 2010. <https://www.who.int/workforcealliance/knowledge/resources/mlpreport2010/en/>. (Accessed February 21, 2020)
- Imai T, Takahashi K, Todoroki M, et al. Perception in relation to a potential influenza pandemic among healthcare workers in Japan: implications for preparedness. *J Occup Health* 2008; **50**(1): 13-23. <https://doi.org/10.1539/joh.50.13>
- Baack S, Alfred D. Nurses' preparedness and perceived competence in managing disasters. *J Nurs Scholarsh* 2013; **45**(3): 281-287. <https://doi.org/10.1111/jnu.12029>
- World Health Organization (WHO). Global strategy on human resources for health: Workforce 2030. Tables A1.1 (p.41) and A1.3 (p.44). Available at: www.who.int/hrh/resources/global_strategy_workforce2030_14_print.pdf. (Accessed February 21, 2020)
- Daud-Gallotti RM, Costa SF, Guimarães T, et al. Nursing workload as a risk factor for healthcare associated infections in ICU: a prospective study. *PLoS ONE* 2012; **7**(12): e52342. <https://doi.org/10.1371/journal.pone.0052342>