

EDITORIAL

Hand hygiene implementation: an easy step to improve public health

Carolina Fankhauser-Rodriguez, Chloé Guitart, Didier Pittet

Infection Control Programme,
University of Geneva Hospitals and Faculty of Medicine, Geneva, Switzerland

DOI: 10.3396/ijic.v16i3.015.20

Abstract

The World Health Organization has declared 2020 the "Year of the Nurse and Midwife". On May 5th of this year, for the annual celebration of the SAVE LIVES: Clean Your Hands campaign, the WHO highlighted the critical role of nurses and midwives in promoting public health. Increasing well-trained nurse staffing will enable nurses and midwives to improve quality of care and prevent infections. The implications for improved nursing and health policy are many. Investing in nurses ensures better care for patients, and reduces infections and the economic burden of healthcare-associated infections on countries' economies.

Keywords: hand hygiene; healthcare associated infections; infection control; midwives; nurses; World Health Organization

Correspondence:

Didier Pittet, Infection Control Programme, University of Geneva Hospitals and Faculty of Medicine, 4 Rue Gabrielle-Perret-Gentil, 1211 Geneva 14, Switzerland. e-mail: didier.pittet@hcuge.ch

Hand hygiene is the single most important practice for breaking the pathogen cross-transmission in healthcare settings. The primary role of healthcare providers and professionals, from governmental bodies to nurses' aides, is to organize patient care in a way that will not harm patients. Every year, millions of patients are affected by healthcare-associated infections (HAIs). These infections constitute a major problem for patient safety, and put a supplementary burden on healthcare systems. Though HAIs rates vary within and in between countries, they constitute a universal indicator for the quality of patient care.1 Despite the introduction of surveillance programs in some countries, their varying quality may make it difficult to measure the true rates of HAIs and to establish benchmarks. Although the burden of HAIs is huge, and their prevention is a priority for many health systems, no country can claim to have solved the problem. Lowering HAIs also means lowering the amount of antibiotics that one needs to treat them, which in turn decreases the rate of antimicrobial resistance (AMR). At a time when AMR is at the forefront of healthcare providers' priorities, hand hygiene can make a major difference in lessening its impact. The role of policymakers in promoting hand hygiene as the keystone of infection prevention and control is a good investment and is crucial in the fight to improve quality of care.

Hand hygiene with alcohol-based hand rub has become the standard of care for healthcare institutions worldwide. Currently, 189 countries pledge their commitment to implementing hand hygiene strategies as part of the global campaign "SAVE LIVES: Clean your hands". More than 22,144 healthcare facilities and over 140 Ministries of Health have signed the pledge to champion hand hygiene and address the burden of HAIs, and around 50 individual national/subnational campaigns have been created.¹⁻² In order to continue this momentum, the 5th of May of every year is designated by the World Health Organization (WHO) as World Hand Hygiene Day. WHO has designated 2020, as the Year of the Nurse and the Midwife.³ This year is the bicentenary of the birth of Florence Nightingale, the founder of modern nursing, and the 5th of May was centred around this same theme.4

The 5th of May recognizes and celebrates healthcare practitioners, policy makers and educators for the crucial nature of the work they perform. It also reminds them of their responsibility for the quality of the care they provide to patients. National support for these kinds of initiatives makes a big difference in engagement and awareness raising around the world. The plethora of activities developed and the increasing number of healthcare facilities participating in the 5th of May, shows the growing global commitment of healthcare professionals, patients, and ministries of health.

The WHO Multimodal Hand Hygiene Improvement Strategy has proven its efficacy on hand hygiene compliance all over the world.⁵ When reviewing the hand hygiene literature, one realizes that the ideal model for how to improve hand hygiene doesn't exist, and the ideal intervention must "be practical, affordable and possible to reproduce".⁶ Healthcare facilities nonetheless have a plethora of good tools at their disposal, many of which have been implemented worldwide with positive results.

With so much data supporting the importance of good hand hygiene, one would imagine that special efforts are made by policy makers all over the world to ensure the sustainability of this critical component of patient care. Unfortunately, although hand hygiene is a simple concept, it is difficult to implement, and compliance remains low around the world.⁵ Challenges faced include procuring adequate manpower or staffing, providing sufficient education and training, and adequately allocating resources to sustain the programs once implemented.⁷

Because of their frequent contact with patients, nurses and midwives play a central role in the prevention of HAIs. A systematic review analysing factors in healthcare worker quality found that hand hygiene competence was one of the critical outcomes in nursing education.⁸ The study revealed that for nursing students, hand hygiene knowledge and compliance were low-to-moderate and that for medical students, results were even lower. Only a few of the studies tried to identify the predictors that would affect knowledge and compliance.⁸ Hand hygiene competence must be emphasized in the

healthcare curricula, and educators play a key role in transmitting this knowledge and communicating its importance.⁸⁻⁹

Currently, there is an increasing demand for education and training in the field of infection prevention in general, and in hand hygiene specifically. 9 A qualitative study in China tried to understand what issues of training evaluation studies are important for policy makers to make decisions.¹⁰ Four main outcomes were analysed: the trainees' reaction towards the training, the evidence of knowledge gained (both short and long-term), behaviour changes in applying what they learned, and the overall impact of the training programme. Still, looking at the outcomes of direct training rather than its process might not provide the necessary information needed to evaluate interventions. A range of other factors is important for policy makers, including sustainability (the possibility of the programme to last several years) and scalability (the possibility of the program to be used in another setting). Though this study was meant to analyse middle and low-resource settings, its conclusions can be applied more broadly when developing a hand hygiene improvement program.¹⁰

It is important to remember that hand hygiene is not only the individual responsibility of the healthcare practitioner, but also an institutional responsibility. It is crucial for hospital leadership to align themselves with public health strategies that aim to ensure financial support of such programs. If policy makers accompany this effort, they can make an immense difference for the institutionalization and implementation of hand hygiene in healthcare facilities around the world.

Having a sufficient and adequately trained healthcare workforce is key for achieving the third WHO Sustainable Development Goal on health and well-being. In order to achieve this goal, healthcare practitioners must be educated in hand hygiene and the core components of infection prevention. The lack of economic resources is one of the main obstacles to this goal, particularly in low- and middle-income countries, but also in developed ones. There is a global shortage of health workers in general, and of nurses and midwives specifically, which makes achieving this goal difficult unless we mobilize stakeholders and decision makers at all levels. In this supplies that the supplies that the supplies in the supplies that the supplies is the supplies that the supplies in the supplies that the supplies is the supplies in the supplies is the supplies that the supplies is the supplies in the supplies in the supplies is the supplies in the supplies in the supplies is the supplies in the supplies in the supplies in the supplies is the supplies in the supplies in the

The conclusion of the report of the UN High Level Commission on Health Employment and Economic Growth states that investing in education and job creation in sectors such as health and social services will give a high return not only on health outcomes but on economic growth as well.¹² Please join us in supporting hand hygiene as one of the easiest and most effective steps towards improving health outcomes. Policy Makers: Increase nurse staffing levels to prevent infections and improve quality of care. Create the means to empower nurses and midwives.⁴

Acknowledgements

Didier Pittet works with WHO in the context of the WHO initiative 'Private Organizations for Patient Safety – Hand Hygiene'. The aim of this WHO initiative is to harness industry strengths to align and improve implementation of WHO recommendations for hand hygiene in health care in different parts of the world, including in least developed countries. In this instance, companies/industry with a focus on hand hygiene and infection control related advancement have the specific aim of improving access to affordable hand hygiene products as well as through education and research. All listed authors declare no financial support, grants, financial interests or consultancy that could lead to conflicts of interest.

The authors alone are responsible for the views expressed in this article and they do not necessarily represent the views, decisions or policies of the institutions with which they are affiliated. WHO takes no responsibility for the information provided or the views expressed in this paper.

This work is supported by the Infection Control Programme (SPCI), University of Geneva Hospitals and Faculty of Medicine, Geneva, Switzerland; hand hygiene research activities at the SPCI are also supported by the Swiss National Science Foundation (grant no. 32003B 163262).

Conflict of interest

None declared

References

- Vermeil T, Peters A, Kilpatick C, Pires D, Allegranzi B, Pittet D. Hand Hygiene in hospitals: Anatomy of a revolution. *J Hos Infect* 2019; 101(4): 383-392. https://doi.org/10.1016/j.jhin.2018.09.003
- 2. World Health Organization. Guidelines on hand hygiene in health care. First global patient safety challenge clean care is cafer care. 2009. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/44102/9789241597906_eng. pdf?sequence=1
- World Health Organization. Nursing and midwifery. Fact sheets. 2020a. Retrieved from https://www.who.int/newsroom/fact-sheets/detail/nursing-and-midwifery
- World Health Organization. SAVE LIVES: Clean Your Hands 5 May 2020. 2020b. Retrieved from https://www.who.int/ infection-prevention/campaigns/clean-hands/5may2020/ en/
- Allegranzi B, Gayet-Ageron A, Damani N, et al. Global implementation of WHO's multimodal strategy for improvement of hand hygiene: a quasi-experimental study. Lancet Infect Dis 2013; 13(10): 843-851. https://doi. org/10.1016/S1473-3099(13)70163-4
- Gould D, Moralejo D, Drey N, Chudleigh J, Taljaard M. Interventions to improve hand hygiene compliance in patient care: Reflections on three systematic reviews for the Cochrane Collaboration 2007-2017. J Infect Prev 2018; 19(3): 108-113. https://doi.org/10.1177/1757177417751285

- 7. Neo JRJ, Sagha-Zadeh R, Vielemeyer O, Franklin E. Evidence-based practices to increase hand hygiene compliance in health care facilities: An integrated review. Am J Infect Control 2016; 44(6): 691-704. https://doi.org/10.1016/j.ajic.2015.11.034
- 8. Labrague LJ, McEnroe-Petitte DM, van de Mortel T, Nasirudeen AMA. A systematic review on hand hygiene knowledge and compliance in student nurses. *Int Nurs Rev* 2018; **65(3)**: 336-348. https://doi.org/10.1111/inr.12410
- Gartmeier M, Baumgartner M, Burgkart R, Heiniger S, Berberat PO. Why hand hygiene is not sufficient: modeling hygiene competence of clinical staff as a basis for its development and assessment. GMS J Medical Edu 2019; 36(4): Doc39. doi:10.3205/zma001247
- Wu S, Legido-Quigley H, Spencer J, Coker RJ, Khan MS. Designing evaluation studies to optimally inform policy: what factors do policy-makers in China consider when making resource allocation decisions on healthcare worker training programmes? *Health Res Policy Syst* 2018; 16(1): 16. https:// doi.org/10.1186/s12961-018-0292-2
- United Nations. About the Sustainable Development Goals - United Nations Sustainable Development. 2020. Retrieved from https://www.un.org/sustainabledevelopment/sustainable-development-goals/
- 12. World Health Organization. Final report of the expert group to the High-Level Commission on Health Employment and Economic. 2016. Retrieved from http://www.who.int/hrh/com-heeg/reports/report-expert-group/en/