Contents lists available at ScienceDirect



Editorial

International Journal of Infectious Diseases



journal homepage: www.elsevier.com/locate/ijid

# Why is sharing knowledge about hand hygiene and infection prevention and control still so important?



Claire Kilpatrick<sup>1</sup>, Ermira Tartari<sup>1,2,\*</sup>, Julie Storr<sup>1</sup>, Didier Pittet<sup>3</sup>, Benedetta Allegranzi<sup>1</sup>

<sup>1</sup> Infection Prevention and Control Unit and Hub, Department of Integrated Health Services, World Health Organization, Geneva, Switzerland <sup>2</sup> Faculty of Health Sciences, University of Malta, Msida, Malta

<sup>3</sup> Faculty of Medicine, University of Geneva, Geneva, Switzerland

#### ARTICLE INFO

Keywords: Infection prevention and control Hand hygiene Education and training Strategy Campaigning Guidelines

The global health care workforce is estimated to exceed 65 million [1]. Broken down by cadre, this "stock" comprises 29.1 million nurses, 12.7 million medical doctors, 3.7 million pharmacists, 2.5 million dentists, 2.2 million midwives, and 14.9 million in additional occupations, including cleaners and health care waste workers. These numbers have not accounted for external contractors. Each of these numbers represents a person requiring training and education in infection prevention and control (IPC) to support the overall safety and quality of health care delivery.

Training and education is identified as one of the least performing core components of IPC programs around the world at the national and facility level [2]. In 2016, the World Health Organization (WHO) outlined evidence-based core components for IPC programs, emphasizing the importance of IPC education and training for all health and care workers. The recommendation advocates for participatory team and task-based strategies, incorporating bedside and simulation training. These measures aim to mitigate health care-associated infections and combat antimicrobial resistance [3]. A 2019 WHO global survey evaluated hand hygiene programs across 3206 health care facilities in 90 countries, using the WHO hand hygiene self-assessment framework to gauge progress. The findings showed an intermediate implementation level of overall progress, with significant disparities according to the income level of participating countries. Training and education had a weighted median score of 75 (interguartile range 45-90). Despite a large proportion of health care facilities reporting regular training, less than half made it mandatory and, similarly, only 1362

\* Corresponding author: Tel.: +356 99873798.

E-mail address: tartaribonnicie@who.int (E. Tartari).

(42.8%) of the 3182 reporting facilities had a designated budget for educational initiatives [4].

The WHO links training directly to competence, specifically for IPC-competent practitioners defining this as individuals capable of applying their knowledge, skills, and abilities in professional and personal growth. For IPC practitioners, WHO core competencies also exist [5] and several countries and societies have developed their own competency and education frameworks for health and care workers, with a focus on IPC.

The world continues to experience many infectious threats, including those in health care settings. Health care-associated infections continues to be among the most frequent adverse events occurring in the context of health service delivery. For instance, 136 million cases of health care-associated antibiotic resistant infections occur worldwide every year [6]. Such drivers fueled the overwhelming support for a global IPC strategy in 2023, approved by all WHO member states at the World Health Assembly. The strategy [7] was developed by involving representation from all three (global, regional, and country) levels of the WHO and the IPC Taskforce, coordinated by the WHO, with a wider voice being included from the areas of antimicrobial resistance; water, sanitation, and hygiene (WASH); and patient safety. The guiding principles of this strategy lie in a person-centered approach, ensuring the protection of health and care workers and prioritizing patient safety, including compassion. The strategy and its accompanying action plan feature education and training as integral to achieving the outlined IPC "vision 2030," with the proposed interventions stated as proven to be scalable and adaptable to local contexts. Specifically, one of the eight strategic directions focuses on health and care workers' knowledge on IPC, as well as addressing IPC curricula targeted at different levels of competence.

https://doi.org/10.1016/j.ijid.2024.107063

<sup>1201-9712/© 2024</sup> The Author(s). Published by Elsevier Ltd on behalf of International Society for Infectious Diseases. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/)

#### Table 1

World Hand Hygiene Day, May 5, 2024-How target audiences can understand why knowledge on hand hygiene is still so important.

Target audience	The question	The answer
Health and care workers	Why is sharing	Because hand hygiene is a very effective way to keep people safe from infection.
IPC practitioners	knowledge about hand	Because understanding when and how to perform hand hygiene motivates action.
Policy- and decision-makers	hygiene still so	Because hand hygiene is a very cost-effective way to achieve your public health targets.
The public	important?	Because hand hygiene helps save lives—yours, a loved one's, or those of the most vulnerable in society.

In 2009, the WHO issued the first global evidence-based Guidelines on Hand Hygiene in Health Care [8], which outlined the importance of adopting a multimodal approach to improvement and was accompanied by an associated guide to implementation and toolkit, including a range of training materials, all reinforcing WHO's multimodal improvement strategy [9].

As an example from the toolkit, the "5 Moments for Hand Hygiene" health and care worker observation and feedback forms, as outlined in the guide to implementation [10], essentially support individual, targeted observations, and feedback, which are highlighted to be undertaken for training and educational purposes. To improve the understanding of hand hygiene, it is recommended that the results of these observations be presented to health and care workers in a timely manner to encourage dialogue and promote capacity-building, safety culture, and trust. The final observation results should be shared with all relevant parties, such as management or IPC committees, in accordance with local decisionmaking processes, and should occur as soon as possible after data collection to facilitate on-going knowledge building among everyone involved—the target audiences for overall hand hygiene improvement.

Importantly, training of health and care workers is highlighted as only one element of improvement, for example, training to clean the hands without the provision of feedback on performance, as described previously, is less effective. Ensuring an enabling environment, including WASH services, reminders in the workplace, and a supportive culture also form part of the multimodal strategy and, when used together, are known to result in sustained improvement [11].

IPC and hand hygiene improvements do not exist in a silo. Other key global health commitments, including the UN General Assembly Resolution on WASH, waste, and electricity in health care facilities in December 2023 and the forthcoming proposed resolutions on maternal, newborn, and child health and antimicrobial resistance in 2024, all call for increased investments and action in IPC and, as such, support the IPC global strategy and action plan.

Since 2009, when WHO's global annual campaign, *SAVE LIVES: Clean Your Hands*, was also launched and held every May 5 since, other tools aimed at supporting hand hygiene improvement, including aspects of training, have been made available. Most recently, an early release version of a novel serious game set in the future involving aliens was launched in collaboration with the WHO Academy to enhance training on hand hygiene [12].

In 2024, the WHO global annual campaign, now called *World Hand Hygiene Day* (WHHD), appropriately has the theme of "promoting knowledge and capacity-building of health and care workers through innovative and impactful training and education on IPC, including hand hygiene". A question-and-answer style campaign approach was conceived to remind all target audiences that hand hygiene is as important as ever and to combat campaign fatigue. By presenting the theme as a question, people try to answer it immediately before looking for an official response. They remain engaged with the message and start to think rather than simply ignore it. This also creates a vehicle for hyper-relevant responses that "push the right buttons" for each audience group. Essentially, this new approach has the potential to disrupt how different au-

diences interact with the campaign, with the intention of making them think differently about WHHD in 2024.

WHO is calling on all IPC practitioners, health and care workers, and policy- and decision-makers, alongside the public, to join activities for and engage others in WHHD 2024, using the slogan "Why is sharing knowledge about hand hygiene still so important? Because it helps stop the spread of harmful germs in health care." [13] (Table 1). A range of resources in all United Nations languages are issued. The objectives are clear: to strengthen learning approaches to enable implementation of innovative and effective training and empower health and care workers to improve hand hygiene and IPC at the point of care, with enhanced knowledge, skills, and behaviors. In addition, the campaign will promote access to innovative hand hygiene and IPC training resources for health and care workers. At the same time, it raises awareness about the importance of knowledge and learning about hand hygiene at the right times to prevent a range of infectious diseases.

WHHD aims to continually raise awareness of the significance of hand hygiene as one part of IPC in health care and to "bring people together" every year in their efforts to improve hand hygiene practices worldwide. This day also represents an opportunity for WHO to reaffirm its commitment to supporting countries and health care facilities in improving hand hygiene.

Building knowledge is a simple yet noble campaign theme. Around May 5, 2024, a new WHO IPC curriculum will be launched, created in collaboration with leading in-country organizations and IPC experts. Delving a little deeper, it is important to consider the factors that influence knowledge building. This year's theme presents an opportunity to challenge everyone on what building knowledge actually means to them. Once again, the world will come together to focus on the importance of IPC and hand hygiene and its contribution to safer, higher quality health care. Considering the 65 million plus health workers, it is no understatement to suggest that effective training on hand hygiene plays a critical role in the requisite behavior change that can help save millions of lives. This ambition is at the very heart of WHHD 2024.

## Funding

Funding by WHO.

#### Author contributions

Conceptualization B.A. and C.K. All authors have contributed and agreed to the published version of the manuscript.

### **Declarations of competing interest**

The authors have no competing interest to declare. The opinions expressed in this article are those of the authors and do not reflect the official position of the WHO. The WHO takes no responsibility for the information provided or the views expressed in this article.

# References

Boniol M, Kunjumen T, Nair TS, Siyam A, Campbell J, Diallo K. The global health workforce stock and distribution in 2020 and 2030: a threat to equity

and 'universal' health coverage? BMJ Glob Health 2022;7:e009316. doi:10.1136/ bmjgh-2022-009316.

- World Health Organization. Global report on infection prevention and control, https://iris.who.int/bitstream/handle/10665/354489/9789240051164-eng.pdf? sequence=1; 2022 [accessed 20 February 2024].
- [3] World Health Organization. Core components for infection prevention and control programmes, https://iris.who.int/bitstream/handle/10665/ 251730/9789241549929-eng.pdf?sequence=1; 2016 [accessed 20 February 2024].
- [4] De Kraker MEA, Tartari E, Tomczyk S, Twyman A, Francioli LC, Cassini A, et al. Implementation of hand hygiene in health-care facilities: results from the WHO Hand Hygiene Self-Assessment Framework global survey 2019. Lancet Infect Dis 2022;22:835–44. doi:10.1016/S1473-3099(21)00618-6.
- [5] World Health Organization. Core competencies for infection prevention and control professionals, https://iris.who.int/bitstream/handle/10665/335821/ 9789240011656-eng.pdf?sequence=1; 2020 [accessed 20 February 2024].
- [6] Balasubramanian R, Van Boeckel TP, Carmeli Y, Cosgrove S, Laxminarayan R. Global incidence in hospital-associated infections resistant to antibiotics: an analysis of point prevalence surveys from 99 countries. *PLoS Med* 2023;**20**:e1004178. doi:10.1371/journal.pmed.1004178.
- [7] World Health Organization. Global strategy on infection prevention and control 2023. https://cdn.who.int/media/docs/default-source/gsipc/who\_ipc\_ global-strategy-for-ipc.pdf?sfvrsn=ebdd8376\_4&download=true [accessed 20 February 2024].

- [8] World Health Organization. Guidelines on hand hygiene in health care, https://iris.who.int/bitstream/handle/10665/44102/9789241597906\_eng.pdf? sequence=1; 2009 [accessed 20 February 2024].
- [9] World Health Organization. Resource considerations for investing in hand hygiene improvement in health care facilities, https://iris.who.int/bitstream/ handle/10665/341128/9789240025882-eng.pdf?sequence=1; 2021 [accessed 20 February 2024].
- [10] World Health Organization. A Guide to implementation of the WHO multimodal hand hygiene improvement strategy, https://iris.who.int/bitstream/ handle/10665/70030/WHO\_IER\_PSP\_2009.02\_eng.pdf?sequence=1; 2009 [accessed 20 February 2024].
- [11] Luangasanatip N, Hongsuwan M, Limmathurotsakul D, Lubell Y, Lee AS, Harbarth S, et al. Comparative efficacy of interventions to promote hand hygiene in hospital: systematic review and network meta-analysis. BMJ 2015;351:h3728. doi:10.1136/bmj.h3728.
- [12] WHO Academy. My 5 Moments for Hand Hygiene. Embark on a Mission to Save Lives and Prevent Infections, https://5mgame.lxp.academy.who.int/; 2023 [accessed 20 February 2024].
- [13] World Health Organization. World Hand Hygiene Day 2024, Why is sharing knowledge about hand hygiene still so important?, https: //cdn.who.int/media/docs/default-source/integrated-health-services-(ihs) /ipc/world-hand-hygiene-day-(whhd)/whhd-2024/j0365\_who\_whhd\_2024\_ campaign\_posters-web\_a3-2\_aw.pdf?sfvrsn=94a6757\_6&download=true; 2024 [accessed 20 February 2024].