

Abstract

Educational Models and Training Strategies for the Prevention of Healthcare-Associated Infections Among Healthcare Professionals: A Rapid Review

Camilla Elena Magi¹, Martina Roccasecca², Ilaria Saltori³, Martina Cavestro⁴, Debora Chillon⁵, Francesca Matteucci⁶, Stefano Deiana⁷, Fabiana Veronese⁸, Khadija El Aoufy⁹, Yari Longobucco¹⁰, Maria Mongardi¹¹

¹ Department of Biomedicine and Prevention, Faculty of Medicine, University of Rome "Tor Vergata", Rome, Italy

² Community Hospital of Ravenna, Azienda USL della Romagna, Ravenna, Italy

³ Operative Unit of Anesthesia and Intensive Care 2, Department of Anesthesia and Intensive Care, Santa Chiara Hospital, Trento, Italy

⁴ Polyclinic Outpatient Unit, University Hospital of Padua, Padua, Italy

⁵ Epidemiology and Healthcare-Associated Infection Control Service, Medical Directorate, University Hospital of Padua, Padua, Italy

⁶ Department of Gastroenterology, Santa Maria Hospital, Terni, Italy

⁷ Cardiac Surgery Intensive Care Unit, Careggi University Hospital, Florence, Italy

⁸ Department of Anesthesia and Intensive Care, University Hospital of Padua, Padua, Italy

⁹ Careggi University Hospital, Florence, Italy

¹⁰ Ethical Committee, Associazione Nazionale Infermieri Prevenzione Infezioni Ospedaliere (ANIPIO), Italy

¹¹ Department of Medicine and Surgery, University of Parma, Parma, Italy

(Corresponding Author: magicamillaelena@gmail.com)

Citation: Magi CE, Roccasecca M, Saltori I, Cavestro M, Chillon D, Matteucci F, Deiana S, Veronese F, El Aoufy K, Longobucco Y, Mongardi M. "Educational Models and Training Strategies for the Prevention of Healthcare-Associated Infections Among Healthcare Professionals: A Rapid Review" (2026) *International Journal of Health Supplements* 1(Suppl. 1):61-62. Supp. DOI: <https://doi.org/10.82051/ijhs-2026-1>

Introduction. Healthcare-associated infections (HAIs) are a global patient safety challenge, increasing morbidity, mortality, and costs. Education and training are pivotal to improve prevention practices, but approaches vary widely across settings. This rapid review identifies educational strategies for HAI prevention and summarizes reported outcomes.

Methods. Following PRISMA guidelines, PubMed, CINAHL, and EMBASE were searched for studies

published in the last decade. Using the Population (healthcare professionals), Concept (educational or training interventions), and Context (HAI prevention) framework, records were screened independently and synthesized narratively.

Results. From 24,915 records, 14 studies were included. Educational interventions included participatory/interprofessional initiatives (n=4; 28.6%), multimodal programs (n=3; 21.4%), digital/e-learning interventions (n=2; 14.3%), gamification and video or simulation training (each n=2; 14.3%), and care bundle education (n=1; 7.1%). Interventions improved hand hygiene compliance and knowledge, with reductions in ventilator-associated pneumonia. High satisfaction was observed; time constraints and resistance to change were common barriers.

Discussion. HAI prevention training increasingly incorporates interactive, digital, and behavioral strategies. Multimodal programs appear particularly effective in improving knowledge and practices. Further research is needed to evaluate effectiveness and scalability.

Keywords: Healthcare-Associated Infections, Infection Prevention, Education, Training Strategies, Healthcare Professionals, Rapid Review

© The Author(s) 2026. This abstract is published by iEditore and distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0).

Funding: This research received no external funding. **Conflict of Interest:** The authors declare no conflict of interest.