

## Hand Hygiene

**NQF#** N/A

**Developer:** The Leapfrog Group

**Data Source:** Leapfrog Hospital Survey

**Description:** Leapfrog's hand hygiene standard, which focuses on adherence to "best practice" hand hygiene practices, was developed by a national Hand Hygiene Expert Panel and adapted from the World Health Organization's "Hand Hygiene Self-Assessment Framework." Leapfrog's hand hygiene standard includes five domains: monitoring, feedback, training and education, infrastructure, and culture. The standard encourages facilities to adopt a multimodal approach to hand hygiene, emphasizing the importance of monitoring and feedback. To achieve Leapfrog's Hand Hygiene standard, hospitals must adhere to all elements of the monitoring and feedback domains and two out of the three additional domains.

**Rationale:** Unclean hands are one of the primary ways that pathogens are transmitted throughout the healthcare environment. Many healthcare-associated infections (HAIs) are caused by pathogens transmitted from one patient to another via the contaminated hands of healthcare workers. The CDC estimates that approximately 2 million patients acquire an HAI, and over 90,000 patients die as a result, annually. Hand hygiene is one of the most important and effective interventions in preventing the transmission of pathogens in healthcare facilities. Despite the clear evidence and guidelines for proper hand hygiene procedures, studies have shown that, on average, healthcare workers clean their hands less than 50% of the times that they should.

**Citations for Rationale:**

- Centers for Disease Control and Prevention. Clean hands count for safe healthcare. 2017. Available at <https://www.cdc.gov/features/handhygiene/index.html>
- Centers for Disease Control and Prevention. Guideline for hand hygiene in health-care settings. Morbidity and Mortality Weekly Report. 2002;51(RR-16):1-56.
- Klevens RM, Edwards JR, Richards CL Jr, et al. Estimating health care associated infections and deaths in U.S. hospitals, 2002. Public Health Rep. 2007 Mar-Apr; 122(2):160-6.
- Pittet D, Allegranzi B, Boyce J. The World Health Organization guidelines on hand hygiene in health care and their consensus recommendations. Infection Control and Hospital Epidemiology. 2009;30(7):611-622.
- Pittet D, Allegranzi B, Sax H, et al. Evidence-based model for hand transmission during patient care and the role of improved practices. Lancet Infect Dis. 2006;6:641-652.
- Pittet D, Hugonnet S, Harbarth S, et al. Effectiveness of a hospital-wide programme to improve compliance with hand hygiene. The Lancet. 2000;356(9238):1307-1312.
- Pittet D, Mourouga P, Perneger TV. Compliance with handwashing in a teaching hospital. Ann Intern Med 1999 Jan; 130(2):126-30.
- Webster J, Faoagali J, Cartwright D. Elimination of methicillin-resistant Staphylococcus aureus from a neonatal intensive care unit after hand washing with triclosan. J Paediatr Child Health. 1994;30:59-64.
- Whitby M, Pessaa-Silva CL, McLaws ML, et al. Behavioral considerations for hand hygiene practices: The basic building blocks. Hosp Infect 2007 Jan;65(1):1-8.

**Impact:**

- Affects most patients in the hospital, including patients in outpatient departments and emergency departments
- Approximately 1.7 million patients acquire an HAI each year, resulting in over 90,000 deaths
- Improving compliance with best practices for hand hygiene has shown to reduce HAIs

**Citations for Impact:**

- Centers for Disease Control and Prevention. Guideline for hand hygiene in health-care settings. Morbidity and Mortality Weekly Report. 2002;51(RR-16):1-56.
- Klevens RM, Edwards JR, Richards CL Jr, et al. Estimating health care associated infections and deaths in U.S. hospitals, 2002. Public Health Rep. 2007 Mar-Apr; 122(2):160-6.
- Pittet D, Allegranzi B, Sax H, et al. Evidence-based model for hand transmission during patient care and the role of improved practices. Lancet Infect Dis. 2006;6:641-652.
- Webster J, Faoagali J, Cartwright D. Elimination of methicillin-resistant Staphylococcus aureus from a neonatal intensive care unit after hand washing with triclosan. J Paediatr Child Health. 1994;30:59-64.

**Opportunity:**

- Opportunity for improvement exists, based on the coefficient of variation for the measure.

**Evidence:**

- Pre-post studies of HAI rates with implementation of hand hygiene protocols, observational studies of hand hygiene compliance and HAIs, expert opinion

**Citations for Evidence:**

- Boyce JM, Laughman JA, Ader MH, et al. Impact of an automated hand hygiene monitoring system and additional promotional activities on hand hygiene performance rates and healthcare-associated infections. *Infection Control & Hospital Epidemiology*. 2019 Jul;40(7):741-7.
- Guideline for hand hygiene in health-care settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HIC-PAC/SHEA/APIC/IDSA Hand Hygiene Task Force. Atlanta (GA): Centers for Disease Control and Prevention; 2002. *MMWR* 2002; 51(RR-16):1-45.
- Pincock T, Bernstein P, Warthman S, Holst E. Bundling hand hygiene interventions and measurement to decrease health care-associated infections. *American Journal of Infection Control*. 2012 May 1;40(4):S18-27.
- Pittet D, Hugonnet S, Harbarth S, et al. Effectiveness of a hospital-wide programme to improve compliance with hand hygiene. *The Lancet*. 2000;356(9238):1307-1312.
- Webster J, Faoagali J, Cartwright D. Elimination of methicillin-resistant *Staphylococcus aureus* from a neonatal intensive care unit after hand washing with triclosan. *J Paediatr Child Health*. 1994;30:59-64.
- World Health Organization. Hand hygiene self-assessment framework 2010. Available at [https://www.who.int/gpsc/country\\_work/hhsa\\_framework\\_October\\_2010.pdf?ua=1](https://www.who.int/gpsc/country_work/hhsa_framework_October_2010.pdf?ua=1)