

The Hawthorne Effect Is Skewing Your Hand Hygiene Data

For decades, there has been an industry-wide focus on reducing the prevalence of healthcare-associated infections (HAIs)—and the corresponding impacts on patient health and the cost of care. These infections affect 5% of all hospitalized patients and are linked to almost 100,000 deaths per year in the United States alone.¹

Today, we know that healthcare workers' hand hygiene is one of the most important causative factors related to the spread of HAIs. Up to 40% of all HAIs are transmitted to patients from hospital employees.²

Growing awareness of this problem has compelled regulatory authorities to take action. Both the World Health Organization and the Centers for Disease Control and Prevention have released hand hygiene guidelines urging healthcare providers to emphasize the importance of routine hand washing and sanitizing.^{3,4} More importantly, accrediting agencies now require hospitals to measure and improve hand hygiene compliance as part of their infection control programs.⁵

Hand hygiene has gradually improved in the healthcare sector as a result of the institutional focus on the problem. However, compliance rates are still believed to be lower than 50% in the United States.⁶

It remains difficult to measure hand hygiene rates accurately. Conventional approaches are plagued by small sample sizes, subjective observation methods, and inconsistent data capture and reporting processes. All of these factors reduce the integrity of compliance data.

At the same time, direct observation induces a phenomenon referred to as the Hawthorne Effect: the tendency of individuals to improve their behavior when they are being watched.

The Hawthorne Effect Inflates Reported Hand Hygiene Rates

A recent study published in the *BMJ Quality & Safety Journal* found that hospital staffers wash their hands three-times as often when there is a visible auditor present.⁷

Researchers used an electronic monitoring system to measure compliance rates in multiple areas of a major acute care hospital. They compared the rate of hallway hand washing before and after the arrival of an observer, controlling for variations related to location and time of day. Both the workers under observation and the observers themselves were blind to the purpose of the study.

These findings suggest that current methods of observation are not providing an accurate measurement of hand hygiene compliance rates.

Despite its shortcomings, direct observation remains a useful component of infection control programs. Human observers can recognize nuanced hand hygiene issues that contemporary electronic monitoring systems may not be able to detect or act upon.

However, current observation practices are so labor-intensive that auditors typically have little time for coaching workers on their technique. Moreover, we know that the Hawthorne Effect prevents observers from understanding how workers actually behave on a day-to-day basis, further impeding clinicians' ability to stage effective interventions.

New Technologies Enable Accurate, Efficient, and Reliable Measurement

Given the limitations of direct observation, it seems increasingly clear that new electronic monitoring technologies have a significant role to play in enabling more accurate measurement of hand hygiene compliance. However, selecting the right technology can be challenging.

Because every hospital is different, there is no effective one-size-fits-all solution. Each facility needs a system that fits its individual needs, goals, and culture. For some, this may be a relatively simple application that improves the efficiency of direct observation by streamlining data capture and reporting practices. In other cases, the optimal solution may be a more advanced system that automatically records hand hygiene opportunities and events at the group, area, or individual level.

When organizations are reviewing their options, they should search for a vendor that does more than simply provide technology. The best compliance monitoring partner is one capable of providing flexible technology options and ongoing training and support backed by clinical expertise.

¹ Klevens RM, Edwards JR, Richards CL, et al. "Estimating health care-associated infections and deaths in U.S. hospitals," 2002. *Public Health Reports*. 2007.

² Weber DJ, Rutala WA, Miller MB, et al. "Role of hospital surfaces in the transmission of emerging health care-associated pathogens: Norovirus, Clostridium difficile, and Acinetobacter species." *American Journal of Infection Control*. 2010.

³ World Health Organization. *WHO Guidelines for Hand Hygiene in Healthcare*. 2009.

⁴ Centers for Disease Control and Prevention. "Guidelines for Hand Hygiene in Healthcare Settings." 2002.

⁵ Boyce JM. "Electronic monitoring systems—The next generation approach to monitoring hand hygiene compliance." 2014.

⁶ McGuckin M, Waterman R, Govednik J. "Hand hygiene compliance rates in the United States—a one-year multicenter collaboration using product/volume usage measurement and feedback." *American Journal of Medical Quality*. 2009.

⁷ Srigley JA, Furness CD, et al. "Quantification of the Hawthorne effect in hand hygiene compliance monitoring using an electronic monitoring system: a retrospective cohort study." *BMJ Quality & Safety Journal*. 2014.



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