

Your resource for the latest news in effective infection control program development and best practices.

HAND HYGIENE TIMES

Issue 2
Volume 8



Electronic Hand Hygiene Monitoring as a Complement to Direct Observation to Benefit Patient Safety

Megan J. DiGiorgio,
MSN, RN, CIC, FAPIC

Lori Moore
BSN, RN, MPH, CPPS, CHES

The adoption of technology in healthcare is rapidly replacing the manual gathering of data for more efficient measurement of quality of care; however, we currently rely on direct observation (DO) as the gold standard for measuring hand hygiene (HH) performance. Published rates remain low; or, alternatively, we report rates that are inflated. Perhaps our lack of significant, sustainable improvement is inextricably linked to this methodology. It's time to move on and stop relying solely on DO.

The advantages of DO are clear. Each of the 4 Moments of HH can be examined independently, observing for both quality and glove usage often donned as a workaround for performing HH. Additionally, on-the-spot feedback and coaching can be invaluable in providing education and identifying root causes for missed opportunities.

However, published literature has shown that HH opportunities (HHO) gathered through DO yield only a small portion of all HHO that occur (new data suggest less than 3%).¹ In a study performed in a Canadian emergency department, 300,000 HHO were captured in a 30-day period using an electronic compliance monitoring system (ECM). Visual audits during the same period captured 60 HHO—only 0.02% of those captured through ECM.² There is also no paucity of literature speaking to the Hawthorne effect. One recent study found that HH events (HHE) rates were threefold higher in units where the observer was covert yet visible.³ Inflated rates are deleterious as they may imply that the risk of transmitting harmful organisms via the hands of healthcare workers is low, and therefore, HH may not be elevated

as a strategic priority. It is becoming evident that DO alone is insufficient to manage risk in the wake of the growing burden of healthcare associated infections.

ECM provides non-biased, continuous 24/7 capture of HHO (room entry/exit) and HHE (dispenser) yielding HH compliance rates that more accurately reflect HH behavior. ECM is robust with the ability to capture far more meaningful information to better assess risk. This near real-time data is actionable and allows for timely measurement of the impact of interventions (often difficult through DO).

Some challenge whether room entry/exit can serve as a surrogate for all Moments for HH. Measuring compliance with Moments 2 and 3 through DO is challenging, and the ability for ECM to measure compliance with those moments is even more difficult if not impossible. For those Moments, DO will need to remain the gold standard. However, Boyce recently conducted a review of dozens of studies revealing that Moments 1, 4 and 5 accounted for 489,735 out of 601,988 Moments (81.3%). These data strongly suggest that measuring room entry/exit yields more than acceptable estimates with HH Moments 1, 4 and 5 especially when compared to the very small fraction of HHO captured through DO.

It is well known that good metrics drive strategy.¹ It just makes sense to let ECM do the heavy lifting in collecting HHO and HHE freeing up limited resources for the qualitative aspects of HH, performing audits for Moments 2 and 3 and just-in-time coaching.

1. Boyce JM. Electronic monitoring in combination with direct observation as a means to significantly improve hand hygiene compliance. *Am J Infect Control.* 2017;45:528-535.
2. Bialachowski A, Coffin T, deJager J, Wagner P. Electronic hand hygiene monitoring in the emergency department: charting new territory. Oral abstract presented at: Infection Prevention and Control Canada National Education Conference: May 15-18, 2016; Niagara Falls, Ontario.
3. Srigley JA, Furness CD, Baker GR, Gardam, M. Quantification of the Hawthorne effect in hand hygiene compliance monitoring using an electronic monitoring system: a retrospective cohort study. *BMJ Qual Saf.* 2014;23:974-980.

PRODUCT FEATURE



GOJO® SMARTLINK™ HAND HYGIENE SOLUTIONS

For over 70 years, GOJO has been a leader in the areas of infection control and skin science. We invented PURELL® Instant Hand Sanitizer and advanced the science of hand hygiene. And we know that hand hygiene monitoring can reduce hospital-associated infections (HAI), saving lives while reducing the costs associated with infection prevention. That is why GOJO has made long-term investments in electronic monitoring technology. After rigorous testing in hospitals involving hundreds of thousands of logged opportunities and events, we're proud to provide GOJO SMARTLINK Hand Hygiene Solutions. These comprehensive solutions can help you improve and sustain your hand hygiene performance rate and ultimately help reduce the spread of infection.



For details on our product offering, please contact us at 800-321-9647 or SMARTLINK@GOJO.com

The Right Components to Build and Sustain Performance

GOJO SMARTLINK Hand Hygiene Solutions

Innovative Measurement Tools

GOJO SMARTLINK makes it easy to monitor staff performance by converting real-time data into actionable information. Whether you choose one tool to fit a specific need, or combine all of our capabilities into one complete solution, GOJO SMARTLINK can help you reach your compliance goals.

GOJO SMARTLINK Activity Monitoring System

The GOJO SMARTLINK Activity Monitoring System (AMS) is used to automatically track soap and sanitizer dispenser activations and calculate hand hygiene performance at a group or area level. The system accurately captures dispenses (events) and room entries and exits (opportunities), and can be configured to monitor and measure hand hygiene performance by facility, floor, unit, or room. Ask about our [FREE 60-day trial!](#)

GOJO SMARTLINK Integrated Technology

GOJO SMARTLINK technology integrates with many of the industry-leading Real-Time Locating Systems (RTLS) providers, as well as stand-alone hand hygiene monitoring technologies. This provides you with the flexibility to choose a hand hygiene monitoring solution that meets your needs.

GOJO SMARTLINK Observation System

With the GOJO SMARTLINK Observation System, the electronic collection and collation of hand hygiene performance data allows for instant access to real-time performance data via a secure, web-based portal, allowing you to track your facility's progress and make improvements in real time. Ask about our [FREE 90-day trial!](#)



Seamlessly Integrated

GOJO SMARTLINK Hand Hygiene Technology is engineered to easily fit into GOJO touch-free dispensers, eliminating the need for special equipment. Once the module is in place, it can monitor real-time use and transmit that data for review.

Expert Support

GOJO SMARTLINK Clinician-Based Support bridges clinical expertise and innovative technology to lead the advancement of hand hygiene performance within your facility and provides specialized skill sets, unique perspectives, and innovative techniques to help foster and maintain quantifiable hand hygiene improvement.

Better Products, Safer Facilities

Performance monitoring technology is only the beginning. A total hand hygiene performance solution that includes the proven germ-killing formulations of PURELL Advanced Instant Hand Sanitizer and GOJO hand soaps can create a healthier, safer environment.