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# HAND HYGIENE TIMES

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

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The adoption of technology in healthcare is rapidly replacing the manual gathering of data for more efficient measurement of quality of care; however, we still 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 five moments of HH can be examined independently, observing for quality and also glove usage (often donned as a surrogate 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%).<sup>1</sup> In a study performed in an 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.<sup>2</sup> There is also no paucity of literature speaking to the Hawthorne effect. One recent study found that hand hygiene rates were threefold higher in units where the observer was covert yet visible.<sup>3</sup> 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 health-care associated infections.

ECM provides non-biased, continuous 24/7 capture of HHO (room entry/exit) and HH events (dispenser actuation) 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).

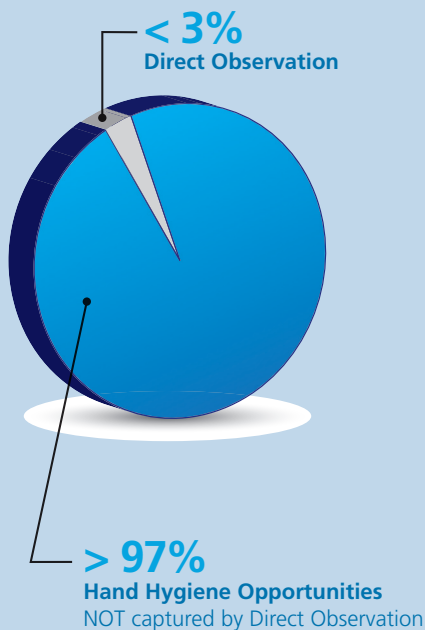
Some challenge whether room entry/exit can serve as a surrogate for all Moments for HH. Measuring compliance with 5 Moments 2 and 3 through DO is challenging, and the ability for ECM to measure compliance with those moments is even more difficult if not impossible. For those Moments, DO will need to 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%).<sup>1</sup> 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. It just makes sense to let ECM do the heavy lifting in collecting HHO and HH events 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

**97% of  
Hand Hygiene  
Opportunities  
are missed in Direct  
Observation<sup>2</sup>**



## EFFECTIVE 1/1/18

The Joint Commission will issue an RFI for any observed failure of an individual to perform hand hygiene during direct patient care.<sup>1</sup>

GOJO SMARTLINK™ electronically monitors hand hygiene 24/7. When combined with clinical interventions, scientifically proven PURELL formulations, and advanced dispensing platforms, our solution is proven to increase hand hygiene performance 82% over baseline.<sup>3</sup>



### ACTIVITY MONITORING SYSTEM

Accurately captures dispenser events and opportunities to calculate hand hygiene performance at a group or area level.

### INTEGRATED TECHNOLOGY

Provides the flexibility of integrating GOJO SMARTLINK dispensers with Real-Time Locating System (RTLS) infrastructure, or stand-alone hand hygiene monitoring systems, to enable person-specific hand hygiene monitoring.

### CLINICIAN-BASED SUPPORT

Bridges clinical expertise and innovative technology to help build and sustain hand hygiene improvement.

### SERVICE ALERTS

Easily integrates with the GOJO®SMARTLINK™ Activity Monitoring System to ensure product is available for critical hand hygiene moments by alerting to low product refills or batteries.

For more information on how you can more effectively monitor hand hygiene performance, **call 1-800-321-9647 or visit [www.GOJO.com/SMARTLINK](http://www.GOJO.com/SMARTLINK)**

#### Citations:

<sup>1</sup> The Joint Commission Requirement Update

<sup>2</sup> Boyce JM. Measuring healthcare worker hand hygiene activity: Current practices and emerging technologies. *Infect Control Hosp Epidemiol* 2011;32(10):000-000.

<sup>3</sup> GOJO Customer Data on File – January 2015 – July 2016

