

The Art and Science of Influencing Hand Hygiene

To the Editor—We read with great interest the study by Kohli et al¹ that demonstrated the Hawthorne effect on rates of hand hygiene compliance. It was noted that this effect was variable on units with different baseline hand hygiene performance. We wanted to add some nuances that we think are applicable to studies that attempt to elucidate the perceivable influence of observation on the behavior of healthcare providers.

First, we want to comment on the variability of the “infection control professional (ICP) Hawthorne effect.” In circumstances in which a known ICP is the observer, his or her influence may vary in terms of both the durability and the magnitude of the impact on those subject to the observations. We have noticed that some ICPs in our institution have an authoritative personality and tend to aggressively and unabashedly reinforce the practice of hand hygiene when non-adherence is identified. Other ICPs can certainly process epidemiologic data with agility but assume a more docile, nonconfrontational form of intervention. Ultimately, to some extent the ICP Hawthorne effect is driver dependent. This phenomenon could serve as an explanation for the study differences between unit A that was “assigned to one particular ICP, and units B and C [that] were regularly assigned to another particular ICP.”

We find that some studies do not clarify how one views hand hygiene opportunities. If the “before” encounter and “after” encounter are measured as independent opportunities, our understanding of compliance (which should measure 2 potential opportunities for each room entry event) becomes clouded. If 10 opportunities “before” the encounters (for events 1–10) were in compliance, but all 10 of the “after” encounters (for events 1–10) lacked in compliance, it would be more accurate to mark these as 10 episodes of zero compliance. If each opportunity was viewed independently, it would falsely increase rates of compliance.

Last, we want to emphasize that it is difficult to form conclusions on the limited observational data provided in the study. For example, the 54 observations made by the ICP in unit A (an intensive care unit) occurred during a 5-month period. This fact implies that approximately 3 observations were made per week (on average). These data would be even harder to extrapolate in an intensive care unit setting. The intensive care unit typically has a well-defined (nonvariable) group of people who would likely make observations skewed to capture the behavior of the same healthcare providers. We do note that fewer observations were made in unit A because of higher baseline hand hygiene compliance rates, but analyzing 2 groups in an observational study with comparable numbers would strengthen the comparisons made.

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1. Kohli E, Ptak J, Smith R, Taylor E, Talbot EA, Kirkland K. Variability in the Hawthorne effect with regard to hand hygiene performance in high- and low- performing inpatient care units. *Infect Control Hosp Epidemiol* 2009; 30:222–225.

Reply to Sahud and Bhanot

To the Editor—We appreciate the comments of Sahud and Bhanot.¹ We acknowledge the limitations of a small observational study such as ours, and we hope that the hypotheses it generated will be tested and extended in other studies.

With regard to the possible “driver dependence” of the Hawthorne effect we observed, we have tried to minimize this effect by keeping the audit function independent of education and the reinforcement or correction of behavior. In our study and in our regular surveillance program, hand hygiene observers do not provide any direct feedback to staff at the time of audits. Instead, we engage unit managers in using local data to provide feedback to their staff.

The World Health Organization’s Clean Care is Safer Care global patient safety challenge identifies not just 2 but “five moments for hand hygiene.”² We focus on 2 of the 5 moments (before patient care and after patient care) to measure hand hygiene performance, and we recognize that this audit is simply a snapshot of ongoing performance. In our opinion, it is not wrong to consider each opportunity separately, although details on which opportunities are taken and which are not can allow for more-targeted interventions. On the other hand, from a patient’s perspective, it may take just one failure to practice hand hygiene to transmit a new pathogen or to contaminate a central line. It is interesting to consider what hand hygiene performance measures would look like if we defined 100% hand hygiene as a hospitalization without any failures by healthcare workers to clean their hands appropriately. We imagine that all of us would have opportunities to improve!