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Hand Hygiene Audits Overreport Compliance

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Physicians and nurses are significantly more likely to comply with handwashing guidelines when they know they are being watched, a new study suggests. The finding, published online July 5 in the *Journal of Hospital Medicine*, suggests traditional methods, such as the use of overt auditors, for monitoring clinician adherence to hand hygiene protocol may substantially overreport compliance.

The World Health Organization (WHO) recommends healthcare providers clean their hands before and after touching a patient or their surroundings and before any procedure, as well as if they come into contact with bodily fluids.

To determine whether and to what degree a phenomenon called the Hawthorne effect, in which individuals alter their behavior when they know they are being watched, influences hand hygiene behavior among physicians and nurses, Adam Kovacs-Litman, BSc, from the Centre for Quality Improvement and Patient Safety at the University of Toronto, Ontario, Canada, and colleagues compared rates of compliance measured by covert observers and overt auditors during a 2-month period.

Of 1597 moments of hand hygiene recorded by two covert observers during clinical rotations at an 800-bed acute care academic hospital between May 27, 2015, and July 31, 2015, only 50% (799) were in compliance with guidelines. In contrast, compliance was seen in 83.7% (2769) of the 3309 moments recorded by overt hospital auditors during the same period.

Among physicians, the covert vs overt compliance rates were 54.2% and 73.2%, respectively. The difference between the two rates was even greater among nurses, with the covert observers documenting 45.1% compliance compared with 85.8% reported by the overt auditors.

The decrease in performance differences between physicians and nurses when neither group was aware their hand hygiene was being measured suggests "healthcare professions are differentially affected by the Hawthorne effect," the authors note. "This difference may be explained by the continuity of nurses on the ward that makes them more aware of visitors like [hand hygiene] auditors, compared with physicians who rotate periodically on the ward."

When assessed by timing and clinical scenario, the covert observations showed compliance rates of

- 43.1% before contact with the patient or patient environment,
- 74.3% before clean/aseptic procedures,
- 34.8% after potential body fluid exposure,
- 56.8% after contact with the patient or patient environment,
- 74.8% when examining patients with isolation precautions, and
- 47.0% in the absence of isolation precautions ($P < .0002$).

With hospital auditors present, compliance rates were similarly high in surgery (91.0%) and medicine (85.0%) and lower in the emergency department (73.8%). On covert observation, compliance rates in surgery, medicine, and the emergency department were 58.9%, 45.7%, and 43.9%, respectively, the authors report.

The assessment of covertly observed compliance by physician type showed that primary teams were less compliant than consulting services (50.4% vs 57.0%), and rounding teams with fewer than three members were less compliant than those with three or more members (42.0% vs 62.1%).

Notably, the authors write, "trainee [hand hygiene] compliance improved markedly when attending staff cleaned their hands and decreased markedly when they did not," even though the presence of an attending physician did not affect trainee compliance, indicating the importance of role modeling appropriate behaviors.

The study findings suggest that even though hospital auditors "play a central role in [hand hygiene] education through in-the-moment feedback," using the information as performance benchmarks can lead to "inappropriate inferences" about compliance, the authors write.

The covert observations also provided insight into hand hygiene motivation. "Self-preservation behaviors were common among both nurses and physicians, as [hand hygiene] compliance was consistently higher after patient contact compared to before or when seeing patients who required additional precautions," the authors write, noting that the perceived risk for transmission appears to be a powerful motivator.

The data indicate that "all healthcare workers have tremendous room for improvement" with respect to hand hygiene, the authors write. More accurate compliance-monitoring systems and the promotion of strong attending physician leadership to set examples for trainees can help bridge the gap between recommended hand hygiene and what is actually being practiced, they note.

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