

“Hand hygiene surveillance programs that rely on direct observations of healthcare worker activity may be limited by the Hawthorne effect.” Yin et al (2014).

Reference:

Yin, J., Reisinger, H.S., Weg, M.V., Schweizer, M.L., Jesson, A., Morgan, D.J., Forrest, G., Graham, M., Pineles, L. and Perencevich, E.N. (2014) Establishing Evidence-Based Criteria for Directly Observed Hand Hygiene Compliance Monitoring Programs: A Prospective, Multicenter Cohort Study. *Infection Control and Hospital Epidemiology*. 35(9), p.1163-1168.

Evidence-based criteria for directly observed hand hygiene compliance [#ivteam](http://ctt.ec/1C_4P+@ivteam)

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Abstract:

Objective: Hand hygiene surveillance programs that rely on direct observations of healthcare worker activity may be limited by the Hawthorne effect. In addition, comparing compliance rates from period to period requires adequately sized samples of observations. We aimed to statistically determine whether the Hawthorne effect is stable over an observation period and statistically derive sample sizes of observations necessary to compare compliance rates.

Design: Prospective multicenter cohort study.

Setting: Five intensive care units and 6 medical/surgical wards in 3 geographically distinct acute care hospitals.

Methods: Trained observers monitored hand hygiene compliance during routine care in fixed 1-hour periods, using a standardized collection tool. We estimated the impact of the Hawthorne effect using empirical fluctuation processes and F tests for structural change. Standard sample-size calculation methods were used to estimate how many hand hygiene opportunities are required to accurately measure hand hygiene across various levels of baseline and target compliance.

Results: Exit hand hygiene compliance increased after 14 minutes of observation (from 56.2% to 60.5%; $P < .001$) and increased further after 50 minutes (from 60.5% to 66.0%; $P < .001$). Entry compliance increased after 38 minutes (from 40.4% to 43.4%; $P = .005$).

Between 79 and 723 opportunities are required during each period, depending on baseline compliance rates (range, 35%-90%) and targeted improvement (5% or 10%).

Conclusions: Limiting direct observation periods to approximately 15 minutes to minimize the Hawthorne effect and determining required number of hand hygiene opportunities observed per period on the basis of statistical power calculations would be expected to improve the validity of hand hygiene surveillance programs.

Other intravenous and vascular access resources that may be of interest (External links - IVTEAM has no responsibility for content).

- [Guide for intravenous chemotherapy and associated vascular access devices from Macmillan.](#)
- [CancerUK IV chemotherapy information.](#)

