

Study shows hospital hand hygiene rates may be worse than reported

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Credit: Karolina Grabowska from Pexels

Hospital staff pay dramatically less attention to hand hygiene when they feel no one is watching, a new study reveals. The research suggests government reported compliance rates are overstated.

UNSW medical researchers have found that [hand hygiene](#) rates in hospital staff drop sharply when humans undertaking [compliance](#) monitoring are replaced by machines.

A government-led mandatory hand hygiene program has operated in Australian hospitals for the past eight years, with human auditors ensuring staff follow hand hygiene guidelines, which require a minimum of 70 percent compliance.

But compliance rates fell from more than 90 percent to 30 percent when the human auditors were relieved by automated surveillance, creating infection risks for patients, the study's authors said.

The researchers compared human and automated methods of surveillance in an Australian teaching hospital over a period of two years. Automated surveillance consisted of hand hygiene dispensers at sinks and bedsides recording hand hygiene by touch, while human surveillance was direct observation of healthcare workers by human auditors.

"Regular hand hygiene among healthcare workers is a cornerstone of hospital hygiene to prevent the transmission of pathogens and potential infection," said lead author UNSW Medicine Professor MaryLouise McLaws, an infection control expert and World Health Organisation health adviser.

"In our study, we found that as soon as human eyes were off the clock outside of the mandatory 20-minute audit and our automated method continued to monitor compliance, hand hygiene compliance went from 94 percent to 30 percent – which is gravely concerning."

This result is an example of the Hawthorn effect, used to describe the phenomenon of people changing their usual behaviour when they know

they are being watched. The study found the magnitude of the Hawthorn effect on direct human auditing produced inflated compliance rates.

In the Australian health system, hospital-wide standards of hand hygiene are enforced by the Australian National Hand Hygiene Initiative, a program introduced in 2010 by Hand Hygiene Australia. The mandatory program requires Australian hospitals to perform audits to ensure staff are complying with hand hygiene guidelines. The current standard is direct human observation for 20 minutes daily on wards. Hospital-wide compliance rates are published on the MyHospitals Australia website for public viewing.

"To date, no one has attempted to quantify potential errors in compliance rates since the Australian hand hygiene initiative was introduced eight years ago," said Professor McLaws.

"The government has been telling us that compliance is high. Our study shows that this may not be the case – which is why we need greater investment into technology-based methods of auditing to determine how high compliance really is, rather than a dependence on human auditors.

"In addition to this, a national behaviour change program needs to be implemented, such as getting back to basics by focusing on mandatory compliance before every patient contact.

"At the moment, clinicians are more likely to practice good [hand hygiene](#) after contact than before, due to a perceived need for self-protection, so their attitudes need to be challenged," said Professor McLaws.

The work has been published in the *American Journal of Infection Control*.

More information: Mary-Louise McLaws et al. Hand hygiene compliance rates: Fact or fiction?, *American Journal of Infection Control* (2018). [DOI: 10.1016/j.ajic.2018.03.030](https://doi.org/10.1016/j.ajic.2018.03.030)

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