

Guest editorial

Hand hygiene – ‘big brother is watching you’

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Editorials about hand hygiene are all starting to read the same and, unfortunately, despite my best efforts, this one will be no different. To recap, we know that improvements in hand hygiene in hospitals are associated with decreases in hospital-acquired infection rates, we know healthcare workers are poorly compliant with hand hygiene practices and we know some predisposing factors for non-compliance. What we don't know is how to change healthcare workers into people who wash their hands reliably and well and the way to maintain this change.

The most compelling example of sustained change in healthcare worker hand-hygiene practices associated with a concomitant reduction in hospital-acquired infections and reduction in transmission of methicillin-resistant *Staphylococcus aureus*, has been provided by the campaign promoting hand hygiene at the University of Geneva Hospitals. In this campaign, the use of bedside antiseptic hand rubs was promoted by a multimodal strategy that included repeated monitoring of compliance and performance feedback, communication and education tools, constant reminders in the work environment, active participation and feedback at both individual and organisational levels, and involvement of institutional leaders¹.

Pittet and others have reported that, while more difficult and expensive than single-action strategies, multimodal intervention strategies are required to induce sustained behavioural change. When designing future campaigns, it would be useful to tease out the impact of different components of a multimodal strategy to identify the most effective combination. This will not be easy in practice and results obtained in one healthcare institution may not be reproducible at another. A better strategy may be for each institution to select components of reported strategies that could be readily applied in their own setting and then to test the impact of these on hand hygiene compliance rates and rates of hospital-acquired infection. This will, of course, require repeated healthcare worker hand-hygiene compliance surveys.

The most accurate way to study healthcare worker hand-hygiene compliance is by direct observation. Observational hand-hygiene surveys are usually unpopular, probably because healthcare workers feel uncomfortable about being watched. However, the effect on the subject of being observed (the Hawthorne effect) tends to increase compliance and contributes significantly to the outcome. Researchers have viewed the Hawthorne effect as an unintended consequence of observational studies since it contributes to altered behaviour that may not be sustained when the period of observation is over. Interestingly, Pittet has a much more positive approach to the Hawthorne effect, viewing it as an integral component of the hand hygiene

campaign and going so far as to say ‘... obtaining a sustained and never-ending Hawthorne effect associated with improved compliance with hand hygiene and decreased infection and cross-transmission rates should be the dream of every hospital epidemiologist’².

Three papers relating to different aspects of hand hygiene are presented in this edition of Australian Infection Control. The study by Flynn *et al*³ provides information about handwashing practices in Australia and New Zealand and confirms that healthcare workers commonly have dry/damaged hands. Unfortunately, the trial design did not allow for correlation between hand hygiene practices and skin damage in individuals but the implication is that the availability of less damaging hand hygiene products might increase compliance. Two studies examined hand hygiene compliance, one competency testing and the other auditing compliance. The study by van de Mortel and Murgo⁴ examined the relationship between theoretical knowledge and practice and showed that greater knowledge did not predict greater compliance. This supports Pittet's argument that education alone is unlikely to be sufficient to promote practice change. Finally, the paper by Brown *et al*⁵ provides a standardised tool for assessing hand hygiene compliance. This describes the methodology developed at Austin Health for evaluating the effectiveness of the Debug Infection Prevention Program in encouraging the use of bedside alcohol-chlorhexidine hand rubs. The repeated use of tools such as this will be necessary to continually refine hand hygiene promotional campaigns in healthcare institutions.

These three articles add to the picture we have of current hand-hygiene practices in Australia. The University of Geneva Hospitals have demonstrated that behavioural theory can be translated into practice and that the ultimate beneficiary is the patient. It is now up to each healthcare institution to take up the challenge, develop a hand-hygiene campaign appropriate to their setting and demonstrate improved patient outcomes as a result.

References

- (1) Pittet D, Hugonnet S, Perneger TV *et al*. Effectiveness of a hospital-wide programme to improve compliance with hand hygiene. *Lancet* 2000; 356: 1307-1312.
- (2) Pittet D. Promotion of Hand Hygiene: Magic, Hype or Scientific Challenge? *Infect Control Hosp Epidemiol* 2002; 23: 118-119.
- (3) Flynn *et al*. Skin condition & hand hygiene practices of Health Care Workers in Australia & New Zealand 2005. *Aust Inf. Control* p59-66.
- (4) van de Mortel and Murgo. Hand hygiene competence in the intensive care unit 2005. *Aust Inf. Control* p46-50.
- (5) Brown *et al*. Hand hygiene: a standardised tool for assessing compliance 2005. *Aust Inf. Control* p51-58.