

## Letter to the Editor

# Smarter cleaning is safer for health

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*To the Editor*—Monash Health began testing a chemical-free cleaning methodology in 2011. A staged implementation was completed by 2015 to include environmental cleaning of all intensive care units (adult, pediatric, and neonatal), all operating suites, aged care facilities and special care nurseries.<sup>1</sup>

Monash Health is the largest health service in Victoria, Australia, with 40 care sites. It provides care from birth to aged care. The new cleaning system saves water (90% less is used for cleaning), is environmentally friendly and microbiologically safe, and poses fewer occupational, health, and safety risks.<sup>2</sup> The chemical-free cleaning is used universally, regardless of a known or perceived infectious risk.

Few Victorian or Australian health services use this system as a method of cleaning environmental surfaces or for healthcare workers (HCWs) to clean medical equipment.

Across Australia, most health services continue to use chemical disinfection to meet clinical cleaning requirements. However, environmental stress fractures have been documented in Victorian health services, prompting an alert by the insurance authority.<sup>3</sup> Review of the manufacturer's instructions for 3 commonly used products (detergent combined with disinfectant) revealed that a 2- or 3-step process is required. Organic matter must be removed before applying the detergent/disinfectant for a minimum contact time of 5–10 minutes (depending on the product), and finally, the surface must be thoroughly rinsed with water.

Prior to the introduction of these new products, cleaning involved a 2-step process of cleaning with detergent and then disinfection with another product.<sup>4</sup> Anecdotal evidence suggests that the manufacturer's instructions are not applied because health services implemented the combined detergent–disinfectant product to save time.

At Monash Health disposable microfibre cloths are used for HCW cleaning of equipment and reusable microfibre cloths are used by cleaning staff. Reusable cloths are laundered in laundry facilities that comply with the Australian Standard AS4160:2000 Laundry Practice. Both disposable microfibre and reusable cloths demonstrate effectiveness in removing bacteria.<sup>5</sup>

Across Victoria, 11 health services use this chemical-free method to clean environmental surfaces for acute and aged care

in public and private facilities. Since fully implementing the chemical-free cleaning, the Monash Health infection control team has been surprised that the time spent managing outbreaks has decreased. A study of norovirus and suspected viral gastroenteritis outbreaks confirmed that Monash Health has had an annual 12% reduction from 2006 to 2016 compared with all Victorian health services, which reported a 6% reduction overall ( $P < .001$ ).<sup>6</sup>

The novel cleaning system has application for other industries in addition to healthcare. These include agriculture, veterinary science, child care, and education. It may also be useful in areas where water is in short supply.

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### Acknowledgments.

**Financial support.** No financial support was provided relevant to this article.

**Conflicts of interest.** The author reports no conflicts of interest relevant to this article.

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**Cite this article:** Gillespie EE. (2019). Smarter cleaning is safer for health. *Infection Control & Hospital Epidemiology*, 40: 947, <https://doi.org/10.1017/ice.2019.144>