

Tackling contamination of the hospital environment by methicillin-resistant *Staphylococcus aureus* (MRSA): a comparison between conventional terminal cleaning and Hydrogen Peroxide Vapour decontamination.

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We conducted a prospective study to investigate environmental contamination with MRSA and compare the impact of conventional terminal cleaning with a novel method, Hydrogen Peroxide Vapour (HPV) decontamination. We investigated environmental contamination with MRSA by surface swabbing before and after conventional terminal cleaning compared with HPV decontamination. All areas tested were contaminated with MRSA, MRSA was common in sites that might transfer organisms to the hands of staff and was isolated from areas and bed frames used by non-MRSA patients. 74% of 359 swabs taken before cleaning yielded MRSA. After cleaning, all areas remained contaminated, with 66% of 124 swabs yielding MRSA. In contrast, after exposing six rooms to HPV, only one of 85 (1.2%) swabs yielded MRSA, by enrichment culture only. The process was accepted well by ward staff and was seen as a positive intervention, despite logistical considerations such as vacation of areas to be decontaminated. The hospital environment can become extensively contaminated with MRSA that is not eliminated by standard cleaning methods. In contrast, HPV decontamination is a highly effective method of eradicating MRSA from rooms, furniture and equipment. This research has prompted further work in the NHS and overseas to investigate the importance of environmental contamination and the utility of HPV decontamination.



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