

orthopaedic surgery. Local policy recommends that any past MRSA-positive patient being admitted to any ward is screened and pre-emptively decolonized, but not necessarily isolated in single rooms due to limited availability of isolation facilities. Nursing staff may initiate the first three doses of decolonization using a patient group direction (PGD) arrangement (this permits the supply of prescription-only medicines to groups of patients, without individual prescriptions).

We audited the impact of the change in screening strategy on the management of past MRSA-positive patients who were admitted to any ward by measuring rates of admission screening and prescription of topical decolonization during admission. Two three-month admission periods, immediately before and after the change in screening strategy, were studied. The first admission period was August 1<sup>st</sup>, 2015 to October 31<sup>st</sup>, 2015 and the second admission period was November 1<sup>st</sup>, 2015 to January 31<sup>st</sup>, 2016. Patients were included if they had MRSA recovered from any site during one-year prior to admission, and if an electronic prescription chart was used. Data were collected from the laboratory information management system and electronic prescription charts.

There were 79 admissions of past-positive patients in the first admission period, compared with 59 admissions in the second period after the change in screening strategy. The screening rate of past-positive patients on admission decreased from 82% to 64%; however, the rate of commencement of decolonization treatment increased from 29% to 37%.

The reduction in the MRSA screening rate for past-positive patients could be a result of the change in the screening strategy. We identified a mismatch between screening and decolonization rates, indicating that pre-emptive decolonization is not commenced in synchrony with screening, as per local policy. One explanation for this might be that staff familiarity with local policy has declined over time, with staff turnover playing a role. We plan to address this with staff education sessions and are currently introducing computerized decision aids and online prompts by developing existing software tools (Patientrack, Wells, UK) to facilitate better MRSA screening and decolonization management with a view to re-audit practice after implementation of these interventions.

Successful identification and management of past MRSA-positive patients who are admitted to hospital is multifactorial and depends on local hospital factors such as staff education and the ability of electronic patient records to assist with patient identification.<sup>3</sup> Electronic alert systems together with isolation precaution orders from infection prevention teams have been found to be effective in improving the implementation of isolation procedures for patients with multidrug-resistant bacteria.<sup>4</sup>

Moving away from universal MRSA screening may require hospitals to dedicate more resources and develop existing patient databases and computerized decision aids to identify past MRSA-positive patients. We suspect that our experience will be generalizable to other hospitals that have also changed screening strategy.

#### Conflict of interest statement

None declared.

#### Funding sources

None.

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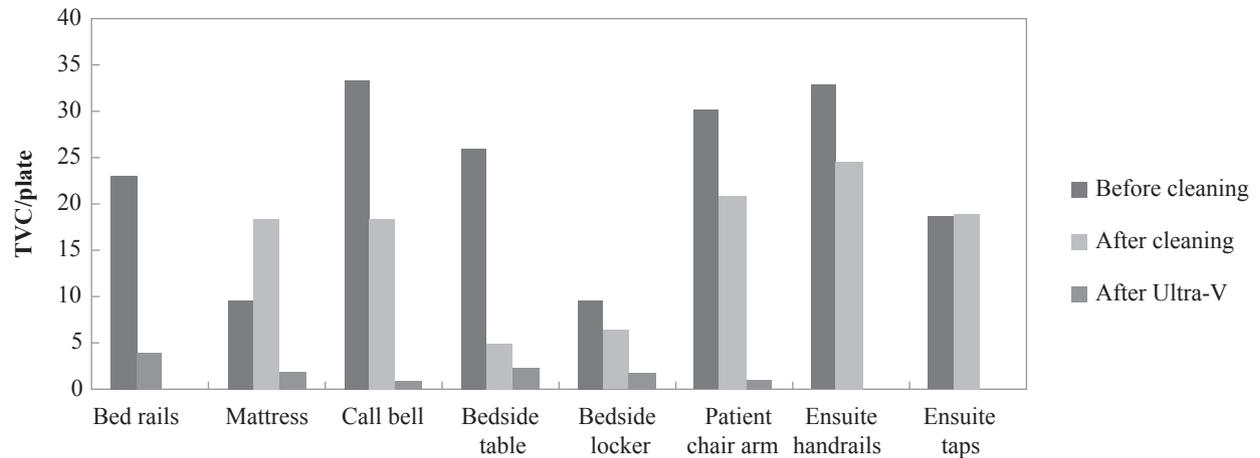
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## Evaluation of the Ultra-V<sup>TM</sup> (ultraviolet) decontamination system as an adjunct to cleaning in a district general hospital



Sir,

Wye Valley NHS Trust is a small district general hospital in Hereford in the west of England. Currently a hydrogen peroxide decontamination system is used to decontaminate side rooms following cleaning with a chlorine dioxide disinfectant. Decontamination of each side room takes about 6 h and this represents a challenge to implement with current



**Figure 1.** Total viable count (TVC) results from 160 touchpoint surfaces in 20 hospital rooms before and after cleaning, and after Ultra-V treatment.

pressures on bed use. The efficacy of the Ultra-V™ system was evaluated as it had the potential to decontaminate rooms in 15–30 min.

The study evaluated the efficacy of the Ultra-V system (Hygiene Solutions, King's Lynn, UK) in 20 rooms in our hospital. These included side rooms, a sluice, a shower room, and a cubicle in the emergency department. Sampling was undertaken using Pro-Tect trypticase soya agar contact plates (Oxoid, Basingstoke, UK) and contact sampling touch points were: bed rails, bed mattress, patient call bell, bedside table, bedside locker, patient chair, ensuite handrails, and ensuite sink taps. Sampling was undertaken pre and post manual cleaning and after deployment of the Ultra-V decontamination system. Surfaces were cleaned with Tristel Fuse chlorine dioxide disinfectant (Tristel Solutions, Snailwell, UK).

Twenty rooms and 160 touch points were sampled. The average total viable count (TVC) per contact plate before cleaning was 27.4; after cleaning 19.3; and after the Ultra-V system 2.3. The Ultra-V technology was also effective when assessed by sampling at each of the touchpoints (Figure 1). In two touchpoints, routine cleaning yielded no reduction in TVCs, whereas the Ultra-V technology reduced TVCs in all.

In conclusion, the Ultra-V system demonstrated efficacy in reducing TVCs in key touch points in the patient environment. It was straightforward to use. It was also rapidly

effective with an average of 20 min required for decontamination per room. This reduced delays between rooms being vacated and being available for admission of a new patient.

#### Conflict of interest statement

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Hygiene Solutions undertook deployment and sampling.

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