



The implementation of universal octenidine-based bathing combined with a standardised washing regime led to a significant reduction of nosocomial VRE” Messler et al (2018).

Abstract:

Background: Vancomycin-resistant *Enterococcus faecium* (VRE) is emerging in German intensive care units (ICUs). On a 32 bed surgical ICU at a university hospital increasing numbers of nosocomial cases occurred despite enforcement of hand hygiene and environmental disinfection.

Aim: Introduction of universal octenidine-based bathing in order to reduce the burden of VRE.

Methods: Between 1/2012 and 3/2014 patients were screened for VRE on admission and twice weekly. Active surveillance for VRE infection and colonisation, and for blood stream infections (BSI) with any pathogen was performed. Intervention in this before-after study comprised of standardised octenidine-based bathing. Distinct subgroups of VRE colonisation or infection were defined and used for statistical analysis of frequency, prevalence and incidence density (ID).

Findings: In the pre-intervention period (1/2012 to 4/2013) the admission prevalence of VRE was 4/100 patients and the mean ID of nosocomial cases was 7.55/1000 patient days (PD). Pulsed-field gel electrophoresis analysis revealed prevalence of three vanA and two vanB

clusters. Post-interventionally (8/2013 to 3/2014), the admission prevalence was 2.41/100 patients and the ID 2.61/1000 PDs ($p = 0.001$ (pre vs post intervention)). Nosocomial VRE infections were 10 in the pre- and one in the post-intervention period. Incidence densities of BSI pre- and post-intervention were 2.98 and 2.06/1000 PDs ($p = 0.15$), respectively.

Conclusion: The epidemiology of emerging VRE appeared as a complex mix of admitted cases and transmissions in small clusters, challenging infection control measures. The implementation of universal octenidine-based bathing combined with a standardised washing regime led to a significant reduction of nosocomial VRE.

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Messler, S., Klare, I., Wappler, F., Werner, G., Ligges, U., Sakka, S.G. and Mattner, F. (2018) Reduction of Nosocomial Blood Stream infections and Nosocomial Vancomycin Resistant *Enterococcus faecium* on an Intensive Care Unit After Introduction of Antiseptic Octenidine-based Bathing. *The Journal of Hospital Infection*. November 5th. .

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