

POSTER PRESENTATION

Open Access

Marked reductions in rates of vancomycin-resistant enterococci (VRE) colonization & disease associated with introduction of a routine hospital-wide bleach cleaning program

ML Grayson^{1,2}, AA Mahony^{1*}, EA Grabsch¹, DR Cameron¹, RD Martin¹, M Heland³, M Petty³, S Xie³

From International Conference on Prevention & Infection Control (ICPIC 2011)
Geneva, Switzerland. 29 June – 2 July 2011

Introduction / objectives

To reduce rates of VRE colonization/disease, we introduced a multimodal hospital-wide bleach-based cleaning program (BBCP) that included a new product (sodium hypochlorite 1000ppm + detergent), new standardised (routine and detailed) cleaning practices & modified glove/gown protocols to rely on alcohol-based handrub & sleeveless aprons. Rates of VRE pre- & post-BBCP were compared.

Methods

Patients in 4 high-risk wards (liver transplant, renal, ICU, hem/oncology) were screened on admission & weekly for rectal VRE colonization, & rates were compared pre-BBCP (Period A [6 mo] – Feb-July 2009) vs post-BBCP (Period B1 & B2 – Feb-July & Aug-Jan 2010/11). Rates of VRE bacteremia (per 100 patients blood cultured [100PBC]) & of urinary tract infection [UTI] were compared - Period A vs B1 & B2.

Results

A 37% reduction in newly recognised VRE colonizations was observed post-BBCP (208/1948 patients screened [Period A] vs 181/2129 [Period B1] vs 143/2141 [Period B2], $p < 0.0001$), despite an increase in screening compliance (68.1% vs 74.6% vs 71.9%, $p = 0.061$) and a stable rate of on-admission VRE colonization (38/1461 [2.6%] vs 44/1795 [2.5%] vs 38/1840 [2.1%], $p = 0.34$). VRE bacteremia declined from 0.48/100PBC (14/2935) pre-BBCP to 0.08/100PBC (5/6194) during the 12 mo post-BBCP

($p = 0.0002$), with a reduction in UTI cases (24 [A] vs 19 [B1] vs 17 [B2]).

Conclusion

The BBCP was associated with a significant reduction in rates of both new VRE colonizations (37% decrease) & VRE disease. This approach potentially represents a new paradigm in the management of VRE.

Disclosure of interest

None declared.

Author details

¹Infectious Diseases, Austin Health, Melbourne, Australia. ²Medicine, University of Melbourne, Australia. ³Austin Health, Melbourne, Australia.

Published: 29 June 2011

doi:10.1186/1753-6561-5-S6-P24

Cite this article as: Grayson et al.: Marked reductions in rates of vancomycin-resistant enterococci (VRE) colonization & disease associated with introduction of a routine hospital-wide bleach cleaning program. *BMC Proceedings* 2011 **5**(Suppl 6):P24.

¹Infectious Diseases, Austin Health, Melbourne, Australia
Full list of author information is available at the end of the article