PREvail® DISINFECTANTS

Use Of A Daily Disinfectant Cleaner Instead Of A Daily Cleaner Reduced Hospital-Acquired Infection Rates

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ABSTRACT

Historically, the documentation of effective approaches to eliminating environmental reservoirs to reduce the spread of hospital-associated infections (HAIs) has posed a challenge. HAIs caused by antibiotic resistant organisms, such as vancomycin-resistant enterococci (VRE), methicillin-resistant Staphylococcus aureus (MRSA) and Clostridium difficile, represent a significant impact on patient morbidity and mortality, in addition to the financial burden it has on the healthcare system. This combination emphasizes the importance of being able to assess the role of the environmental disinfection in HAI transmission as well as the degree of cleaning compliance by staff members.

STUDY

The objective of this study was to evaluate whether daily hospital-wide implementation of a disinfectant cleaner based on the patented Accelerated Hydrogen Peroxide® (AHP®) technology, in a disposable wipe system (in replacement of the existing non-disinfectant cleaner), could lead to a significant reduction of HAI rates for MRSA, VRE and C. difficile.

The study was conducted at an acute care tertiary hospital in Canada, which previously utilized a cleaner with cotton rags. During the 12 month study, the facility utilized Accel INTERVention ready-to-use wipes, (also available under the brand names Oxivir Tb, and PREempt RTU) daily in all patient care areas and for all patient-shared items. The housekeeping staff at the intervention site were trained in the use of AHP® wipes prior to the commencement of the study. For each patient zone, 2 wipes were used for the bed, bedside table, chair and leaning edge of the privacy curtain. The common zones used 1 wipe for the room door knob, computer keyboard and mouse, and other items in the common area; three wipes were used in the bathroom (including the door knob). A UV-visible marker system was used to monitor and confirm if surfaces had been wiped with the disinfectant cleaner. During the intervention, housekeeping personnel received same day feedback on cleaning compliance based on UV-visible marker monitoring and were asked to re-clean the sites that were not adequately cleaned.

At the end of the study, the HAI data for the intervention period was compared with the data from the previous three years. The HAI data from the intervention hospital were also compared with the sister hospital in the same city.

RESULTS

The top high-touched sites for all study wards revealed the following compliance when disinfection was executed with a ready-to-use wipe:

- Bathroom sink: 86.5% cleaning compliance
- Tap: 90.7% cleaning compliance
- Toilet bowl: 85.1% cleaning compliance
- Toilet seat: 86.4% cleaning compliance
- Soap dispenser: 84.5% cleaning compliance
- Bedrail: 88.9% cleaning compliance
- Over bed table: 95.4% cleaning compliance
- Call button: 82.1% cleaning compliance
- Floor: 88.7% cleaning compliance
- Commode: 84.3% cleaning compliance

The data revealed that when cleaning compliance was equal or greater than 80%, there was a >20% reduction in HAIs for MRSA, VRE, and C. difficile. For any cleaning compliance, there was still a significant reduction in the cases/10,000 patient days for VRE.

CONCLUSION

This study was important in concluding that when a disposable AHP-based ready-to-use wipe was utilized as a cleaning method on a daily bases to patient care high-touch environmental surfaces with a minimum of 80% compliance, the rates of HAIs caused by C. difficile, MRSA, and VRE were significantly reduced. This study indicated that to achieve HAI reduction there were three key components: a clearly defined housekeeping protocol with education, routine housekeeping cleaning compliance monitoring with staff feedback and a minimum of 80% compliance, and the use of an effective disinfectant cleaner.

IMPLICATIONS FOR AHP®

Providing housekeeping staff with an easy to use and highly effective disinfectant such as AHP® will improve cleaning compliance and reduce HAIs for MRSA, VRE, and C. difficile by >20%.

REFERENCE

Alfa, M.J. et al. (2015). Use of a daily disinfectant cleaner instead of a daily cleaner reduced hospital-acquired infection rates. American Journal of Infection Control 43 (2015) 141-6.

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