Brief report

The value of ready-to-use disinfectant wipes: Compliance, employee time, and costs

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Key Words:
- Environmental services
- Cleaning
- Disinfection
- Practice modalities
- Cost savings

Cleaning and disinfection practices of environmental surfaces are critical interventions for reducing health care-associated infections. We studied the value of ready-to-use cleaning and disinfection wipes compared with the traditional towel and bucket method. When using ready-to-use wipes, we found compliance to be significantly higher, a more rapid cleaning and disinfection process, and potential cost savings. Facilities should consider these products when making environmental services product selections.

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Supported by Clorox Healthcare, which did not play a role in data collection, analysis, writing, or critical review of the study data or manuscript.

Conflicts of interest: None to report.
RESULTS

Nine employees participated in the study: 8 environmental services workers and 1 nurse. The nurse was tasked with cleaning and disinfecting rooms when environmental services employees are not available. The average number of compliance points when using the RTU wipes was 10.6 (standard deviation [SD], 1.3), and the average points when using the cloth and bucket method was 8.1 (SD, 2.4; \( P = .017 \)). Further description of compliance by site can be found in Table 1. Time to completion of the CD assignment using the RTU method versus the bucket method, an average of 15 rooms cleaned per day, an average of 20 minutes in each room, and an employee wage of $10 per hour. R v2.15.1 (R Foundation for Statistical Computing, Vienna, Austria) was used for all analyses.

DISCUSSION

This study indicates that using ready-to-use CD wipes significantly increases compliance with CD practices and results in less personnel time needed to complete the same CD assignment as compared with the bucket method. Furthermore, we were able to determine potential cost savings after implementation of RTU wipes when switching from the bucket method.

The increase in compliance may be due to the ease of use of these products, including the ease of obtaining a new wipe when they become dry or contaminated. Increased compliance with CD processes may lead to a lower environmental bioburden, leading to a decreased risk of transmission of health care-associated pathogens. Interestingly, the surfaces wiped with the RTU product remained wet for much longer than did those wiped with the rags dipped in the bucket. This is due to participants wringing the towel prior to use for the bucket method. However, it is important to note that the surfaces remained wet for the appropriate contact times using both methods. It is unclear as to the potential impact of the wipe material (cotton rags vs RTU wipe material) on compliance observations. For example, it is possible that the RTU material is manufactured such that it smears or removes the fluorescent marker more readily than the cotton rag.

A more rapid CD process can assist the facility with prompt patient transfers and/or admissions. We have experienced significant patient movement locally, putting an exceedingly large strain on environmental services employees. Decreasing the time needed to complete the CD process may allow employees to put more focus on CD practices in other areas of the health care facility (eg, common areas).

There may be some limitations to the RTU wipes. For example, because the wipes and buckets are disposable, potential environmental impacts should be considered (eg, recycling). Furthermore, storage may be an issue for some facilities because a significant amount of product must be maintained to ensure it is available when needed. Our cost savings data are limited in that the calculation only accounts for the costs related to employee time. The actual institutional cost savings after implementing RTU wipes will vary based on the additional costs associated with the RTU wipes. For example, the total cost savings may be dependent on the contract pricing of the product, the number of wipes used per room, and the number of rooms cleaned and disinfected per day. However, the increase in compliance may lead to reductions in HAIs, which may offset any additional product-related costs. Future studies should examine the statistical cost-effectiveness of these products.

In conclusion, this study supports the use of RTU CD wipes over the traditional bucket method. Enhancing environmental processes may reduce the environmental bioburden, leading to reductions in HAIs because of environmentally hardy pathogens.

References