Fig. 1.

Ongoing surveillance is required to determine sustainability of these interventions.

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Enhanced Environmental Cleaning to Reduce Rates of *Clostridioides difficile* Infection on Oncology Units

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Background: *Clostridioides difficile* infection (CDI) is a major contributor to morbidity and mortality in patients with hematologic malignancy. Due to both immunosuppression and frequent antibiotic exposures, up to one-third of inpatients receiving chemotherapy or stem-cell transplant develop CDI. Transmission of *C. difficile* in healthcare facilities occurs due to environmental surface contamination and hand carriage by healthcare workers from colonized and infected patients. We investigated the effectiveness of enhanced room cleaning in collaboration with environmental services (EVS) staff to prevent CDI transmission and infection. Methods: From April 1, 2018, to September 30, 2018, a multimodal enhanced cleaning intervention was implemented on 2 oncology units at the Hospital of the University of Pennsylvania. This intervention included real-time feedback to EVS staff following ATP bioluminescence monitoring. Additionally, all rooms on the intervention units underwent UV disinfection after terminal cleaning. We performed a system-level cohort study, comparing rates of CDI on the 2 study units to historic and 2 concurrent control units. Historic and concurrent control units received UV disinfection only for rooms with prior occupants with MRSA or CDI. All units during the intervention period received education on the importance of environmental cleaning for infection prevention. Mixed-effects Poisson regression was used to adjust for system-level confounders. Results: A median of 1.34 CDI cases per 1,000 patient days (IQR, 1.20–3.62) occurred during the 12-month baseline period. There was a trend toward a reduced rate of CDI across all units during the intervention period (median, 1.19; IQR, 0.00–2.47; $P = .13$) compared with all units during the historical period. Using mixed-effects Poisson regression, accounting for the random effects of study units, the intervention was associated with an incidence rate ratio for *C. difficile* of 0.72 compared to control units (95% CI, 0.53–0.97; $P = .03$). Average room turnaround time (TAT) increased across all units during the study period, from 78 minutes (IQR 74–81) to 92 minutes (IQR, 85–96; $P < .001$). Within the intervention period, TAT was higher on intervention units (median, 94 minutes; IQR, 92–98) compared to concurrent control units (median, 85; IQR, 80–92; $P = .005$). Conclusions: Enhanced environmental cleaning, including UV disinfection of all patient rooms and ATP bioluminescent monitoring with real-time feedback, was associated with a reduction in the incidence of CDI.

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Enhancing Employee Influenza Immunization in a Tertiary-Care Healthcare Setting in the Middle East Using Epic Express Lane Workflow

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Background: Influenza virus illness affects millions. The virus's ability to change yearly and its dependence on private