Sciences grant UL1TR002345 from the National Center for Advancing Translational Sciences (NCATS) of the National Institutes of Health (NIH). The content is solely the responsibility of the authors and does not necessarily represent the official view of the NIH.

Disclosures: None

Doi: 10.1017/ice.2020.524

Presentation Type: Oral Presentation

Mitigating Hospital-Onset Clostridioides difficile: Evaluation of a Standardized Environmental Hygiene Program in Eight Hospitals

Philip Carling, Boston University School of Medicine; Lyndsay O’Hara, University of Maryland School of Medicine; Anthony Harris, University of Maryland School of Medicine; Russell Olmsted, Trinity Health

Background: Despite ongoing efforts over the past 3 decades, hospital-onset Clostridioides difficile infection (HO-CDI) continues to challenge interventions aimed at its prevention and control. We describe the impact of a model environmental services (EVS) program on the incidence of HO-CDI across 8 hospitals that are part of a nationwide integrated health system.

Methods: Eight acute-care hospitals with 44–532 beds (mean, 263 beds) in 6 states with stable endemic HO-CDI incidence densities independently implemented identical sporidical environmental hygiene interventions in 2017. The program combined the use of a hydrogen peroxide/peroxyacetic acid surface disinfectant for all patient-zone hygienic cleaning combined with a structured model EVS cleaning program that included optimized cleaning and disinfection technique, staff training, and auditing with objective performance feedback, which aligned with 2008 HICPAC/CDC categories I and II as well as 2010 CDC Guidance Level II monitoring program recommendations. After a 3-month phase-in, we compared NHSN-reported LabID HO-CDI SIRs for 18 months before and 12 months after implementation of the program. Results were not shared between sites and data were not collated by the authors until a year after the postintervention results were initially available. Multiple possible confounding factors were evaluated and determined not to have identifiably affected the outcome. Results: Mean preintervention HO-CDI SIRs over the 18 months measured ranged from 0.5 to 1.4 (mean, 1.0 for the group). Following the wash-in period, SIRs decreased precipitously in all sites to a mean of 0.42 for the group by the end of 12 months of the intervention. (P < .0001) (Fig. 1). Individual site improvement ranged from 20% to 92% (mean, 57%) (Fig. 2.) Conclusions: Overall, HO-CDI SIRs decreased almost 60% in the study hospitals following daily sporidical disinfection cleaning of all patient-zone surfaces in association with ongoing programmatic optimization of cleaning practice. As predicted by earlier single-site studies reporting a favorable impact of sporidical disinfectant cleaning in outbreak settings, this multisite quasi-experimental study has illustrated the substantial potential impact of hospital-wide sporidical disinfection integrated with objectively sustained optimized thoroughness of cleaning to decrease the incidence of HO-CDI.

Funding: None

Disclosures: None

Doi: 10.1017/ice.2020.525

Fig. 1.

Fig. 2.