

An Infection Preventionist Driven Early Warning System Reduces *Clostridioides difficile* Reports to NHSN

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Background

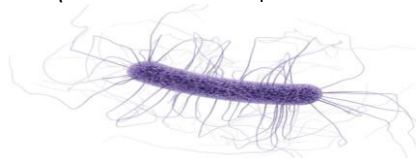
The Centers for Medicare and Medicaid Services (CMS) mandates reporting of hospital-onset (HO) *Clostridioides difficile* (C. diff)¹ (CDC, 2024). Misidentification of community onset cases as HO can be a significant source of financial burden on healthcare organizations. Development of an early warning system, driven by Infection Preventionists (IP) and presented to clinical leadership daily may reduce numbers of HO C. diff Laboratory-Identified (LabID) events reported to the National Healthcare Safety Network (NHSN).

Methods

- Electronic Health Record (EHR) report scans all inpatient admissions that meet criteria.
- Inclusion Criteria: Age over one year; loose, watery or frothy stool; documentation of at least one episode of diarrhea; patient admission to an NHSN inpatient unit; patient on calendar day three of admission^{2,3}
- Exclusion Criteria: Existing C. diff screening, culture or Polymerase Chain Reaction (PCR) test.
- Report results reviewed by IP in alignment with algorithm; (elevated white cell count, abdominal pain, fever, three or more loose stools in the last 24 hours, or no laxatives.
- Physician or nurse contacted to discuss qualifying report results and request testing if clinically appropriate.
- Cases communicated at Daily Safety Briefing for all hospital leadership.

Results

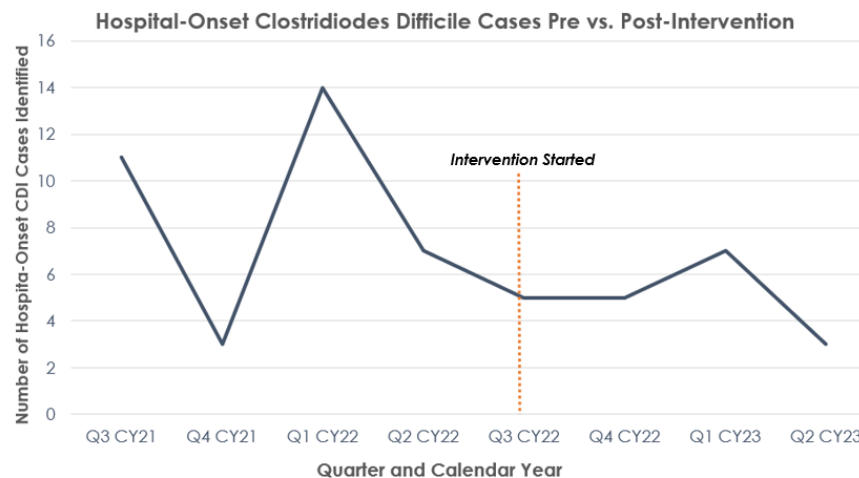
- Pre-Intervention period from July 2021 to June 2022.
- Post Intervention period July 2022 to June 2023.
- Over a one-year post intervention period a 43% reduction in HO C. diff cases was observed (20 cases vs 35, p=0.03, CI=95%)



Discussion

- As a result of this implementation:
 - Increased awareness and discussions around C. diff among caregivers.
 - Continued education about proper stool documentation and escalation of patients with diarrhea without a recognized cause.
 - A combination of these efforts can significantly decrease HO C.diff cases.
- Some limitations included:
 - The EHR's capability to generate pertinent reports is reliant on nursing documentation
 - Small sample size

Data



References

- Centers for Disease Control and Prevention. (2024). *Operational Guidance for Acute Care Hospitals to Report Facility-Wide Inpatient (FacWideIN) Clostridioides difficile Infection (CDI) Laboratory-Identified (LabID) Event Data to CDC's NHSN for the Purpose of Fulfilling CMS's Hospital Inpatient Quality Reporting (IQR) Requirements.* <https://www.cdc.gov/nhsn/pdfs/cms/FINAL-ACH-CDI-Guidance.pdf>
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