

Readmissions of Hospitalized Patients with *Clostridioides difficile* Infection (CDI) for Recurrent CDI is Common

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Introduction

- The Centers for Medicare and Medicaid Services evaluate hospitalacquired infections (HAI) and hospital readmissions
- Clostridioides difficile infection (CDI) is an HAI notorious for causing recurrent illness and potentially leading to re-hospitalizations

Methods

- Single-center, retrospective, chart review at a tertiary academic medical center
- All hospitalized patients with a positive stool test for *C. difficile* (GI panel PCR, FilmArray, Biofire, *C. difficile* PCR, Xpert CD assay, or Cepheid) with or without an ICD-10 code of Enterocolitis due to *C. difficile* (A04.7, A04.71, A04.72) from January 2018 through June 2018 were included
- Demographic and clinical data were collected from the electronic health record
- Primary outcomes:
- · Frequency of follow-up appointments for patients with CDI
- Rate of re-hospitalization for recurrent CDI (rCDI)

Results

Table 1: Baseline Patient Characteristics

| Variable | Patients (N = 283) | |
|--|--|--|
| Male, n (%) | 141 (49.8) | |
| Age in years, median [IQR] | 64 [51, 74.9] | |
| Race, n (%) Asian Black or African American White Other Race | 11 (3.9) 56 (19.8) 197 (69.6) 33 (11.7) | |
| Charlson Comorbidity Index Score, median [IQR] | 2 [1, 4] | |
| Immunocompromised*, n (%) | 121 (42.8) | |

^{*}Transplant, HIV, malignancy, leukemia, lymphoma, autoimmune disease

Table 2: Baseline Hospitalization Characteristics

| Variable | Patients (N = 283) |
|---|--|
| Treating service at time of index episode, n (%) Medicine Hematology/Oncology Pulmonary/Critical Care Cardiology Other Surgery General Surgery Colon and Rectal Surgery Surgery Oncology Other OB/GYN | 238 (84.1) 51 (18.0) 30 (10.6) 12 (4.2) 145 (51.2) 42 (14.8) 11 (3.9) 9 (3.2) 6 (2.1) 16 (5.7) 3 (1.1) |
| Infectious Diseases (ID) Consult, n (%) | 64 (22.6) |
| Gastroenterology (GI) Consult, n (%) | 53 (18.7) |
| ICU admission, n (%) | 60 (21.2) |

Figure 1: *C. diff* diagnosis based on treating physician (N=283)

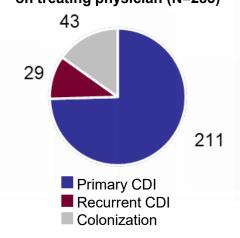
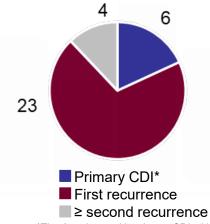


Figure 2: CDI within 90 days of discharge (n = 33)



*The 6 patients with primary CDI within 90 days of discharge were colonized at the index episode with no prior CDI within 90 days before colonization

Table 3: Follow-up Appointments

Results

| Variable | Patients (N = 283) |
|--|--|
| Follow-up appointment within 30 days, n (%) | 42 (14.8) |
| Initial episode, n (%) Primary Recurrence Colonization | 31/211 (14.7) 9/29 (31.0) 2/43 (4.7) |

Table 4: Patients with rCDI within 90 days of discharge

| Variable | Patients (n = 27)* |
|---|--------------------------|
| ID Consult during index hospitalization, n (%) | 2 (7.4) |
| GI Consult during index hospitalization, n (%) | 2 (7.4) |
| Follow-up appointment within 30 days, n (%) | 5 (18.5) |
| ED-visit for recurrence, n (%) | 1 (3.7) |
| Hospitalization for recurrence, n (%) Follow-up appointment prior to re-hospitalization | 12 (44.4) 2/12 (16.7) |

^{*}Only the 27 patients with recurrent CDI are included in this table

Discussion & Conclusions

- A variety of services treated CDI in the hospital
- Few patients had a follow-up appointment for CDI after hospital discharge
- Almost half of the patients who had rCDI had to be re-hospitalized for the recurrent episode
- The majority of patients re-hospitalized with rCDI did not have a followup appointment within 30 days of their index episode
- Further study is necessary to determine if a dedicated follow-up appointment specifically for CDI would result in decreased hospitalizations associated with rCDI