patients were more likely than non-CDI patients to be older (mean age, 78.3 vs. 76.1 years, \( P < 0.0001 \)), be women (64.5% vs. 58.1%, \( P < 0.0001 \)), or have comorbidities (mean Charlson comorbidity index score, 4.5 vs. 1.8, \( P < 0.0001 \)).

**Conclusion.** CDI incidence rates in the Medicare Advantage population were similar to those reported previously in the Medicare fee-for-service population and nationally among adults aged ≥65 years. Data are consistent with a high CDI burden among older US adults.

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2379. It’s Getting Complicated: Outcomes of Clostridioides difficile PCR Positive/Toxin-Negative Patients

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**Session:** 251. HA: C. difficile - Epidemiology

**Saturday, October 5, 2019: 12:15 PM**

**Background.** The addition of toxin enzyme immunoassay to molecular tests creates challenges in the diagnosis and management of *Clostridioides difficile* infection (CDI). In limited samples of PCR+/toxin- patients, CDI-attributable complications are thought to be rare, even nonexistent. We aimed to characterize outcomes of a large PCR+/toxin− cohort within 60 days of initial testing date.

**Methods.** We conducted a retrospective cohort study on all PCR+/toxin− adult inpatients from June–December 2018. Patients were placed into 3 groups to analyze outcomes: (1) complete treatment (guideline concordant); (2) incomplete treatment; and (3) no treatment. The primary outcome in group (1) was CDI-related complication, defined as megacolon, colectomy, or ICU care. For groups (2) and (3), clinical failure was defined as a composite of: need for repeat CDI testing or subsequent treatment.

**Results.** We identified 240 individuals (Figure 1). Mean age was 60 years, and 122 (51%) were female. 173 (72%) received complete treatment (85% vancomycin monotherapy), 47 (19%) incomplete treatment, and 26 (11%) none. Baseline conditions included high severity comorbidities (Figure 2). In the complete treatment group, 10/173 (5.8%) patients met criteria for fulminant colitis. 21/173 (12%) experienced CDI-attributable complications (15 megacolon, 1 colectomy, 18 ICU care). A significantly higher proportion of these patients had leukocytosis >15,000 (57 vs. 23%, \( P < 0.001 \)), creatinine >1.5 (57 vs. 27%, \( P = 0.005 \)), and were receiving concomitant proton pump inhibitors (65 vs. 43%, \( P = 0.05 \)) and antibiotics (65 vs 44%; \( P = 0.05 \)) compared with those without CDI-related complications. In patients who received incomplete treatment, there were 10 clinical failures (7 had repeat testing; 3 were administered complete treatment) compared with 4 in the no treatment group (Figure 3). Interestingly, 4/9 (44%) patients who had incomplete or no treatment and underwent repeat testing were found to be PCR+/toxin+. There were 4 (1.7%) deaths related to CDI in the cohort. All occurred in the complete treatment group.

**Conclusion.** CDI-attributable complications and clinical failure occur in PCR+/toxin− patients. The challenge of distinguishing colonization from disease remains. Additional studies are needed to identify predictors of disease in PCR+/toxin− patients.

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2378. Corticosteroid Use Prevents Primary *Clostridioides difficile* Infection in the Setting of Broad-Spectrum Antibiotic Use Among Hospitalized Patients

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**Background.** *Clostridioides difficile* is the most common pathogen causing healthcare-associated diarrhea and recurs in up to 30% of patients, often requiring readmission. Socioeconomic factors, such as living in a disadvantaged neighborhood may impact readmission but have not been studied.

**Methods.** We examined the relationship between neighborhood disadvantage, as measured by the Singh validated area deprivation index (ADI), and 30-day all-cause readmission risk in patients with an index hospital stay with CDI. We analyzed a random 20% sample of national Medicare claims for patients’ initial index hospitalization with a CDI diagnosis in 2014 (n = 19,528) that included each patient’s neighborhood ADI national percentile. The most disadvantaged neighborhoods were categorized as those in the upper 35 percentile, while the least disadvantaged was defined as those in the bottom 65.5% of national ADI rankings. We evaluated the relationship between ADI percentile and 30-day readmission risk using multivariate logistic regression, controlling for key patient demographics, comorbidities, and hospital/stay characteristics.

**Results.** A total of 19,528 patients had an index stay with CDI, 4,899 were readmitted within 30 days. Patients from the most disadvantaged neighborhoods had a higher average rate of readmission compared with those living in the least disadvantaged neighborhoods (28% vs. 24%; unadjusted risk ratio = 1.16 [1.10, 1.21]). This relationship held after controlling for confounders. After adjustment, being a resident of the most disadvantaged neighborhoods was associated with a 6% increase in the risk of readmission (adjusted risk ratio = 1.06 [1.03, 1.09]). We observed a similar result in the upper 35 percentile and 30-day readmission risk, including multivariate logistic regression controlling for key patient demographics, comorbidities, and hospital/stay characteristics.

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