persistent carriage. For persistent carriers, the estimated median time to clearance of colonization was 76 days (range, 41 to 95 days from acquisition). Ten of 17 (59%) persistent carriers had a high burden of carriage (defined as > 25 colonies recovered from 1 or more swabs) vs. only 1 of 33 (3%) transient carriers (P < 0.001).

Conclusion. Acquisition of asymptomatic carriage of toxigenic C. difficile carriage was common among patients in healthcare facilities, but most carriers had transient low-level carriage. Additional studies are needed to determine whether a higher burden of carriage predicts subsequent risk of transmission.

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2372. PCR Ribotyping and Antimicrobial Susceptibility of Clostridioides (Formerly Clostridium) difficile in Korea
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Session: 251. HAI: C. difficile - Epidemiology
Saturday, October 5, 2019: 12:15 PM

Background. Clostridioides difficile infection is a leading cause of healthcare-associated diarrhea. The epidemiology and characteristics of C. difficile vary geographically. We performed toxin enzyme immunoassay (EIA), toxigenic gene analysis, antimicrobial susceptibility tests (AST), and PCR ribotyping to elucidate the characteristics of C. difficile in Korea.

Methods. Between July 2017 and June 2018, C. difficile was prospectively isolated in 128 specimens from the culture of 1,182 unduplicated specimens. Seventy-five stool specimens with a positive toxin EIA between July 2016 and June 2017 were also included. We performed PCR for the tcdA and tcdB genes on these isolates, and AST and PCR ribotyping on the isolates with a positive toxin EIA.

Results. Older patients tended to have a higher rate of positive toxin EIA and positive cultures than did younger patients. Ribotype 018 was predominantly identified (48.6%), followed by ribotype 014/020 (9.9%), and ribotype 002 (8.3%). All of A+B+ isolates were either ribotype 017 or B-2. Ribotypes 017, 018, and B-2 showed high resistance to various antibiotics. In contrast, ribotypes 002, 014/020 and C-4 demonstrated low resistance rates, except that to moxifloxacin in ribotype 002. Clindamycin and erythromycin showed a positive correlation. Most of the isolates resistant to rifampicin or tetracycline showed a high MIC to both erythromycin and clindamycin.

Conclusion. Ribotype 018, which is highly transmissible and resistant to various antimicrobial agents, is predominant in Korea. Ribotype 002 has also been increasing in prevalence in Korea.

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2373. Impact of a Change in Testing Strategy for Clostridioides difficile Infection on a Publicly Reported Metric and Treatment Days of Therapy
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Background. In an effort to optimize diagnostic testing for Clostridioides difficile infection (CDI) our health system changed from stand-alone PCR testing to a “2-step” approach wherein all positive PCR results referred to an EIA. We report the effects of this change on publicly reported CDI metrics and treatment days of therapy (DOT).

Methods. The setting includes 10 Cleveland Clinic Health System hospitals in northeast Ohio and one in Florida. On June 12, 2018, 9 NE Ohio hospitals changed from PCR alone to PCR followed by EIA. Stand-alone PCR testing remained at one and GDH / EIA / PCR for discordant for another. Testing volumes were obtained from the microbiology laboratory. C. difficile LabID event SRs were obtained from NHSN. Public reporting interpretative categories were identified based on SIR for second half of 2018. DOT for CDI agents were obtained from an antimicrobial stewardship database.

Results. Among hospitals that changed strategy the volume of PCR testing and the percent PCR + was similar between time periods. EIA positivity ranged from 23% to 53%. 4/11 hospitals improved their public reporting category: 3/9 that changed strategy and 1/2 that did not (Table 1). Two of 3 that changed strategy and improved public reporting also had a decrease in DOT. DOT increased in the 2 hospitals that did not change strategy.

Conclusion. Six months after adopting a 2-step CDI testing strategy 7 of 9 hospitals had a lower SIR with 3 also demonstrating an improvement in public reporting category favorably impacting reputational and reimbursement risk for our healthcare system. CDI agent DOT was similar before and after the change. The impact of choice of test on publicly reported metrics demonstrates the difficulty of utilizing a proxy for hospital onset CDI, the CDI LabID event, as a measure of quality of care provided.

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2374. Impact of a Change in Testing Strategy for Clostridioides difficile Infection on Hospital Onset C. difficile Infection
A Multicenter Cohort Study of the Natural History of Clostridioides difficile Colonization and Infection
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Background. Asymptomatic carriage of toxigenic Clostridioides difficile strains is common in healthcare settings. However, the natural history of C. difficile colonization and infection is not well understood, particularly for patients with new acquisition of carriage.

Methods. In 3 tertiary care hospitals and affiliated long-term care facilities (LTFCs), we conducted a 6-month cohort study to identify patients with new acquisition of rectal carriage of toxigenic C. difficile and determined the duration and burden of carriage. Asymptomatic carriage was defined as transient if only 1 culture was positive with negative cultures before and after or persistent if 2 or more cultures were positive; clearance was defined as 2 consecutive negative rectal cultures.

Results. Of 4180 patients with negative initial cultures, 144 (3%) acquired asymptomatic carriage of toxigenic C. difficile, and 19 (13%) of these carriers subsequently were diagnosed with CDI. Of 50 asymptomatic carriers analyzed for duration of carriage, 33 (66%) had transient carriage of toxigenic C. difficile and 17 (34%) had persistent carriage. For persistent carriers, the estimated median time to clearance of colonization was 76 days (range, 41 to 95 days from acquisition); Ten of 17 (59%) persistent carriers had a high burden of carriage (defined as > 25 colonies recovered from 1 or more swabs) vs. only 1 of 33 (3%) transient carriers (P < 0.001).

Conclusion. Acquisition of asymptomatic carriage of toxigenic C. difficile carriage was common among patients in healthcare facilities, but most carriers had transient low-level carriage. Additional studies are needed to determine whether a higher burden of carriage predicts subsequent risk of transmission.

Disclosures. All authors: No reported disclosures.
Infection (CDI) may be life-threatening, with inflammatory bowel disease activity (IBDA), data in our setting showed a significant association between CDI and IBDA. However, we did not find a statistically significant association between new CDI and IBDA during a median follow-up period extending beyond 1 year. Conclusion. We found no association between CDI and IBDA. Risk factors associated with CDI were residence in Mexico City and a decreasing age when IBD was diagnosed.

### Methods

Prospective cohort study in a tertiary care hospital in Mexico City. Patients aged ≥21 years with IBD in clinical remission were included between April 2017 and April 2019. Demographic, clinical and laboratory variables, as well as three fecal samples, were collected at inclusion and during follow-up. CDC was defined as a positive GDH test without diarrhea. CDI was defined as diarrhea (as per IDSA criteria) plus positive GDH and PCR tests. IBDA was defined as bloody diarrhea plus a negative GDH test. The primary outcome was the association between CDC and IBDA. Secondary outcomes were incidence rates of CDI and CDC, including risk factors associated with CDC. Multivariable analyses were performed considering P < 0.05 as statistically significant.

### Results

Out of 250 IBD patients, 101 cases met inclusion criteria and 85 completed follow-up (median = 420 days, IQR = 243–511 days). Twenty-three cases (27%) had IBDA during follow-up, eight cases had new CDC (incidence of 8.2/100 person-years), and one case developed CDI (incidence of 1.0/100 person-years). Figure 1 shows the cumulative percentage of cases without CDC during follow-up. In univariate analysis, the following were associated with CDC: decreasing age, decreasing age when IBD was diagnosed, residence in Mexico City or the State of Mexico, and hospitalization during follow-up. In Cox regression analysis, a decreasing age when IBD was diagnosed (HR = 0.92, 95% CI = 0.87–0.98, p = 0.009) and residence in the State of Mexico (HR = 0.88, CI 95% = 1.21–28.60, p = 0.028) remained significantly associated with CDC. However, we did not find a statistically significant association between new CDI events and IBDA during a median follow-up period extending beyond 1 year.

### Conclusion

We found no association between CDC and IBDA. Risk factors associated with CDC were residence in the State of Mexico and a decreasing age when IBD was diagnosed.

### Disclosures

No reported disclosures.

### 2374. Healthcare Resource Use, Costs, and Recurrences in Patients with Clostridioides difficile Infection: A Real-world Data Analysis

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### Background

Clostridioides difficile infection (CDI), especially recurrent CDI (rCDI), is associated with high morbidity and resource use and imposes a significant burden on the US healthcare system. The objective of this study was to evaluate the burden of rCDI on healthcare resource utilization.

### Methods

A retrospective study analyzed commercial claims data from patients aged 18–64 years old in the IQVIA PharMetrics Plus® database. CDI episodes required an inpatient stay with CDI diagnosis code (ICD-9- CM 008.85; ICD-10-CM A04.7, A04.71, A04.72), or an outpatient medical claim with CDI diagnosis code plus a CDI treatment, and index episodes occurred from January 1, 2010 to June 30, 2017. Only patients who were observable 6 months before and 12 months after the index CDI episode were included. Each CDI episode was followed by a 14-day claim-free period after the end of treatment. rCDI was defined as another CDI episode within an 8-week window immediately after the claim-free period. Number of CDI and rCDI episodes, healthcare resource use, and costs were calculated over 12-month follow-up and stratified by number of rCDI episodes. Costs were adjusted to 2018 dollars.

### Results

46,571 patients with an index CDI episode were included, with 3,129 patients (6.7%) who had 1 rCDI, 472 (1.0%) who had 2 rCDI, and 134 (0.3%) who had 3+ rCDI episodes. Mean age was 47.4 years, and 64.2% were female. In the 12-month follow-up, the mean (SD) numbers of inpatient visits were 1.4 (2.1) for those with no rCDI, 2.7 (3.4) for those with 1 rCDI, 3.7 (3.9) for those with 2 rCDI, and 5.8 (6.0) for those with 3+ rCDI episodes. Emergency department (ED) visits had a similar trend, with mean (3.4) for those with 1 rCDI, 3.7 (3.9) for those with 2 rCDI, and 5.8 (6.0) for those with 3+ rCDI episodes. Mean age was 47.4 years, and 62.4% were female. In the 12-month follow-up, and stratified by number of rCDI episodes. Costs were adjusted to 2018 dollars.

### conclusion

CDI and rCDI are associated with substantial healthcare resource utilization and direct medical costs. During the 12 months after an index CDI episode, the mean (SD) number of visits was 1.5 (3.5), 2.5 (6.0), 3.7 (7.0), and 4.6 (13), respectively for the 1 rCDI episodes. Emergency department (ED) visits had a similar trend, with mean (3.4) for those with 1 rCDI, 3.7 (3.9) for those with 2 rCDI, and 5.8 (6.0) for those with 3+ rCDI episodes. Mean age was 47.4 years, and 62.4% were female. In the 12-month follow-up, and stratified by number of rCDI episodes. Costs were adjusted to 2018 dollars.