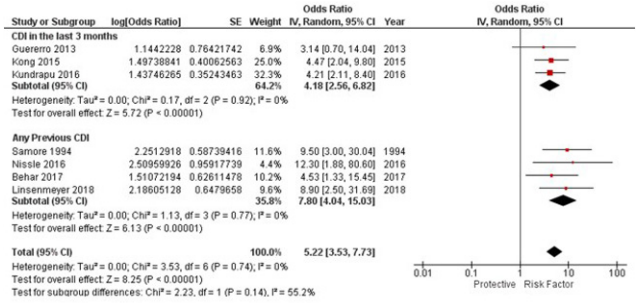


Fig. 1: Previous C. diff Infection and Risk of Colonization

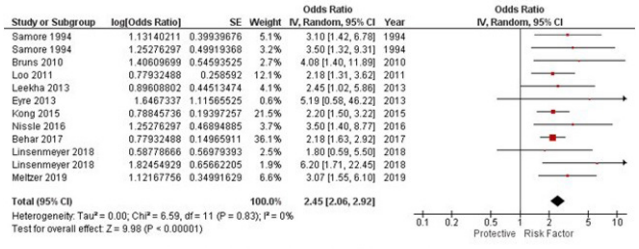


Fig. 2: Hospitalization in Previous 6 Months and Risk of Colonization

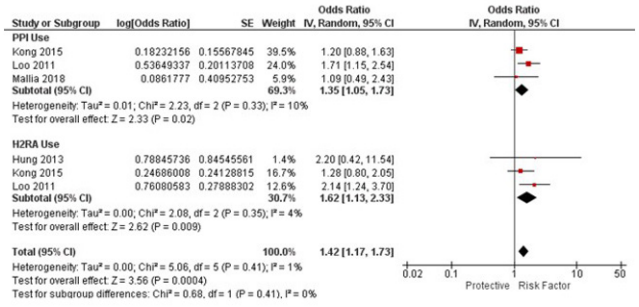


Fig. 3: Use of Gastric Acid Suppression Therapy within Previous 8 Weeks and Risk of Colonization

***Disclosures.*** **All authors:** No reported disclosures.

### 2371. A Multicenter Cohort Study of the Natural History of *Clostridioides difficile* Colonization and Infection

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**Session:** 251. HAI: *C. difficile* - Epidemiology
*Saturday, October 5, 2019: 12:15 PM*

***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 (LTCFs), 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.

### 2372. PCR Ribotype and Antimicrobial Susceptibility of *Clostridioides* (Formerly *Clostridium*) *difficile* in Korea

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***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.

***Disclosures.*** **All authors:** No reported disclosures.

### 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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**Session:** 251. HAI: *C. difficile* - Epidemiology
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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 reflexed 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 SIRs 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 testing 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.