

## C. difficile doubles hospital readmission rates, lengths of stay

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Patients with *Clostridium difficile* infection (CDI) are twice as likely to be readmitted to the hospital as patients without the deadly diarrheal infection, according to a study published in the April issue of the *American Journal of Infection Control*, the official publication of the Association for Professionals in Infection Control and Epidemiology (APIC).

Researchers from the Detroit Medical Center (DMC), a seven-hospital system in southeastern Michigan, conducted a large study to understand the epidemiology of CDI [readmissions](#), analyzing 51,353 all-cause discharges between January 1 and December 31, 2012. There were 615 patients (1 percent) who were discharged with a CDI diagnosis, including 318 where CDI was present on admission, and 297 who were diagnosed during their hospital stay.

The study indicated that 30.1 percent of CDI patients were readmitted after 30 days versus 14.4 percent of all-cause discharges. The length of stay (LOS) upon readmission was also significantly higher among CDI patients, adding 4.4 days for community-onset CDI cases and 6.4 days for hospital-onset CDI over non-CDI readmissions.

"We found that CDI readmissions for any reason had almost a one week longer average LOS than all-cause readmissions," said Teena Chopra, MD, MPH, a leading CDI expert from DMC's Division of Infectious Diseases who led the study. "This suggests that CDI readmissions place a burden on the health system by requiring patients to stay in the hospital

longer, leading to less patient bed turnover and higher hospital costs."

Patients who take antibiotics are most at risk for developing CDI. More than half of all hospitalized patients will get an antibiotic at some point during their hospital stay, but studies have shown that 30 to 50 percent of antibiotics prescribed in hospitals are unnecessary or incorrect, according to the Centers for Disease Control and Prevention (CDC).

In anticipation of programs from the Centers for Medicare and Medicaid Services (CMS) that tie reimbursement to performance in key areas, the authors state that hospitals should have more incentive to improve [infection control](#) and antibiotic prescribing measures to prevent CDI.

"If nothing is done to try and curb CDI rates, healthcare systems may stand to face financial penalties because of high rates of hospital-acquired CDI and CDI-related readmissions for CMS-reportable conditions," said Dr. Chopra. Dr. Chopra added that effective antibiotic stewardship should be across the healthcare system including [acute care](#) hospitals, long term acute care facilities, and nursing homes.

*C. difficile* causes inflammation of the colon and life-threatening diarrhea. According to the CDC, *C. difficile* has become the most common microbial cause of healthcare-associated infections in U.S. hospitals and costs up to \$4.8 billion each year in excess healthcare costs for [acute care facilities](#) alone. The CDC estimates that *C. difficile* caused almost half a million infections in 2011 and that 29,000 U.S. [patients](#) died within 30 days of their initial diagnosis.

**More information:** "Burden of Clostridium difficile infection on hospital readmissions and its potential impact under the Hospital Readmission Reduction Program," by Teena Chopra, Anupama Neelakanta, Carolyn Dombecki, Reda A. Awali, Sarit Sharma, Keith S. Kaye, and Paru Patel appears in the *American Journal of Infection*

*Control*, Volume 43, Issue 4 (April 2015).

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