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2124. Treatment of *Clostridium difficile* Infection in 10 US Geographical Locations, 2013–2014

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Background. In 2011, there were approximately half a million *Clostridium difficile* infections (CDIs) and 29,000 associated deaths. The Infectious Diseases Society of

America and Society for Healthcare Epidemiology of America published CDI treatment guidelines in 2010. To our knowledge, provider adherence to recommendations has been assessed only in limited single-center studies. We sought to describe CDI treatment across geographically diverse areas and assess adherence to current guidelines.

Methods. Active population-based CDI surveillance was conducted in 10 US sites. A case was defined as a positive *C. difficile* toxin or molecular assay on a stool specimen from a person ≥ 18 years old without a positive test result in the prior 8 weeks during 2013–2014. Demographics, comorbidities, outcomes, and treatment data were collected. Based on available information, severe disease was defined as white blood cell count $\geq 15,000$ cells/ μ L.

Results. Of 13,202 cases with data available, 11,717 (89%) were treated for CDI. The proportions that were female (62% versus 60%), aged ≥ 65 years (47% versus 44%), or had Charlson comorbidity index >2 (32% versus 29%) were similar between the treated and untreated cases. Of treated cases, 6793 (58%) received only metronidazole, 2189 (19%) received only vancomycin, and 2482 (21%) received both. Most (81%) were prescribed therapy within 2 days of diagnosis. Of those treated with only metronidazole, 81% received the recommended dosage and frequency, but only 62% were treated for ≥ 10 days. Of 2041 severe cases, 2006 (98%) were treated; however, only 36% received vancomycin consistent with current Infectious Diseases Society of America/Society for Healthcare Epidemiology of America guidelines. A greater proportion of untreated patients than treated patients died (11% versus 2%, $P < .0001$). Among severe cases that were treated, a greater proportion of patients treated with non-guideline-adherent therapy died compared with those with adherent therapy (9% versus 2%, $P < .0001$).

Conclusion. The majority of patients with CDI were promptly treated following diagnosis. However, adherence to recommended therapy was low and mortality with non-guideline-adherent therapy was increased among patients with severe disease. Efforts to improve provider adherence to treatment guidelines could lead to improved CDI patient outcomes.

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