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Reassessing *Clostridioides difficile* trends and racial disparities

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The study by Sheza Maliket *et al* [1] is really important, as *Clostridioides difficile* (*C. difficile*) is an important public health threat, with substantial morbidity and mortality, which needs to be addressed, monitored and discussed—particularly in an era of increased antibiotic usage. Although this study indicates a decrease in infection rates for the period 2005-2020 in the United States, more recent statistics show that *C. difficile* infection (CDI) is on the rise in the United Kingdom [2]. Therefore, analyzing and evaluating trends of existing data is important to help identify contributing factors, with a view to reducing infection rates in different healthcare systems.

The study raises several questions that I think it would be valuable to address. First, does the study have data on the antibiotic usage prior to each *C. difficile* case, including the antibiotic used and the duration? We already know the antibiotics frequently associated with causing *C. difficile*—clindamycin, second and third generation cephalosporins, and broad-spectrum penicillins—however, it would be useful to see the real-world figures from this study. It may show results we were not expecting, or indicate a particular antibiotic associated with higher rates; this would be valuable information, both for prescribers who initiate antibiotic therapy, and for safety-netting patients.

Second, does the study have any data on the length of hospital stay and location in the hospital (for example ward vs. intensive care/high-dependency unit) linked to rates of CDI? This would be useful to highlight if there was an association for clinicians when looking at the risk vs. benefit of discharging patients home.

Third, does the study have any data on the breakdown of complications of CDI? For example, the complications within each age group and mortality within each age group, as this again would be useful for clinicians to be aware of.

Finally, it was concerning to read within the study that there was a higher rate of decline of CDI amongst White compared to Black cohorts. Although, as mentioned in the article, this could be due to socioeconomic and institutional inequalities, does the study have any further data that could shed light on this disparity, such as patient comorbidities, previous antibiotic usage, and the rationale for antibiotic prescriptions?

References

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