

5 Take-Aways

Antibiotic Stewardship for CDI Prevention

Here are key messages from the CDI Prevention Collaborative September 1, 2021, webinar presented by Arjun Srinivasan, MD, Associate Director for Healthcare at the Centers for Disease Control and Prevention.

1. How can we use stewardship to combat *C. difficile*?
 - Some success with shifting agents from high-risk antibiotics
 - Might have more success with shortening duration of therapy
 - Most success with not starting antibiotics in the first place
2. Which antibiotics are more likely to predispose patients to *C. difficile* infection?
 - Virtually every *antibiotic* has been associated with CDI through the years.
 - Certain classes—**third-/fourth-generation cephalosporins, fluoroquinolones, carbapenems, and clindamycin**—have been found to be high risk. ⁱ
3. What's the relationship between high-risk antibiotic use and the risk for HA *C. difficile*?ⁱⁱ
 - For every 100-day increase of days of therapy per 1,000 patient days present in high-risk antibiotic use, there was a **12% increase** in hospital onset CDI.
 - This increase translates to 4 additional cases with every 100 days of therapy increase per 1,000 patient days present.
4. Which infections are often prescribed antibiotics that may increase the risk of CDI?ⁱⁱⁱ
 - In a 2011 survey in ~180 hospitals, CDC and state collaborators reviewed charts of patients who got antibiotics to determine the reason for use:
 - Lower respiratory tract infections: 34.6%
 - Urinary tract infections: 22.3%
 - Skin and soft tissue infections: 16.1%
 - Total for these three: 73%! Quinolones and cephalosporins feature prominently in the top 2.
5. What are good resources for my team to review related to stewardship?
 - **CDC Core Elements for Hospital Antibiotic Stewardship**
<https://www.cdc.gov/antibiotic-use/core-elements/hospital.html>
 - Poster: **Be Antibiotic Aware – At Hospital Discharge**
<https://www.cdc.gov/antibiotic-use/pdfs/BAA-Hospital-Discharge-Flowchart-P.pdf>
 - Poster: **5 Ways Hospital Pharmacists Can Be Antibiotics Aware**
<https://www.cdc.gov/antibiotic-use/community/pdfs/Hospital-Pharmacist-Poster-508.pdf>
 - **AHRQ Safety Program for Improving Antibiotic Use**
<https://www.ahrq.gov/hai/tools/antibiotic-stewardship/index.html>
 - **AHRQ Antibiotic Stewardship Toolkits**
<https://www.ahrq.gov/antibiotic-use/index.html>
 - **Covid 19 and Antibiotic Resistance**
<https://www.cdc.gov/drugresistance/covid19.html>

ⁱ Clinical Practice Guidelines for Clostridium difficile Infection in Adults and Children: 2017 Update by the Infectious Diseases Society of America (IDSA) and Society for Healthcare Epidemiology of America (SHEA). Clin Infect Dis. 2018 Mar 19;66(7):e1-e48. doi: 10.1093/cid/cix1085. PMID: 29462280; PMCID: PMC6018983.

ⁱⁱ Hospital-level high-risk antibiotic use in relation to hospital-associated *Clostridioides difficile* infections: Retrospective analysis of 2016-2017 data from US hospitals. Infect Control Hosp Epidemiol. 2019 Nov;40(11):1229-1235. doi: 10.1017/ice.2019.236. Epub 2019 Sep 16. PMID: 31522695.

ⁱⁱⁱ Prevalence of antimicrobial use in US acute care hospitals, May-September 2011. JAMA. 2014 Oct 8;312(14):1438-46. doi: 10.1001/jama.2014.12923. PMID: 25291579.

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C-DIFFERENCE

THE CDI PREVENTION COLLABORATIVE