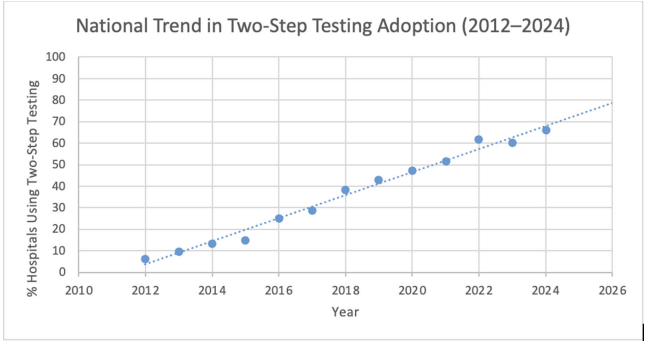
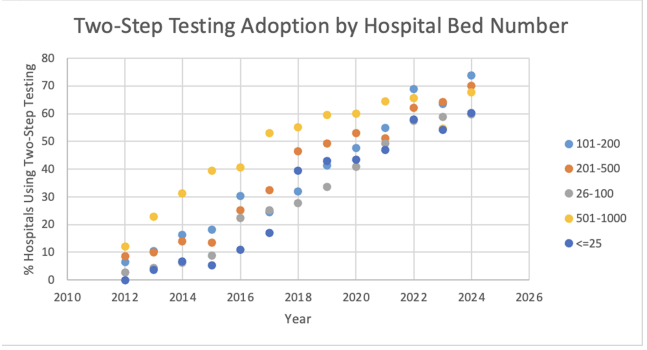
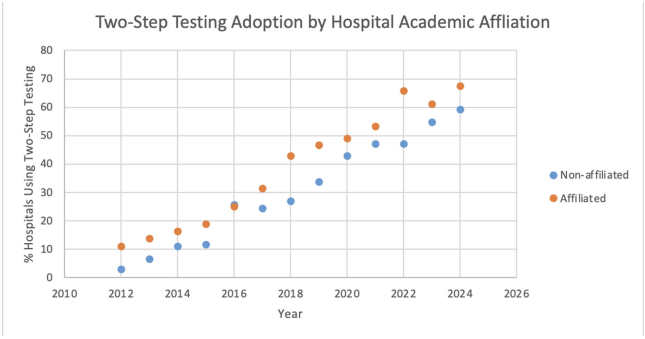
Presentation Type:
Top Poster Abstract
Subject Category: Diagnostic Stewardship
Trends in Clostridioides difficile Diagnostic Testing Methods in U.S. Acute-Care Hospitals‡

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Background: Clostridioides difficile infection (CDI) remains a leading healthcare-associated infection (HAI) in the United States. To prevent outbreaks and transmission within healthcare facilities, providers must quickly recognize signs of CDI, correctly diagnose it, and implement measures to contain it. Nucleic acid amplification tests (NAATs) are highly sensitive but may over diagnose CDI, while toxin enzyme immunoassays (EIAs) risk false negatives. Two-step diagnostic algorithms have been recommended to improve diagnostic accuracy; however, national trends in their adoption have not been well described. **Method:** We conducted a secondary analysis of data from the Preventing Infections Through Appropriate Staffing (PITAS) study, which includes annual National Healthcare Safety Network (NHSN) hospital survey data from 347 U.S. acute-care hospitals from 2011-2024. Hospitals reported CDI testing methods annually, which were categorized as one-step, two-step, or other algorithms. Temporal trends in two-step testing adoption were assessed using mixed-effects linear regression with hospital as a random effect and adjustment for bed size and academic affiliation. Stratified analyses were performed by hospital size and academic status. **Result:** A total of 347 acute care hospitals contributed data from 2011-2024. In 2012, the predominant testing method was NAAT alone, which was utilized by 58% of hospitals while only 6.25% of hospitals utilized two-step methodologies. In 2017, the year of publication of the updated Infectious Disease Society of America (IDSA) and Society for Healthcare Epidemiology of America (SHEA) Clinical Practice Guidelines, 28.75% of hospitals used two-step methods. By 2024, 66.18% of surveyed hospitals utilized two-step methodologies for CDI. Academic hospitals consistently demonstrated higher adoption rates than non-academic hospitals (11.11% vs 2.92% in 2012 and 67.35% vs 59.18% in 2024). Hospitals with 501-1000 beds had significantly higher odds of adopting two-step testing compared with the smallest hospitals. **Conclusion:** Use of two-step CDI testing methods increased substantially in U.S. acute-care hospitals from 2011- 2024, particularly following the 2017 IDSA and SHEA guideline update. As hospitals increasingly adopt two-step testing, policymakers and healthcare epidemiologists should consider how testing methods influence reported infection rates.







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Appropriateness of urinalysis bypass and effect on antibiotic prescribing for urinary tract infections in the outpatient setting‡

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Background: Over-utilization and inappropriate interpretation of urinalyses and urine dipsticks drives unnecessary urine cultures, leading to unnecessary treatment of asymptomatic bacteriuria (ASB), avoidable antibiotic associated adverse drug effects, and risk of antimicrobial resistance. The urinalysis with reflex order set (UA w/ reflex) is a stewardship intervention to reduce unnecessary cultures. Providers can elect to bypass the reflex criteria by selecting specific clinical indications (e.g., pregnancy) to culture urine regardless of urinalysis results. We aimed to assess the appropriateness of provider bypass selection and the effect on appropriate antibiotic prescribing for urinary tract infections (UTIs). **Methods:** From a dataset of adult outpatient encounters in which the UA w/ reflex order set was used at Vanderbilt University Medical Center (VUMC) between June 1, 2022 and June 30, 2024, 120 patients were randomly selected for review as part of an ongoing study. Of those, patients <16 years of age, hospitalized within 2 days of UA, with delay of UA acquisition, or with incomplete encounter documentation were excluded (N=20). Patient and provider demographics, patient symptoms, physical exam findings, urine diagnostic testing, and antibiotics prescribed were extracted from the electronic medical record (EMR) and via manual chart review and analyzed. **Results:** Of the 100 included patients, the average age was 48.9 years and 64% were female. Of the 32 (32%) who received antibiotics, 24 (75%) had a possible UTI or indication for treatment of ASB ("appropriate"), and 8 (25%) had nonspecific or no symptoms ("inappropriate"). Among 13 patient encounters which inappropriately bypassed the reflex criteria, 1 (14%) received "inappropriate" antibiotics compared to 2 (33%) who received "appropriate" antibiotics (p = 0.559), see Table 1. Among those where the culture reflexed per protocol (n = 59), 45 had non-specific or no symptoms (76%) and 41 (91%) did not receive unnecessary antibiotics (p<0.0001). This difference was not seen in bypass appropriate or bypass inappropriate groups (p=1.00 and p=0.559 respectively), see Table 1. **Conclusions:** In this preliminary analysis, we observed high (~1/3) rates of inaccurate selection of bypass criteria; however, this was not associated with increased inappropriate antibiotic prescribing, which may have been due to the small sample size.

‡The abstract titles in this supplement have been corrected since original publication. A notice detailing the changes has been published at https://doi.org/10.1017/ash.2026.10802.

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