

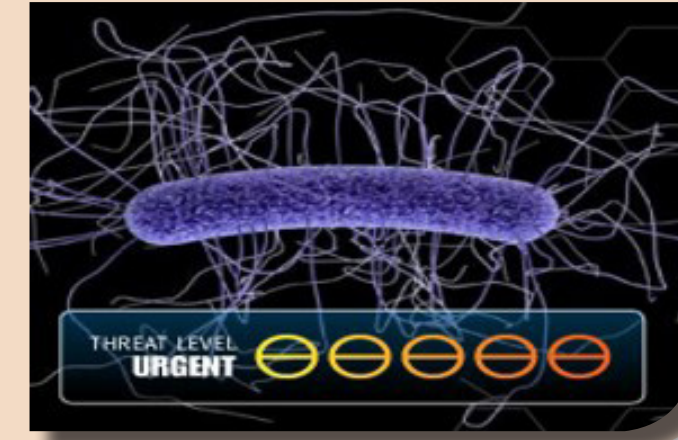
A National Survey of Testing Practices for Asymptomatic Carriage of *C. difficile*

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BACKGROUND:

- Clostridioides difficile* is a Gram-positive, spore-forming, anaerobic bacillus
- C. difficile* is an urgent threat in the United States
 - Recognized as one of the most important pathogens in healthcare settings resulting in half a million infections (CDI) among patients
- While much is known about symptomatic CDI, asymptomatic *C. difficile* colonization is less understood
 - Colonization of *C. difficile* is considered as a potential infectious reservoir which may pose a transmission risk
- Among healthy adults with no recent history of healthcare facility exposure, asymptomatic *C. difficile* colonization prevalence was less than 2%



RATIONALE FOR SURVEY:

With increasing recognition of asymptomatic *C. difficile* carriers among hospitalized adults, there are anecdotal reports of identification, isolation, and management of these patients despite a lack of recommendations on testing or management

METHODS:

- The Infectious Diseases Society of America (IDSA) Emerging Infections Sentinel Network (EIN) is a provider-based emerging infections sentinel network.
 - The EIN is funded by the Centers for Disease Control and Prevention (CDC) and sponsored by the IDSA
- To assess current clinical practices, a web-based survey was distributed to 1309 U.S.-based infectious disease physician members with adult practice from November 29 through December 23, 2017.
 - EIN staff at the coordinating center sent the initial invitation by email or fax with two reminders
 - No incentive for participation was provided

Survey

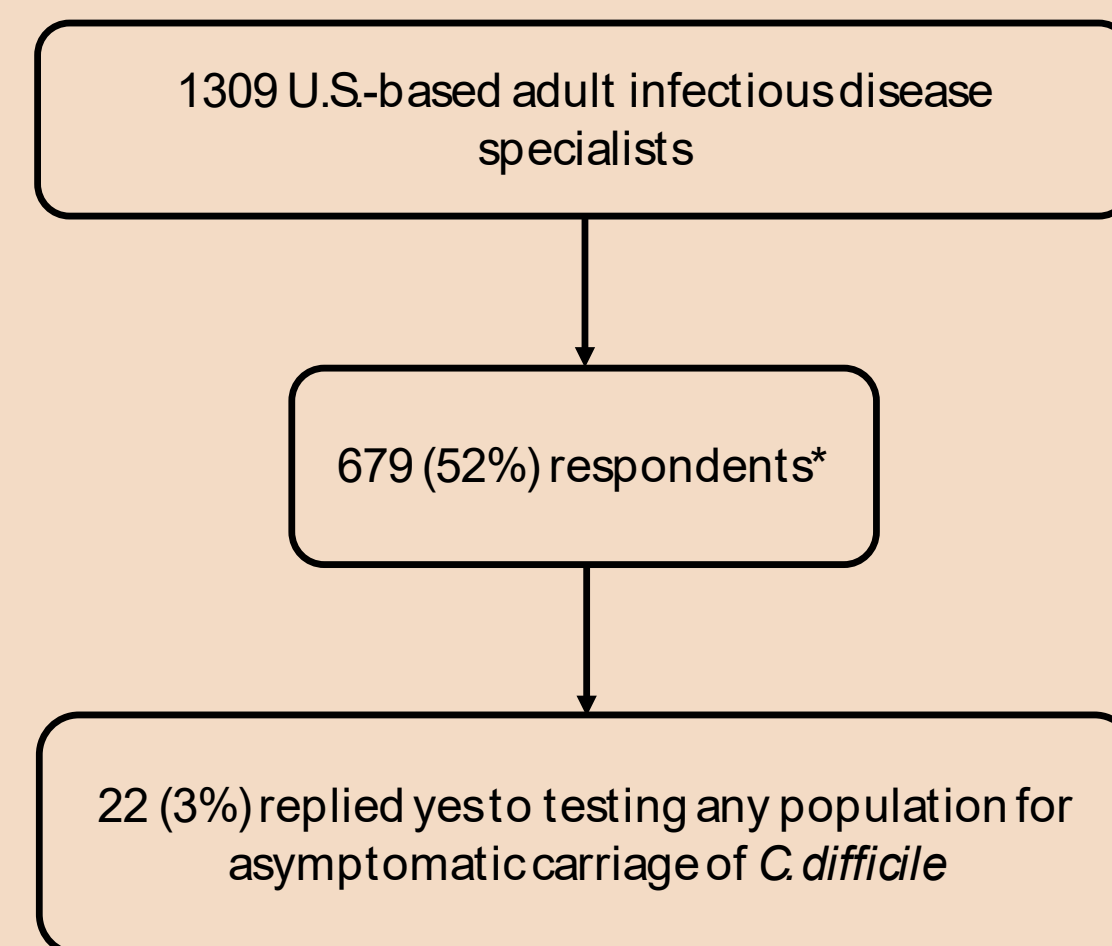
- A confidential, 9-question multiple choice/open-ended survey
- Queried practice characteristics, including identification of patients with asymptomatic carriage of *C. difficile*, isolation, and management

Analysis

- Results were analyzed with SAS Version 9.4
- Geographic and practice characteristics were compared between non-respondents and respondents in order to assess non-response bias
- For open-ended questions, comments were systematically reviewed, coded for relevant themes, and grouped into categories

RESULTS

Survey Respondents



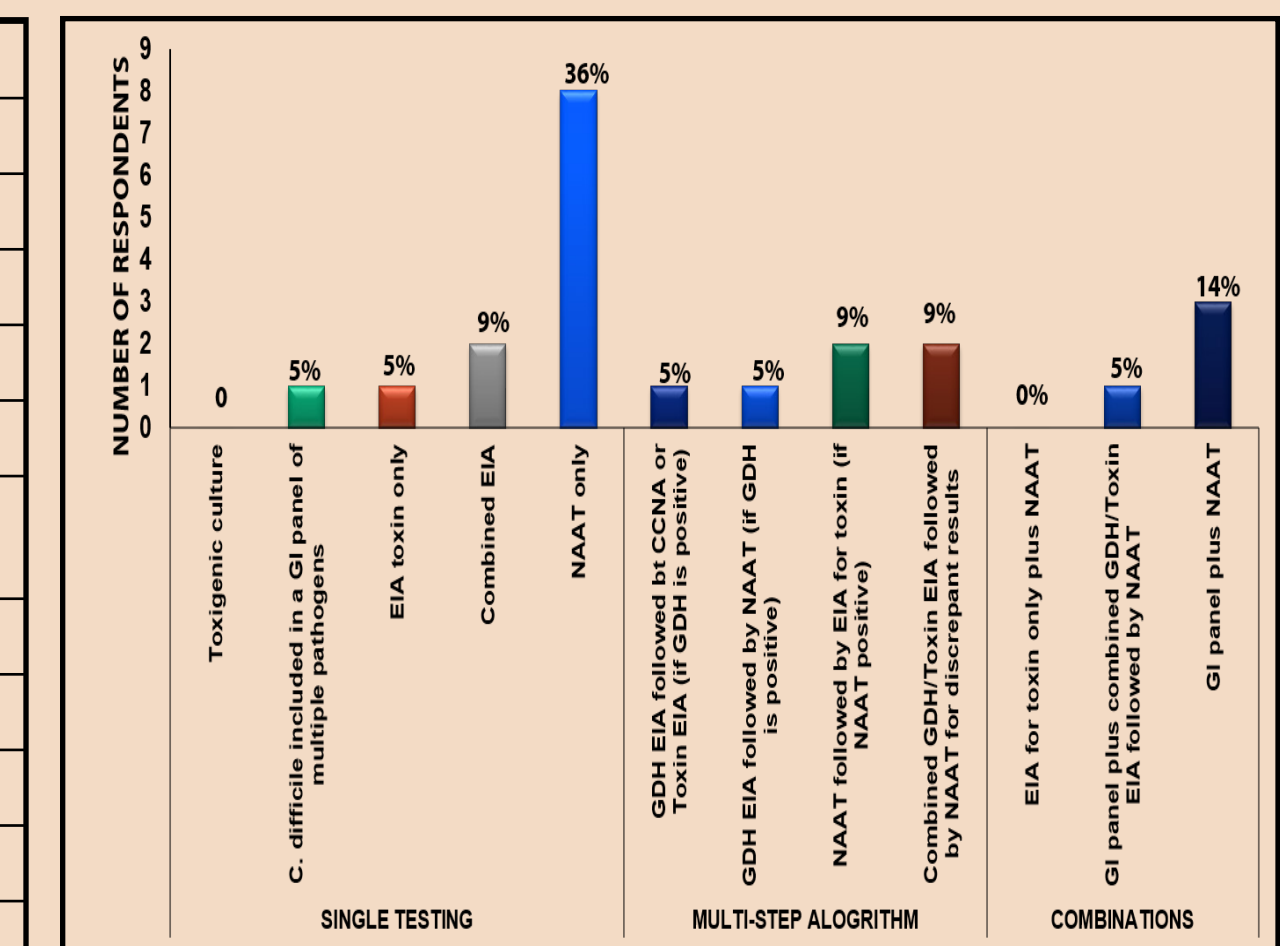
*Non-responders were significantly more likely than respondents to have <25 years of Infectious Disease experience (p<0.01)

Demographic Characteristics (n=22)

Years experience since ID fellowship	n (%)
<5 years	3% (4/150)
5-14 years	3% (6/211)
15-24 years	2% (2/121)
≥25 years	5% (10/197)
Employment	n (%)
Hospital/clinic	3% (7/218)
Private/group practice	3% (5/186)
University/medical school	4% (9/228)
VA and military	2% (1/45)

Hospital bed size	n (%)
<200	4% (3/76)
200 - 350	2% (3/164)
351 - 450	4% (4/110)
451 - 600	4% (5/132)
>600	4% (7/197)
Approximately how many patients with symptomatic CDI have you seen in the past six months?	n (%)
1-10	6 (27)
11-25	6 (27)
26 - 50	5 (23)
>50	5 (23)

What tests are used to diagnose symptomatic CDI in your primary hospital? (n=22)



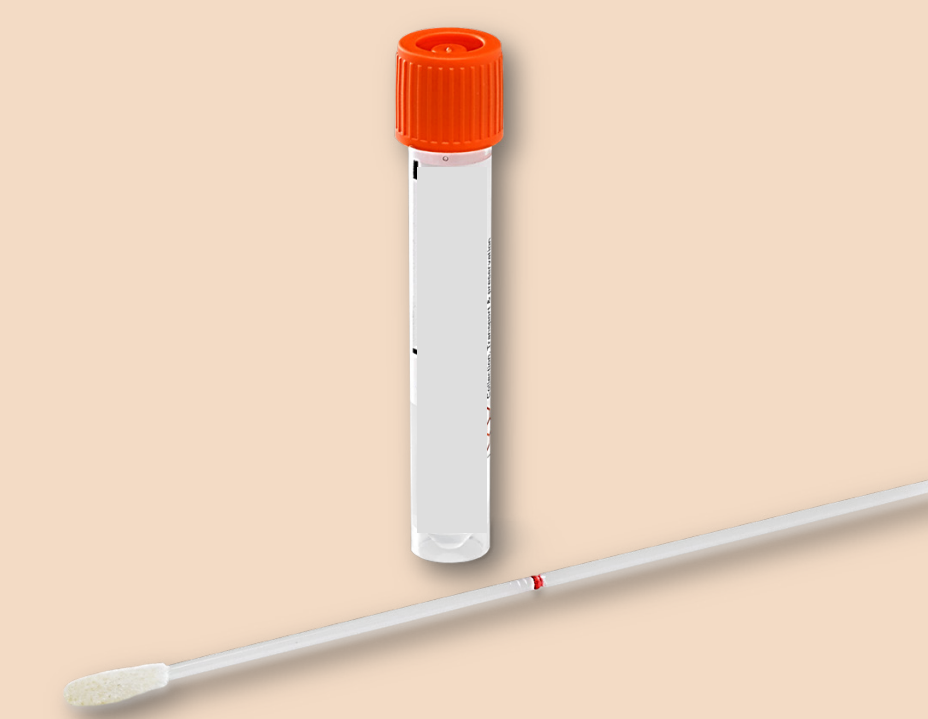
On what basis are patients selected for asymptomatic carriage screening? (n=22) {select all that apply}

Selected units	n (%)
ICUs	3(27)
Oncology +/- HCT	7(64)
Other*	2 (18)
Admission source (from both LTCF/LTACH)	4 (18)
Hospital-wide	4 (18)
Previous history of CDI	4 (18)
Not sure	1 (5)
Other**	3 (14)

Specimen Types (n=22)

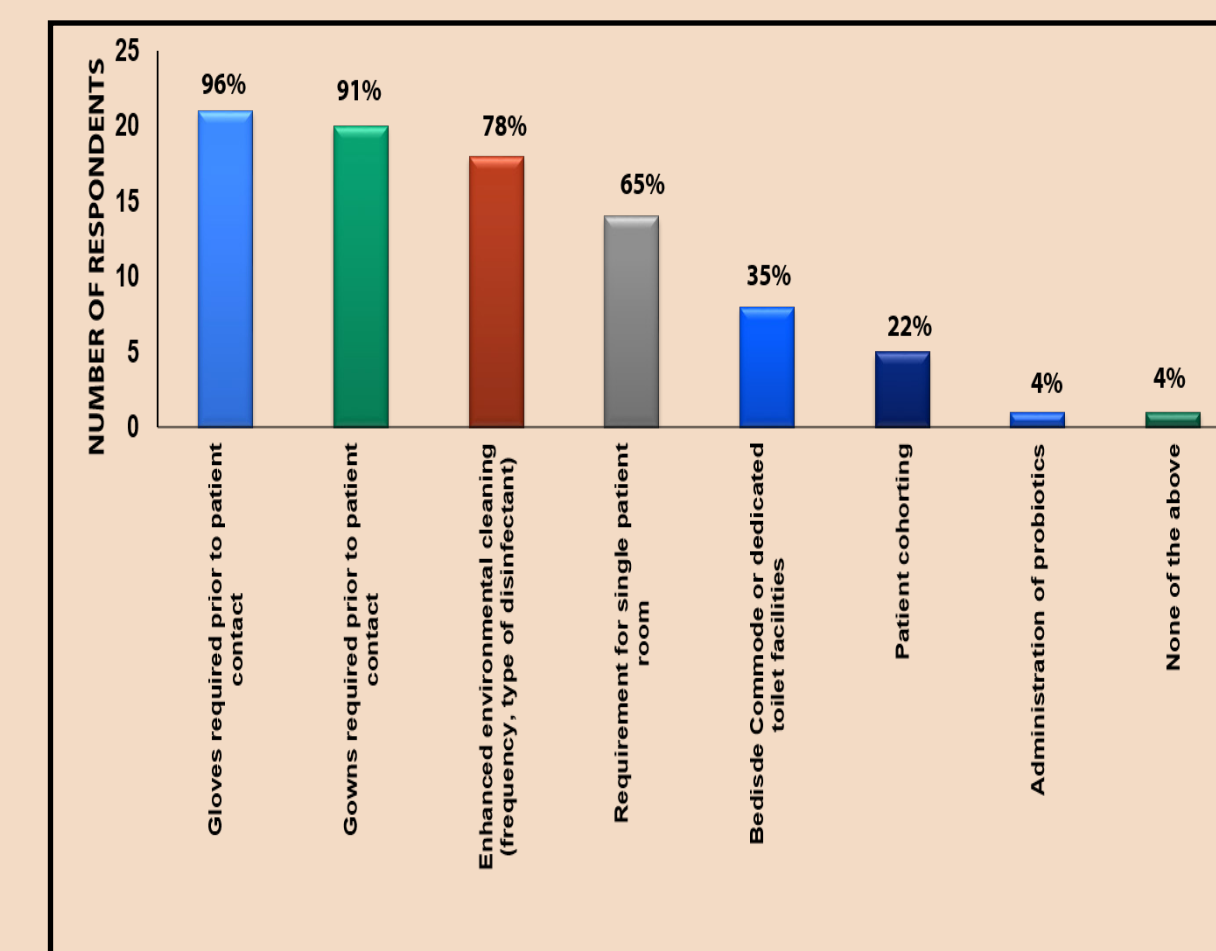
A Rectal swab (48%) was the most common specimen type

- Followed by stool (26%) and perirectal swab (13%).



*BMT admissions, BPICU, TSICU, Medical unit with high incidence
 ** QA Pilot study (2), history of exposure to a case (1), urology patients undergoing neobladder surgery

Infection Control measures (n=22) {select all that apply}



What actions are taken if an asymptomatic carrier develops diarrhea? (n=22) {select all that apply}

- Repeat *C. difficile* testing (36%)
- Empiric treatment without repeat testing (36%)
- Depends on the presence of other causes of diarrhea (36%)
- Not sure (32%)

Prophylactic Treatment of Asymptomatic Carriers (n=13)

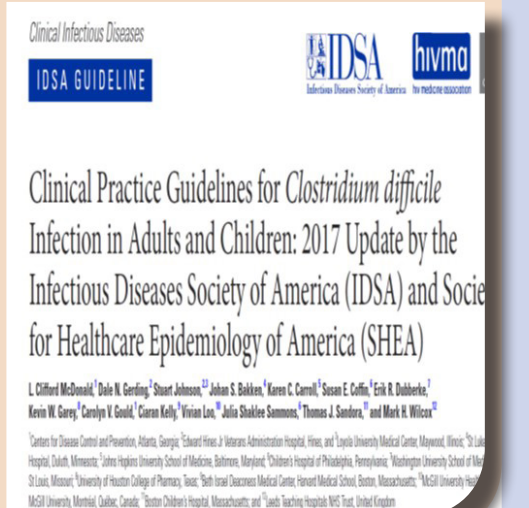
- Reasons for prophylactic treatment:
 - Patient receiving concomitant antibiotics (39%)
 - Identification of carriage (23%)
- The most common prophylactic drug was oral vancomycin (62%)
 - Other responses included a) Physician's choice (15%) and b) metronidazole (8%)

LIMITATIONS:

- Modest response rate
 - May limit the generalizability of these results to all EIN members
- Members of EIN may not be representative of the majority of physicians
- Self-reported data

CONCLUSIONS:

- A nationwide survey indicates that screening of asymptomatic carriers for *C. difficile* is performed uncommonly in healthcare settings
 - When identified, isolation, contact precautions, and enhanced environmental cleaning are instituted in addition to treatment with oral vancomycin
- There are no current recommendations regarding screening for asymptomatic carriage and management of such patients
- Future studies to better understand the role of asymptomatic carriage in *C. difficile* transmission, as well as measures to reduce that risk, is critical to informing best practices in this population



ACKNOWLEDGEMENTS

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 Survey link: <https://ein.idssociety.org/surveys/survey/103/>
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