A Clinical Practice Assessment on *Clostridium difficile* Infection

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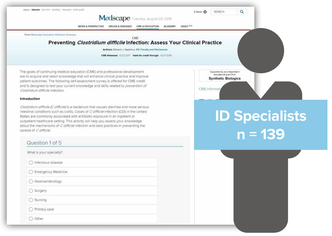
BACKGROUND

The goal of this study was to assess physicians' current practice patterns in prevention and management of *Clostridium difficile* infection (CDI).

METHODS

- A 25-question clinical practice assessment survey was made available to infectious disease (ID) specialists without monetary compensation or charge
- Questions evaluated knowledge, competence, and barriers related to CDI, such as current and emerging strategies for limiting risk and achieving optimal outcomes related to antimicrobial use
- The survey launched on a website dedicated to continuous professional development on October 27, 2017. Data were collected until January 16, 2018
- Respondent confidentiality was maintained, and responses were de-identified and aggregated prior to analyses

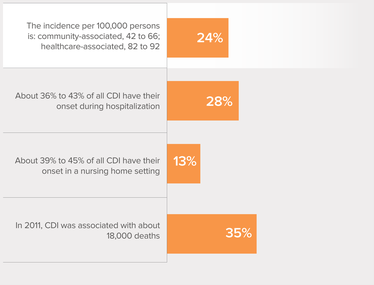


RESULTS

INCIDENCE OF CDI

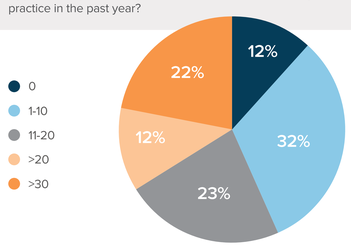
A total of 76% were not aware of the incidence of CDI in the United States

Which of the following is an accurate statement about CDI in the United States?



About 34% had more than 20 cases of CDI in their practice in the past year

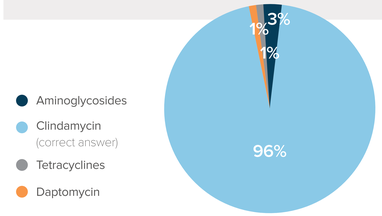
Approximately how many cases of CDI have occurred in your practice in the past year?



RISK FACTORS FOR CDI

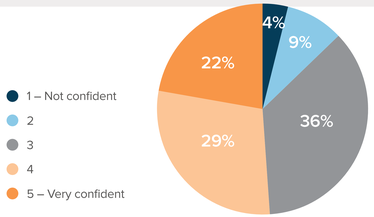
Nearly all (96%) physicians correctly identified the type or class of antibiotic most closely associated with development of CDI

The use of which of the following antibiotic or class of antibiotics is most closely associated with the development of CDI?



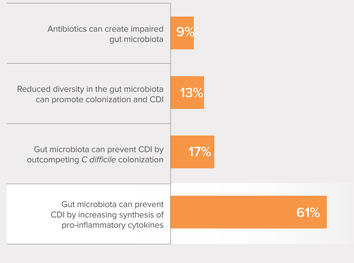
Only 22% reported they were very confident in recognizing host risk factors for CDI

Two events are required for the development of CDI: Disruption of the fecal microbiota (typically via use of antibiotics) and ingestion of spores via the fecal-oral route. Host factors also have a role in a person's risk for CDI. How confident are you in recognizing host risk factors for CDI?



39% were not aware of the relationship between the gut microbiome and CDI

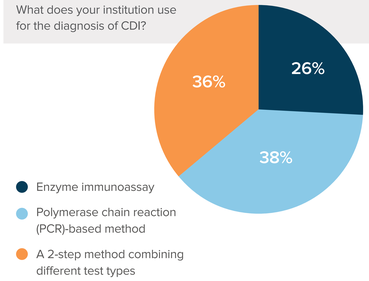
Which of the following is not an accurate statement about the relationship between gut microbiota and CDI?



DIAGNOSIS OF CDI

38% use a polymerase chain reaction-based method for CDI diagnosis; 36% use a 2-step method combining different test types

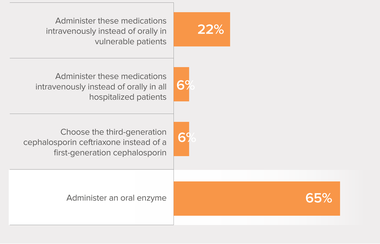
What does your institution use for the diagnosis of CDI?



NEW DEVELOPMENTS

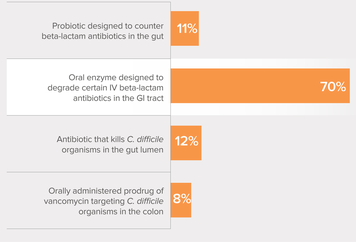
About one-third (35%) are not aware of new strategies being investigated for prevention of CDI

Cephalosporins, penicillins, and carbapenems are beta-lactam antibiotics that are proven to damage gut microbiome diversity. Which of the following is a potential new strategy for reducing the negative effect of these medications on the gut microbiota?



30% are not aware of the mechanism by which new therapies prevent development of CDI

What is the supposed mechanism by which ribaxamase, currently in clinical trials, may prevent CDI?



CONCLUSION

This research yielded important insights into current clinical practice gaps among ID specialists regarding identification and prevention of CDI and could be valuable to inform needs for continuing medical education.

ACKNOWLEDGMENTS

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