METHODS

A clinical practice assessment consisting of 25 multiple-choice knowledge- and case-based questions was made available to US physicians. Respondent confidentiality was maintained and responses were de-identified. A clinical practice assessment consisting of 25 multiple-choice knowledge- and case-based questions was made available to US physicians. There was no monetary compensation or charge for participation.

Questions evaluated knowledge, competence, skills, barriers, and attitudes related to CDI, such as recognition of risk factors, strategies for limiting risk, and emerging strategies for prevention.

The assessment launched online 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

69% 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?

- The incidence per 10,000 patient hospitalizations is 43% among adults age 65 or older.
- About 50% to 65% of all CDI have their onset during hospitalization.
- About 20% to 35% of all CDI have their onset in a nursing home setting.
- In 2011, CDI was associated with about 30,000 deaths.

Only 8% 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?

- 1 – Not confident
- 2
- 3
- 4
- 5 – Very confident

73% reported at least 1 case of CDI occurring in their practice over the past year.

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

- <10
- 10-20
- 21-30
- >30

57% 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 microbiome and CDI?

- Antibiotic use leads to overgrowth of intestinal pathogens.
- Gut microbiome is perturbed by antibiotics, contributing to CDI.
- Gut microbiome can prevent CDI by autoregulating intestinal cytokine production.
- Gut microbiome can prevent CDI by suppressing immune response.

58% 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?

- Administer these medications intravenously rather than orally in all hospitalized patients.
- Administer probiotics intravenously rather than orally in all hospitalized patients.
- Choose the third-generation cephalosporin ceftriaxone instead of a first-generation cephalosporin.
- Administer an oral enzyme.

48% 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?

- The ribaxamase enzyme degrades the antibiotic.
- The ribaxamase enzyme enhances the antibiotic.
- The ribaxamase enzyme inhibits the antibiotic.
- The ribaxamase enzyme nullifies the antibiotic.

CONCLUSION

This research yielded important insights into current clinical practices of physicians and gaps in the prevention and management of CDI that could inform development of future medical education projects.

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