About the Guideline

About the Guideline (cont'd.)
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- This guideline serves as an update to the SHEA/IDSA 2010 publication “Clinical Practice Guidelines for *Clostridium difficile* in Adults”. The updated version incorporates recommendations for children.
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• The objective is to provide recommendations to improve diagnosis, treatment, infection control and environmental prevention of Clostridium difficile in adults and children. Recommendations are based on the most up-to-date literature and best available evidence and practices at the time of publication.
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- Recommendations were made in 4 specific areas: epidemiology, diagnosis, infection control and prevention, and treatment.
About the Guideline (cont'd.)
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- All recommendations that were listed in the guidelines were included in this summary regardless of the strength of recommendation or quality of evidence.
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- Since publication of this guideline, the following innovations have become available, (no formal recommendations were included in the publication):
  - Bezlotoxumab is a monoclonal antibody pharmacologic agent with activity against C. difficile toxin B. This agent has been approved as an adjuvant therapy in patients with Clostridium difficile infection (CDI) at high risk for reoccurrence (Wilcox et al., 2017)
About the Guideline (cont'd.)

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- Since publication of this guideline, the following innovations have become available, (no formal recommendations were included in the publication):
  - Bezlotoxumab is a monoclonal antibody pharmacologic agent with activity against *C. difficile* toxin B. This agent has been approved as an adjuvant therapy in patients with *Clostridium difficile* infection (CDI) at high risk for reoccurrence (Wilcox et al., 2017)
  - Multiplex polymerase chain reaction (PCR) is now available as a diagnostic modality to test for *C. difficile* and exist as part of an enteral pathogen panel of > 20 pathogens (Zhang et al., 2015)
Key Clinical Considerations
Background
Background

- *Clostridium difficile* infection (CDI) is defined as the presence of diarrhea (3 or more unformed stool in a 24-hour period) and a stool test positive for *C. difficile* toxins, toxigenic *C. difficile*, or histopathologic or colonoscopic findings demonstrating pseudomembranous colitis (McDonald et al. 2018).
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- There is typically a history of antimicrobial or antineoplastic exposure in the 8 weeks prior, but this is not a diagnostic criterion in the formal definition.
Background

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- There is typically a history of antimicrobial or antineoplastic exposure in the 8 weeks prior, but this is not a diagnostic criterion in the formal definition.

- There is a spectrum of clinical manifestations of *C. difficile* ranging from asymptomatic carriers, to mild or moderate diarrhea, to severe, fulminating pseudomembranous colitis. In this guideline, there are no recommendations to treat asymptomatic carriers.
Background (cont'd.)
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- In the guidelines, fulminant CDI refers to severe, complicated CDI which may include hypotension, shock, ileus or megacolon.
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- Typical clinical manifestations may include:
  - diarrhea
  - passage of mucous or blood in stool
  - fever
  - abdominal pain
  - leukocytosis
Background (cont'd.)

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- Typical clinical manifestations may include:
  - diarrhea
  - passage of mucous or blood in stool
  - fever
  - abdominal pain
  - leukocytosis

- Transmission is primarily fecal-oral within healthcare facilities.
Epidemiology
Epidemiology

In an attempt to standardize surveillance and reporting to best compare clinical settings, the following terminology/definitions are recommended:
Epidemiology

In an attempt to standardize surveillance and reporting to best compare clinical settings, the following terminology/definitions are recommended:

- CDI should be categorized as follows in both adult and pediatric populations, based on exposure:
  - Healthcare facility onset CDI: (HO) CDI
    - Specimen collected > 3 days after facility admission
  - Community-onset, healthcare facility-associated CDI: (CO-HCFA) CDI
    - Specimen collected in outpatient setting or \( \leq 3 \) calendar days after hospital admission with history of an overnight stay in healthcare facility in prior 12 weeks.
  - Community associated CDI: (CA-CDI)
    - CDI with no inpatient stay in hospital for 12 weeks prior to onset of symptoms
Epidemiology (cont'd.)
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- The minimum recommended surveillance group for both adult and pediatric populations is for HO-CDI in healthcare facilities to monitor for outbreaks and high rates of infection.
Epidemiology (cont'd.)

- The minimum recommended surveillance group for both adult and pediatric populations is for HO-CDI in healthcare facilities to monitor for outbreaks and high rates of infection.
  - The case definition for surveillance includes presence of diarrhea or evidence of megacolon or severe ileus with positive laboratory evidence or endoscopic or histopathologic evidence of pseudomembranes (McDonald et al., 2018).
Epidemiology (cont'd.)
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- In both adult and pediatric populations, prevalence should be reported as follows:
Epidemiology (cont'd.)

- In both adult and pediatric populations, prevalence should be reported as follows:
  - Healthcare facilities should report (HO) CDI rates in terms of the # cases/10,000 patient days.
  - Consider not including cases in patients < 2 years of age.
Epidemiology (cont'd.)

- In both adult and pediatric populations, prevalence should be reported as follows:
  - Healthcare facilities should report (HO) CDI rates in terms of the # cases/10,000 patient days.
    - Consider not including cases in patients < 2 years of age.
  - CO-HCFA rates should be expressed # cases/1000 patient admissions.
Epidemiology (cont'd.)

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  - Healthcare facilities should report (HO) CDI rates in terms of the # cases/10,000 patient days.
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  - CO-HCFA rates should be expressed # cases/1000 patient admissions.
- Facilities with high rates of CDI in comparison to similar facilities should prompt further investigation to localize and target control strategies.
Epidemiology (cont'd.)

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  - Healthcare facilities should report (HO) CDI rates in terms of the # cases/10,000 patient days.
    - Consider not including cases in patients < 2 years of age.
  - CO-HCFA rates should be expressed # cases/1000 patient admissions.
- Facilities with high rates of CDI in comparison to similar facilities should prompt further investigation to localize and target control strategies.
- Limited evidence to support surveillance in community for CA-CDI to detect trends.
Diagnosis
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- *C. difficile* testing should be performed on patients with unexplained, new-onset ≥ 3 unformed stools in 24 hours (McDonald et al. 2018).
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- Consider multi-step testing of stool samples that includes stool toxin in those at risk for clinically significant *C. difficile*:
Diagnosis

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- Consider multi-step testing of stool samples that includes stool toxin in those at risk for clinically significant *C. difficile*:
  - Glutamate dehydrogenase (GDH) plus toxin
  - GDH plus toxin and nucleic acid amplification test (NAAT)
  - NAAT plus toxin
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• The following are considered most sensitive in those with clinical symptoms highly suggestive of CDI:
Diagnosis

• *C. difficile* testing should be performed on patients with unexplained, new-onset ≥ 3 unformed stools in 24 hours (McDonald et al. 2018).

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  • Glutamate dehydrogenase (GDH) plus toxin  
  • GDH plus toxin and nucleic acid amplification test (NAAT)  
  • NAAT plus toxin

• The following are considered most sensitive in those with clinical symptoms highly suggestive of CDI:
  
  • NAAT alone  
  • Multistep testing as described above
Diagnosis (cont'd.)
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- Repeat testing is not recommended (within 7 days) in a patient with same diarrheal symptoms as original testing.
Diagnosis (cont'd.)

- Repeat testing is not recommended (within 7 days) in a patient with same diarrheal symptoms as original testing.

- Testing in asymptomatic patients is not recommended.
Diagnosis (cont'd.)

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- Testing in asymptomatic patients is not recommended.

- Testing for cure is not recommended.
Diagnosis (cont'd.)

- Repeat testing is not recommended (within 7 days) in a patient with same diarrheal symptoms as original testing.

- Testing in asymptomatic patients is not recommended.

- Testing for cure is not recommended.

- There is no role for using biologic markers such as fecal lactoferrin to improve detection of CDI.
Diagnosis (cont'd.)

Pediatric Considerations:
Diagnosis (cont'd.)

Pediatric Considerations:

- Neonates and infants ≤ 12 months with diarrhea should not be tested for CDI due to high rates of asymptomatic carriage.
Diagnosis (cont'd.)

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- Neonates and infants ≤ 12 months with diarrhea should not be tested for CDI due to high rates of asymptomatic carriage.

- Children between ages 1-2 years with diarrhea should not undergo testing for CDI until other infectious etiologies have been ruled out.
Diagnosis (cont'd.)

Pediatric Considerations:

• Neonates and infants ≤ 12 months with diarrhea should not be tested for CDI due to high rates of asymptomatic carriage.

• Children between ages 1-2 years with diarrhea should not undergo testing for CDI until other infectious etiologies have been ruled out.

• In children ≥ 2 years of age, CDI testing should be performed in those with underlying risk factors (inflammatory bowel disease or immunocompromised state) and underlying risk for exposure (recent antibiotics, exposure to healthcare facility) AND prolonged or worsening diarrhea.
Infection Control and Prevention

The goal of preventing *C. difficile* transmission can be accomplished by preventing horizontal transmission, minimizing exposure, and decreasing risk factors for patients to develop *C. difficile* if exposed (Cohen et al. 2010).
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**Isolation Measures for Patients with CDI:**
Infection Control and Prevention

The goal of preventing \textit{C. difficile} transmission can be accomplished by preventing horizontal transmission, minimizing exposure, and decreasing risk factors for patients to develop \textit{C. difficile} if exposed (Cohen et al. 2010).

\textbf{Isolation Measures for Patients with CDI:}

\begin{itemize}
  \item When possible, a private room or dedicated toilet is recommended for patients with CDI.
    \begin{itemize}
      \item If private room availability is limited, those with fecal incontinence should receive priority.
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Infection Control and Prevention

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**Isolation Measures for Patients with CDI:**

- When possible, a private room or dedicated toilet is recommended for patients with CDI.
  - If private room availability is limited, those with fecal incontinence should receive priority.
  - If cohorting is necessary, patients with CDI should be cohorted with other patients with similar organism and not with patients with other drug resistant organisms.
Infection Control and Prevention

Isolation Measures for Patients with CDI (cont'd.):
Infection Control and Prevention

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- When caring for a patient with CDI, healthcare personnel must wear gown and gloves upon entering the room and while caring for the patient with CDI.
Infection Control and Prevention

Isolation Measures for Patients with CDI (cont'd.):

- When caring for a patient with CDI, healthcare personnel must wear gown and gloves upon entering the room and while caring for the patient with CDI.
- Contact precautions should be initiated in patients suspected of having CDI pending test results.
Infection Control and Prevention

Isolation Measures for Patients with CDI (cont'd.):

- When caring for a patient with CDI, healthcare personnel must wear gown and gloves upon entering the room and while caring for the patient with CDI.
- Contact precautions should be initiated in patients suspected of having CDI pending test results.
- Contact precautions should be maintained for the duration of diarrhea and 48 hours after resolution of diarrhea in all patients with CDI.
Infection Control and Prevention

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- When caring for a patient with CDI, healthcare personnel must wear gown and gloves upon entering the room and while caring for the patient with CDI.
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- Consider prolonged contact precautions until discharge in facilities with high rates of CDI despite implementation of standard infection control measures.
Infection Control and Prevention

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- When caring for a patient with CDI, healthcare personnel must wear gown and gloves upon entering the room and while caring for the patient with CDI.
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- Contact precautions should be maintained for the duration of diarrhea and 48 hours after resolution of diarrhea in all patients with CDI.
- Consider prolonged contact precautions until discharge in facilities with high rates of CDI despite implementation of standard infection control measures.
- Hand hygiene compliance must be encouraged/ emphasized and is the cornerstone of preventing horizontal spread. The use of soap and water or an alcohol-based hand hygiene product is recommended before and after contact with a patient with CDI and after removing gloves.
Infection Control and Prevention

Isolation Measures for Patients with CDI (cont'd.):
Infection Control and Prevention
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- In areas of CDI outbreak, sustained high rates of CDI infection, or when there is direct contact with feces or area of high fecal contamination (perineal region) consider using soap and water rather than alcohol-based hand hygiene products given improved removal of spores with soap and water.
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- Patients could be encouraged to wash hands and shower to reduce spore burden on skin.
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- Patients could be encouraged to wash hands and shower to reduce spore burden on skin.
- Utilize disposable patient equipment when possible; all reusable equipment should be cleaned with sporicidal disinfectant.
Infection Control and Prevention

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- Patients could be encouraged to wash hands and shower to reduce spore burden on skin.
- Utilize disposable patient equipment when possible; all reusable equipment should be cleaned with sporicidal disinfectant.
- Consider daily cleaning with a sporicidal agent and terminal room cleaning with sporicidal agent in areas if high CDI infection, outbreaks or repeated cases of CDI in the same room (McDonald et al. 2018).
Infection Control and Prevention
Isolation Measures for Patients with CDI (cont'd.):

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  - At this time, there is not sufficient evidence to recommend the use of automated, terminal disinfection using a sporicidal method for CDI prevention.
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- Healthcare facilities should have method of monitoring effectiveness of cleaning methods.
Infection Control and Prevention
Isolation Measures for Patients with CDI (cont'd.):

- In areas of CDI outbreak, sustained high rates of CDI infection, or when there is direct contact with feces or area of high fecal contamination (perineal region) consider using soap and water rather than alcohol-based hand hygiene products given improved removal of spores with soap and water.
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- Utilize disposable patient equipment when possible; all reusable equipment should be cleaned with sporicidal disinfectant.
- Consider daily cleaning with a sporicidal agent and terminal room cleaning with sporicidal agent in areas if high CDI infection, outbreaks or repeated cases of CDI in the same room (McDonald et al. 2018).
  - At this time, there is not sufficient evidence to recommend the use of automated, terminal disinfection using a sporicidal method for CDI prevention.
- Healthcare facilities should have method of monitoring effectiveness of cleaning methods.
- Screening for asymptomatic carriers should not take place.
Infection Control and Prevention
Antibacterial use:
Infection Control and Prevention

Antibacterial use:

• To reduce patient’s risk for CDI, the use of antibiotics should be minimized when possible and the duration of treatment should be limited to the minimal number or days to effectively treat a given infection.
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- To reduce patient’s risk for CDI, the use of antibiotics should be minimized when possible and the duration of treatment should be limited to the minimal number or days to effectively treat a given infection.

- Antibiotic stewardship committees can be effective in limiting antibiotics use and facilitating the targeting treatment of infections to local epidemiology.
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• Target the treatment of CDI to local epidemiology and the C. difficile strain present.
Infection Control and Prevention

Antibacterial use:

- To reduce patient’s risk for CDI, the use of antibiotics should be minimized when possible and the duration of treatment should be limited to the minimal number or days to effectively treat a given infection.
- Antibiotic stewardship committees can be effective in limiting antibiotics use and facilitating the targeting treatment of infections to local epidemiology.
- Target the treatment of CDI to local epidemiology and the *C. difficile* strain present.
- When clinically appropriate, limit the use of fluoroquinolones, clindamycin and cephalosporins (except for surgical antibiotic prophylaxis).
Infection Control and Prevention

Proton Pump Inhibitors (PPI):
Infection Control and Prevention

Proton Pump Inhibitors (PPI):

- While there is an association between PPI use and CDI, and unnecessary PPIs should always be stopped, PPI discontinuation as a measure to prevent CDI has not been proven.
Infection Control and Prevention

Use of probiotics:
Infection Control and Prevention

Use of probiotics:

- There are no recommendations supporting the use of the probiotics in reducing the risk of CDI based on the currently available probiotics on the market at time of this guideline publication.
Treatment: Adult
Treatment: Adult

- Discontinue antibiotic treatment with the provoking antibiotic as soon as clinically possible.
Treatment: Adult

- Discontinue antibiotic treatment with the provoking antibiotic as soon as clinically possible.

- Empiric antibiotic treatment for CDI should be initiated when there is an anticipated delay in laboratory confirmation or if there is a high clinical suspicion for fulminant CDI.
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Initial episode, non-severe
  (white blood cell count ≤ 15,000 cells/µL, serum creatinine level < 1.5 mg/dL)
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Initial episode, non-severe
  (white blood cell count ≤ 15,000 cells/µL, serum creatinine level < 1.5 mg/dL)
  - Vancomycin 125 mg PO four times daily for 10 days
    OR
  - Fidaxomicin 200 mg PO two times daily for 10 days
  - If access to Vancomycin or Fidaxomicin is limited, use Metronidazole 500 mg PO three times daily for 10 days. Avoid repeated or prolonged use due to risk of neurotoxicity.
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Initial episode, non-severe  
  (white blood cell count ≤ 15,000 cells/μL, serum creatinine level < 1.5 mg/dL)
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  - If access to Vancomycin or Fidaxomicin is limited, use Metronidazole 500 mg PO three times daily for 10 days. Avoid repeated or prolonged use due to risk of neurotoxicity.

- Initial episode, severe CDI  
  (white blood cell count > 15,000 cells/μL, serum creatinine > 1.5mg/dL)
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- **Initial episode, non-severe**
  (white blood cell count ≤ 15,000 cells/µL, serum creatinine level < 1.5 mg/dL)
  - Vancomycin 125 mg PO four times daily for 10 days
    OR
  - Fidaxomicin 200 mg PO two times daily for 10 days
  - If access to Vancomycin or Fidaxomicin is limited, use Metronidazole 500 mg PO three times daily for 10 days. Avoid repeated or prolonged use due to risk of neurotoxicity.

- **Initial episode, severe CDI**
  (white blood cell count > 15,000 cells/µL, serum creatinine > 1.5mg/dL)
  - Vancomycin 125 mg PO four times daily for 10 days
    OR
  - Fidaxomicin 200 mg PO two times daily for 10 days
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Initial episode, fulminant
  (hypotension, shock, ileus, megacolon)
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

• Initial episode, fulminant
  (hypotension, shock, ileus, megacolon)

• Vancomycin 500 mg PO or NGT four times daily
  AND
• Metronidazole 500 mg IV every 8 hours
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Initial episode, fulminant
  (hypotension, shock, ileus, megacolon)

- Vancomycin 500 mg PO or NGT four times daily
  AND

- Metronidazole 500 mg IV every 8 hours

If complete ileus present:
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Initial episode, fulminant
  (hypotension, shock, ileus, megacolon)

- Vancomycin 500 mg PO or NGT four times daily
  AND
- Metronidazole 500 mg IV every 8 hours

If complete ileus present:

- Vancomycin 500 mg in 100 mL NS per rectum every 6 hours via retention enema
  AND
- Metronidazole 500 mg IV every 8 hours
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Reoccurrence
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Reoccurrence
  - 1st reoccurrence: treated based on initial, severity-based treatments
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Reoccurrence
  - 1st reoccurrence: treated based on initial, severity-based treatments
    - Vancomycin 125 mg PO four times daily for 10 days if Metronidazole was used for initial episode
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Reoccurrence
  - 1st reoccurrence: treated based on initial, severity-based treatments
    - Vancomycin 125 mg PO four times daily for 10 days if Metronidazole was used for initial episode
    - OR
  - Prolonged, tapered Vancomycin regimen if Vancomycin used for initial regimen
    - Example of tapered regimen: Vancomycin 125 mg PO four times daily for 10-14 day, followed by Vancomycin 125 mg PO two times daily for one week, followed by Vancomycin 125 mg PO daily for one week, followed by Vancomycin 125 mg 2-3 times per week for 2-8 weeks.
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Reoccurrence
  - 1st reoccurrence: treated based on initial, severity-based treatments
    - Vancomycin 125 mg PO four times daily for 10 days if Metronidazole was used for initial episode
    OR
    - Prolonged, tapered Vancomycin regimen if Vancomycin used for initial regimen
      - Example of tapered regimen: Vancomycin 125 mg PO four times daily for 10-14 day, followed by Vancomycin 125 mg PO two times daily for one week, followed by Vancomycin 125 mg PO daily for one week, followed by Vancomycin 125 mg 2-3 times per week for 2-8 weeks.
      OR
    - Fidaxomicin 200 mg PO two times daily for 10 days if Vancomycin used for initial regimen
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)
  - Reoccurrence
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

• Reoccurrence
  • 2nd or subsequent reoccurrence:
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Reoccurrence
  - 2nd or subsequent reoccurrence:
    - Vancomycin PO either pulse dose or tapering dose regimen
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

• Reoccurrence
  • 2nd or subsequent reoccurrence:
    • Vancomycin PO either pulse dose or tapering dose regimen
      OR
    • Vancomycin 125 mg PO four times daily for 10 days followed by Rifaximin 400 mg three times daily for 20 days
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

• Reoccurrence
  • 2nd or subsequent reoccurrence:
    • Vancomycin PO either pulse dose or tapering dose regimen
      OR
    • Vancomycin 125 mg PO four times daily for 10 days followed by Rifaximin 400 mg three times daily for 20 days
      OR
    • Fidaxomicin 200 mg PO two times daily for 10 days
Treatment: Adult (cont'd.)

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

- Reoccurrence
  - 2nd or subsequent reoccurrence:
    - Vancomycin PO either pulse dose or tapering dose regimen
    OR
    - Vancomycin 125 mg PO four times daily for 10 days followed by Rifaximin 400 mg three times daily for 20 days
    OR
    - Fidaxomicin 200 mg PO two times daily for 10 days
    OR
    - Fecal microbiota transplantation
Treatment: Adult (cont'd.)

Surgical Intervention
Treatment: Adult (cont'd.)

Surgical Intervention

- Subtotal colectomy with preservation of rectum recommended in those with severe illness. Alternative surgical option includes diverting loop ileostomy with colonic lavage followed by antegrade vancomycin flushes (McDonald et al., 2018).
Surgical Intervention

- Subtotal colectomy with preservation of rectum recommended in those with severe illness. Alternative surgical option includes diverting loop ileostomy with colonic lavage followed by antegrade vancomycin flushes (McDonald et al., 2018).

There are no recommendations for the use of CDI directed antibiotics in the prevention of CDI recurrence in those requiring continued treatment of infection.
Treatment: Children

- Pharmacologic treatment recommendations: (McDonald, et al., 2018)
Treatment: Children

- Pharmacologic treatment recommendations: (McDonald, et al., 2018)
  - Initial episode, non-severe
Treatment: Children

- Pharmacologic treatment recommendations: (McDonald, et al., 2018)
  - Initial episode, non-severe
    - Metronidazole 7.5 mg/kg/dose, PO, 3-4 times daily for 10 days
Treatment: Children

- Pharmacologic treatment recommendations: (McDonald, et al., 2018)
  - Initial episode, non-severe
    - Metronidazole 7.5 mg/kg/dose, PO, 3-4 times daily for 10 days
      OR
    - Vancomycin 10 mg/kg/dose, PO, 4 times daily for 10 days
Treatment: Children

- Pharmacologic treatment recommendations: (McDonald, et al., 2018)
  - Initial episode, non-severe
    - Metronidazole 7.5 mg/kg/dose, PO, 3-4 times daily for 10 days
      OR
    - Vancomycin 10 mg/kg/dose, PO, 4 times daily for 10 days
  - Initial episode, severe/ fulminant CDI
Treatment: Children

- Pharmacologic treatment recommendations: (McDonald, et al., 2018)
  - Initial episode, non-severe
    - Metronidazole 7.5 mg/kg/dose, PO, 3-4 times daily for 10 days
    OR
    - Vancomycin 10 mg/kg/dose, PO, 4 times daily for 10 days
  - Initial episode, severe/ fulminant CDI
    - Vancomycin 10 mg/kg/dose, PO or PR, 4 times daily for 10 days
Treatment: Children

- Pharmacologic treatment recommendations: (McDonald, et al., 2018)
  - Initial episode, non-severe
    - Metronidazole 7.5 mg/kg/dose, PO, 3-4 times daily for 10 days
    - Vancomycin 10 mg/kg/dose, PO, 4 times daily for 10 days
  - Initial episode, severe/ fulminant CDI
    - Vancomycin 10 mg/kg/dose, PO or PR, 4 times daily for 10 days
      - WITH OR WITHOUT
        - Metronidazole 10 mg/kg/dose, IV, 3 times daily for 10 days
        - Addition of Metronidazole recommended in those with critical illness
Treatment: Children

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

Reoccurrence
Treatment: Children

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

Reoccurrence

- 1st reoccurrence, non-severe treated based on initial, severity-based treatments
Treatment: Children

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

Reoccurrence

- 1st reoccurrence, non-severe treated based on initial, severity-based treatments

  - Metronidazole 7.5 mg/kg/dose, PO, 3-4 times daily for 10 days
    OR
  - Vancomycin 10 mg/kg/dose, PO, 4 times daily for 10 days
Treatment: Children

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

Reoccurrence

- **1st reoccurrence, non-severe** treated based on initial, severity-based treatments
  - Metronidazole 7.5 mg/kg/dose, PO, 3-4 times daily for 10 days
    OR
  - Vancomycin 10 mg/kg/dose, PO, 4 times daily for 10 days
- **2nd or subsequent reoccurrence:**
Treatment: Children

Pharmacologic treatment recommendations: (McDonald, et al., 2018)

Reoccurrence

- **1st reoccurrence, non-severe** treated based on initial, severity-based treatments
  - Metronidazole 7.5 mg/kg/dose, PO, 3-4 times daily for 10 days
    OR
  - Vancomycin 10 mg/kg/dose, PO, 4 times daily for 10 days

- **2nd or subsequent reoccurrence:**
  - Vancomycin PO either pulse dose or tapering dose regimen @ 10 mg/kg/dose
    OR
  - Vancomycin for 10 days (10mg/kg/dose 4 times daily) followed by Rifaximin for 20 days (no specific pediatric dose)
    OR
  - Fecal microbiota transplantation
References


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