Health PEI: Antimicrobial Stewardship Subcommittee

Clostridioides (Clostridium) difficile Infection Treatment Guidelines for Adults

Clostridioides difficile **"C. diff"** **Antibiotic Associated Colitis/Diarrhea**	Non-SIRS / Pre-SIRS Note: Definition of "Recurrence" (Relapse): **Symptoms returning less than 8 weeks after stopping therapy.**	SIRS / Sepsis (2 of 4) >38.3<36.0; HR>90; RR>20 or PaCO2<32; WBC <4 >12 or Bands	Severe Sepsis(1 of 7+) Mottled, anuria, Lactate>2, Plt<100, DIC, ARDS, fastΔLOC…	Septic Shock (Pressors) Refractory Septic Sh. (More Pressors)
Vanco=vancomycin (IV is NOT effective) Metro=metronidazole Prevention • Hand hygiene (soap if visibly soiled). Also applies to those caring for patients with diarrhea. • Cleaning of shared equipment, including stethoscopes. • Adherence to contact precautions • Use antibiotics wisely! Treatment Measures • **STOP:** unnecessary antibiotics, or… • **CHANGE:** to lower risk antibiotics Ordered by risk: clindamycin >moxifloxacin > ciprofloxacin > levofloxacin > carbapenems > 2nd and 3rd generation cephalosporins > amox-clav > amox • **STOP**: Unnecessary proton-pump inhibitors, anti-diarrheal agents. • Add fiber, reduce dairy Secondary prophylaxis • Patient with a history of *C. diff* requiring abx therapy for another indication(s) - giving prophylactic metro or vanco is not routinely recommended.	Initial episode Vanco 125 mg PO QID x 10 days 1st Recurrence Vanco Pulse: 125 mg PO QID x 5 days, 125 mg PO BID x 3 days, 125 mg PO daily x 3 days 125 mg PO q2days x 3 doses **OR** Fidaxomicin 200 mg PO BID x 10 days $⊘ 2nd Recurrence Vanco Taper: 125 mg PO QID x 10 days, 125 mg PO BID x 7 days, 125 mg PO daily x 7 days, 125 mg PO q2days x 2 weeks **OR** Fidaxomicin 200 mg PO BID x 10 days 3rd Recurrence Consult expert on use of repeat Vanco taper/pulse, Fidaxomicin standard dose or taper ⊘ or fecal transplant.	**AND (specifically for C diff): WBC ≥ 15 or Albumin <30** Vanco 125 mg PO q6h x 14 days (once stabilized, can switch to QID dosing)	• Vancomycin 500 mg PO/NG q6h x 3 days, **then** Vancomycin 125 mg PO/NG q6h x 11 days (can continue to 2nd recurrence strategy if indicated) **AND** • Metro 500 mg IV q8h (administer until no longer critically ill) **AND** • Consider surgical consult	Investigate alternative diagnosis and: • For toxic megacolon: consult surgery for possible subtotal colectomy or loop ileostomy. • Vanco 500 mg (PO/NG) q6h **AND** • Metro 500 mg IV Q8h **AND** Consult infectious disease and surgery ASAP
		Abd flat plate to rule out toxic megacolon, repeat in 3 days if no clinical improvement		
		If presence of ileus: add **Vanco 500 mg PR q6h** (500 mg in 500 mL N/S by retention enema via Foley catheter held for 3 hours)		

⊘ = Not covered under the Provincial Formulary for this indication **$** Fidaxomicin 10 day course cost is ~ $2000.00

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WHEN TO SEND A STOOL SAMPLE:

Diarrhea:

- taking the shape of the receptacle, or corresponding to Bristol stool chart types 6–7 (**NOTE: formed stool typically NOT processed, unless concern for ileus.)
- greater than or equal to 3 unformed stools in 24 or fewer consecutive hours
- cannot be explained for any other reason

Ensure patient is NOT receiving:

- laxatives for the past 24-48 hours

**If you have questions about whether or not to send a stool sample, please contact the Medical Microbiologist for clarification.

TESTING:

- Do NOT test stool from asymptomatic patients.
  - C. Diff toxin positive **without current symptoms** is NOT considered C. Diff disease
  - ~10% of pts will test positive within one week of hospitalization, some studies suggest up to 50% of patients will be colonized after >4 weeks in hospital.
  - Colonization rates are ~10% in LTC.
- **Repeat testing for cure is NOT indicated.**

**Stat testing is available. PCR testing in the setting of a negative screen with high clinical suspicion is also available.

PROBIOTICS:

Who are they strongly recommended for?

- Patients taking antibiotics!
  - Especially those at risk of antibiotic associated diarrhea and *C. difficile* due to their current antibiotic regimen or their past history.
  - May be more effective with higher baseline incidence of *C. diff* (>5%) and higher risk (ie. multiple *C. diff* recurrences or taking 2 or more antibiotics).
  - Low quality or weak evidence for using probiotics as an adjunctive therapy for treating *C. diff*.

Which probiotic is best?

- No consensus in the literature on strain, strength, or dose.
- Commonly used species with individual evidence include:
  - *Lactobacillus rhamnosus GG* (most evidence)
  - *Lactobacillus casei*
  - *Lactobacillus acidophilus*
  - Kefir (*Expert opinion, 1 cup BID-TID, avoid in diabetics)
  - *Saccharomyces boulardii*
  - Mixed strain formulations (often proprietary blends)

**Pooled results of different strains still show benefit, indicating that positive effect may be seen regardless of strain.

What patients should be cautioned about their use?

- Neutropenic patients
- Patients under the age of 18 (for the purposes of these guidelines)
- Patients admitted to the ICU.

How should probiotics be taken?

- Timing:
  - Studies indicate that initiating probiotics **as close to the first dose of antibiotic therapy** as possible is most effective.
  - Separating the dose from abx dosing is **not** generally required.
- Duration of therapy – no strong consensus.
  - Options include:
    - fixed 14 day course
    - duration of antibiotic exposure
    - duration of antibiotic exposure and up to 7 days following completion
- Dose:
  - **Single strain**: some trials indicate at least 5 billion CFU (colony-forming units) per day. Others say at least 15 billion CFU.
  - **Multi-strain**: some suggestion that 50 billion CFU daily is best, depending on blend.

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