Montefiore GI Pathogen Panel Guidance

Prepared by the Montefiore/Einstein Antimicrobial Stewardship Program (ASP) — Revised 2026

DIAGNOSTIC STEWARDSHIP AND RESULT INTERPRETATION

1) When to order the GI pathogen panel?

- Reserve for patients with **moderate-to-severe watery diarrhea, bloody diarrhea, febrile, persistent diarrhea (>7 days), nosocomial diarrhea, or immunocompromise**. Most acute community-acquired diarrhea is self-limited and does not require testing.[1]

- **"3-day rule":** Do not order in patients hospitalized >3 days, where diagnostic yield is low. Test specifically for *C. difficile* instead when hospital-onset diarrhea develops.[1]

- **One specimen per episode:** A single stool specimen detects most bacterial pathogens. Do not reorder the panel within the same illness episode.[1]

- **Insurance/cost note:** Coverage for highly multiplexed panels (≥12 targets) is frequently limited for outpatients not meeting the indications above, and results often do not change management.[1]

2) Interpreting results

- The panel is highly sensitive but detects nucleic acid and **cannot distinguish active infection from colonization or post-infectious shedding**. Interpret every result in the context of the clinical presentation.[2]

- The panel is **not quantitative** and provides **no antimicrobial susceptibility data**.[2][3]

- **Co-detection of multiple pathogens is common, especially in pediatrics,** and of variable significance; correlate with symptoms and exposures rather than treating every target.[2]

- **Confirmatory/reflex stool culture** is required for positive *Salmonella, Shigella, Campylobacter, STEC, Vibrio,* and *Yersinia* to enable susceptibility testing and public-health surveillance.[1][3]

- **No test-of-cure by PCR.** Culture-independent tests are not validated to document clearance; use culture when clearance documentation is required (e.g., food handlers, healthcare/daycare workers) per public-health rules.[4]

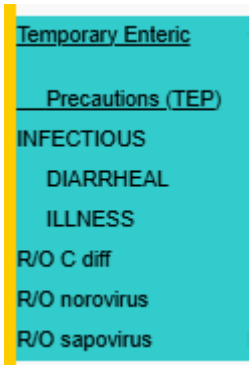
3) C. difficile testing

- *C. difficile* is **not reported on the Montefiore multiplex panel.** When CDI is suspected, order the dedicated *C. difficile* assay and initiate **contact plus isolation**.

4) **Reporting note:** Positive results for organisms marked [1] below must be reported to the New York State Department of Health. Infection Control is notified of positive results; coordinate with Infection Control.

5) **Isolation:** Refer to EPIC isolation screen or Montefiore Intranet IPC Guidelines

Order "Temporary Enteric Precautions (TEP) for r/o C.difficile, norovirus, or sapovirus



ORGANISM-SPECIFIC ETIOLOGY AND TREATMENT

Summary table— antibiotic options are listed in order of preference; combination therapy is not recommended unless specified. Pediatric doses should not exceed the adult dose.

**Additional management notes below table*

Isolated organism	**Treat?**	**Preferred first-line (adult)**	**Preferred first-line (pediatric)**	**Key caution**
BACTERIA				
Campylobacter[1]	Only if severe or high-risk	Azithromycin 500 mg q24h ×3 d	Azithromycin 10 mg/kg/dose q24h ×3 d (max dose 500mg)	Ciprofloxacin resistance rising — check susceptibility
Plesiomonas shigelloides	Only if severe/high-risk	Ciprofloxacin 500 mg q12h ×3 d	Azithromycin 10 mg/kg/dose q24h ×3 d	Benefit uncertain

Isolated organism	Treat?	Preferred first-line (adult)	Preferred first-line (pediatric)	Key caution
Salmonella[1] (nontyphoidal)	No, unless severe/high-risk or Typhi/Paratyphi	Ciprofloxacin 500 mg q12h ×7 d	Usually not indicated; consider for < 3 months of age, immune-compromised: Azithromycin 10 mg/kg/dose q24h ×5–7 d	May prolong carriage; consult ID
Vibrio[1] (non-cholerae)	Only if severe/prolonged	Azithromycin 1 g ×1 or doxycycline 300 mg ×1	No standard regimen; consult Peds ID for severe infection	Rehydration is the primary treatment
Vibrio cholerae[1]	Yes (adjunct to rehydration)	Doxycycline 300 mg ×1	Azithromycin 20 mg/kg ×1	Rehydration is the primary treatment
Yersinia enterocolitica[1]	Only if severe/immune-compromised	TMP-SMX 1 DS q12h ×5 d	TMP-SMX 5 mg TMP/kg/dose q12h ×5 d	Benefit uncertain
EAEC / EPEC	Usually no	Azithromycin 1 g ×1 (if treated)	Usually not indicated; if moderate–severe: Azithromycin 10 mg/kg/dose q24h ×3 d	Limited data
ETEC	Yes if >4 stools/d, fever, or blood/pus	Azithromycin 1 g ×1 or rifaximin 200 mg q8h ×3 d	Azithromycin 10 mg/kg/dose q24h ×3 d	—
E. coli O157 / STEC (stx1/stx2)[1]	No — avoid antibiotics	Supportive care only	Supportive care only	Antibiotics/anti-motility/NSAIDs raise HUS risk;

Isolated organism	Treat?	Preferred first-line (adult)	Preferred first-line (pediatric)	Key caution
				monitor CBC, renal function
Shigella / EIEC[1]	Severity- and susceptibility-guided	Azithromycin 500 mg q24h ×3 d	Azithromycin 10 mg/kg/dose q24h ×3 d	High cipro/azithro resistance, use carbapenem if severe/XDR
PROTOZOA				
Cryptosporidium[1]	Prolonged/severe or immune-compromised	Nitazoxanide 500 mg q12h ×3 d	Nitazoxanide ×3 d: 1–3 y 100 mg q12h; 4–11 y 200 mg q12h; >12 y 500 mg q12h	Poor response if immune-compromised; consult ID to discuss longer duration
Cyclospora cayetanensis[1]	If symptomatic	TMP/SMX 1 DS q12h ×7–10 d	TMP-SMX 5 mg TMP/kg/dose q12h ×7–10 d	ID consult if immune-compromised
Entamoeba histolytica	Yes, if detected	Metronidazole 500 mg q8h ×7–10 d, then luminal agent	Metronidazole 10–15 mg/kg/dose q8h ×7–10 d, then paromomycin 30 mg/kg/day divided q8h ×7 d	Must follow with paromomycin
Giardia lamblia[1]	If symptomatic	Tinidazole 2 g ×1	Tinidazole (≥3 y) 50 mg/kg ×1	—
VIRUSES *Contact plus isolation for noro/sapovirus; contact for rotavirus, adeno/astrovirus are standard precautions if continent, contact isolation if incontinent/diapered				

Isolated organism	Treat?	Preferred first-line (adult)	Preferred first-line (pediatric)	Key caution
Adenovirus F40/41, astrovirus, norovirus, rotavirus, sapovirus	No	Supportive care only	Supportive care only	Rota positivity may be vaccine shedding

NOTES

BACTERIA

Campylobacter[1]

- Presentation/sources: fever, cramps, diarrhea within 6–48 h, fecal leukocytes often present; unpasteurized milk, poultry, dairy; peak spring/summer.

- Most patients recover without antibiotics (may shorten symptoms by ~1 day). Treat if **severe illness** (high fever; bloody, severe, or worsening diarrhea) or **high risk** (elderly, pregnant, immunocompromised).[4]

- Adults: Azithromycin 500 mg q24h ×3 days; or Ciprofloxacin 500 mg q12h ×3 days (verify local susceptibility). Immunocompromised may require 7–14 days.

- Pediatrics: Azithromycin 10 mg/kg/dose q24h ×3 days.

Plesiomonas shigelloides

- Presentation/sources: severe cramps and diarrhea within 6–48 h; fresh water, shellfish, international travel.

- Most recover without antibiotics; benefit uncertain. Consider treatment for severe diarrhea, extremes of age, or immunocompromise.

- Adults: Ciprofloxacin 500 mg q12h ×3 days; or Azithromycin 500 mg q24h ×3 days; or TMP/SMX 1 DS q12h ×3 days.

- Pediatrics: Azithromycin 10 mg/kg/dose q24h ×3 days.

Salmonella[1] (nontyphoidal)

- Presentation/sources: fever, cramps, diarrhea within 6–48 h, fecal leukocytes often present; poultry, eggs, dairy, produce, reptiles; peak summer/fall.

- For uncomplicated nontyphoidal salmonellosis, **antibiotics are not indicated** (no effect on illness length and may prolong carriage). Treat if: **severe illness** (>8 stools/day, high fever, hospitalized); **high risk** (age 50 y, immunocompromised); or **all *S. enterica* Typhi/Paratyphi** (call ID / Peds ID). ID consult recommended.[4]

- Adults: Ciprofloxacin 500 mg q12h ×7 days (consider Ceftriaxone 1 g q24h if invasive disease or fluoroquinolone resistance suspected — see cdc.gov/narms); Azithromycin 500 mg q24h ×7 days; or TMP/SMX 1 DS q12h ×7 days. Follow-up culture and susceptibility if possible. Immunocompromised require ≥14 days if relapsing.

- Pediatrics: typically not indicated for nontyphoidal gastroenteritis; use for 3 mo, immunocompromise, or Typhi/Paratyphi (call Peds ID): Azithromycin 10 mg/kg/dose q24h ×5–7 days; alternatives TMP/SMX 5 mg TMP/kg/dose q12h ×5–7 days (max 160 mg TMP/dose), or Amoxicillin (if susceptible) 45 mg/kg/dose q12h ×5–7 days.

***Vibrio*[1] (non-cholerae)**

- Presentation/sources: fever, cramps, diarrhea within 6–48 h, fecal leukocytes often present; shellfish.

- Aggressive rehydration is primary; most recover without antibiotics. Consider antibiotics for severe or prolonged diarrhea.

- Adults: Azithromycin 1 g ×1; or Doxycycline 300 mg ×1. Invasive disease: Ceftriaxone 1 g q24h + Doxycycline 100 mg q12h.

- Pediatrics: no standard regimen; most recover without antibiotics. Consult Peds ID for severe infection.

***Vibrio cholerae*[1]**

- Presentation/sources: cramps and large-volume watery diarrhea within 16–72 h; shellfish, travel to endemic areas.

- Aggressive rehydration is primary; antibiotics as adjunct shorten illness and are recommended.

- Adults: Doxycycline 300 mg ×1; or Ciprofloxacin 500 mg ×1; or Azithromycin 1 g ×1.

- Pediatrics: Azithromycin 20 mg/kg ×1. Alternatives: >8 y Doxycycline 4–6 mg/kg ×1 (max 100 mg); older children Ciprofloxacin 20 mg/kg ×1.

***Yersinia enterocolitica*[1]**

- Presentation/sources: fever and persistent cramps within 1–11 days ± diarrhea, fecal leukocytes often present; unpasteurized milk, undercooked pork, chitterlings; peak winter.

- Most recover without antibiotics; benefit uncertain. Consider in immunocompromised patients.

- Adults: TMP-SMX 1 DS q12h ×5 days; or Ciprofloxacin 500 mg q12h ×5 days. Invasive disease: Doxycycline 100 mg IV q12h + tobramycin or gentamicin 5 mg/kg/day.

- Pediatrics: typically not indicated; for severe disease or immunocompromise: TMP-SMX 5 mg TMP/kg/dose q12h ×5 days; alternative Doxycycline 2.2 mg/kg/dose q12h ×5 days.

DIARRHEAGENIC *E. COLI* / *SHIGELLA*

***E. coli* — EAEC / EPEC / ETEC**

- Presentation/sources: cramps, watery diarrhea within 16–72 h, can be prolonged; international travel, infantile diarrhea in developing countries.

- Limited data for EAEC/EPEC; many recover without antibiotics. **For ETEC**, antibiotics shorten illness and are indicated for diarrhea (>4 stools/day), fever, or blood/pus in stool.

- Adults: Azithromycin 1 g ×1 or 500 mg q24h ×3 days; or Rifaximin 200 mg q8h ×3 days; or Ciprofloxacin 500 mg q12h ×3 days.

- Pediatrics: typically not indicated; moderate–severe disease: Azithromycin 10 mg/kg/dose q24h ×3 days.

***E. coli* O157[1] and Shiga toxin–producing *E. coli* (STEC, stx1/stx2)[1]**

- Presentation/sources: bloody diarrhea with minimal fever within 3–8 days; unpasteurized milk, fresh produce, ground beef, petting zoos.

- **Avoid antibiotics** — no benefit on duration/severity and **increased risk of hemolytic-uremic syndrome (HUS)**, particularly with O157 and Shiga toxin 2 (stx2)–producing strains. **Supportive care only.**[4][8][9][10]

- **Also avoid antimotility agents, NSAIDs, and narcotics.** Monitor CBC and renal function for HUS.[4][8]

***Shigella* / Enteroinvasive *E. coli* (EIEC)[1]**

- Presentation/sources: fever, cramps, diarrhea within 6–48 h, fecal leukocytes present; egg salad, lettuce, daycare.
- **Treatment is guided by severity and susceptibility.** Antibiotics may be withheld in mild/resolving disease in immunocompetent hosts; treat severe illness, immunocompromise, or public-health indications. [12-13]
- **Rising resistance:** Preliminary CDC data estimate that a majority of recent U.S. *Shigella* isolates carry ciprofloxacin-resistance markers and a substantial minority

carry azithromycin-resistance markers, with emerging extensively drug-resistant (XDR) strains. **Select therapy by local epidemiology and susceptibility.** [12]

- Adults: Azithromycin 500 mg q24h ×3 days; or Ciprofloxacin 500 mg q12h ×3 days (avoid for *Shigella* if MIC ≥0.12 μg/mL — risk of inducible resistance); or TMP-SMX 1 DS q12h ×3–5 days; or Ceftriaxone 1 g q24h ×3–5 days. For severely ill patients with suspected XDR strains requiring empiric parenteral therapy, consider a carbapenem and consult ID. Immunocompromised: 7–10 days. [12]
- Pediatrics: most self-limited; moderate–severe or immunocompromised: Azithromycin 10 mg/kg/dose q24h ×3 days; alternatives (older children) Ciprofloxacin 12.5 mg/kg/dose q12h ×3 days or TMP-SMX (if susceptible) 5 mg TMP/kg/dose q12h ×3–5 days.

PROTOZOA

***Cryptosporidium*[1]**

- Presentation/sources: prolonged watery diarrhea (>1 week); contaminated recreational/drinking water, unpasteurized apple cider.
- Most immunocompetent patients recover without treatment; antiparasitics may shorten illness. Immunocompromised patients often have prolonged symptoms and respond poorly — ID consult recommended.
- Adults: Nitazoxanide 500 mg q12h ×3 days for prolonged/severe illness (± antimotility agents).
- Pediatrics (prolonged/severe): Nitazoxanide ×3 days — 1–3 y 100 mg q12h; 4–11 y 200 mg q12h; >12 y 500 mg q12h.

***Cyclospora cayetanensis*[1]**

- Sources: imported fresh produce. Treat if symptomatic; ID consult for immunocompromised.
- Adults: TMP/SMX 1 DS q12h ×7–10 days. Pediatrics: TMP-SMX 5 mg TMP/kg/dose q12h ×7–10 days.

Entamoeba histolytica

- Sources: returning travelers. Treat if detected.
- Adults: Metronidazole 500 mg q8h ×7–10 days (or Tinidazole 2 g q24h ×3 days), followed by a luminal agent — Paromomycin 8–8.5 mg/kg/dose q8h ×7 days; nitazoxanide 500 mg q12h ×3 days is an alternative.
- Pediatrics: Metronidazole 10–15 mg/kg/dose q8h ×7–10 days (or Tinidazole ≥3 y 50 mg/kg/dose q24h ×3 days), each followed by Paromomycin 30 mg/kg/day divided q8h ×7 days.

***Giardia lamblia*[1]**

- Sources: contaminated recreational water, daycare, international travelers. Treat if symptomatic.
- Adults: Tinidazole 2 g ×1; or Nitazoxanide 500 mg q12h ×3 days; or Metronidazole 500 mg q8h ×5–7 days.
- Pediatrics: Tinidazole (≥3 y) 50 mg/kg ×1; alternatives Nitazoxanide (1–3 y 100 mg q12h ×3 days; 4–11 y 200 mg q12h ×3 days; ≥12 y adult dosing) or Metronidazole 5–10 mg/kg/dose q8h ×5–7 days.

VIRUSES (Adenovirus F 40/41, Astrovirus, Norovirus GI/GII, Rotavirus A, Sapovirus)

- Presentation/sources: vomiting and non-bloody diarrhea within ~10–51 h; daycare/young children; norovirus from salad, shellfish, cruise ships (peak winter); rotavirus in infants (peak winter).
- **No targeted antiviral therapy; treat symptomatically. Antibiotics are not indicated.**
- In young children, rotavirus positivity may reflect vaccine-strain shedding for up to 4 weeks after a dose.
- **Isolation:** Rotavirus — contact; Norovirus and Sapovirus — contact plus.

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