

Laboratory Protocol for Investigation of Faecal Specimens for Enteric Pathogens

When to send a faecal specimen:

- **In Community setting:** Acute diarrhoea: ≥ 3 episodes of loose stools a day, < 14 d and sample takes shape of pot
- **In Hospital setting:** 'New' or unexpected diarrhoea (defined as a single episode of Bristol stool chart types 5-7) that is clearly not attributable to an underlying condition e.g., overflow diarrhoea following laxatives / bowel preparation or therapy
- Diarrhoea and/or vomiting
- Diarrhoeal stool with characteristic "C. diff" smell and/or \uparrow Temperature and \uparrow WBC
- New-onset of Faecal incontinence
- When advised by health protection unit e.g., during outbreaks of diarrhoea in a family, community, residential or nursing home residents, investigation of contacts of a case of *E. coli* O157, diarrhoea in food handlers, healthcare workers, children after farm visits, or at nurseries etc.
- Persistent, chronic (> 14 days), or recurrent diarrhoea

Specimen Requirements:

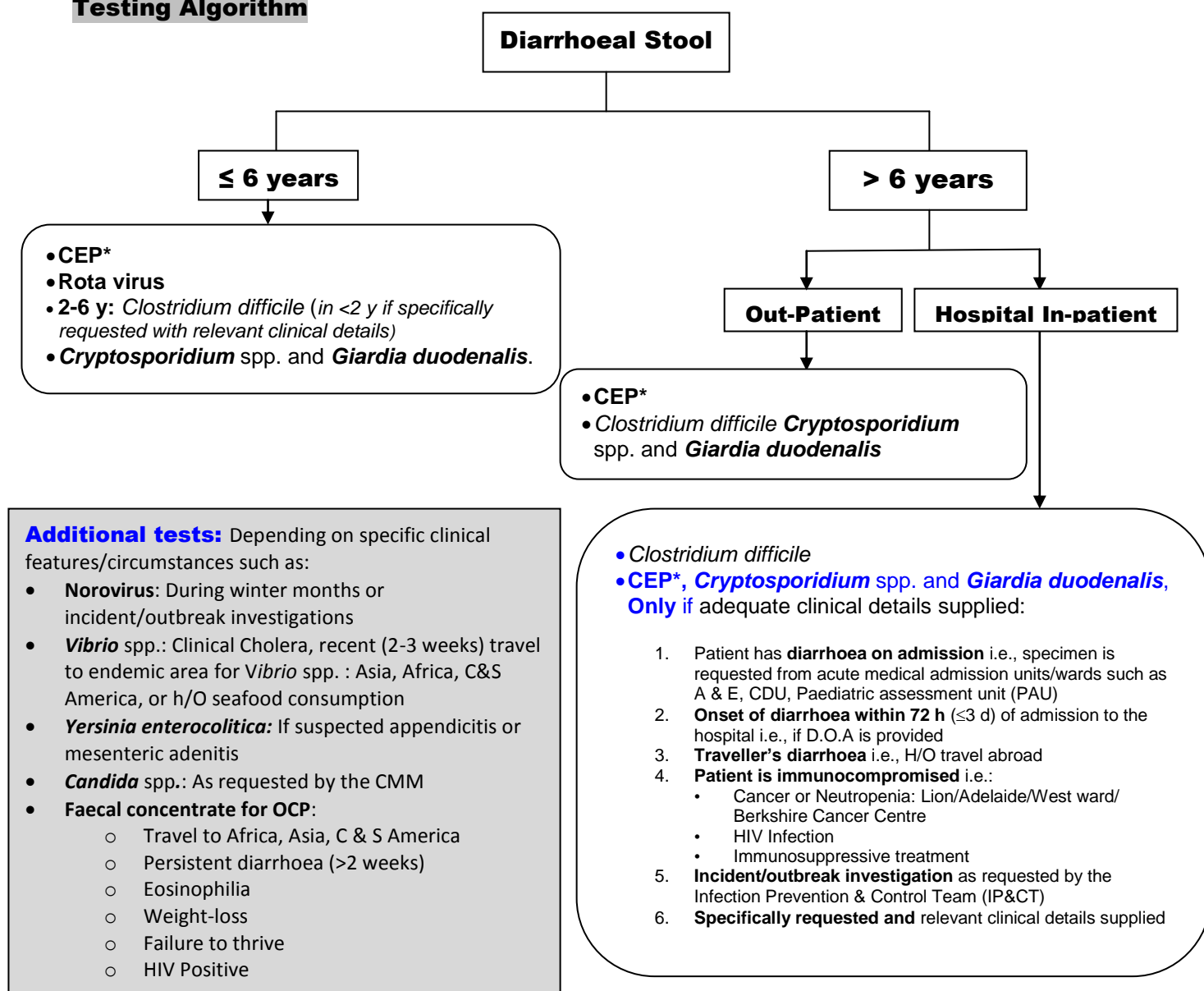
- A single stool specimen (1ml/1-2 g minimum) in a 50 ml 'CE marked leak-proof' universal container and labelled with 3 patient identifiers (as below), should be sent to the lab in a sealed specimen plastic bag with a (duly filled, as below) request form.
- ONLY **diarrhoeal stool specimens** (i.e., that take the shape of its container) will routinely be tested.
- **Non-diarrhoeal stools** may be tested for:
 - Rotavirus
 - Investigation of PUO e.g., Typhoid and Paratyphoid fever
 - Food handler or food poisoning 'contact' case on request of EHO as part of outbreak/incident investigation for specific enteric pathogens *Salmonella* spp., *Shigella* spp., *Campylobacter* spp., *E. coli* O157, coordinated by the community IP&CT and local (PHE) health protection team (HPT)
 - **For ova/cysts and parasite (OCP):**
 - However, for investigations other than *Cryptosporidium* spp. and *Giardia* spp. up to 3 specimens (5 ml each) 2-3 days apart, should be submitted stating clearly on the request form any travel history including name (s) of the countries visited
 - **Sellotape slide** is required for investigation of threadworm infestation
- A request form (electronic or paper) must include, as a minimum:
 - 3 patient identifiers:
 - Patient's name: Surname, first name
 - NHS no.
 - Date of birth and Gender
 - Location: GP surgery/**nursing or residential home**/ward/ department and tel no./extension/bleep
 - Test (s) required: Please state if submitted at request of HPT, CCDC or EHO.
 - Stool (faecal) culture for enteric pathogens (c & S)
 - Stool microscopy for OCP, or Schistosomiasis
 - Date and time of specimen collection

Specimen Requirements continued on next page...

- All relevant history and clinical information to help determine diagnostic methods such as:
 - Clinical symptoms and signs: Systemic illness, fever, bloody stool, abdominal pain/tenderness
 - Duration of s/s: acute (<14 days), chronic (> 2 weeks), or recurrent
 - Immunosuppression, HIV positive etc.
 - Food/water poisoning incidents e.g., barbecue; restaurant; eggs; chicken; shellfish
 - Recent (≤ 6 weeks) foreign travel including countries visited
 - Antimicrobial treatment (recent i.e., ≤ 6 weeks, current and intended) including drug regimen: agent, route, dose and frequency, duration of treatment
 - Contact with other affected individuals or outbreak

All cases with an enteric pathogen (s) are reported to the PHE via automatic co-surv reporting system

Testing Algorithm



*CEP: Conventional Enteric Pathogens: *Salmonella* spp., *Shigella* spp., *Campylobacter* spp., VTEC (Verocytotoxigenic *E. coli* incl.O157)

References:

1. [BIA HPA GP unit primary care guidance document 'Infectious Diarrhoea'-The role of microbiological examination of faeces.' July 2010.](#)
2. [UK SMI B30: Investigation of faecal specimens for enteric pathogens](#)
3. [UK SMI B 31: Investigation of specimens other than blood for parasites](#)
4. [UK SMI B 10: Lab investigation of faeces for *Clostridium difficile*](#)
5. [UK SMI S 7: Gastroenteritis and diarrhoea](#)
6. Changes in causes of acute gastroenteritis in the United Kingdom over 15 years: Microbiologic findings from 2 prospective, population-based studies of infectious intestinal disease. *Clin Infect Dis* 2012;54(9):1275-86.