Microbiology User Information: Stool Samples

Specimen Types:
Faeces

Indications for Faecal Samples:

MTW Trust Guidelines: Gastrointestinal infections (formularywkccgmtw.co.uk)
Primary Care antimicrobial guidelines: Primary Care Antimicrobial Prescribing Guidelines (formularywkccgmtw.co.uk)

Community Acquired Diarrhoea:

- Routine testing is for Salmonella, Shigella, Campylobacter,-STEC-producing E coli (includes serotype O157), Cryptosporidium and Giardia only. C difficile testing is performed on all patients >65 years old.
- Rotavirus and Adenovirus testing is performed on all children < 5 years of age, and on immunocompromised individuals on advice from Consultant Microbiologist
- Culture for Vibrio, Yersinia and Plesiomonas is available if there is a relevant travel history
- In addition to culture, request ova, cysts and parasites, if clinical suspicion of parasite infection other than Giardia or Cryptosporidium, recent travel abroad, immunocompromised
- If amoebic dysentery or suspected, discuss with Microbiology medical staff
- If patient has received antibiotics in the past month request *C.difficile* toxin testing

Hospital Acquired Diarrhoea (more than 3 days into admission):

- Usually request *C.difficile* toxin testing only
- If part of an outbreak / cluster of cases, contact infection control
- Request as for community acquired if:
    - age >65 or <16 with significant co-morbidity
    - immunocompromised
    - suspected non-diarrhoeal manifestation of enteric infection

Outbreak cases

- Norovirus testing is only available in the context of an **outbreak** or on the advice of **Infection Prevention and Control**.
- If an outbreak is suspected, please contact **Infection Prevention and Control**, or duty Consultant Microbiologist.
- Samples are only tested within **7 days** from the start of an outbreak. Once an outbreak is confirmed to be due to Norovirus, no further samples will be tested.

Helicobacter Pylori:

- Do not perform this test in patients that had a PPI in the last two weeks or antibiotics in the last four weeks as it may lead to false negative results**.**

Request form requirements:

Providing adequate clinical details to microbiology request forms is vital for the safety of laboratory staff and ensuring patient tests are correctly interpreted. Please include details of relevant clinical information, current, just finished or intended antibiotic therapy.

The history of the patient should identify risk factors for unusual causes of acute gastroenteritis and any extra-intestinal causes. Including

- Acute/outbreak case
- Immune status
- Healthcare or community acquired.
  -If patient is hospitalised, date of admission and date of symptom onset should be included
- Recent overseas travel including location and dates
- Recreational/untreated water exposure
- Farm animal exposure/animal contact
- Food intake, for example shellfish and chicken
- Recent antibiotic use
- Other relevant information such as suspected food poisoning, contact with cases, food handler and occupation

Faeces minimum volume:

A liquid specimen of 1-2 mL or 1-2 gram (large pea-size) of unformed specimen is sufficient

Investigation for Parasites: Ideally three stool specimens from three different days are recommended (clearly labelled with date and time) because of the intermittent shedding of cysts and ova

Time to laboratory:

Specimens should be transported and processed as soon as possible. Important pathogens such as Shigella species may not survive the pH changes that occur in faecal specimens if not promptly delivered to the laboratory, even if refrigerated

If processing is delayed, store refrigerated, rather than at room temperature

N.B Parasite Investigation: Investigation for Strongyloides spp and Hookworm spp culture require a fresh (less than two hours old if possible) specimen. A 'hot' stool (that must be examined within 30 minutes of being passed by the patient) may be provided for amoebae investigation. Please inform the laboratory beforehand if this is the case.

For information on transport, including days and times, please see Pathology Transport Services

Laboratory Testing:

All Microbiology laboratory investigations are based on UK Standards for Microbiology Investigations which can be found HERE. If further advice is required, please contact the laboratory

Cryptococcus and Giardia testing is carried out using PCR; all other ova, cysts and parasites are diagnosed via microscopy.
CDT testing on patients under the age of 2 will NOT be performed, these samples will have faecal culture.
Should the investigation of an organism other than those routinely screened for be required, please contact the Microbiology Department

Laboratory Turn Around Time (from Date/Time of Receipt in Laboratory):

Faecal Pathogens PCR: 24 Hours
C.difficile results: 24 Hours
Other: Parasites/Virology: 2 working days
H.pylori antigen testing: 4 working days

Time limit for requesting additional investigations:
7 days

Requests for extra tests must be received within the sample storage period and must be accompanied by a request form. Please telephone the laboratory before requesting extra tests to ensure the sample is available and still viable

Adverse factors affecting the interpretation of microscopy and culture results:

- Delay in arrival at laboratory- Important pathogens such as Shigella species may not survive the pH changes that occur in faecal specimens if not promptly delivered to the laboratory, even if refrigerated
- Excessive temperature
- Insufficient sample volume may impede the recovery of organisms
- Risk of false negative results for H.pylori testing if patient has had PPI in the last two weeks or antibiotics in the last four weeks

Note: rapid transport to the laboratory is the best way to minimise uncertainty of results

Specimen Collection:

Collection Containers	
Specimen Type	Faeces, Sellotape slide for threadworm investigation
Collection Methods	Faeces may be passed directly to a sterile wide-mouthed CE marked leak proof container or may be passed to a clean, dry bedpan or similar container and transferred to a CE marked leak proof container. Use blue scoop in lid of container to transfer at least a walnut sized piece into specimen pot A liquid specimen of 1-2 mL or 1-2 gram (large pea-size) of unformed specimen is sufficient for culture and toxin detection. **Bacterial PCR and culture**: Collect specimens soon as possible after onset of symptoms and before antimicrobial therapy where possible **Parasites:** Ideally three stool specimens from three different days are recommended (clearly labelled with date and time) because of the intermittent shedding of cysts and ova. Fresh faeces specimens are essential for the examination of amoebic trophozoites **Threadworm** Threadworm ova are rarely found in faeces. If infestation is suspected the correct specimen is a 'sellotape' smear. As the female worm lays her eggs at night specimens are best taken first thing in the morning (before the patient washes or defecates). The eggs are collected by pressing

	against the peri-anal area with the sticky side of a piece of clear sellotape. This is then stuck down firmly onto a glass microscope slide. The slide can then be transported to the laboratory, together with the request form, in a specimen bag. The alternative method is to moisten the peri-anal area with sterile saline and then gently swab the area. Place the swab in a sterile white top 30ml "universal" container with a drop of saline. Glass Microscope slides and carry cases can be requested by contacting the Microbiology department on 01622 224040