Response to a Case of Gastroenteritis

Acute gastroenteritis or infectious intestinal disease (IID) – the terms are used interchangeably in this document - is a condition, the management of which can fall within the scope of Public Health or General Practice or both. The public health response will be directed towards the population and will be concerned with identification of cases and outbreaks as well as control and prevention measures. The clinical response will be directed towards the patient and will be concerned with the clinical management of the patient. If however a clinician identifies features suggestive of the possibility of further transmission (i.e. if the patient belongs to a Risk Group - see Section 4, Page 15, below - or the case potentially being part of an outbreak) then this provides the ideal opportunity for clinicians to offer immediate public health advice and alert Public Health colleagues of the potential threat. In many cases, Public Health physicians must take clinical decisions regarding individual patient management; this document should prove valuable in assisting them in this regard.

The response to cases is laid out below on Public Health lines and on Clinical lines.

Public Health Management of IID

Acute gastroenteritis or infectious intestinal disease (IID) continues to produce a considerable load on the health system, and on the wider social system, and reducing the incidence of these illnesses provides the possibility for significant reduction in disease burden.

Risk factors for acquisition of gastroenteritis include:
- Poor personal hygiene (including in foodhandlers)
- Lack of sanitation (including in food preparation and healthcare settings)
- Poverty
- Undercooked food
- Contaminated food (ready to eat food contaminated with the uncooked juices/blood of uncooked food product)
- Immunosuppression (including HIV/AIDS, cancer, immunosuppressive therapy, post-splenectomy, high dose steroids)

- Diarrhoea is a cardinal symptom of most IIDs.
- A liquid stool is more likely than a formed stool to contaminate hands and the environment, and as such poses a significantly greater risk of onward transmission of pathogenic microorganisms.
- Conversely, asymptomatic adults and older children probably pose a risk of onward transmission that is only slightly increased. This is particularly true of those with bacterial enterocolitis; asymptomatic cases of viral gastroenteritis have been shown to be capable of spreading readily.
- Similarly vomitus may contain large numbers of infectious agents and can contaminate a wide area, including through aerosolisation.
- In addition some pathogens continue to be shed in stools for a period after clinical recovery.
- Finally, many have considerable powers of survival. VTEC, for example has been shown to retain the capacity to grow following a number of weeks on bare metallic surfaces. Norovirus has, likewise, been shown to survive for weeks in soft furnishings. However, good personal hygiene markedly reduces the risk of onward transmission.

To prevent secondary spread, enteric precautions and in some cases, exclusion from work/school, are required.

2. Enteric precautions

Use of enteric precautions is the most effective method of minimising the threat posed by enteric pathogens in any setting. The core requirements for effective enteric precautions are:
- Effective handwashing at every opportunity
- Effective and safe disposal of waste (including excreta and vomitus) and soiled materials
- Careful management of spillages
- Effective decontamination of soiled areas.
- Education of patients and staff is crucial to ensure the use of enteric precautions becomes as habitual as possible.

2.1. Hand washing

Scrupulous hand washing with soap (preferably liquid) in warm running water, and thorough drying (ideally with disposable hand towels), is the single most important factor in preventing the spread of gastrointestinal (and many other) infections. 6

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6 In addition to preventing intestinal and other faeco-oral infections, handwashing is an effect method of preventing the spread of a wide range of diseases including influenza, conjunctivitis, TB, SARS, typhus, toxoplasmosis, tetanus, infectious mononucleosis, meningitis, Crimean Congo Haemorrhagic Fever, infective skin eruptions, acute upper and...
Patients and their carers should also be advised in particular, to wash hands:

- After using or cleaning the toilet
- After attending to anyone with diarrhoea or vomiting
- After touching articles contaminated by diarrhoea or vomiting
- After handling contaminated clothing or bedding (including nappies)
- After handling household and garden waste or rubbish
- After touching or handling pets or other animals (including their kennels/hutches/tanks, bedding etc.)
- On returning to the house having been working in the garden/farm
- Before handling, preparing, serving, or consuming food or drink after going to the toilet or changing babies’ nappies and before preparing or serving food or eating meals.
- Particular care must be taken with hand hygiene and cleaning of surfaces and utensils after handling raw meat and poultry

More extensive guidance on Social and Antiseptic Hand Hygiene for Healthcare Workers is laid out in Appendix 2.

2.2. Disposal of waste and soiled materials

At home, people symptomatic with gastroenteritis should normally use a flush toilet. If someone is ill with gastroenteritis:

- Ideally, one toilet should be identified for the sole use of the infected individual (although this may not be possible).
- In instances where a bedpan or commode has to be used, the carer should wear disposable gloves and ideally a disposable apron.
- The bedpan or commode should be emptied in to the toilet bowl and then washed with hot water and a household detergent.
- Aprons and gloves should be discarded in a plastic bag, sealing the neck and disposed of as solid household waste.
- Hands should be washed thoroughly after removal of gloves and apron.
- In the case of gross soiling of clothing and bed linen, solid material should first be scraped off into the toilet bowl or plastic bag
- The items washed separately in a domestic washing machine at the highest temperature that they will tolerate (e.g. 60°C plus for linen).
- Soaking in disinfectant is not recommended as it may damage fabrics.

- The exterior of the machine should be wiped down with hot water and detergent after the washing machine is turned on.
- Disposable gloves and apron should be worn throughout this procedure and hands should be washed thoroughly upon their disposal.

2.3. Spillages

Any spillage of vomit or faeces should be cleaned immediately by absorbing any excess with disposable paper towels or by scraping into a toilet and then thoroughly cleaning the area with hot water and detergent. Sanitizers may also be used once all visible soiling is removed. Soft furnishings should be cleaned with hot water and detergent or with a steam cleaner if available.

2.4. Decontamination

As it may not be possible for a toilet to be identified for the sole use of the infected individual, it is important that:

- The toilet area to be kept clean, including areas that are frequently touched by hand (e.g. flush handles, toilet seats, taps, light switches, toilet door handles).
- Cleaning should be carried out at least daily - more often depending on use.
- Hot water and detergent should be used.
- Commercial sanitizers, wipes or a dilute bleach solution may also be used (in accordance with the manufacturer’s instructions), once all visible soiling has been removed.
- Disposable gloves, aprons and cloths should be used when cleaning, and hygienically discarded following use.
- Hands should be washed thoroughly after cleaning.

2.5. Education

Good personal hygiene should be emphasized to

- patients
- their carers and
- household contacts

with particular emphasis placed on hand hygiene and the hygienic preparation and serving of food.

- Schools and institutions should have adequate hand-washing facilities and the toilet hygiene of young children and people with learning disabilities should always be supervised.

3. Risk Groups

People in risk groups pose an increased risk of spreading infection. It is particularly important to assess infected people who belong to one of the four Risk Groups for whom special action/exclusion criteria may apply. People (cases and contacts) who fall into this category lower respiratory infections, helminthic infections and hospital acquired infections.

Risk group categorisation should be determined for every case (or contact) of gastroenteritis.
pose a greater risk of **onward transmission** and must be treated with particular care (see individual pathogens for fuller details).

**Table 1: Risk Groups**
*(Categories of patients who pose a greater risk of onward transmission)*

<table>
<thead>
<tr>
<th>Risk Group</th>
<th>Risk Categorisation</th>
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<tbody>
<tr>
<td>1</td>
<td>High-risk food handlers(^7) (e.g. those whose work involves touching unwrapped foods that will not undergo further heat treatment).</td>
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<tr>
<td>2</td>
<td>Health care, preschool nursery, or other staff who have direct contact, or contact through serving food, with highly susceptible patients or people in whom an intestinal infection would have particularly serious consequences (for example, the immunosuppressed).</td>
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<tr>
<td>3</td>
<td>Children under 5 years of age attending nurseries, play groups, or other similar groups (who have not yet fully developed toilet hygiene).</td>
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<tr>
<td>4</td>
<td>Older children and adults who are unable to implement good standards of personal hygiene (particularly toilet hygiene).</td>
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4. **Exclusion**

All cases of gastroenteritis should be considered infectious and should, if at all possible, remain off work/school until 48 hours after symptoms have cleared. Certain individuals pose a greater risk of spreading infection and additional exclusion criteria may apply. In addition, microbiological clearance may be required for cases infected with certain pathogens.

Contacts of cases of certain infectious disease may also require microbiological clearance before being permitted to return to work/school (see individual pathogens for guidance on requirements for microbiological clearance).

The circumstances of each case, carrier or contact in these risk groups should be considered individually and factors such as their type of employment, provision of toilet and handwashing facilities at work, school or institution and standards of personal hygiene should all be taken into account. In certain instances, it might make sense temporarily to reallocate a convalescing worker to alternative role that does not pose an infectious risk to others. Alternatively, special sanitary arrangements can be put in place to reduce the risk of spread.

For those illnesses requiring microbiological clearance (such as VTEC and Typhoid/Paratyphoid), once the criteria for microbiological clearance are satisfied, the individual should no longer be considered a risk and should be allowed to return to normal working.

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\(^7\) Guidance on the strengthening procedures to combat foodborne disease and to provide expert advice on best practice in relation to food safety is available in the HPSC Document Preventing Foodborne Disease: A Focus on the Infected Food Handler (2004) available at http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/Foodborneillness/Publications/