

## 11. Norovirus

(Notifiable)

**Description:** Norovirus produces a clinical syndrome characterised by pronounced vomiting and mild diarrhoea. Between 1% and 5% of the population will develop norovirus gastroenteritis each year.

**Annual Numbers:** Not accurately quantified but between 1% and 5% of the population will develop noroviral infection each year. There are between 1,000 and 1,800 notified cases of norovirus and about 200 norovirus outbreaks notified each year in Ireland.

**Seasonal Distribution:** There tends to be an elevated plateau each winter but the peak in this can vary from November until April. Norovirus upsurges occur every few years; minor upsurges occur every 3-4 years and major upsurges occur every 10 or so years.

**Causative Agent:** Norovirus is an RNA virus and is the commonest cause of IID.

**Reservoir:** the human gastrointestinal tract.

**Transmission:** Noroviruses are primarily transmitted by the faeco-oral route. Spread is through person-to-person by direct or indirect contact with infectious vomitus or faeces. Can also be food- and waterborne.

**Outbreak Potential:** Norovirus has very high to extremely high outbreak potential whether transmitted person to person, through food or through water.

**Incubation period:** The incubation period for norovirus-associated gastroenteritis in humans is usually between 24 and 48 hours (median incubation period calculated from outbreak data is about 33 to 36 hours).

**Infectivity:** Noroviruses are shed for at least 2 weeks after a bout of gastroenteritis. In general shedding is maximal when diarrhoea is present and in the first couple of days following resolution of symptoms.

**Epidemiology:** Noroviruses are extremely common and produce large waves of outbreaks especially during winter months. Outbreaks tend to occur in congregate setting (including hospitals, nursing homes, hotels, cruise ships), food handlers. The infectious dose is very small – it can be as few as 10 virions. Recent evidence from the CDC suggests that norovirus causes 800 deaths per annum in the US

**Exposure-prone groups:** residents in institutions, hospital patients and staff, hotel guests, those in childcare settings.

**Clinical Features:** Nausea (often sudden onset), vomiting (often projectile), watery diarrhoea.

### Clinical Management of Cases:

Enteric precautions: paying particular attention to handwashing and thorough cleaning and decontamination of contaminated environmental surfaces. Consider isolation if institutionalised.

The case should be notified to the local Department of Public Health. It is important to determine if the case is aware of similar cases suggesting the possibility of an outbreak. Determine if case is in a risk category.

### Public Health Management of Cases:

Determine if linked cases appear in a congregate setting (hospital, nursing home, hotel, aircraft, cruise ship, school, large workplace etc).

**Norovirus is highly infectious – even in those with the highest possible levels of personal hygiene – exclusion from work for at least 48 hours following cessation of symptoms is crucial to prevent introducing the infection into the workplace/hospital/school**

**Food Hygiene Implications:** Food hygiene re-education is necessary for food handlers.

**Public Health Management Contacts:** Clinical surveillance with advice to manage conservatively and stay away from work for exclusion period.

**Exclusion:** Until 48hr after first normal stool or last episode of vomiting

**Microbiological Clearance:** None

**Resources:** Guidance on norovirus is available at: <http://www.hpsc.ie/hpsc/A-Z/Gastroenteric/Norovirus/Publications/>

**Notifiable:** to the local [Medical Officer of Health](#).