

General information and infection prevention and control precautions to prepare for and manage norovirus in care homes

Norovirus season starts every year usually in October. So that everyone is prepared and ready, '*About a month to go to norovirus season*' reminders will be issued at week 37 which this year is 15/09/2014

This document was written for Care Home settings but could be used in other non-hospital settings where care accommodation services are provided.

Local Contact Information	
Health Protection Team (HPT)	
Care Inspectorate	

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1. GENERAL INFORMATION

This document is divided into 3 sections:

- **Section 1** provides general information on norovirus, how to prepare for norovirus outbreaks and what to do if residents develop symptoms.
- **Section 2** provides key information on infection control measures by giving the instructions needed to prevent the spread of norovirus.
- **Section 3** provides additional outbreak control measures to help reduce the effects of norovirus outbreaks¹.

1.1 Norovirus

Noroviruses are viruses which can cause diarrhoea and/or vomiting in people and often cause outbreaks in care homes. These infections are sometimes called winter vomiting disease.

The symptoms caused by noroviruses are usually a sudden onset of non-bloody, watery diarrhoea and/or vomiting which can be projectile.

Also present may be:

- abdominal cramps;
- muscle aches;
- headache;
- feeling of weakness; and
- a slightly raised temperature.

It can happen that residents can become symptom free then relapse with more symptoms a few days later.

Norovirus should be suspected in any resident (and staff member) who develops diarrhoea with or without vomiting and without any other obvious cause.

Norovirus infection can occur throughout the year but is most common from mid October through to April.

1.2 Routes of spread

Norovirus is spread through 3 routes:

By direct contact transmission (touching someone)

The virus is passed directly from an infected person to another person who transfers the virus to their mouth e.g. by not washing their hands after contact with faeces. **Hands may be contaminated with norovirus without appearing visibly soiled.**

¹ Although Norovirus is a common type of outbreak that arises in care homes, other outbreaks can occur. All outbreaks should be reported to the local HPT for information and management and Care Inspectorate.

By indirect contact transmission (touching something)

This takes place when a person has contact with a contaminated (infected) object, such as a commode, furniture or equipment which is in the environment of an infected person. Again, the person then transfers the virus from the object to their mouth. Eating food contaminated with norovirus can also cause infection. Norovirus can be present in either cooked or uncooked food, but the food will not look or smell bad.

By droplet transmission (spreading in the air)

Residents with excessive vomiting can spread large quantities of virus in droplets which can contaminate surfaces of the care home. These droplets can remain in the air, travel over a distance and still be infectious. Spread of norovirus can then occur when others inhale and then swallow these droplets.

The spreading of norovirus via the air can contaminate any unwrapped food or surfaces in the care home setting potentially leading to indirect contact transmission as described.

**N.B. 30mls of vomit may contain up to 30,000,000 virus particles.
Diarrhoea can also be spread over a wide area.**

1.3 Incubation period

The time from coming into contact with the virus to becoming ill is usually between 12-48 hours.

1.4 Period of infectivity

People with infection caused by norovirus usually stop having symptoms within 2-3 days, but 40% of people can still have symptoms at 4 days. Residents and staff are considered infectious while they have symptoms and until 48 hours **after** their bowel habit has returned to what is normal for them. NB Very vulnerable people can excrete norovirus for much longer.

1.5 Norovirus survival in the environment

Noroviruses can survive on any surface including equipment for at least a week and even on refrigerated food for up to 10 days.

1.6 People most at risk

Everyone is at risk of infection caused by norovirus. Symptoms caused by norovirus usually stop without the need for treatment and are generally considered mild. However, some vulnerable people, such as the elderly can become very ill as a consequence. This is because diarrhoea and vomiting can cause dehydration – which in elderly residents can be a serious condition.

1.7 Why care home residents are vulnerable to norovirus

Residents in care homes are vulnerable to norovirus because:

- People do not develop lasting immunity to norovirus.
- People working in or visiting a care home may, from time-to-time, have norovirus and they can then spread the infection to others. The symptoms caused by

norovirus (diarrhoea and vomiting) makes it easy for the virus to spread to many people. There are often no warning signs, so people can be at work or visiting a care home when symptoms suddenly start. Such an event can easily start an outbreak.

- As the virus can spread to many people very quickly, people who live collectively in a care home are more vulnerable than those who live in small family units.

1.8 Preparing for the norovirus season

Norovirus outbreaks can occur at any time of the year but every year there is a norovirus season which usually starts in mid-October and finishes about April. Although not all norovirus outbreaks can be prevented, care homes can and should be prepared to reduce the risk of an outbreak occurring. The following is a suggested list of actions to reduce the risk of a norovirus outbreak(s):

Before the norovirus season starts:

The care home policies and procedures should include the need to do the following.

- ✓ Check that all staff know what to do if a resident(s) develops diarrhoea and/or vomiting.
- ✓ Check that all staff know who to report to (and to frequently update) with information on any single case or outbreak of diarrhoea and/or vomiting.
- ✓ Have an easy-to-access reminder for staff listing what to do in an outbreak and ensure this reminder is placed somewhere all staff can see it.
- ✓ Check that all staff know what to do if they develop diarrhoea and/or vomiting.
- ✓ Remind the residents and their visitors to report any symptoms of diarrhoea and/or vomiting to staff as soon as they occur and tell staff to keep a closer watch for symptoms in residents who might not be able to communicate well.
- ✓ Consider preparing a care plan for residents who develop symptoms to make sure they don't get dehydrated and/or ensure that the information is added to the appropriate sections of existing care plans. Include information on how to reduce the risk from residents who may have symptoms but who may be unable to follow infection control precautions e.g. residents with dementia.
- ✓ Advise regular visitors not to visit if they develop symptoms of norovirus.
- ✓ Prepare a short poster/notice at the entrance door reminding visitors not to visit for at least 48 hours if they have or have recently had symptoms of diarrhoea and/or vomiting or are unwell.
- ✓ Have information ready to give out to visitors to help them reduce personal risk and ensure that visitors know where they can wash their hands (see [Appendix 1](#) for available leaflets).

Once the season starts:

- ✓ Be alert to norovirus activity in the local community (via the media or Health Protection Team).
- ✓ Display a notice to remind all visitors not to visit for at least 48 hours if they have symptoms of diarrhoea and/or vomiting.
- ✓ Be alert to residents developing symptoms and take appropriate actions.
- ✓ Follow the care plans and action plans.
- ✓ Check that admissions from a hospital to the care home are coming from wards that are open and without a probable or confirmed ongoing norovirus outbreak.

Once the season is over:

- ✓ Review your actions and think of what has worked well and is this reflected in the service policies and procedures and things you could do better next season to reduce the risk of norovirus outbreaks in your care home.

1.9 General care and management of a resident with gastrointestinal symptoms (diarrhoea and or vomiting)

- Norovirus outbreak can present differently in people, that is, some will have diarrhoea, some will have vomiting and some will have both. If any resident has diarrhoea and/or vomiting report this immediately to the person in charge.
- Check that the resident is not taking prescribed laxatives or any other drugs that could cause diarrhoea.
- Organise stool sampling with the Health Protection Team (HPT)/GP (see link to [procedure for how to take a stool sample](#)).
- As long as this does not compromise their safety, ask any resident who is suspected of having a gastrointestinal infection (symptoms of diarrhoea and or vomiting) to remain in their room (with the door closed) whilst they are unwell and not to visit communal areas until 48 hours after they are symptom free.
- Explain to the resident why they need to stay in their room. The resident may feel unhappy at being isolated so make sure they can access help easily and are not ignored or suffer as a consequence of having the door closed.
- Monitor the resident closely to make sure they do not become dehydrated (start a stool and fluid balance recording chart).
- As prescribed by the GP, use oral rehydration solutions to prevent or reduce the risk of dehydration. Signs of dehydration include loss of appetite, dry skin, dark coloured urine, dry mouth, fatigue, headaches and increased respirations.
- If any resident(s) becomes more unwell as a consequence of the diarrhoea and /or vomiting, report this immediately to the GP.

If there are 2 or more residents or staff with symptoms - a possible outbreak

- Report this to the person in charge immediately who should **seek advice from the NHS Board's HPT, the GP and notify Care Inspectorate. Have these contact numbers clearly displayed/available for all staff to access.**
- The HPT will offer advice on whether it is necessary to restrict admissions and transfers to/from the care home.
- If any resident requires admission to hospital, **inform the clinical area receiving the resident and the ambulance/transport service that the resident has/had diarrhoea and/or vomiting, or that there are residents with diarrhoea and/or vomiting in the care home.**
- Do not resume normal admissions of new residents until the NHS Board HPT advises.

2. INFECTION CONTROL PRECAUTIONS

To prevent any infection spreading generally, Standard Infection Control Precautions (SICPs) must be used by **all care workers all of the time** when caring for **all residents** and when caring for the residents' environments and their equipment. Additional infection control precautions are needed when infections can still spread even when SICPs are used, e.g. to prevent norovirus spreading. Listed below are the precautions needed to prevent spread of norovirus in a care home.

2.1 Precautions for residents with possible norovirus infection

Hand hygiene:

As norovirus remains active for several days on surfaces that have been touched, staff must remember that hands can and will transfer the virus. Alcohol based hand rubs (ABHRs) will not kill or remove noroviruses, therefore:

- Always use liquid soap and warm running water for routine hand hygiene.
- **Do not** use ABHRs alone, when there is an outbreak of diarrhoea and/or vomiting (possible norovirus outbreak), or when caring for a resident who has diarrhoea and/or vomiting.
- Hands can and will be contaminated with the virus during routine activities like touching doors and telephones therefore frequent hand washing is necessary – follow the 5 moments for hand hygiene and wash your hands:
 - Before touching a resident.
 - Before a clean or aseptic task.
 - After exposure to body fluid (including faeces) – even if gloves worn.
 - After touching a resident.
 - After touching a resident's surroundings.

NB ABHR must be used before an aseptic technique after undertaking a routine handwash.

Personal Protective Equipment (PPE):

- Use suitable PPE, including, disposable gloves and disposable plastic aprons to prevent personal contamination with body fluids including contact with faeces.
- Staff must remember that anyone wearing PPE (e.g. gloves and an apron) and coming into contact with spillages or contaminated surfaces can spread norovirus by glove contact on clean surfaces.
- Aprons and gloves must be changed and disposed of, then hands washed between contacts with different residents (even when they are being cared for in the same room).
- On removal of PPE hands must be washed with liquid soap and warm running water and dried with paper towels.

Resident care equipment:

- Residents with diarrhoea should have the use of their own toilet or be allocated a commode for their own personal use.
- Using disposable cloths clean using general purpose neutral detergent followed by chlorine releasing agent diluted to 1,000 parts per million (ppm) available chlorine,

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or alternatively decontaminate with a combined detergent/disinfectant product diluted to 1,000 ppm.

- Always follow local cleaning and decontamination guidelines and specific equipment manufacturers' instructions.
- Avoid the use of fans during outbreaks as these can help spread infection.

Linen:

It is very important that staff wear PPE i.e. disposable gloves and disposable plastic apron and perform hand washing after dealing with used linen. During an outbreak, all linen from residents with diarrhoea and/or vomit must be designated as infectious and safely put inside a washing machine without staff becoming contaminated, e.g. place in a water soluble (alginate) bag or bag with water soluble membrane or an approved re-useable bag and then place this bag directly into the washing machine.

Environmental precautions:

Standard environmental cleaning regimens using detergents may not be effective enough against noroviruses.

- If the resident has been vomiting, with their permission, remove and discard all unwrapped foods e.g. fruit. This is because anyone eating this food may get sick. In areas affected with norovirus it is advisable to remove uncovered food, drinks and fruit from communal areas.
- Keep the environment clean and as clutter free as possible.
- Use single use disposable cloths or paper roll for cleaning each resident's room.
- Ensure that the rooms of residents with symptoms are prioritised for frequent cleaning (at least daily) with a focus on frequently-touched surfaces (e.g. tables, furniture, toilets, door knobs) and equipment. These frequently touched surfaces should also be cleaned throughout the day and immediately if visibly soiled.
- Wherever possible use a household detergent followed by a chlorine releasing agent diluted to 1,000 ppm available chlorine or a combined chlorine/detergent based product. (Always follow manufacturer's instructions).
- Domestic staff, where possible, should not move between areas where the residents have symptoms and areas of the care home where the residents are not having symptoms.
- The cleaning of areas where there are residents who have symptoms should be done separately to the cleaning of areas where the residents do not have symptoms. Separate cleaning equipment should be used for both areas.

Decontamination (cleaning) of spillages of faeces or vomit:

Spillages of faeces and vomit are highly infectious and care must be taken to prevent personal exposure to the person(s) decontaminating the spillages. In the unlikely event that there is a risk of splash/droplets then facial protection e.g. eye goggles and surgical mask or facial visor should be worn. Disinfectants that kill the virus will also damage soft furnishings including carpets; therefore there must be an agreed decontamination policy available in the care home. Many of the furnishings in care homes are personal items belonging to residents. There is a flow chart on the next page which shows how to decontaminate surfaces contaminated with blood or body fluids.

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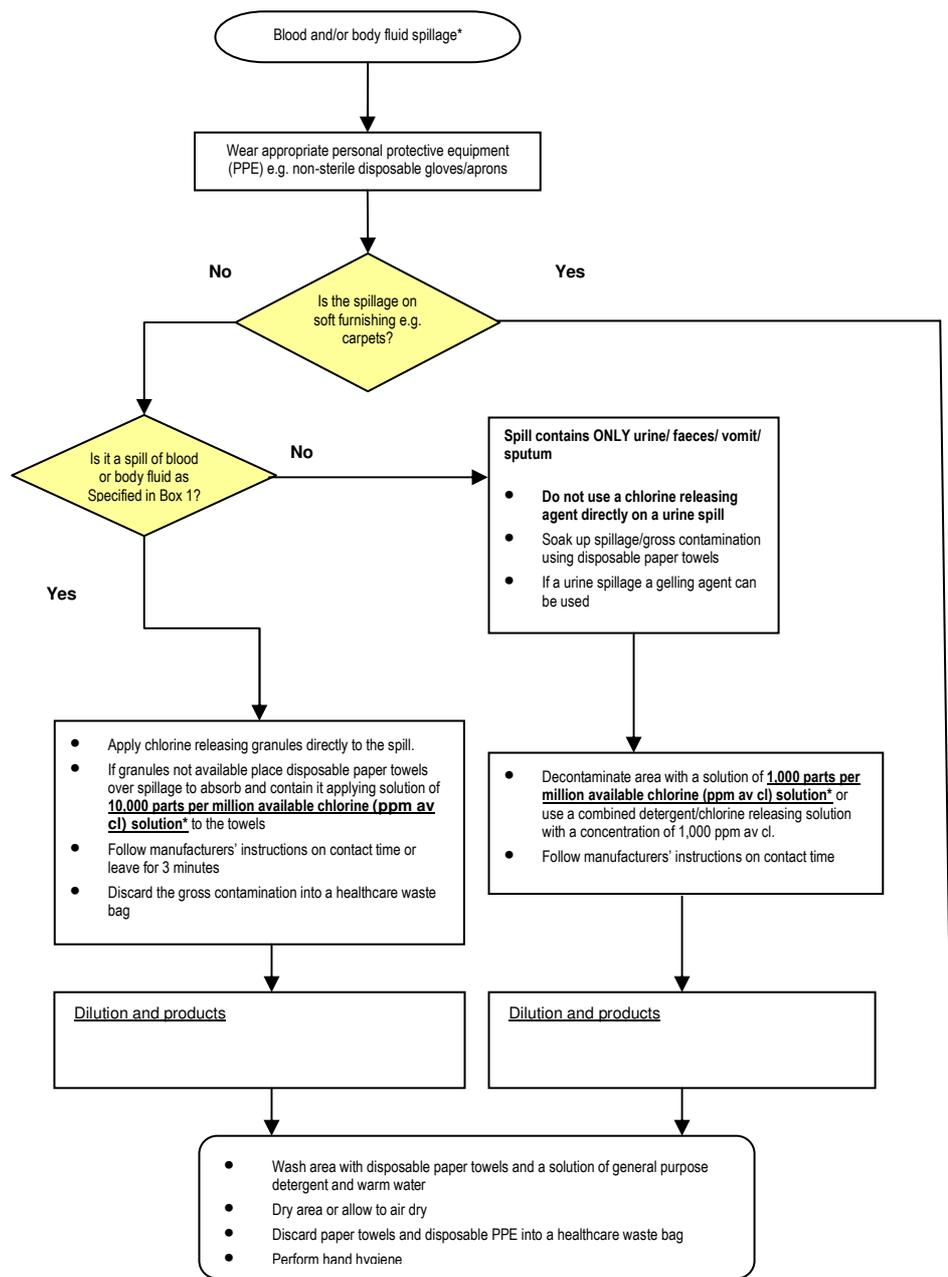
Appendix 11 of the National Infection Prevention and Control Manual

Infection prevention and control team/Health Protection Team

Name:

Designation:

Contact Number.....



- Box 1**
- Cerebrospinal fluid
 - Peritoneal fluid
 - Pleural fluid
 - Synovial fluid
 - Amniotic fluid
 - Semen
 - Vaginal secretions
 - Breast Milk
 - Any other body fluid with visible blood (excluding urine)

Discuss with IPCT and consider:

- If furnishing heavily contaminated you may have to discard it.
- If the furnishing can withstand a chlorine releasing solution then follow appropriate procedure for the type of spill.
- If it is safe to clean with detergent alone then follow appropriate procedure.
- If it is not safe to clean with detergent then the item should be discarded.

* Scottish National Blood Transfusion Service and Scottish Ambulance Service use products that differ from those stated in the National Infection Prevention and Control Manual

Extract from National Infection Prevention and Control Manual, v2.3; 2014 Part 1: Standard Infection Control Precautions (SICPs) Policy, Appendix 11,

3. OUTBREAK CONTROL MEASURES

3.1 Reporting and updating the HPT/Care Inspectorate

If there is a possible outbreak, that is, 2 or more residents with symptoms of diarrhoea and vomiting, in a care home, then this must be reported immediately to the local NHS HPT and Care Inspectorate should also be notified. The HPT should be kept up to date with the number of new symptomatic residents. The HPT will work with the care home and others to investigate and manage the outbreak.

The HPT will advise if the care home or parts of it must close to new admissions, and when it can return to normal admissions. This information must be notified to Care Inspectorate.

During an outbreak, as well continuing with the infection control precautions in [Section 2](#), the following additional outbreak control measures should be applied.

3.2 Staff Restrictions

- Symptomatic staff should not be at work and should remain off work until 48 hours after their last symptom. Staff must still report as usual any sickness to management.
- Staff looking after symptomatic residents and/or exposed residents should not also look after asymptomatic non-exposed residents where possible.
- Bank, agency and locum staff should follow the same arrangements as permanent staff.

3.3 Transfer of residents to hospital

During an outbreak of norovirus care homes should, as far as is possible, avoid the need to transfer residents to hospitals as this can start further outbreaks. If transfer of a resident, even an asymptomatic resident (a person without symptoms) is necessary, the following must be done before the transfer begins:

- The hospital's clinical team who will care for the resident must be informed if the resident has or has had symptoms, and if there are people in the care home with symptoms.
- The transfer ambulance team must also be informed if the resident has symptoms.

3.4 Information for residents and visitors

- Ensure all residents, relatives and visitors are aware of what they should do in any outbreak situation and what they can do to prevent additional personal risk.
- Provide written information e.g. how to wash personal laundry and how to wash hands leaflets ([Appendix 1](#)).
- If an outbreak occurs, there should be a management approved notice on the door of the care home to alert visitors to the possibility of a norovirus, or diarrhoea and vomiting, outbreak.
- The notice should advise visitors to wash and dry their hands and state where they can do this i.e. on entering the care home, on leaving the care home and not to put

fingers in their mouth or consume food or drink whilst in the care home. These messages should be reinforced to visitors by a member of the care home team.

- Visitors should be advised:
 - To reduce the number of visits whilst the outbreak lasts.
 - Not to visit if they themselves are suffering from any gastrointestinal symptoms (diarrhoea and/or vomiting) until they are 48 hours symptom free.
 - Children should not visit the care home during an outbreak.
 - NB Temporarily suspending visiting may be considered necessary to stop the outbreak – this will also prevent visitors being exposed to norovirus.

3.5 Cleaning of an area where there has been an outbreak (on advice from the HPT)

Prior to the care home returning to normal working a thorough clean should be undertaken. The HPT will advise when this can be done. Although in care homes residents occupy the same rooms before and after an outbreak, cleaning prior to re-opening is done to prevent the outbreak re-starting. This cleaning should be done in all areas affected.

3.6 Cleaning of a resident's room after the outbreak

- Once a resident has been free of symptoms for 48 hours, all surfaces in the resident's room or private area should be thoroughly cleaned and dried with detergent and water solution (following manufacturer's instructions).
- Cleaning and/or disinfection of all care equipment and surfaces e.g. commodes, beds, mattresses should be in line with manufacturer's instructions.
- Where surfaces can withstand a chlorine releasing agent diluted to 1,000ppm available chlorine this should be used following cleaning with detergent and water solution, or a combined chlorine and detergent product should be used and then dried.
- The room should be well ventilated and care taken to prevent any resident being affected by chlorine fumes.
- Items belonging to the residents should be cleaned with the resident's consent.

3.7 Re-opening the care home to admissions

The care home can be re-opened to admissions following:

- Cleaning to the satisfaction of the care home manager and the NHS Board HPT.
- There have been no new cases of possible norovirus for 48 hours.
- There has been no vomiting or diarrhoea considered to be caused by norovirus for a full 48 hours.
- The HPT has approved re-opening.

Notify Care Inspectorate that the outbreak is officially over and normal services have resumed.

Appendix 1 – Weblinks to information leaflets

Germ Wash your hands of them

<http://www.washyourhandsofthem.com/documents/the-campaign/phase-2/leaflets/hand-hygiene-information-for-members-of-the-public.aspx>



Washing clothes at home: Information for people in hospitals or care homes and their relatives

<http://www.documents.hps.scot.nhs.uk/hai/infection-control/publications/washing-clothes-home.pdf>



When and how to obtain a faecal specimen from a resident: Information for care staff

<http://www.hps.scot.nhs.uk/haic/ic/publicationsdetail.aspx?id=49011>



Norovirus Stay at Home campaign

<http://www.nhsinform.co.uk/health-library/articles/n/norovirus/introduction>

