



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive



Guidance on the Management of Outbreaks of Noroviral Infection in Tourist and Leisure Industry Settings

Prepared by the Viral Gastroenteritis Subcommittee of the Scientific Advisory
Committee of the Health Protection Surveillance Centre

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Preface

Every year outbreaks of gastroenteritis caused by norovirus (NoV) affect hospitals, hotels, nursing homes, cruise ships. Known colloquially as “winter vomiting disease”, this viral gastrointestinal infection is in fact, prevalent throughout the year becoming more prominent in winter when people tend to spend more time indoors and in congregate settings.

NoV can be particularly disruptive in hotels and on board coaches. Between 2002 and 2006, 55 outbreaks of suspect/confirmed noroviral illness occurring in leisure settings were reported to the Health Protection Surveillance Centre (HPSC) resulting in 1500 cases of illness. More than three quarters of these outbreaks involved hotels.

In these settings, outbreaks of norovirus can be very difficult to manage and distressing for clients and staff, and the situation can rapidly escalate to severely impact on the business concerned. Staff in the leisure industry can do much to control the spread of NoV and hence minimise the impact of the virus. The control measures that can prevent an outbreak becoming more than a minor nuisance or disruption are simple, inexpensive and commonsensical and involve forward planning, a rapid response to episodes of vomiting, strict cleaning and decontamination procedures, robust hygiene practices, and clear, timely communication with all those involved.

This guidance document has been produced by the Viral Gastroenteritis Subcommittee of the Scientific Advisory Committee of the Health Protection Surveillance Centre for use by leisure industry staff to assist them in managing the risks posed by NoV infection. While the focus of much of this Guidance is on the hotel and coach industry, this Guidance can be adapted to any other relevant setting such as guest houses and hostels.

I am very grateful to this Committee for the work and expertise they have contributed. In particular, I would like to thank Dr Margaret O’Sullivan (HSE-S), Mr Cathal Kearney (HSE-W) and Mr Jeff Moon (FSAI) for the input of their special expertise in this area. I am also very grateful to the stakeholders to whom we spoke whose opinions have helped fashion this Guidance.

Dr Paul McKeown

Chairman of the Viral Gastroenteritis Subcommittee

1.0 Introduction

1.1 Aim

The aim of this document is to provide guidance on the management of noroviral infection for leisure industry staff. Included in the appendices are template documents that can be adapted for local use.

It is also intended as an *aide memoire* for public health professionals in the event of an outbreak. Any information contained in this document is intended to inform local professional judgement; it is not a substitute for it.

1.2 Noroviral infection

1.2.1 What is norovirus?

Norovirus (NoV) is a virus that is a frequent cause of vomiting and diarrhoea. The infection is usually mild, with symptoms lasting 12-72 hours. It is sometimes called the “winter vomiting virus” although illness can occur all year round. Noroviruses are the most common cause of outbreaks of acute gastroenteritis in Ireland and globally (Koopmans *et al.*, 2006).

Noroviral infection is now recognised as being extremely common and when outbreaks occur in hospitals or in leisure industry settings, it is merely a reflection of what is happening in the community. In order to address the risk of norovirus, the leisure industry (along with other business and public service sectors) should build response capacity into their business plans. It is important to expect this virus and be prepared for it.

1.2.2 How is it spread?

Person-to-person: This is the main method of spread of the infection. The virus is present in the vomit and stool (bowel motions) of an infected person; if food, water or the environment become contaminated with vomit or stool, it can be spread to other people.

Airborne: Projectile vomiting creates an aerosol (mist) of liquid that can settle on surfaces such as door handles, tables, sideboards etc. This mist can travel quite some distance from the immediate area of contamination. If anyone should touch the contaminated area and place their fingers to their mouth they are likely to become infected. It can also be swallowed when aerosolised. Additionally, it is believed that noroviruses can survive for possibly weeks in the environment, on surfaces etc (Mattison *et al.*, 2007).

Foodborne: Shellfish such as oysters can concentrate noroviruses if they are grown in sewage-contaminated water. However any food item can become contaminated through handling (especially from infected staff who handle food) or if it is exposed to environmental contamination.

Waterborne: Infection can be spread through water; by drinking contaminated water or by exposure to contaminated recreational water sources such as swimming pools, spas, baths, water parks and lakes.

1.2.3 How do you recognise it?

The main symptom is vomiting of sudden onset (which can be projectile) and which can result in widespread environmental contamination. Vomiting however can be quite mild. Diarrhoea can be prominent but tends to be short-lived and less severe than with other types of gastroenteritis. Nausea, abdominal cramps, headache, muscle aches, chills and fever can all be present. Symptoms generally last 1-3 days and recovery is usually rapid. In children and the elderly, severe vomiting can occasionally lead to dehydration.

1.2.4 How do you identify a Norovirus outbreak?

An outbreak is when two or more people develop the same symptoms as a result of being infected by a common source. If two or more guests or members of staff develop sudden onset vomiting within a 3 day period it is likely to be a norovirus outbreak. An outbreak can be confirmed as norovirus by testing stool specimens for the virus in a laboratory.

1.2.5 Whom should I tell?

If someone becomes ill in a hotel, it is important to seek the advice of the hotel's general practitioner. In addition, if an outbreak of norovirus is suspected, the local Department of Public Health and Environmental Health Department should be informed. Information on cases of norovirus and outbreaks will be passed onto the Health Protection Surveillance Centre.

1.2.6 How is it prevented?

Since norovirus is so common, it will never be possible to prevent it completely. However there are simple steps that can be taken that will markedly reduce the impact of this virus on hotels and other businesses.

- **Regular hand-washing** with soap and warm running water for at least 15 seconds, then drying with a disposable paper towel, is the most effective way of reducing spread.
- Using **proper protective equipment** – (See Appendices 1 and 2).
- Strict attention to hygiene in the kitchen, toilets in guests' rooms and public area toilets.
- The establishment of **Hotel Response Teams** that will immediately clean and decontaminate an area after vomiting has occurred.
- **Food handlers** should **never** be involved in cleaning or decontamination following episodes of vomiting.
- **Early recognition of vomiting/outbreak** (see Section 2.3.1)
- **Rapid cleaning/disinfection** following any episodes of vomiting especially in communal and food preparation areas. The focus of cleaning should be on the immediate area of contamination and surfaces touched by hand e.g. door handles, lift buttons, toilet flush handles, counter tops and work surfaces.
- **Environmental cleaning with warm water and detergent; and disinfection with the recommended concentration of bleach:** Noroviruses are very resistant to cleaning and disinfection. Temperatures of over 60°C or a 0.1% bleach solution are required to destroy the virus.
- **Isolate ill guests** and keep them separate from other guests as far as possible.

- **Exclude ill staff** from work for 48 hours after their vomiting and diarrhoea has stopped. People who have been ill will always continue to pass norovirus out of their bodies (shedding) for at least 2 days after they have recovered from their vomiting and diarrhoea. Allowing staff to return to work within 48 hours is very likely to reintroduce infection into a hotel.

2.0 Guide for hotel managers

2.1 Context

Hotels are vulnerable to norovirus outbreaks for the following reasons:

- They often host **vulnerable individuals** (e.g. elderly, young children).
- **Communal food sources** provide an effective method of spreading infection among guests and staff.
- **Communal areas** - guests meet in communal areas that also promote spread of infection.
- **Mobility of staff** - staff move throughout a hotel and if they are ill, or recovering from norovirus infection, can spread infection widely.
- **Economic consequences**: outbreaks are expensive to manage and may be very costly in terms of adverse publicity.

2.2 Preparedness

Success in minimising the impact of norovirus will depend on how prepared you are; preparedness for incidents/outbreaks of norovirus should be part of any hotel business plan.

2.2.1 Development of Policy and Protocols

It is crucial to have a written policy on the management of incidents of vomiting and outbreaks of noroviral illness in your hotel.

This policy and any protocols should contain the following key components:

- Guidance on cleaning and decontamination (*see Appendix 1*)
- These should:
 - stress the importance of hand-washing, hygiene, sanitation
 - contain a comprehensive equipment checklist
- The composition of the Hotel Response Team, cleaning rotas etc
- The areas requiring special attention such as kitchens, food preparation/storage areas, communal areas, guests' rooms
- The surfaces requiring particular attention during cleaning include those touched frequently by hands (*See Appendix 1*).
- How to accommodate and isolate ill guests
- Exclusion periods for staff who are, or have been ill (This must be for 48 hours after their vomiting and diarrhoea has stopped).
- The hotel policy on accommodating guests who arrive ill to the hotel regardless of method of arrival
- Communication regarding contamination incidents and outbreaks with prompt reporting to the local Medical Officer of Health (MOH) and to the local Department of Environmental Health
- Sickness log (*See Appendix 4*).
- Guests should be advised to report incidents of vomiting to hotel staff. Simple signs on the back of toilet/bathroom doors could remind guests of this (*See Appendix 3.B – Norovirus - Information for Guests and Holidaymakers*).

2.2.2 Training

Proper training of staff will do more to limit the impact of norovirus in a hotel than any other measure.

Training of staff protects them from infection.

- Management should provide training for staff on outbreak identification and control (material should be provided in such a way to ensure that staff whose first language is not English can be effectively trained).
- A specially selected, dedicated '**Hotel Response team**' should be identified and trained in cleaning methods and a roster put in place to ensure adequate cover at all times with an immediate rapid response to any contamination event. **Members of this cleaning team must not be food handlers.**

2.2.3 Communications

A Hotel policy on communication in the event of an outbreak should be devised to cover communication with:

- guests
- parent company
- local GPs
- local Department of Public Health
- local Environmental Health Department

During an outbreak consideration should be given to particular groups:

- **Guests in residence** should be issued with information on the outbreak including how to identify illness, what to do if they become ill and the control measures that are in place. They should also receive regular updates on the status of the outbreak.
- **Intending Guests:** consideration must be given to informing intending guests of the situation depending on the scale, distribution and likelihood of escalation of the outbreak.
- **Other businesses:** where external companies may come into contact with either infected guests (e.g. coach drivers) or contaminated material (e.g. laundry companies), prior notification and advice should be given so that appropriate control measures can be put in place.

2.2.4 Equipment

Standard inexpensive cleaning equipment is all that is required to manage the threat of norovirus. It is crucial that it is always available to those that need it. A full list of equipment is laid out in *Appendix 1*.

2.3 Outbreak Management

2.3.1 Identification of an outbreak

An outbreak is when **two or more** people develop the same symptoms as a result of being infected by a common source.

If **two or more** guests or members of staff develop sudden onset vomiting within a 3 day period it is likely to be a norovirus outbreak.

2.3.2 Immediate measures

In general, if a guest in a hotel or a passenger on a bus vomits once and subsequently feels well, they may not necessarily have norovirus but the vomit should be treated as potentially infectious. However, if that guest continues to feel unwell or vomits repeatedly, norovirus illness should be suspected.

Therefore if any guest vomits, the staff member who witnesses or is called to deal with this should immediately:

(“The 5 Cs”)

1. **Cover** the area of vomit
2. **Clear** other guests away
3. **Cordon off** the immediate area
4. **Call** the Hotel Response Team who will
5. **Clean** and decontaminate the area.

This procedure should also be followed for an episode of vomiting involving a staff member.

During an outbreak, the most important measures that will limit the outbreak size are:

- Any soiling due to vomiting should be **immediately cleaned up** and the area decontaminated (*See Cleaning Guide in Appendix 1*)
- **Hands** should be **washed regularly** (with warm running water and soap for at least 15 seconds and dried thoroughly afterwards with a disposable paper towel), after using the toilet and when touching food.
- **Ill guests** should be identified and **isolated** in their rooms
- Any **staff member** who becomes ill **must report** the illness to their supervisor immediately and leave work. They should be given information on ensuring personal hygiene when ill (*see Appendix 3 – Staff leaflet*).

2.3.3 Next steps / Control Measures

These next steps will consolidate the immediate measures:

- **Increased frequency of cleaning** of kitchen and toilet areas
- Prominent placing of **notices** in staff areas about **hand-washing**
- Ill staff **must** be excluded from work for 48 hours after their vomiting and diarrhoea has stopped
- Provide **information leaflets** for ill guests/relatives (*see Appendix 3*)
- Consider **alerting** other guests
- Strict use of **guest (and staff) sickness logs**
- **Alert GP** and the local Department of Public Health/Environmental Health Department

Guests

- All ill guests should have access to **medical care**, where necessary.
- Ill guests should **remain in their room** (i.e. they should be served meals in their rooms and should avoid communal hotel areas) and should not travel on to another hotel or board a coach, until they have been well for 48 hours.
- Guests who are not sick **should not be restricted** in their travel. The destination hotel should be informed in advance that there has been illness among the party so that prompt action can be taken if another member of the party subsequently becomes ill.
- If any member(s) of a coach tour group become ill for the first time **after** they have boarded the coach, every effort should be made to accommodate them at their destination hotel.
- The coach tour operator **should inform the destination hotel** if a passenger vomits aboard the coach so that appropriate control measures can be put in place prior to the arrival of the guests.
- However, the chances of infection being passed on by someone who has disembarked from a coach containing ill passengers, but who does not have symptoms, is likely to be low. Such well guests therefore need not be restricted in their travel.
- Where ill guests must travel, arrangements should be made to minimise their contact with non-infected guests by making **separate transport arrangements** where practicable.

Staff

- Any ill residential staff should **remain confined in their quarters** while ill, and **for 48 hours** after they have recovered. Ill staff should be segregated from other staff members to control the spread of infection.
- **Staff sickness logs** should be maintained at all times.
- Staff should complete a **medical declaration** before returning to work.

Food

- **If vomiting occurs in the kitchen**, uncovered food and surrounding surfaces may have been contaminated.
 - All staff should leave the area straight away.
 - The Hotel Response Team should immediately clean all visible contamination, discard all opened and potentially exposed food,

clean and disinfect all surfaces thoroughly and ventilate the area for a least one hour before resuming service.

- **If vomiting occurs in the dining area:**
 - All staff and guests should leave the area immediately.
 - The Hotel Response Team should respond as in the kitchen.
- **Self-service buffets should be suspended** for the duration of the outbreak or alternatively staff should serve guests from the buffet to minimize the risk of cross-contamination.
- The serving of **shellfish and cold foods** such as salads should be **suspended** during the outbreak and a cooked food menu (hot) introduced.
- Notices reminding guests of the importance of **washing their hands** before eating and after using the toilet, should be posted in bedrooms, toilets and the entrance to the dining rooms. Guests should be encouraged to report any incidents of vomiting to hotel staff.
- Ensure that the **drinking water supply** to the hotel meets the minimum standards (The European Communities (Drinking Water) Regulations, 2007). If there is any doubt about the quality of the water, guests and staff should be instructed to use bottled water. In these instances tap water should not be used for making ice or brushing teeth.

Kids' clubs/Crèche facilities

- During an outbreak, consideration must be given to **suspending kids' clubs and crèches** due to the susceptibility of this young age group to infection and the potential for spread.
- If the operation of the kids' club/crèche is essential or closure is impractical then certain **control measures** should be implemented:-
 - Any child who complains of feeling sick should not be allowed into the club/crèche.
 - A sick child should be removed from the club/crèche area immediately.
 - Where vomiting and/or diarrhoea occurred within the club, the area should be closed and cleaned thoroughly, including all surfaces and all toys.

2.3.4 Public health involvement

There is a legal responsibility on all medical practitioners and laboratories to report cases of illness due to norovirus and outbreaks to the local Medical Officer of Health (MOH), a senior public health doctor at the local Department of Public Health. The MOH is responsible for investigating such outbreaks and for bringing them under control.

In investigating an outbreak, public health medical and environmental health staff will provide advice on how to limit spread of infection and manage vulnerable areas such as kitchens and toilets.

They may collect clinical information on ill guests and staff and also on those who are well to determine how the infection was spread. They will want to

outrule food, water and food handlers as possible sources of infection. Stool samples may be collected from guests and staff to confirm the diagnosis.

All of these actions are directed to preventing further cases and determining if there could be a continuing source of infection.

Depending on the extent and duration of an outbreak it may be necessary to consider closing the hotel to incoming guests and make alternative arrangements to accommodate such guests elsewhere.

3.0 Guide for coach tour operators

3.1 Context

Coaches are vulnerable to norovirus outbreaks for the following reasons:

- They often host **vulnerable individuals** (e.g. elderly, young children)
- They are **confined areas** that can readily become contaminated by vomit.
- **Motion Sickness** - passengers with norovirus who might be able to prevent themselves vomiting are much more likely to vomit in a moving vehicle.
- **Limited toilet and sanitation facilities.**
- **Crowding:** if a coach is operating at full capacity there is nowhere to isolate an ill passenger en route.

3.2 Preparedness

Success in minimising the impact of norovirus will depend on how prepared you are; preparedness for norovirus should be part of any coach tour operator's business plan.

3.2.1 *Development of Policy and Protocols*

It is crucial to have a written policy on the management of incidents of vomiting and outbreaks of noroviral illness aboard your coaches.

This policy and any protocols should contain the following key points:

- Stress the importance of hand-washing, hygiene, sanitation
- Cleaning guidance (*Appendix 2*)
- Cleaning equipment (*Appendix 2*)
- Exclusion periods for staff who are, or have been ill (for 48 hours after their vomiting and diarrhoea has stopped)
- Responsibility for cleaning vehicles
- Communication with onward hotels

3.2.2 *Training*

All coach drivers should receive training in how to clean and disinfect buses in the event of contamination occurring (*Appendix 2*). The parent company should have in place a protocol for full decontamination and thorough cleaning when the coach arrives back in the depot.

3.2.3 *Communications*

A Company policy on communication in the event of vomiting incidents and outbreaks in supplying hotels should be devised to cover communication with:

- passengers
- parent company
- communication with the destination hotel
- local GPs and Department of Public Health (if necessary)
- local Department of Environmental Health

3.2.4 Equipment & Cleaning policies

See Appendix 2

3.3 Managing an incident of vomiting

- Passengers should be **taken off the bus** as soon as it is practicable and safe to do so.
- Incidents of vomiting and diarrhoea should be **cleaned up immediately** (see Appendix 2 for sample cleaning protocol).
- **Sick bags** should be available to all passengers to minimise environmental contamination.
- The coach tour operator must **inform the destination hotel** of the situation so that necessary control measures can be put in place prior to the arrival of the guests.
- On the resumed journey, the ill passenger should (where possible) remain seated and have as little contact as possible with the other passengers.
- Upon return to base, the coach should be **thoroughly cleaned and fully decontaminated** with hot water/steam cleaning and completely **ventilated** for several hours, before being allowed back into operation.

APPENDICES

Appendix 1 – Hoteliers Cleaning/Equipment Checklist

Staff Safety

- A special 'Hotel Response Team' should be established – this should be made up of specially trained staff members – all members of the cleaning team must be issued with a copy of this document. **No member of this team should be a food handler.**
- A roster should be drawn up to ensure sufficient cover is available at all times.
- This rapid response team should be able to begin cleaning any episode of vomiting/diarrhoea within 5 minutes of it happening.
- While awaiting the arrival of the Hotel Response Team, any staff present should ensure that the following immediate steps are taken (see 2.3.2)
 - **Cover** the area of vomit (with disposable paper towels)
 - **Clear** other guests away
 - **Cordon off** the immediate area
 - **Call** the Hotel Response Team who will
 - **Clean** and decontaminate the area.

Equipment

The following equipment must be kept in a lockable cupboard and used solely for the purposes of the cleaning team:

- Waterproof protective gloves
- Disposable aprons
- Dustbin bags in a distinctive colour
- Soiled linen bags
- Disposable sick bags
- Disinfectant agent
- Multi-purpose detergent cleaner
- Wet/dry vacuum cleaner
- Disposable cloths/towels
- Mop, bucket, dustpan and plastic scraper

The cleaning team must have access to the following facilities:

- A designated sink/sluice area for use by the cleaning team only. This should be used only for washing soiled/contaminated items and must not be located near a food preparation area.
- Changing and washing facilities, if possible for their exclusive use, supplied with hot and cold water, liquid soap, and paper towels.

Disinfectants

- For disinfection of norovirus, an agent delivering at least 1000 parts per million (ppm) or 0.1% of available chlorine is required. [e.g. Milton Sterilising Solution (which is a 2% solution for retail sale) requires a 1:20 dilution (i.e., 1 measure of Milton plus 19 measures of water) to achieve a final strength of 0.1%]
- The concentration of supermarket domestic bleach solutions is variable and the dilution recommended by the manufacturer for disinfection of surfaces should be used.

Fogging and other cleaning methods

Commercial fogging devices are available. These should not be considered as a substitute for conventional cleaning and disinfection.

Some commercial enterprises have advocated the use of ultra micro-fibre cloths to remove norovirus from hard surfaces, but these must be laundered at high temperatures afterwards.

General Cleaning Methods

1. Put on disposable apron and gloves **before undertaking any cleaning.**
2. Gross contamination of vomit and/or diarrhoea should be removed by:-
 - a) Using paper towels or absorbent granules to soak up excess liquid followed by disposable cloths.
 - b) Placing contaminated material directly into a waste bag.
 - c) Washing the immediate area with hot water and detergent using disposable cloths or using a wet vacuum containing a detergent solution depending on surface.
 - d) Applying disinfectant directly to the contaminated area and its surrounds (at least 3 metres in all directions) after cleaning.
 - e) Disposing of aprons, gloves and cloths into the waste bag.
 - f) Cleaning and disinfecting non-disposable equipment after use.
 - g) Washing hands thoroughly afterwards.
 - h) Cordoning off and thoroughly airing until dry.

Specific Areas & Surfaces

- **Hard Surfaces:** After cleaning, all hard surfaces within 3 metres of the incident must be wiped down with a 1% bleach solution.
- In addition, **during an outbreak particular attention should be paid to surfaces touched by hand** such as:
 - *wash hand basins,
 - work surfaces,
 - taps,
 - *toilet and bath rails,
 - telephones,

- banisters,
- furniture (particularly chair backs and arms rests, desks and tables),
- waste bins,
- door and toilet flush handles,
- window frames and bathroom fittings,
- lift doors and buttons,
- TV remote controls,
- minibars and fridges,
- light switches,
- room key cards,
- food covers for buffet breakfasts and other meals,
- lockers for staff and in leisure centres,
- bar surfaces,
- baby changing rooms.

*Note: toilets and wash hand basins should be cleaned with products containing bleach.

During outbreaks, repeated cleaning of these surfaces should be a priority as surfaces touched by hand are the way in which norovirus will be most effectively transmitted around a hotel.

- **Soft Furnishings:** Initial cleaning should be followed by steam cleaning if the items are heat tolerant. If this is not possible, washing with a detergent solution should be considered.
- **Table Place Settings:** All table place settings i.e. cutlery, crockery, salt and pepper sets, tablecloths etc., within at least 3 metres in all directions of a vomiting incident must be cleared, the area cleaned and disinfected, and all washable items washed in a dishwasher (at the hottest appropriate dishwasher cycle temperature). Table linen should be handled as soiled bed linen.
- **Carpets:**
 - Vacuuming of carpets is not recommended during an outbreak as it re-circulates the virus particles.
 - Steam cleaning may be effective if temperatures of 60°C can be guaranteed and if the carpets are heat tolerant.
 - If carpets cannot be steam cleaned, clean with detergent and water solution, and thoroughly air the area until dry before allowing guests back in.
- **Bed Linen/Laundry:**
 - Contaminated bed linen/laundry should be placed in separate laundry bags and washed separately using a cold pre-wash sluice cycle (if available) followed by a full wash cycle at a minimum temperature of 60°C.

- If an external laundry service is used, inform the operators of the likelihood of contaminated bedding, and identify any special requirements that they may have for the receipt of such articles.
 - Where there is gross contamination of laundry items, consideration should be given to discarding them.
 - Fabrics that can tolerate it should be washed at a temperature of at least 70°C.
- **Shared Toilet Facilities:**
 - Clean and disinfect contaminated areas/objects as above.
 - During an outbreak, check and clean shared toilet facilities at least hourly and after any incident of soiling or contamination.
 - All hard surfaces must be cleaned and disinfected ensuring that separate disposable cloths are used for 'dirty' areas such as toilet bowls (and then disposed of immediately after use). A colour-coded system for such disposable cloths could be employed e.g. red cloths for toilet areas, green cloths for kitchen areas, blue for all other areas.
- **Rooms Occupied by Ill Guests:**
 - Particular attention should be paid to items that are frequently handled such as door handles, taps, toilet handles, bath rails, telephones, banisters and railings, TV remote controls.
 - Cleaning should be with warm water and detergent and then disinfection with a solution of 1000ppm chlorine. Separate disposable cloths should be used for toilet areas, (using a colour-coded system for cloths as described above).
 - Rooms that have accommodated ill guests should be thoroughly cleaned and disinfected upon their departure.
 - All windows and doors should be opened.
 - Bed linen should be laundered and mattresses and soft furnishings should be placed in direct sunlight for a few hours.
 - All mattresses and soft furnishings that have been contaminated with vomit or faeces should be removed for steam cleaning.
 - All tea making facilities and provisions, cups, spoons, glasses teapots and other crockery should be placed in a plastic box with a lid. They should be washed and disinfected using the hottest dishwasher cycle. This procedure should also be followed when removing crockery after the guest has had room service. All items should be washed separately from other hotel crockery.
- **Swimming pools**

In the event of the hotel pool becoming contaminated with faecal matter or vomit, the following action should be taken:

 - Clear the pool of all guests immediately.
 - Close the pool.
 - Switch off turnover.

- A trained member of the Hotel Response Team cleaning team using appropriate equipment should remove any solid or visible matter.
- Consideration should be given at this stage to super-chlorinating the pool.
- The pool should be filtered for six turnover cycles.
- Subject to satisfactory testing (chlorine level and pH), the pool can be reopened.
- Records should be maintained of the incident and all subsequent actions taken.
- In the event of poolside contamination, faecal matter or vomit should be cleaned up immediately. It must not be swept into drains. The area should then be flooded with appropriate disinfectant.

Appendix 2 – Coaches Cleaning/Equipment Checklist

- **Staff safety**
 - Coach drivers must be specifically trained to respond to an incident of vomiting/diarrhoea aboard their coach.
 - Adequate equipment should be supplied and maintained at all times
 - A copy of this document should also be on board at all times as reference material.

- **Equipment for Driver**

The following equipment must be kept on the bus at all times:-

 - Large supply of detergent wipes
 - Adequate supply of water for cleaning
 - Rubber gloves
 - Disposable aprons
 - Dustbin bags in a distinctive colour
 - Sick bags
 - Disinfectant
 - Multi-purpose detergent cleaner
 - Disposable cloths/towels
 - Mop, bucket, dustpan and plastic scraper

Immediate Action

1. Passengers should be taken off the bus if it is practicable and safe to do so.
2. Incidents of vomiting and diarrhoea should be cleaned up as soon as possible.

Disinfectants

- For disinfection of norovirus, an agent delivering at least 1000 parts per million (ppm) or 0.1% of available chlorine is required. [e.g. Milton Sterilising Solution (which is a 2% solution for retail sale) requires a 1:20 dilution (i.e., 1 measure of Milton plus 19 measures of water) to achieve a final strength of 0.1%]
- The concentration of supermarket domestic bleach solutions is variable and the dilution recommended by the manufacturer for disinfection of surfaces should be used.

Fogging and other cleaning methods

Commercial fogging devices are available. These should not be considered as a substitute for conventional cleaning and disinfection.

Some commercial enterprises have advocated the use of ultra micro-fibre cloths to remove norovirus from hard surfaces, but these must be laundered at high temperatures afterwards.

General Cleaning Method

1. Put on disposable apron, gloves **before undertaking any cleaning.**
2. Gross contamination of vomit and/or diarrhoea should be removed by:-
 - a) Using paper towels to soak up excess liquid then using disposable cloths.
 - b) Place contaminated material directly into a waste bag.
 - c) Wash immediate area with hot water and detergent.
 - d) Apply disinfectant directly to the contaminated area and its surrounds (at least 3 metres in all directions) after cleaning.
 - e) Dispose of aprons, gloves and cloths into the waste bag.
 - f) Clean and disinfect non-disposable equipment after use.
 - g) Wash hands thoroughly afterwards.
 - h) Cordon off and thoroughly air until dry.
 - i) Isolate air conditioning system and do not reintroduce until the coach has been cleaned following return to the base/destination.

On return to base/destination:

1. The transport operator should notify the person in charge of the occurrence of illness on board his/her vehicle and the action taken.
2. The transport operator or cleaning team should then carry out a full clean.
3. Remove any contaminated material for proper disposal.
4. Dispose of consumables e.g. paper cups.
5. Remove seat head rest covers, cushions, and launder at 70°C.
6. Clean and disinfect hard and soft furnishings with the appropriate cleaner/disinfectant include toilets, wash hand basins, door and toilet flush handles, floors and windows.
7. Steam clean contaminated cloth seats.
8. Clean accessible carpeted areas with a wet and dry vacuum cleaner containing detergent and warm water solution.
9. The vehicle should be well vented after cleaning and disinfection is complete.
10. Clean and disinfect non-disposable equipment.
11. Replenish supplies.

Appendix 3 – Leaflets

A. NOROVIRUS – INFORMATION FOR STAFF

What is norovirus?

Norovirus (NoV) is a frequent cause of vomiting and diarrhoea. The infection is usually mild, symptoms generally lasting 12-48 hours (but can be longer). It can cause:

- Nausea and vomiting (which may be projectile)
- Diarrhoea – the frequent passage of loose, fluid, unformed bowel movements
- Muscle aches
- Headache
- Fever

How is norovirus spread?

The virus is present in the vomit and stool of an infected person. Therefore if food, water or the environment becomes contaminated from vomit or stool, there is potential for spread to other people. It can be spread by:

- Aerosol spread if an ill person vomits near other people.
- Direct contact with an environment contaminated with the virus, followed by failure to wash hands before eating or drinking or before preparing food.
- Failing to wash hands after using the toilet and then touching food or surfaces that others can touch with their hands.
- Eating food contaminated with the virus.

What do I do if a guest shows symptoms?

- Report guests with such symptoms to your manager.
- Management will arrange for the ill guest to be isolated where possible.
- Management will also arrange for a special cleaning team to deal with any contaminated areas.
- Do not attempt to do this yourself unless you have been trained to do so.
- Be particular about personal hygiene during outbreaks of diarrhoea and vomiting.
- Always wash your hands after using the toilet, and before handling or eating food.

What do I do if I develop symptoms?

- If you develop any symptoms while at work report it to your manager.
- You should not work while you are unwell.

If you have had diarrhoea or vomiting you should remain off duty until 48 hours after the last episode of diarrhoea or vomiting.

- If you become unwell while at home, stay at home and phone in 'sick'.
- Do not come into work.

What do I do if someone in my house has diarrhoea and vomiting?

In this instance, you are a close contact of an infectious person and could develop symptoms yourself.

- Make sure that you, and others in your house, **wash hands regularly** with warm running water and soap for at least 15 seconds and dry thoroughly afterwards with a disposable paper towel, after using the toilet and when touching food.
- Frequent and thorough cleaning of contaminated areas such as toilets is essential to minimize your risk of infection.
- You should phone your manager and report this episode, and he/she may ask you to stay at home.
- Your manager should keep in contact with you by phone until 48 hours after your vomiting and diarrhoea has stopped.
- If you have not become unwell during this period, you can return to work.

B. NOROVIRUS – INFORMATION FOR GUESTS AND HOLIDAYMAKERS

What is norovirus?

Norovirus (NoV) is a viral illness that is a frequent cause of vomiting and diarrhoea in the community and is most common during the winter. It is sometimes called 'winter vomiting disease'.

Why is it a problem?

NoV causes vomiting and/or diarrhoea which can last up to 48 hours or longer. Some people may also have a fever, headache and muscle aches. The illness is usually mild and gets better without antibiotics. NoV does however spread very easily from person to person, particularly if someone becomes unwell and vomits in a confined space with a large number of other people. Thus, it is possible for infection to spread readily where people are close together as in hotels and on coach tours.

Why is this important to me?

While you are on holiday the management wants to promote a healthy and pleasant environment for all visitors to enjoy. Simple precautions can reduce the risk of you or your companions becoming unwell and help to ensure that you enjoy your holiday.

What should I do if I become unwell?

- If you are out on a trip when you become unwell with vomiting or diarrhoea, you should inform your guide who will arrange transport to take you back to your hotel.
- If you are in the hotel when you become unwell, please return to your room and inform reception that you are unwell.
- Someone will visit you and make sure that you have everything you need and are properly looked after. The main treatment is to drink plenty of fluids. However, if you require medical attention, staff can arrange for a local doctor to visit you.
- While you are unwell, it is important that you pay particular attention to washing your hands with warm running water and soap for at least 15 seconds and drying thoroughly afterwards with a disposable paper towel, after being sick or after using the toilet.
- If you vomit in a public toilet, please inform a member of staff immediately so that the toilet can be cleaned for other users.

What action should I expect if I become unwell?

- A member of staff will contact you to talk to you and to collect details of your illness.
- They will make sure that you are provided with everything you need in your room and the toilet you use is kept clean.
- They will advise you not to leave your room until 48 hours after your vomiting and diarrhoea has stopped. This will mean that your food will be served in your room. In addition, you will be asked to avoid any communal areas (including bars and restaurants) for this 48 hour

period. This is extremely important as this will help prevent spread of norovirus which is highly contagious.

- If there is an outbreak, you may be contacted by staff from the local Department of Public Health and Department of Environmental Health who may be investigating the outbreak.
- You may be asked to provide a stool specimen to be sent to the laboratory.

C. NOROVIRUS – INFORMATION FOR RELATIVES AND FRIENDS

What is norovirus?

Norovirus (NoV) is a viral illness that is a frequent cause of vomiting and diarrhoea in the community and is most common during the winter. It is sometimes called 'winter vomiting disease'.

Why is it a problem?

NoV illness lasts up to 48 hours or longer and the person will have vomiting which, on occasion, is projectile and/or diarrhoea. It may also result in high temperatures, headaches and muscle aches. The illness is usually mild. NoV spreads very easily where there is close contact or people are in a confined environment. Large numbers of people can be involved. To stop the illness spreading, it is important to restrict visiting and for you to take certain control measures.

How does it affect my relative/friend?

If unwell, they will be unable to join the rest of the group for meals or for other communal activities including coach trips. They will be advised to remain in their room, although their symptoms will mean that they may wish to remain in their room in any event. They will be asked to remain in their room for meals and to avoid communal areas in the hotel for 48 hours after their vomiting and diarrhoea has stopped.

Will they need treatment?

- The main treatment is to drink plenty of fluids. However, if there is any concern or if they are receiving regular medical supervision, ask for a GP to visit.
- Your relative/friend may be asked for a stool sample to be sent to the laboratory for testing and for some personal information including a history of where they have been/what they have eaten.
- Once the illness is over no further action is required.

Can I visit?

You should avoid visiting the room of your relative/friend while they are unwell. Where you need to visit, keep these visits to a minimum and take precautions as detailed below.

What precautions do I need to take?

You should:

- Always maintain a high level of personal hygiene – wash your hands thoroughly after using the toilet and before eating and drinking.
- You should, as far as possible, try and keep contact with the ill person to a minimum.
- Avoid eating/drinking in the room.
- Do not touch soiled bed linen or clothing
- Do not attempt to clean up vomit/faeces (contact a member of staff).

**Appendix 4
SICKNESS LOG**

Hotel Sickness Log

Basic Illness Report for w/e/.....

Hotel.....

Number of beds occupied...../.....Total beds

Date reported	Name	Child/ Adult	Ref No.	Room No.	Date of arrival	Onset date	Symptoms	No. days ill	GP contact details

Appendix 6 – References and Bibliography

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