SOP Objective

To provide Healthcare Workers (HCWs) with details of the precautions necessary to minimise the risk of cross infection with Norovirus.

This policy applies to all staff employed by NHS Greater Glasgow & Clyde and locum staff on fixed term contracts and volunteer staff.

This policy applies to both confirmed and suspected outbreaks of Norovirus.

KEY CHANGES FROM THE PREVIOUS VERSION OF THIS POLICY

- **Section 1. Responsibilities:** HCW- added 3rd bullet. IPCT-removed action to alert A&E departments that season has started.
- **Section 2. General Information:** Removed duplication of information and revised text for ease of reading
- **Section 3. Transmission Based Precautions for Norovirus:** Removed information duplicated in Outbreak SOP and revised text for ease of reading without changing guidance on IPC precautions.
- **Updated references in section 4. Evidence Base**
- **Updated made to guidance in Appendices.**

Document Control Summary

Approved by and date	Board Infection Control Committee 26th Sept 2018
Date of Publication	26th Sept 2018
Developed by	Infection Control Policy Sub-Group
Related Documents	National IPC Manual NHSGGC Hand Hygiene SOP NHSGGC Loose Stools SOP NHSGGC SOP Terminal Clean of Isolation Rooms/ward NHSGGC SOP Twice Daily Clean of Isolation Rooms
Distribution/Availability	NHSGGC Infection Prevention and Control Manual and the Internet www.nhsggc.org.uk/your-health/infection-prevention-and-control/
Lead Manager	Board Infection Control Manager
Responsible Director	Board Medical Director

CONTENTS

Norovirus Aide Memoire

Consult SOP and Isolate in a single room with:

- ✓ ensuite / own commode
- ✓ door closed
- ✓ IPC yellow sign on door
- ✓ dedicated equipment
- ✓ Bristol Stool Chart
- ✓ Norovirus Care Checklist completed daily

Patient Assessed Daily

Patient has been asymptomatic for > 48 hours?

NO

YES

- ✓ Stop isolation
- ✓ undertake terminal clean of room

Norovirus SOP - Guidelines for patients in isolation:

Hand Hygiene: Liquid Soap and Water

PPE: Disposable gloves and yellow apron
Consider face mask or eye protection where there is a risk of splashing with blood or body fluid.

Patient Environment: Twice daily chlorine clean

Patient Equipment: Twice daily chlorine clean

Laundry: Treat as infected

Waste: Dispose of as Clinical / Healthcare waste

Disease Symptoms: Diarrhoea and vomiting

Incubation Period: 12 – 48 Hours

Period of Communicability: While symptomatic and up to 48hours after symptoms.

Notifiable disease: Yes

Transmission route: Direct contact, Indirect contact, droplet contact

1. Responsibilities

Healthcare Workers (HCWs) must:

- Follow this SOP.
- Inform their line manager if this SOP cannot be followed.
- Be vigilant for increased number of cases with similar symptoms and notify IPCT

Senior Charge Nurse (SCN) / Managers must:

- Support HCWs and Infection Prevention & Control Teams (IPCTs) in following this policy.
- Cascade new policies to clinical staff after approval by the Board Infection Control Committee (BICC).

IPCTs must:

- Keep this SOP up-to-date.
- Provide education opportunities on this SOP.

Occupational Health Service must:

- Advise HCWs regarding possible infection exposure and return to work issues as necessary

2. General Information on Norovirus

Communicable Disease/ Alert Organism	Norovirus is highly infectious and causes outbreaks of gastroenteritis in places where people congregate, e.g. schools, hospitals, nursing homes, cruise ships etc. Gastroenteritis caused by Norovirus is usually self-limiting, mild to moderate in severity and normally occurs during winter and early spring but can occur throughout the year. The infective dose is very small, between 10 – 100 virus particles. (HPS 2016). Norovirus outbreaks usually require closure of wards to prevent onward spread
Clinical Condition	**Gastroenteritis**: Gastro-intestinal symptoms, e.g. nausea, vomiting (often projectile), non-bloody watery diarrhoea; characteristically lasting 12-48 hours. Also present may be abdominal cramps, myalgia (muscle pain), headache, malaise and low grade fever.
Mode of Spread	**Direct Contact:** • Hands come into contact with faecal matter/ vomit and subsequently touch the mouth. **Indirect Contact:** • Hands come into contact with contaminated equipment or contaminated surfaces and subsequently touch the mouth. • Consumption of faecal contamination in food or water. **Droplet Dissemination:** • Patients with excessive or projectile vomiting can disseminate large quantities of virus in droplets which can contaminate extensive areas of the ward/department. **NB:** Norovirus can survive on any surface including equipment and on refrigerated food for up to 10 days.
Incubation period	Usually 12-48 hours.
Notifiable disease	No.
Period of communicability	During the acute stage of the disease and up to 48 hours after symptoms have resolved or stools have returned to their normal (pre-infection pattern).
Persons most at risk	All. Susceptibility is widespread. It should be noted that mortality associated with Norovirus can occur particularly in elderly patients with co-morbidities. (HPS 2016)

3. Transmission Based Precautions for Norovirus

Accommodation (Patient Placement)	All patients symptomatic of unexplained vomiting and/or diarrhoea must be placed in a single room with en suite (or own dedicated commode). If the patient is clinically unsuitable for isolation, a risk assessment must be undertaken by the clinical team, in conjunction with a member of the IPCT. Failure to isolate must be documented in the IPC Care Checklist and reviewed daily. If a single room is not available, after consulting bed manager, staff must inform a member of the IPCT
IPC Care Checklist available	Yes. Loose Stools Care Checklist
Clinical / Healthcare Waste	Waste should be designated as clinical/ healthcare waste and placed in an orange waste bag. Please refer to the NHSGCC Waste Management Policy.

Domestic Advice	• Patients room/bed space should be cleaned twice daily as per NHSGGC Twice Daily Clean of Isolation Rooms SOP • Chlorine based detergents should be used for routine and terminal cleaning of the area. • Blood and/ or body fluid contamination of the environment should be dealt with as per the NHSGGC Decontamination SOP. • On resolution of symptoms (more than 48 hours asymptomatic) or discharge home, patient room/ bed space must be terminally cleaned see NHSGGC Terminal Clean of Isolation Room/Ward
Equipment	Patient equipment must be dedicated as far possible, while patient remains symptomatic and during infectious period. Patient care equipment should be cleaned twice daily with chlorine based detergent or immediately if visibly contaminated. Where possible equipment such as commodes, washbowls, chairs, hoist slings, cuffs, thermometers etc should be kept for use by individual, symptomatic patients. If equipment is taken out of the room it must be cleaned with 1000ppm chlorine based detergent. Please also refer to NHSGGC Decontamination SOP
Hand Hygiene (HH)	Hand hygiene is the single most important measure to prevent cross-infection with Norovirus. Hands must be decontaminated with liquid soap and water

	before and after each direct patient contact, after contact with the environment, after exposure to body fluids and before any aseptic tasks. Patients should be encouraged/ assisted to use the hand hygiene facilities after using the toilet or commode and before meals. Hand wipes should be provided to those patients unable to use hand hygiene facilities Visitors must also be encouraged to wash their hands with soap and water after visiting a patient with loose stools. Please refer to NHSGGC Hand Hygiene SOP
Individual precautions required until	Patient has been asymptomatic for 48 hours.
Last Offices	No special requirements.
Linen	All laundry from a patient with suspected or confirmed Norovirus should be treated as soiled/infected and placed into a water soluble bag then into a secondary plastic bag before being put into the laundry hamper. Any soiled clothing for home laundering should be placed into a domestic water soluble/ alginate bag then into a patient clothing bag before being sent home. All soiled clothing for home laundering should be accompanied with a Washing Clothes at Home Leaflet and staff should alert relatives/ carers to the condition of the laundry.
Moving Patients between wards, hospitals and departments (including theatres)	Movement of patients should be restricted until they have been asymptomatic for 48 hours. Movement of patients while symptomatic must only occur if there is a **clinical** need and this should be discussed with the IPCT and the acute receiving area.
Notice for Door	The yellow IPC isolation sign must be placed on the door to the patient's room. In Mental Health Services, on advice of the IPCT.
Outbreak	**If an outbreak is suspected, contact a member of the IPCT and refer to the NHS GGC Outbreak SOP.** **Appendices 2 and 3 can be used to gather information during the outbreak.**
Personal Protective Equipment (PPE)	Disposable yellow aprons and disposable gloves must be worn if in contact with an infected patient or their environment. Where there is a risk of blood and / or body fluid splash to the face, a fluid resistant surgical mask and eye protection must be considered.

	Visitors do not require PPE unless they are participating in patient care.

Specimens required	Specimens of faeces must be obtained for microbiology and virology at the earliest possible opportunity. Both faecal and vomit specimens can be sent to virology.
Stool Charts	It is the responsibility of staff within the area to record type/frequency of stool, using the appropriate stool chart. See Appendix 1 Bristol Stool Chart
Terminal Cleaning of Room	Refer to SOP Terminal Clean of Isolation Rooms/ward.
Visitors	Visitors are not required to wear aprons and gloves, unless they are participating in patient care. Visitors must be advised to decontaminate their hands with liquid soap and water on leaving the room/ patient. Symptomatic visitors should be advised not to visit patients in hospital until they have been asymptomatic for 48 hours. Staff should consider restricting the number of visitors to two and advising visitors not to bring young children and babies to visit whilst the patient is symptomatic.

4. Evidence Base

HPS (2016) General information to prepare for and manage norovirus in care settings.

CDC (2011) Guideline for the Prevention and Control of Norovirus Gastroenteritis Outbreaks in Healthcare Settings

CDC (2011) Updated Norovirus Outbreak Management and Disease Prevention Guidelines. MMWR 60(RR03); 1-15.

Chadwick P.R. et al (2000) Management of hospital outbreaks of gastro-enteritis due to small round structured viruses. Report of the Public Health Laboratory Service Viral GastroEnteritis Working Group. Journal of Hospital Infection. 45 pp l-10

Heymann D.L. (2008) Control of Communicable Diseases Manual. 19th ed. The official report of the American Public Health Association. Washington DC.

HPS (2018) National Infection prevention and Control Manual

5. Glossary

AHP	Allied Health Professionals
BICC	Board Infection Control Committee
HCWs	Healthcare Workers
HIIAT	Hospital Infection Incident Assessment Tool
HPS	Health Protection Scotland
IPCN	Infection Prevention & Control Nurse
IPCT	Infection Prevention & Control Team
OCT	Outbreak Control Team
OHS	Occupational Health Service
PPE	Personal Protective Equipment
SGHD	Scottish Government Health Directorates
SICPs	Standard Infection Control Precautions
SOPs	Standard Operating Procedures

Appendix 1 –Bristol Stool Chart

BOWEL MOVEMENT RECORD

Month: _____ Year: _____

Name:

Date	Time	Size S-small M-medium L-large S M L	Type 1 Separate hard lumps like nuts (hard to pass)	Type 2 Sausage shaped but lumpy	Type 3 Like a sausage but with cracks on surface	Type 4 Like a sausage or snake, smooth and soft	Type 5 Soft blobs with clear-cut edges (passed easily)	Type 6 Fluffy pieces with ragged edges, a mushy stool	Type 7 Watery, no solid pieces (entirely liquid)	Staff Initials
	am pm									
	am pm									
	am pm									
	am pm									
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Adapted from the Bristol Stool Scale developed by KW Heaton and SJ Lewis at the University of Bristol, 1997

Appendix 2 - Norovirus Outbreak Daily Checklist

Date commenced: _____

Both the checklist and data record to be completed and updated by the ward staff.

Norovirus Outbreak Daily Checklist to ensure Norovirus Control Measures are in place.

Tick if done, X if not done, N/A for not applicable.

Hospital:	**Ward:**	**ICT informed date:**	**Date:**				
The ward is closed due to admissions and transfers – until **48** hours after last new case.							
The ward (and side-room) doors are closed and there is an approved notice on the ward door advising visitors of necessary actions.							
All Healthcare Workers (HCWs) on the ward are:	• Aware of the status of the ward and how Norovirus is transmitted. • Aware of their duty to report when they have symptoms of gastrointestinal infection and not return or continue to work until they are symptom free for 48 hours.						
All patients (and relatives) on the ward are aware of the Norovirus situation and have been given information leaflets on Norovirus and advised on the need for hand hygiene, and safe handling of personal laundry.							
All patients with symptoms of Norovirus have been assessed today for symptom severity and assessed for signs of possible dehydration (Stool and Fluid Balance charts).							
Norovirus Outbreak Data Record (Appendix 3). The outbreak data collection record has been updated – including any new cases, the symptoms patients are experiencing today and laboratory data. (Stool samples have been requested from all symptomatic patients).							
Patient Placement Assessment: A patient placement assessment and any advised/suggested moves have been made today.							
Personal Protective Equipment (PPE) – gloves, apron, surgical (mask/visor – if risk of facial contamination with aerosols). There are sufficient supplies ofPPE in the ward and staff are using it appropriately.							
Hand hygiene <u>is being carried out with liquid soap and warm water</u> – this can be followed by alcohol based hand rub.							
Hand hygiene: Patients are encouraged and given assistance to perform hand hygiene before meals and after attending the toilet.							
Environment: The environment is visibly clean including curtains and there is increased cleaning which includes decontamination of frequently touched surfaces with detergent and 1000ppm av cl. (cleaning records are up-to-date).							
Environment: There are no exposed foods in the ward area – even if unexposed all fruit should be washed before eating.							
Equipment: Where possible single patient use equipment is used and communal patient equipment avoided. All re-usable equipment is decontaminated after use. There are sufficient other sundries on the wards to enable the control measures to be implemented.							
Linen: Whilst the ward remains closed, categorise all discarded linen as "infected".							
Spillages: All faecal and vomit spillages are decontaminated by staff wearing PPE. The spillage is removed with paper towels, and then the area is decontaminated with an agent containing 1000 pp, av cl. All waste arising is discarded as healthcare waste. PPE is then removed and hands washed with liquid soap and warm water.							
Advice and Guidance: HCWs have access to and follow NHS Board guidance on:	• The decontamination of body fluid spills, equipment, soft furnishings. • What to do if uniforms become contaminated.						
Today the ICT has made an assessment of the outbreak and the continuing need for ward closure.							
• **In preparation for re-opening** – empty beds have been cleaned but left unmade.							
• **In preparation for re-opening** – the curtains/bed screens in empty rooms have been taken down.							
• **In preparation for re-opening** – consider if pre-booking a terminal clean and pre-booking clean curtains/screens being hung is possible.							
• **Before re-opening**: a terminal clean has been performed following ICT recommendation and following the hospital procedure.							

Appendix 3 - Norovirus Outbreak Data Record Ward

Possible Norovirus Infection: A person (patient or staff) who, within a 24 hour period has, 2 or more episodes of non-bloody diarrhoea*, and/**or**, 2 or more episodes of vomiting, without having any other obvious cause or symptoms.

Confirmed Norovirus Infection: A person (patient or staff) who, within a 24 hour period has, 2 or more episodes of non-bloody diarrhoea*, and/or, 2 or more episodes of vomiting, without having any other obvious cause for symptoms **AND** who has tested positive for Norovirus in RT-PCR.

Tick if symptoms present (Antibiotics is abbreviated as [Abx])

Names/numbers of all symptomatic patients (diarrhoea and/or vomiting)	**D=Diarrhoea V=Vomiting**	**Abx Y or N**	**Laxatives/ Enemas Y or N**	**Specimen date**	**Possible or Confirmed***	**Other Info**	**Date(s) and Time**					

***Does the patient meet the definition of a Possible or Confirmed case?**

Date (agree a time of day to be done)									Comment
No. of patients symptomatic									
No. of patients <48 hrs symptomatic free									
No. of empty beds									
No. of new HCWs off duty with symptoms									