Management of Norovirus infection and outbreaks of D&V

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Health Protection Agency
Outline

Who and what is the HPA?
Features of norovirus
Roles and responsibilities
  HPA, care homes, NHS, local authorities
Outbreak response and damage limitation
The HPU Teams

• Each unit has specialist practitioners, nurses and doctors
• We operate a 24 hour service and there is always a consultant on call
• Other members of the team gather and interpret local information to create a picture of diseases and other hazards which is used in planning and coordinating our work.
• We are supported by regional health emergency planning advisors, environmental public health units and surveillance teams.
• Work in close partnership with PCT infection control teams and EHOs
• In April 2013 we will become part of Public Health England
When to contact us

If you need specialist health protection advice

Infectious hazards (but don’t forget chemical and radiation hazards)

OUTBREAKS (flu, scabies, D&V, C difficile, MRSA)

Advice about complex situations or novel infections (e.g. meningitis, TB, HIV, swine flu)
How to contact us

Office in Sheffield covers S Yorkshire

There are always “duty professionals” in the office to deal with incoming enquiries

Contact details for all the units are on the HPA web site

Out of hours you will be directed to a switchboard who hold the out of hours rota

WE RECOMMEND YOU KEEP THE NUMBER HANDY

0114 2428850
Health and Social Care Act duties

Criterion 5

Registered providers, excluding personal care providers, should ensure that advice is received from suitably informed practitioners and that, if advised, registered providers should inform their local health protection unit of any outbreaks or serious incidents relating to infection.
What is norovirus?

Winter vomiting virus
Small round structured virus (SRSV)
Norwalk like virus
(closely related to Sapovirus)
Commonest cause of outbreaks of D&V
Highly contagious (10 to 100 virus particles)
Short-lived illness 2 to 3 days
Relatively mild
Significant problem in closed or semi closed communities e.g. cruise ships, care homes
Care Home D&V 2010 – 2011

No of outbreaks reported to S Yorks HPU

Jan-10 Feb-10 Mar-10 Apr-10 May-10 Jun-10 Jul-10 Aug-10 Sep-10 Oct-10 Nov-10 Dec-10 Jan-11 Feb-11 Mar-11 Apr-11 May-11 Jun-11 Jul-11 Aug-11
Why such a problem?

Highly contagious – faeco-oral; airborne; environmental (persistent for 8 hrs to 7 days); food handlers; shellfish

Immunity short-lived

Asymptomatic excretion occurs (pre and post symptoms). Esp prolonged in under 5s

Resistant to some cleaning / disinfecting agents – need hypochlorite
Immediate action of the Manager/Nurse in charge:

• Identify when you have an outbreak, i.e. 2 or more cases of diarrhoea and/or vomiting

• Report the outbreak to:
  a. The local Environmental Health Department and
  b. South Yorkshire Health Protection Unit

  (The above liaise with each other)

• Discuss the cases involved in the outbreak with the resident’s General Practitioner to ascertain whether or not symptoms could be attributed to underlying medical conditions and to agree on the collection of specimens
South Yorkshire Standard Operating Procedure for Suspected Norovirus Outbreak – Health Protection Agency

**TELEPHONE CALL**

from care homes/schools, nurseries/community establishments

- Discuss likelihood of norovirus/other possibilities, risk assessment, source of infection
- Choose one of the three options below
- Specify when HPA wants to be informed during follow up
- Inform Infection Control Nurse (ICN) / Community Matron
- Admin to pass phone call to duty professional
- Duty professional to complete a standardised questionnaire
- Duty professional to enter situation on HPA Zone
- Duty professional to advise
- Duty professional to fax the completed questionnaire to EHO and call to inform and discuss situation

**HA**

- Admin to phone call today professional
- Duty professional to complete standard questionnaire
- Duty professional to enter situation on HPA Zone
- Duty professional to advise
- Duty professional to discuss with HPA
- Close situation on HPA Zone when appropriate

**EHO**

If suspected to be non-food borne – norovirus (prolonged outbreak, C. diff etc.):

- Inform ICN / Community Matron to discuss with duty professional
- Where indicated, close premises

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- Discuss with HPA
- Close situation if premises appropriate

- If suspected to be faecal/oral outbreak:
  - Monitor number of cases
  - Advise further samples if necessary; discuss with ICN / Community Matron
  - Take appropriate action

- If suspected to be faecal/oral outbreak:
  - Discuss with ICN / Community Matron
  - Where indicated, close premises

- If suspected to be faecal/oral outbreak:
  - Discuss with ICN / Community Matron
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Risk assessment

Norovirus or other GI infection

- Incubation period
- Pattern and duration of symptoms (D vs V)
- Person to person vs point source outbreak
- Epidemiological links between cases
- Staff / residents / visitors affected
- Hospital admissions or deaths

(Kaplan’s criteria: vomiting >50%, avg incubation 24-48hrs. Avg duration 12-60 hrs, no bacterial pathogens isolated. Predate ready access to norovirus PCR)
A STITCH IN TIME ......
Challenges

Hygiene atmosphere

Infection control
• The virus is easily passed from person to person. It can be transmitted by contact with an infected person; by consuming contaminated food/water or by contact with contaminated surfaces or objects.

• Norovirus often causes outbreaks which can be difficult to control because it is so easily spread from person to person, the virus is able to survive in the environment for many days and the fact that such a low dose is needed to cause infection.

• Symptoms often start with sudden onset of nausea followed by projectile vomiting and watery diarrhoea. However, not all of those infected will experience all of these symptoms. Some people may also have a raised temperature, headaches and aching limbs.

• Symptoms usually begin around 12 to 48 hours after becoming infected and generally last for 12 to 60 hours. Most people make a full recovery within 1-2 days.
• There is no specific treatment for norovirus apart from letting the illness run its course. It is important to drink plenty of fluids to prevent dehydration.

• There is no one specific group who are at risk of contracting norovirus – it affects people of all ages. The very young and elderly should take extra care if infected, as dehydration is more common in these age groups and may necessitate hospital treatment.

• A recent study by the HPA shows that outbreaks are shortened when control measures are implemented quickly, such as closure to new admissions from the beginning of the outbreak and implementing strict hygiene measures.

• The vast majority of people who are infected with norovirus will not have any contact with medical services. This makes formal identification of cases difficult. The number of outbreaks varies each year.

• Recent research suggests that around two million cases of norovirus occur in the community each year.
Data recording

• Names and DOB of cases
• Nature, date and time of onset of symptoms for each individual case
• Food/drink items in common/menus
• The names of symptomatic staff and information on their symptoms (noting those who are food handlers)
• Any movement of patients outside the home, i.e. out-patients, day trips etc. during last 7 days
• Occasional staff/agency staff i.e. hairdressers, chiropodists, nurses etc.
• When specimen collected and results
Outbreak control

Environmental cleaning
Handwashing
Laundry
Isolation
Exclusions
Cohort nursing
Isolation

- Sick residents should be nursed in single rooms wherever possible
- Sick residents should, where possible, have sole use of designated toilet facilities
- Identify specific facilities, or use own commodes if appropriate
- Hand washing facilities should be accessible in each room for staff – liquid soap and hand towels
Cohort nursing

- Segregation of residents: separate the symptomatic from the asymptomatic
- Segregation of staff; designate staff to care for sick residents. Prevent staff who assist with feeding from nursing sick residents
- No one should be admitted/discharged/transferred during the outbreak unless there are special circumstances
- Symptomatic residents may be cared for together within a designated area if sufficient individual rooms are not available
- Designate separate staff and resident toilets
Exclusion

• No admissions/discharges or unnecessary transfers should be made

• Cancel any day care facilities until 48 hours after the last episode of diarrhoea or vomiting.

• If admissions are absolutely necessary the resident and/or their family/carers should be informed that they are being admitted to an area in which there is, or has recently been, an outbreak of diarrhoea and/or vomiting.

• When a transfer is absolutely necessary the receiving establishment must be informed

• The home should remain closed to admissions/discharges for 48 hours following recovery of the last symptomatic case.

• It is advisable to restrict non-essential visiting until the outbreak is over.

• Advice should be sought from Environmental Health Officers if the home supplies meals on wheels or outreach workers; these services may need to be discontinued for the duration of the outbreak.
Staff Issues – 48 HOUR RULE

Staff members with symptoms should be sent home immediately.

Stool specimens required from all sick staff

Avoid food preparation until 48 hours symptom free

Staff must not return to work until 48 hours symptom free

Staff admitted to hospital should inform the hospital that they have been working in an area with an outbreak.

Bank Nursing staff should inform their main employer that they have been working in an area with an outbreak.
ENVIRONMENTAL CLEANING

• Perform routine daily cleaning and disinfection of frequently touched surfaces and equipment in isolation and cohorted areas.

• Increase cleaning to twice a day during outbreaks and 3 times a day for frequently touched surfaces (toilets, commodes, handrails, door handles etc.)

• Cleaning must precede disinfection. Use cleaning solutions in accordance with the manufacturers instructions. Local policies should detail which cleaning detergents and chemicals should be used and the appropriate cleaning frequencies. Ensure any products used are active against norovirus.

• Body fluids/waste, e.g. faeces and vomit, on carpets and soft furnishings should be removed and the area cleaned using a liquid detergent and the carpet steam cleaned.

• Disinfection of hard surfaces – preferred 0.1% sodium hypochlorite (1000 ppm available chlorine)

• Disinfection of soft furnishings etc – steam cleaning.

• Clothing, bed linen, curtains etc should be washed in a washing machine at the hottest setting that the fabric will tolerate.

• Segregation of infected washing and use of alginate bags
PERSONAL PROTECTIVE EQUIPMENT

- Disposable plastic aprons and gloves should be worn when caring for isolated/infected residents.
- PPE should also be worn when disposing of soiled linens.
- Gloves and aprons must be single patient use only and should be discarded into a clinical waste bag.
- Staff should change their uniforms daily, before working in other establishments and before going home.
- An explanation regarding the outbreak and the risk of infection should be offered to visitors, with the advice that they wash their hands on leaving the resident’s room.
- Care Homes should have policies on the use of PPE, as well as handwashing and waste/linen management in order to comply with the Health and Social Care Act 2008, Code of Practice on the Prevention and Control of infections and related guidance 2010.
HANDWASHING

• Is vital to prevent person-to-person transmission - frequent hand hygiene should be actively encouraged.
• Liquid soap and paper towels should be easily accessed by staff.
• Alcohol hand gel can be used in outbreak situations as an extra measure to prevent person to person spread when caring for symptomatic residents – it should not, however, replace handwashing with soap and water.
• Remember the World Health Organisation’s “5 moments” – hands should be washed:
  ➢ before and after all contact with residents and care procedures
  ➢ at the start and end of clinical duties
  ➢ before putting gloves on
  ➢ following removal of gloves
  ➢ when hands are visibly soiled
  ➢ immediately after hands have been contaminated with body fluids/waste
  ➢ before serving or preparing food
  ➢ after visiting the toilet
Challenges for care homes

Client groups e.g. EMI, learning disabled
High turnover of staff – training, training, training
Increasingly complex needs of esp those in residential care
Cleaning of soft furnishings, commodes, bedpans
Adequacy of sluices and laundry facilities
Retaining a homely atmosphere
And finally, what we would like from you

Infection control champion and contact point

An email address

Don’t wait until things are bad before you contact us