

The Kirklees and Wakefield Council Infection Prevention and Control Guidance for Care Homes and Health and Social care staff

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Please ensure that all staff can access a copy of this guidance.

Users of this policy should be aware that:

In line with the Care Quality Commission (CQC) (2010) Guidance about compliance – Essential standards of quality and safety. [Guidance for providers | CQC Public Website](#) Is it Safe Infection Control Outcome 8: Cleanliness and infection control, and the Health and Social Care Act 2008, Code of Practice on the prevention and control of infections and related guidance (Department of Health 2015), <https://www.gov.uk/government/publications/the-health-and-social-care-act-2008-code-of-practice-on-the-prevention-and-control-of-infections-and-related-guidance> all facilities must ensure timely reporting of outbreaks to UK Health Security Agency (UKHSA) and put appropriate measures in place for managing outbreaks.

Good infection control, particularly good hand hygiene, is central to preventing and controlling all Healthcare associated infections (HCAI). It is essential that all health and social care providers have a dedicated infection and prevention lead. This person should have knowledge and understanding of infection prevention and control (IPC) and champion best IPC practice throughout the care home. All care homes or healthcare premises should make efforts to have Outbreak Management Plans for gastroenteritis, as well as other infections such as influenza, scabies and MRSA. The Code of Practice in the Health and Social Care Act 2008 (updated 2015) requires that employers ensure, so far as is reasonably practicable, that care workers are free of, and are protected from, exposure to infections that can be caught at work, and that all staff are suitably educated in prevention and control of infection associated with the provision of health and social care.

Acknowledgements

A number of resources were reviewed and utilised in formulating this policy which require acknowledgement. These include;

- HPA South West Community Infection Control Guidelines 2nd Edition (2007)
- Essex Health Protection Unit Infection Control Guidelines for Care Homes Revised Edition 2011
- National Public Health Service for Wales Infection Control Guidelines for Care Homes July 2007
- Infection Prevention and Control Guidelines for Care Homes in Kirklees and Wakefield (June 2013). Developed by West Yorkshire Health Protection Unit and Kirklees Council Infection Prevention and Control Nurses
- Department of Health and Health Protection Agency (2013). Prevention and control of infection in care homes – an information resource

Disclaimer

This guidance is provided to assist care homes managers in ensuring high quality infection prevention and control (IPC) practices are undertaken within their healthcare environment premises. IPC Policies are necessarily general and readers should not rely solely on the information contained within them. The information is not intended to be a substitute for advice from other relevant sources including, but not limited to, the advice from a health care professional.

Foreword

These guidelines replace and update the previous IPC manual 2018, which was compiled by the West Yorkshire Health Protection Unit, UKHSA, in collaboration with the Kirklees Council Infection Prevention and Control Team and Environmental Health Teams for use within care homes and residential healthcare settings.

Infection prevention and control (IPC) is an important part of an effective risk management programme, to improve the quality of health and social care and the occupational health of staff. The aim is to provide guidance on infection prevention and control in these settings. The guidance provides a clear summary of common infection control procedures, a brief overview of commonly encountered infectious diseases, and a guide to local procedures for reporting and managing outbreaks in these settings. Further guidance information and documentation, including outbreak management on viral gastroenteritis and Influenza is located on the Kirklees Council IPC web site. [Infection prevention control | Kirklees Council](#)

The guidance aims to encourage all health and social care providers to take responsibility for infection prevention and control. Proprietors and registered managers are responsible for ensuring that there are effective arrangements in place for the management of infection prevention and control of infections.

The guidance is organised into the following sections:

Section 1: Introduction, local contacts, roles and responsibilities in infection control

The first section introduces the guidance and includes local contact details and an overview of roles and responsibilities in infection prevention and control. It also contains information about staff training and occupational health.

Section 2: Spread of infection and notification of infectious diseases

This section includes an overview of how infection is spread and the chain of infection. It provides guidance on reporting infectious diseases and outbreaks to the local health protection unit.

Section 3: Standard infection control precautions

This section has guidance on standard infection control precautions. It should be read in conjunction with the national infection control guidance provided by the Department of Health and Social Care (DHSC) and UK Health Security Agency (formally PHE) (2013). It includes hand hygiene, decontamination of the environment and equipment, management of laundry and waste and food hygiene.

Section 4: Infection control precautions in specific conditions

This section includes guidance on caring for service users/residents with specific conditions and invasive devices.

Section 5: Infectious diseases

This section provides a basic overview of infectious diseases commonly encountered in a care home setting. This list is not intended to be exhaustive. It has information regarding mode of spread, the prevention and the control of these infections. These pages can be printed as information sheets for wider distribution to staff and residents,

Section 6: Managing outbreaks in Care Homes

This includes information and resources, such as exclusion periods, checklists and data collection forms for outbreaks, audit tools, outbreak management pathways and log sheets, as well as a comprehensive pack on managing influenza outbreaks.

Section 7: Appendices

A number of appendices are available to support the use of this guidance.

Section 8: References

Some terms have been used interchangeably with the same meaning

Resident: Client, Service user, Resident or Patient

Staff - Care worker, Care Assistant, Health Care Worker and Carer

Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
BBV	Blood Borne Viruses
CCDC	Consultant in Communicable Disease Control
C Diff/CDI	Clostridioides Difficile/ Clostridioides Difficile Infection
COSHH	Control of Substances Hazardous to Health
CPE	Carbapenemase Producing Enterobacteriaceae
CQC	Care Quality Commission
D&V	Diarrhoea and Vomiting
DHSC	Department of Health and Social Care
E.Coli	Escherichia coli
EHO	Environmental Health Officer
ESBL	Extended-spectrum beta-lactamase
FSA	Food Standards Agency
GP	General Practitioner
HIV	Human Immunodeficiency Virus
HPN/P/T	Health Protection Nurse/Practitioner/Team
HSE	Health and Safety Executive
ILI	Influenza like Illness
IPC	Infection Prevention and Control
MRSA	Meticillin Resistant Staphylococcus Aureus
MSSA	Meticillin Sensitive Staphylococcus Aureus
NHSE	NHS England
NTAT	No Touch Aseptic Technique
PEP	Post Exposure Prophylaxis
PHE	Public Health England (UKHSA prior to 2021)
PIR	Post Infection Review
PPE	Personal Protective Equipment
SFBB	Safer Food Better Business

TB	Tuberculosis
WHO	World Health Organisation
WYHPT	West Yorkshire Health Protection Team
UKHSA	UK Health Security Agency

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Section 1

Introduction and Management

Introduction to Infection Control

The Health and Social Care Act 2008, Code of Practice on the prevention and control of infections and related guidance (DH 2015 updated) requires all organisations which provide health and adult social care to have policies, procedures and protocols in place which minimise the risk of infection. This Act relates to all health and social care providers and is used by the CQC to assess compliance with the registration requirements on 'cleanliness and infection prevention and control'.

The Code of Practice and related guidance sets out how the CQC will assess compliance with the registration requirement ‘cleanliness and infection prevention and control’ and describes how providers of care may meet the registration requirements related to the prevention and control of infections. There are 10 criteria that providers of adult health and social care are required to meet. These are listed below.

Criteria for compliance with cleanliness and infection prevention and control

Compliance criterion	What the registered provider will need to demonstrate
1	Systems to manage and monitor the prevention and control of infection. These systems use risk assessments and consider how susceptible service users are and any risks that their environment and other users may pose to them.
2	Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.
3	Ensure appropriate antibiotic use to optimise patient outcomes and to reduce the risk of adverse events and antimicrobial resistance.
4	Provide suitable accurate information on infections to service users, their visitors and any person concerned with providing further support or nursing/medical care in a timely fashion.
5	Ensure prompt identification of people who have or are at risk of developing an infection so that they receive timely and appropriate treatment to reduce the risk of transmitting infection to other people.
6	Systems to ensure that all care workers (including contractors and volunteers) are aware of and discharge their responsibilities in the process of preventing and controlling infection.
7	Provide or secure adequate isolation facilities.
8	Secure adequate access to laboratory support as appropriate.
9	Have and adhere to policies, designed for the individual’s care and provider organisations that will help to prevent and control infections.
10	Providers have a system in place to manage the occupational health needs of staff in relation to infection.

All providers of care must comply with other relevant legislation, such as the Health and Safety at Work Act 1974 and the Control of Substances Hazardous to Health Regulations (2002). Tools to support and help organisations to effectively manage and prevent infection have been published and should be used.

The tools include Infection Control Guidance for Care Homes, which was published by the Department of Health and the Health Protection Agency (now UKHSA) in 2013 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/214929/Care-home-resource-18-February-2013.pdf

Managers and care workers in all sectors of health and social care, whether statutory or voluntary, must be aware of their local infection prevention and control arrangements and who they can contact for advice or guidance in the event of an IPC related incident or outbreak. Many infection prevention and control problems and outbreaks can be resolved quickly, if action is taken at the earliest opportunity and advice is received from the appropriate specialists. All care workers must have access to written infection prevention and control policies and receive training.

The infection prevention and control responsibilities for all care workers should be included in their job description and in personal development plans.

The Health and Social Care Act (2010 updated 2015) require all registered providers of adult health and social care to have **infection prevention and control programmes and infrastructures** in place.

The IPC programme should include:

- Infection prevention and control measures needed in the service.
- Policies, procedures and guidance, how they will be kept up to date and how compliance is monitored.
- Initial and ongoing documented infection prevention and control training that all health and social care providers will receive.
- The IPC audit and monitoring process
- The planned programme of audit of IPC practice and surveillance of infection should clearly be identified in the Annual Infection Prevention and Control Programme

The infrastructure should include the organisations IPC policy and incorporate:

- A record of the names and contact details of sources of IPC advice and guidance.
- Guidance for all staff about the circumstances in which contact should be made.

Registered providers should also provide a written **IPC statement** annually. This should incorporate their annual review of:

- Any outbreaks of infection and the action taken following these.
- All IPC Audits undertaken.
- Risk assessments undertaken for IPC.
- Training received by care workers.
- Review and update of policies, procedures and guidance.
- The training and competence of qualified nurses to undertake clinical procedures.

The information and practices outlined in this guidance are evidence-based or in line with current national guidelines, legislation, or regulations. Where evidence is not available, consensus opinion from specialist professionals is used.

References have been included and these can also be used for further reading.

Information can be found on many websites including:

Department of Health: <https://www.gov.uk/government/organisations/department-of-health>

UKHSA: [UK Health Security Agency - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

Medicines & Healthcare Products Regulatory Agency:

<https://www.gov.uk/government/organisations/medicines-and-healthcare-products-regulatory-agency>

Health and Safety Executive: <http://www.hse.gov.uk/>

Kirklees and Wakefield Council IPC: www.kirklees.gov.uk/infectioncontrol

Contact details

It is important that all staff know who to contact for advice in relation to the prevention and control of infections, and how to safely manage an outbreak of infection or management of single cases of infectious diseases. The lead agency for advice on outbreak management for Kirklees and

Wakefield is the Infection Prevention and Control Team within the Public Health Directorate, Kirklees Council.

However, UK Health Security Agency (UKHSA) should be contacted, if two or more residents present with a suspected infectious condition, such as diarrhoea and vomiting (D&V). UKHSA should be informed in a timely way of any suspected outbreaks. A risk assessment will be undertaken by the UKHSA duty professional, who will contact either the appropriate infection prevention and control or environmental health team.

Health Protection Team	
UKHSA, West Yorkshire Health Protection Team	0113 3860300, out of hours 0151 909 1219
Wakefield and Kirklees Infection Prevention and Control Teams	
Public Health Directorate, Wakefield and Kirklees Council	01484 221000 ext 75296
Hospitals	
Calderdale & Huddersfield NHS Foundation Trust	0844 8110101
Mid Yorkshire Hospitals Trust	0844 8118110
Local Authorities (Environmental Health Departments)	
Kirklees Environmental Health	01484 221000
Wakefield Environmental Health	0345 8 506 506
Care Quality Commission	
Enquiry line for health and social care professionals	03000 616161

Roles and responsibilities

It is the responsibility of ALL health and social care workers to maintain infection prevention and control. Therefore, all domiciliary care providers; staff working in, or visiting a care home must adhere to the advice and information in this document.

The **care home** should produce a written policy that details the roles and responsibilities of the staff during an outbreak of communicable disease or episode of infection (part of the overall infection control policy)

The plan should include details of the roles and responsibilities of senior personnel as follows: The **owner** of a home is responsible under health and safety legislation for maintaining an environment which is safe for residents, visitors, and staff. Suitable arrangements and procedures for the control of infection would form part of health and safety requirements.

As mentioned above it is good practice for the registered manager to produce an IPC annual statement (Appendix 1) which demonstrates the systems in place for the prevention and control of infection and how these are monitored. The report should contain information on incidents and outbreaks of infection, risk assessment, training and education of staff, and infection control audit, and the actions that have been taken to rectify any problems. Managers should also periodically

undertake an assessment of the infection risks in their workplace; and ensure that everything necessary is in place to manage identified risks.

The **person in charge** should ensure that appropriate infection control policies and procedures exist, are readily available, easily accessible and are understood by all members of staff within the home. The person in charge should ensure that all IPC policies are being adhered to and used within the home.

The Council IPC Team staff are employed by either Kirklees or Wakefield Councils and provide IPC advice to the public, GP's, community healthcare providers, including care homes and the local authority. The IPC Nurse/Practitioner conducts regular IPC audits within care homes, and supports the management of outbreaks of gastrointestinal disease, infectious D&V and scabies within care homes.

The **Consultant in Communicable Disease Control (CCDC)**, employed by UKHSA has responsibility for the control of infectious disease within the community. The CCDC also advises, and works collaboratively with the local authority Director of Public Health, which has statutory duties and powers relating to communicable disease control. Though CCDCs will wish to ensure that appropriate infection control arrangements are in place in local care homes, they are not responsible for providing an infection control service directly to care homes.

The **Health Protection Nurse** is employed by the local part of UKHSA and is appointed to provide advice to the community in collaboration with the CCDC. They will undertake an initial assessment, before informing the local IPC team (Kirklees and Wakefield IPC team) or the Environmental Health Officer (EHO) to continue to provide onward support and direction to the care home.

The **Kirklees/Wakefield Infection Prevention and Control Team** provide expert and specialist IPC advice to the public, and all health and social care providers in relation to infections and support the management of care home outbreaks. The IPC team will conduct IPC environmental audits to gain assurances that health and social care providers are delivering care in a clean, safe environment and adhering to The Health and Social Care Act 2008, Code of Practice on the prevention and control of infections and related guidance (DH 2015 updated)

The **GP** is responsible for the diagnosis and treatment of infectious diseases as they occur in their patients. The GP also has an ethical responsibility to consider the implications of such a diagnosis for other people. Liaison with the CCDC is important in infectious disease control; the GP is responsible for notifying the CCDC of certain infectious diseases (see **Section 2**).

The **EHO** work for local authorities and advise on the management of food safety, including hygiene and kitchen design, pest control and waste disposal. They are also responsible for the control of pollution and other nuisances. Their duties include the inspection of food premises, as well as enforcing the provisions of the UK laws and EU food hygiene legislation applied throughout the UK from January 2006. EHOs also investigate complaints about food and collaborate with the CCDC in the investigation and management of outbreaks of food or waterborne illness.

The **Care Quality Commission (CQC)** is the independent regulator of health and adult social care in England. Whether health care services are provided by the NHS, local authorities, independent providers or voluntary organisations, the CQC are responsible to ensure the care that people receive is of an appropriate standard. The CQC register and license providers of care services, to ensure that they meet essential standards of quality and safety. They also monitor

healthcare providers to make sure they continue to meet these standards, and work together with people who use services, service providers and other regulators to ensure safe and quality care is provided.

Staff training in Infection Prevention and Control

Health and social care providers must ensure that all newly employed staff are aware of the information within the Infection Prevention and Control Policy by the end of their first week of employment as part of their induction. Staff must also attend an annual mandatory update on infection prevention and control and/or when new matters arise. All care homes should identify a dedicated Infection Control Link Person to attend the IPC link worker update sessions conducted by the IPC team. The IPC link person should cascade new IPC information and guidance to all staff within the care home. The IPC link worker sessions are designed to ensure that care homes are informed of best and latest IPC practice.

Staff Health

Occupational Health, there must be arrangements in place for occupational health support and advice, together with appropriate policies for the protection of staff from infection through immunisation; the avoidance and management of incidents, training and compliance with health and safety legislation. Such policies should also apply to all agency and locum staff, and to those on short-term contracts. Each new member of staff should complete a pre-employment health assessment following a conditional offer of employment, and should provide information about previous immunisations and exposure to relevant infections. Occupational Health and infection control policies should clearly set out the responsibilities of staff members to report episodes of illness, such as Covid-19, Influenza, vomiting and/or diarrhoea, to their manager to help prevent the spread of infection.

The Code of Practice in the Health and Social Care Act 2008 (updated 2015) requires that employers ensure, so far as is reasonably practicable, that care workers are free of, and are protected from, exposure to infections that can be caught at work, and that all staff are suitably educated in prevention and control of infection associated with the provision of health and social care.

Registered providers should ensure that policies and procedures are in place in relation to the prevention and control of infection confirming that:

- All staff can access occupational health services or access appropriate occupational health advice.
- Occupational health policies on the prevention and management of communicable infections in care workers are in place.
- Decisions on offering immunisation are made on the basis of a local risk assessment as described in 'Immunisation against infectious disease (The Green Book)'.
• Employers should make vaccines available free of charge to **any** employees at risk of acquiring a vaccine preventable illness following a local risk assessment. (COSHH Regulations 2002).
- There is a record of relevant immunisations.
- The principles and practice of preventing and controlling infection are included within the induction and training programmes for new staff. These principles include ensuring that policies are up-to-date, feedback of audit results to all staff with documented evidence, examples of good practice and action needed to correct poor practice;
- There is appropriate ongoing education for existing staff (including support staff, volunteers, agency/locum staff and staff employed by contractors), which should incorporate the principles and practice of prevention and control of infection;
- There is a record of training and updates for all staff;

- Responsibilities of each member of staff for the prevention and control of infection are reflected in their job description and in any personal development plan or appraisal.

Immunisations

- A record of staff immunisation histories must be retained to ensure that appropriate action is taken should an incident occur. This should be kept with the staff member's personnel file, which must be stored within a locked cupboard.
- The need to vaccinate staff who have not completed a primary course of routine childhood vaccination should be considered to ensure complete immunity.
- Employers are expected to organise and pay for vaccination of any workers who are considered to be at risk. They are also expected to keep records of who has been vaccinated.
- Staff when handling sharps e.g. needles, cannula, lancets, razors etc., which may be contaminated with the blood of others, or staff that are at risk of bites or scratches from residents or any potential exposure to body fluids should have a full course of Hepatitis B vaccine following a risk assessment which will provide protection from the risk of occupationally acquired hepatitis B (Blood test one to four months after final dose of vaccine). One booster dose should be given five years after completion of the primary course due to the nature of their work. Under COSHH regulations, workers are entitled to be aware of their immune status; antibody levels should be measured and staff informed.
- New staff from countries with high incidence of tuberculosis (TB) should be assessed on employment as part of pre-employment health check, to establish current status of TB immunity/infection.
- A list of countries classified as high risk (defined as a rate of TB equal to, or more than, 40 per 100,000 population) can be found
 - <http://www.who.int/mediacentre/factsheets/fs104/en/>
- Consider BCG vaccination for staff that are unvaccinated and tuberculin negative in individuals less than 35 years of age.
- In order to protect service users and reduce the transmission of infection within the home, the DH recommends that health and social care employees, in direct contact with service users should be offered yearly influenza immunisation. This is a very important measure to protect the residents of care homes, in whom vaccination may be less effective than in younger age groups.

A risk assessment tool is available alongside this document which includes guidance on immunisation of staff. Details of the schedules are available in the UKHSA document "Immunisation against Infectious Disease 2014" (The Green Book) found at www.gov.uk/government/collections/immunisation

Staff sickness policy and exclusion from work

When necessary, staff may need to be excluded from work until they have recovered or results of specimens are available. Staff with vomiting and/or diarrhoea should be advised to remain off work until at least 48 hours have elapsed since their last symptoms. Further details of recommended exclusion periods can be found in **Appendix 2**. Specific guidance is available for food handlers.

Contamination injuries and bites, scratches/body fluid splashes

There should be a clear policy regarding action to be taken in the event of a blood contamination incident (e.g. needle-stick, sharps, inoculation injury, scratch or bite). Where possible this should

be provided in a poster format, as well as written policy, so an injured party can take action promptly. Staff should be aware of “sharps injury” procedure (**refer to Section 3, Management of Contamination Injuries and Sharps**).

Risk Assessments

Written risk assessment is an important legal step to protect residents/service users. The assessment should focus on the infection risks that have the potential to harm. In some instances, straightforward measures can readily control risks e.g. ensuring that clean and dirty linen are separated to prevent cross contamination. Not all risks can be eliminated, but it is important that all practicable steps are taken to protect residents and staff.

The assessment should identify whether adequate precautions are in place to prevent harm which will include;

- Identify the hazard e.g. gastro intestinal illness
- Decide who may be harmed
- Evaluate the risks
- Decide on the precautions required
- Document the findings
- Communicate and implement them
- Review the assessment and update if necessary

When undertaking a risk assessment, it is important to ensure that care staff at all levels are involved in the process, as they will have useful information making the risk assessment more thorough and effective. A *hazard* is anything that may cause harm, such as chemicals, micro-organisms or electricity.

A *risk* is the chance, high or low that someone could be harmed by the hazards identified, together with an indication of how serious the harm could be.

In order to achieve compliance with the registration requirements, registered providers should ensure that they have assessed the risks to the residents relating to infection prevention and control. Identified risks should be recorded and steps taken to reduce or control those risks. The effectiveness of actions to reduce the risk of infection should be monitored and reviewed as necessary.

Surveillance

The Kirklees/Wakefield community IPC Team receive notification of sample results for residents in care homes in the community, found to be colonised or infected with a micro-organism,

such as MRSA, C-diff or Norovirus. This information ensures optimal management of residents, as well as the management of infections within the wider community.

A record should be kept within the care home of the following information on clients with a suspected or confirmed infection:

- Name, date of birth and sex of client
- Name of clinician.
- Date of onset of symptoms and type of symptoms.
- Details of samples sent to the laboratory, the date submitted and the results if known
- Diagnosis and outcome
- Source of the infection if known

- Whether the case was reported to the local health protection team and the date of notification/reporting
- Similar information should be kept for staff who report any infectious disease

See **Section 5** for further information about the management of specific infections/infectious diseases.

Post infection Review

Community Health and social care providers will be requested to contribute to a Post Infection Review (PIR) investigation if a resident is found to have a serious infection, such as E coli. This will help to identify;

- What happened to expose the resident to the infection
- How it happened
- Why it happened, and
- What lessons can be learned to prevent reoccurrence of the infection

When there has been an occurrence(s) of infection, it is extremely useful to carry out this type of investigation, to identify and understand if there are any improvements that can be made to reduce the risk of reoccurrence. It is extremely important that all staff are aware of the findings of any investigations to ensure that they contribute to the provision of safe care for residents.

Immunisation of residents

Care home managers should ensure that policies and procedures are in place to ensure that residents receive appropriate immunisations in order to protect them against vaccine preventable infections.

Care home managers must ensure that:

- There is a record of immunisations given to individual residents and any refusals documented
- The immunisation status and eligibility for immunisation of residents are regularly reviewed in line with “*Immunisation against infectious disease*” (The Green Book) and other Department of Health guidance; and
- Following review of the record of immunisations, all residents are offered further immunisations as needed, in accordance with the national immunisation schedule.

Section 2

Spread of Infection and Notification of Infectious Diseases

Infection and its causes

An understanding of commonly encountered micro-organisms is essential for good infection control practice. Micro-organisms that cause disease are referred to as pathogenic organisms. They may be classified as follows:

Bacteria are organisms about one-thousandth to five-thousandth of a millimetre in diameter. Antibiotics are medicines used to prevent and treat bacterial infections. A growing list of bacterial infections – such as pneumonia, tuberculosis, blood poisoning – are becoming harder, and sometimes impossible, to treat as antibiotics become less effective. Antibiotic resistance occurs when bacteria change in response to the use of these medicines.

Viruses are much smaller than bacteria and although they may survive outside the body for a time they can only grow inside cells of the body. Viruses are not susceptible to antibiotics, but there are some anti-viral drugs available which are active against a limited number of viruses.

Pathogenic Fungi can be either moulds or yeasts. For example, a mould which causes infections in humans is *Trichophyton rubrum* which may cause ringworm, it may also infect nails. A common yeast infection is thrush which is caused by *Candida albicans*.

Protozoa are microscopic organisms, but larger than bacteria. Free-living and non-pathogenic protozoa include amoebae and paramecium. Examples of medical importance include *Giardia lamblia* which can cause Gastroenteritis.

Parasites Worms are not always microscopic in size but pathogenic worms do cause infection and some can spread from person to person. Examples include: threadworm and tapeworm. Head lice and scabies are types of parasites found external to the body.

Prions are infectious protein particles for example - the prion causing (New) Variant Creutzfeldt-Jakob Disease (vCJD).

The Spread of Infection

One feature that distinguishes infection from all other disease is that it can be spread, i.e. one person can 'catch' it from another or via a vector (e.g. crawling or flying insects). There are various means by which micro-organisms can be transferred from a reservoir to susceptible individuals. The modes of spread of infection can be classified as:

Direct Contact

Direct spread of infection occurs when one person infects the next by direct person-to-person contact (e.g. chickenpox, tuberculosis, sexually transmitted infections etc.). Hands of healthcare workers are probably the most important vehicles of cross-infection. The hands of residents can also carry microbes to other body sites, equipment and staff.

Indirect Contact

Indirect spread of infection is said to occur when an intermediate carrier is involved in the spread of pathogens e.g. fomite or vector.

A **fomite** is defined as an object, which becomes contaminated with infectious microbes and which subsequently transmits those organisms to another person. Examples of potential fomites are bedpans, thermometers, oxygen masks or any inanimate article.

Crawling and flying insects are obvious examples of **vectors** which need to be controlled. Insect bites may cause infections such as malaria in areas where malaria carrying mosquitoes live.

Hands of health care workers are probably the most important vehicles of cross-infection. The hands of residents can also carry microbes to other body sites, equipment and staff.

Inhalation

Inhalation spread occurs when pathogens are exhaled or discharged into the atmosphere by an infected person. These are then inhaled by another person and potentially cause an infection.

The common cold and influenza are examples, but it is likely that hands and fomites (inanimate objects) are also important in the spread of respiratory viruses.

Ingestion

Infection can occur when organisms capable of infecting the gastro-intestinal tract are ingested.

When these organisms are excreted through faeces by an infected person, faecal/oral spread can occur. Organisms may be carried on fomites, hands or in food and drink e.g. Hepatitis A, *Salmonella.spp.*, *Campylobacter spp.*

Inoculation

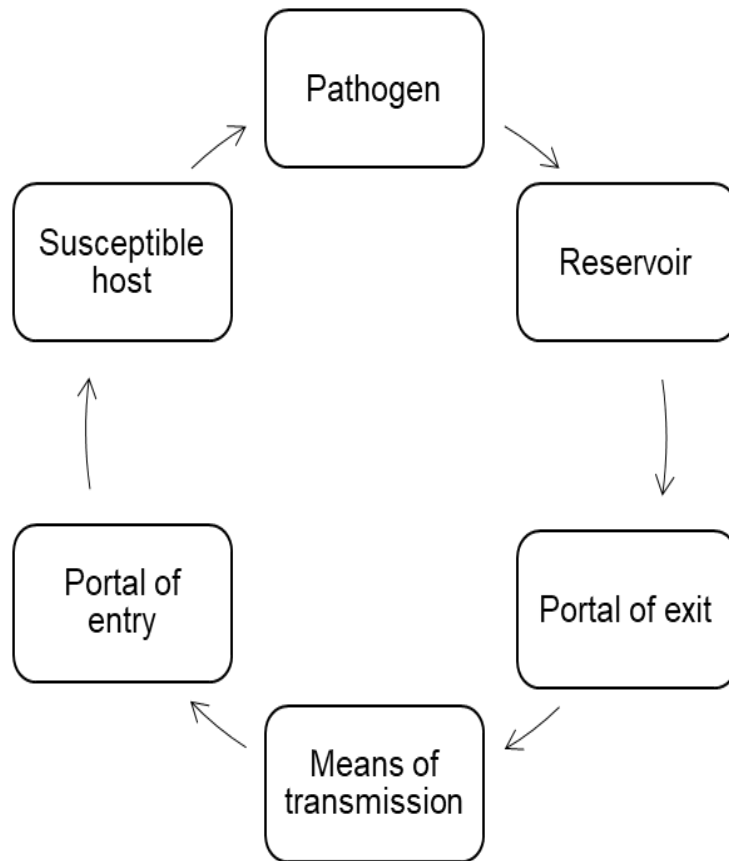
Inoculation infection can occur following an injury with a sharp instrument contaminated with a micro-organism for example, Hepatitis B virus, can be directly inoculated into the blood stream of the person receiving the injury. Human, animal and insect bites can also spread infection by the inoculation mode.

The Chain of Infection

The chain of infection provides an overview of the process by which a resident acquires any type of infection. The characteristics of each link show how organisms are transferred.

Breaking the link or cycle is necessary to prevent the spread of any infection.

The Chain of Infection



Link	Example of breaking the chain
Pathogen	Completing prescribed course of antibiotics reduces the opportunity for the pathogen to become resistant to treatment.
Reservoir	<p>Regular cleaning or decontamination requirements will reduce the number of pathogens present in the environment and on equipment.</p> <p>Isolation or distancing, keeping away from others when infectious, reduces the opportunity for the pathogen to find a new host (reservoir).</p>
Portal of exit	<p>Covering nose and mouth when coughing or sneezing reduces the chances of spread of respiratory infections.</p> <p>Having dedicated toilet facilities and access to vomit bowls reduces the chances of spread of gastrointestinal infections.</p>
Means of transmission	<p>Hand hygiene removes many pathogens and stops them moving between people.</p> <p>Ventilation can help dilute certain pathogens such as viruses which cause respiratory illness.</p>
Portal of entry	<p>Fluid repellent surgical face masks and eye protection reduce the risks of pathogens entering the body through mucus membranes.</p> <p>Ensure any wounds are covered and only use indwelling devices, such as catheters, when absolutely necessary.</p>
Susceptible host	Vaccination helps fight off infection and prevent disease, illness and death.

Some diseases are infectious before any signs or symptoms develop, such as chickenpox. Some infections may not show any signs or symptoms, such as Hepatitis B or HIV and Covid-19. Also some people may be carriers without developing the infection themselves, e.g. salmonella or MRSA. For this reason it is important that everyone carries out standard precautions at all times, regardless of whether staff are aware that infection is present or suspected (Appendices 3 and 4).

Notification of Infectious Diseases

This section sets out the procedures for staff to follow in respect of communicable disease control.

Responsibilities

Any primary care healthcare practitioner (i.e. doctor or nurse) who becomes aware or suspects that a patient they are attending is suffering from a notifiable disease, is required by law (Health protection (Notification) Regulations 2010) to notify the local authority Proper Officer as soon as possible. Prompt notification and reporting of cases of infectious disease is essential for the monitoring of infection and assists with investigation and control. In West Yorkshire, the Consultants in the CCDC act as Proper Officers to local authorities.

It is not necessary to wait for laboratory/microbiological confirmation of a diagnosis to notify.

Although the GP is legally responsible for the formal notification of a number of infectious diseases, any suspicion of an outbreak of communicable disease in a care home or the community should be reported to UKHSA by the Care Home Manager or person in charge immediately for further investigation, and management as appropriate. For some of these diseases, such as tuberculosis or food poisoning, there may be further control measures to be taken. Cases of other infectious diseases, which are not statutorily notifiable, (e.g. scabies and influenza) should also be reported when an outbreak is suspected.

Registered Medical Practitioners must also notify the Proper Officer of the relevant local authority where there are reasonable grounds for suspecting that a patient has an infection that presents, or could present, significant harm to human health.

Managers

Managers have a responsibility to report relevant notifiable diseases and outbreaks to UKHSA and or GP's.

Clinical and Healthcare Staff

- All staff have an important role in the prevention and control of infection which is an integral quality issue in the care and management of residents and the health and safety of staff.
- All staff need to follow all guidelines and participate in relevant infection prevention and control audits.
- All staff need to bring infection control issues to the attention of their Managers.
- All staff need to maintain a high standard of infection control as a matter of good practice.

Which diseases are notifiable?

Acute encephalitis	Acute meningitis
Acute poliomyelitis	Acute infectious hepatitis
Anthrax	Botulism
Brucellosis	Cholera
Covid-19	Diphtheria
Enteric fever (typhoid or paratyphoid fever)	Food poisoning
Haemolytic uraemic syndrome (HUS)	Infectious bloody diarrhoea
Invasive group A streptococcal disease and scarlet fever	Legionnaires' Disease
Leprosy	Malaria
Measles	Meningococcal septicaemia
Monkeypox	Mumps
Plague	Rabies
Rubella	SARS/MERS
Scarlet Fever	Smallpox
Tuberculosis	Tetanus
Viral haemorrhagic fever (VHF)	Typhus
Yellow fever	Whooping cough

Diseases notifiable (to Local Authority Proper Officers) under the Health Protection (Notification) Regulations 2010
 * This category includes any infection which could be food or water-borne e.g. *Campylobacter*, *Salmonella*, *Cryptosporidiosis*, *Giardia*.

Section 3

Standard Infection Control Precautions

Hand Hygiene

Health and social care workers play a vital role to protect service users/patients from infections that are difficult to treat by performing hand hygiene preferably by using an alcohol-based rub or by hand washing with soap and water if hands are visibly dirty.

The importance of hand hygiene in the prevention of cross infection in health and social care settings is well documented. Micro-organisms passed from one individual to another during the delivery of care may potentially be harmful however, hand hygiene can minimise the risks.

Routine hand hygiene

The aim of routine hand hygiene is to remove dirt and most removable (transient) micro-organisms found on the hands. It should be carried out in at least the following circumstances:

- Before starting work and going home;
- After contact with body fluids e.g. dealing with incontinent clients;
- Before putting on gloves;
- After removing gloves;
- Before handling invasive devices;
- Before and after giving care;
- After using the toilet;
- Before eating and handling/preparing food;
- After handling pets;
- After handling raw food;
- After handling refuse and clinical waste;
- When hands look or feel dirty;
- After any cleaning activities;

Procedure for washing hands

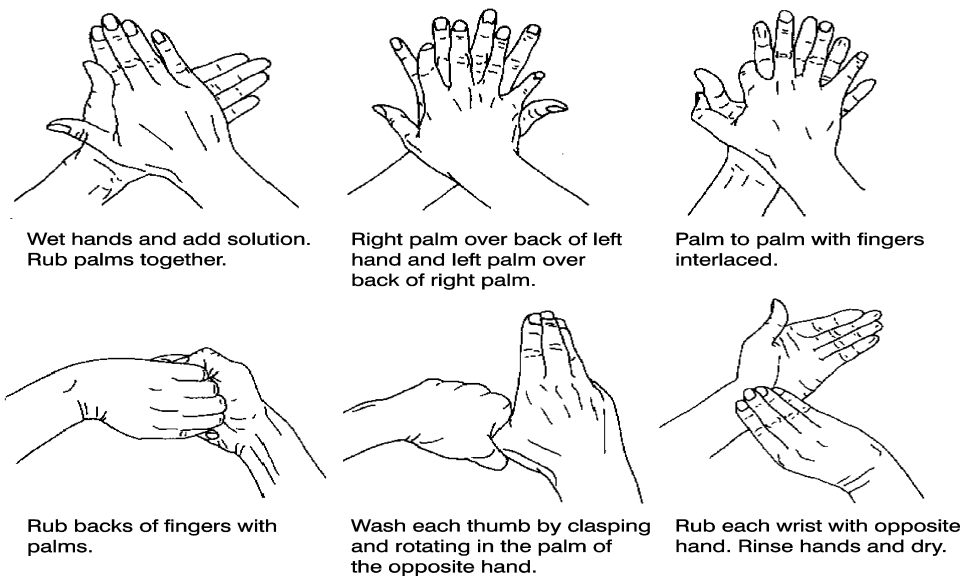
- First wet hands under warm running water.
- Apply liquid soap.
- Rub this into all parts of the hands vigorously, using the 6-step technique (**see Figure 2**) for at least 10-15 seconds.
- Rinse hands under running water.
- Dry thoroughly using paper towels.

Cleansing wipes can be used if necessary, but are not as effective as using soap and water unless the correct technique for cleaning is used

The World Health Organisation's " Moments for hand hygiene" provides a guide for when hand hygiene is required. This can be found at: [Your moments for hand hygiene: Residential care \(who.int\)](http://www.who.int)

Figure 2

Hand Hygiene Technique - Appendix 5 provides a poster also demonstrating the correct technique



Bare below the Elbows (BBE)

Micro-organisms can be carried on items of jewellery. Rings, bracelets, wrist watches, earrings, body piercings and jewellery can harbour harmful micro-organisms.

- All hand and wrist jewellery (including wrist watches) must be removed before the start of a working day.
- Sleeves should be rolled up so that they are above the elbow.
- Only a single band without stones can be worn as a ring.
- Nails should be kept short, no false nails, overlays or no nail polish can be worn whilst at work.

Therefore it is an expectation that all staff delivering care, adhere to the bare below the elbows standard. This requires all staff to remove long sleeved cardigans, wrist jewellery, rings, nail polish and false nails whilst providing care.

Hand Hygiene Products

Liquid soap should be used for all routine hand decontamination in the care home. Liquid soap should preferably be in a wall-mounted dispenser. The dispenser should be regularly maintained and cleaned and should contain individual soap cartridges that can be discarded when empty, to avoid cross contamination of the soap. If pump action soap bottles are used, they must be discarded when empty and not refilled.

Bacteria can grow in bar soap, which can then become a reservoir and source of infection. Bar soap may be used by individual residents for their own use but not by healthcare staff.

Alcohol based hand products. The choice and siting of 70% alcohol based hand products in the care home should be subject to risk assessment. It should be easy to access and pose no risk to vulnerable residents. WHO advise that alcohol based hand products should be available within reach when delivering care; this can be met by staff carrying personal dispensers.

Alcohol based hand rub products **must not** be used on visibly soiled hands or in place of soap and water when dealing with a resident who has loose stools; *C-difficile* or norovirus.

Rehydration Cream (Moisturiser) should be available for staff to use and they should be encouraged to use them before and at the end of each shift. However, communal tubes and pots of moisturising creams must not be used because of the potential risk of cross infection. Staff should have access to free standing, or wall mounted dispensers of moisturising cream.

Any product causing a rash, cracking or soreness of the hands, should be stopped immediately, and replaced with an alternative. Medical advice should be sought if the problem continues. Any staff with broken skin on hands should not perform direct care to residents, unless their broken area can be covered with a waterproof dressing.

Access to Hand Hygiene Products. Hand hygiene products should be easily accessible to permanent and visiting staff, particularly where direct care is being provided to residents. This should include as a minimum, liquid soap and paper towels.

Personal Protective Equipment (PPE)

PPE is an essential part of health and social care. It provides protection from micro-organisms for both carers and clients. It is used to protect the skin (and sometimes airway or mucous membranes; mouth and eyes) from contact with blood and body fluids, and also protects clothing from contamination. The use of personal protective equipment should be based on an assessment of the risk of spread of micro-organisms from person to person, and the risk of contamination of the carer’s clothing or skin.

PPE recommendations summary

The recommended PPE that should be used as standard precautions

Activity	Face mask	Eye protection	Gloves	Apron
Care or domestic task involving likely contact with blood or body fluids (giving personal care, handling soiled laundry, emptying a catheter or commode)	Risk assess if splashing likely Type IIR if splashing likely	Risk assess if splashing likely	Yes	Yes
General cleaning with hazardous products (disinfectants or detergents)	Risk assess if splashing likely Type IIR if splashing likely	Risk assess if splashing likely	Risk assess	Risk assess
Undertaking an AGP on a person who is not suspected or confirmed to have an infection spread by the airborne or droplet route	Yes – type IIR to be used for single task only	Yes	Yes	Yes (consider a gown if risk of extensive splashing)

For people with an infectious illness, follow the above principles and any additional advice for the specific infection.

Disposable gloves

- A range of appropriate gloves should be available and accessible to staff (**Table 3**). Gloves are to be worn whenever contact with body fluids, mucous membranes or non-intact skin is anticipated.
- Gloves **must not** to be worn as an alternative to hand hygiene.
- Gloves **must** be changed after each procedure and hands washed prior to applying and following the removal of gloves.
- Gloves **must** be removed prior to contact with other items e.g. door handles; telephones and pens.

- Gloves should be removed by grasping the outside of the palm and pulling them forwards over the hand and fingers, inverting the glove holding the glove in the gloved hand, insert the finger underneath and peel off second glove. This will avoid contaminating the skin.
- Washing gloves with soap and water or alcohol **must not** be undertaken as they are a single use item.
- Gloves should be seamless, well-fitting and powder-free.
- Latex-free gloves should be available for any staff with latex allergy, or those who are caring for residents with known latex allergy.

Table 3 : Selection of appropriate gloves

Procedure to be performed	Suitable Gloves Most guidelines now only recommend the use of non-latex gloves
1. Invasive or Aseptic procedures, such as catheter insertion and dressing of wounds, where it is important to maintain the sterility of the area.	Sterile, non-powdered latex examination or surgeons' glove. For those who are sensitised to natural rubber latex (clients and staff), there are synthetic materials available e.g. nitrile or neoprene.
2. Non-invasive procedures involving exposure to blood or body fluids, or exposure to excreta, such as urine, faeces, vomit, and where there is little likelihood of exposure to blood or hazardous/corrosive substances.	Non-sterile, non-powdered vinyl or latex examination glove. For those who are sensitised to natural rubber latex, there are synthetic materials available e.g. nitrile or neoprene. Polythene gloves are not recommended.
3. General cleaning procedures	Flock-lined, latex, nitrile or vinyl gloves. (Latex free gloves are recommended if available). If contact with blood or body fluid is likely, wear a glove that is comparable with (2) outlined above.
4. Handling chemicals , or other hazardous substances (refer to COSHH guidelines)	A glove that offers the necessary protective qualities, e.g. latex for high resistance to water-based chemicals and nitrile for resistance to solvents and oil-based chemicals.
5. Food handling	Polythene, if necessary.

Guidance on glove use can be found at [Glove awareness | Campaigns | Royal College of Nursing \(rcn.org.uk\)](https://www.rcn.org.uk)

Aprons/gowns

These are worn to protect the clothing from contamination. The decision to wear an apron is based upon an assessment of the risk of contamination for example when making beds or dealing with body fluids e.g. diarrhoea. They are single use and should be changed between tasks, then discarded appropriately. Colour coding of the aprons can be useful, though not essential.

An example of this may be:

Green	Food handling and feeding
White	General uses
Red	When caring for clients with infection

Examples of when they should be worn:

- During bathing of residents.
- When handling invasive devices.
- When assisting with residents with personal cares or helping residents in the toilet.
- When cleaning equipment, sanitary equipment and environment.
- During bed making.
- During the laundry of clothes, bedding and other items.
- During food handling.

Masks, visors, eye protection

These are worn when a particular procedure is likely to cause splashing of blood, tissues or chemical into the eyes, face or mouth. Advice should be sought with regard to masks if caring for a client who is known to have pulmonary TB, Influenza Or Covid-19. Advice on whether it is necessary to wear a mask can be obtained from UKHSA or the IPC Team.

Uniforms

Uniforms do not constitute protective clothing. During the course of the working day uniforms will become contaminated with micro-organisms:

- Uniforms should be protected from contamination with the use of disposable aprons.
- Uniforms should have short sleeves and not be fitted with buttons.
- The material should be able to withstand a wash temperature of 60°C.
- Staff should change into normal clothing at the end of the working day.
- The wearing of uniform to and from work should be discouraged. If unavoidable, the uniform must be covered with an outer layer, and the member of staff must go directly home. Uniforms should not be worn when visiting shops, supermarkets or other public areas. A sufficient supply of uniforms should be provided by the employer so that a clean uniform can be worn every day.
- If staff wear their own clothes in the workplace similar hygiene measures should be employed.
- During outbreaks of infection, staff **must** change their clothes/uniforms before leaving the establishment. Guidance for uniforms can be found at:-[Infection prevention and control: resource for adult social care - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/resources/resource-centres/infection-prevention-and-control)

Safe handling and disposal of sharps

Staff should be trained in the safe handling and disposal of sharps.

- Sharps must not be passed directly from hand to hand.
- Handling must be kept to a minimum.
- Safety devices should be used wherever possible.
- Needles and razors must not be 'recapped', bent or broken; neither should they be disassembled before use or disposal.
- Used sharps must be discarded into a sharps container conforming to current standards at the point of use by the user.
- Sharps containers must not be filled above the mark indicator.
- Sharps containers must be safely located; not on the floor or where they can be accessed by the public.
- Sharps containers must be taken to the point of use.
- Sharps containers must be disposed of by a licenced contractor.

- *Sharps containers must be assembled correctly.*

Appendix 7 is a poster for the management of sharps

Prevention of sharps injuries, bites and inoculation injuries

Action	Rationale
Always use an approved British Standard sharps container.	To prevent sharps being discarded inappropriately, and to comply with safety regulations.
Ensure it is correctly assembled and labelled with the name of home/centre etc. Only keep in circulation for max of three months even if not full. Lid should be closed with temporary closure when not in use to prevent spills and injury.	Prevents the container becoming disassembled and spillage of contents. Labelling allows identification in the event of spillage, and provides an audit trail.
Take it with you when dealing with sharps e.g. when giving an injection.	To enable sharps to be disposed of at the point of use, to prevent injury.
Place sharps directly into sharps box.	To reduce the chances of injuries whilst carrying sharps.
Never re-sheath needles.	Reduces the possibility of injury.
Do not fill the container beyond line indicated before sealing and disposing of clinical waste, following the manufacturer's instructions.	Reduces the possibility of the container bursting if dropped or of sharps protruding and therefore the possibility of injury.
Cover all cuts and abrasions.	Avoids contact with blood/body fluids.
Wear gloves and/or eye protection when handling blood or if there is a risk of splash into the face.	Reduces the possibility of contact with blood.
If biting is likely wear long sleeves and gloves for contact or even arm guards and gauntlets in a high risk situation.	Makes penetration more difficult.
Consider using a pen system if possible. The GP or community nurse can advise on devices available.	Avoids re-sheathing the device.

Contamination injuries, sharps and bites

Staff must follow their organisation's inoculation injury policy if they have one.

Sharps include: Needles, scalpel blades, stitch cutters and cannulae used in clinical care. These may become contaminated with blood or high-risk body fluids during use and there is a risk of accidental injury if not handled correctly.

Risk assessment: High-risk inoculation injuries include:

- Inoculation with an instrument such as a needle, scalpel blade or used razor which has been contaminated with blood, or one of the "high-risk" body fluids listed below.
- Contamination of mucous membranes (eye or mouth) or breaks in the skin with blood, or another "high-risk" body fluid listed below.
- A human bite, if the skin is broken.

High-risk body fluids include:

- Blood and blood products, semen and vaginal secretions.

In relation to blood-borne infections, urine, faeces, vomit, sweat, tears, skin, sputum are not considered to be high risk, unless they are blood stained. The risk of transmission of a blood-borne virus is associated with **inoculation** of an **infectious dose** of **infected body fluid** into a **susceptible recipient**.

A simple injury, which does not break the skin, or does not involve the inoculation of body fluid, is unlikely to lead to the transmission of infection. Human bites very often become infected due to the large amount of bacteria present in saliva; therefore check the wound daily for any signs of bacterial infection.

Post-exposure Prophylaxis for healthcare workers

In case of accidental contamination injury from a high risk patient/resident, advice should be sought promptly and **within an hour of the injury**. The staff member should immediately attend A&E for further risk assessment and be offered HIV and Hepatitis B post exposure follow up.

Where possible a medical assessment will attempt to assess the blood borne virus status of the source. An initial blood sample should be taken from the injured person and sent to the laboratory to be stored (*Appendix 7*).

There is currently no vaccine available for hepatitis C. Following an incident, a review of the event should be undertaken in order to identify if the injury could be avoided in future.

The HSE has developed guidance in the management of sharps.

www.hse.gov.uk/healthservices/needlesticks/

Environmental aspects of infection prevention and control

Introduction

Good standards of cleanliness are essential to ensure that people receive care in a clean and safe environment.

Cleaning/decontamination of the environment

Micro-organisms that cause infection (pathogens) thrive in places that are damp and dirty. By keeping a clean environment the opportunity for pathogens to thrive is reduced. Cleaning reduces pathogen contamination and reduces the opportunities for cross infection to take place. This is particularly important during outbreaks. Door handles, flush handles, taps, light switches and hard surfaces require special attention during outbreaks.

Care homes should have in place policies to deal with cleaning of the environment and equipment which should include how and when to clean the different areas of the environment, fixtures, fittings and specialist equipment and individual responsibilities for cleaning. Staff should consider what products and equipment to use when cleaning; what to do and what products to use if there is a spillage of blood or body fluids; and what training staff need to implement the policy. Guidance on setting and measuring performance outcomes in care homes.

[Infection prevention and control: resource for adult social care - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

Minimum cleaning frequencies

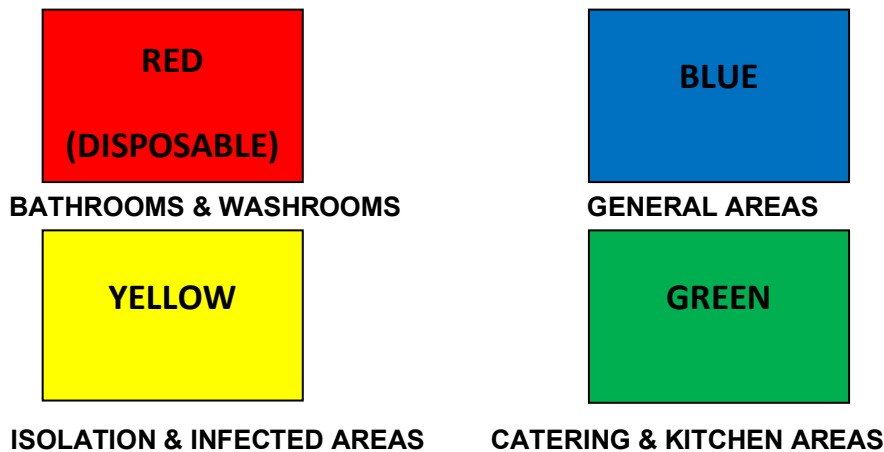
Cleaning frequency charts and cleaning schedules should be readily available for staff to identify how often cleaning of equipment and the environment should occur.

Cleaning materials

Disposable, non-shedding cloths or paper roll should be provided for cleaning purposes. Equipment and materials used for general cleaning should be kept separate from those used for

the cleaning of body fluid spillage. Disposable cloths should be used when dealing with body fluids. Do not leave cloths or mops stored in disinfectants or buckets. Colour coding of cleaning equipment (cloths, mops, gloves) ensures risks from cross contamination is minimised.

Table 5: NPSA colour coding system for cleaning



Cream cleaner or a hard surface cleaner is usually suitable for cleaning hand washbasins, and general-purpose detergent is recommended for other environmental cleaning. Follow manufacturer's instructions. Detergent wipes can be used for the outer casing of those items that cannot be immersed e.g. electrical equipment. A COSHH assessment is required for any cleaning materials used, and appropriate storage facilities required. For suggested methods and frequencies of cleaning the environment and equipment manufacturer's instructions should be followed.

Management of the spillage of blood and high-risk body fluids

Spillages of blood and high-risk body fluids must be dealt with quickly and effectively and the contaminated debris treated as infectious waste. Chlorine-releasing agents are the best product to use to safely manage spillages of blood and body fluids; but they can be hazardous if used in large volumes in confined spaces or mixed with other chemicals.

Chlorine must not be used on urine/vomit spillages due to the potential large volume of body fluid. This reacts with the ammonia generating chlorine type gas. There are specialist spill kits that can be used to safely manage urine and vomit. Protective clothing must be worn and the area well ventilated. A risk assessment and COSHH assessment must be carried out if using these chemicals. Following a risk assessment and depending upon the products available, spillages may be dealt with by any of the following methods.

***Sodium dichloroisocyanurate (NaDCC) method (not carpets and soft furnishings)**

- Wearing protective clothing, cover spillage with NaDCC granules (e.g. Presept granules, Haz Tab granules).
- Leave for at least two minutes.
- Scoop up the debris with paper towels and/or cardboard.
- Wash the area with detergent and water and dry thoroughly.
- Dispose of all materials safely using the segregation of waste information (Appendix 9).
- Clean the bucket/bowl with fresh soapy water and dry.
- Discard protective clothing using the segregation of waste information.
- Wash hands.

Detergent and water method (for soft furnishings and carpet)

Blood/Body fluid spills on carpets may be removed by-

- Covering blood/blood stained body fluid spillage with cold water to dilute blood.
- Absorb the liquid with disposable paper towels.
- Place contaminated paper towels/disposable cloths in a clinical waste sack.
- The area may then require cleaning with advice from specialist cleaners

Management of spillage of urine and vomit

- Wearing protective clothing, mop up organic matter/spillage with paper towels or disposable cloths.
- Steam clean or clean surface thoroughly using a solution of detergent and water and paper towels or disposable cloths.
- Rinse the surface and dry thoroughly.
- During outbreaks of viral gastroenteritis disinfect surfaces, using chlorine releasing solution after cleaning or a combined product.
- Dispose of materials using the segregation of waste information (*Appendix 9*).
- Clean the bucket/bowl in fresh hot, soapy water and dry.
- Discard protective clothing using the segregation of waste information (*Appendix 9*).

Routine cleaning of isolation rooms

- Wash hands
- Wear personal protective clothing (disposable gloves and apron, risk assess requirements).
- Use a fresh solution of detergent and water and disposal cloths or paper roll. If indicated, e.g. single cases and outbreaks of gastrointestinal infection, including *C difficile* clean with chlorine-releasing agent after cleaning with a solution of detergent, or use a combined cleaner-disinfectant.
- Change cleaning solution frequently and ensure the correct dilution is used accurately.
- Clean or damp dust in the following order, if possible:
 - Fittings and furniture using detergent and water.
 - High level surfaces and curtain rails.
 - Door handles and horizontal surfaces.
- Vacuum cleaners should have a HEPA filter in situ and be cleaned after use
- Patient equipment.
- Bath or shower room, toilet.
- Mop the floor.
- Discard waste as infectious waste (orange waste bags).
- Empty waste bin, clean inside and out, and insert new liner.
- Clean all cleaning equipment and leave to dry.
- Restock paper towels, liquid soap and other supplies.
- Remove PPE and wash hands.

Terminal cleaning of isolation rooms

In addition to the above: -

- Remove/dispose of unwanted items (flowers, equipment etc.).
- Clean, and disinfect everything in the room, including all furniture and fittings.
- Take down curtains and send to the laundry or steam them. If they are a disposable type, they should be discarded.

- Strip the bed and remove any unwanted items. Clean mattress cover with detergent solution and disinfect if necessary.
- Vacuum the floor.
- Hang laundered/clean curtains.

Cleaning/decontamination of equipment risk assessment

The choice of method of disinfection or sterilisation of equipment depends on a number of factors, which include the type of material to be treated, the organisms involved, the time available for decontamination, and the risks to staff and patients. Equipment can be categorised according to the risk of infection it poses to the client.

Risk assessment and Risk Categories for Decontamination

HIGH RISK	Definition	Items in close contact with a break in skin or mucous membrane or introduced into a normally sterile body area.
	Examples	Syringes, needles, dressings and catheters.
	Suitable method	Single use disposable instruments should be used whenever possible. Reusable instruments must be sent to a EU accredited department for sterilisation
MEDIUM RISK	Definition	Items in contact with mucous membranes, or other items contaminated with particularly virulent or readily transmissible organisms, or items to be used on highly susceptible patients
	Examples	Bedpans, commode pans and urinals.
	Suitable method	Disinfection required
LOW RISK	Definition	Items in contact with normal and intact skin
	Examples	Washing bowls, chairs, hoist
	Suitable method	Cleaning and drying usually adequate.

Anyone who inspects, services, maintains or transports healthcare equipment has a right to expect that the equipment has been appropriately decontaminated to remove or reduce the risk of infection.

The care home is responsible for ensuring that appropriate documentation and labelling, which indicates contamination status of an item, accompanies the healthcare equipment for inspection, service, maintenance or repair, as per MHRA DB2006(05) November 2006 (*Appendix 8*). Failure to comply with legislative requirements could leave the care home open to prosecution and/or possible fines by the court.

Cleaning

Thorough cleaning with a neutral detergent and/or biological cleaning solution and warm water (body temperature) will remove large numbers of micro-organisms from a surface, especially if the article can be rinsed. A further reduction in numbers occurs as the surface dries. Devices cannot be effectively disinfected or sterilised without first been thoroughly cleaned and dried, staff should read manufacturer's instructions to ensure correct products are used on devices.

Cleaning will not be effective if surfaces are damaged or rusty. Automated methods such as a thermal washer/disinfector/bed pan washer are the most effective cleaning method and are recommended for cleaning bed pans, jugs and urinals, records must be maintained and kept.

Manual cleaning

This method should be used for cleaning the environment and low risk patient equipment such as beds, commode chair and hoist frames. A risk assessment and records of agreed procedures must be in place to ensure that a consistent method is employed by all staff.

Disposable gloves and apron should be worn, and the use of biological cleaning solution or detergent and warm water (not exceeding 35° C). Where possible, equipment should be immersed under water to reduce splashing. If splashing is unavoidable, face protection should be worn. After cleaning, the equipment should be rinsed and inspected. If the item remains soiled, the cleaning process must be repeated until the equipment is cleaned to a satisfactory standard. The item should be dried as quickly as possible using paper roll or by inverting to air-dry in an appropriate place, away from public areas.

Cleaning materials

Cleaning equipment (such as brushes and mops) must be kept clean (mops should be laundered at least daily in a washing machine) stored clean and dry between uses. Re-usable cloths are not recommended.

Detergent wipes

Detergent wipes can be very useful to decontaminate equipment and can be as cost effective as using disposable cloths, which also reduces further risk of cloths being reused. Detergent wipes must be used correctly, as per manufacturers instruction.

Disinfection

Disinfection is a process used to reduce the number of micro-organisms to a level that is considered safe, but which may not necessarily destroy some viruses or bacterial spores. Disinfection is usually acceptable for devices that pose a medium risk of infection if these devices cannot be effectively sterilised. Disinfection can be achieved in a number of ways, including the use of heat and chemical disinfectants.

Heat disinfection

Industrial dishwashers, washing machines and washer-disinfectors are effective methods for disinfecting equipment, because they clean the item and then expose the items to hot water for the required time to achieve thermal disinfection: 65° C for 10 minutes, 71° C for 3 minutes, 80° C for 1 minute 90° C for 1 second. Domestic equipment may not hold the temperature at the required level to achieve disinfection.

Industrial washing machines are required to be run once per week on an empty hottest wash cycle. Records should be kept with the date and time of this cycle.

Chlorine preparations

These include Sodium hypochlorite and Sodium dichloroisocyanurate (NaDCC). They usually are presented in the form of tablets, powders, wipes or granules that are then reconstituted into the required concentration. In liquid form they are less stable and have a shorter shelf-life. NaDCC releases chlorine slowly and has a more prolonged effect than Sodium hypochlorite. Chlorine preparations are corrosive to metals and inactivated by organic matter, though NaDCC is less so than sodium hypochlorite. They should not be used on urine as this may release chlorine vapour,

which is hazardous. PPE must be worn when using these products in order to protect staff under the COSHH regulations. Examples: **Haz Tabs, Actichlor, Presept, Sanichlor, Milton.**

Combined detergent-disinfectants

Products are available that combine a detergent and a chlorine-based disinfectant for use when cleaning the environment and equipment. Examples include: **Titan Sanitizer, Chlorclean, and Actichlor plus.** (Any substances under COSHH regulations should be locked away after use; staff must ensure that they wear appropriate PPE).

- Always refer to manufacturer's instructions prior to cleaning
- If higher level of disinfection is required due to a resident's infection status, refer to manufacturer's instructions or seek advice from the IPC team.
- Shared equipment should be cleaned after each use
- A cleaning schedule should be in place for all equipment with signed records

NOTE: A record should be kept of when and how items of equipment were cleaned/disinfected.

Single use medical devices

Packaging of medical devices will indicate whether an item is for single use or for single patient use. Items labelled "single use only" (the symbol below indicates a single use item only) must be used only once for example gloves, needles and syringes. The manufacturer will not guarantee that any form of reprocessing, including washing in soap and water, will not harm or change the safety of the device.



If the manufacturer advises that it can be used more than once, e.g. "single patient use", the necessary information will be given on the packaging. It will include details of whether it is for re-use only on one patient, the correct method of cleaning between uses and how long the item may be safely used after re-processing.

Ignoring the advice printed and re-using an item (device) outside the guidelines given by the manufacturer has legal implications so that any legal claim can be made against the person reprocessing it and not the manufacturer. If the manufacturer's instructions on single use, or single patient use are ignored, the safety, performance and effectiveness of the device are compromised, and you will be exposing patients/clients and staff to unnecessary risk. **Follow the instructions on the packaging and do not reuse.**

Re-use and reprocessing of devices not intended for reuse, may constitute committing an offence under The Health and Safety at Work Act 1974, Part One of the Consumer Protection Act 1987, The General Product Safety Regulations 1994 or The Medical Devices Regulations 1994.

Laundry

The guidance provided here follows the essential principles given in the "Health and Social Care Act 2008: Code of Practice on the Prevention and Control of Infections and related guidance". This code requires that effective prevention and control of infection be embedded in every day practice.

The provision of clean linen is a fundamental requirement of care. Incorrect handling, linen processing and storage of linen can pose an infection hazard. Infection can be transferred between contaminated and uncontaminated items of linen and the environment in which they are stored. Within care facilities, specific hygiene measures should be taken to reduce these risks.

Linen provided by care providers:

- Must be fit for purpose
- Should look and be clean
- Should be of the right material
- Should be the correct type of linen for the intended purpose
- Should not be damaged or discoloured

A separate facility/room or rooms should be used for the accommodation of linen processing. Accessed for this purpose only, with access to those processing laundry. The environment should be maintained to minimise risk of recontamination of decontaminated linen.

The information below is summarised from the Health Technical Memorandum 01-04: Decontamination of linen for health and social care [NHS England » \(HTM 01-04\) Decontamination of linen for health and social care](#)

This guidance introduces 'standard and enhanced' processes for the safe management of laundry. The guidance document gives an overview of the Department of Health's Policy and best practice guidance on the decontamination of linen for health and social care.

Laundry and its products' should preserve the patient's dignity, promote the patients care and be appropriate to the patient group, gender, clinical status, religion and beliefs. Where appropriate it should support the use of personal clothing.

Healthcare linen processors should validate their disinfection processes as part of the BSEN14065 Health Technical Memorandum 01-04: Decontamination of linen for health and social care

- Processes should be safe and protect staff and service-users against exposure to infection. As part of this there is a duty of care to carry out a hazard and risk assessment and reduce risk to an acceptable level. Laundry staff should not undertake the pre-sorting of infectious linen.
- Staff who undertake laundering must receive training including COSHH regulations. There should be written policies and procedures in place for the safe operation of all equipment and processes.
- Appropriate personal protective equipment (including appropriate clothing and eye protection) should be available for all staff.
- Processed linen should be stored in a clean area above floor level and should not be kept in the laundry area.
- The laundry area should be designed to minimise the risk of recontamination of linen and to ensure the protection of service-users and staff involved in the handling of used linen. This should include:
 - procedural segregation of clean and dirty items/areas within the laundry room

- hand decontamination facilities including a handwash basin, liquid soap, disposable paper towels, pedal-operated clinical and domestic waste receptacles and a first-aid kit;
- An industrial/commercial-type washing machine capable of meeting the disinfection requirements given in 'Disinfection of linen' guidance is required achieving a hot wash cycle (71°C for at least three minutes or 65°C for at least ten minutes) or alternatively a chemical disinfection process may be adopted as long as it meets the requirements of 'Disinfection of linen'. This should be professionally installed and maintained.
- Independent advice is available from the Society of Laundry Engineers and Allied Trades (SLEAT) on industrial and commercial washers, tunnels and dryers.
- The washing machine's disinfection stage must be validated at least annually to prove it meets the requirements above (in accordance with the 'Schedule of periodic tests' within the 'Engineering, equipment and validation' volume). It is likely that an external validation contractor or the machine manufacturer would need to undertake these tests on behalf of the organisation.

Many micro-organisms will be physically removed from the linen, by the detergent and water, during the washing cycle of a well-made "A" rated (for washing performance) washing machine for household use. In order to comply with guidance, the standard processes should be performed in a washing machine for household use achieving an EU Ecolabel wash performance rating of A (not to be confused with the energy performance rating) when measured in accordance with BS EN 60456 (or equivalent commercial model).

- The items should be washed in the highest suitable temperature in accordance with the garment care label.
- Those items that are not washable, should be dry cleaned or, if necessary, destroyed.
- Bed linen should not be shaken and it must be removed with care, avoiding the creation of dust and dissemination of skin scales.
- There should be a designated separate laundry area for that purpose only and a workflow system such that clean and soiled/fouled linen is physically separated throughout the process.
- Where enhanced processes are used (see 'Categorisation and segregation of linen'), this area should be accessible only to staff performing laundry duties.
- Where the enhanced process is regularly used, organisations should operate systems that minimise manual handling/opening of infectious linen (for example, the use of water soluble or dissolvable cold water seals type bags)
- All linen/clothing should enter the laundry through the appropriate dirty entrance and should not be stored but processed as soon as possible.
- Laundry staff should never open any inner water-soluble bags. Instead, the bags should be transferred to the washing machine for decontamination.
- Washing machines and driers should not be sited in kitchens.
- Foul or infected laundry should be laundered after all the other routine laundry has been done, using the hottest wash available for that fabric.
- Used linen and fouled/infected linen must not be laundered together.
- The washing machine must not be over loaded to ensure that the machine functions adequately and the laundry is allowed to circulate within the drum.
- Laundry baskets should be cleaned with detergent and water after containing soiled or fouled linen, and at least weekly in between.
- Kitchen items and mop heads must be washed separately from clothes and bedding.
- Separate cleaning equipment must be made available for use in the laundry area only.

- Heavily soiled items should also have a pre-wash/sluice cycle selected.
- Heat-labile items should be washed at the highest temperature possible for the item.
- All items should then enter a drying process (when the item is compatible).
- Once removed, they should be stored in a clean area above floor level and not be kept in the laundry area.

Handling Used/Dirty Linen

All used/dirty linen should be handled with care and attention paid to the potential spread of infection.

- Hang laundered/clean curtains.
- PPE such as disposable single use plastic aprons and suitable gloves should be worn for handling dirty or contaminated clothing and linen.
- Linen should be removed from a resident's bed with care and placed in an appropriate container according to the segregation category (see section below, 'Categorisation and segregation of linen').
- Personal clothing should also be removed with care and placed into an appropriate bag, not placed upon the floor.
- Soiled or fouled linen should not be held close to the body of staff to prevent contamination of the uniform and an apron must be worn.
- Any segregation required prior to washing should be carried out before transport to the laundry area, negating the need for additional handling within the laundry.
- Staff should never empty bags of linen onto the floor to sort the linen into categories as this presents an unnecessary risk of infection.
- Many care homes currently use water-soluble bags within cotton sacks in a wheeled trolley to facilitate this separation, keeping linen off the floor before taking the bags to the laundry.
- After handling linen, hands should be washed.

If linen is sent to an off-site laundry, the laundry should be made aware of its nature, and written guidelines should be agreed and followed regarding its transportation and handling. The care-home manager and laundry staff should be satisfied and assured that the processing of items sent will meet decontamination guidelines required. General guidance and further information can be obtained from Home Hygiene ~Council <http://ifh-homehygiene.org/factsheet/clothing-household-linens-laundry-home-hygiene>

Categorisation and Segregation of linen

It is the responsibility of the person handling linen to ensure that it is segregated appropriately. In the on-site care-home setting, two categories should be used relating to the process, and these can be colour-coded as follows:

Standard process

Soiled and fouled items should be placed into a water soluble bag(s) (and additionally within a coloured sack – usually white cotton if required) or alternatively placed directly in a white impermeable bag. Any solids should be carefully removed prior to being placed into the bag using disposable paper and disposed of into either the toilet bowl or slop-hopper (sluice facility). Foul or infected linen should not be handled any more than is absolutely necessary. It must not be 'sluiced' by hand as this may spray micro-organisms onto surfaces, uniforms and skin. Any linen placed into a water soluble bag should then be stored in a lidded container prior to being laundered.

Enhanced process

Enhanced process should be used when triggers are identified relating to the possibility of linen or clothing being from an infectious patient, or a resident with an infection. Example triggers include:

- unexplained diarrhoea and vomiting;
- confirmed infection;
- unexplained rashes;
- confirmed cases of scabies/lice;
- unexplained fever.

These items should be sealed in a red water-soluble bag immediately on collection. This primary container should then be placed in an impermeable or nylon/polyester bag. Additionally the outer bag must carry a bold legend stating "Infectious linen".

Enhanced process should be performed in a machine as for the standard process, but using a cycle with a minimum temperature of 60°C, or the highest temperature suitable for heat-sensitive items. All enhanced processes should use a washing cycle that has either:

- a thermal disinfection cycle that reaches 71°C for at least three minutes or 65°C for at least ten minutes; or
- a chemical disinfection process that satisfies the requirements in the section 'Disinfection of linen' (in the 'Management and provision' volume).

Colour-coding bags for used linen

- Used and soiled linen should be placed into the appropriate colour laundry bag. In care settings it can be helpful to introduce a colour-coding system. Assess the condition of used linen and clothing to decide which category it falls into.

Segregation and laundering of used linen

Category	Description	Laundering requirements
Used linen and clothing	Linen that is used but not contaminated with urine, faeces, blood, vomit, sputum or any other bodily fluid or debris.	<ul style="list-style-type: none">• White laundry bag.• A sluice cycle is not required. Launder at 65°C for at least 10 minutes, or 70°C for 3 minutes.• Or as per care label
Foul or infected linen and clothing	Linen that is contaminated by bodily secretions or faeces, or from a person with a known infectious condition.	<ul style="list-style-type: none">• Remove solid waste. Place in a red alginate bag using gloves and apron.• A sluice cycle should be used. Launder at 65°C for at least 10 minutes, or 70°C for 3 minutes.
Heat sensitive fabrics	Linen that is soiled or fouled and cannot be washed at high temperatures.	<ul style="list-style-type: none">• If fouled, disposal may be necessary. Dry cleaning may be possible for some items.

Design of the laundry

- The floor, walls, splash-backs, draining boards in the laundry should be easily washed with no cracks visible in the surface.
- Floors should be non-slip and easy to clean.

- The design of the laundry should facilitate the creation of dirty and clean areas i.e. dirty linen can be brought into one area, moved through the laundry as it is processed and come out as clean laundry, without being handled in the 'dirty area' to prevent cross contamination.
- Any laundry bins should be fully washable and be well maintained.

Wash hand basin

- Lever action mixer/sensor taps are recommended.
- Liquid soap and paper towels must be available.
- A foot-pedal operated bin for paper towels should be provided if hand washing delicate materials or other personal items is undertaken, a designated sink or bowl, which is separate from the wash hand basin, must be used.

Washing and Drying Machines

An industrial washing machine sited on a plinth with a sluice cycle should be available for use. Machines must be regularly maintained and records retained for inspection. Home managers should ensure that documentary evidence (for example, a logbook) of any service and repair visits should be kept and be available for inspection along with written local policies and safe working procedures for the operation of all washing machines and dryers.

Industrial tumble driers should be available for use which is vented to the outside.

Laundry use during outbreaks in care settings

- Red alginate/water soluble linen bags must be used for fouled/infected linen to minimise cross infection. This bag should then be stored in a lidded container prior to being laundered.
- Alginate bags should be placed directly into the washing machine with a sluice cycle. The alginate bag may fully dissolve when in contact with water or 'split open' (cold water seal type) which will leave some residual bag in the machine when the wash cycle has finished.
- The number of people visiting/using the laundry should be kept to a minimum.
- The laundry room and equipment must be kept especially clean and clutter free.
- Contaminated linen must be kept away from clean linen.

Laundry processes should meet essential quality requirements and organisations should have a written plan in place to move towards Best Practice. (BS EN14065 Health Technical Memorandum)

Management of waste

Legislation

Waste Management is the generic term given to the whole spectrum of activities associated with waste, namely its generation, handling, storage and transportation from point of source to final place of disposal recycling/landfill/incinerator or alternative treatment technologies.

Waste generated every day in care homes can present risks to the health and safety of residents, staff and visitors in the care home, and the general public if it is not properly segregated, handled, transported and disposed of in accordance with legislation. There have been significant legislative changes which have implications on the way that waste is defined and how it should be disposed of.

You have a legal duty of care to:

- Assess the risk.
- Develop policies.
- Put arrangements in place to manage the risks; and
- Monitor the way these arrangements work.

Non-compliance could lead to prosecution. The following guidance aims to ensure the safe handling, segregation, storage and disposal of clinical waste generated within the care home environment.

This guidance incorporates the Department of Health: Environment and sustainability: safe management of healthcare waste (2013), Environmental Agency guidance, The Hazardous Waste regulations (2005) and the Environmental Protection (Duty of Care) Regulations (1991).

Responsibilities of the home manager in respect of waste management

Care homes have a statutory duty of care for the safe disposal of waste. This applies to everyone in the waste management chain from producer to disposer. It requires the home to manage the waste and to take all reasonable measures to ensure that the waste is dealt with appropriately from the point of production to the point of final disposal.

The manager is responsible for ensuring that waste is:

- Correctly segregated.
- Appropriately labelled.
- Packaged appropriately for transport.
- Stored safely and in a secure place away from areas of public access within the premises (that is, taking all reasonable precautions to prevent waste escaping and to prevent the public getting access to it – this could be a fenced, locked compound).
- Described accurately and fully on the accompanying documentation when removed.
- Transferred to an authorised person for transport to an authorised waste site.

In addition to the above, the manager should ensure that:

- The premise is registered as a hazardous waste producer (unless exempt from registration).
- A register of the necessary records and returns in the appropriate location is retained.
- Staff are trained and aware of the waste procedures.
- The waste management contractor should be willing to advise on fulfilling the requirements for the above responsibilities. However: it remains the legal responsibility of the home manager, not the waste contractor, to ensure full compliance.

Waste segregation, packaging, classification and labelling

Waste segregation is driven by a number of factors including:

- The technical capabilities and permits of the waste disposal facilities.
- Packaging requirements for safely transporting certain materials.
- Health and safety.
- The Hazardous Waste Regulations which prohibit the mixing of waste categories.

The segregation system below is designed to implement these requirements. If not all of the streams indicated are implemented, it is unlikely that the segregation system meets the legal requirements. Specifically, the following waste segregation should be implemented:

- Cytotoxic and cytostatic waste (unless it has been confirmed that none of these are used in the home); (purple lidded)

- Other medicines. Medicines no longer required by the patient should be returned to pharmacy and stored safely before return. (Blue lidded box can be used for this.)
- Medicinally-contaminated sharps. (yellow lid)
- Non-medicinally contaminated sharps or those sharps contaminated with blood (orange lid)
- Infectious waste (orange bag).
- Offensive clinical waste (yellow/black bag - Tiger striped).
- Domestic waste (black/clear or other appropriate bag).

To determine their classification, all care waste items must be clinically and specifically assessed by the producer, at the time of production for;

- Medicinal properties
- Chemical properties
- Infectious properties

Staff training

Staff working in areas where clinical waste is generated must receive training on correct waste management. A record of this training should be kept by the person in charge of the care home. It is also helpful to staff if posters are displayed at appropriate locations within the care home showing the different types of waste and where it should be segregated.

Waste streams

Household/domestic waste (black waste bags)

Municipal waste containers should be used for any non-hazardous paper, magazines, newspapers, food and drink containers, paper towels from hand washing, uncontaminated paper rolls etc. Recycling options should be considered where available. Packaging from products should also be placed in this waste stream. Waste is termed “domestic” for ease of understanding, although not produced in a domestic environment it is the same type of non-hazardous, non-risk waste that would be produced in a domestic environment.

Offensive waste (yellow/black tiger stripe waste bags)

Offensive waste describes waste which is non-infectious, and does not require specialist treatment or disposal but may cause offense to those coming into contact with it. Examples of offensive waste include sanitary waste, incontinence products and other waste produced from human hygiene.

In cases where the human hygiene waste outlined above is from an individual who is thought to have an infection i.e. they have offensive diarrhoea and/or their wound dressing is heavily contaminated with pus and/or blood, their waste should be placed in the infectious waste stream (orange bag).

Waste bags must be labelled with the name of the home and the postcode to provide an audit trail.

Infectious waste (Orange waste bags)

The definition of clinical waste has historically been used to describe waste produced from activities that pose a risk of infection or may prove hazardous. It includes any waste which consists wholly or partly of human or animal tissue, blood or other bodily fluids, excretions, drugs or other pharmaceutical products, swabs or dressings, syringes, which unless rendered safe may prove hazardous to any person coming into contact with it.

Examples of infectious waste include that from residents who are receiving treatment e.g. for colonisation suppression, antibiotics for urine infections or wound infections; or who have specialist dressings indicating a possible infection is present i.e. silver, dressings or where a wound looks clinically infected and the dressing has a large amount of visible exudate. Drains that do not have protruding edges, offensive hygiene waste from a known infected patient and/or heavily contaminated with blood and/or faeces should also be placed into an orange waste bag.

When homes have an outbreak of illness or disease e.g. diarrhoea and/or vomiting; infectious waste stream must be available for use. It is a legal requirement of the Hazardous Waste Regulations to segregate infectious waste from other wastes. Segregation of waste at the point of production into colour coded packaging is vital to good waste management. Waste bags must be labelled with the name of the home and the postcode to provide an audit trail.

Health and Safety, Carriage and Waste Regulation require that waste is handled, transported and disposed of in a safe and effective manner

Cytotoxic and cytostatic medicines

Care Homes will not produce a lot of cytotoxic/cytostatic waste, but this section is included for information if required.

Examples of cytotoxic/cytostatic waste include medicines such as hormone tablets, chloramphenicol eye drops or other medicines that are toxic, mutagenic, carcinogenic or toxic for reproduction regardless of how it is used.

The manager should:

- Review the medicines in use in the home to identify those that are cytotoxic and cytostatic.
- Place wastes arising from this into a purple-lidded cytotoxic/cytostatic waste container. A list of cytotoxic and cytostatic medicines in use and their properties should be attached as a continuation sheet to the consignment note and accompany the waste.

Appendix 10 provides a list of medicines that are cytotoxic/cytostatic

Other medicines

Other medicines including painkillers, eye drops and vaccines need to be disposed of into a specific waste stream:

- Medicines should be placed in a clearly-labelled waste medicines container.
- Vials or ampoules that have been used to charge syringes should be disposed of into the yellow lidded sharps receptacle along with the syringe.
- Ensure that the waste description and classification match i.e. cytotoxic/live vaccines, go into a purple lidded bin.
- Controlled drugs must be denatured and placed with other waste medicines.
- Medicated (for example antibiotic) intravenous bags should be disposed of as waste medicines.
- Non-medicated (for example saline) intravenous bags should be discharged to foul sewer and the empty bags placed in the offensive/hygiene waste receptacle.
- For medicines in aerosol form (betadine iodine, cryogenic sprays, asthma medication etc.), they must be segregated from other medicines or, where this is not done, their presence must be identified on the accompanying waste documentation.

Management of sharps waste

Clinical sharps include needles, scalpels, stitch cutters, glass ampoules, pen injection devices, sharp instruments and broken glass.

The safe handling and disposal of sharps is paramount in reducing the risk of exposure to blood-borne viruses and extreme care must always be taken when using and disposing of sharps.

- Clinical sharps should be single-use only.
- The re-sheathing of used needles and razors is hazardous and must be avoided at all times.
- The user of sharps must discard them directly into a sharps container.
- Sharps containers must comply with UN3291 and BS7320: 1990.
- When carrying a sharps container, or whenever the container is left unattended, use the temporary closure to prevent spillage or tampering.
- Place sharps containers of a suitable size in each location where sharps are handled, on a level surface.
- Assemble containers following manufacturer's instructions, and label correctly.
- Carry them by the handle; do not hold them close to the body.
- Do not attempt to retrieve items from a sharps container.
- Do not attempt to press down upon sharps to make more room.
- Sharps bin to be disposed of after a maximum of three months from opening, even if not full as per safe management of healthcare wastes.
- Lock using the closure mechanism.
- If sharps are spilled from the container a dustpan and brush must be used to retrieve them, and they should be placed carefully back into the container by sliding them off the dustpan, and guiding them into the container with the brush. Never pick up or handle used sharps with your hands, even when wearing gloves.
- Never put a sharps container inside a clinical waste bag.
- Always carry the container to where the sharp is being used, never carry the sharp back to the container.
- Sharps boxes must be positioned in a place which is easily accessible for staff, but out of the reach of residents and the public.

Colour Coding

The tables below show the waste stream bags and receptacle colours

Colour of bag	Type of waste
Black	Domestic waste and waste from residential premises
Yellow/black tiger stripe	Offensive waste for deep landfill
Orange	Hazardous/infectious waste for incineration.
Colour of sharps container	Type of waste
Yellow bin with yellow lid	Sharps containing/having contained medication (not cytotoxic)
Yellow bin with purple lid	Sharps including those contaminated with cytotoxic and cytostatic medicines
Yellow bin with orange lid	Sharps not contaminated with medicinal products or contaminated with blood.

Handling of waste before disposal

When handling waste staff must ensure they:

- Wear the appropriate personal protective clothing;
- Place waste in waste bags in foot operated bins, or other appropriate containers, at the point of generation.
- Avoid hand to mouth contact at all times to prevent cross contamination;
- Replace bags at least daily or when three-quarters full, and ensure tops are securely tied.
- Wash hands.

Storage of waste awaiting collection

Bulk waste storage containers (wheelie bins) or storage areas/rooms should be:

- Reserved for clinical waste only, and of sufficient capacity to match proposed frequency of collection.
- Sited away from food preparation and general storage areas, and from routes used by the public.
- Totally enclosed and secure.
- Sited on a well-drained, impervious hard standing.
- Kept locked when not in use.
- Secure from entry by animals and free from insect or rodent infestations.
- Clearly marked with warning signs.
- Collected at appropriate and regular frequency.
- Washed (and disinfected, if appropriate) on a weekly basis and when visibly soiled.

Food Hygiene

All foods are potentially hazardous if they are not handled correctly. Good food handling practices are essential to minimise the risk of food poisoning. This is especially important in residential care settings where food is being prepared and served to large numbers, and where consumers are at particular risk from food borne illnesses.

Food poisoning can cause serious illness and even death, particularly in the elderly. It is important that all people involved in preparing and serving food are aware of how to reduce the risk of food poisoning.

Environmental Health Officers/food safety officers of the local authority will inspect care home premises to make sure you are complying with the food hygiene regulations. They may come on a routine inspection, or visit because of a complaint. Usually, they will not tell you in advance that they are coming. Enforcement officers can take action if they find that your standards of food hygiene are not good enough. In serious cases, action might include closing the premises or prosecution.

Managing food safety

Food safety management is all about what you do to manage how food is produced in your business, to make sure it is safe to eat. Food safety management procedures: -

Training

You must make sure that any member of staff who handles food is supervised and instructed and/or trained in food hygiene in a way that is appropriate for the work they do.

Where clients cook food for themselves, staff must ensure that the individual is supported in applying the principles of food hygiene until independence is achieved.

The FSA has published revised 'Food Handlers: Fitness to Work' guidance to help prevent the spread of infection to other people through food and can be found at - www.food.gov.uk/business-industry/guidancenotes/hygguid/foodhandlersguide

If you are not sure whether someone should be working with food, ask for advice from a doctor or the local Environmental Health Department.

Pets

Pets can often enhance the quality of life for the ageing and the ill. However, animals can harbour many infectious micro-organisms which can cause infection in humans e.g. toxoplasmosis. Sensible infection control precautions can reduce this risk to an acceptable level. The Person in Charge of the home must ensure that a named, knowledgeable person is responsible for resident animals (pets) in the home. The handler of any animal visitors brought to the home must acknowledge the authority of the Person in Charge of the home and comply immediately with any instructions given.

Resident Animal Pets

A named person should ensure that all pets are:

- Fully vaccinated. Veterinary certificates regarding appropriate vaccinations should be kept in a safe place within the home; treated with a broad-spectrum helminthicide (i.e. 'wormed') every three months.
- If pets become ill e.g. with diarrhoea and are normally in a healthy condition, they must be excluded from resident contact and the advice of a vet sought.
- Regularly groomed and checked for signs of infection e.g. fleas (ectoparasites) or ticks. If fleas/ticks are found the pet should be treated with an approved insecticide.
- Feed using designated stainless steel or earthenware bowls in designated areas only. At the end of each feeding session, bowls should be removed, washed and stored dry.
- Not allowed into food preparation/eating areas, clinical rooms (e.g. treatment room, sluice room) or the laundry room.
- Prevented from visiting residents who are ill with diarrhoea and vomiting.
- The named person is responsible in ensuring that animal excreta is removed from cat litter trays etc. on a daily basis.

Animal Visitors to the home

- Animal visits to the home, whether initiated by staff or residents themselves, must be by prior arrangement with the Person in Charge of the Home. The potential visit should be discussed and assessed by the Person in Charge. In addition, pets must be in a 'healthy' condition and free from illness.
- The first arranged visit must take place in the presence of the Person in Charge. The handler must report to the Person in Charge on arrival at and departure from the home.
- Visiting dogs must be brought into the home on a lead. Cats must be brought to the home in a cat box.
- The resident's bedding should be protected with a plastic sheet and draw sheet or incontinence pad if the animal visitor is to be placed on the bed and these removed immediately when the visit is over.
- Animal visitors must not visit residents who are ill with diarrhoea and vomiting.

The pet should not be allowed to approach any resident(s) without the handler first ascertaining:

- Whether the resident is likely to be allergic to the animal's fur/hair.
- Whether the resident wishes to be visited.

- Following the visit, the hands and forearms of all those having had contact with the animal must be thoroughly washed.

General Hygiene measures

- Any member of staff handling the animal must wear a disposable plastic apron. Immediately afterwards the apron must be removed and the hands and forearms thoroughly washed.
- After touching the pet or visiting animal all concerned (patients, staff, visitors) must wash their hands and forearms thoroughly.

Litter box care

- Pregnant women should not clean out the litter box.
- Always wear gloves and a protective apron when cleaning the litter box.
- Always wash hands after cleaning the litter box.
- Fit a disposable liner to the box for easy cleaning.
- Use a leak-proof litter box.
- Change the litter daily if soiled.
- Seal litter in a plastic bag and dispose of with household waste.
- The litter box should not be sited near food preparation, storage or eating areas.
- Do not use the kitchen sink or hand washbasin for cleaning litter boxes. Wash well using water and detergent, and then fill with boiling water and leave to stand for at least 5 minutes to kill toxoplasma eggs and other micro-organisms. Finally leave to dry or dry with a disposable cloth or paper towel.

Certain animals are more likely to carry diseases that may spread to humans:

- Stray animals.
- Sick animals/birds.
- Wild animals/birds.
- Animals with diarrhoea.
- Exotic animals.
- Cage birds.
- Tropical fish.
- Domestic pets that hunt and eat rodents or birds.
- Reptiles (iguanas, lizards etc) carry exotic salmonella species that may be harmful to children under five or other vulnerable adults.

Good general hygiene and hand washing are essential for risk reduction. By ensuring that all the above advice is followed, the physical and psychological benefits of having pets should improve the quality of life of the clients.

The care home should have a clear written policy covering management of visiting animals and in particular resident pets.

Client's personal hygiene

Washing and bathing

- Clients should have their own toothbrushes, razors, face cloths, soap, lotions, creams etc. Communal items can spread infection, and every attempt to prevent communal use must be instigated. Items should be kept clean and dry and stored away from other resident's items.

- Separate cloths must be used for cleaning of the client's face/body and their genital/anal areas. Disposable (single use) cloths are a better alternative.
- Antiseptics or salt should not be added to the bath water as they have little or no beneficial properties.
- Daily bathing, shower, or a full body wash is best to prevent an accumulation of dirt and bacteria on the skin. This is particularly important for those who are incontinent.
- Baths should be cleaned after each resident's use with warm water and detergent or cream sanitizer. It is not usually necessary to add disinfectants.
- If wash bowls are used in care homes, they must be individualised. They must be cleaned and dried thoroughly between uses. Scratched bowls should be replaced as these can harbour bacteria. They should not have holes or string for hanging up, but should be stored upside down in a cupboard.

Mouth care

- The most effective method of keeping the mouth clean, moist and free from infection is to brush the teeth/gums with a soft toothbrush and toothpaste after meals. Keep toothbrushes clean and dry, replace at least every 3 months for manual toothbrush and more frequently in case of gum disease.
- Disposable foam sticks should not be used.
- Frequent sips of water or ice chippings can also keep the mouth fresh and clean, if drinking is inadequate.
- Liquid paraffin e.g. Vaseline, may be used to moisten the lips but must not be available for communal use.
- Antiseptic mouthwashes have a limited effect on mouth organisms and should not be used routinely.
- Dentures should be cleaned using a proprietary denture cleaner. Denture pots must be individualised and cleaned regularly.
- Regular dental checks can help to identify and prevent mouth conditions. The use of synthetic saliva can assist to keep the mouth moist if required.

Eye care

Special precautions are only needed if the eyes are damaged or after eye surgery. In these cases, if eyes require cleaning, this should be performed using a low-lint swab moistened with either normal saline or cooled boiled water. **Use a separate swab for each eye.** If further advice is needed, please contact the infection control team, or discuss with community nurses.

Ear care

Ears should be kept clean and dry and examined periodically for signs of infection. Items such as cotton buds should not be used to remove wax from the ears. The removal of wax can be promoted by chewing. If a build-up of wax in the ear is noted it may be worth instilling a few drops of wax remover, following the manufacturer's directions. For further advice and information, please contact the resident's GP surgery or the community nurse.

Cleaning hearing aids

'In the ear' hearing aids

- When the hearing aid is removed, carefully wipe down with a dry soft cloth or tissue.
- Inspect the portion of the hearing aid that fits down into the ear canal.
- Remove any wax with a small brush (usually provided with the hearing aid, but a toothbrush may be used if necessary).
- Finally, open the battery door and place the hearing aids in their case.

- Many hearing aids have an independent on/off switch.
- It is still advisable to open the battery door to allow air to enter the hearing aid and assist in reducing the effects of moisture that may accumulate when the aids are in the ear canal. It also helps prolong battery life.

'Behind the ear' hearing aids

- Separate the hearing aid from the ear mould by pulling the flexible tubing away from the hooked part of the hearing aid. Take care not to pull the tubing out of the ear mould. If the tube is stiff, do not force it.
- Wash the ear mould and flexible tube in warm soapy water (not detergent or cleaning liquid). A small brush such as an old toothbrush can be used to remove any wax from the tube.
- Rinse the ear mould in clean water. Dry the tubing and ear mould by tapping gently onto a tissue held in the hand to remove drops of water. Ensure no droplets remain.
- Leave the ear mould and attached tubing to dry in a warm (not hot) place.
- Once the ear mould and tubing are dry, reattach to the aid.
- Contact the local audiology department for further information.

NOTE: Do not use solvents or alcohol on the hearing aids as there is a possibility that they can breakdown the hearing aid material. Check manufacturer's instructions.

Foot care

Good foot care is essential to ensure feet are kept healthy, and to prevent wounds and disease of the feet. In care homes residents tend to be at special risk especially during times of immobility, during which pressure-relieving devices must be used.

Certain individuals are at increased risk of foot disease, including people with diabetes, neuropathy and ischemic disease. For advice on foot disease, or problems with foot care, please contact a registered podiatrist or GP. Please ensure that any foot care specialist/podiatrists have the appropriate registration and indemnity insurance.

Please note it is the responsibility of the care home to verify professional registration and indemnity insurance for any services provided within the home whether commissioned by the care home or their residents individually.

Diabetic foot ulcers

Diabetic patients need to be assessed at least once a year for susceptibility to foot ulcers and treated appropriately, so must be referred to a specialist clinic. Good fitting shoes can help avoid foot ulcers.

Management of deceased clients with an infection

If the death occurs from a serious infectious condition that may have public health implications, the clinician who certifies the death must inform the Health Protection Unit at UKHSA, telephone 0113 386 0300.

Even anticipated deaths may give rise to enquiries, and it is easier for the Health Protection Team to deal with these if they have already received information.

Handling bodies

It is important to consider the cultural elements concerning death and preparation of bodies. If possible such issues should be discussed with the client, family or informal carers prior to their death. Inappropriate handling of bodies can be greatly offensive.

Most bodies pose little risk of infection but sensible precautions will reduce the risks even further. When washing and preparing the body, the same infection control precautions used when the

patient was alive should be employed including using standard infection control precautions (Section 3).

Clean dressings should be applied to any wounds or leakage sites and secured with tape or a loose bandage to prevent any further leakage from the site. The use of pins should be avoided since they present a potential hazard to others.

Last Offices for infected people

Following the death of an individual with an infectious disease, the precautions carried out prior to death must be continued after death since the body may remain infectious. However, any cultural traditions must be respected, having been identified in the assessment on arrival.

For further information or advice, please contact the IPC team or the UKHSA. There are provisions under Public Health legislation to prevent contact with the body of a person dying with a notifiable infectious disease. Relatives and companies processing the deceased should be informed of any risk of infection, though in most cases the risk is small and no greater than when the deceased was alive.

Specimen Management

Obtaining specimens from residents with a known or suspected infection is an important part in establishing a causative organism. Appropriate specimens should be submitted from affected residents. Specimens are a potential risk and must be packaged and handled correctly. All specimens must be sent to the laboratory as soon as possible, and all must be safely contained in an approved leak-proof container. This container must also be enclosed in a sealable polythene bag.

It is important that specimens are labelled clearly and correctly, this includes the resident's name, date of birth, address, NHS number, the test required and the relevant clinical details. The request form should be placed in the side pocket of the polythene bag and must not be secured with clips or staples as these may puncture the bag. Care should be taken to ensure that the outside of the container and the bag remains free from contamination with blood and other body fluids.

If specimens are transported e.g. to a GP Practice or hospital by care home staff, an approved container must be used for transportation. See resources section container must be to standard UN3373.

Isolation of residents with an infection

Isolation of a resident with an infection may be necessary to prevent further cases of infection. (depending on location and type of infection) Residents who display symptoms of diarrhoea and/or vomiting should be isolated immediately to prevent spread. The most effective form of isolation is a single room. Ideally single rooms should be available for this purpose and registered managers of homes will need to consider how best to achieve this. In most cases, residents can be isolated in their bedroom with the door closed. If there are safety issues with closing the door, a risk assessment must be completed and placed in the resident's notes.

Single rooms should contain hand hygiene facilities including liquid soap dispenser and disposable paper towels. Ideally these rooms should have full en-suite facilities including a toilet. Where this is not possible, residents with infectious diarrhoea should have the specific use of a toilet or commode. This must be thoroughly cleaned after each use with warm water and detergent followed by a hypochlorite solution.

When a decision is taken to isolate a resident, it is important to consider the potential effects on the resident. It is possible for residents to become disorientated due to their isolation. A risk assessment should be undertaken and documented.

The infection prevention and control team can advise on the management of individual cases where required. Verbal and written information should be provided to residents and their visitors, explaining the reasons for isolation; the likely duration; precautions required and the ways in which the resident's psychological and physical needs will be met e.g. availability of a telephone and newspaper.

Planning of a resident's care should take into account the extra time required for isolation procedures i.e. wearing PPE; providing psychological support and extra time to provide food and drinks.

Sharing of information about residents

Care homes must ensure that accurate information is recorded and communicated effectively between organisations about a residents' infectious status in order to minimise the risk of inappropriate management and further transmission of infection.

There should be a local protocol for the dissemination of information about residents with infections between care organisations; this could be the completion of a form (*Appendix 11*) or alert stickers (*Appendix 12*) if they require transfer, admission or discharge to another care facility.

Sharing this information will ensure that a resident is cared for appropriately and safely.

All information shared with other organisations must be in line with information governance guidelines and Data Protection.

SECTION 4

Infection Control Precautions for Specific Conditions

The Immuno-suppressed client

An increasing number of patients have severely compromised immune systems due to cytotoxic drug therapy, recipients of bone marrow transplant or other transplanted tissues, or HIV/AIDS.

General principles

- Limit contact to as few people as possible e.g. immediate family and staff.
- Ensure that contacts understand the need to protect the patient from common infections e.g. colds and that they practice effective hand washing.
- Food should be prepared in accordance with good food hygiene practice and in addition the following foods should be avoided:
 - Raw fruit.
 - Salads.
 - Uncooked vegetables.
 - Unpasteurised milk products.
 - Soft cheeses.
 - Eggs – especially raw or lightly cooked.
 - Pate.
 - Reheated/thawed foods.
 - Uncooked herbs and spices including pepper.
- All water should be boiled then cooled before consumption, including water used to make ice cubes.
- Encourage regular mouth care and observe carefully for signs of oral infection.
- Encourage regular foot care and observe carefully for signs of foot infections.
- Observe carefully for signs of infection e.g. temperature; flushing; rigors; sweating.
- The living environment should be kept clean.

Indwelling urinary catheters

Catheters are an invasive device and must only be used after alternative methods of management have been considered. A full assessment should be made by a District Nurse/Continence team before carrying out urinary catheterisation. As part of the clinical assessment, nurses should review the patient's condition and assess if the patient requires a catheter. Alternatives to long term catheterisation should be considered e.g. intermittent catheterisation.

Catheterisation should only be carried out using an aseptic technique. Only Qualified staff who have been assessed as competent should carry out catheterisation. All qualified staff should undergo yearly urinary catheter training and demonstrate they have undertaken and successfully completed competence assessment.

Patients, carers and health care staff should be trained in the ongoing management of urinary catheters. All health and social care staff including Care Home staff should have a written policy/protocol for catheter care and management. Catheter care and management should be documented within individual patient care plans. The care plans should include the signs and symptoms of infection as described below.

The patient's clinical need for catheterisation should be reviewed regularly, and the urinary catheter removed as soon as possible.

A catheter specimen of urine should be obtained, if the patient develops signs of infection, such as;

- High temperature/fever/rigor- flush face/headache/lethargy.
- Increased Confusion.
- Cloudy or dark coloured urine (see urine chart in appendix 13).
- Abdominal discomfort.
- Pain and burning sensation.

Appendix 14 provides guidance at a glance to manage residents with a urinary tract infection (UTI). If the patient develops any of the signs or symptoms of infection, seek immediate medical advice from the GP, community nurse and or the out of hour's service.

The Catheter Record

All catheterised patients should have a Catheter Record. The Record indicates the reason for catheterisation and the correct equipment the patient requires.

The Infection Prevention and Control teams for Calderdale, Kirklees and Wakefield have devised a “Catheter Record” in conjunction with the continence team and colleagues from the acute hospitals. The Catheter Record has been introduced to improve urinary catheter management and urinary catheter care. This catheter record provides general information and advice about catheter management, and is targeted at patients and their carers either living within their own home or within a care home.

The hospital discharging ward will complete the record indicating the type of catheter equipment and the reason for catheterisation. The catheterised patient will be issued with the record on hospital discharge and will share the information with carers or care staff. The patient should always present the record on hospital admission, to ensure essential information is shared. For information on insertion of an indwelling catheter, please see

Appendix 15.

Infusion devices/Tracheostomies

There has been an increasing use of medical technology in palliative care settings, care homes and even individual client's homes. These invasive devices include peripheral intravenous catheters; central venous skin-tunnelled catheters e.g. Hickman lines; central lines used for total parenteral feeding (TPN); subcutaneous infusions via a syringe driver and spinal infusions. For

advice on management of these devices, please contact the resident's doctor or specialist nurse delivering or responsible for their care.

Detailed information about the management of tracheostomies is available from ear, nose and throat departments, many of which employ specialist nurses in this field. Those caring for someone with a tracheostomy for the first time must have some training from a specialist to ensure they are competent to deal with all the relevant situations and procedures.

Enteral Feeding

Patients and carers (including informal carers) who are involved in the management of enteral feeding in the home or community settings should receive appropriate education and training. Staff who prepare and administer enteral feeding should be deemed competent before undertaking these procedures. Enteral feeding systems are susceptible to microbial contamination, which may result in systemic infection, especially in vulnerable or immunosuppressed individuals. For advice on dealing with enteral feeding systems, please see attached document "Enteral Feeding", or contact either resident's doctor or specialist nutritional nurse. Appendix 16 provides additional information on enteral feeding

Wound/Ulcer Care

The presence of a wound or ulcer can increase the risk of the individual developing an infection or becoming colonised, for example with MRSA. It is therefore important to try to prevent wounds, such as pressure ulcers, if possible, and to prevent infection in existing wounds. There are a number of pressure relief devices for use.

The key measures that can help to prevent wound infection/colonisation include:

- Hand hygiene before dealing with wounds or dressings.
- Wearing gloves and aprons when handling wounds.
- Using a wound dressing that is appropriate to the wound.
- Changing dressings when indicated and whenever the barrier-effect has been impaired (e.g. wet).

These should be followed regardless of whether an aseptic technique is used or not.

Non Touch Aseptic Technique

Aseptic techniques are used to prevent contamination of wounds and other susceptible sites. Aseptic techniques must be used for acute wounds such as surgical wounds, recent trauma, burns and scalds and for chronic wounds in patients who are at greater risk of infection, e.g. immuno-compromised, circulatory problems or diabetes. It is also used when inserting or caring for invasive devices e.g. tracheostomies and catheters. Principles of aseptic techniques include:

- Minimal exposure of wound/susceptible site.
- Hand decontamination prior to procedure.
- Use of sterile gloves if body sites/sterile equipment or devices are likely to be touched/handled during the procedure.
- All fluids and materials used are sterile.
- Sterile packs must be checked for expiry date and evidence of damage or moisture penetration.

- Non sterile items are not placed onto the sterile field.
- Single use items must never be re-used.
- Movement within the immediate area where the procedure is being undertaken should be kept to a minimum.

Appendix 17 provides additional information on No Touch Aseptic Techniques

Clean dressing technique

A clean dressing technique may be used for chronic wounds, such as leg ulcers and pressure sores in people with normal infection risk. Clean gloves, equipment and tap water may be used in addition to hand hygiene. However, care should still be taken to avoid introducing pathogens into the wound.

For further details on wound management refer to local wound management guidelines; a wound care formulary or the local Community Nurse or Wound Care/Tissue Viability Specialist.

Section 5

Infections/Infectious Diseases

Common infectious diseases

This section contains information on some of the most common diseases seen in care homes. The list of communicable and notifiable diseases provided is much longer in reality, but most are very rarely seen in the care home setting. For advice on any of these other diseases, please contact the **West Yorkshire Health Protection Team (WYHPT) by contacting UKHSA on tel 0113 386 0300**

Viral infections

Chickenpox/Shingles (varicella-zoster virus)

Chickenpox is an acute, generalised viral infection, commonly affecting children. The rash tends to affect central areas of the body, e.g. the trunk more than the limbs, also the scalp, mucous membrane of the mouth and upper respiratory tract and eye may be affected. It is infectious from about 2 days before, to 5 days after, the rash appears.

Shingles occurs only in people who have previously had chickenpox infection. Following chickenpox, the virus remains dormant in the body, usually in a sensory nerve root. In later months or years the virus reactivates and causes a shingles rash at the skin site supplied by the nerve. Therefore anyone with shingles must have had chicken pox in the past, even if they don't remember it.

Shingles causes a rash of tiny blisters, usually affecting a clearly defined area of the body. After a few days, the blisters crust over and form scabs. The rash is not itchy, but it can be very painful. The pain may start a day or so before the rash appears. It is infectious for about a week after the blisters appear.

How are they spread?

Chickenpox is spread by contact with infected respiratory droplets or fluid from the blisters. It is very infectious to people who have not had chickenpox before. Shingles cannot be spread from person to person. However, the blister fluid contains the varicella virus. Therefore people who have never had chicken pox should avoid contact with cases of both chickenpox and shingles. You can get chicken pox from shingles if non immune.

Is anyone at extra risk?

Certain individuals have additional risks if infected, including the immuno-compromised (e.g. those receiving steroids or cytotoxic drugs), non-immune pregnant women and neonates. If they have contact with a case during the infectious phase they may need immunoglobulin. Discuss the situation with occupational health, microbiologist or GP/midwife.

Non-immune members of staff should be immunised against varicella.

Non-immune staff who have direct contact with high-risk groups and are exposed to the virus should be redeployed to a lower-risk environment from the 8th to 21st day (28 days, if immunoglobulin has been given) after initial contact with a case during the infectious phase.

How is spread avoided?

- People with chickenpox should stay off school or work for 5 days from the onset of the rash.
- People who are not immune to chickenpox should avoid contact with cases.
- In care homes, keep clients with chickenpox/shingles in their room for 5 days after the onset of the rash. If it's not possible to isolate in LD/EMI units with shingles, keep rash covered to reduce the risk.
- Wear gloves if applying lotion to the rash.
- In care settings treat laundry as infected.

- Seek immediate medical advice if the rash involves the eye.

Cold sores (Herpes simplex)

A cold sore is a cluster of tiny blisters caused by a virus called herpes simplex, which usually occurs around the edges of the mouth. These dry up to form a scab, and the cold sore is usually better within 10 days. Unfortunately once infected with the virus it remains for life, and can cause further cold sores from time to time.

Method of spread

The virus can pass from one person to another by direct contact. But in most adults their own herpes virus, which has never left them, causes repeated cold sores.

Prevention of spread

People, e.g. carers, who touch cold sores, can get an infection around the fingernail (herpetic whitlow). Therefore wear gloves when touching a client's cold sore. Carers with cold sores should ensure that they wash their hands thoroughly before giving care.

Treatment of cold sores

In the vast majority of people a cold sore will recover completely on its own with no treatment. In people who have very poor immunity or who have severe eczema, the cold sore may spread and cause a severe infection. Seek medical advice if the infection does not heal within ten days, begins to spread or looks like it is becoming infected. Antiviral medications such as acyclovir can be effective if given at the time of onset.

Gastrointestinal infections

Clostridioides difficile (C.diff)

Clostridioides difficile (C.diff) can live in small numbers in the human bowel, especially in older people and babies, causing no harm. When taking antibiotics, C.diff may multiply and produce toxins. The toxins cause the bowel to become inflamed and for diarrhoea to develop.

Symptoms range from mild diarrhoea to severe life threatening pseudo-membranous colitis or peritonitis. Infection can be prevented by avoiding the unnecessary use of broad-spectrum antibiotics e.g. cephalosporins although all antibiotic use creates risk. (see Antibiotic Guardianship and consider keeping individual record of antibiotics prescribed for each resident)

Method of spread

Spread sometimes occurs in hospital wards, or care homes, where other older people live or are cared for. Older people are most at risk if they have recently had or are taking antibiotics. When a person is infected with C.diff, they pass the micro-organisms in their faeces and can have offensive diarrhoea. A susceptible person (elderly, taking antibiotics) can pick up the infection if they come into contact with the infected faeces or contaminated surfaces and transfer the bacteria to their mouth.

Prevention of spread

- Residents with diarrhoea should be isolated in their rooms until 48 hours symptom free AND have had a return to their normal bowel habits
- People with diarrhoea must wash their hands carefully after toileting, with soap and water.
- Clothing soiled with diarrhoea should be washed separately on a hot wash.
- Equipment contaminated with diarrhoea should be cleaned immediately using a chlorine-releasing agent according to manufacturer's guidance

- Toilets and commodes/bedpans should be cleaned with a chlorine releasing agent after each use. (or bedpan washing machine)
- Staff and others who have to handle diarrhoea, bedpans etc. should wear aprons and disposable gloves and wash their hands with soap and water.
- In care settings, a separate toilet or commode should be used if possible, if not possible a risk assessment should be undertaken with appropriate control measures in place
- Visitors and staff should wash their hands with soap and water before leaving the room (alcohol products **are not** effective against C.diff spores).
- Patients with C.diff infection in hospital may be transferred, e.g. to a care home, once the diarrhoea has stopped for 48 hours.
- The door to the room should be closed if risk assessed to be safe. If this is not possible the reason for being unable to close the door should be documented.

Treatment

If a C.diff infection is suspected, samples should be sent for testing. There is no need to obtain a further specimen for clearance. Residents should be kept hydrated and a record kept of their bowel movements including type and frequency of stool using the Bristol Stool Chart. Fluid balance charts must also be used to accurately record fluid intake. *Appendix 18* is an example of a combined fluid input/output and Bristol stool chart. If antibiotics are prescribed the full course of treatment should be administered.

If symptoms are severe or clusters of cases are noted (**2 or more cases**), inform your local Infection Control Team or UKHSA.

A post infection review (PIR) will be undertaken by the IPC Team for care home residents with a C.diff infection. All patients will receive an information leaflet and alert card to ensure that they share information with other relevant professionals. Appendices 19 and 20 provide examples of 'guidance at a glance' information for the management of residents with C.diff and information leaflet.

Norovirus

Norovirus is a major cause of acute gastroenteritis (vomiting and diarrhoea) in children and adults. Norovirus (previously known as Norwalk-like or Small Round Structured Virus) was described in 1968 and is often termed Winter Vomiting Disease because of the increased prevalence in the winter months; however it can be detected throughout the year.

Norovirus is the most common cause of outbreaks of gastro-enteritis in hospitals and can also cause outbreaks in other settings such as schools, care homes and cruise ships. Hospital outbreaks often cause major disruption in hospital activity resulting in area closures, cancelled admissions and delayed discharges. Failure to observe and comply with Infection Control guidelines/policy can lead to further spread of infection and a delay in returning to normal activity. Outbreaks can affect both patients and staff, sometimes with attack rates in excess of 50%. For this reason, staff shortages can be severe, particularly if several areas are involved at the same time. It is therefore essential that cases are detected early and isolated appropriately to prevent spread and major outbreaks.

Signs and Symptoms

The average incubation period for Norovirus associated gastro-enteritis is 12-48 hours.

The illness is characterised by a sudden acute onset of:

- Vomiting (predominant symptom), often projectile, and is seen in 50% of cases. However, clusters can occur where vomiting is infrequent or absent altogether;

- Watery diarrhoea and abdominal cramps;
- Nausea.

In addition headache, myalgia, fever and malaise are common. Some or all of the above symptoms may be present. Symptoms last between one and three days and recovery is usually rapid.

Dehydration is the most common complication and residents may require replacement fluids.

Transmission

Noroviruses are highly contagious with as few as 100 virus particles thought to be sufficient to cause infection. Noroviruses are transmitted primarily through the faecal/oral route, either by person to person spread or via contaminated food or water. In addition Noroviruses can be spread via aerosol dissemination of infected particles following vomiting (close proximity). Transmission can also occur through hand transfer of the virus to the oral mucosa following contact with environmental surfaces, fomites and equipment which have been contaminated with either faeces or vomit.

Diagnosis

Norovirus may be suspected clinically in residents and staff with a history of vomiting of sudden onset followed by diarrhoea. During an outbreak several people are commonly affected over a short space of time and cases with typical features may be ascribed to norovirus infection without further testing.

Confirmation of norovirus infection depends on a PCR test performed on faecal samples. This is useful in confirming the nature of an outbreak early on, identifying atypical or outlying cases and in determining whether norovirus shedding is occurring in cases of persistent diarrhoea.

Samples will usually be requested by Public Health England; Infection Prevention and Control Team or an Environmental Health Officer.

When an outbreak is suspected, it is imperative to institute infection control measures immediately **without** waiting for virological confirmation from stool testing.

The movement of affected residents from one area to another for cohort management is **NOT** recommended.

Outbreaks should be managed using the pathway provided in *Appendix 21*.

Non-essential staff **must not** visit the affected area. Where a unit or floor only is closed, a team of dedicated staff should be allocated to these areas. Staff (nursing, carers and domestic) who are working on affected areas must not be moved to work in other parts of the home. The use of Bank and Agency staff is not advised on affected areas.

Wherever possible, medical staff should visit the area as their last visit, if not possible it is preferable that they shower and change clothing prior to attending other areas. Hands must be washed with soap and water before and after each resident contact or contact with their immediate environment. Aprons and gloves must be worn for each resident contact.

Communication

A poster should be put on all entrances including the front door advising visitors of the outbreak, and clear directions to hand washing facilities should be provided for all visitors.

For the duration of any period of closure the manager, or link person will discuss with the IPC team on a daily basis details of which area, the number of cases to date, the last occurrence and the next review date/time.

Appendix 22 provides norovirus information for carers, residents, and their families on the management of norovirus.

Other Gastro-intestinal illnesses (including food poisoning)

Gastro-intestinal illnesses may have many causes including: viruses, bacteria, toxins and chemical contaminants. Causative organisms include campylobacter, *C.diff*, *cryptosporidium*, *E coli* 0157, Giardia, salmonella, etc. The symptoms vary depending upon the cause of the illness. Some cause mainly vomiting whereas others cause mainly diarrhoea. Other possible symptoms may include abdominal pain, nausea or fever. Infections may have an incubation period of a few hours, or several days. Some infections improve naturally, while others need to be treated.

How are they spread?

Many raw foods such as meat, poultry and raw eggs contain harmful microbes or toxins. Micro-organisms may get onto the food during handling and preparation, but are destroyed during cooking. If the food is not going to be cooked further or will be eaten raw the microbes and toxins will not be destroyed and may cause illness. A food handler with a gastrointestinal disease, or who does not practice good hygiene, can spread microbes onto the food. Humans and animals can also be sources of infection and infection can spread by contact with infected diarrhoea or vomit; or indirect contact with the contaminated environment - the microbes being passed to the mouth and ingested.

How can they be prevented?

Prevention of infection involves good food hygiene, hand hygiene and decontamination of equipment and the environment.

- Suspect gastrointestinal disease if **two or more people at the home have diarrhoea or vomiting at the same time**, or if anyone is positive for bacterial or viral organisms.
- Wash hands before giving care and after giving care and handling excreta with soap and water.
- Ensure the client can wash their hands after using the toilet.
- Keep symptomatic clients in their room with their own toilet/commode until free of symptoms for 48 hours.
- Staff with symptoms should stay off work until symptom free for 48 hours. Some infections require infected care workers to have microbiological clearance before returning to work. Advice on these can be obtained from the UKHSA.
- Strict hygiene standards are very important, increase frequency of cleaning toilet areas.
- Clean and disinfect spills of diarrhoea and vomit, remember virus particles can land several feet away from the spillage, so clean a large area.
- A chlorine-releasing disinfectant (e.g. bleach, sodium hypochlorite, NaDCC) can help to kill the micro-organisms.
- Remove any open fruit, sweets or food which may be exposed to the organism.
- Do not pre-lay dining tables prior to meal times.
- Inform UKHSA as soon as suspected
- Send faecal samples from cases to the laboratory for Microscopy, Culture & Sensitivity and for Virology.

Outbreak - Inform local IPC team 01484 221000 or UKHSA tel 0113 386 0300 as soon as an outbreak is suspected, and follow the pathway (*Appendix 21*)

Risk group categories for gastrointestinal infections

Groups that pose increased risk of spread of infection

- A. Any person of doubtful personal hygiene or unsatisfactory toilet, hand-washing or hand drying facilities at home, work or school
- B. Children who attend pre-school groups or nursery
- C. People whose work involves preparing or serving unwrapped foods not subjected to further heating
- D. Clinical and social care staff who have direct contact with highly susceptible patients or persons in whom a gastrointestinal infection would have particularly serious consequences

Infestations/fungal infections

Head lice

Head lice are tiny insects, which live on the head, most commonly behind the ears and at the back of the neck and feed off blood by biting the scalp. Head lice can affect anyone, but are common in children under 11 years and their families.

Nits are the empty eggs that remain after the lice have hatched. They are cemented to hairs close to the scalp and can be difficult to see. The eggs hatch after 7 to 10 days and then turn pearly white. As the hair grows the nits become more obvious and can be seen further from the scalp. Nits that are a few centimetres from the scalp are empty having hatched several weeks before.

How are head lice spread?

They are only spread by head to head contact, they cannot hop or jump. They do not willingly leave a head except to walk directly onto another head. If a louse falls onto a hat, hairbrush or furniture, it is almost certainly dead or dying and will not cause problems. So the sharing of hats etc. will not spread lice.

How are they treated?

Treatment should only be carried out if live, moving lice are seen in the hair or on the scalp. An insecticidal lotion may be used or the new silicone-based product, 4% dimeticone lotion. An aqueous solution may be preferred (Derbac-M liquid or Full Marks liquid) for people with asthma. Most of these can be bought from a chemist or obtained on a doctor's prescription. Shampoo treatments are not recommended. Treatment involves two applications of the lotion seven days apart; the second application will ensure that any remaining or newly hatched lice are killed.

Head lice can be spread quickly in a family or care home. If a client is found to have lice then they should be treated and the hair of other clients and staff examined. Contacts **should only be treated** if there is evidence of live lice on their heads. See Appendix 23 for further details.

Scabies

Scabies is a condition of the skin caused by a tiny mite called *Sarcoptes scabiei*. Symptoms are caused by an allergic reaction to the by-products of the mite. Scabies occurs worldwide and outbreaks in the UK often occur in care homes, elderly care wards and schools. Most cases only have around 10 mites on their body.

Classical scabies features itching two - six weeks after a first infestation or one - four days after re-infestation. The itching is often severe and worse at night or after a bath. Sometimes raised flesh-coloured, or grey, burrows with a sinuous ridge can be seen. A symmetrical allergic rash appears from the axillae to the calves and around the waist, but not the upper back.

Atypical scabies features dry, flaky lesions that may be present on the palms, soles and nail beds of the hands, feet, wrists, buttocks and penis. The lesions can flake off and may contain hundreds of mites. Consequently it is very infectious.

How is scabies spread?

Scabies is spread by direct, prolonged skin-to-skin contact; holding hands is a common route. It's also possible – but rare – for scabies to be passed on by sharing clothing, towels and bedding with someone who's infected.

How is spread avoided?

- Be aware of the symptoms of scabies and watch out for cases.
- Treat all cases and their contacts, ideally on the same day. Lyclear dermal cream or Derbac M are recommended. Pregnant or breast-feeding women should be treated under the supervision of the GP and should avoid Lindane. Infants and young children should be treated with Permethrin.
- Apply lotion to cool, dry skin including under nails and in skin creases.
- Leave lotion on skin for 8 - 24 hours. Re-apply to areas of skin that subsequently become wet e.g. after washing hands or incontinence etc.
- Itching can persist for several weeks; calamine or an antihistamine can be used to alleviate symptoms.
- Wear gloves and apron for contact with a case until treated.
- Wash hands and skin after contact.
- For atypical scabies; a more intensive regime is required eg. handle bedding etc. with gloves and place in plastic bag until laundered. Tumble-drying kills the mites. Vacuum carpets and upholstery. Spread to others is common.

Outbreaks of scabies - See *Appendix 24* for more details on management of scabies.

Ringworm and other fungal infections

A microscopic fungus causes ringworm. Ringworm may occur on the scalp, body or feet (athlete's foot). On the scalp it causes a small circular bald patch with broken hairs at the edges. On the skin it causes a reddish ring-shaped area with healthy looking skin in the centre. Ringworm can reappear many times, especially if the treatment is not used for long enough.

How are fungal infections spread?

Fungal infections are spread by direct and indirect contact - Ringworm is spread by contact with infected animals or people and their environment. The fungus can survive on furniture and

clothes, so it is not necessary to have had close contact with an infected person. If left untreated some ringworm infections may be passed to other people.

Skin ringworm stops being infectious as soon as treatment is started. It is not clear how long scalp ringworm remains infectious, but if cream is used as well as tablets, spread to other people is extremely unlikely.

How can spread be avoided?

- Do not share towels.
- Do not share hairbrushes or hair clippers/razors in cases of scalp ringworm.
- Launder clothes and bed clothes once treatment has started.
- Ensure treatment is continued until the skin is completely clear or the infection may relapse.
- For scalp ringworm, a course of tablets or medicine is usually needed. These may have to be taken for several months. Using a cream at the same time may help to stop the infection spreading to other people. Once treated, the hair will grow back normally.
- For other fungal infections, obtain a correct diagnosis and ensure treatment is given as prescribed.

Blood borne viruses

Hepatitis B and C

Hepatitis B and C are viral infections that cause inflammation of the liver with jaundice (yellowing of the skin). Symptoms may also include vomiting, abdominal pain, joint pains, loss of appetite and tiredness. A blood test is needed to diagnose the infection. Most people who get hepatitis recover completely and are only infectious to others for a short time while they are ill. Some people who become infected do not get any symptoms, and some of these may carry the virus in their blood for many years and may develop long-term liver disease. Their blood continues to be infectious as long as it contains the virus. Hepatitis C can cause serious liver disease in later life.

How are hepatitis B and C spread?

They are spread to others in three main ways:

- Blood-borne i.e. the infected blood gets directly into the bloodstream of another by sharing needles, toothbrushes, razors, surgical instruments, tattoo and acupuncture needles, blood transfusion, needle-stick injury or bites which break the skin.
- Sexual i.e. sexual intercourse with an infected partner without the use of a condom, (particularly hepatitis B).
- Perinatal: i.e. from infected mother to baby.

Kissing, touching, hugging, coughing, sneezing, sharing crockery and cutlery, or via the toilet or food do not spread these infections.

How is spread of hepatitis B and C prevented?

Since we do not usually know who has the infection, we should treat all blood from **anyone** as potentially infectious. The prevention of infection from person-to-person can be prevented in the following ways:

- Cover all cuts with a waterproof dressing;

- Wear gloves when touching someone else's blood;
- Clean up blood spills quickly and thoroughly, wearing PPE;
- Wash hands after touching blood and removing gloves;
- Do not share toothbrushes, razors, needles, etc.;
- Immunise people at high risk of Hepatitis B infection e.g. health care workers, people with haemophilia etc. An accelerated course may be necessary in high-risk circumstances.

Take action quickly if a bite breaks the skin or an injury with a blood stained sharp object (e.g. a needle) occurs. Action includes:

- In the case of a bite rinse the wound and the mouth with lots of fresh *water*. Discuss with a doctor to risk assess the need for further action/follow up;
- In the case of a sharps injury make the wound bleed, wash under running water, cover wound with a waterproof dressing and **discuss with the doctor to risk assess the need for further action/ follow-up treatment.**
- **See section 3.4 for further advice on exposure incidents.**
- Complete an incident form

Human Immunodeficiency Virus (HIV)

The letters HIV stand for Human Immunodeficiency Virus. It is the virus, which is responsible for acquired immune-deficiency syndrome (AIDS). It is spread in the same way as hepatitis B, although it appears to be much less infectious. People who become infected with HIV usually appear perfectly well for many years before they may become ill with conditions associated with their infection and developing AIDS.

You cannot tell if someone is infected with HIV by looking at them. About three months after becoming infected with HIV a person will develop antibodies, which can be detected by a blood test. These people are said to be HIV positive. Before this it is not normally possible to tell if someone is infected.

How is HIV spread?

HIV is spread in the same way as hepatitis B, but is much less infectious.

How is the spread of HIV prevented?

The precautions are the same as for hepatitis B, though there is no vaccine for HIV. If an injury occurs involving blood-to-blood contact with an infected person, immediate action (within one hour) is optimal. The injured person will be offered post exposure prophylaxis (PEP) for HIV infection. This involves taking a number of anti-viral drugs. To be effective these drugs must be started as soon as possible after the injury occurred, ideally within one hour.

In high risk situations there may be value in starting PEP up to 7 days after the incident. PEP can have unpleasant side effects and since the risk of HIV is low, it is sometimes decided not to use PEP. Since we do not usually know who has the infection, we should treat **all** blood from everyone as potentially infectious.

The prevention of this infection from person-to-person can be prevented in the following ways:

- Cover all cuts with a waterproof dressing.
- Wear gloves when touching someone else's blood.
- Clean up blood spills quickly and thoroughly wearing gloves and a disposable apron.
- Wash hands after touching blood/body fluids and removing gloves.

- Do not share items that may be blood stained e.g. toothbrushes, razors, needles and syringes.
- Ensure instruments used for minor surgery, or dental treatment, are sterilised afterwards as per standard infection control precautions.
- Take action quickly if a bite breaks the skin or an injury with a blood stained sharp object (e.g. a needle) occurs.

Action includes:

- In the case of a bite, rinse the wound with lots of fresh water. Contamination to the mouth, rinse with fresh water. Discuss any further action with a doctor.
- In the case of a sharps injury, make the wound bleed, wash under running water, cover wound with a waterproof dressing. Discuss with a doctor the need for follow-up treatment.

Respiratory Infections

Respiratory infections are very common and can be serious in older and debilitated people.

Influenza

Influenza is an acute viral respiratory infection that tends to occur in the winter months. The two main types of influenza causing disease in the UK are influenza type A and B, but new strains and variants of the virus emerge each year. The incubation period is 2-3 days and cases are infectious from 1 day before the onset of symptoms and remain infectious for up to 5 days.

Outbreaks may occur in communities and communal settings such as schools and care homes.

Where there are two or more residents with symptoms within a 48 hour period please contact UKHSA- **0113 386 0300** and refer to the influenza information in *Appendix 25*. When the number of cases exceeds that normally expected, this is defined as an epidemic.

If a completely new strain of influenza virus emerges, to which the population has no previous immunity, it may result in a global outbreak, known as a pandemic, which can have a high death rate.

The onset of influenza is:

- Sudden with a high fever ($> 38.9^{\circ}\text{C}$),
- Dry cough
- Headache
- Aches and pains in the joints and muscles
- Chills and a general feeling of tiredness

Fever usually reduces after the second day. The nose may become stuffy and a sore throat may develop.

People with influenza should stay at home and rest, drink plenty of fluids and may find symptom relief with painkillers, cough mixture etc. Antibiotics are not required unless there is also a bacterial infection.

Who is at risk?

Most people recover from influenza within a few days. However, influenza may be serious in new born babies, people aged over 65 years and people of any age with existing chronic diseases. High-risk conditions include: people with cardiac, respiratory, renal and liver disease and those with impaired immune systems. Bronchitis and secondary bacterial infections such as pneumonia can result in hospital admission and can be life-threatening.

How is influenza spread?

Influenza is highly infectious and spread by coughs and sneezes or via the environment contaminated with respiratory droplets. The infection spreads easily within households and overcrowded or confined areas such as schools, barracks, hospital wards and care homes.

How can influenza be prevented?

Each year a new influenza vaccine is developed which provides immunity against the strains of influenza circulating that year. Every autumn the vaccine is offered to anyone aged over 65 years, people with a high-risk condition and their carers, people residing in care homes and care home staff. Antiviral drugs such as oseltamivir can be offered to at-risk groups when influenza is circulating in the community. Health and social care teams should report any suspected cases in their care to the GP and any clusters to UKHSA.

How can the spread of influenza be avoided?

People with influenza should:

- Try to stay away from contact with others during the infectious period.
- Stay in their own room, if living in a care home.
- Use disposable tissues and wash hands after coughing and sneezing.

Carers should:

- Wash their hands before and after giving care, handling used tissues or items contaminated with respiratory secretions.
- Wear appropriate PPE
- Keep the environment clean.
- If in risk groups have flu vaccine every year.

COVID-19 (SAR CoV2)

COVID-19, along with many other respiratory infections such as influenza (flu), can spread easily and cause serious illness in some people. You may be infected with a respiratory virus such as COVID-19 and not have any symptoms but still pass infection onto others.

Who is at risk?

COVID 19 can affect any person, there are more vulnerable at risks groups, defined by UKHSA. The risk of catching or passing on COVID-19 is greatest when someone who is infected is physically close to, or sharing an enclosed and/or poorly ventilated space with, other people.

How is COVID 19 spread?

When someone with a respiratory viral infection such as COVID-19 breathes, speaks, coughs or sneezes, they release small particles that contain the virus which causes the infection. These particles can be breathed in or can come into contact with the eyes, nose, or mouth. The particles can also land on surfaces and be passed from person to person via touch.

How can COVID 19 be prevented?

There are simple things you can do in your daily life that will help reduce the spread of COVID-19 and other respiratory infections and protect those at highest risk. Things you can choose to do are:

- Get vaccinated.
- Let fresh air in if meeting others indoors.
- Practise good hygiene:
 - wash your hands
 - cover your coughs and sneezes

- clean your surroundings frequently
- Wear a face covering or a face mask.
- Wear appropriate PPE
- Appropriate universal precautions in health and social care.
- Ventilation of shared areas/spaces.

Health and social care teams should report 2 or more suspected cases to the IPC team or UKHSA.

Antibiotic resistant bacteria

Residents may be transferred from hospital or other community establishments, whilst colonised or infected with antibiotic resistant bacteria.

Meticillin-resistant *Staphylococcus aureus* (MRSA)

Staphylococcus aureus is commonly found on the hair, skin and in the nostrils of about 30% of the population. It usually causes no harm, but it can sometimes cause infections such as boils, sties, cause infection in cuts and abscesses if there is an opportunity to enter the body eg. through a break in the skin. The severity of the disease can range from mild to life threatening and can include

- Wound infections
- Infected eczema
- Abscesses
- Joint infections
- Infections of the heart valves (endocarditis)
- Pneumonia
- Bacteraemia (blood stream infection)

These infections may improve without treatment, or may need a course of antibiotics. Sometimes, residents can develop more serious infections, such as surgical wound infection and septicaemia (blood poisoning).

In recent decades some strains of *Staphylococcus aureus* have developed a resistance to certain antibiotics. They are called Meticillin-resistant *Staphylococcus aureus* (MRSA). Infection with MRSA is more difficult to treat because there is less choice of antibiotics and they may be expensive.

Patients in hospital, especially those in intensive care, special care baby units, orthopaedic wards, burns units, cancer and transplant wards are most at risk of serious illness with MRSA. Healthy people may pick up MRSA for a short time, but are not usually at risk of developing serious infection. MRSA is more likely to be found in damaged skin, such as eczema, chronic wounds and the insertion sites of invasive devices.

Method of spread

MRSA can live on skin and in skin folds, such as the nose, armpits, groins, umbilicus and under breasts and in dust. It is passed by contact with the skin or contaminated environments, but is easily removed by hand washing and general cleanliness. Care home staff will be informed if a resident has MRSA. There is no justification for refusing admission and residents do not need to be isolated. Contact the infection control team if you have any further concerns.

All residents found to have MRSA will receive an information leaflet and an alert card (Appendix 26)

Prevention of spread

- Hand washing before and after touching wounds, catheters or giving care.
- Wear gloves and aprons for handling wounds, catheters and wound drains. Keep wounds covered.
- Change bedding frequently and don't shake the bed linen.
- Treat linen and waste as infected only if undergoing decolonisation or active infection.
- Keep the environment clean and dust-free. Clean baths after use.
- No special disinfectants are needed, routine detergents are adequate.
- Wash crockery and cutlery as normal.
- Clients may socialise, visit friends, see older people and babies, go to hairdressers, and work etc., as normal.
- If client is being transferred to hospital inform the ward that they have had MRSA and complete an Intercare transfer form (*Appendix 11*).
- Routine screening of clients and staff is not necessary, unless clinically indicated i.e. signs of infection develop.
- In care homes, clients with MRSA should ideally not have to share a room if either room-mate has open wounds or catheters.
- Visitors to wash hands when leaving.
- In clinics try to arrange to see the client at the end of the list.

Appendix 26 is an information leaflet on MRSA

Appendix 27 provides 'guidance at a glance' information to manage residents with MRSA

Tuberculosis (TB)

Tuberculosis (TB) is caused by *Mycobacterium tuberculosis*. It usually affects the lungs (pulmonary), although it can occur elsewhere in the body. Pulmonary TB infection occurs when the bacteria are inhaled. The bacteria are usually overwhelmed by the body's immune system, but may become active again later in life. In the UK the elderly may develop TB following infection earlier in life (this is known as latent TB).

People with pulmonary TB infection generally complain of a bad cough lasting more than one month, chest pain, coughing up sputum that may be blood-stained, loss of appetite, weight loss, tiredness and weakness and sometimes of night sweats.

How is TB spread?

Only people with pulmonary TB infection affecting the lungs are infectious to others. These individuals expel the bacteria into the air during coughing; others may then inhale the bacteria. People with pulmonary TB may pass the infection on to others, particularly members of their household with whom they have close contact over a long period of time.

However, TB is difficult to catch and the disease develops slowly and may take several months for symptoms to appear. Many people are immune to TB especially if they have had BCG vaccination.

Some people are at greater risk including children, the elderly, diabetics, people taking steroids, people taking other drugs affecting the immune system, people living in overcrowded or poor housing, people who are dependent upon drugs or alcohol, people with chronic bad health, people with HIV infection or leukaemia.

How is spread avoided?

- The UKHSA is notified of cases of TB and ensures that contacts are identified and followed up if necessary.
- As TB is slow-growing, follow-up is not a matter of urgency.
- Clients with infectious pulmonary TB should stay in their own room until they have had two weeks of anti-TB treatment. Advise the resident to wear a face mask for the two week period if they have contact with others.
- People with TB should be encouraged to cough into a disposable tissue or put their hand over their mouth to prevent airborne spread.
- For further advice please contact the TB nurse or infection control team.

Visit UKHSA/NHS website for latest guidance and information.

Other Alert Organisms

Any resident identified with any of the following infections, should be documented in the care plan, and Inter Care transfer form and risk assessment sticker.

Extended-Spectrum Beta-Lactamases (ESBL's)

ESBLs are bacteria that produce enzymes called extended-spectrum beta-lactamases (ESBL's) that confer resistance to much penicillin; cephalosporin and other antibiotics. The two main bacteria that produce ESBL's are Escherichia Coli (E Coli) and klebsiella species.

E Coli with ESBL's may cause urinary tract infections (UTI's) or wound infections that can sometimes progress to more serious infections like blood poisoning (septicaemia), which can be life threatening. Residents who have indwelling devices in situ such as urethral catheters are at a greater risk of developing E.coli infection. This is due to the bacteria being able to easily be introduced into the urethra and bladder at routine catheter changes. It is also due to the catheter replacing the opportunity to 'flush' urine out of the bladder during normal micturition.

Treatment depends in the type of infection; however, antibiotics are usually used for the treatment of an E.coli bacteraemia. *Appendix 28* provides further information on Extended-Spectrum Beta-Lactamases

Carbapenemase-producing Enterobacteriaceae (CPE)

Carbapenemase-producing Enterobacteriaceae (sometimes abbreviated to CPE) are a type of bacteria which has become resistant to carbapenems, a group of powerful antibiotics. Enterobacteriaceae are bacteria that usually live harmlessly in the gut of humans. This is called 'colonisation' (a person is said to be a 'carrier'). However, if the bacteria get into the wrong place, such as the bladder or bloodstream they can cause infection.

This resistance is helped by enzymes called carbapenemases, which are made by some strains of the bacteria and allows them to destroy carbapenem antibiotics. This means the bacteria can cause infections that are resistant to carbapenem antibiotics and many other antibiotics. See appendix 29

Vancomycin Resistant Enterococci

Vancomycin-resistant Enterococci are specific types of antimicrobial-resistant bacteria that are resistant to vancomycin, the drug often used to treat infections caused by enterococci. Enterococci are bacteria that are normally present in the human intestines and in the female genital tract and are often found in the environment. These bacteria can sometimes cause infections. Most vancomycin-resistant Enterococci infections occur in hospitals. (Vancomycin-

resistant Enterococci is also called VRE) *Appendix 30* provides further information on Vancomycin Resistant Enterococci.

Panton Valentine Leukocidin

Panton-Valentine Leukocidin (PVL) is a toxin produced by some strains of *Staphylococcus aureus* (*S. aureus* or MRSA). The bacterium can cause cellulitis, abscesses, boils and carbuncles. Risks include close contact sports such as wrestling and rugby, communal living such as universities, care homes, prisons and sharing contaminated towels or razors. Rarely, PVL-producing *S. aureus* can cause septic arthritis, bacteraemia (blood poisoning) or necrotising pneumonia. *Appendix 31* provides further information on Panton Valentine Leukocidin.

Appendix 32 provides a table of other diseases for information.

Section 6

Managing Outbreaks in Care Homes

Outbreak Management

From time to time clients or staff may become ill with infectious diseases. Some of these diseases are highly infectious, especially in communal settings, and extra care may need to be taken to prevent spread to other clients and staff. Although the GP is legally responsible for the formal notification of a number of infectious diseases, any suspicion of an outbreak of communicable disease in the care home, or the community should be reported to UKHSA immediately for further investigation, and management as appropriate.

Different infectious diseases are spread in different ways. By using the standard infection control precautions outlined in **Section 3** the risk of transmission of infection from body substances (such as blood, faeces, urine) is very much reduced. It is the responsibility of the person in charge of the home to ensure that all staff are aware of control of infection guidelines, and that they are followed as a matter of routine. Two or more residents or staff suffering from the same infectious illness, or high sickness rate among staff due to same infectious illness should trigger an alert about a possible outbreak.

Suspected gastro-enteritis

If it is suspected that there **may** be an outbreak of gastro-enteritis or food poisoning in a care home, the person in charge **must** inform the IPC Team and CQC of the outbreak. Any of the following should be reported as a suspected outbreak of food poisoning:

- Two or more clients diagnosed as having salmonella, campylobacter or other food-related infection.
- Diarrhoea and/or vomiting in two or more clients/staff.
- Vomiting in two or more clients/staff.
- Two or more clients diagnosed by a doctor as having food poisoning.

It is much better to be cautious, and to report early, rather than to wait until there is a major problem. Use the Outbreak Chart provided in *Appendix 21*.

If a residential establishment is affected the following guidance should be followed:

- The IPC Team should be contacted without delay if they suspect there may be an outbreak of infection in a home. The IPC Team will contact the local Environmental Health Department if required. UKHSA should be emailed to obtain an ILOG number.
- The care home manager should contact CQC.
- Senior management must be informed and requested to ensure adequate staffing to cope with the extra demands of managing an outbreak. Staff working in the home should not work in other care establishments until the outbreak is declared over by the IPC Team.
- List all residents and staff affected, including age, area/unit where resident/working, date and time of onset of symptoms, symptoms suffered, duration of illness, and whether a sample has been taken. Templates for recording information can be downloaded from [Infection prevention control | Kirklees Council](#) If diarrhoea is a symptom, the type should also be recorded using The Bristol Stool Chart. Appendix 18.

A member of the IPCT will contact the home within 24 hours of being informed and then contact the home each weekday, usually via the telephone, for a daily update. Outbreak records should

be available at the home, to provide accurate and prompt information to the IPCT member when they contact the home. (see above)

In the event of an outbreak of diarrhoea (with or without vomiting), it is essential to obtain stool samples as soon as possible. The sooner the sample is obtained the higher the chance of identifying the organism causing the outbreak.

Samples should be taken as soon as possible after diarrhoea has started, and kept safely at room temperature prior to sending it to the local GP surgery for testing. Ideally samples should be taken Monday to Friday. However, if C.Diff is suspected then care homes should contact the microbiology laboratory at the relevant Trust to confirm where to take the sample for testing. For North Kirklees and Wakefield this is Mid Yorkshire Hospitals NHS Trust via switchboard. For Huddersfield this is Calderdale and Huddersfield Foundation Trust via switchboard.

Please see Bristol Stool Form Scale on Appendix 18 and note that only stool samples of types 6 and 7 of the Scale will usually be processed by the microbiology laboratories). Samples of vomit are not required.

An identification number, known as the I- log number will be provided by UKHSA and must be added to the form and pot to ensure the sample is linked to others in the outbreak.

This number informs the laboratory that the sample is part of an outbreak, and should be written on every sample pot and form. Please ensure sample pots are securely closed, labelled and sent to the laboratory in the correct packaging. Contact the IPCT for further advice on completion of the laboratory form.

To reduce the delay in collection of stool samples we recommend that an 'outbreak' kit is kept and replenished after use. The kit should contain:

- Stool sample pots x 3
- Plastic transport bags x 3
- Laboratory forms (to be completed once sample is obtained) x 3.

The above can be obtained from your GP, District Nurse or Environmental Health Officer. All staff should be aware of the location of the kit. Anyone visiting the home should be made aware of the outbreak, including community nurses, podiatrists and any other peripatetic services.

Follow the advice given in the pathway, *Appendix 21*

- Isolate symptomatic residents in their own rooms with their own toilet facilities or a designated commode if en-suite facilities are not available.
- Environmental cleaning to be increased to twice per day. Particular attention should be paid to all hard surfaces, toilets, bathrooms, door handles, support handrails and unit kitchens. For the duration of the outbreak, environmental cleaning should be performed using detergent and hot water, followed by a chlorine-releasing solution (1 part household bleach to 10 parts water). A combined product may also be used.
- Where chlorine-releasing tablets are used follow the manufacturer's dilution instructions, to give a solution of 1000ppm.
- All staff hand washing areas and the rooms of symptomatic residents should have liquid soap and disposable paper towels available for the duration of the outbreak; the use of alcohol hand rub is not recommended during outbreaks, as it is not effective against either C.diff or Norovirus.
- Residents should be encouraged to wash their hands after using the toilet or commode, and before eating. Hand wipes can be used as an alternative to hand washing.

- Staff should pay attention to all infection control practices, particularly the washing of hands and wearing of protective clothing.
- Faecal samples should be obtained as above.
- Doors to the rooms of symptomatic residents/patients should be kept closed when risk assessed as possible.
- If it is not possible to isolate a resident/patient by closing the door then a written risk assessment should detail actions taken to minimise risk of transmission eg. Cohort nursing, use of separate lounge facility.
- The home should be closed to admissions and transfers until 48 hours after the last symptomatic resident has recovered. The IPC team will advise on this.
- Symptomatic staff must go off duty, a faecal sample should be taken and they must remain off work until symptom free for 48 hours.
- Visitors should be informed of the outbreak and unnecessary visits should be discouraged. Those who choose to visit should wash their hands as they enter and leave the home and comply with all other hygiene practices in place. They should be provided with an information leaflet (*Appendix 22*).
- Residents should only be discharged 48 hours after their last symptom and with the full consent of anyone who may be required to care for them in the community.
- If any resident requires admission to hospital both the ambulance crew and the receiving unit must be informed of the outbreak, so that they can institute appropriate measures. An Intercare transfer form or risk sticker should be provided (*Appendices 11 and 12*)
- The rooms of each resident that has been ill must be deep cleaned (**refer to section 3 - Decontamination**) before the home reopens to admissions.

Specific Guidance for Outbreaks of Respiratory Infections

Respiratory Infections in Care Homes

Respiratory infections often affect the elderly in residential settings. For most people the illness is mild, but in the elderly it can cause serious illnesses such as pneumonia and even death, because they may have underlying chest problems and compromised immunity. Between October and March every year respiratory viruses including influenza circulate. Whenever there is a cluster of cases of new respiratory illnesses, severe enough to warrant hospital admission or cause death, UKHSA should be contacted to assess the situation.

Flu outbreak

Flu like illness affects many people during the winter months. Two or more cases of flu-like illness occurring within 72 hours in residents or staff from the same care home, indicates that an outbreak of influenza is possible and this should be reported to the local IPCT/UKHSA. If staff in the care home suspect an outbreak, they should ensure that measures are in place to reduce the risk of spread to other residents. Included in these guidelines is an outbreak pack, which will help to ensure that staff are aware of what to do, and who to inform. (*Appendix 25*).

When influenza is known to be circulating in the community, treatment and prophylaxis may be required for outbreaks in residential homes. Where evidence of influenza circulating is not clear, laboratory confirmation may be necessary before treatment and prophylaxis are considered.

Signs and Symptoms of Influenza like illness (ILI)

An influenza-like illness (ILI) will present with the following signs and symptoms:

- Sudden onset of fever;
- Headache.

- Myalgia.
- Prostration.
- Cold or runny nose
- Sore throat.
- Cough.

Elderly patients may, however, not have a fever, and may present with unusual signs and symptoms such as loss of appetite or change in mental state.

Control Measures when Flu is suspected in a Care Home

- Notify IPCT/UKHSA when two or more residents are affected as soon as possible.
- Isolate ill residents in their rooms, or nurse them together on the affected unit, until they no longer have a fever if they are on antiviral medication or until 5 days after the onset of illness if they are not on antiviral medication.
- Separate symptomatic residents from asymptomatic residents during activities to prevent further spread or re-infection.
- Encourage residents to wash their hands frequently, and where they are unable, they should be assisted to wash them. Detergent hand wipes may be used.
- Re-offer vaccination to unvaccinated residents.
- Keep a record of onset date and the presenting signs and symptoms such as fever, cough etc.
- Staff on duty should pay attention to all infection control practices. They should wear gloves and apron when attending to symptomatic residents, and wash hands before and after each contact. The use of masks is based on risk assessment, or situations requiring close contact when aerosol-generating procedures are being carried out, such as suctioning or chest physiotherapy.
- Ill staff must not work until 5 days after the onset of their illness.
- Unvaccinated staff should be offered vaccination and repeated yearly to protect staff and residents in their care.
- Environmental cleaning should be increased, paying particular attention to hard surfaces, door handles, handrails and wheelchair arms using detergent and hot water, followed by 1000 ppm of available chlorine.
- Used or contaminated paper tissues should be disposed of as infectious waste.
- The home should be closed to admissions and discharges until the outbreak is declared over (10 days after the onset of illness in the last case). The length of closure, however, can be reviewed based on laboratory isolation of the offending virus or lack of lab confirmation.
- Visitors should be informed of the outbreak and unnecessary visits should be discouraged; ill visitors should be discouraged from visiting the home.

Prevention of Influenza like illness

People at risk, such as those over 65 years, people with chronic respiratory and cardiovascular diseases, chronic renal diseases, diabetics and immunocompromised are entitled to free yearly seasonal influenza vaccinations. Therefore it is strongly recommended that all residents in a care home who fall into these groups should be vaccinated to prevent any serious respiratory infection. Staff should also be vaccinated as part of an employer's Occupational Health programme and a record kept.

Stopping admissions, discharges or day care

In the event of an outbreak of gastro-enteritis, food poisoning or flu, it is advisable to stop admissions, day care and transfers to other homes or hospitals. UKHSA and IPC team will

also advise on criteria for restarting admissions and discharges. Should a resident require urgent transfer to an acute hospital ensure ambulance staff and hospital staff are aware of the outbreak.

Further advice

Further advice about any infectious disease can be obtained from UKHSA during normal office hours 0113 386 0300. On-call Public Health Specialists may be contacted for emergency infectious disease matters out of normal working hours. **Call the UKHSA on 0151 9091219 out of hours.** The UKHSA website provides up to date information about a wide range of infections and diseases. Visit [UK Health Security Agency - GOV.UK \(www.gov.uk\)](https://www.gov.uk) or www.gov.uk. In addition, the Local Authority Environmental Health Teams may have a range of information leaflets available on food-related illnesses.

Section 7 - Appendices

1. Annual statement
2. Exclusion periods
3. Standard Precautions at a glance
4. Standard precautions poster
5. Handwashing technique poster
6. Sharps handling poster
7. Flow chart for management of sharps injury, inoculation or bite
8. Handling of equipment prior to inspection, service, repair or return
9. Waste segregation colour code chart
10. List of cytotoxic/cytostatic drugs
11. Intercare transfer form
12. Intercare transfer/ risk stickers
13. Urine colour chart
14. Guidance at a glance – management of resident with a urinary tract infection
15. Urinary catheter insertion and management information
16. Enteral feeding guidance
17. Asepsis and aseptic poster
18. Bristol stool chart
19. Management of CDI guidance at a glance
20. CDI leaflet and alert card
21. Outbreak management care pathway
22. Norovirus information
23. Information for the management of head lice
24. Management of scabies
25. Management of Influenza Outbreaks
26. MRSA information leaflet and alert card
27. MRSA management – guidance at a glance
28. Extended-Spectrum Beta-Lactamases (ESBL's)
29. Carbapenemase resistant enterococci (CPE) information
30. Vancomycin Resistant Enterococci
31. Pantone Valentine Leukocidin
32. List of infectious diseases
33. Tackling Dehydration – Top Tips

Appendix 1; Example Annual Statement

This is a suggested template including the topics which should be covered in the Annual Statement, which each Care Home is required to produce as part of compliance with the Code of Practice on the prevention and control of infections under the Health and Social Care Act 2008 (updated 2015)

The Statement should contain a short review of:

Outbreaks of infection	<p>This should contain a brief summary of any outbreak of an infection such as any multiple cases of diarrhoea and vomiting, norovirus, or Clostridioides difficile <i>for example</i>.</p> <p>The summary should contain:</p> <ul style="list-style-type: none"> • the timescale of the outbreak • the number of people affected • the duration • the precautions taken to manage the outbreak and • any lessons learnt and action taken following an outbreak. • how the outbreak was communicated both to staff in the home and to families and visitors outside the home. <p>The summary should include new cases of infection which were diagnosed after admission to the care home. It should also detail the number of people admitted with infections.</p> <p>A summary of any other notifiable disease within the year should also be given here.</p>
Audits	<p>A summary of audits undertaken.</p> <p>This should include:</p> <ul style="list-style-type: none"> • the name of the audit tool; • the frequency of the audit; and • whether it was an internal audit or one undertaken by an external body. • action taken following audits
Risk assessments	<p>Risk assessments undertaken for prevention and control of infection.</p> <p>A summary of the assessment of the risks to persons receiving care with respect to prevention and control of infection.</p>

	<p>In addition, risk assessments should be undertaken for example:</p> <ul style="list-style-type: none"> ● each person who has a catheter; ● PEG feed; ● pressure sore; or ● other factor which makes them more susceptible to the risk of infection. <p>Also any person who has repeatedly been prescribed medication for infections should be identified and a review undertaken to determine how the risk of infection can be minimised in future.</p>
<p>Training</p>	<p>Training in infection prevention and control received by staff</p> <p>A summary of</p> <ul style="list-style-type: none"> ● the numbers of staff who received training ● the number who received refresher/update training and ● the numbers who are awaiting training. <p>Details on the nature of the training should be listed along with the source of the training.</p>
<p>Review and update of policies, procedures and guidance</p>	<p>Review and update of policies and procedures</p> <p>This should identify which policies/procedures/guidance were due for review in the period, the changes that were made and the new review date.</p>
<p>Actions taken</p>	<p>Any actions taken following an outbreak of infection or following recommendations from an audit.</p> <p>The specific actions should be stated where changes in practice have been implemented, and new learning outcomes should be described where training materials have been updated.</p>
<p>Communication</p>	<p>The statement should provide brief details on how the outbreak was communicated, both to staff in the home and to families and visitors outside the home.</p>

Appendix 2

The following table provides advice on the minimum periods of exclusion from work for staff members suffering from an infectious disease.

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
SARS CoV2 COVID 19 Notifiable	Coronavirus (COVID-19) symptoms in adults - NHS (www.nhs.uk) Coronavirus (COVID-19) symptoms in children - NHS (www.nhs.uk)	2 – 14 days	Airborne particles Contaminated areas/fomites/surfaces where particles have settled	Coronavirus (COVID-19) - NHS (www.nhs.uk)	Coronavirus (COVID-19) - NHS (www.nhs.uk) Follow online guidance from gov.uk new and changing advice as ongoing research following global pandemic.
DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
ESCHERICHIA COLI ENTERITIS (Including Enterotoxigenic and Enteropathogenic)	Abdominal pain, fever, diarrhoea, vomiting	10 – 72 hours	Faecal oral spread via contaminated food and water or person to person spread	Cases - enteric precautions Contacts – None	Cases - 48 hours after first normal stool Contacts – None

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
<p>E COLI O157 VTEC</p> <p>Notifiable (1 & 2)</p> <p>Leaflet available</p>	<p>Abdominal pain, diarrhoea, bloody diarrhoea, Haemolytic Uraemic Syndrome (HUS)</p>	<p>12 hours to 14 days, usually 3 – 5 days</p>	<p>Swallowing the bacteria</p> <ul style="list-style-type: none"> • During and/or after direct contact with infected animal faeces e.g. caring for infected animals or spraying slurry • During and/or after indirect contact with infected animals faeces e.g. from clothing contaminated with cattle faeces, during picnics or BBQ's in the countryside • When eating raw or undercooked meat contaminated with the bacteria. • By drinking or eating unpasteurised (raw) or poorly pasteurised milk or milk products which are contaminated with the bacteria e.g. cheese. • On unwashed vegetables or fruit fertilised with infected manure <p>Drinking rural or private water supplies contaminated with infected faeces</p> <p>Person to person spread can occur within families or community groups</p>	<p>Management is based on risk assessment by Health Board appointed Competent Person therefore discuss all cases and contacts with HPT</p> <p>Cases– Enteric precautions</p> <p>Symptomatic contacts - Enteric precautions</p> <p>Test all close contacts i.e. those that have had direct or indirect contact with infected faeces and symptomatic household members</p> <p>Guidance for the Public Health Management of Infection with Verotoxigenic <i>Escherichia coli</i> (VTEC) http://www.documents.hps.scot.nhs.uk/about-hps/hpn/vtec.pdf</p>	<p>Exclusion based on risk assessment so discuss all cases and contacts with HPT</p> <p>Cases ABCD - exclude until 2 consecutive negative faecal samples 24 hours apart</p> <p>Primary school children whose hygiene is doubtful manage as group A</p> <p>48 hours after first normal stool if not in groups ABCD</p> <p>Symptomatic Contacts - Exclude as case</p> <p>Asymptomatic Contacts - Groups ABCD exclude until 2 consecutive negative faecal samples 24 hours apart.</p> <p>Note: <i>If case is in group A or B screening of contacts who are in groups A or B will not start until the case is asymptomatic or removed from the household.</i></p> <p><i>All exclusions will be reviewed every three weeks</i></p> <p><i>Cases in Group A&B should not swim in public swimming pools until exclusion lifted. All other cases 48 hours symptom free.</i></p>

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
GIARDIASIS Notifiable (2) Leaflet available	Mucoid diarrhoea, abdominal cramps, nausea, weight loss	3 – 25 days, usually 7 – 10 days	Faecal - oral spread mainly person to person. Contaminated food and water	Cases - Enteric precautions Contacts - None	Cases - 48 hours after first normal stool Contacts - None
HEPATITIS A Notifiable Notifiable (2) Leaflet available	Fever, malaise, anorexia, jaundice, nausea	15 – 50 days, usually around 30 days	Person-to-person faecal oral transmission Eating: <ul style="list-style-type: none"> • food contaminated by an infected person. • foods such as salads and fruits, which have been washed in contaminated water. • contaminated shellfish Drinking water contaminated by infected faecal material Sharing drug injecting equipment, including needles, syringes, filters, spoons etc. Through sexual intercourse <ul style="list-style-type: none"> • Through anal sex, usually men who have sex with men. 	Cases – enteric precautions. Do not share any equipment that may be contaminated with blood e.g. razors, needles Contacts - HPT will advise on immunisation and/or the use of immunoglobulin Asymptomatic contacts that attend pre school establishments require supervised hand washing	Management and exclusion based on risk assessment so discuss all cases and contacts with HPT Cases - exclude until 7 days after onset of jaundice Or 7 days after onset of symptoms if no jaundice Contacts - none BUT it may be necessary to exclude children under 12 months and food handlers in specific settings Symptomatic Contacts - Exclude as case Asymptomatic - None

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
HEPATITIS E Notifiable (2)	Fever, malaise, anorexia, jaundice, nausea	15-60 days Usually around 30-40 days	Faecal -oral <ul style="list-style-type: none"> • Drinking/eating contaminated food & water • Occasionally person to person 	Cases- enteric precautions Contacts – none	Exclusion based on risk assessment so discuss all cases and contacts with HPT Cases- risk assess Contacts - none Note: NE&N central London HPU 2006 Exclusion for all cases and those ABCD up to 14 days after first symptoms. Advise to avoid contact with pregnant women.
NOROVIRUS Notifiable (2) Leaflet available	Vomiting and/or diarrhoea abdominal cramps, headaches, fever, nausea	4 - 48 hours after exposure to the virus. Symptoms usually resolve in 12-60 hours	Person to person via faecal-oral route <ul style="list-style-type: none"> • Swallowing the virus after picking it up from contaminated surfaces or objects and not washing hands thoroughly before preparing or eating food. • Eating food contaminated by others • Swallowing suspended viral particles dispersed after vomiting Consumption of shellfish harvested from contaminated water	Cases - enteric precautions Contacts - None	Cases - 48 hours after first normal stool Contacts - none

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
<p>SALMONELLA INFECTION Notifiable</p> <p>Notifiable (2)</p> <p>Leaflet available</p>	<p>Diarrhoea, abdominal pain, nausea, fever</p>	<p>6 - 72 hours, usually 12 - 36 hours</p>	<ul style="list-style-type: none"> • Consumption of contaminated food i.e. under cooked poultry, eggs, or meat. • Person to person especially when case has diarrhoea • Exposure to exotic pets e.g. reptiles 	<p>Cases- enteric precautions</p> <p>Contacts- None</p>	<p>Cases -48 hours after first normal stool</p> <p>Cases in A&B require supervised hand washing</p> <p>Symptomatic contacts - 48 hours after first normal stool</p> <p>Asymptomatic contacts – None</p>
<p>SALMONELLA TYPHI & PARATYPHI</p> <p>Notifiable (1 & 2)</p> <p>Leaflet available</p>	<p>Rigors, fever, cough, rash, variable gastro-intestinal symptoms (can include constipation)</p>	<p>3 – 56 days, usually 1 – 3 weeks</p>	<p>Faecal – oral, occasionally foodborne</p>	<p>Discuss with HPT</p> <p>Cases - Enteric precautions. May be hospitalised</p> <p>Contacts- Test all household contacts and those with common exposure in the month prior to the case's disease onset.</p>	<p>Discuss with HPT</p> <p>Cases - Groups ABCD until microbiological clearance</p> <p>Group C - 6 consecutive negative faecal specimens Group ABD - 3 consecutive negative faecal specimens</p> <p>Each sample obtained 1 week apart, commencing 3 weeks after completion of treatment</p> <p>Contacts - Exclude Groups ABCD until 2 negative stools at 48 hour apart. Start sampling after case has commenced treatment.</p>

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
STAPHYLOCOCCUS AUREUS Notifiable (2)	Vomiting, abdominal pain, diarrhoea	1 – 6 hours	Pre-cooked foods, custards etc	Cases - enteric precautions Contacts - None	Cases 48 hours after first normal stool Contacts - Group C exclude food handlers with septic lesions on exposed skin until successfully treated.
YERSINIA Notifiable Notifiable (2) Leaflet available	Watery diarrhoea abdominal pain fever	2 – 11 days usually 3– 7 days	Faecal –oral via <ul style="list-style-type: none"> • Consumption of contaminated food especially pork or pork products • Drinking contaminated water • Direct contact with infected animals • Person to person 	Cases - enteric precautions Contacts - None	Cases - 48 hours after first normal stool Contacts - None

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
<p>CHICKENPOX (Varicella Zoster)</p>	<p>Sudden onset – fever, malaise, generalised rash. Initially macular, lesions become papules then vesicles. Rash develops in successive “crops” usually starting on the face and scalp so lesions at all stages are present during the first few days.</p>	<p>2 – 3 weeks, usually 13-17 days</p>	<p>Person to person by direct contact, droplet or airborne spread of respiratory or vesicular fluids</p> <p>Spread. High risk, mainly due to airborne spread of respiratory secretions, from 1 – 2 days before onset of rash and the first 5 days</p> <p>Note: Infectivity may be prolonged in the immunocompromised.</p>	<p>Discuss with HPT</p> <p>Cases Pregnant, neonate and immunocompromised – see GP urgently. In addition to the above risk groups, Acyclovir should be considered for all adults over 16 years if treatment can commence within 24 hours of onset of rash.</p> <p>Contacts Pregnant, neonate and immunocompromised - see GP urgently. VZIG may be indicated</p> <p>Healthcare settings HCW’s with no previous history of chickenpox or shingles who have contact with a case should be tested for antibody; if negative exclude from contact with those at increased risk of serious disease for 8-21 days after contact All non-immune HCW’s should be offered immunisation.</p> <p>Ref: Immunisation against Infectious Disease SEHD (2004) PHLS Guidance (2002)</p>	<p>Community Settings</p> <p>Cases 5 days from the onset of rash. If immunocompromised – until lesions have crusted.</p> <p>Contacts - None Note: Susceptible contacts are potentially infectious 8-21 days after contact (8-28 days if VZIG has been given) and should be advised to avoid contact with those at increased risk during this period where possible.</p> <p>Healthcare Settings Cases should be isolated from those at increased risk of severe disease: antibody negative pregnant women, neonates and immunocompromised until lesions have crusted over</p> <p>Note: Susceptible contacts (including staff) are potentially infectious 8 -21 days after contact (8 –28 days if VZIG has been given) and should be excluded from contact with those at increased risk during this period.</p>

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
<p>SHINGLES (Herpes Zoster)</p>	<p>Pain, occasionally flu like symptoms accompanied by clusters of clear vesicles</p>	<p>Reactivation of Varicella Zoster Virus (the virus that causes chickenpox). 14-16 days depends on immunity</p>	<p>Contact with vesicle fluid or indirectly via articles freshly soiled with vesicle fluid</p> <p>Much lower risk of spread than in chickenpox. Spread may be possible until all lesions have crusted usually about 1 week following the onset of the rash.</p> <p>Immunocompromised individuals may be infectious 1 – 2 days prior to rash and it may be several weeks until all lesions crust.</p>	<p>Cases Basic principles Pregnant, neonate and immunocompromised – see GP urgently. In these groups consider Aciclovir at any stage of illness. Consider for other cases if given within 72 hours</p> <p>Contacts Pregnant, neonate and immunocompromised – see GP. VZIG may be indicated</p> <p>Ref: Immunisation against Infectious Disease</p>	<p>Cases For exposed lesions (e.g. face) – exclude for 5 days from onset of rash. If immunocompromised – until lesions have crusted. If lesions can be covered no exclusion is usually necessary.</p> <p>Contacts None. Note: Susceptible contacts are potentially infectious 8-21 days after contact (8-28 days if VZIG has been given) and should be advised to avoid contact with those at increased risk during this period where possible.</p> <p>Healthcare Settings Cases should be isolated from those at increased risk of severe disease: antibody negative pregnant women, neonates and immunocompromised until lesions have crusted over.</p> <p>Note: Susceptible contacts (including staff) are potentially infectious 8 -21 days after contact (8 –28 days if VZIG has been given) and should be excluded from contact with those at increased risk during this period.</p>

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
COLD SORES (Herpes Simplex)	Fever, malaise, blister-like lesions on lips and in the mouth, including the tongue.	2 – 12 days	Direct contact with saliva and fluid from blisters. Virus can be found in saliva after recovery and during reactivations (which may be subclinical) for the rest of life.	Cases Treat any secondary bacterial infection. Basic principles Contacts - None	Cases Children with open sores who "mouth" toys, bite or drool. Contacts - None (HPA 2010)
CONJUNCTIVITIS (Children) Leaflet available	Watering eyes, swelling of the conjunctiva, swelling of the eyelids and yellow/green discharge.	24 – 72 hours	Contact with discharge from the conjunctiva and respiratory secretions. Contact with contaminated fingers, clothing and other items. Spread, high during acute stage of infection	Cases Topical antibiotic - if appropriate Basic principles Contacts - Basic principles	Cases Until symptoms settle or until treated with an antibiotic for 24 hours (if indicated). Contacts - None
DIPHTHERIA (Corynebacterium diphtheriae) Notifiable (1 & 2) URGENT	Nasal discharge, sore throat, patches of adherent greyish membrane to uvula and soft palate. Swelling of soft tissues in the neck ("bull-neck" appearance)	2 – 5 days, although sometimes longer	Prolonged direct person – person transmission by intimate respiratory and physical contact. More rarely contact with articles soiled with discharge from lesions of infected people. Raw milk can be a vehicle. Spread, high in non-immunised individuals.	Discuss cases and contacts with HPT HPT will assess all cases and contacts to establish the need for chemoprophylaxis and immunisation	Discuss cases and contacts with HPT Cases Until 2 negative nose and throat swabs (+ skin lesions if cutaneous) taken 24 hours apart, 24 hours after completing treatment. Contacts HPT to assess (Bonnet & Begg 1999)

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
<p>FIFTH DISEASE (Parvovirus B19, Slapped Cheek Syndrome, erythema infectiosum) Leaflet Available</p>	<p>Striking erythema of the cheeks (slapped-face appearance) Mild usually non-febrile illness</p> <p>Adults may have some joint pain/swelling</p>	<p>4 - 20 days more commonly 13 - 18 days</p>	<p>Person to person by direct contact, droplet or airborne spread particularly in closed environments e.g. classrooms</p> <p>Contact with infected respiratory secretions.</p> <p>Mother to foetus</p> <p>Spread most likely 1 – 2 weeks before the rash appears. By the time the rash appears the person is not infectious.</p>	<p>Discuss with HPT Cases Pregnant Blood disorder Immune suppression All see GP urgently</p> <p>Contacts Pregnant Blood disorder Immune suppression All see GP urgently</p> <p>Management of Healthcare Workers (PHLS 2002) (HPA 2010)</p>	<p>Cases - None</p> <p>Contacts - None</p>
<p>GLANDULAR FEVER (Infectious Mononucleosis)</p>	<p>Fever, sore throat, malaise, rarely jaundice can occur</p>	<p>4 – 6 weeks</p>	<p>Person to person via saliva. Saliva on toys etc can cause infection in children.</p>	<p>Cases - Basic principles</p> <p>Contacts - None</p>	<p>Cases - None</p> <p>Contacts - None</p>
<p>BLOOD BORNE VIRUS (HIV, HEPATITIS B & C) HBV and HCV notifiable (2) Leaflets available</p>	<p>No specific symptoms</p> <p>Symptoms can be vague but there maybe tiredness/ muscle aches/ fever/ loss of appetite/ abdominal pain/ jaundice</p>	<p>Varies from virus to virus.</p> <p>Many individuals unaware of infection status.</p>	<p>Unprotected sexual intercourse, heterosexual and homosexual.</p> <p>Sharing injecting paraphernalia</p> <p>Vertically from mother to child</p> <p>Blood to blood i.e. from a sharp injury.</p>	<p>Standard Infection Control Procedures should be practiced at all times (NHS Grampian 2010)</p> <p>In event of significant exposure advice should be sought from GP, A&E or OHS.</p>	<p>Cases - None</p> <p>Contacts - None</p>

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
HAND, FOOT AND MOUTH DISEASE (Coxsackie Virus) Leaflet available	Sudden onset - fever, sore throat, lesions in the mouth Rash on the fingers, palms and the soles of the feet.	3 – 5 days	Direct contact of with faeces, blisters and respiratory droplets of the infected person Not to be confused with Foot & Mouth Disease.	Cases - Basic principles Contacts - None	Cases - None. Contacts - None (HPA 2010)
HEAD LICE Leaflet available	Head lice (pediculosis) - GOV.UK (www.gov.uk)				
IMPETIGO (Staphylococcal or Streptococcal infection)	Blister-like lesions then yellow/green discharge. Skin surrounding the lesions is red and inflamed	4 – 10 days	Person-to-person contact. Sharing of towels, clothes and other similar objects Spread. As long as lesions are discharging or a carrier state persists.	Cases - Basic principles Contacts - Basic principles	Cases Until skin is healed or 48 hours after starting treatment (HPA 2010) Contacts - None
INFLUENZA Notifiable (2) Leaflet Available	Fever, headache, muscle pain, exhaustion, runny nose, sore throat, and cough.	1 – 4 days	Airborne, droplet spread particularly in closed environments. Close contact with respiratory secretions. Cases are infectious from 1 day before the onset of symptoms until 3 - 5days after onset in Adults (Hawker et al 2005)	Cases - Basic principles Contacts - Basic principles	Cases - None Contacts - None Subject to change during an influenza pandemic.

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
<p>MEASLES</p> <p>Notifiable (1 & 2) URGENT</p>	<p>Fever, conjunctivitis, runny nose, and cough. White "Koplik" spots on the buccal mucosa, which fade as the rash appears around day 3 of illness. Rash appears in the hairline rapidly spreading to face, trunk and limbs fading over 7-10 days</p>	<p>10 days (ranging between 7 and 18 days) with a further 2 – 4 days before the rash appears.</p> <p>(Chin, 2000. cited in Greenbook 2006)</p>	<p>Airborne, droplet spread and direct contact with respiratory secretions of <i>an individual with measles infection</i>.</p> <p>Cases are infectious from 5 days before the onset of rash until 4 days after the rash develops (HPS May 2010)</p>	<p>Discuss with HPT Cases</p> <p>Salivary testing kit to HPA Colindale to confirm diagnosis. Basic principles.</p> <p>Contacts</p> <p>In some circumstances MMR or HNIG may be indicated following discussion with HPT. (HPN May 2010)</p> <p>Basic principles.</p>	<p>Discuss with HPT Cases</p> <p>Until 4 days after onset of rash (HPN May 2010)</p> <p>Contacts - None</p> <p>Healthcare workers need to liaise with Occupational Health Department. Exclusions will be put in place for those with no evidence of past infection or MMR x 2</p> <p>(HPN May 2010)</p>
<p>MENINGOCOCCAL INFECTION</p> <p>Notifiable (1 & 2) URGENT</p> <p>Leaflets available</p>	<p>Fever, severe headache, nausea, vomiting, stiff neck, and petechial rash. Delirium, shock and coma.</p>	<p>2 – 10 days commonly 3 – 5 days.</p> <p>Disease more common in winter months.</p>	<p>Direct contact with respiratory secretions, including droplets.</p> <p>Spread is low. Requires frequent close, prolonged personal contact e.g. household</p>	<p>Discuss cases and contacts with HPT</p> <p>HPT will assess all cases and contacts to establish the need for chemoprophylaxis and immunisation</p> <p>Please refer to NHS Grampian Public Health Management of Meningitis Policy (2009)</p>	<p>Discuss with HPT Cases - None</p> <p>Contacts - None</p>

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
MOLLUSCUM CONTAGIOSUM	<p>Smooth, firm, spherical, painless lesions (flesh-coloured, white, yellow or translucent) with a dip in the middle. Lesions may appear in crops and persist for months. Lesions may spread to other parts of the body.</p> <p>Adults – lesions on the lower trunk, pubic area, and inner thighs. Children - lesions initially mainly on the trunk.</p>	It is estimated to be between 2 weeks and 6 months. (CDC 2006)	<p>Direct skin to skin contact –with someone who already has the condition. Secondary spread autoinoculation (accidental transfer of infected material from lesions from one body site to another i.e. by scratching or shaving)</p> <p>Indirect contact with items handled by an infected person i.e. towels, clothing, and toys.</p>	<p>Cases - Basic principles</p> <p>Contacts - None</p>	<p>Cases Avoid skin to skin contact with others</p> <p>Contacts - None (HPA 2010)</p>
<p>MUMPS</p> <p>Notifiable (1 & 2)</p> <p>Leaflet available</p>	Fever, swelling and tenderness of one or both salivary glands, orchitis (20-30% adult males), oophoritis (5% adult females)	12 – 25 days commonly 18 days	<p>Droplet spread and direct contact with saliva.</p> <p>Infectious from 5 days before swelling appears to 9 days after.</p>	<p>Cases Salivary testing kit to HPA Colindale to confirm diagnosis. HPT will send kit to GP on notification, Basic principles</p> <p>Contacts - None</p>	<p>Cases 5 days after onset of swelling 10 days if contact with unvaccinated population e.g. babies.</p> <p>Contacts - None (HPA 2010)</p>
<p>POLIOMYELITIS</p> <p>Notifiable (1 & 2)</p> <p>URGENT</p>	Fever, malaise, headache, nausea, vomiting, muscle pain and stiffness and sudden onset flaccid paralysis	3 – 35 days, commonly 7 – 14 days	<p>Faecal-oral spread, close contact with pharyngeal secretions</p> <p>Spread. High in the few days before and after onset of symptoms. Can be transmitted as long as virus present in stools and nasopharynx.</p>	Discuss cases and contacts with HPT	Discuss cases and contacts with HPT

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
RINGWORM	Fungal infection. Flat, spreading ring shaped lesions	4 - 10 days.	Direct and indirect contact with lesions of infected people and animals Spread. Fairly high as fungus survives for long periods of time.	Cases Complete treatment. Basic principles <i>NB for ringworm of scalp treatment by GP required.</i> Contacts - None	Cases Until treatment commenced Contacts - None
RUBELLA Notifiable (1 & 2)	A mild prodrome of malaise and fever 1-2 days prior to appearance of rash (especially adults) Diffuse maculopapular rash (resembling measles or scarlet fever), lymph-adenopathy (may be generalised), arthropathy (especially adult women)	14 – 23 days, commonly 16 – 18 days	Droplets spread or direct contact with respiratory secretions. Virus also found in urine of infants with Congenital Rubella Syndrome (CRS) but is not generally a source of infection Spread. High in closed environments and from infants with CRS. From 1 week before to 6 days after onset of rash.	Cases If pregnant see GP urgently. Salivary testing kit to HPA Colindale to confirm diagnosis. Contacts If pregnant see GP urgently. (PHLS 2002, HPA 2010)	Discuss with HPT Cases 6 days from onset of rash. (HPA 2010) Contacts - None
SCABIES Leaflet available	Intense itching, particularly at night. Rash will be present on the fingers, elbows, knees, ankles waist, under the breast and the genital area.	2 – 6 weeks before onset of itching if not previously exposed. 1 – 4 days after re-exposure	Prolonged direct skin to skin contact. Sexual contact. Spread. The risk of further spread is more likely among families and intimate contacts. Individuals with poor	Cases Treatment should be reapplied one week later (BNF 2010) Contacts Only household and close personal contacts need to be treated.	Cases Until first treatment is complete. (HPA 2010) Contacts - None If outbreak suspected discuss with HPT

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
			<p>immunity are susceptible.</p> <p>Bedding and clothing are not considered a major risk of transmission.</p>	<p>Please refer to (NHS Grampian Scabies Policy 2005)</p>	
<p>GROUP A STREPTOCOCCAL INFECTION</p> <p>Leaflet available for Scarlet Fever</p>	<p>Wide range of infections including: Sore throat Impetigo Erysipelas Scarlet Fever</p>	<p>1 – 4 days</p>	<p>Contact with secretions from the nose and throat of infected persons (direct, indirect or droplet), airborne spread has also been suggested)</p> <p>Contact with infected wounds or skin lesions</p>	<p>Cases Treatment with appropriate antibiotic</p> <p>Contacts - None</p>	<p>Cases Throat Infections -minimum 24 hours after start of antibiotics. (HPA 2010)</p> <p>Skin Infections</p> <p>Scarlet Fever - minimum 24 hours after start of antibiotics (HPA 2010)</p> <p>Impetigo - until skin is healed or 48 hours after starting treatment (HPA 2010)</p> <p>Contacts - None</p>

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
<p>INVASIVE GROUP A STREPTOCOCCUS (iGAS)</p> <p>Necrotising fasciitis Notifiable (1)</p> <p>URGENT</p>	<p>iGAS Necrotising fasciitis Bacteraemia</p>	<p>1 – 4 days</p>	<p>Contact with secretions from the nose and throat of infected persons (direct, indirect or droplet), airborne spread has also been suggested)</p> <p>Contact with infected wounds or skin lesions</p> <p>Spread, 7 days before onset of iGAS until 24 hours after start of antibiotics (NHS Grampian May 2010)</p> <p>Increased risk of sporadic iGas - aged 65+ ,recent Varicella infection, HIV +ve, diabetes heart disease, cancer high dose steroids, IV drugs. (HPA, 2004)</p>	<p>Cases Treatment with appropriate antibiotic</p> <p>Contacts Discuss contacts with HPT Close contacts may require antibiotic chemoprophylaxis. (NHS Grampian 2010)</p>	<p>Cases Minimum of 24 hours after start of antibiotics. (HPA 2010)</p> <p>Contacts - None</p>
<p>GROUP B STREPTOCOCCUS (GBS)</p>	<p>GBS can cause meningitis pneumonia septicaemia</p>	<p>Neonates Early onset: 0 – 7 days. 90% of cases < 24hours</p> <p>Late onset: 1 – 12 weeks, more commonly 3 – 4 weeks</p>	<p>Asymptomatic GBS carriage is common in pregnant women.</p> <p>Vertical transmission, neonates acquire the disease as they pass through the birth canal.</p> <p>Intra partum antibiotic treatment of women</p>	<p>Cases Treatment with an appropriate antibiotic</p> <p>Contacts - None</p>	<p>Cases - None</p> <p>Contacts - None</p>

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
			colonised with GBS appears to reduce neonatal infection.		
THREADWORMS	Peri-anal itching, sleep disturbance	Worms lay eggs in e intestines, which develop into infective embryos within 6 hrs	Eggs are transferred to fingers during anal itching then transferred into the mouth on the hands. Spread More likely in households on hands, bedding and clothing.	Cases Initial course of treatment to be repeated 2 weeks later. Contacts Household members should be treated at the same time.	Cases - None Contacts - None (HPA. 2010)
TUBERCULOSIS (Respiratory) i.e. Mycobacterium tuberculosis of the lung disease Notifiable (1 & 2) Leaflet available	Persistent cough usually with sputum. Sometimes haemoptysis, malaise, unexplained weight loss, fever/night sweats	4 – 12 weeks but can reactivate years after exposure	Airborne, droplet spread following inhalation of bacilli Spread. Low risk, but more likely in household and close contacts	Discuss with HPT Cases Ongoing by Chest consultant and TB Specialist Nurse (HPT) for a minimum of 6 months. Contacts TB Specialist nurse will identify at risk contacts and screen as appropriate.	Cases Usually until 2 weeks after start of treatment regime. MDRTB - Discuss with CPHM Contacts - None (HPN 2009)
TUBERCULOSIS (Non-Respiratory) i.e. Mycobacterium tuberculosis not affecting the lung Notifiable (1 & 2) Leaflet available	Dependant on site of TB. Usually includes unexplained weight loss, malaise and fever/night sweats.	4 – 12 weeks but can reactivate years after exposure	Airborne, droplet spread following inhalation of bacilli Spread. Not infectious but TB Specialist Nurse will screen household contacts to try to determine index case	Discuss with HPT Cases Ongoing by Chest consultant and TB Specialist Nurse (HPT) for a minimum of 6 months Contacts TB Specialist Nurse will identify at risk contacts and screen as appropriate.	Cases - None Contacts - None (HPN 2009)

DISEASE	CLINICAL FEATURES	INCUBATION PERIOD	COMMON SOURCES & MEANS OF SPREAD	MANAGEMENT	EXCLUSION
TUBERCULOSIS Environmental (atypical) i.e. infection with Mycobacterium other than TB	Dependant on site of TB. May include unexplained weight loss, malaise and fever/night sweats.	4 – 12 weeks but can reactivate years after exposure	Usually through water or soil. Spread. Not infectious	Cases Ongoing by Chest consultant and TB Specialist Nurse (HPT) for a minimum of 6 months Contacts - None	Cases - None Contacts - None
WARTS	Many different types of wart. Generally a raised, rough textured papule, sometimes in clusters. May persist for months or years.	1 – 20 months, usually 2 – 3 months.	Direct contact. Contact with contaminated items such as razors, floors etc have been implicated. Some types can be transmitted sexually. Increased risk of spread in immunosuppressed individuals.	Cases Plantar warts (also known as verrucae) should be covered when swimming etc. Basic principles. Contacts - None	Cases - None Contacts - None (HPA. 2010)
WHOOPING COUGH (Pertussis) Notifiable (1 & 2) URGENT	Insidious onset, cough becoming paroxysmal. Cough following by high pitched inspiratory “whoop” and/or vomiting.	6 – 20 days, commonly 7 – 10 days	Airborne/droplet spread and direct contact with respiratory secretions Spread. High in period before onset of paroxysmal cough. After this, communicability decreases to negligible risk by 3 weeks.	Discuss with HPT Cases 7 day course of antibiotics Contacts – None Dodhia et al (2002)	Discuss with HPT Cases 5 days after starting treatment or 21 days from onset of illness if no antibiotic treatment. (HPA 2010) Contacts Depends on vaccination status. May require 7-day course of antibiotics.

Appendix 3 Guidance at a glance Standard Precautions

GUIDANCE AT A GLANCE - STANDARD PRECAUTIONS

These guidelines support the prevention and control of infection in community and primary care settings. The principles reflect best practice/national guidelines.

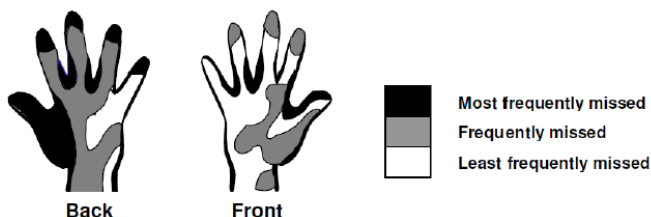
KEY POINTS

Standard Precautions are a range of measures that reduce the risk of transmission of infection from known and unknown sources. They are basic Infection Prevention and Control (IPC) precautions and should be used on *all* patients.

ALL blood and body fluids are potentially infectious.

Hand hygiene

Effective hand cleaning significantly reduces infection rates. See the WHO 'Five Moments for hand hygiene'. Technique is vital – this should cover all areas of the hands including the wrists.



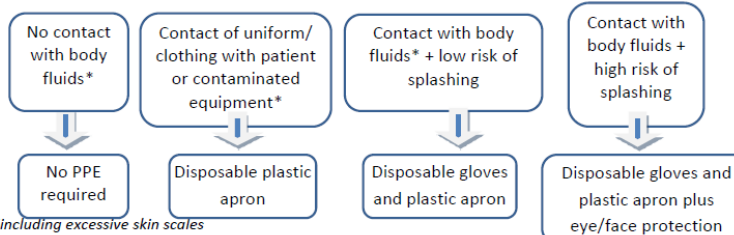
Alcohol hand rubs should *not* be used if the patient has diarrhoea and/or vomiting as they do not work.

Other standards include: keep nails short; sleeves rolled up; no nail varnish/gel/false nails; no stoned rings, no watches/bracelets.

Hand washing facilities should be dedicated, of adequate size and supplied with liquid soap and paper towels.

Personal Protective Equipment

Consists of gloves, disposable aprons, face protection. What is worn is dependent on a 'risk assessment' of the task to be performed to establish if there is to be contact with blood or other body fluids:



PPE must be changed between procedures and patients

Blood and bodily fluids spillage

'Spill kit' should be used for a blood or body fluid spillage. If you do not have one: wear PPE, mop up excess spill with paper towels, ventilate the area and disinfect with a chlorine releasing agent following the manufacturer's instructions (usually 10,000 ppm), followed by detergent and water and allow to dry.

Infection Prevention and Control Team for resources and advice on
Tel: 01484 221000 Ext: 75296 or email infection_control@kirklees.gov.uk
Thanks to Calderdale IPC tem for allowing adaptation of this guide

Standard Precautions



Sharps safety

The following procedures will reduce risk of injury:

- YOUR sharps are YOUR responsibility. YOU dispose of them at the point of care
- Never resheath or bend razors and other sharp needles prior to disposal
- Use sharps safety devices (EU directive 2013) where available, ensuring staff are suitably trained.

The BIN

- Use the temporary closure mechanism between use to reduce the risk of accidental spillage
- Sign and date the bin on assembly + closure. Close when the fill line is reached.
- Store the bin out of the reach of children and NOT on radiators/sunny window ledges (heat can damage the fabric of the bin)

Standard infection prevention & control precautions

A simple, consistent and effective approach to infection prevention & control



Hand hygiene



Use of gloves



Personal protective equipment



Use of gowns/apron



Safe handling of sharps



Safe handling of waste



Safe handling of soiled linen



Environmental cleaning

Minimise contact with blood and body fluids by ensuring safe working practices, protective barriers and a safe working environment

Appendix 4


Appendix 5 Hand washing step by step guidance



Best Practice: How to hand wash step by step images

Steps 3-8 should take at least 15 seconds.

1



Wet hands with water.

2



Apply enough soap to cover all hand surfaces.

3



Rub hands palm to palm.

4



Right palm over the back of the other hand with interlaced fingers and vice versa.

5



Palm to palm with fingers interlaced.

6



Backs of fingers to opposing palms with fingers interlocked.

7



Rotational rubbing of left thumb clasped in right palm and vice versa.

8




Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.

9



Rinse hands with water.

10



Dry thoroughly with towel.

11



Use elbow to turn off tap.

12



Steps 3-8 should take at least 15 seconds.

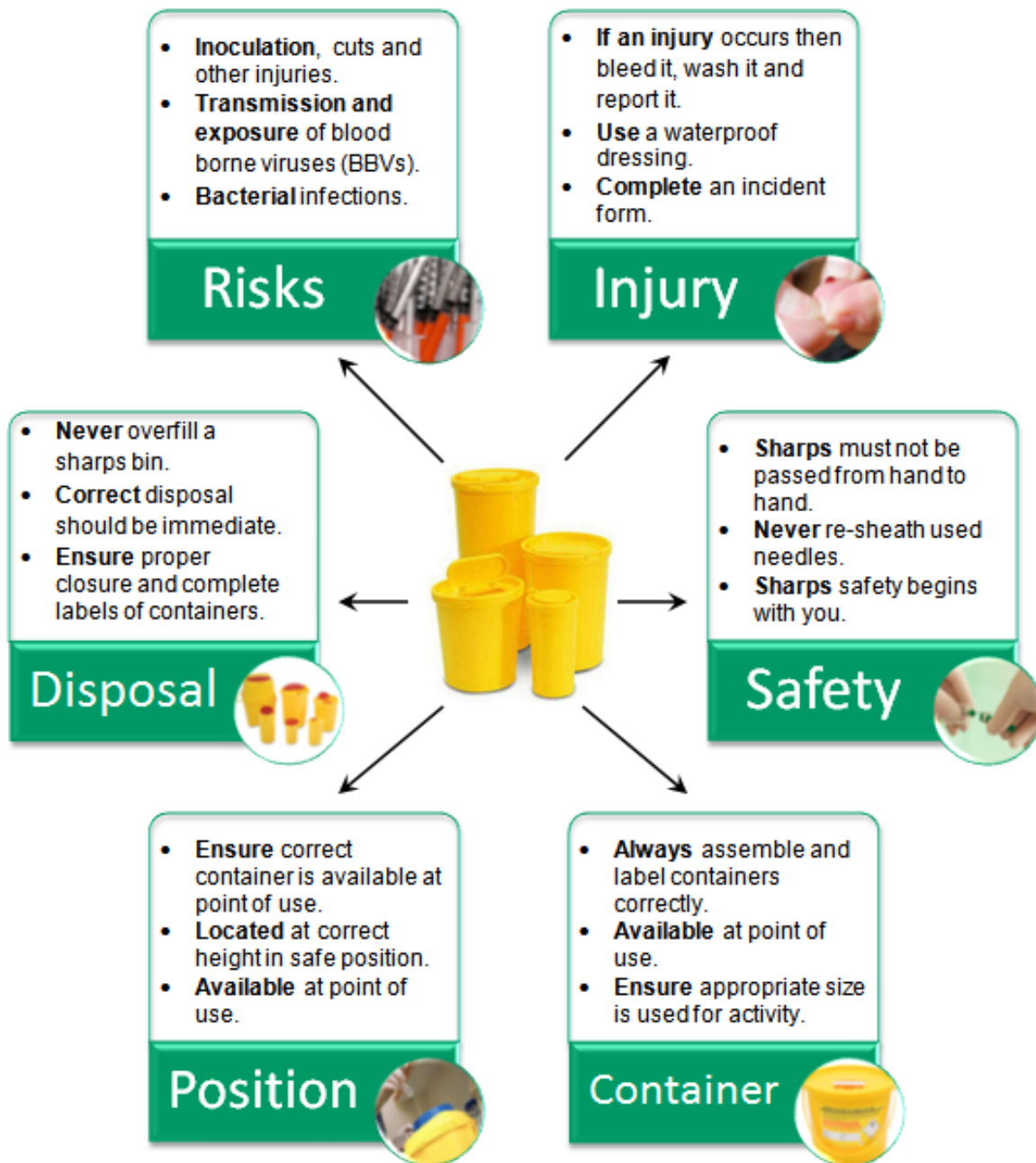
... and your hands are safe*.

Adapted from the World Health Organization/Health Protection Scotland
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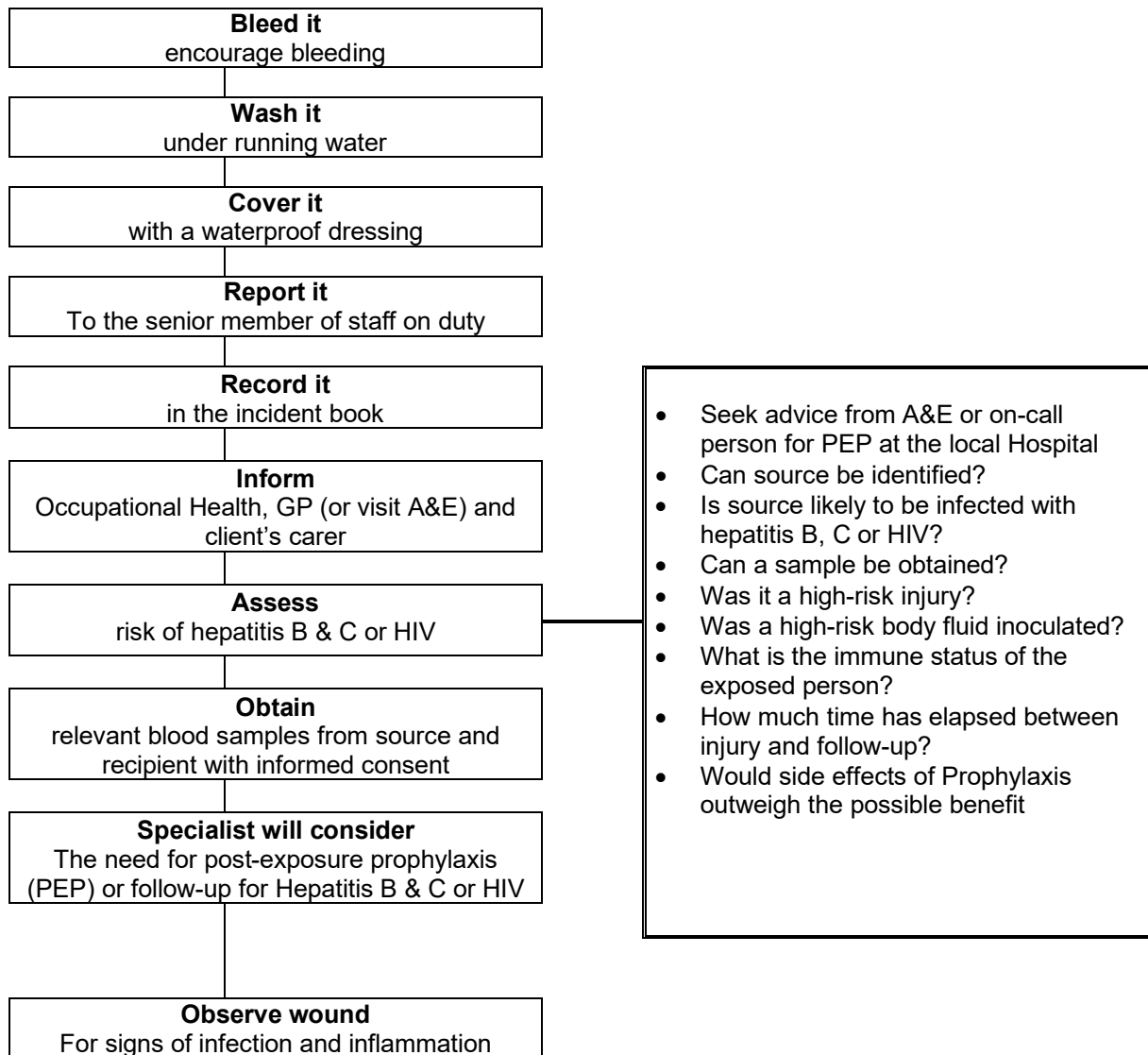
*Any skin complaints should be referred to local occupational health or GP.

Safe handling and disposal of sharps

Staff should be trained in the safe handling and disposal of sharps. Venepuncture and injections should only be carried out by trained and competent staff.

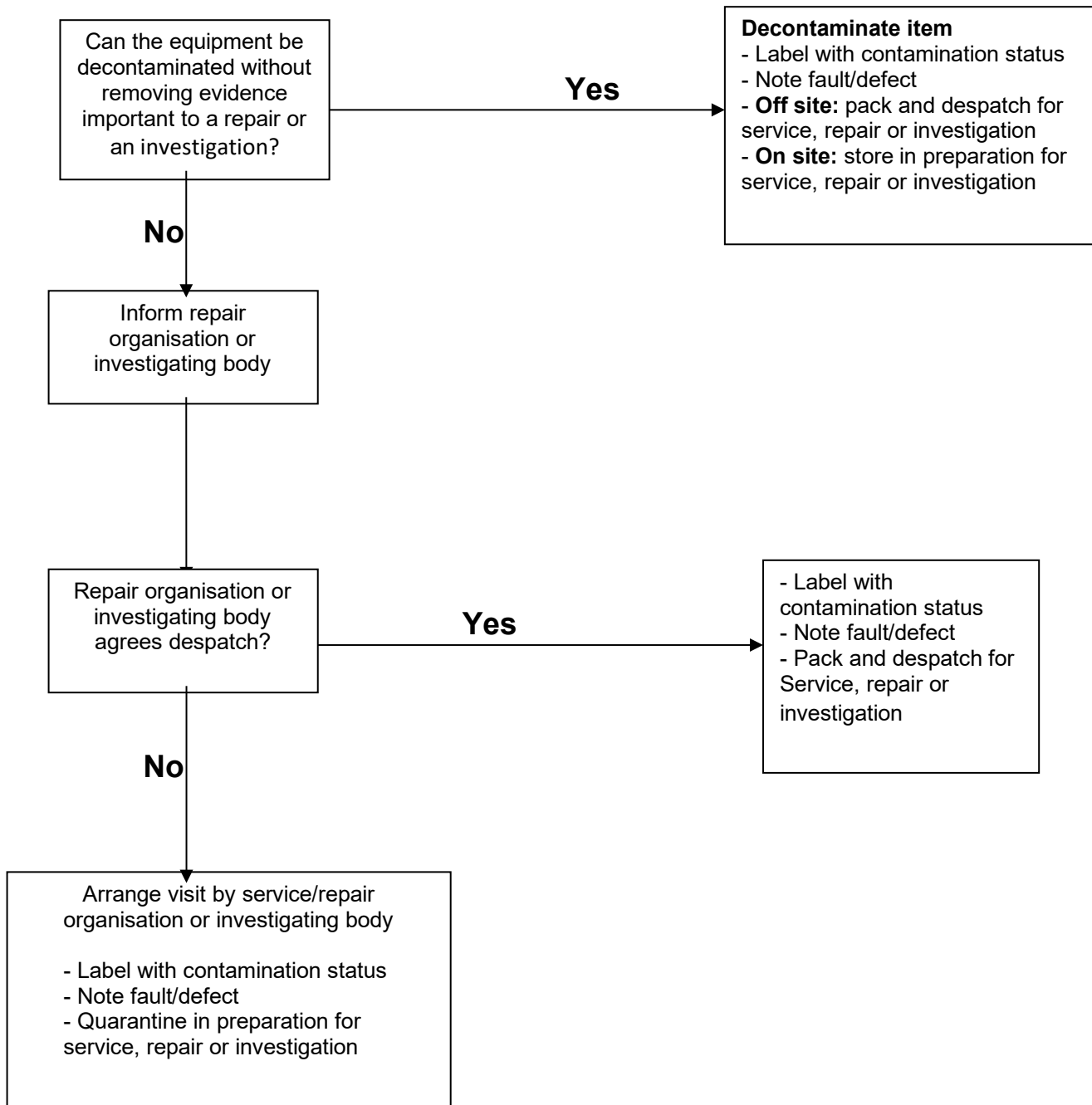


Appendix 7: Action to be taken following sharps injury, inoculation injury or a bite





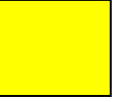
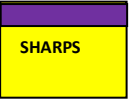
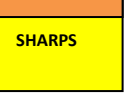


Appendix 8: HANDLING OF EQUIPMENT PRIOR TO INSPECTION, SERVICE, REPAIR, RETURN TO LENDING ORGANISATION OR INVESTIGATION OF ADVERSE INCIDENT

Note: it is illegal to send contaminated items through the post



Appendix 9: Waste segregation chart

Container colour	NHS Colour Code. [Bag or bin].	Segregated Material	Waste Examples
Orange Bag		Low Infectious and potentially infectious healthcare waste <u>excluding</u> body parts/tissues. No free liquids permitted e.g. urine samples	<u>Soiled</u> Couch roll, bandages etc. <u>contaminated</u> with body fluids or anything from patients with likely or known infection e.g. due to having treatment for colonisation.
Yellow Bag		Not in general use. Now special usage for unusual items requiring incineration. Not likely to be needed in care homes.	Offensive wastes from patients being treated with <u>toxic class</u> medicines. Special items agreed by Waste Manager.
Tiger Stripe Bag		Offensive wastes <i>All healthcare waste not infectious should go into Tiger Bag</i>	<i>Healthcare waste group; wastes from patients not receiving infection treatments, bandages with no seepage, gloves, disposable gowns etc.</i> <i>Municipal waste group; e.g. sanitary towels, stoma bags (except where patients receiving urinary tract and gut infection treatments).</i>
Black Bag		Trade Waste. Standard domestic & office waste after removal of any recyclable components	E.g. <u>unsoiled</u> couch roll, paper towels. Packaging materials <u>if cannot be recycled.</u>
Yellow sharps bin (Lid Colour)		Any sharps that contain or are contaminated with non-toxic medicines ONLY	Any Non Toxic Medicines & Vaccines.
Yellow sharps bin with purple lid		Sharps including those contaminated with cytotoxic and cytostatic medicines	Cytotoxic and cytostatic medicines
Yellow sharps bin with orange lid		Low Infectious or potentially infectious sharps. Must not contain or be contaminated with any medicine. Incineration or alternative treatment	Sharps not contaminated with medicinal products; e.g. Phlebotomy, Haemacue, Acupuncture, Scalpel blades, Any single use instruments/items that may puncture a bag.

Appendix 10

HAZARDOUS MEDICINES

The Following is a list of medicines that due to their Cytotoxic or Cytostatic properties are deemed to be hazardous

Aldesleukin	Estrogens, Esterified	Paclitaxel
Alemtuzumab	Estrone	Paraldehyde
Alitretinoin	Estropipate	Pegaspargase
Altretamine	Etoposide	Pentamidine Isethionate
Amsacrine	Exemestane	Pentostatin
Anastrozole	Finasteride	Perphosphamide
Arsenic Trioxide	Floxuridine	Pipobroman
Asparaginase	Fludarabine	Piritrexim Isethionate
Azacitidine	Fluorouracil	Plicamycin
Azathioprine	Fluoxymesterone	Podofilox
Bacillus Calmette-Geurine Vaccine (BCG)	Flutamide	Podophyllum Resin
Bexarotene	Fulvestrant	Prednimustine
Bicalutamide	Ganciclovir	Procarbazine
Bleomycin	Ganirelix Acetate	Progesterone
Busulfan	Gamcitabine	Progestins
Capecitabine	Gemtuzumab Ozogamicin	Raloxifene
Carboplatin	Goserelin (Zoladex)	Raltitrexed
Carmustine	Hydroxycarbamide	Ribavirin
Cetorelix Acetate	Ibritumomab Tiuxetan	Streptozocin
Clorambucil	Idarubicin	Tacrolimus
Chloramphenicol	Ifosfamide	Tamoxifen
Choriogonadotropin Alfa	Imatinib Mesilate	Temozolomide
Chlormethine Hydrochloride	Interferon Alfa-2a	Tenisposide
Cidofovir	Interferon Alfa-2b	Testolactone
Cisplatin	Interferon Alfa-n1	Testosterone
Cladribine	Interferon Alfa-n3	Thalidomide
Colchicines	Irinotecan HCl	Thioguanine
Cyclophosphamide	Leflunomide	Thiotepa
Cytarabine	Letrozole	Topotecan
Ciclosporin	Leuprorelin Acetate	Toremifene Citrate
Dacarbazine	Lomustine	Tositumomab
Dactinomycin	Medestrol	Tretinoin
Daunorubicin HCl	Melphalan	Trifluridine
Denileukin	Menotropins	Trimetrexate Glucuronate
Dienostrol	Mercaptopurine	Triptorelin
Diethylstilbestrol	Methotrexate	Uramustine
Dinoprostone	Methyltestosterone	Vaccines (Live)
Docetaxel	Mifepristone	Valganciclovir
Doxorubicin	Mitomycin	Valrubicin
Dutasteride	Mitotane	Vidarabine
Epirubicin	Mitoxantrone HCl	Vinblastine Sulphate
Ergometrine/Methylegometrine	Mycophenolate Mofetil	Vincristine Sulphate
Estradiol	Nafarelin	Vindesine
Estramustine Phosphate Sodium	Nilutamide	Vinorelbine Tartrate
Estrogen-Progestin Combinations	Oxaliplatin	Zidovudine
Estrogens, Conjugated	Oxytocin	

This list is intended as a guide and is not an exhaustive list. Please check the data sheets for further guidance if you are unsure as to the Cytotoxic and Cytostatic properties of any medicines or consult with a Pharmacist.

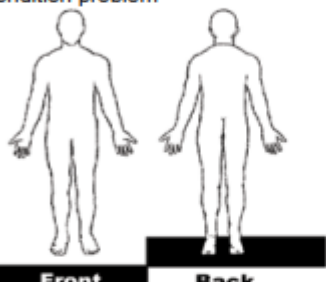
Appendix 11



Inter-Care Transfer Form

Date:		Care Home Name:		Reason for Transfer:	
Section 1: Client Details			Section 2: Next of Kin		
Name:		Name:			
Address:		Address:			
Telephone Number:		Relationship:			
Date of Birth:		Daytime Telephone No:			
Marital Status:		Mobile No:			
Religion:		Night Time Telephone No:			
Date of Transfer:		Next of Kin Informed of Transfer:			
Time of Transfer:					
Section 3: Medical Diagnosis			Section 4: Behaviour Issues eg Dementia		
Section 5: Allergies			Section 6: Transport Arrangements		
			Ambulance Requested:		Y/N
			If Yes, Date and Time:		
			Client:		Able to Walk/Wheelchair/Stretcher
			Escort:		Care Staff/Relative/Friend/None
			Specify Alternative Transport		
Section 7: Medication			Section 8: Maintaining Safety		
Medication Prescription Photocopied		Y/N		Tendency to fall	
Copy sent with client		Y/N		Tendency to wander	
What medication given prior to transfer				Aware of surroundings	
Homely remedy given		Y/N		Section 9: Communicating	
Specify homely remedy given				Speech	
				Mood	
				Memory	
				Hearing	
				Eyesight	
Section 10: Elimination			Section 11: Eating and Drinking		
Takes aperients		Y/N		Diet:	
Any aids used				Time of last meal/drink:	
Pads				Dentures:	
Size				Y/N/Part	
Catheter		Y/N		Weight if known:	
Catheter record		Y/N		Section 12: Breathing	
Conveen		Y/N			
If yes, please attach record					
Catheter type:					
Balloon size:					
Date catheter last changed:				Section 13: Personal Cleansing/Dressing	
Problematic insertion		Y/N		Bath/Showers Independently	
History of UTI		Y/N		Washes Independently	
Bowel:				Dresses Independently	
Continent/Incontinent/Occasional Incontinent				No of carers required if necessary	
Date of last bowel movement					
Bristol Stool Type 1 2 3 4 5 6 7					



Section 14: Mobilising		Section 16: Sleeping	
Ambulant	Y/N	Sleep problems	Y/N
Assistance required	Y/N	If yes, specify	
No of carers required		Preferred number of pillows	
Mobilising aids		Usual bed time	
Pressure relieving aids			
Section 15: Skin Condition		Section 17: Infection Prevention and Control Information	
Identify location, type and extent of any skin condition problem		Is client known risk of transferring infection?	Y/N
 <p>Front Back</p> <p>Skin type Dry discoloured oedematous broken Other</p> <p>Comments on skin condition</p> <p>Waterlow score If pressure sore, grade</p>		Please identify the confirmed or suspected organism eg MRSA/CDiff/Norovirus/Other Date:	
		If MRSA, has suppression treatment been provided	Y/N
		Has the client been exposed to others with an infection eg diarrhoea and vomiting	Y/N
		Does the client require isolating on transfer	Y/N
Section 19: Items Sent with Clients		Section 18: Other Relevant Information	
Photocopy of MAR sheet	Y/N		
DNAR consent form	Y/N		
Copy of wound care plan	Y/N		
An appointment card	Y/N		
GP/Discharge Letter	Y/N		
Medication	Y/N		
Change of clothing	Y/N		
Night attire, dressing gown, slippers*	Y/N		
Client wheelchair	Y/N		
Client walking aid	Y/N		
Fresh continence pad	Y/N	Section 20: Form Authorisation	
Appropriate toiletries	Y/N	Staff Name:	
Dentures/hearing aid/glasses	Y/N	Signature:	
Catheter record	Y/N	Date:	
MRSA/CDiff card	Y/N		
Specify other items			

*Delete as appropriate. In an emergency transfer situation, complete sections 1, 2, 7 and 15, copy and send with client. Send fully completed form to receiving location as soon as possible.

Appendix 12

INFECTION RISK ASSESSMENT

Patient Name:

NHS No.:

DOB:

Attach this sticker to the transfer documentation in all cases. If you answer "YES" to any of the questions, contact the admitting area in advance to allow for appropriate isolation to be arranged.

YES	NO	Does the patient have a previous history of MRSA, MSSA, E.coli, CPE, PVL or another multi-resistant organism? (circle as appropriate)
YES	NO	Is this patient known, or suspected to have Pulmonary TB for which they have received less than two week's treatment, or considered infectious by the TB nurse?
YES	NO	Does the patient have a current/recent history of Diarrhoea & Vomiting (Viral Gastroenteritis) or a current/recent history of Clostridium Difficile (CDI) ?

Does the patient have any of the following infections:

Chickenpox Slapped Cheek Scarlet Fever

Measles Rubella or other communicable disease:











Or Infestation:- Head Lice Scabies

This form has been completed with information available at the time of the assessment

Name:

Date:

Urine may have a variety of colours. It usually ranges from a deep amber or honey colour to a light straw colour with many golden variations in between. The colour of urine can tell you a lot about your body's state. This chart can be used to help indicate what this means.

Colour	Indication	Colour	Indication
	No colour/transparent You're drinking a lot of water. You may want to cut down.		Syrup or brown ale You could have liver disease or severe dehydration. Drink water and see your doctor if it persists.
	Pale straw colour You're normal, healthy and well-hydrated.		Pink to reddish Have you eaten beetroot, blueberries or rhubarb recently? If not you may have blood in your urine. It could be nothing or it could be a sign of kidney disease, tumours, urinary tract infection, prostate problems or something else. You should consult your doctor.
	Transparent yellow You're normal.		Orange You may not be drinking enough water or you could have a liver or bile duct condition. Or it could be food dye. Consult your doctor.
	Dark yellow Normal. But drink some water soon.		Blue or green There is a rare genetic disease that can turn your urine blue or green. Also certain bacteria can infect the urinary tract. But it's probably a dye in something you ate or a medication. See your doctor if it persists.
	Amber or honey Your body isn't getting enough water - drink some now.		Outside influences Some medications can change the colour of your urine. Such as, laxatives and chemotherapy drugs which can make your urine darker than normal.
<p>Final word You can tell a lot from your urine. Your GP can tell a lot more from a physical examination and testing your urine. Blood and sugar in your urine can be invisible and a sign of disease. When you visit your doctor do not be afraid to take a sample.</p>			

This chart is based on information provided by the Cleveland clinic [clevelandclinic.org/healthhub] and used here by kind permission.

GUIDANCE AT A GLANCE- URINARY TRACT INFECTION

These guidelines support the management of urinary tract infection including catheter associated UTI.
 Ref: NICE (2012) *Infection prevention in community and SWYAPC (2013) Antimicrobial Guidelines for Primary Care*

KEY POINTS

Older people and those with indwelling catheters often have asymptomatic bacteriuria (no symptoms but bacteria in urine) which does not indicate infection.
 DO NOT rely on dipstick nitrites to diagnose catheter associated UTI.
 Prescribe in line with the antibiotic guidelines, with reference to previous sensitivities or C&S results.
 Sampling technique is essential for accurate results.

MY PATIENT HAS A UTI.....

- In adult women with uncomplicated UTI (i.e. no fever or loin pain) it is reasonable to start empirical treatment with no culture if dipstick positive for nitrite or leucocyte esterase. Negative nitrite and leucocyte esterase have a 95% negative predictive value.
- Urine culture is always indicated in men, children, pregnant women, those with complicated infection or where empirical treatment has failed
- In sexually active young men and women with urinary symptoms consider *Chlamydia trachomatis*.
- A strong smelling urine is not indicative of a UTI. Asymptomatic bacteriuria occurs in 25% of women and 10% of men >65 years and is not associated with increased morbidity and does not require antibiotic therapy.
- Review urine culture results to check organism is sensitive to antibiotic prescribed and change to an alternative antibiotic if necessary.
- Be alert to UTI due to resistant organisms such as Extended Spectrum Beta-Lactamase *E. coli*. Microbiology will provide advice on treatment options. In patients with a previous ESBL UTI discuss with Microbiology the potential treatment options should the patient become symptomatic again.

ANTIBIOTICS -

Please refer to the current Antimicrobial Guidelines for Primary Care when prescribing antibiotics for UTI.

Note different advice for uncomplicated UTI; for pregnant women; and for children and those over the age of 65 years

Catheter Record

The Catheter Record is a patient held booklet being used across Calderdale, Kirklees and Wakefield. It contains information for patients and carers and provides an area for healthcare professionals to document the reason for the catheter, trials without catheter, changes and problems. The district nurses can issue these if your patient doesn't have one.



MY PATIENT HAS A CATHETER ASSOCIATED UTI

- Only treat if systemically unwell or pyelonephritis is suspected. Do not use prophylactic antibiotics for catheter changes unless history of catheter-change-associated UTI or trauma .
- Laboratory microscopy and dipstick testing should not be used to diagnose UTI in catheterised patients as they often have white cells or bacteriuria because of the catheter. Strong smelling urine is not indicative of a UTI.
 - A clearly marked CSU (taken from the sample port) with relevant clinical details should be sent for C&S prior to starting antibiotic treatment, if infection suspected
 - For patients with a long term urinary catheter, the catheter should be changed 12 to 24 hours after treatment has been started.
 - Take into account previous treatments and culture results when choosing an antibiotic for empirical treatment.
 - If no previous sensitivities are available and if immediate treatment for lower UTI is required treat empirically with Trimethoprim 200mg BD for 7 days or contact Microbiology for advice via Hospital switchboard.

Thanks to Calderdale IPC team for allowing adaptation of this guidance.
 Infection Prevention and Control Team for resources and advice on Tel: 01484 221000 or infection.control@kirklees.gov.uk
 Microbiologist for prescribing and treatment advice (SWITCHBOARD) CHFT – 01484 342000, MYHT – 08448 118110

Appendix 15

Urinary Catheterisation - Insertion technique

Catheterisation may be performed by any competent health professional (Pratt et al 2007). It must be an aseptic procedure. Nurses that perform catheterisation should have undertaken appropriate training and completed the necessary competency based assessment (NICE 2012). Staff must also undertake/ have an Essential Steps assessment each year to assure their competence to undertake catheterisation (Appendix 18)

List of equipment used for insertion of an indwelling urinary catheter:

- Sterile catheter insertion pack (gallipots, receiver, low-linting swabs, disposable towels).
- Pairs of sterile gloves.
- A tube of sterile single use anaesthetic lubrication gel (e.g. Instillagel).
- Male or female long term sterile catheter that is the smallest suitable sized catheter which will allow for drainage (also check for latex sensitivity, if latex is being used).
- Prefilled sterile syringe or syringe and sterile water (to fill the balloon – usually 10mls).
- Sterile water or saline (for cleaning the meatus).
- Drainage bag or valve.
- Single use disposable apron.
- Catheter stand (if required).
- Catheter securing device if required (e.g. thigh Strap: G-Strap or Comfa-Sure).
- Insertion documentation (e.g. care plan and catheter record).

Prep patient
- Apply waterproof pad & gown.
- Ask patient to lift gown pre step 9.

Preparation zone



1
Clean hands
with alcohol hand rub
or soap & water



2
Clean trolley
according to local policy



3
Gather equipment
onto bottom shelf

Patient zone



4
Apply apron
(clean hands if
contaminated between
Steps 3 & 4)



5
Open catheter pack
& position waste bag



6
Open equipment
onto critical aseptic field
using non-touch
technique (NTT)



7
- **Clean hands**
- **Apply sterilised
gloves**



8
**Prepare
equipment**
using non-touch
technique (NTT)



9
**Apply aseptic
field drapes**
over genitals &
between legs



10
**Clean urethral
orifice with
normal saline & gauze**



11
**Insert
lubricating gel**



12
- **Dispose gloves**
- **Clean hands**
- **Apply sterilised gloves**



13
Insert catheter
using NTT by touching
only the plastic wrapping



14
Inflate balloon
using NTT



15
**Attach collection
bag using NTT**



16
**Dispose of waste
& gloves**

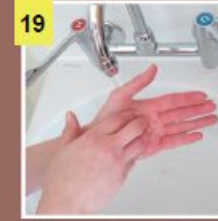


17
Clean hands
with soap & water immediately
after glove removal

Decontamination zone



18
Clean trolley
according to local policy



19
Clean hands
with alcohol hand rub
or soap & water

Preparation Zone



1

Wash and dry hands



2

Collect Equipment

Patient Zone



3

Gel hands

Put on non sterile gloves and apron

4



5

Clean tap thoroughly with 2% Chlorhexidine and 70% Alcohol wipe, for 30 secs

Allow to dry 30 seconds

6



7

Empty urine into container



8

Clean tap thoroughly with 2% Chlorhexidine and 70% Alcohol wipe, for 30 secs

Decontamination Zone



9

Measure and record amount of urine



10

Dispose of equipment

Remove gloves and apron

11



12

Wash and dry hands

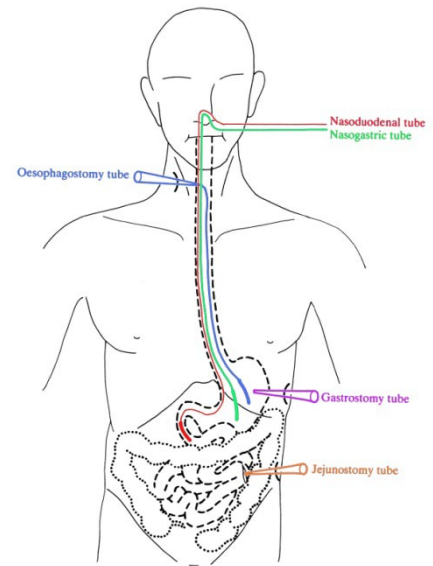
Always wash hands effectively
Never contaminate key parts
Touch non key parts with confidence
Take appropriate infective precautions

Appendix 16

Enteral Feeding

Enteral feeding is a means of delivering nutrition into the gastrointestinal tract through a tube, either via the nose or directly into the stomach or small intestine through a stoma in the intestinal wall.

This method of feeding has resulted in a range of different routes and systems for delivery of nutrition, and more patients are now being fed by home enteral feeding tubes in the community setting. The need for education and training in infection prevention and control is vital for patients and carers to ensure the provision of clean and safe care of all enteral feeding systems (NICE, 2012). The National Institute for Health and Clinical Excellence found that 30% of feeds were contaminated with a variety of microorganisms, largely due to the poor preparation or poor administration of feeds, (NICE 2003). The research found that the rates of contamination were highest in home settings and thus reinforces the need to focus on infection prevention and control practices within the community setting.



Routes of Enteral Feeding

Equipment

Syringes

- Must be for Enteral feeding purposes only - Purple 50/60ml female leuc lock or catheter tip.
- Single use or reusable single patient use as per manufacturer's instructions. If single patient reusable syringes are used a full risk assessment must be completed by a qualified nurse, at least annually or more frequently if clinically indicated. If re-usable syringes are used, the plunger should be removed and both barrel and plunger washed in hot soapy water (domestic washing up liquid). Both should then be rinsed and either dried with a clean paper towel or left to air dry and stored in a container with a lid once dry.

Giving sets

- Use up to 24 hours only and then discard.
- NICE, 2006 states that giving sets are single use and must be discarded after each feed. However, if organisations deviate from these guidelines, a full risk assessment must be undertaken to ensure patient safety, and they must be cleaned in accordance with the manufacturer's recommendations.
- Refer to NICE guidance <https://www.nice.org.uk/guidance/cg32>
- If the giving set is disconnected from the gastrostomy tube within the 24 hour period (for brief periods only e.g. to administer medication) the end of the giving set must be protected by a clean cover until reconnected.

The GP (nursing and residential homes) GP/District nurse (in residential homes only) will:

- Prescribe feed in accordance with the dietitian’s recommendations.
- Assess the stoma site for signs of infection and provide appropriate treatment/referral and take swabs if clinically indicated.
- Provide Enteral feeding syringes in accordance with NICE guidance, If the patient is immuno suppressed liaise with the patient’s GP to discuss any special requirements.

In order to monitor and maintain their competence level, staff must ensure that they carry out a minimum of three tube changes a year and receive refresher training on an annual basis. All care homes who have residents with a gastrostomy tube in place **must** ensure that staff are assessed using the Department of Health document, Essential steps to safe, clean care (2007).

Management of Gastrostomy Tube and site

Refer to specific guidance from hospital or nurse specialist for tube management

Prior to all procedures, all health care staff should wash hands as per infection control policy and use both gloves and an apron.

NB: All equipment used must be checked to ensure that it is within the expiry date.

ACTION	RATIONALE
<p>Gastrostomy feeding must be carried out within as clean an environment as possible. However, within a patient’s home it is not always possible to achieve optimum infection prevention and control standards. Minimal handling and an non-touch aseptic technique must be used to connect the feed container, administration system and Enteral feeding tube (Essential steps, 2007)</p>	<p>To ensure that microbial contamination is kept to a minimum</p>
<p>In accordance with the Trust hand hygiene policy staff must be:</p> <ul style="list-style-type: none"> • bare below the elbows. • free from jewellery and watches other than a plain band. • free from false nails and varnish. • Hands washed incorporating the six steps to hand hygiene using soap and water or alcohol gel. <p>If an aseptic technique is required, staff must wash their hands with soap and water and dry. In addition they must add alcohol gel and allow to dry, prior to putting on their gloves.</p> <p>When care staff are setting up a feed, disposable gloves and an apron must be worn at all times. When examining the stoma, gloves must be worn.</p>	<p>To prevent microbial contamination. To removal transient organisms. To remove resident organisms.</p> <p>To protect clothing.</p> <p>To minimise the risk of cross contamination from the patient and from staff to the patient.</p>

All PPE must be disposed of in accordance with the Trust Waste Policy.	To Ensure compliance with the European Waste Guidelines.
All feed must be clearly labeled with the name of patient and date and time of opening (as appropriate). Opened packs of feed (NB: not reconstituted feed) should be closed, stored in a fridge and discarded after 24 hours. Feed should be placed into a clean container and stored above raw foods in patient's home and in a medicine fridge within a hospital/care home.	To minimise microbial replication. To prevent cross contamination.
Feeds should be administered at room temperature. The required amount for each feed should be removed from the fridge 20-30 minutes prior to feed administration	To prevent gastro intestinal discomfort.
If a pump system is being used the giving set must be primed with feed prior to connection to the gastrostomy tube.	To prevent air entering the patient.
Decanting of feeds is not considered to be good practice and is, therefore, not normally advocated. However there are instances when this is unavoidable. Flexitainer/hydro bag advice. NB: This should only be undertaken following full assessment by a dietitian and a patient specific care plan has been written and put in place.	To minimise microbial contamination.
The feeding port should be higher than the stoma site when feeding.	To prevent backflow and leakage.
The cap on the gastrostomy tube must be replaced after use.	To reduce backflow of stomach contents.
Nursing staff to follow individual patient care plans and document all care provided within the nursing documentation.	Clear guidance and continuity of care.

Pump Cleaning/maintenance

It is important to keep the feeding pump as clean as possible:

- The feed pump should be switched off and unplugged whilst being cleaned.
- Clean the pump every day, after feeding and immediately after any spills.
- Use a clean damp disposable cloth, warm water and a mild detergent, ensuring that all areas of the pump are clean.
- **Never immerse the pump in water.**

- Check the pump casing and charger unit on a regular basis to ensure that they are intact and not damaged. Check manufacturer's instructions for cleaning products and technique.

Care of the stoma site

On a daily basis, the stoma site must be checked, washed with water and dried thoroughly. If there are clinical signs of an infection e.g. redness, swelling, pain, exudate, excoriation of skin, a swab should be taken and the appropriate documentation completed. Senior staff must be informed and if necessary appropriate medical advice sought.

If informed that the patient is MRSA colonised or has a wound infection, please liaise with the patient's GP who will advise on any necessary treatment.

Dressings should be avoided, if a dressing is necessary, please ensure that an appropriate, key hole dressing is applied and changed daily or sooner if it becomes wet (in order to reduce the risk of infection).

Mouth care

Tube feeding is associated with significant pathogenic colonisation of the mouth and oral bacteria have been proven to be one of the main causes of aspiration pneumonia in tube fed patients (Metheny 2012). Development and maintenance of an oral hygiene program is a critical step in preventing pneumonia in nursing home residents (El-Solh, 2011).

Practical Advice for patients who are unable to perform their own mouth care:

- Explain to the patient/carer the importance of keeping the mouth, teeth, and gums clean from infection.
- The frequency of mouth care will depend on how quickly their mouth becomes dry but should be at least twice daily.
- Remove any partial dentures and place in a bowl.
- Use a soft, dampened small or baby toothbrush and toothpaste brush the patient's teeth, gums and tongue. If unable to tolerate a toothbrush wrap a gloved finger with dampened gauze and wipe over the teeth and oral mucosa.
- Brush the inner and outer aspects of the teeth with firm, individual strokes directed outwards from the gums.
- If it is safe to do so get the patient to rinse the mouth with water to remove the debris, toothpaste etc. Patients should be advised to sit upright during the procedure.
- Ensure lips are moistened using a lip salve or balm.

Dentures:

Dentures should also be cleaned on all surfaces with a denture brush or toothpaste, rinsed well and returned to the mouth. If at any time the patient complains of sore mouth, bleeding gums, blistered tongue or mouth area, they should be advised to contact their district nurse/GP.

References for enteral feeding appendix

http://www.bapen.org.uk/res_drugs.html (2004)

Department of Health (2007) Essential Steps to Safe Clean Care. Enteral Feeding

Medical Device Agency Single-Use Medical Devices (2000). Implications and Consequences of Reuse.









National Institute for Health & Clinical Excellence (2010). *Infection Control Guidelines*: London.

Appendix 17

Asepsis and aseptic technique

The principles of asepsis play a vital role in the prevention of infection in all environments and is the responsibility of all care staff to understand these incorporating them into their everyday practice where it is relevant.






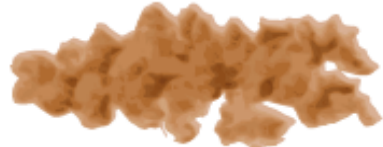

The principles of asepsis/aseptic technique require that:

<ul style="list-style-type: none">Exposure of any susceptible areas is kept to a minimum. <p>Exposure</p> 	<ul style="list-style-type: none">Correct hand decontamination should be carried out. <p>Hand hygiene</p> 	<ul style="list-style-type: none">Correct type of gloves are used as appropriate. <p>Gloves</p> 
<ul style="list-style-type: none">Uniform and clothing is protected with a disposable plastic apron. <p>Clothing</p> 	<ul style="list-style-type: none">All fluids and materials used are sterile. <p>Materials</p> 	<ul style="list-style-type: none">Sterile packs are checked for damage, expiry or moisture penetration. <p>Sterile</p> 
<ul style="list-style-type: none">Contaminated non-sterile items are not placed in the sterile area. <p>Non-sterile</p> 	<ul style="list-style-type: none">Single use items are never reused. <p>Single use</p> 	

Fluid Balance/Stool Chart

Guidelines for use:

The fluid balance/stool chart should be completed accurately where possible. If unable to measure input/output a best estimate should be made. Record all fluid intakes and output if the patient has diarrhoea. Diarrhoea is two or more episodes of watery or liquefied stool (type 6 or 7) within 24 hours. Record the number of episodes and the stool type as shown below

Type	Bristol Stool Chart	
1		Separate hard lumps, like nuts (hard to pass) Looks like rabbit droppings
2		Sausage-shaped but lumpy Looks like bunch of grapes
3		Like a sausage but with cracks on the surface Looks like corn on cob
4		Like a sausage or snake, smooth and soft Looks like sausage
5		Soft blobs with clear-cut edges Looks like chicken nuggets
6		Fluffy pieces with ragged edges, a mushy stool Looks like porridge
7		Watery, no solid pieces. Entirely Liquid Looks like gravy

GUIDANCE AT A GLANCE - CLOSTRIDIUM DIFFICILE

These guidelines support the control and prevention of *C.difficile* in community and primary care settings.
Key Ref: PHE (2013) Updated guidance on the management and treatment of *Clostridium difficile* infection

KEY POINTS

- Early diagnosis prevents complications and saves lives
- Prudent prescribing of antibiotics may prevent infection
- Communication of infection risk helps prevent cross infection
- Alcohol hand rub is **ineffective** at killing *C.difficile* spores.
- Review Risk factors for infection = over 65's, recent hospitalisation, recent antibiotics, GI procedures and gastric ulcer medications

These affect the balance of bacteria in the bowel providing an opportunity for C.difficile to multiply, produce toxin and inflame the bowel

ANTIBIOTICS

My patient has diarrhoea

A useful mnemonic protocol for potentially infective diarrhoea is :
Suspect that a cause may be infective where there is no clear alternative cause of diarrhoea or the patient has recently received antibiotics
Isolate the patient if appropriate – *i.e. care home residents*
Gloves and aprons must be worn to reduce cross contamination
Hand washing with soap & water before and after each patient contact and the patient's environment
Test the stool for toxin, by sending a specimen immediately

Watery or mucoid diarrhoea with or without blood (typical smell and green appearance), abdominal pain, loss of appetite, fever.

CDI Symptoms

My patient has confirmed CDifficile Infection

- **No repeat specimens** are required once diagnosed. For **toxin gene detected** results, only treat as *C.difficile* infection (CDI) if symptomatic.
- Review the need for any current antibiotics and stop the course if possible – if unable to stop, change to a narrow spectrum antibiotic.
- Review other drugs that may potentially cause diarrhoea.
- Proton pump inhibitors (PPI) should be reviewed/reduced where possible
- For treatment options refer to the algorithm over the page and also the local antimicrobial guidelines for primary care.
- Maintain hydration, monitor diarrhoea (*for care homes residents, advice care plan, fluid balance chart and Bristol Stool Chart to support this*)
- Where patients/carers are unable to manage due to the symptoms of *C.difficile* consider referral to social services.

CDI can lead to: dehydration, electrolyte imbalance low blood albumin pseudomembranous colitis, toxic megacolon, sepsis , death.

Complication

Communicating infection risk:

- If admitting a patient with symptoms, notify the receiving area so appropriate isolation can be instigated.
- The IPC team will write to your patient supplying a leaflet and card with information – copied to the practice.
- Record the infection risk on the patient record as guided by the IPC team.

Resources

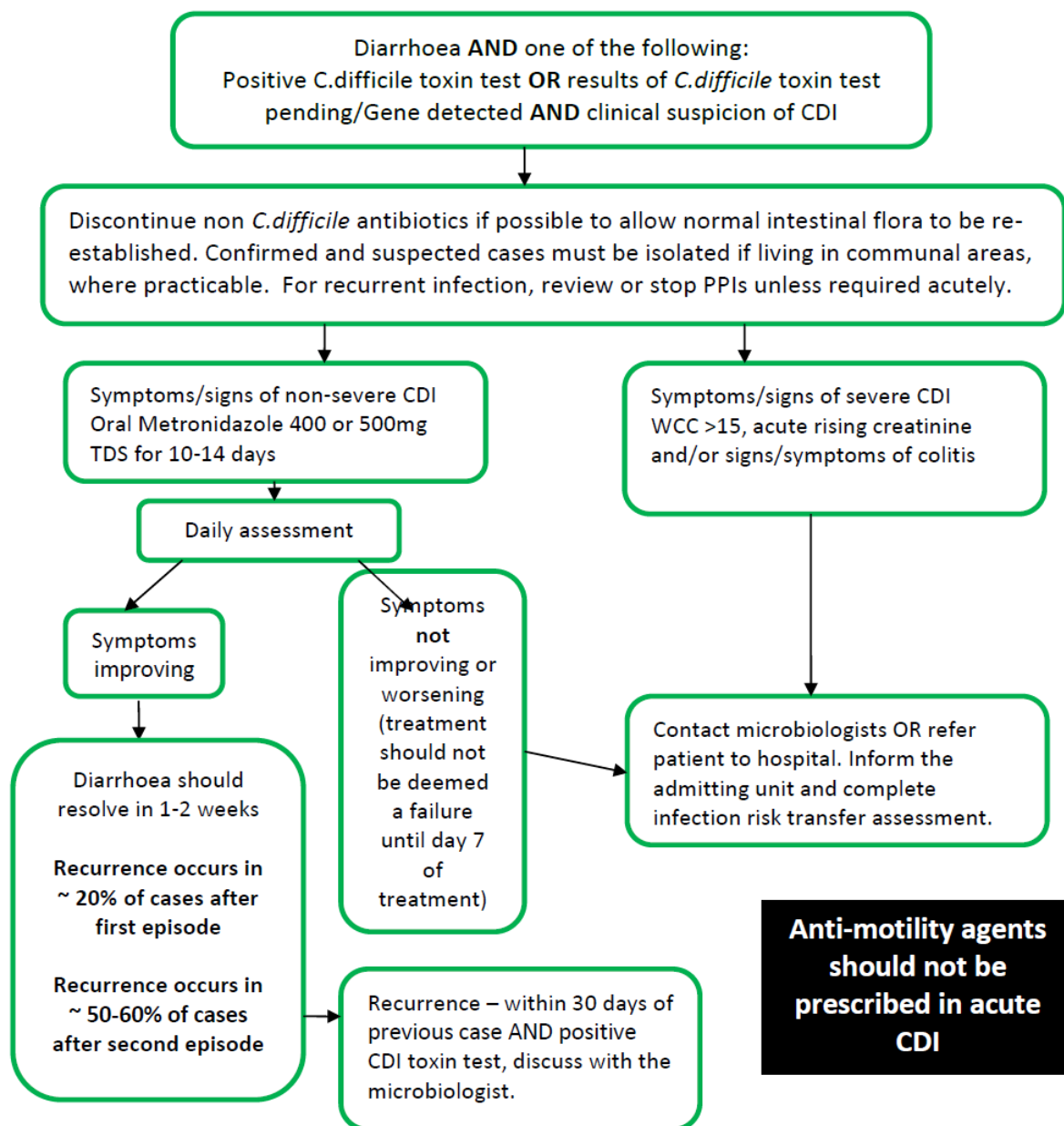
- Antimicrobial guidelines
- Patient held card
- CDifficile patient information leaflet
- PHE guidelines '13

My patient has a history of CDifficile and needs antibiotics

There is an increased risk of CDI if someone has had it before or has had the gene detected. Consider narrow spectrum antibiotics if treating other infections

Infection Prevention and Control Team for resources and advice on Tele: 01484 221000 or infection.control@kirklees.gov.uk
Microbiologist for prescribing and treatment advice (SWITCHBOARD) CHFT – 01484 342000, MYHT – 08448 118110
Thanks to Calderdale IPC team for allowing adaptation of this guidance

Treatment Algorithm for CDI



Anti-motility agents should not be prescribed in acute CDI

Severity

Mild CDI is not associated with a raised WCC; it is typically associated with <3 stools of types 5-7 on the Bristol Stool Chart per day.

Moderate CDI is associated with a raised WCC that is $<15 \times 10^9/L$; it is typically associated with 3-5 stools per day.

Severe CDI is associated with a WCC $>15 \times 10^9/L$, or an acute rising serum creatinine (i.e. >50% increase above baseline), or a temperature $>38.5^\circ C$, or evidence of colitis (abdominal or radiological signs). The number of stools may be a less reliable indicator of severity.

Life-threatening CDI includes hypotension, partial or complete ileus or toxic megacolon, or CT evidence of severe disease.

N.B. Mild/moderate CDI – treat as non-severe.

Infection Prevention and Control Team for resources and advice on Tele: 01484 221000 or infection.control@kirklees.gov.uk

Microbiologist for prescribing and treatment advice (SWITCHBOARD) CHFT – 01484 342000, MYHT – 08448 118110
Thanks to Calderdale IPC team for allowing adaptation of this guidance

Clostridium difficile infection

**Information and advice for
people with Clostridium
difficile who are not in
hospital**

Produced in partnership by
NHS Calderdale, NHS Kirklees, NHS Wakefield District,
Calderdale and Huddersfield NHS Foundation Trust,
Mid Yorkshire Hospitals NHS Trust and Locala Community Partnerships.

What is Clostridium difficile?

Clostridium difficile, sometimes called C.difficile or C.diff is a bacterium (germ). It lives harmlessly in the gut (bowel) of many people. Approximately 3 in 100 healthy adults and up to 7 in 10 healthy babies have a number of Clostridium difficile bacteria living in their gut. We all have many types of harmless bacteria that live in our gut and for those who have small numbers of Clostridium difficile bacteria these are kept in check by the other gut bacteria.

How is it spread?

Clostridium difficile produces spores (like seeds) and these can survive in the environment for many months. The spores get into the environment when someone who has Clostridium difficile has diarrhoea, these spores then land on surfaces, clothing or hands. They can enter the mouth and gut via food. Spores that get into the gut can develop into bacteria and this is how people can have Clostridium difficile harmlessly in their gut.

Why does it happen?

Usually antibiotics are the main cause of the infection. If you take a course of antibiotics for an infection e.g. for a chest infection or urinary tract infection those antibiotics as well as killing the bacteria that cause your initial infection will also kill many of the harmless bacteria living in your gut. If Clostridium difficile is in your gut it will then allow the numbers of those bacteria to multiply greatly. Once this happens the Clostridium difficile start to produce toxins (poisons) and these attack the gut and cause the symptoms of Clostridium difficile infection.

What problems does it cause?

The Clostridium difficile bacteria make toxins which can cause inflammation and damage to the wall of the lower gut. This causes watery diarrhoea, often with mucous and an offensive smell. Other symptoms include loss of appetite, nausea (feeling sick), fever and abdominal pain or tenderness. These symptoms can last from a few days up to several weeks and sometimes the symptoms can go away without treatment.

In some cases pseudomembranous colitis can develop, colitis means inflammation of the colon and pseudomembranous means that if you looked inside the colon you would see membrane-like patches. This can cause bloody diarrhoea, fever, abdominal pain, swollen abdomen and colon and make you feel very unwell. In rare cases it becomes life-threatening and the colon may perforate (rupture).

Who is at risk of infection?

Clostridium difficile infection can occur in people who are in, or have recently been in hospital. It can also affect people in care homes or in their own home.

Clostridium difficile infection is more common in older people with more than 8 out of 10 cases reported in those over the age of 65. People of all ages with serious underlying illnesses are more at risk as well as those who have had bowel surgery or procedures or have conditions which affect their gut. Taking antibiotics is also a risk. Symptoms can start within a few days of starting antibiotics, but may not occur for up to 10 weeks.

If you have had Clostridium difficile, there is a 1 in 5 chance of the infection recurring.

How is it diagnosed?

As diarrhoea can happen as a side effect of taking certain types of antibiotics or for other reasons such as a viral infection or food poisoning a sample of diarrhoea is tested to see if Clostridium difficile is present. The laboratory examine the sample for the presence of the Clostridium difficile toxins. Once the diagnosis is confirmed no more specimens are needed. Generally the only instance when another specimen is needed is when symptoms resolve and then recur or if symptoms carry on despite treatment.

What is the treatment?

Stopping the antibiotics you are taking is sometimes all that is needed in mild to moderate cases but you should never do this without speaking to your doctor to decide if it is safe to do so. This then allows the harmless bacteria to multiply in your gut and the symptoms should then ease. Those with more severe diarrhoea or colitis will normally be given a different antibiotic to treat the infection. It is important to complete the course even if your diarrhoea settles down and you begin to feel better.

As with any episodes of diarrhoea it is important to drink plenty of fluids to replace some of the fluids that are lost by having diarrhoea. Medication used to prevent constipation is usually stopped whilst someone has diarrhoea. In some cases extra fluid and medication is given in hospital. In rare cases surgery is needed if the bowel perforates. It is not advisable to take medicines to stop diarrhoea like Imodium/Loperamide unless informed to do so by your doctor.

Where will I receive treatment?

You will usually be able to have the treatment for your infection at home. During this time symptoms generally start to improve. If symptoms do not improve or the infection is severe you might need to go into hospital for more treatment. It is advisable to stay at home until two days after symptoms have resolved. If you live in a care home you will need to stay in your own bedroom for this time.

How can I help

You can play an important role in reducing the risks of infection spreading. To prevent *Clostridium difficile* spreading to others or to prevent you developing the infection again hand washing is essential. Even though your hands may appear to be clean, the *Clostridium difficile* bacterial spores are too small to be seen and may still be present. It is essential to wash your hands well after visiting the toilet or before handling food.

Keep nails short and clean. If you are sharing soap use liquid soap if possible rather than a bar of soap. Do not use alcohol hand gels as they are not effective against this infection.

How to effectively wash your hands

- Wet both hands with warm water.
- Use enough soap to get a good lather.
- Rub hands together making sure all areas of the hands are covered, with particular attention to nails, fingertips and between fingers.
- Rinse and dry hands well.

Wash ALL surfaces of the hands



Rub palm to palm



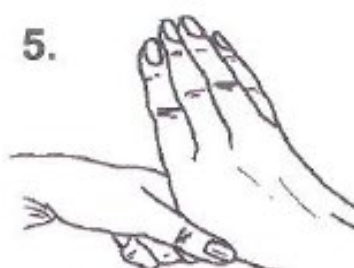
Rub the backs of both hands



Rub palms again with fingers interlaced



Rub backs of interlaced fingers



Rub both thumbs



Rub all fingertips onto palms

The six steps take about 15 seconds.

Rinse and dry hands well.

Are there things that I need to do around the house

To prevent *Clostridium difficile* living in the environment good cleaning is essential, as the spores are very hardy and are able to survive for months.

Toilet and bathroom

As this is the area where *Clostridium difficile* is most likely to be found thorough cleaning of the toilet area including toilet seat, flush handle or button, toilet bowl, washbasin and taps is necessary. You will need to use warm water and detergent followed by a chlorine containing disinfectant e.g. household bleach to destroy the spores as they have a hard coating, following the manufacturers instructions. If at all possible use a separate toilet from the rest of your family whilst you are unwell.

Laundry

Any clothing, bedding or towels soiled with faeces should be washed separately from other washing, in a washing machine at the highest temperature possible for that fabric, 60° or above if possible. Do not share towels and flannels with others. Once your diarrhoea has gone there is no need to separate items.

Kitchen

Surfaces should be cleaned with a detergent and warm water before and after food preparation.

Will other family members/guests in my home be affected?

People in good health do not usually get a *Clostridium difficile* infection. There is very little risk to healthy family members and other visitors (including pregnant women and children), as long as they wash their hands. Elderly or frail family and friends or those whose immune systems are weak are more at risk of *Clostridium difficile* and it is important not to visit them until your diarrhoea has stopped.

How will I know when the infection has gone?

When your normal bowel habit returns, the infection is gone and the balance of bacteria in your bowel is back to normal.

The card that makes a difference

Please show this card whenever you visit a doctor, pharmacist, dentist or other healthcare provider.

If you have a Clostridium difficile infection and have not received this card please contact your GP surgery.



Design: MY design – The Mid Yorkshire Hospitals NHS Trust | KD64431

Outbreak Management

21.1 Suspected Information Front Sheet

21.2 List of Staff/Residents Affected

21.3 Daily Checklist

21.4 Care Plan

21.5 Post Outbreak Audit Tool

21.6 Outbreak Poster

If an outbreak is suspected **out of office hours** (which are 1700hrs – 0800hrs) Monday to Friday *or on a weekend or Bank Holiday* inform the out of hours service (identified overleaf)

Guidance on how to complete the MICROBIOLOGY REQUEST FORM;

Write the patients name, address and date of birth (in full)

Clinical details: Write GI Outbreak and ILog Number (example WY/S.12 33333)

(Include any other appropriate clinical information)

You will be supplied an identifying ILog number to be labelled on the lab request form by the UKHSA. This number is the personal identifier at the laboratory for the outbreak at your home (it must be on the form otherwise the sample will be discarded by the lab).

Test/Examination required: write Microscopy, culture and virology

Sample Type/Specimen-write Faeces (must be Bristol Stool Type 5 - 7 (record time and date collected).

Stool specimens must fill a maximum of half the specimen pot and can be contaminated with urine. Sampling early may identify the cause of the outbreak

Consultant/Requestor Doctor details – write Dr. Okereke

Department of Microbiology Old Medical School Leeds General Infirmary Leeds LS1 3EX

Essential health care appointments

If a resident has to be admitted to hospital /A&E from the home when the outbreak had already started they can be discharged back to the home even though the outbreak may still be ongoing (this is because they have been exposed to the infection already).

Remember to use the transfer form and risk assessment stickers to alert other health care providers.



OUTBREAK – DETAILS OF STAFF AFFECTED

KEY: D – Diarrhoea N – Nausea V – Vomiting U – Unknown X – Asymptomatic

Home/Area:	Manager	KC/WC
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No	Staff Name	Job Role	Symptoms	Date of sick	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Date of Return	Specimen/ Result



Appendix 21.3



Infection Prevention Daily Checklist

Identified areas of risk at
 Date..... Assessment by.....(IPCN/IPCP)

The lead member of staff for the outbreak should review the checklist daily and sign/date.

Initial Management	Yes	No	Comments
Identification and reporting of the outbreak was completed at an early stage. The HPA were given immediate notification within a 24 hour period?			
A risk assessment has been undertaken and the Infection Prevention Daily Checklist has been provided and discussed (to be returned at Post Outbreak Audit)			
Inter hospital documentation and/or stickers are available?			

Care Plan One (Daily Communication Reviews) A-G

Care Plan Two (Daily Management Reviews) A-M

Date/time	Information/advice provided	Signature

Appendix 21.4

Care Plan 1		DAY	DAY	DAY 3	DAY	DAY	DAY	DAY	DAY	DAY	DAY 10
Daily Communication reviews		1	2	✓/X	4	5	6	7	8	9	✓/X
		✓/X	✓/X	Date	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	Date
		Date	Date		Date	Date	Date	Date	Date	Date	
A	Cases of diarrhoea and vomiting have been reported to the person in charge and entered the log sheet (residents and staff)	ICN to complete									
B	Visitors continue to be informed of the homes closure and a poster remains displayed on the main entrance to the home	ICN to complete									
C	Information leaflets are available for visitors and for staff	ICN to complete									
D	Visiting health care staff have been informed of the outbreak i.e. GP's, community nurses, physiotherapists, occupational therapists, pharmacists	ICN to complete									
E	All non essential services have been deferred until after the outbreak- i.e. chiropodist, hairdresser, decorator	ICN to complete									
F	The Public Health Consultant on call or West Yorkshire HPU Duty Desk has been informed of any resident's requiring an emergency admission to hospital	ICN to complete									

Care Plan 1		DAY	DAY	DAY 3	DAY	DAY	DAY	DAY	DAY	DAY	DAY 10
Daily Communication reviews		1	2	✓/X	4	5	6	7	8	9	✓/X
		✓/X	✓/X	Date	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	Date
		Date	Date		Date	Date	Date	Date	Date	Date	
G	The care home manager informed the GP/ambulance crew and admitting hospital of the outbreak, so that the resident could be received into a suitable area in A&E/medical admissions (MAU)	ICN to complete									
H	Staff work rotas are reviewed daily and organised to minimise contamination of unaffected areas. (Avoid moving staff between floors. Cohort staff must work in one area during the duration of the outbreak. Also consider food service. Food service staff must not care for those affected by symptoms of D & V). Ensure that plans are communicated frequently to keep all staff updated	ICN to complete									

Care plan 2		DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY 10
Daily Management reviews		1	2	3	4	5	6	7	8	9	✓/X
		✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	Date
		Date	Date	Date	Date	Date	Date	Date	Date	Date	
A	Symptomatic residents are isolated in their own rooms (until 48 hours symptom free). Risk assessment in place where person is unable to comply	ICN to complete									
B	Bristol stool chart is in use and a stool specimen (type 5-7) has been obtained from all symptomatic cases	ICN to complete									

C	Fluid balance monitoring has been commenced and records are up to date (diet provided as tolerated)	ICN to complete									
---	---	-----------------	--	--	--	--	--	--	--	--	--

D	Staff and visitors with symptoms have been excluded until asymptomatic for 48 hours	ICN to complete									
E	Staff are not eating/ drinking with residents	ICN to complete									
F	All open boxes of chocolates, sweets, biscuits, and bowls of fruit have been removed from the open environment	ICN to complete									

G	Staff are changing out of uniforms prior to leaving the home during the outbreak and a new uniform is worn each day. All staff are compliant with Bare below the elbows guidance	ICN to complete									
H	Personal Protective Equipment (PPE) is worn by all staff/care providers delivering care	ICN to complete									

Care plan 2		DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY 10
Daily Management reviews		1	2	3	4	5	6	7	8	9	✓/X
		✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	Date
		Date	Date	Date	Date	Date	Date	Date	Date	Date	
I	PPE is available and easily accessible (enclosed from the open environment) and all gloves and aprons are discarded after each episode of patient care into the correct waste stream.	ICN to complete									
J	Hand wash sinks are accessible and are well stocked with liquid soap and paper towels for staff and visitors (alcohol gel is ineffective against D&V).	ICN to complete									
K	Residents are provided with hand wipes and encouraged to wash their hands regularly	ICN to complete									
L	Laundry soiled by faeces or vomit is placed directly into a water soluble/infected laundry bag. This is taken directly to the laundry and managed appropriately.	ICN to complete									
M	Laundry staff have access to and wear personal protective equipment (gloves, aprons and goggles) when dealing with soiled linen.	ICN to complete									

Care Plan 3		DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY 10	
Daily cleaning/waste reviews		1	2	3	4	5	6	7	8	9	✓/X	
		✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	Date
		Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	
A	The home environment is being thoroughly cleaned twice daily using hot water and detergent	ICN to complete										
B	All areas accessed by symptomatic residents are cleaned as above and then following this all hard surfaces, (including floors) and toilet areas are cleaned with a hypochlorite solution 1,000 parts per million (i.e. Milton 1:10, domestic bleach solution or chlorclean).	ICN to complete										
C	Commodes and toilet seats are cleaned after every use with soap and water or a detergent wipe and then cleaned with a hypochlorite solution	ICN to complete										
D	Spillages are dealt with promptly and safely and staff wear the appropriate PPE	ICN to complete										

E	Contamination of carpets are cleaned up immediately with detergent and hot water, any soiled carpets are cleaned with a carpet shampooer/steam cleaner	ICN to complete									
F	There is a dirty utility room/designated area available to deal safely with the decontamination of commodes and bedpans	ICN to complete									

Care Plan 3		DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY 10	
Daily cleaning/waste reviews		1	2	3	4	5	6	7	8	9	✓/X	
		✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	✓/X	Date
		Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	
G	If available the macerator/ bedpan washer is operational	ICN to complete										
H	An infectious waste stream is available. Bins are foot operated and waste is managed safely (internally and externally).	ICN to complete										

Once alerted by the IP&CT all areas affected have been deep cleaned. Carpets have been *shampooed/*steam cleaned (*please indicate as appropriate). All soft furnishings/curtains have been cleaned or replaced. Outbreak posters have been removed from public display.

Signed.....Designation.....Date.....

Date	Record actions and communications with IPCT	Signed

Appendix 21.5



Infection Control Post Outbreak Audit Tool

Home Name:			
Address:			
Care Home Manager:			
Onset date of outbreak:			
Causative infection of the outbreak:			
	Number		Number
Number of patients involved at the commencement of the outbreak		Number of staff involved at the commencement of the outbreak	
Total number of patients involved at the finish of the outbreak		Number of staff involved at the finish of the outbreak	

Date of visit:

Name of Nurse/Practitioner:

Email address:

Management		Yes	No	N/A	Comments
1	Identification and reporting of the outbreak was completed at an early stage and the UKHSA or Infection Control Team given immediate notification? (Within a 24 hour period)				
2	Has the Infection Prevention Check list been completed to ensure control measures were implemented and maintained?				
3	Has effective clear and concise communication been evident throughout this outbreak?				
4	Has a review of the outbreak been undertaken				
5	Were specimen samples collected from residents in an effective and timely manner				

RECOMMENDATIONS



Communication		Yes	No	N/A	Comments
6	Cases of diarrhoea and vomiting were reported to the person in charge and entered the log sheet (residents and staff)				
7	The IPC duty desk were informed in a timely manner				
8	The Environmental Health Officers were informed in a timely manner				
9	The home was closed as soon as it was identified that there was an outbreak				
10	Visitors were informed of the homes closure and a poster was placed on the main entrance to the home.				
11	Visiting health care staff were informed of the outbreak i.e. GP's, community nurses, physiotherapists, occupational therapists, pharmacists.				
12	All non-essential services were deferred until after the outbreak- i.e. podiatry, hairdresser, decorator.				
13	The West Yorkshire Duty Desk were informed of any residents requiring an emergency admission to hospital.				
14	For any residents requiring admission the GP/ paramedics/care home manager informed the admitting hospital of the outbreak so that the resident can be received into a suitable area in A&E/medical admissions (MAU).				
15	Transfer stickers were available and used on all documentation identifying the resident as coming from a care home with an outbreak				
RECOMMENDATIONS					

Infection Control Precautions		Yes	No	N/A	
16	Were residents isolated in their rooms until 48 hours symptom free (if not was a risk assessment completed)				
17	Staff rotas were organised to minimise contamination of affected areas				
18	A stool specimen was obtained as soon as possible from all symptomatic cases				
19	Staff and visitors with symptoms were excluded until asymptomatic for 48 hours				
20	Staff did not eat or drink unless in specifically designated areas and all open boxes of chocolates, sweets, biscuits, and bowls of fruit were removed for the duration of the outbreak				
21	Staff changed out of uniforms prior to leaving the home during the outbreak				
22	Staff wore a clean uniform each day				
23	Personal Protective Equipment (PPE) were worn at all times when dealing with blood and body fluids				
24	There were adequate stocks of PPE available for staff during the outbreak				
25	Gloves and aprons were discarded after each episode of patient care into the correct waste stream				
26	Sinks are accessible and were well stocked with liquid soap and paper towels for staff and visitors.				
27	Residents were provided with hand wipes or encouraged to wash their hands regularly				
28	The macerator/bedpan washer was operational – any faults being dealt with immediately				

29	Laundry soiled by faeces or vomit was placed directly into a water soluble/infected laundry bag				
30	Laundry staff had access to and wore personal protective equipment (gloves and aprons) when dealing with soiled linen				
31	The home was thoroughly cleaned twice daily using hot water and detergent.				
32	Following decontamination with a detergent solution, all hard surfaces and toilet areas were then cleaned twice daily using a hypochlorite solution 1,000 parts per million (i.e. Milton 1:10, domestic bleach solution or chlorclean).				
33	Commodes and toilet seats were cleaned after every use with soap and water or a detergent wipe and then cleaned with a hypochlorite solution				
34	Spillages were dealt with promptly and staff wore the appropriate PPE				
35	Contamination of carpets were cleaned up immediately with detergent and hot water, any soiled carpets were cleaned with a steam cleaner (if available)				
RECOMMENDATIONS					



INFECTION PREVENTION AND CONTROL

NOTICE TO VISITORS

**We are currently experiencing
episodes of diarrhoea and vomiting
within the Care Home**

**In order to reduce the potential spread of this
infection we request that you:**

- Follow any instructions provided by Care Home staff
- Please ensure that you thoroughly wash your hands with soap and water when entering and exiting the Care Home
- Keep visiting to a minimum
- Deter children from visiting

Thank you for your co-operation

Infection Prevention and Control Team

Telephone: 01484 221000

Appendix 22 Norovirus information for residents and their families

INFORMATION FOR RESIDENTS AND VISITORS

WHAT IS NOROVIRUS?

Norovirus is a frequent cause of diarrhoea and vomiting in the community and is most common during the winter. It is sometimes called 'winter vomiting disease'.

HOW DOES IT AFFECT ME?

Norovirus causes symptoms of 'gastric flu'. It lasts 2-3 days and the person will have diarrhoea and/or vomiting. Some people may have a raised temperature, headaches and aching limbs. The illness is usually mild in nature and gets better without antibiotics.

WHAT ARE THE PROBLEMS WITH IT?

Norovirus spreads very easily in healthcare settings this is due to the close contact between patients. Norovirus is very infectious. There are several ways the Norovirus can spread:

- When people vomit the virus is dispersed over a wide area and people close by when this happens may then acquire the infection;
- Hands and surfaces may become contaminated by the virus which can then become a source for further spread of infection.

This is why during an outbreak we increase the cleaning and ask everyone entering and leaving the home to wash their hands thoroughly.

WILL I NEED TREATMENT?

Antibiotics are not needed to treat Norovirus, the main treatment is making sure you drink plenty of fluid. If you develop diarrhoea and vomiting, a stool sample may be sent to the laboratory for testing. Once the illness is over no further action is necessary and your care will continue as before.

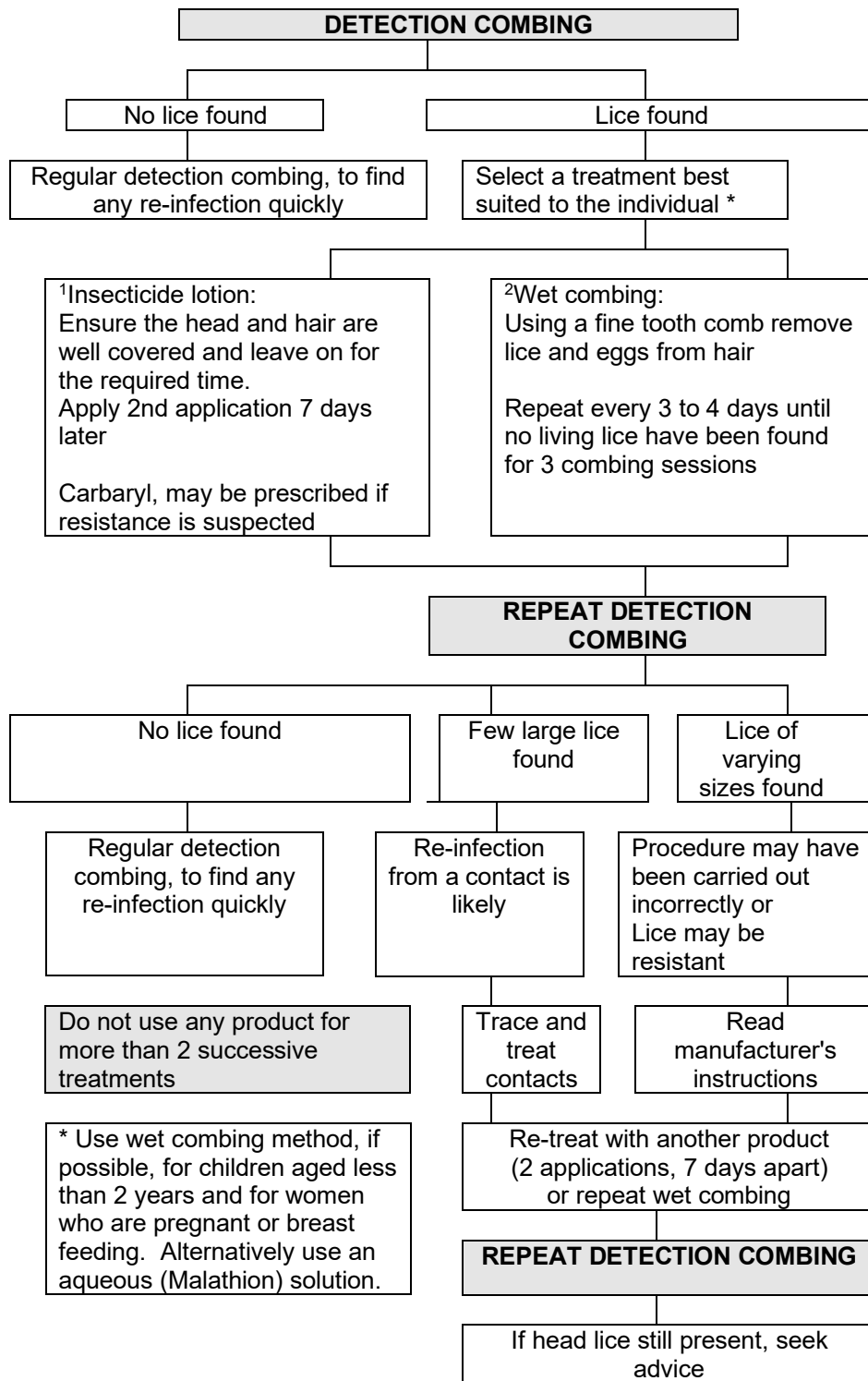
CAN I HAVE VISITORS?

Yes you can have visitors. Although the symptoms are mild, children **should not** come to visit you, as they may be particularly prone to the virus. Friends or relatives that are unwell or suffering from diarrhoea and vomiting themselves **must not** visit. If you have any concerns at all about someone visiting, please discuss this with the nurse or carer. To prevent the spread of infection your visitors should avoid visiting other areas of the home.

DO VISITORS NEED TO TAKE PRECAUTIONS WHEN VISITING ME?

Visitors should wash their hands thoroughly both before and after visiting you. It is also advisable to keep your number of visitors to a minimum as they may pick up the virus when in the home. The care staff will advise if anything further is necessary.

Managing head lice in a care home



Scabies

Section 1: Introduction and Management of a single case in a household

Introduction

Scabies is a contagious infestation caused by a mite *Sarcoptes scabiae var. hominis*. The condition is recognised by an allergic reaction to the saliva & faecal material excreted by the mite. It is a worldwide disease, more common where overcrowded conditions prevail. It can affect any individual irrespective of social class or race. It is primarily characterised by itching and vesiculations. Signs of reddish, slightly elevated tracts may also occur. Miniature papules, vesicles, pustules and excoriations soon appear. Scratching of these areas may lead to secondary bacterial infection, sometimes requiring antimicrobial treatment.

Mode of Transmission

Scabies is host specific i.e. *Sarcoptes scabiae var. hominis* only lives on humans, therefore scabies cannot be caught from pets or other animals. Transmission is by direct personal contact i.e. by prolonged skin-to-skin contact of a sexual or social nature, and thus a quick handshake or hug will not spread the infection. Mites usually pass from person-to-person in close communities, particularly within households. It is recognised that the spread is not limited to family members but includes everyone who has close (skin contact) personal contact with infected individuals. Infection occurs following transference of mites, which burrow into the skin. People who have acquired the infection for the first time may not show any symptoms for 2 - 4 weeks, so this makes spread of the disease difficult to identify and contain in institutions such as care homes.

Life Cycle of the Mite

- The newly mated female burrows through the skin, often at the finger webs, wrists and elbows.
- Eggs are laid in the burrows at a rate of 2 - 3 per day for up to 2 months.
- Eggs mature, and larvae emerge from the eggs 3-4 days after they have been laid.
- After emerging from the egg, the larva passes through two moults before becoming adult.
- Adult mites mate
- The entire life cycle can be completed in 10-14 days, and mites live for around 30 days.

Incubation Period

The incubation period for a first infection is usually 2 - 4 weeks in people without previous exposure, as the mites faecal contamination takes time to cause an allergic reaction. Subsequent infection will cause an allergic reaction within one week. Scabies can be easily managed when treatment is performed correctly. However, as a result of the extended incubation period there may also be asymptomatic carriers who can re-infect others after treatment has been performed. It is therefore important to undertake a thorough risk assessment when planning eradication treatment and to undertake follow up skin assessments for at least two weeks post treatment.

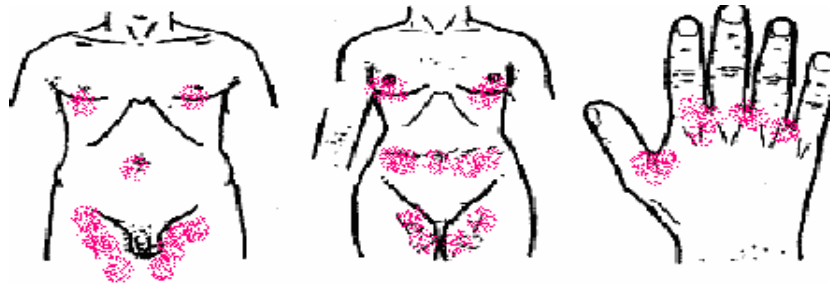
Sites of Infection

The most common areas affected are between the fingers (finger webs), wrists, elbows, armpits, waist, thighs, genitalia, nipples, breasts and lower buttocks. In infants, young children the elderly and those who are chronically ill, the mites can be found on the face, ears and scalp. It should be recognised that scabies causes an allergic reaction, and the itch and the rash may not always coincide with the actual site of the mite.

Recognition/Diagnosis

Appropriately trained professionals who will look for burrows and/or mites can make a clinical diagnosis. Usually there are only a few mites on the entire body and therefore evidence of infection can easily be missed. Recovering the mite from its burrow by taking skin scrapings and identifying it microscopically may establish diagnosis. However scabies should always be suspected in the presence of the following symptoms:

- intense itching, particularly at night
- a symmetrical unexplained rash
- burrows and other lesions on the sites mentioned above



Sites of the mite burrows

The Rash

The rash is a symmetrical itchy red papular rash which is an allergic reaction of the body to the saliva & faeces of the mite, and the eggs deposited by the mite under the skin. The allergic reaction may not correspond with the site where the mite may actually be found. The appearance and severity of symptoms varies from person to person and as with all allergies, the symptoms and their severity are strongly influenced by the immune status of the affected individuals.

Classification of Scabies

There are two classes of scabies infection; both are caused by the same mite.

Classical scabies

- Found in people with normal immune systems.
- Mites may be few in numbers.
- Itch can start between 2-4 weeks following initial acquisition of the infection.
- Sites of the rash may not correspond to sites of the mites.

Hyperkeratotic Scabies (also known as crusted, Norwegian and atypical scabies)

- An unusual form of the infection that is highly contagious.
- Occurs in immunodeficient individuals e.g. the frail elderly.
- Infection often appears as a generalized dermatitis more widely distributed than the burrows and the usual severe itching may be reduced or absent.

- Persons with crusted scabies are highly contagious because of the large number of mites present in the skin scales.
- Skin becomes thickened, scaled, crusted and unsightly due to the numbers of mites present.

Contact Tracing

Unless the original source of infection and all contacts are identified and treated, the disease will continue to spread with the possibility of re-infection for those already treated. The purpose of contact tracing is to identify anyone who may be infected and advise them about treatment options. All those with whom close contact was made for a prolonged period of time within the previous 2-6 weeks must be identified. It is beneficial for those people to seek information and guidance from their family doctor, practice nurse, community pharmacist or where appropriate their occupational health department.

Treatment

The index case and all members of the affected household should be treated simultaneously even in the absence of symptoms. It is also important to stress that this is not limited to family members but should include everyone who has had close contact with infected affected individuals, e.g. sleeping in the same bed. All members of the household should be treated at the same time (preferably within twenty four hours). For those who have been diagnosed with a scabies rash, treatment should be undertaken **twice**, one week apart.

Scabicial treatments for topical use

In symptomatic persons it is recommended that these products be applied twice, seven days apart.

Aqueous liquids and dermal creams are preferable to alcoholic preparations; they are easier to apply and are less irritating to the sensitive areas of the skin.

A non-pyrethroid product should be recommended for people who are allergic to Chrysanthemums.

Not contra-indicated in pregnancy or breast-feeding.

Transmission of the mite ceases after the first application has been applied, however, itching may persist for some time following successful treatment.

Use sufficient quantities of the scabicide, usually 30 grammes = 1 tube of cream or 100mls of lotion, this will cover the average person, but larger people in size and body weight will require two tubes of cream/bottles of lotion to ensure all areas of the body are covered adequately.

Treatments of choice are:

Permethrin 5% Dermal Cream (pyrethroid) – first choice

- Should be applied to the whole body including the face, neck, scalp & ears.
- It should be washed off after eight - twelve hours contact time.
- If hands (or other areas of the body) are washed within the eight - twelve hours application period, reapply to that area of the skin.
- Children aged 2 months to two years medical supervision is required.
- Do **not** apply to broken or secondarily infected skin.

Malathion 0.5% Liquid (organo-phosphate) (e.g. Derbac M™)

- Should be applied to the whole body including face, neck, scalp & ears.
- It should be washed off after 24 hours contact time.
- If hands (or other areas of the body) are washed within the 24 hours of application, reapply to that area of the skin.

- For young children under 6 months, use under medical supervision.
- Do **not** apply to broken or secondarily infected skin.

Treatment of classical scabies

- Aqueous liquid or dermal cream should be applied by rubbing gently onto **all** parts of the body including the face, neck, behind the ears and the scalp.
- Hot baths before treatment should be avoided as evidence suggests this aids absorption into the blood stream, and reduces its action at the site.
- The liquid or cream should be allowed to dry before getting dressed.
- Partners and close contacts should be treated simultaneously (within 24 hours).
- People may need assistance to apply the treatment properly and special attention should be paid to armpits, wrists, elbows, finger webs and under nails, beneath the breasts and around the nipples, the soles of the feet and the toes. Liquid should be brushed under the ends of the nails.
- The cream or liquid should be reapplied after washing hands or other areas of the skin (e.g. after nappy changing or after a person is incontinent) during the treatment time, and, to prevent small children and babies sucking the treatment from their hands, mittens can be worn.
- There is no evidence to suggest that scabies is transmitted on clothing, towels and bedding, therefore no special cleaning or laundering measures other than the usual hygienic ones are required following treatment.
- People should be advised that itching could persist for some time after successful treatment. An anti-pruritic (itching) cream may be helpful. **However, persistent symptoms for more than 3 weeks may indicate that the eradication treatment has not been successful, and may indicate that a further risk assessment &/or treatment is required.**
- The guiding principle is co-ordination of treatment to limit both spread of the disease and unnecessary scabicide exposure. Successful treatment does not however protect the person from re-infection from undiagnosed contacts inside and outside the family/household.

Treatment of hyperkeratotic (resistant) scabies

An oral product, Ivermectin, is available on a named person basis and has been used in combination with topical treatments for the treatment of hyperkeratotic (crusted, Norwegian or atypical) scabies that does not generally respond to topical treatment alone.

Patients with hyperkeratotic scabies may require 2 or 3 applications of topical treatment on consecutive days to ensure that enough penetrates the skin crusts to kill all mites.

Section 2: Management of Scabies in Health and Social Care Settings e.g. Care Homes, Day Centres

Risk Assessment process:

It must be acknowledged that it will never be possible to completely eradicate the risk of scabies infection entering a care home setting or a day centre, so awareness of symptoms & early detection are key factors in limiting the impact of scabies infection within health & social care settings. The use of standard precautions including disposable gloves and aprons will minimise the spread of scabies in a care home.

The purpose of the risk assessment process is to identify the potential source of scabies infection and then to take control measures that will minimise the impact of the infection within the setting. If scabies infection is identified or suspected within a care home setting then the chance of possible infection for each resident and staff member should be assessed as 'high', 'medium' or 'low' risk, this will aid the appropriate follow-up and treatment of contacts.

High risk: are staff members who undertake close care (involving skin contact) of residents and who move between residents, rooms or units. This will include both day & night staff. It will also include all symptomatic residents and staff members.

Medium risk: are staff and other personnel who have intermittent direct personal contact with residents. It will also include asymptomatic residents who have their care provided by staff members categorised as 'high risk'.

Low risk: those at lowest risk are staff members who have no direct or close contact with affected residents e.g. gardeners, maintenance, catering & laundry staff. It also includes asymptomatic residents whose carers are not considered to be 'high risk' i.e. their direct personal care is provided by staff members who have not undertaken close care of symptomatic residents or who have not worked in the affected area(s) of the home.

- All staff and residents identified as '**high risk**' or '**medium risk**' will require treatment even in the absence of symptoms. In many institutions this may involve all patients and staff, that provide direct resident care, being treated simultaneously (within a 24 hour period) in a co-ordinated way.
- It is recommended that the management of care home facilities take responsibility for purchasing the scabicial treatments for their staff. By doing this the home management can ensure that treatment is undertaken at the same time and will greatly reduce the risk of prolonged or re-infection.
- There is no evidence to support the spread of scabies by fomites such as towels, bedding, soft furnishings or equipment. However, fomites may play a part in the dissemination of the more unusual form of scabies infection known as hyperkeratotic scabies (also known as crusted, Norwegian or atypical scabies).
- Machine wash ($\geq 60^{\circ}\text{C}$ or hottest possible temperature) clothes, towels, and bed linen, on the day of application of the first treatment. For cases of hyperkeratotic scabies, wash temperatures of above 60°C are essential. Keep any items of clothing that cannot be washed in plastic bags for at least 72 hours to contain the mites until they die.
- Pressing clothes with a warm iron, dry cleaning, or putting items in a dryer on the hot cycle for 10–30 minutes is also effective
- Normal hygiene and vacuuming of chairs, beds and soft furnishings will minimise environmental contamination with skin scales.
- **Care home staff do not need to stay off duty provided that they have observed the minimum contact time for their initial treatment.**
- Where staff have responsibility for applying the liquids/cream to residents, they should wear disposable, non-sterile, powder-free CE marked gloves and disposable plastic apron to do so.

Definition of an outbreak:

For the purpose of a suspected outbreak of scabies, the following definitions can be applied:

- Two or more persons diagnosed with scabies by a competent health professional¹
- Two or more persons with an unexplained rash, diagnosed by a clinician as probable scabies.

Where there is a possible case of scabies infection specialist diagnosis should be undertaken by an appropriately trained person, i.e. dermatologist or dermatology nurse.

Single case of scabies infection:

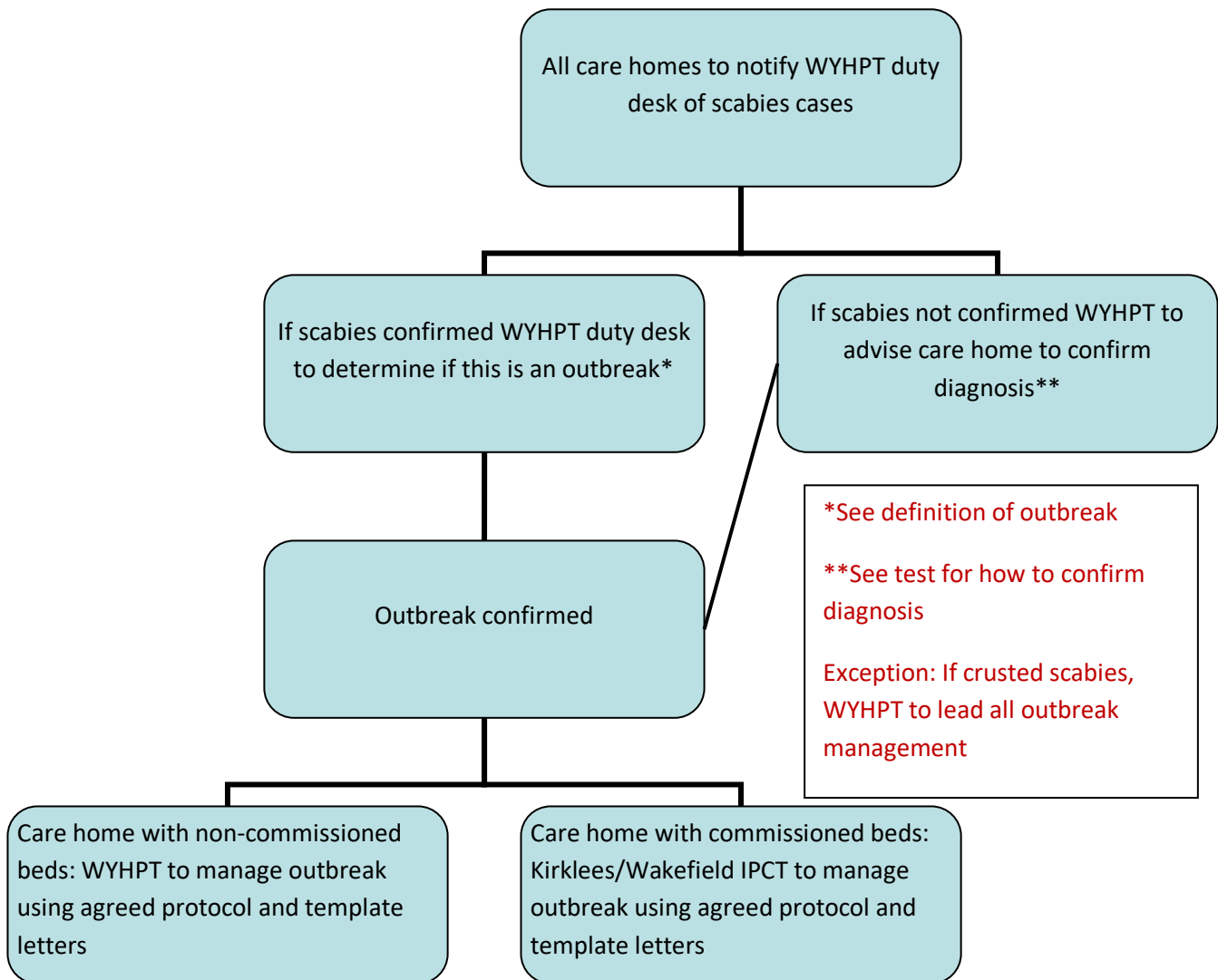
- Where an individual resident (single case) has a clinical diagnosis of scabies infection then they should be treated as soon as possible with an appropriate scabicial treatment that has been prescribed by their GP. They will require two full body treatments, seven days apart.
- Staff providing close care for this resident should be risk assessed as being '**high risk**' and treated as appropriate i.e. two applications seven days apart for symptomatic staff & one application for asymptomatic staff.

Cluster of cases/outbreak situation:

- In the event of a cluster of cases/suspected outbreak of scabies, it is the responsibility of the owner, manager or nominated lead of the care facility to liaise with the local infection control team (ICT) or health protection unit (HPU) for support and advice.
- All GPs should be informed of the problem by the manager/officer in charge and should be requested to promptly see their patients to make a clinical diagnosis, to treat and to follow up as necessary.
- Effective control requires early identification of index case(s) and adequate and simultaneous treatment (within a 24 hour period) of cases and close personal contacts to prevent further spread.
- Treatment should be co-ordinated with all affected care staff and residents given two full body applications, seven days apart.
- Asymptomatic staff and residents should receive one treatment on day of first treatment of the affected staff and residents (see algorithm on page 6).
- If possible, have one principle pharmacy co-coordinating the supply of scabicial treatments.
- Family members of staff may require treatment if they have prolonged skin-to-skin contact and therefore, should seek advice from their respective GPs.
- Regular visitors to the home should also be advised about the scabies outbreak and given advice on the symptoms of scabies & where appropriate, to seek treatment from their GP.
- The management of the home should also post a notice in a public area of the home to inform visitors that an outbreak of infection is currently being experienced.
- Management should consider, and discuss with the ICT/HPU, the need to temporarily close to admissions/respite patients until completion of the first treatment
- Care institutions that have recently had an admission, or taken a transfer of a resident from an affected area (hospital ward or care home), should be informed so that an assessment of the patient can be made for possible infection risks.

Roles and responsibilities for managing scabies outbreaks in care homes in Kirklees.

UKHSA	IPCT
Give general advice following enquires, including for single cases	Give general advice following enquires, including for single cases
Manage outbreaks in care homes with non-commissioned beds	Manage outbreaks in care homes with commissioned beds
Provide specialist advice/support to PCT ICT if required	Provide specialist advice to care homes with commissioned beds
Manage outbreaks of crusted scabies or other difficult to control outbreaks	Support UKHSA in managing outbreaks of crusted scabies, or other difficult to control outbreaks



Scabies Outbreak Management Pathway

Both eradication treatments **MUST** be co-ordinated and all staff and residents and other identified contacts treated simultaneously – if not, treatment will fail

Care Manager _____

Total Number of Residents _____

Care Home _____

Total Number of Staff _____

Address _____

Total Number with symptoms _____

Telephone Number _____

Scabies confirmed by _____

Client Group _____

Method of confirmation _____	Date	Signature
On identification of a scabies outbreak the care manager in-charge should:-		
Contact the Health Protection Team to inform of a potential outbreak 0113 3860300 Out of hours advice 0151 9091219		
Record the names of all residents and all staff, identifying those with symptoms of confirmed scabies/crusted scabies		
Contact each resident's GP to arrange an adequate supply of Permethrin 5% dermal cream (Malathion if contraindicated) for the size of resident and for 2 applications.		
Advise all staff to visit their own GP's to arrange adequate supplies of treatment for themselves, and if demonstrating any symptoms, for their household contacts also.		
To ensure a successful eradication the care manager in-charge should:-:-		
Identify 2 dates a week apart for the treatments to be done. Preferably no staff should be away from work.		
Plan off-duty in advance – enough staff on-duty (late or night shift) for each identified date to apply cream to all residents the same evening plus enough staff the next morning to bath all the residents.		
Arrange for staff who will be away (e.g. sick/on holiday) to be treated at the same time as the home, or prior to return to work, if this is not possible		
Arrange for residents currently away from the home (e.g. in hospital) to be treated prior to return, if this is to be after the start of the treatments		
Obtain enough treatment for all residents, staff and their close contacts		
For residents with crusted skin, treat with emollients to lift the crusts prior to the first treatment day – this may take some time		
Provide All staff with a leaflet describing what will occur on ERADICATION DAY, and how to apply the lotion to themselves and residents in order to succeed in eradicating scabies.		
Complete and maintain the data sheets provided to allow effective follow-up.		
Following ERADICATION DAY's 1 & 2 the care manager will:-		
Monitor the situation, reporting any concerns to the Health Protection Team		
Following 1 month, when all itching/rashes should have abated the treatment can be deemed as being a success or a failure.		

Eradication Day – 1 Date _____

ERADICATION DAY part A - the late/night shift (dirty team) must apply treatment to all residents:-		
Do not bath or shower residents before application of treatment. The lotion/cream should be applied to a cool skin.		
Ensure complete coverage of all body areas, including the palms of the hands, soles of the feet, under trimmed clean fingernails and toenails, the neck, face, ears and scalp if the hair is thinning. The manufacturer may not advise application above the neck except for certain groups, however expert opinion is that this area must be treated in all cases/contacts.		
The product must be re-applied if removed (e.g. during hand washing, toileting)		
The cream/lotion should be removed following treatment as directed by the manufacturer.		
MEANWHILE - all other staff not on duty as the 'dirty team' must apply treatment to themselves and their identified close contacts at this time.		
Application overnight is most effective, as treatment will not be removed during day-to-day activities.		
ERADICATION DAY part B - the early shift who themselves are treated must remove the treatment from all residents:-		
The cream/lotion should be removed following treatment as directed by the manufacturer.		
MEANWHILE the 'dirty team' must go off duty and apply treatment to themselves and their identified close contacts.		
Do not bath or shower before applying the treatment. The lotion/cream should be applied to a cool skin.		
Ensure complete coverage of all body areas, including the palms of the hands, soles of the feet, under trimmed clean fingernails and toenails, the neck, face, ears and scalp if the hair is thinning. The manufacturer may not advise application above the neck except for certain groups, however expert opinion is that this area must be treated in all cases/contacts.		
The product must be re-applied if removed (e.g. during hand washing, toileting)		
The product should be removed following treatment as directed by the manufacturer.		

1 week later the whole process must be repeated for all AFFECTED residents, staff and contacts

NOTES: _____

Eradication Day – 2

Date _____

ERADICATION DAY part A - the late/night shift (dirty team) must apply treatment to all AFFECTED residents:-		
Do not bath or shower residents before application of treatment. The lotion/cream should be applied to a cool skin.		
Ensure complete coverage of all body areas, including the palms of the hands, soles of the feet, under trimmed clean fingernails and toenails, the neck, face, ears and scalp if the hair is thinning. The manufacturer may not advise application above the neck except for certain groups, however expert opinion is that this area must be treated in all cases/contacts.		
The product must be re-applied if removed (e.g. during hand washing, toileting)		
The cream/lotion should be removed following treatment as directed by the manufacturer.		
MEANWHILE - all AFFECTED staff must apply treatment to themselves.		
Application overnight is most effective, as treatment will not be removed during day-to-day activities.		
ERADICATION DAY part B -		
The cream/lotion should be removed following treatment as directed by the manufacturer.		
MEANWHILE any other affected staff must go off duty and apply treatment to themselves.		
Do not bath or shower before applying the treatment. The lotion/cream should be applied to a cool skin.		
Ensure complete coverage of all body areas, including the palms of the hands, soles of the feet, under trimmed clean fingernails and toenails, the neck, face, ears and scalp if the hair is thinning. The manufacturer may not advise application above the neck except for certain groups, however expert opinion is that this area must be treated in all cases/contacts.		
The product must be re-applied if removed (e.g. during hand washing, toileting)		
The cream/lotion should be removed following treatment as directed by the manufacturer.		

The treatment is now complete. Itching and rashes may persist for up to one month in those who had symptoms, this does not mean the treatment has failed. Anti-itching medication/cream may be appropriate for these cases.

NOTES: _____

Template letter

Date: _____

To GPs of staff and residents at _____ Care Home

Dear Colleague

Scabies infestation among residents and staff of the _____ Home

I am writing to request your assistance in attempting to control an outbreak of scabies infestation at the above named home.

A number of the staff and residents at the home have been affected by a scabies infestation; therefore effective control requires simultaneous treatment of all staff and residents, as well as treatment of the household contacts of affected staff with topical scabicides.

Treatment of residents and staff is being coordinated through the care home, and we would therefore be grateful if you could assist us by prescribing Malathion (Derbac M®) for family members of affected staff registered with your practice, as detailed in the protocol below. We will work with the staff at the care home to coordinate the timing of treatment.

Thank you for your co-operation in this matter.

Yours sincerely

Consultant in Communicable Disease Control

PROTOCOL FOR SCABIES TREATMENT

1. All **SYMPTOMATIC** residents and staff, will be treated with Malathion (Derbac M®) - 2 treatments 7 days apart.
2. All **ASYMPTOMATIC** residents and staff, including temporary “agency”/“bank” staff who have worked in the care home in the last six weeks, will be treated with Malathion (Derbac M®) - one treatment.
3. Family members of **SYMPTOMATIC residents** who visit, and have reasonable close contact with the residents (e.g. prolonged hand-holding, cuddling) and family members of **SYMPTOMATIC staff** should be treated with Malathion (Derbac M®) - one treatment.
4. Malathion (Derbac M®) should be applied to the **WHOLE** body (including the head, face, neck and ears) and left on for 24 hours before washing off. If hands are washed during treatment time, cream should be reapplied.
5. All bedding should be washed on the hot cycle (60oC), where possible, and dried on the hot cycle for at least 20 minutes after both the first **and** second treatment.

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Appendix 25 Management of Influenza Outbreaks

25.1 Influenza information for Care Homes

25.2 Influenza information for Residents and Carers

25.3 Influenza outbreak management flow chart

25.4 Individual case record

25.5 Influenza outbreak summary data collection form

25.6 Details of suspected and confirmed cases

25.7 Influenza outbreak Infection Control Measures



Appendix 25.1

Influenza Outbreaks: Information for Care homes

1. What is an outbreak of influenza?

Two or more cases of flu-like illness occurring within 72 hours in residents or staff, who are in close proximity to each other in the care home, indicates that an outbreak of flu is possible. UKHSA will confirm whether or not there is an outbreak.

2. How can you reduce the risk of influenza transmission in care-homes?

- Wash hands frequently with soap and water and dry thoroughly.
- Ensure frequent cleaning of surfaces.
- Cover your mouth and nose with a tissue when coughing or sneezing.
- Dispose of used/dirty tissues as clinical waste.



3. What precautions should you take if you suspect a possible outbreak of flu in the care home?

3.1 Care of patients

1. The first priority is the care of patients. If possible affected patients should be cared for in single rooms, or in the same area of the care home, to reduce the risk to other residents who are not affected.
2. Ensure that standard infection control precautions are in place.
3. Inform the UKHSA as soon as possible.



3.2 Informing UKHSA

UKHSA staff (consultants and specialist nurses) will:

- Verify whether there is an outbreak, and collect further information.
- Offer advice on whether further tests or treatment is required.
- Liaise with other health care professionals who may be involved with the care of residents.
- Ensure that detailed information on infection control precautions is made available, and
- Monitor the progress of the outbreak, and offer support for any other control measures that may be required.
- Contact number for UKHSA – **0113 386 0300** for the duty desk.



3.3 Reinforce Infection Control Measures

In the event of an outbreak, the standard infection control measures that should be in place in all health and care settings should be maintained, and environmental cleaning measures should be enhanced.



3.4 Additional key measures recommended during outbreaks are outlined below.

These cover three main areas:-

- Restrictions to visitors and staff.
- Respiratory hygiene.
- Droplet precautions.

Further advice on these matters can be obtained from your local Infection Control Nurse/Practitioner or Health Protection Unit.



Restrictions to residents, visitors and staff

- Restrict *visitor* access to symptomatic patients to the minimum that is required for patient welfare. Children and vulnerable adults should be discouraged from visiting during an outbreak.
- Exclude *symptomatic staff and visitors* until fully recovered and at least five days after the onset of symptoms.
- *Agency and temporary staff* who are exposed during the outbreak should be advised not to work in other health or care settings until the outbreak is over.



Respiratory hygiene

Respiratory hygiene/cough etiquette is essential when an outbreak of flu is being considered. Recommended measures include:-

- Putting up signs at entrance or common areas instructing residents and visitors to inform staff if they have respiratory symptoms, and discouraging visitors with symptoms.
- Providing tissues to residents and visitors who are coughing or sneezing so that they can cover their mouth and nose.
- Residents with symptoms of respiratory infection should be discouraged from using common areas where feasible. Residents should have an adequate supply of tissues and covered sputum pots, as well as convenient and hygienic methods of disposing of these.
- Ensuring that supplies for hand washing are available where sinks are located and providing dispensers of alcohol-based hand rubs in other locations.
- Encouraging coughing persons to sit at least 3 feet (1m) away from others if possible.



Droplet precautions

- If possible symptomatic residents should be cared for in **single rooms** until fully recovered and at least five days after the onset of symptoms. If this is not possible, then **group together** suspected flu residents with other residents suspected of having flu.
- If possible, staff should work with either symptomatic or asymptomatic residents (but not both), and this arrangement should be continued for the duration of the outbreak.
- Staff should use appropriate infection control precautions while dealing with affected patients- e.g. gloves, single use apron etc.
- The Health Protection Unit will advise on the appropriate use of surgical masks.



For further information, please contact UKHSA on: **0113 386 0300**.

Appendix 25.2 Influenza Outbreaks Information for Residents and Carers

What is a flu (influenza) outbreak?

Flu like illness affects many people during the winter months. Two or more cases of flu-like illness occurring within 72 hours in residents or staff from the same care home indicates that an outbreak of influenza is possible.



Recommended precautionary measures for homes with a possible flu-outbreak

If staff in the care home suspect an outbreak, they will ensure that measures are in place, to reduce the risk of spread to other residents. They may also advise restrictions on staff and resident movements.

UKHSA and IPCT will be supporting them in:-



- adequate control measures are taken to prevent the spread of infection.
- affected residents or staff receive appropriate treatment and;
- residents, staff and carers receive appropriate, and timely information on the measures being taken.

What are the specific measures that staff can take?

- Wash hands frequently with soap and water and dry thoroughly.
- Dispose of used/dirty tissues as clinical waste.
- Ensure frequent cleaning of surfaces.
- Ensure that supplies for hand washing are available where sinks are located.
- Provide tissues to residents and visitors who are coughing or sneezing so that they can cover their mouth and nose.
- Staff should use appropriate infection control precautions while dealing with affected patients e.g., gloves, single use apron etc.



How can residents and carers help?

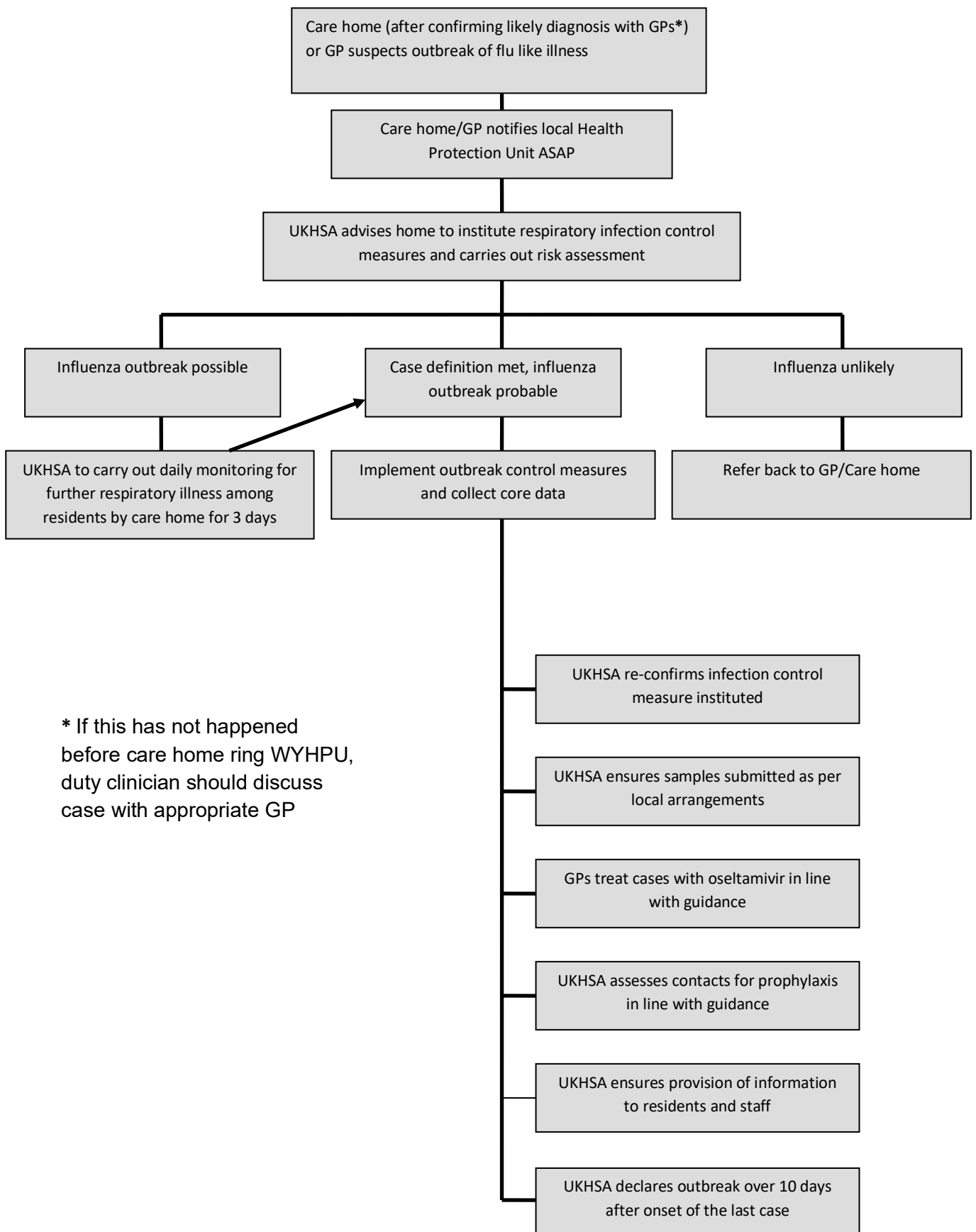
- Residents with flu symptoms should:-
 - Avoid using common areas.
 - Cover their mouth and nose with a tissue when coughing or sneezing.
 - Sit at least 3 feet (1m) away from others if possible.
- All residents can:-
 - Discourage visitors especially children and vulnerable adults.
 - Support the home by adhering to other restrictions being placed.



Carers, family and friends should not visit the home if they have flu symptoms.

For further information please contact the UKHSA on: **0113 386 0300**

Appendix 25.3 Outbreak Flow Chart



Appendix 25.4: Individual Influenza case record

(Information to be kept in the Care Home in residents records)

PATIENT DETAILS

Forename:		Surname:	
DOB:			
Staff/Resident:			
Onset Date:		Age at Date at Onset:	

Fever ≥ 37.8 C :	Yes / No	Sudden decline:	Yes / No
Shortness of Breath:	Yes / No	Wheezing:	Yes / No
Chest Pain:	Yes / No	Cough:	Yes / No
Sore Throat:	Yes / No	Sneezing:	Yes / No
Nasal discharge / Congestion:	Yes / No	Hoarseness:	Yes / No
Other symptoms:			

INVESTIGATION & RESULTS

Chest X-Ray:	Yes / No	Date done		Date result received		Results:	
Nasal Swab (Virology):	Yes / No	Date done		Date result received		Results [§] :	
Sputum Culture:	Yes / No	Date done		Date result received		Results:	
Other Investigations:							

Antiviral Treatment:	Yes / No	Hospital Admission:	Yes / No
Treatment start date:		Died:	Yes / No
Vac Status Influenza:	Immunised / unimmunised / unknown		

Appendix 25.4: Individual case record cont'd

Vac Status Pneumococcal:	Immunised/unimmunised/unknown
Previous contact of a case in the home:	Yes/No
Comments:	

CONTACTS DETAILS (= anyone sharing a room with the above case)

Contact ID:			
Forename:		Surname:	
DOB:		Staff/Resident:	
Onset Date:		Age at Date Onset:	

Antiviral Prophylaxis:	Yes / No	Prophylaxis Date:	
Flu vaccination Status:	Immunised / unimmunised / unknown		
Pneumococcal vaccination Status:	Immunised / unimmunised / unknown		
Developed Flu:	Yes / No		

Comments (any other relevant information):

Appendix 25.5 Flu outbreak Summary Data collection form

(Please return to HPU when outbreak concluded)

Name of Notifier:			
Name of Manager:			
Establishment Name:			
Establishment Address:	Postcode:		
Establishment Tel:			
Type of care home:	Residential/Nursing/Mental Health or Learning disability/Other		
Bed capacity:	Residential EMI/LD	Nursing Intermediate Care	
Total No. Residents in home at the start of outbreak			
Age range of residents	< 55 years	55 – 64 years	65 years and over
Type of GP Cover:	One dedicated GP Surgery Residents retain own GP		
Total no of staff:	Permanent Agency	Temporary	
Date reported to HPU:			
Date of onset of first case:			
Date of onset of last case:			
Hospital Admissions (linked to flu):	Yes/No	If yes, how many:	
Deaths (linked to flu):	Yes/No	If yes, how many:	
Date Home Closed:			
Date Home Re-opened:			

APPENDIX 25.7 OUTBREAKS OF SEASONAL INFLUENZA IN CARE HOMES INFECTION CONTROL MEASURES

In the event of an outbreak, the standard infection control principles that should be in place in all health and care settings should be maintained.

Standard infection control precautions:

Staff should wash their hands thoroughly using soap and water, or use a 70% alcohol hand rub **before and after any contact with residents**. Placing hand rub dispensers at the residents' bedsides for use by visitors and staff should be considered, if safe to do so. It is advisable to recommend carrying out a risk assessment before introducing alcohol gels into the workplace.

Respiratory Hygiene/Cough Etiquette

Where possible, respiratory hygiene/cough etiquette should be implemented whenever residents or visitors have symptoms of respiratory infection, to prevent the transmission of all respiratory tract infections in long-term care facilities. **When an outbreak of influenza is being considered, respiratory hygiene/cough etiquette is essential and must be implemented.**

Respiratory hygiene and cough etiquette include the following:

- Posting visual signs at the entrance to the home instructing residents and visitors to inform staff if they have symptoms of respiratory infection, discouraging those who are ill from visiting the home, and encouraging them to practice respiratory hygiene/cough etiquette. Ensure these are brightly coloured to stand out from normal door signs.
- Providing tissues to residents and visitors who are coughing or sneezing so that they can cover their mouth and nose.
- Providing tissues and alcohol-based hand rubs in common areas and waiting rooms.
- Provide no-touch receptacles for used tissue disposal.
- Provide conveniently located dispensers of alcohol-based hand rub; where sinks are available, ensure that supplies for hand washing (i.e., soap, disposable towels) are consistently available.
- Encouraging coughing persons to sit at least 3 feet (1m) away from others, if possible.
- Residents with symptoms of respiratory infection should be discouraged from using common areas where feasible. Residents should have an adequate supply of tissues and covered sputum pots, as well as convenient and hygienic methods of disposing of these.

Droplet precautions:

- If possible symptomatic residents should be cared for in single rooms until fully recovered, and at least five days after the onset of symptoms. If this is not possible then cohort suspected influenza residents with other residents suspected of having influenza; cohort confirmed influenza residents with other residents confirmed to have influenza. At the very least, symptomatic residents should be cared for in areas well away from asymptomatic residents. If the design of the care home and the numbers of symptomatic residents allows, the separation of symptomatic and asymptomatic residents in separate floors or wings of the home is preferable.
- If possible, staff should work with either symptomatic or asymptomatic residents (but not both), and this arrangement should be continued for the duration of the outbreak.
- Staff should use single-use plastic aprons when dealing with patients, and gloves as appropriate. Glove wearing does not obviate the need for hand hygiene.
- Surgical masks should be worn by care staff attending to personal care needs of affected residents or working within three feet (1m) of an affected person. This is particularly important during cough-inducing procedures, including nebuliser administration. Masks should be removed

on leaving the resident's room and disposed of as clinical waste. Homes should obtain masks from their usual PPE suppliers.

- If resident movement or transport is necessary the affected resident should wear a surgical mask if possible.
- All staff should perform hand hygiene immediately after de-masking, as per standard infection control precautions.

Restrictions to residents, visitors and healthcare staff:

- The home (and any associated day care facility) must be closed to admissions until the outbreak is declared over.
- Residents should not be transferred to other homes or attend external day centres, social events, or similar activities until the outbreak is declared over.
- Residents should avoid non-urgent outpatient clinic visits. More urgent out-patient or similar visits (e.g. for investigations), should be subject to a risk assessment by the clinicians involved in collaboration with infection control staff in the concerned hospital.
- Agency and temporary staff who are exposed during the outbreak should be advised not to work elsewhere (e.g. in a local acute care hospital) until the outbreak is over. If this is not possible, they should not work in the affected home until the outbreak is over.
- Symptomatic staff and visitors should be excluded from the home until fully recovered, and at least five days after the onset of symptoms.
- Children and adults vulnerable to infection should be discouraged from visiting during an outbreak.
- Visitor access to symptomatic residents should also be kept to a minimum, consistent with patient welfare.

Other measures:

- Surgical masks, gloves and aprons, and contaminated tissues should be disposed of as clinical waste in an orange bag.
- Resident's clothes, linen and soft furnishings should be thoroughly washed on a regular basis, and all rooms kept clean, including TV remote controls, handles and light switches. More frequent cleaning of surfaces such as lockers, tables & chairs, televisions and floors is required, especially those located within 3 feet (1m) of a symptomatic residents. Hoists, lifting aids, baths and showers should also be thoroughly cleaned between residents.
- Uniforms and other work clothing should be laundered at work if there are facilities for this. If laundered at home the general advice on washing work clothes separately would apply. Uniforms should not be worn between home and the place of work.



Infection Prevention Society
Incorporating the ICM4



Department
of Health

Advice for those affected by MRSA outside of hospital

*If you have MRSA this
leaflet provides information
and advice for managing
your day-to-day life.*



About MRSA

There are lots of different types or families of germs found on the human body and in the environment around us. One of these families of germs is called *Staphylococcus aureus*. MRSA belongs to this family.

Staphylococcus aureus

Staphylococcus aureus (*S. aureus*) is found on about a third of the population. It usually lives in the moist areas such as armpits, groin and nose, although it can be found on other parts of the body such as your hands. Mostly, it causes no problems, though like any other germ, it can cause infections. In particular, *S. aureus* can cause skin-related problems such as pimples and boils. These germs can cause more serious infections if they get into sites where they would not normally be found, for example through cuts or surgical wounds. This family of germs is treatable with a wide range of antibiotics and is known sometimes as MSSA, or meticillin **sensitive** *Staphylococcus aureus* (meticillin being a type of antibiotic).

MRSA

MRSA (meticillin **resistant** *Staphylococcus aureus*) is when *S. aureus* becomes resistant to meticillin, meaning that there is a reduced choice of antibiotics available to treat it, although it is still treatable with other antibiotics.

How it is spread

MRSA exists throughout the community. It is more common in hospitals and care homes where people are having medical procedures and are being cared for. Mostly the germ does not cause harm to people unless it gains entry to the body via a break in the skin. Normal social contact such as holding hands or hugging does not usually present a risk.

People with breaks in their skin such as a sore or surgical wound, or those who have medical tubes in place, should keep them covered with a dressing to limit the risk of the germ getting into the body. They should also be sure to wash their hands before and after changing their dressings or touching their wounds. This is because germs are most commonly passed on from the hands.

Dealing with MRSA

On the whole, colonisation with MRSA does not require treatment. If, however, you need a healthcare procedure or surgery, there may be an increased risk of infection, (because this makes it possible for MRSA to enter the body). Your healthcare professional will consider whether you need to be 'decolonised'. This means removing as much of the MRSA as possible. Decolonisation can be carried out either in hospital or at home. It will usually include treatment with bodywash, antiseptic shampoo and nasal cream, in order to remove MRSA from the body, hair and nostrils respectively. If you are being treated for an MRSA infection, you may be given antibiotics to take orally, to rub on your skin or by a drip.

There are some specific precautions that you should take while you are being decolonised or treated for an infection to ensure that this is effective (please see the last section of this leaflet, 'Around the house').

Safety and effectiveness of home treatment

Your healthcare professional will decide whether it is safe for you to be decolonised or treated at home. If you need treatment or decolonisation and there is no other reason for you to be in hospital, then it is safe for you to be treated at home. This can offer benefits such as enabling you to be cared for in the comfort of your own home, as well as assisting hospital staff in controlling the spread of infection. The decolonisation regime can be done simply and effectively at home. If you have had a bloodstream infection, your healthcare professional may decide that it is safe for you to continue your treatment at home and may arrange for a nurse to visit you at home and give you your antibiotics. The important thing to remember is to follow your treatment instructions carefully and make sure you complete it.

Tackling MRSA: how you can help

It is the responsibility of everyone who comes into contact with the NHS (from patients to healthcare staff, from managers to visitors) to help tackle infection and promote safe, clean care.

Tackling infection is everyone's business. However, you can play an important role in reducing risks, by taking some specific actions, and this section focuses on such issues.

Pay particular attention to hygiene

Because they are an important route through which the germs are passed on, hands should be washed regularly,



especially before and after wound care and handling any drips or tubes that enter your body. This is especially important if you are involved in changing or handling a dressing from a wound. Even when gloves are worn as an extra barrier, they should be

thrown away with the soiled dressing. Hands should then be thoroughly washed again.

Take precautions when looking after wounds

If you have MRSA there is a small risk to those people with whom you come into contact, if they have open wounds, intravenous lines, catheters or if they have chronic skin conditions. In addition to general maintenance of good hand hygiene, the most effective way to reduce the risk is for them to take sensible precautions such as covering open wounds, cuts and abrasions with a waterproof dressing or plaster.

Frequently asked questions

How will I know that I am colonised?

If you are colonised you will not have **any** symptoms at all, this is because the germ has not caused an infection.

How will I know that I have an infection?

If you develop a general infection you may feel unwell, hot, lethargic and have a poor appetite.

There are **5 signs** that can help you recognise any wound infection (including an MRSA infection):

- heat
- redness
- pus
- swelling
- pain

If you have any doubts, you should contact your GP or NHS Direct for advice.

How much of a risk am I to other people?

If you have MRSA, you do not normally present a risk to generally healthy people in the community (including elderly people, pregnant women, children and babies).

What about personal and sexual relations?

You should continue your normal life and this can include maintaining a normal relationship with your partner without restriction. If you do have MRSA, it is unlikely to harm your partner. While close contact could lead to your partner becoming colonised, this will not present a significant risk. If you are undergoing a decolonisation regime, say prior to surgery, you should ensure that you complete the treatment as advised by your healthcare professional, in order to reduce risk.

What if I am pregnant or a nursing mother?

If you are pregnant, and fit and healthy, there are no additional risks from MRSA. Breastfeeding is safe for you and your baby. However, in common with the usual advice given to breastfeeding mothers, if you notice certain symptoms, you should contact your GP, midwife or health visitor for advice. These include:

- painful breasts
- red patches or a sense of 'lumpiness' around the breasts
- flu-like symptoms, including a temperature

These symptoms indicate that you may have mastitis but this may or may not be MRSA. It is important that you tell your healthcare professional that you have or have had MRSA so that they can treat you appropriately.

Can my child go to school/nursery?

Children in whom MRSA has been detected can attend nursery and go to school as normal (see also the advice about leisure below). You do not have to inform the school or nursery.

Can I do my normal leisure activities and go to work?

MRSA colonisation does not prevent you going about your usual activities, including socialising, swimming, going to the gym etc. Regardless of whether you have MRSA or not, you should avoid swimming if you have a sore or open wound, and cover sores and wounds completely with a waterproof dressing if you are taking part in sports.

In general, you will be able to go to work as normal. However, if you work in a healthcare setting, and have an MRSA infection, you should contact your GP or occupational health service for advice.

Do I have to tell people that I have MRSA?

You do not have to tell anyone that you have MRSA. However, if you seek medical advice or visit the hospital for treatment, you should share this information with your healthcare practitioner. This is important because they might decide that you need an invasive procedure that may require decolonisation in advance.

Can I expect to be screened for MRSA?

Screening means that swabs will be taken from various parts of your body and tested for MRSA. You will be informed of the results. These results will help healthcare staff decide the safest way to proceed with your treatment. By 2009, all hospitals will screen patients who are admitted for a planned stay. By 2011 patients who come into hospital in an emergency will also be screened.

What about my pet?

Pets pose minimal risk in the spread of MRSA. In general, the germs that live on humans are different from the germs that live on animals. Occasionally, human germs may pass to animals, and that includes MRSA. MRSA is not common in animals, although it is possible for a pet to become colonised with MRSA and develop an infection. Likewise, it may be possible (although it is extremely rare) for an animal with MRSA to pass these germs to you. You should always, as a matter of course, wash your hands after handling your pets, and keep wounds covered.

Can I still go to a care home?

Yes. As long as there is no other reason for you to be in hospital, it is safe for both you and the other residents, providing sensible precautions – such as regular hand washing by staff and visitors – are taken. Your care home should already follow good basic hygiene principles.

It is safe for you to share a room, as long as neither you nor the other occupant has open sores, wounds, drips or catheters. You can also join other residents in communal areas. Any sores or wounds should be covered with a dressing.

What is PVL?

You may have heard of the PVL type of *S. aureus*. PVL stands for Panton-Valentine Leukocidin. A small proportion of *S. aureus* germs (2%) are the PVL type. These infections are rare in the UK and are not common in hospitals. This rare type can cause more severe infections, but they can still be treated with antibiotics. More information on PVL is available from the Health Protection Agency at: <http://www.hpa.org.uk/webw/HPAweb&Page&HPAwebAutoListName/Page/1207208304710?p=1207208304710>

More information about MRSA, for patients in hospital, is available from the Health Protection Agency at: http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1203496949853?p=1153846674382

Around the house

While special cleaning measures are not required, good hygiene and cleaning procedures in your household, will lower the risk of potential spread of MRSA.



Keep surfaces dust-free and regularly vacuum carpets. Clean your bath, shower, basins and toilets regularly with your usual cleaning products.

You should wash your clothes, bedding and linen as normal using your usual washing powder or liquid detergent at the hottest temperature suitable for the fabric. Your clothes can be incorporated into the family wash as usual, taking care not to overload your machine. You can tumble dry or line dry and iron clothes as normal.

Additional precautions

If you are being decolonised or treated for MRSA infection, there are some extra precautions to be taken. These will help get rid of as much MRSA as possible from your body, and will help reduce the chance of you becoming recolonised.

(You do not have to do these if you are colonised but not being treated.)

At a glance...

Can I still do these?	I have MRSA and:	
	I don't need treatment	I am being treated
Swimming	Yes (but not if you have open wounds)	Yes (but not if you have open wounds)
Work	Yes – as normal	Yes – as normal
School and nursery	Yes – as normal	Yes – as normal
Friends and partners	Yes – keep any open wounds covered	Yes – keep any open wounds covered
Partners and sexual relationships	As normal	As normal
Breastfeeding	Yes – be aware of signs of mastitis as usual	Yes – be aware of signs of mastitis as usual
Cleaning the house	Usual cleaning regime	Usual cleaning regime
Laundry	Wash clothes at hottest temperature for the fabric using usual detergent. Avoid overloading the machine	Wash clothes at hottest temperature for the fabric using usual detergent. Avoid overloading the machine
Pets	Wash your hands after handling pets	Wash your hands after handling pets
Care home	You can go back to your care home as normal. Wounds should be covered	You can go back to your care home as normal. Wounds should be covered
Towels	As normal	You shouldn't share personal towels and should change them daily
Washing and bathing	As normal	Follow treatment instructions given by your healthcare professional
Shaving	Don't share shaving equipment	Don't share shaving equipment
Clothes	As normal	Use fresh clothes/nightwear daily

MRSA Important Information

Please show this card to any
Doctor, Pharmacist, Dentist
or other healthcare
needs provider



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286672 1p 0k April 08
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www.dh.gov.uk/publications

Appendix 27

GUIDANCE AT A GLANCE- MRSA

These guidelines support the control and prevention of MRSA in community and Primary Care settings. They reflect best practice/national guidelines of the DH and local protocols

KEY POINTS

Meticillin Resistant Staphylococcus (MRSA) refers to the resistance of a strain of Staphylococcus aureus to the Beta lactam class of antibiotics. MRSA can colonise or cause infections in patients. It survives well in the environment, on skin scales and in dust and can be carried transiently on hands. The main route of transmission is through direct contact mainly by the hands.

If a patient has had a positive MRSA result in the last three years then it is good practice to consider them still positive.

My patient is colonised with MRSA...

Colonisation with MRSA may be identified when patients have been screened in hospital and discharged prior to the result being known. Sometimes it may be appropriate for the patient to have a course of colonisation suppression. The IPC team will inform the patient, providing written information and an MRSA alert card. This card (pictured) should be shown to future health and social care providers to enable informed decisions about treatments and isolation.

Preventing spread

Key actions to take:

- See MRSA cases at the end of a list where possible
- Hand hygiene before and after each patient contact
- Aprons to be worn for examination
- Clean equipment after each use including the couch

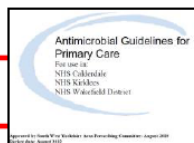
My patient has an MRSA infection

MRSA Important Information

Please show this card to any Doctor, Pharmacist, Dentist or other healthcare needs provider



Clinical infection with MRSA requires systemic treatment when symptoms of infection are present. See the Community Antimicrobial Guidelines 2013 or contact the microbiologists at the acute hospital (via the hospital switchboard) for advice on antibiotics. As above, the IPC team will write to the patient, providing written information and an MRSA card.



My patient has a history of MRSA....

If a patient with a history of MRSA presents with an infection that you suspect maybe Staph aureus, consider their history when deciding on antibiotic treatment and take a specimen to confirm the causative organism so treatment can be altered as soon as possible if needed.

Patients with MRSA may not respond to usual empirical antibiotics treatment (e.g. amoxicillin, flucloxacillin). If any patient is not responding to treatment as expected, please consult microbiology for antibiotic advice.

Resources

- Antimicrobial guidelines
- Patient held card
- MRSA patient information leaflet (also available in easy read)
- Transfer stickers – (available from the IPC team)

My patient has recurrent abscesses...

Panton Valentine Leukocidin (PVL) can be a cause of recurrent skin abscesses or boils. PVL can be MRSA or MSSA. If swabbing recurrent boils consider PVL. First line treatment for small PVL lesions is incision and drainage, not systemic antibiotics.

Communicating infection risk

- If admitting a patient with a history of MRSA, notify the receiving area so appropriate isolation can be instigated.
- The IPC team will write to your patient supplying a leaflet and card information to be sent to the practice.
- The infection risk should be documented on the patient record as guided by the IPC team.

Infection Prevention and Control Team for resources and advice on Tele: 01484 221000 or infection.control@kirklees.gov.uk
Microbiologist for prescribing and treatment advice (SWITCHBOARD) CHFT – 01484 342000, MYHT – 08448 118110
Thanks to Calderdale IPC Team for allowing adaptation of this guide

Appendix 28

Extended-Spectrum Beta-Lactamases (ESBL's) and E-coli

What are ESBLs?

ESBLs are bacteria that produce enzymes called extended-spectrum beta-lactamases (ESBL's) that confer resistance to penicillin, cephalosporin and other antibiotics. The two main bacteria that produce ESBL's are Escherichia Coli (E Coli) and klebsiella species.

E Coli with ESBL's may cause urinary tract infections (UTI's) or wound infections that can sometimes progress to more serious infections like blood poisoning (septicaemia), which can be life threatening

E. coli are very common bacteria that normally live harmlessly in the gut. ESBL-producing strains are bacteria that produce an enzyme called an extended-spectrum beta-lactamase, which makes them more resistant to antibiotics and makes the infections harder to treat. In many instances, only two oral antibiotics and a very limited group of intravenous antibiotics remain effective.

What illnesses do ESBL-producing E. coli cause?

E. coli are one of the most common bacteria causing infections in humans, particularly urinary tract infections (UTIs). These infections can sometimes progress to cause more serious infections such as blood poisoning which can be life threatening. ESBL-producing strains are more difficult to treat because of their antibiotic resistance.

Are some people more at risk than others?

Most of the infections have occurred in people with other underlying medical conditions who are already very sick, and in elderly people. Patients who have been taking antibiotics or who have been previously hospitalised are mainly affected. Residents who have indwelling devices in situ such as urethral catheters are at a greater risk of developing E. coli infection. This is due to the bacteria being able to easily be introduced into the urethra and bladder at routine catheter changes. It is also due to the catheter replacing the opportunity to 'flush' urine out of the bladder during normal micturition.

Treatment depends in the type of infection; however, antibiotics are usually used for the treatment of an E.coli bacteraemia.

Is this the type of E. coli that causes severe food poisoning?

No. There are very specific strains of E. coli including E. coli O157 that cause food poisoning and sometimes kidney failure when people eat undercooked meat. These are completely different strains. ESBL-producing E. coli are usually associated with urinary tract infections (UTIs) rather than food poisoning.

How do people contract it?

Further research is needed to look at the risk factors associated with different strains of ESBL-producing E. coli and how they are transmitted between patients and also in the community. UK Health Security Agency (UKHSA) is currently doing research to address some of these issues.

Is it treatable?

The important factor is quick diagnosis and recognition that the bacteria causing infection are resistant to some antibiotics, so that the most appropriate treatment can be prescribed quickly. There are only two oral antibiotics and few intravenous antibiotics that are effective against such infections.

Which antibiotics are these infections resistant to?

Most ESBL-producing E. coli are resistant to cephalosporin, penicillin, fluoroquinolones, trimethoprim, tetracycline and some other antibiotics, leaving very limited options for oral treatment in the community, usually only nitrofurantoin and fosfomycin.

How can the spread be controlled?

Robust infection control measures are always important to prevent the spread of infection. These include interventions, such as, hand washing and patient isolation. It is also important to ensure that antibiotics are prescribed only when needed, in the right dose, for the right duration, so as to reduce resistance developing in bacteria.

What else is UKHSA doing about the problem?

There are several ongoing initiatives. These have included advice and assistance in treatment and management of patients; awareness raising through presentations and publications; development of guidance on detection of such organisms and studies into patient risk factors for infection outcome; and research through externally funded projects.

Where can I find more information?

The UKHSA web site is another source of information [Extended-spectrum beta-lactamases \(ESBLs\): guidance, data, analysis - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/extended-spectrum-beta-lactamases-esbls)

Appendix 29

Carbapenemase-producing Enterobacteriaceae

CPE information leaflet (UKHSA)

Carbapenemase-producing Enterobacteriaceae (CPE). I am colonised/have an infection – what does this mean?

What does ‘carbapenemase-producing Enterobacteriaceae’ mean?

Enterobacteriaceae are bacteria that usually live harmlessly in the gut of humans. This is called ‘colonisation’ (a person is said to be a ‘carrier’). However, if the bacteria get into the wrong place, such as the bladder or bloodstream they can cause infection. Carbapenems are one of the most powerful types of antibiotics.

Carbapenemases are enzymes (chemicals), made by some strains of these bacteria, which allow them to destroy carbapenem antibiotics and so the bacteria are said to be resistant to the antibiotics.

Why does carbapenem resistance matter?

Carbapenem antibiotics can only be given in hospital directly into the bloodstream. Until now, doctors have relied on them to successfully treat certain ‘difficult’ infections when other antibiotics have failed to do so. In a hospital, where there are many vulnerable patients, spread of resistant bacteria can cause problems.

Does carriage of carbapenemase-producing Enterobacteriaceae need to be treated?

If a person is a carrier of carbapenemase-producing Enterobacteriaceae (sometimes called CPE), they do not need to be treated. However, if the bacteria have caused an infection then antibiotics will be required.

How did I ‘pick up’ carbapenemase-producing Enterobacteriaceae?

It can be difficult to say when or where you picked it up, but do ask your doctor or nurse to explain this to you in more detail. As mentioned above, sometimes this bacteria can be found, living harmlessly, in the gut of humans, however, there is an increased chance of picking up these bacteria if you have been a patient in a hospital abroad or in a UK hospital that has had patients carrying the bacteria, or if you have been in contact with a carrier elsewhere.

How will I be cared for whilst in hospital?

You will be asked to remain in a single room with your own toilet facilities whilst in hospital. You may be asked to provide a number of samples, depending on your length of stay, to check if you are still carrying the bacteria. These will probably be taken on a weekly basis. The samples might include a number of swabs from certain areas, such as where the tube for your drip (if you have one) enters the skin, a rectal swab i.e. a sample taken by inserting a swab briefly just inside your rectum (bottom), and/or a faecal sample. You will normally be informed of the results within two to three days.

How can the spread of carbapenemase-producing Enterobacteriaceae be prevented?

Accommodating you in a single room will help to prevent spread of the bacteria. Healthcare workers should wash their hands regularly. They will use gloves and aprons when caring for you. The most important measure for you to take is to wash your hands well with soap and water, especially after going to the toilet. You should avoid touching medical devices and other vulnerable areas (if you have any), such as your urinary catheter tube, your intravenous drip, and any wounds you may have. Visitors will be asked to wash their hands on entering and leaving the room and they may be asked to wear an apron.

What about when I go home?

Whilst there is a chance that you may still carry the bacteria when you go home quite often this will go away with time. No special measures or treatment are required and any infection that you had will have been treated prior to your discharge. You should carry on as normal, maintaining good hand hygiene. If you have any concerns you may wish to contact your GP for advice.

Before you leave hospital, ask the doctor or nurse to give you a letter or card advising that you have had an infection or been/are colonised with carbapenemase-producing Enterobacteriaceae. This will be useful for the future. **It is important that you make health care staff aware of it.** Should you or a member of your household be admitted to hospital, you should let the hospital staff know that you are, or have been a carrier and show them the letter/ card.

Where can I find more information?

If you would like any further information please speak to a member of your care staff, who may also contact the Infection Prevention and Control Team for you. The Public Health England website is another source of information:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/439801/CP-E-Non-AcuteToolkit_CORE.pdf

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Information Leaflet

Carbapenemase-producing Enterobacteriaceae: I may be a carrier (or have an infection) – what does this mean?

What does ‘carbapenemase-producing Enterobacteriaceae’ mean?

Enterobacteriaceae are bacteria that usually live harmlessly in the gut of humans. This is called ‘colonisation’ (a person is said to be a ‘carrier’). However, if the bacteria get into the wrong place, such as the bladder or bloodstream they can cause an infection. Carbapenems are one of the most powerful types of antibiotics. Carbapenemases are enzymes (chemicals), made by some strains of these bacteria, which allow them to destroy carbapenem antibiotics and so the bacteria are said to be resistant to the antibiotics.

Why does carbapenem resistance matter?

Carbapenem antibiotics can only be given in hospital directly into the bloodstream. Until now, doctors have relied on them to successfully treat certain ‘difficult’ infections when other antibiotics have failed to do so. Therefore, in a hospital, where there are many vulnerable patients, spread of these resistant bacteria can cause problems.

Does carriage of carbapenemase-producing Enterobacteriaceae need to be treated?

If a person is a carrier of carbapenemase-producing Enterobacteriaceae (sometimes called CPE), they do not need to be treated. As mentioned, these bacteria can live harmlessly in the gut. However, if the bacteria have caused an infection then antibiotics will be required.

How will I know if I am at risk of being a carrier or having an infection?

Your doctor or nurse may suspect that you are a carrier if you have been in a hospital abroad, or in a UK hospital that has had patients who carry these bacteria, or if you have been in contact with a carrier elsewhere. If any of these reasons apply to you, screening will be arranged for you. If in hospital, you will need to be cared for in a single room with your own toilet facilities at least until the results are known.

How will I be screened for carbapenemase-producing Enterobacteriaceae?

Screening usually entails taking a rectal swab by inserting it just inside your rectum (bottom). Alternatively, you may be asked to provide a sample of faeces. The swab/sample will be sent to the laboratory and you will normally be informed of the result within two to three days. If the result is negative, the doctors or nurses may wish to check that a further two samples are negative before you can be cared for on the main ward. These measures will not hinder your care in any way. If all results are negative no further actions are required.

Advice for patients who have a positive result

What happens if the result is positive?

Whilst there is a chance that you may still carry the bacteria when you go home, quite often this will go away with time. If the result is positive, ask your doctor or nurse to explain this to you in more detail. You will continue to be cared for in a single room whilst in hospital. If you have an infection, you will need to have antibiotics. However, if there are no signs of infection and you are simply 'carrying' the bacteria, no treatment is required.

How can the spread of carbapenemase-producing Enterobacteriaceae be prevented?

If the result is positive, caring for you in a single room, will help to prevent the spread of the bacteria. Healthcare workers should wash their hands regularly. They will use gloves and aprons when caring for you. The most important measure for you to take is to wash your hands well with soap and water, especially after going to the toilet.

You should avoid touching medical devices and other vulnerable areas (if you have any), such as your urinary catheter tube, your intravenous drip, and any wounds you may have. Visitors will be asked to wash their hands on entering and leaving the room and they may be asked to wear an apron. You should avoid touching medical devices (if you have any), such as your urinary catheter tube and your intravenous drip, particularly at the point where it is inserted into the body or skin. Visitors will be asked to wash their hands on entering and leaving the room and may be asked to wear an apron.

What about when I go home?

Whilst there is a chance that you may still be a carrier when you go home, quite often this will go away with time. No special measures or treatment are required; treatment will have commenced for any infection you may have prior to your discharge. You should carry on as normal, maintaining good hand hygiene. If you have any concerns you may wish to contact your GP for advice.

Before you leave hospital, ask the doctor or nurse to give you a letter or card advising that you have had an infection or been/are colonised with carbapenemase-producing Enterobacteriaceae. This will be useful for the future.

It is important that you make health care staff aware of it. Should you or a member of your household be admitted to hospital, you should let the hospital staff know that you are, or have been a carrier and show them the letter/card.

Where can I find more information?

If you would like any further information please speak to a member of your care staff, who may also contact the Infection Prevention and Control Team for you. The UKHSA website is another source of information:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/439801/CP-E-Non-AcuteToolkit_CORE.pdf

[Carbapenem resistance: guidance, data and analysis - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/439801/Carbapenem_resistance_guidance_data_and_analysis.pdf)

Carbapenemase-producing Enterobacteriaceae – I am a contact of someone who is a carrier or has an infection – what does this mean?

What does ‘carbapenemase-producing Enterobacteriaceae’ mean?

Enterobacteriaceae are bacteria that usually live harmlessly in the gut of humans. This is called ‘colonisation’ (a person is said to be a ‘carrier’). However, if the bacteria get into the wrong place, such as the bladder or bloodstream they can cause infection. Carbapenems are one of the most powerful types of antibiotics. Carbapenemases are enzymes (chemicals), made by some strains of these bacteria, which allow them to destroy carbapenem antibiotics and so the bacteria are said to be resistant to the antibiotics.

Why does carbapenem resistance matter?

Carbapenem antibiotics can only be given in hospital directly into the bloodstream. Until now, doctors have relied on them to successfully treat certain ‘difficult’ infections when other antibiotics have failed to do so. Therefore, in a hospital, where there are many vulnerable patients, spread of resistant bacteria can cause problems.

Does carriage of carbapenemase-producing Enterobacteriaceae need to be treated?

If a person is a carrier of carbapenemase-producing Enterobacteriaceae (sometimes called CPE), they do not need to be treated. As mentioned, these bacteria can live harmlessly in the gut. However, if the bacteria have caused an infection then antibiotics will be required.

How is carbapenemase-producing Enterobacteriaceae spread?

If a patient in hospital is carrying this bacteria it can get into the ward environment and can also be passed on by direct contact with that particular patient. For that reason, the patient will normally be cared for in a single room. Effective environmental cleaning and good hand hygiene by all, staff and patients, can reduce the risk of spread significantly.

Do I need to be screened?

If you have shared the same rooms/bay with someone with this bacteria before staff were aware that the person had it, screening will be offered to you. This screening is offered as there is a slight chance that you could have picked up the bacteria and may be carrying it too.

How will I be screened for carbapenemase-producing Enterobacteriaceae?

Screening usually involves taking a rectal swab by inserting it just inside your rectum (bottom), or you may be asked to provide a sample of faeces. The swab/sample will be sent to the laboratory and you will normally be informed of the result within two to three days. If the result is negative nothing further is required unless you are staying in hospital for some time. In that case, you will probably be asked to provide a sample on a regular basis eg once a week, as a precautionary measure.

What if the result is positive?

Please ask your doctor or nurse if the result is positive to allow them to explain this to you in more detail and to provide a leaflet relating to positive results. You will be cared for in a single room until you leave hospital. No treatment is necessary unless you have an infection when antibiotics will be given.

Where can I find more information?

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/439801/CPE-Non-AcuteToolkit_CORE.pdf

[Carbapenem resistance: guidance, data and analysis - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/439801/CPE-Non-AcuteToolkit_CORE.pdf)

Appendix 30

Vancomycin Resistant Enterococci

Vancomycin-resistant Enterococci are specific types of antimicrobial-resistant bacteria that are resistant to vancomycin, the drug often used to treat infections caused by enterococci. Enterococci are bacteria that are normally present in the human intestines and in the female genital tract and are often found in the environment. These bacteria can sometimes cause infections. Most vancomycin-resistant Enterococci infections occur in hospitals. [Vancomycin-resistant Enterococci is also called VRE]

What are vancomycin-resistant enterococci?

Enterococci are a type of bacteria always found in the human body.

All of us have this type of bacteria in our intestines (gut) and in some women they are also present in the vaginal area and the urinary tract. Enterococci are also often found in the environment. Occasionally enterococci cause infections in the urinary tract, blood-stream or wounds. These infections are often treated with an antibiotic called vancomycin. Sometimes though, enterococci become resistant to this antibiotic - in other words, vancomycin does not work against them. We call this vancomycin-resistant enterococci or VRE.

Who is at risk of infection caused by VRE?

People at an increased risk of getting an infection caused by VRE include those who:-

- Have been in hospital for a long time.
- Have weakened immune systems, transplant patients, for example, or those in intensive care.
- Have undergone surgery involving the abdominal or chest area.
- Have medical devices such as catheters or drips which have been in place for a long time.
- Have been previously treated with antibiotics such as vancomycin and cefuroxime.

What will happen if I am found to have VRE?

Generally speaking, if you are found to be *colonised* with VRE in other words, you have the bacteria in or on your body, but no symptoms of infection, you will not need any treatment. We may however give you a special body wash to reduce the number of bacteria on your skin and so reduce the risk of infection developing.

If you are found to have an *infection* caused by VRE, then we will treat you with antibiotics. Although VRE is resistant to vancomycin, there are other antibiotics which can be used. We will carry out laboratory tests to determine which drug can best treat your infection.

Nursing Care

What happens if you are found to have VRE will depend on whether it is likely that you or people you come into contact with are at risk of getting an infection with these bacteria.

You can be cared for in the same place and in the same way as before. You will simply need to keep a closer eye for any signs of infection and may need to clean the area around you more frequently to reduce the risk that the bacteria could spread. This will be if:-

You are strong enough to keep the VRE bacteria in check.

You are being cared for in an area where other people are generally fairly well and so unlikely to get an infection even if the VRE bacteria is passed on to them.

The VRE bacteria are found in your faeces or urine rather than for example in a wound.

You may need to be cared for in a single room with separate toilet facilities. Extra cleaning of the room will take place, staff will wear gloves and aprons when caring for you and items of medical equipment may be reserved for your use only. All of this reduces the risk of the VRE bacteria being passed onto other people. This will be if:-

You or those around you are at high risk of infection from VRE, perhaps because your immune system is weakened or because you have wounds or medical devices such as a central or Hickman Intravenous line etc.

You are being cared for in an area where the other patients are also at high risk of infection. The VRE bacteria are found in a part of your body where we think it is likely to cause infection: perhaps in a wound.

Will I be tested for VRE if I am admitted to hospital?

As VRE can live in your body without causing any problems, it is not generally screened for it when being admitted into hospital. It is sometimes detected during routine testing that may be needed while in hospital.

Can I be cured of VRE?

VRE may go away on its own eventually, especially if you do not take antibiotics. However as enterococci normally live in the body, you may remain a carrier indefinitely. The bacteria should not cause any problems if you are generally fit and well.

What happens when I am discharged from hospital?

If you have VRE, there is no need to take any special precautions once you are home. Just continue to wash your hands thoroughly after going to the toilet and before preparing food and clean your bathroom regularly and thoroughly.

You should mention that you were found to have VRE to any healthcare professionals caring for you in the future. It may be that they will test you again for the bacteria and if it is still present, care for you away from other patients who are at risk of infection. It will certainly ensure that you receive the right antibiotics if you develop infection in future.

What can I do to help prevent the spread of VRE and other bacteria and infections?

Hand washing with soap and water is the most effective way to prevent the spread of infections in hospital. You can help fight infection by making sure that you clean your hands regularly, especially after using the toilet and before eating. You can also cleanse your hand with the alcohol hand rubs when available in public buildings. These should be used as well as hand washing though, as they are not always effective by themselves.

You will notice in care settings that Health Care workers also regularly clean their hands, that they will sometimes wear disposable aprons and gloves, and that all surfaces are regularly cleaned. Again, all of this helps to prevent the spread of infection.

Where can I find more information?

The UKHSA web site is another source of information:

<https://www.gov.uk/guidance/enterococcus-species-and-glycopeptide-resistant-enterococci-gre>

Appendix 31

Panton Valentine Leukocidin

What is PVL *Staphylococcus aureus*?

Staphylococcus aureus ('SA') is a bacterium (germ) that commonly lives on healthy skin. About one third of healthy people carry it quite harmlessly, usually on moist surfaces such as the nostrils, armpits and groin. This is known as colonization. Some types of *Staphylococcus aureus* produce a toxin called Panton-Valentine Leukocidin (PVL) and they are known as PVL-SAs. (Panton and Valentine were two doctors who first found this chemical which can kill white blood cells called leukocytes – hence 'leukocidin').

What type of illness does it cause?

All SAs, including PVL-SAs, can cause harm if they get an opportunity to enter the body, for example through a cut or a graze. They can cause boils or skin abscesses and are occasionally associated with more serious infections of the lungs, blood, joints and bones. Some SAs such as PVL-SA are more likely to cause infections than others.

How do you catch PVL-SA?

Anyone can get a PVL-SA infection. Infection can occur in fit, healthy people. PVL-SA can be picked up by having skin-to-skin contact with someone who is already infected, for example close family during contact sports, or contact with an item or surface that has PVL-SA on it from someone else, for example shared gym equipment, shared razors, shared towels.

How is PVL-SA treated?

Boils and abscesses should be drained by incision by a doctor or nurse. Some infections may be treated with a course of antibiotics. In addition, the PVL-SAs carried on your skin may be eliminated with a five day skin treatment (washes, creams and shampoos). This is done to reduce the chances of you getting repeated infections and reduce the chances of you spreading PVL-SAs to others. In some patients this skin treatment may not be entirely successful, but the more carefully you follow the instructions, the more likely you are to clear the PVL-SAs from your skin. Your GP may recommend checking members of your household and close contacts, e.g. partners/children, in case they are also carrying PVL-SAs, and offering them skin treatments where necessary.

How do I prevent passing PVL-SAs to other people?

You need to keep infected areas of your body covered with clean, dry dressings or plasters. Change these regularly and as soon as discharge seeps to the surface. It is important that fluid or pus from infected skin is contained, because it has large numbers of PVL-SAs that can spread to others.

- Do not touch, poke or squeeze infected skin. This contaminates your hands and can push the PVL-SAs deeper into the skin. Contact your GP surgery if you have a boil or abscess that needs draining.
- Cover your nose and mouth with a tissue when you cough or sneeze, particularly if you have a cold, because PVL-SAs can live in your nose. Throw the tissue in the bin at once and then wash your hands.
- Wash your hands frequently with liquid soap and water, and **especially** after changing your plasters, dressings, and bandages or touching infected skin.
- Encourage others at home to wash their hands regularly with liquid soap.

- Use a separate towel and keep it separately, so others don't use it by mistake. Have it washed frequently in a hot wash.
- Regularly vacuum and dust (wiping with a damp cloth) your bedroom, bathroom, kitchen and other rooms, as well as personal items and shared items, such as keyboards. Household detergent is adequate for cleaning.
- Clean your sink, taps and bath after use with a disposable cloth and household detergent, then rinse clean and throw away the cloth.

Can I go to work or school when I have a PVL- SA infection?

You should not work as a carer in a nursery, hospital, residential or care home or similar place until your skin has healed and you have permission to return to work from your local occupational health department, GP or manager.

You should not work in the food industry, e.g. waitress, chef, food production, until your skin has healed and you have permission to return to work from your local occupational health department or GP.

You may carry on with other types of work, provided you keep infected skin areas covered with clean, dry dressings. If you are not sure about working, contact your local occupational health department or your GP.

Children can only go to school if they are old enough to understand the importance of good hand hygiene, and if their infected skin is covered with a clean dry dressing which will stay dry and in place until the end of the school day. Children should not take part in contact sports, or use communal gym equipment until their skin is healed. The GP's advice is essential, and school management should be informed.

People who have eczema or a more generalised skin condition should remain off work or school until treatment has been completed for both the eczema or skin condition and the PVL-SA infection. You need to continue treating your skin to keep it in good condition. In the long term this helps to reduce the risk of spread of PVL-SA to others.

Can I go to swimming pools, gyms or sports facilities when I have a PVL-SA infection?

You should not use communal facilities for example gym equipment, saunas, swimming pools, or have a massage, manicure or similar until your skin has healed.

How do I prevent becoming infected again?

- You should take good care of your skin. If you suffer from eczema, discuss the best treatment for this with your GP.
- Keep all cuts and grazes clean with liquid soap and water, apply disinfectant cream, and cover with dry dressings until scabbed over or healed
- Shower or bathe daily
- Put on clean clothes daily and wash bedclothes and towels on a regular basis using normal washing detergent but at the highest temperature the materials will allow
- Do not share personal items such as towels, razors, toothbrushes, water bottles, and facecloths
- In shared facilities, such as gyms, use fresh towels. Only go when skin lesions have healed and put a towel between your skin and the equipment. Importantly, shower afterwards and use a separate (second) clean towel to dry yourself. Wash any towels which you have taken to shared facilities after each visit
- Seek medical help at the first sign of infection in a cut, such as redness, swelling, pain, or pus

If you are found to carry PVL-SA persistently on your skin or nose, or if you suffer from repeated infections, you may be prescribed a further course of skin treatment. If this fails to eliminate it and you suffer repeated infections then you may be prescribed antibiotics and skin treatment together. Sometimes the skin treatment will be extended to your household or close contacts. In these circumstances it is important that all affected people in a household or social group are treated at the same time. If you have a further infection of any type, if you are admitted to hospital unexpectedly, or if you are going to be admitted to hospital for an operation, always tell the doctor or nurse looking after you that you have had a PVL-SA infection. This will ensure that you receive appropriate treatment.

Further information can be found on the UKHSA website at [PVL-Staphylococcus aureus infections: diagnosis and management - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/pvl-staphylococcus-aureus-infections-diagnosis-and-management)

Appendix 32

A-Z list of infectious diseases/conditions

Disease or causative organism	Mode of transmission	Period of infectivity	Additional Infection control precautions	Notes	Notify local HPU
<i>Bacillus cereus</i> food poisoning	<ul style="list-style-type: none"> Food (preformed toxin) 	Not infectious.	None.	Retain food samples.	Yes
Body lice	<ul style="list-style-type: none"> Person-to-person 	Until treated.	<p>If new resident, single room until treated.</p> <p>Laundry resident's clothing and bedding.</p>		No
<i>Campylobacter</i> spp.	<ul style="list-style-type: none"> Food Hand-to-mouth Pet faeces 	While diarrhoea persists.	<p>Single room if incontinent.</p> <p>Separate toilet.</p>	A local risk assessment should be undertaken to determine if pets in contact with resident need to be examined by a vet.	Yes, as the infection could be the result of food poisoning.
Chickenpox (varicella)	<ul style="list-style-type: none"> Airborne Contact with rash 	Infectious for 1–2 days before the onset of symptoms and 6 days after rash appears or until lesions are crusted (if longer).	Single room.	Pregnant staff and visitors who are not immune should avoid contact. Local HPU will advise on the management of contacts and may advise immunoglobulin and early antiviral therapy.	Yes
Clostridial food poisoning (<i>C. perfringens</i>)	<ul style="list-style-type: none"> Food 	Not infectious.	None.	<p>Toxin formed in gut after ingestion.</p> <p>Retain food samples.</p>	Yes
<i>Clostridioides difficile</i>	<ul style="list-style-type: none"> Hand-to-mouth Environmental contamination 	While diarrhoea persists.	<p>Single room.</p> <p>Separate toilet.</p>	<p>May need treatment with antibiotics.</p> <p>Likely to cause outbreaks.</p>	Yes- if there is a risk of cross infection

Cold sore (herpes simplex)	<ul style="list-style-type: none"> • Direct contact with lesions 	Until lesions crusted.	Use gloves for handling lesions, feeding or mouth care.		No
Conjunctivitis	<ul style="list-style-type: none"> • Direct contact with the discharge 	Until 48 hours after treatment.	Gloves/no touch technique when dealing with discharge. Personal hygiene/hand hygiene.		If two or more related cases are suspected
Coronavirus	<ul style="list-style-type: none"> • Respiratory droplets, direct and indirect contact with respiratory secretions. 	From up to 1 day before* to 5 days after clinical onset.	Isolation, PPE	Swabbing as government guidance at the time	If two or more related cases are suspected
<i>Cryptosporidium</i> spp.	<ul style="list-style-type: none"> • Water • Hand-to-mouth 	While diarrhoea persists.	Single room. Separate toilet.		Yes
<i>Escherichia coli</i> including verotoxin-producing <i>E. coli</i> (VTEC)	<ul style="list-style-type: none"> • Food • Hand-to-mouth 	Variable, but unlikely to infect others by 48 hours after diarrhoea stops unless poor hygiene/Incontinent.	Single room until 48 hours after diarrhoea stops. Separate toilet.	Retain food samples. Complications include haemolytic uraemic syndrome. Contact the HPU for advice on contact tracing and sampling.	Yes
Fleas	<ul style="list-style-type: none"> • From pets • Person-to-person 	Until treated.	If new resident, single room until treated. Treat pets. Launder resident's clothing and bedding.	Vacuum room of infected person daily for several days, with particular attention to pest resting sites.	No
German measles (rubella)	<ul style="list-style-type: none"> • Droplet, direct contact with infectious secretions. 	Incubation period of 14–17 days. (range 14 – 21). Individuals are infectious from about one week	Single room	Pregnant staff should know their immune status and seek advice if not immune.	Yes

		before, and at least four days after, the onset of the rash.		Non-pregnant staff should be immunised if susceptible.	
Giardia lamblia	<ul style="list-style-type: none"> Water Hand-to-mouth 	Until treated	Single room, if incontinent. Separate toilet.		Yes
Head lice	<ul style="list-style-type: none"> Person-to-person 	Until treated	Combing egg cases (nits) and live lice from hair.		No
Hepatitis A	<ul style="list-style-type: none"> Hand-to-mouth Food 	The incubation period is 15 –50 days, average 28–30 days. Maximum infectivity occurs during the latter half of the incubation period and continues until 7 days after jaundice appears.	Single room. Separate toilet.	May be asymptomatic, but can be severe and prolonged in older people.	Yes
Hepatitis B	<ul style="list-style-type: none"> Contact with infected blood or other body fluids Sexual transmission 	Variable, but can be for life.	Strict application of standard precautions, including care with sharps and body fluids	Immunisation of some staff may be recommended.	Yes – for acute infection (jaundice) No – for chronic carrier state
Hepatitis C	<ul style="list-style-type: none"> Contact with infected blood or other body fluids 	For one or more weeks prior to onset of the first symptoms; may persist in most persons indefinitely. May be infectious for life	Standard precautions including care with sharps and body fluids.		Yes – for acute infection (jaundice) No – for chronic carrier state
HIV/AIDS	<ul style="list-style-type: none"> Contact with infected blood or other body fluids 	For life.	Standard precautions, including care with	Resident’s GP, consultant and the Local HPU will collaborate with management.	No

	<ul style="list-style-type: none"> Sexual transmission 		sharps (see pages 30 - 31) and body fluids.		
Impetigo <i>(staphylococcal</i> <i>Or streptococcal)</i>	<ul style="list-style-type: none"> Direct contact with lesions 	Until crusted over.	Single room until 48 hours after treatment started. Cover lesions if mixing with other residents.	The bacterium may be carried in the nose of infected resident, other residents or staff.	If more than two cases suspected
Infectious mononucleosis (glandular fever)	<ul style="list-style-type: none"> Contact with saliva 	Variable – may be several weeks.	Care with articles soiled with nasal or throat discharges. Encourage hand hygiene.		No
Influenza or influenza-like illness	<ul style="list-style-type: none"> Droplet Direct and indirect contact. 	While symptomatic.	Single room. Reinforce the importance of respiratory and hand hygiene.	Flu vaccine - NHS (www.nhs.uk)	If influenza is confirmed by laboratory. Otherwise if more than two cases suspected
Measles	<ul style="list-style-type: none"> Airborne, direct contact with infectious secretions. 	Incubation period is approximately 10 days (range 7 – 18 days) from exposure to onset of fever and, usually, 14 days before the rash appears. The person is infectious from four days before the rash onset and 4 days after rash appearance.	Single room	Local HPU will advise on the management of contacts. Pregnant staff should know their immune status and seek advice if not immune. All staff should have received 2 doses of MMR or have natural immunity.	Yes

Mumps	<ul style="list-style-type: none"> • Droplet 	Incubation period around 17 days (range 14 - 25). Greatest infectivity is from 2 days before the onset of symptoms to 4 days after symptoms appear.	Single room.	Local HPU will advise on the management of contacts. Staff should have received 2 doses of MMR.	Yes
Norovirus	<ul style="list-style-type: none"> • Hand-to-mouth • Droplet 	Up to 48 hours after symptoms have resolved.	Single room. Separate toilet.	Very likely to cause outbreaks.	Yes
Pinworms, threadworms	<ul style="list-style-type: none"> • Hand-to-mouth • Airborne during bed making 	Until treated.	Personal hygiene, including hand hygiene.	Vacuum room of infected person daily for several days.	If more than two cases suspected
Pulmonary tuberculosis	<ul style="list-style-type: none"> • Airborne if 'open' case (sputum smear positive). Otherwise not infectious 	Normally 2 weeks after starting treatment.	Single room if sputum smear positive.	Local HPU will advise on the management of contacts (residents and staff).	Yes
Rotavirus	<ul style="list-style-type: none"> • Hand-to-mouth • Droplet 	Up to 48 hours after symptoms have resolved.	Single room. Separate toilet.	Very likely to cause outbreaks.	Yes
Salmonella spp.	<ul style="list-style-type: none"> • Food • Hand-to-mouth 	Variable, but unlikely to infect others by 48 hours after diarrhoea stops, unless poor hygiene/incontinent.	Single room until 48 hours after diarrhoea stops. Separate toilet.	Retain food samples. Organism can be in stools for weeks/months after infection.	Yes
Scabies	<ul style="list-style-type: none"> • Person-to-person (close contact) 	Until treated.	Single room until 24 hours after treatment Launder resident's clothing and bedding	Untreated or the immune suppressed may develop more severe form of scabies. In this case it may be necessary to treat other residents, staff and family members.	If more than two related cases suspected

<i>Shigella</i> spp.	<ul style="list-style-type: none"> • Hand-to-mouth • Water or food contaminated by infected water 	Variable, but unlikely to infect others by 48 hours after diarrhoea stops unless poor hygiene/incontinent.	Single room until 48 hours after diarrhoea stops. Separate toilet.	Very likely to cause outbreaks. Complications include haemolytic uraemic syndrome.	Yes
Staphylococcal food poisoning	<ul style="list-style-type: none"> • Food (preformed toxin) 	Not infectious.	None	Retain food samples. Food contamination from infected fingers, eyes, etc. of food handlers likely.	Yes
Shingles (herpes zoster)	<ul style="list-style-type: none"> • Usually reactivation (of chickenpox) • Direct contact with rash • Airborne 	Until lesions crusted	A resident with shingles may mix with other residents if rash can be covered.	Staff and residents should not be in contact unless immune to chickenpox.	If management of case poses difficulties
Viral gastroenteritis (undiagnosed)	<ul style="list-style-type: none"> • Hand-to-mouth • Droplet 	Variable. May be several days after symptoms resolve	Single room. Separate toilet.	Very likely to cause outbreaks.	If more than two cases occur
Whooping cough (pertussis)	<ul style="list-style-type: none"> • Droplet 	Five days after start of appropriate antibiotic treatment.	Single room	Local HPU will advise on the management of contacts.	Yes

Tackling dehydration



Dehydration in warmer weather can cause a significant increase in the incidence of urinary tract infection (UTI) and other severe infections associated with it.

Here are some key facts to help prevent your patients becoming dehydrated:

1

Keep drinking

- Adults need a minimum of 1.5 litres of fluid every day
- This is equivalent to at least 8 large cups or mugs of fluid

2

Any fluid is good fluid

- The most important thing is to consume sufficient fluids. It does not matter what form this fluid takes. Coffee and tea are a preferred source of fluids for many people and have been shown to have no significant dehydrating effect. Alcohol is also still a fluid but should be consumed in moderation
- Fluid rich foods such as jelly, ice cream and yoghurt can also supplement fluids in drinks

3

Look out for signs of dehydration

- Dry skin or mouth, dark coloured urine, headaches, confusion and drowsiness can all be signs of dehydration

4

Older people and young children are particularly vulnerable

- Make sure everyone has a cup they can use easily. Cups that are heavy or have small handles can be very difficult to hold
- Some people may also need assistance to hold the cup and drink. Avoid straws for those with difficulty swallowing, due to increased risk of choking
- Encourage those worried about incontinence not to stop drinking if they are concerned about leaking urine. Concentrated urine resulting from not drinking can irritate the bladder and increase the risk of infection

www.ips.uk.net

For more information please visit
<https://www.england.nhs.uk/commissioning/nut-hyd/10-key-characteristics/>
<http://www.hps.scot.nhs.uk/pubs/detail.aspx?id=3464>
<https://www.uwl.ac.uk/academic-schools/nursing-midwifery/research/richard-wells-research-centre/research-projects/i-hydrate>

ips Infection Prevention Society

Section 8

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