INFECTION PREVENTION AND CONTROL MANUAL

2016

Version Table

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SECTION 1: Introduction and Contacts

1.1 Introduction

This manual has been written predominantly for healthcare workers in primary care but can be used by healthcare workers in other non-acute settings such as Dentistry and Care/Nursing Homes.

The Care Quality Commission requires all registered providers to have and adhere to infection prevention policies and to have in place a system to review and update these policies. This manual will cover most of the required policy requirements for infection prevention and control (IPC) in Primary Care. It will be reviewed annually and updated as new guidance becomes available.

It is recognised that some individual areas of practice may need specific detailed IPC advice which can be developed in consultation with the Clinical Commission Group’s IPC Lead.

The aim of this manual is to give a consolidated general overview of the many IPC related directives and guidance currently published by the Department of Health, the National Health Service (NHS), Public Health England (PHE), the Care Quality Commission (CQC), the National Institute of Clinical Excellence (NICE), and other bodies including the World Health Organisation (WHO). Also covered in this manual is reference to the Health and Safety at Work (etc.) Act 1974 including COSHH regulations related to handling of sharps and sharps safety regulations within the European Union directive 2010/32/EU.

The purpose of this manual is to provide consistent IPC related advice across the whole Suffolk health economy.

The prevention and control of infections is a vital component of the Patient Safety agenda and in the general public’s expectations for quality care. “Infection prevention and control is fundamental in improving the safety and quality of care provided to patients.” Mike Durkin, Director of Patient Safety, NHS England (2014)

1.2 Responsibilities

All individual staff are responsible for their actions and omissions with regards to infection prevention dependent upon the IPC elements within their employment contract.

<table>
<thead>
<tr>
<th>Department of Health (DH)</th>
<th>Is responsible for leading on government policy and legislation for health and social care. This includes national objectives for performance monitoring of IPC.</th>
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<tbody>
<tr>
<td>NHS England national office (NHSE)</td>
<td>The main aim of NHSE is to improve the health outcomes for people in England. One of its core roles is supporting, developing and assuring the commissioning system for health and implementing government policy.</td>
</tr>
<tr>
<td>Care Quality Commission (CQC)</td>
<td>The CQC is responsible for regulating the quality of health and adult social care services. CQC exists to ensure all providers of regulated care activity in England provide people with safe, effective, compassionate and high quality care. Organisations’ compliance with mandatory standards for quality and safety are assessed and monitored by CQC.</td>
</tr>
<tr>
<td>Public Health England</td>
<td>Core responsibilities include promoting best practice, surveillance and feedback of HCAI data and risk assessments, support, co-ordination and leadership of HCAI related outbreaks and other situations. PHE do not provide routine IPC</td>
</tr>
</tbody>
</table>
Within the CCG, the Chief Executive/Accountable Officer has ultimate responsibility for ensuring that there are effective arrangements in place for the prevention and control of infections. Assurance is provided to the Chief Executive/Accountable officer by the Director of Infection Prevention and Control (DIPC)/Chief Nursing Officer.

Assurance of provider services compliance to the CQC fundamental standards is obtained via the Contracts management, Quality management and the infection prevention and control lead. The assurance is provided in the form of six monthly and annual reports to the Clinical Executive, annual performance reports to the Governing Body and quarterly performance reports to Public Health Suffolk and NHS England regional teams.

Within Primary Care, the registered provider holds ultimate responsibility for ensuring that there are effective arrangements in place for the prevention and control of infections. The Health and Social Care Act 2008 (revised 2015) states that all registered general practice providers must have “A designated person with appropriate knowledge and skills who will take responsibility for infection prevention and control in the practice (the IPC Lead). This can be the registered provider or a member of their staff appointed by the registered provider.

### 1.3 Contacts

Advice on attaining the standards within The Code and general IPC issues can be obtained from the Infection Prevention and Control Lead based at Rushbrook House, Paper Mill Lane, Bramford, Ipswich IP8 4DE

Telephone 01473 770000 and ask for the infection prevention lead

Email wsccg.ict@nhs.net
General advice and guidance on specific infectious diseases may be obtained from the regional health protection unit based at Thetford healthy living centre, Thetford.
Telephone 0344 225 3546.
SECTION 2: INFECTION, ITS CAUSES AND SPREAD

2.1 The causes of infection
Microorganisms that cause infections are known as pathogens. They may be classified as follows:

a) **Bacteria** are minute organisms about one-thousandth to five thousandth of a millimetre in diameter.
b) **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.
c) **Fungi** can be either moulds or yeasts. For example, a mould which causes infections in humans is *Trichophyton rubrum* which is one cause of ringworm and which can also infect nails. A common yeast infection is thrush caused by *Candida albicans*.
d) **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 causes enteritis (symptoms of diarrhoea).
e) **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.
f) **Prions** are infectious protein particles. All known prion diseases affect the structure of the brain or other neural tissue and all are currently untreatable and universally fatal. Example: A prion is responsible for Creutzfeldt-Jakob disease.

2.2 The spread of infection
A feature that distinguishes infection from all other disease is that it can be spread from one person to another.

It is convenient to classify the modes of spread of infection as follows:

a) **Direct contact**: Direct spread of infection occurs when one person infects the next by direct person to person contact (e.g. chicken pox, tuberculosis, sexually transmitted infections etc.).
b) **Indirect**: 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 infected organisms and which subsequently transmits those organisms to another person.

Examples of potential fomites are bedpans, urinals, thermometers, oxygen masks or practically any inanimate article.

Crawling and flying insects are obvious examples of vectors and need to be controlled. Insect bites may cause infections such as malaria.

c) **Hands**: The hands of health and social care workers are probably the most important vehicles of cross-infection. The hands of patients can also carry microbes to other body sites, equipment and staff.
d) **Inhalation**: Inhalation spread occurs when pathogens exhaled or discharged into the atmosphere by an infected person are inhaled by and infect another person. The common cold and influenza are often cited as examples, but it is likely that hands and fomites (inanimate objects) are also important in the spread of respiratory viruses.
e) **Ingestion:** Infection can occur when organisms capable of infecting the gastrointestinal tract are ingested. When these organisms are excreted faecally by an infected person, faecal-oral spread is said to occur. Organisms may be carried on fomites, hands or in food and drink e.g. Hepatitis A, Salmonella, Campylobacter.

f) **Inoculation:** Inoculation infection can occur following a “sharps” injury when blood contaminated with, for example, Hepatitis B virus, is directly inoculated into the blood stream of the victim, thereby causing an infection. Bites from humans can also spread infection by the inoculation mode.

g) **Splash Injury:** Infection may occur through splashing of blood, body fluids, secretions or excretions into the face and eyes.

### 2.3 Chain of infection

For any infection to occur, a chain of events must happen. Infection prevention is designed to break the chain and thus prevent infection. Preventing infection will reduce antibiotics usage and reduce resistant organisms evolving. Breaking any link in the chain will assist in preventing the spread of micro-organisms.

For an infection to spread from person-to-person, the following criteria must exist:

a) **causative micro-organism** - the presence of an organism (e.g. virus, bacterium, fungus or protozoan) capable of causing disease in humans

b) **reservoir** – the availability of a source of infection (e.g. an infected or colonised person or animal, contaminated food, water or equipment). The main sources will be patients, staff and visitors. However, equipment and the environment also provide important reservoirs

c) **portal of exit** - secretions and excretions discharged from the body carry the micro-organisms into the environment (e.g. faeces, respiratory droplets, blood or skin scales)

d) **mode of transmission** - how micro-organisms reach other individuals (e.g. direct contact, droplets in the air from a sneeze, an insect vector, or indirectly via contaminated hands, surfaces or equipment)

e) **portal of entry** – micro-organisms need to enter the body (e.g. by inhalation, ingestion, inoculation, genitally or trans-placentally)

f) **susceptible host** - factors such as age, nutritional status, previous exposure and immune status determine whether the acquired micro-organisms will cause a disease. Patients undergoing invasive procedures and those with chronic illness are particularly susceptible, as are the very young and the elderly.

The mode of transmission is generally the most susceptible link in healthcare settings.
2.4 The infection continuum

The infection continuum describes the process of infection development and what actions should be considered.

<table>
<thead>
<tr>
<th>Sterile</th>
<th>Contamination</th>
<th>Colonisation</th>
<th>Critical Colonisation</th>
<th>Infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absence of microbes</td>
<td>Presence of microbes but little active growth</td>
<td>Growth and death of microbes kept at a safe level by host immune response (health balance)</td>
<td>Hose defences unable to maintain a healthy balance, either too many microbes or too many species</td>
<td>Host defences overwhelmed, local signs of infection</td>
</tr>
<tr>
<td>Very brief period following sterilising process</td>
<td>Present soon after exposure to environment</td>
<td>Situation normal</td>
<td>Some clinical signs of infection, delay in wound healing</td>
<td>Clinical signs of infection</td>
</tr>
<tr>
<td><strong>ACTION</strong></td>
<td><strong>ACTION</strong></td>
<td><strong>ACTION</strong></td>
<td><strong>ACTION</strong></td>
<td><strong>ACTION</strong></td>
</tr>
<tr>
<td>Situation will not persist</td>
<td>No action needed</td>
<td>No action needed</td>
<td>Consider intervention depending on site of critical colonisation e.g. clean wound, hydrate if UTI</td>
<td>Send sample, consider systemic antibiotics</td>
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Standard Precautions (previously referred to as Universal Precautions or Barrier Nursing)

All staff should be trained in hand hygiene and proper use of personal protective equipment both during clinical work and during decontamination. Policies should be in place for safe handling and disposal of waste and sharps.

Overview of standard precautions

People receiving healthcare are at increased risk of acquiring infection due to impaired normal immune defences. Infection is a common and often avoidable complication of healthcare. Many infections occur because micro-organisms colonizing one patient or present in the environment are inadvertently transferred to a vulnerable site (Wilson, 2006).

We do not always know if someone is incubating an organism and so to protect the service user, staff and visitors, procedures to prevent cross-infection and to minimise the risk of transmission must be incorporated into routine practice.

Standard Precautions refers to a set of evidence-based guidelines that when used by all staff, all of the time, in every healthcare setting, with all service users, will prevent and control infections.

Standard precautions include:

- Hand Hygiene
- Personal Protective Equipment (gloves, aprons, face masks and goggles)
- Safe handling and disposal of sharps
- Cleaning and disinfection

And can also include:

- Segregation of linen
- Segregation of waste
- Isolation

Hand hygiene is a process, that when followed, will significantly reduce microbial contamination of healthcare workers hands.

Personal protective equipment (clothing) usually refers to single-use disposable gloves and aprons and can sometimes include mask, eye protection and water proof gowns.

Safe handling and disposal of sharps is a set of guidelines aimed at reducing the risk of needle stick and sharps injury as well as reducing the risk of exposure to blood borne viruses

Cleaning and disinfection is a set of guidelines aimed at reducing contamination in the healthcare environment and on healthcare equipment so that the risk of transferring potentially pathogenic organisms is reduced.

Segregation of linen is a process that, when followed, will reduce the risk of transferring potentially pathogenic organisms within the healthcare environment and protect laundry workers from exposure to potentially hazardous substances.
Segregation of waste is a process that, when followed, will reduce the risk of transferring potentially pathogenic organisms within the healthcare environment and protect waste contractors from exposure to potentially hazardous substances.

Isolation is a process that, when followed, will reduce the risk of micro-organisms from an affected person being transferred to others.

3.1 Hand Hygiene

Hand Hygiene is the single most important measure for preventing the transmission of infection.

Hands readily pick up and transfer micro-organisms and must be decontaminated between activities that result in direct contact with the service user or their environment.

The aim of Hand Hygiene is to remove or destroy potentially pathogenic transient micro-organisms, dirt and organic material from the hands and wrists.

The acquisition of a healthcare acquired infection (HCAI) increases the cost of care by three times.

In addition to the direct costs to providers of healthcare, HCAIs also have intangible costs to both the service user and their families.

Hand hygiene can protect the service user, the healthcare worker and their families.

The principles of hand hygiene apply equally to where-ever care is given.

The technique, timing and duration of hand hygiene practice needs to be correct to be an effective means of preventing infection spread.

Research has revealed that when hand washing is carried out in a hasty manner, certain areas will not be effectively decontaminated.

The diagram below shows the areas of skin which were typically not decontaminated during a poor hand washing procedure.

The “6 step” technique is a research based process which, if undertaken correctly, will ensure all surfaces of the hands are effectively decontaminated.
The sequence of movements is important and should be identical to the diagram below. The process should last for 20-30 seconds. Counting to “2” for each step will ensure the correct time is spent on the procedure.

The Six Step Technique

1. Palms together
2. Backs Backs
3. Through i.e. fingers interlaced
4. Knuckles Knuckles i.e. finger tips into the base of fingers both sides
5. Thumbs Thumbs
6. Palms Palms
7. Wrist Wrists

Don’t forget your wrists!
Alcohol gel does not kill norovirus or C.diff spores

The process
a) Washing hands with soap and water
   • Wet hands with water before applying soap
   • Use sufficient amounts of soap to cover all areas of skin. Liquid soap dispensers are designed to deliver the right amount of soap in one or two push/pull movements of the dispenser bar. Excessive application of soap will result in irritation and dehydration of the skin.
   • Using the six step technique above, work soap and water onto all areas of the skin. This should be done energetically to achieve gentle friction.
   • Rinse under running water.
   • Dry skin thoroughly using disposable paper towels. Poor drying can lead to skin becoming chapped and sore

b) Using hand sanitisers (alcohol or non-alcohol)
A local risk assessment must be conducted to ascertain safety of providing alcohol based hand sanitiser dispensers in areas accessible to service users and the general public. Responsibility for this rests with the clinical manager responsible for the area.

Hand sanitizers will continue to reduce the microbial load on skin for many minutes after application. Alcohol based products are effective on bacterial microorganisms like MRSA, but does not work on some viruses e.g. Norovirus, Blood Borne viruses or bacterial spores e.g. Clostridium difficile.

Some non-alcohol based products can be effective on Norovirus and Clostridium difficile

The six step technique must be used to apply the gel, the product must be rubbed onto skin for 20-30 seconds and until totally evaporated and the skin feels dry. This will permit sufficient skin contact time for the chemical to destroy micro-organisms.

c) **Hand Cream**

An emollient hand cream should be applied regularly to help protect skin integrity.

Communal pots must not be used – only use pumps action dispensers.

Only apply before a refreshment break or at the end of a shift. Over liberal use of hand cream combined with frequent washing can provoke chapped skin and dermatological problems.

d) **When to perform hand hygiene The “5” moments**

The World Health Organisation (WHO 2009) defined the ‘5 moments for hand hygiene’. The five moments serve as defined critical control points for hands decontamination and preventing the spread of infection.
Hand Hygiene in the Community

The WHO has recently re-defined the “5 moments” for application outside an in-patient setting. This has been done by geographical zoning of 3 areas; the patient zone, the critical site and the health care area.
The patient zone includes the patient and some surfaces/items in his/her surroundings that are temporarily and exclusively dedicated to him/her (i.e. all inanimate surfaces touched by or in direct physical contact with the patient and touched by the HCW while providing care), including the patient’s personal belongings. The microbiological rationale behind this concept is the fact that the immediate environment of the patient and any dedicated device becomes contaminated with the patient flora by direct contact or microbiological shedding.

The critical sites correspond either to body sites or devices that have to be protected against pathogens or body sites or medical devices that potentially lead to hand exposure to body fluids and blood borne pathogens.

The health-care area corresponds to all physical surfaces outside the patient zone, including other patients and their patient zones, and the wider health-care environment.

As far as hand hygiene performance is concerned, the geographical distinction between the patient zone and health-care area helps prevent microbial transmission between patients and health-care environment contamination.

Hand hygiene must be performed in association with patient contact and care procedures.

The point of care is exactly where the care action takes place and is defined as the place where three elements come together: the patient, the HCW, and care or treatment involving contact with the patient.

All staff working in community settings or service users homes should carry with them the means to decontaminate their hands. For example:

- Small bottle of hand sanitizer (alcohol or non-alcohol)
- Small bottle of liquid soap
- Disposable paper hand towels
• Pack of “detergent wet wipes”.
• Disposable single use Nitrile gloves and aprons

These items must be protected from contamination by being housed in a cleanable container. All items should be provided at the organisation’s expense.

f) **Hand Hygiene and the Dress Code**

When in direct contact with a service user (performing a clinical task), all staff must be “bare below the elbows”. This means:

• No false nails, nail varnish, jewellery, bracelets or stoned/engraved ring
• Only a plain banded “wedding” type ring can be worn
• Sleeves must be rolled up and wrist watches must be removed
• Open skin lesions, cuts and abrasions on hands must be covered by a water repellent dressing.

g) **Adverse Dermatological Effects**

Frequent hand washing or application of hand sanitisers can cause sore, chapped skin or provoke dermatitis type reactions.

The risk of developing dermatitis or chapped skin can be reduced by applying only the measured dose of liquid soap provided by the dispenser, using cold or only warm water to wash hands and thoroughly drying skin.

Nailbrushes must never be used for routine health care hand hygiene practices.

In the event of a member of staff developing a skin rash, dermatitis or chapped skin, they should be referred to the occupational health service requesting advice for the employee and guidance on variation to hand hygiene products (and Protective gloves) where deemed necessary.

All health care workers should protect their skin from damage off duty as well as on duty. Some hobbies can provoke skin problems. Damaged skin is more likely to harbour infective micro-organisms, provide an entry point for infection to the individual or be a means of infection spread to others.

h) **Facilities, Supplies and Estate Management**

• All staff must have unobstructed access to designated staff hand wash basins.
• The design of the hand basin should ensure that staff can wash their hands under running water, and do not have to fill the basin.
• Staff hand-wash basins should not have a plug or overflow, and should have elbow, wrist or sensor operated thermostatically controlled mixer taps.
• A separate sink should be available for other cleaning purposes, such as cleaning instruments.
• The water supply must deliver warm (not hot) running water
• The drainage hole must not be directly under the flow of water.
• A wall mounted liquid soap dispenser fitted with “no air entry soap cartridge” must be close beside or above the sink.
• A paper towel dispenser must also be provided as a wall mounted fixture
• Hand sanitiser dispensers must not be beside hand wash basins and sited at least a metre (3 feet) away from the sink, preferably at point of care.
• A “hands free” bin must be positioned near each hand wash basin and be an appropriate size for the volume of paper towels generated in the area. Used paper hand towels can be processed as domestic waste unless contaminated by blood or body fluids.
• Any signs placed within splashing distance of a sink must be made of wipe clean laminated material.

3.2 **Personal protective equipment** (gloves, aprons, masks and goggles)

Body fluids, excretions and secretions are a major source of pathogenic micro-organisms. For example:

• Faeces
• Urine
• Vomit
• Blood
• Semen
• Vaginal secretions
• Sputum

Therefore; protective clothing should be worn for any direct contact with these fluids, to protect the skin of staff from contamination and reduce the risk of transmission of micro-organisms between staff and patients (Wilson, 2006).

Selection of protective equipment must be based on an assessment of the risk of transmission of micro-organisms to the patient, and the risk of contamination of the healthcare practitioners’ clothing and skin by patients’ blood, body fluids, secretions or excretions.

Protective clothing must be changed between patients to prevent transmission of infection and between undertaking different tasks with the same patient such as personal care and wound dressing.
**Assessment of risk = WHAT TO WEAR WHEN**

| No exposure to blood/body fluids or substances listed under COSHH regulations anticipated | Exposure to blood/body fluids or substances listed under COSHH regulations anticipated, but low risk of splashing | Exposure to blood/body fluids or substances listed under COSHH regulations anticipated – high risk of splashing to face |
| No protective clothing | Wear gloves and a plastic apron | Wear gloves, plastic apron and eye/mouth/nose protection |

**Gloves**

Gloves must be worn for invasive procedures, contact with sterile sites and non-intact skin or mucous membranes, and all activities that have been assessed as carrying a risk of exposure to blood, body fluids, secretions or excretions, or to sharp or contaminated instruments.

It is highly recommended that Nitrile gloves be used by all clinical staff. Polyurethane/polythene gloves do not act as a barrier to infection. They do not meet the Health and Safety Commission regulations and they do not have a place in clinical application. DO NOT USE powdered gloves or polythene gloves in healthcare activities.

Gloves must be worn as single-use items. They must be put on immediately before an episode of patient contact or treatment and removed as soon as the activity is completed. Gloves must be changed between caring for different patients, and between different care or treatment activities for the same patient.

Do not substitute wearing gloves for hand washing.

Gloves must be disposed of as clinical waste if contaminated with blood or body fluid.

Hands must be decontaminated after the gloves have been removed.

Gloves must be available in a size that suits you.

Gloves must not be washed between patients as the gloves may be damaged by the soap and, if punctured unknowingly, may cause body fluid to remain in direct contact with skin for prolonged periods.

Gloves should be stored in racks to reduce the risk of environmental contamination.

Gloves should not be worn unnecessarily as their prolonged and indiscriminate use may cause adverse reactions and skin sensitivity.

Sensitivity to gloves must be reported to Occupational Health
The main principles of safe handling and disposal of sharps are:

- The use of sharps will be avoided wherever possible.
- Where sharps must be used, injuries will be prevented.
- In the event of a penetrating sharps injury all staff will take the appropriate actions including the reporting of sharps injuries to the appropriate persons via the approved system.
- All systems and equipment will conform to the EU Directive 2010/32/EU on the prevention of sharps injuries in the health care sector.
- Hierarchy of controls applied to sharps injury prevention

<table>
<thead>
<tr>
<th>Elimination or substitution (for example, eliminate unnecessary injections)</th>
<th>Most effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering controls (for example, safer needle devices, sharps containers)</td>
<td></td>
</tr>
<tr>
<td>Administrative (policies and training programmes)</td>
<td></td>
</tr>
<tr>
<td>Work practices (standard precautions, no recapping)</td>
<td></td>
</tr>
<tr>
<td>Personal protective equipment (gloves, masks, gowns etc.)</td>
<td>Least effective</td>
</tr>
</tbody>
</table>

Non sterile gloves: Should be used when hands are likely to come into contact with body fluids or equipment contaminated with body fluids.

Sterile gloves: Should be used when the hands are likely to come into contact with normally sterile areas or during any surgical procedure.

Disposable plastic aprons

Aprons must be worn when there is a risk that clothing may be exposed to blood, body fluids, secretions or excretions, with the exception of sweat. Plastic aprons should be worn as single-use items, for one procedure or episode of patient care, and then discarded and disposed of as clinical waste if exposed to or contaminated with blood or body fluid.

Face masks and eye protection (a visor, safety spectacles or goggles) and/or surgical masks must be used whenever there is a possibility that a member of staff’s oral mucous membranes or eyes could be splashed with blood, excreta or body fluids.

Respiratory protective equipment

There are very few occasions when the wearing of masks is required. If a mask is to be worn, a disposable surgical mask should be used. It must fit the face closely and be changed if it becomes wet.

Masks are generally only recommended when there is a risk to staff or patients from airborne spread of infection. Most commonly for close contact, i.e. chest physiotherapy, with patients who are known or strongly suspected to have Pulmonary Tuberculosis.

3.3 Safe handling and disposal of sharps

The main principles of safe handling and disposal of sharps are:
**Significant types of exposure**

**Percutaneous exposure**

This means penetrating through skin; typically could be caused by a needle or any other potentially contaminated sharp object, a bite that causes bleeding or other visible skin puncture.

**Mucocutaneous exposure**

This means potentially penetrating through mucous membrane or the conjunctiva of the eye. These body tissues do not present a good barrier to BBV and so a splash of blood into the eye or mouth should also be regarded as a possible risk of infection acquisition.

Percutaneous injury amongst health care workers is one of the most reported staff injuries. Many injuries are due to the mishandling and inappropriate disposal of needles and sharps and as such are entirely avoidable (HPA, 2012).

Percutaneous injuries present a potential serious health risk to staff, service users and visitors. In order to avoid occupational exposure to potentially infectious agents, particularly those micro-organisms that may be found in blood or body fluids, precautions are essential.

The greatest risk for transmitting a blood borne virus is through parenteral exposure e.g. a needlestick injury, especially those needles with hollow bores where blood may reside. Risks can also exist from splashes of blood/body fluids particularly to mucous membranes.

It must always be assumed that all blood fluid spillages could be carrying potentially harmful micro-organisms that might be transmitted and cause harm to others. Precautions to prevent exposure must be taken as standard.

There are three main blood borne viruses that affect healthcare workers when they are exposed to blood:

- Hepatitis B (HBV)
- Hepatitis C (HCV)
- Human Immunodeficiency Virus (HIV)

**Body fluids that may be considered high risk for BBV transfer**

<table>
<thead>
<tr>
<th>Virus</th>
<th>Documented</th>
<th>Possible</th>
<th>Not significant unless blood stained</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBV</td>
<td>Blood, Blood products</td>
<td>Bloody Fluids, Semen, Vaginal Fluids</td>
<td>Faeces, Saliva, Urine</td>
</tr>
<tr>
<td>HCV</td>
<td>Blood</td>
<td>Blood Products, Semen, Vaginal Fluids</td>
<td>Faeces, Saliva, Urine</td>
</tr>
<tr>
<td>HIV</td>
<td>Blood Products</td>
<td>Breast Milk</td>
<td>Faeces</td>
</tr>
<tr>
<td>-----</td>
<td>---------------</td>
<td>-------------</td>
<td>--------</td>
</tr>
<tr>
<td>Blood</td>
<td>CSF</td>
<td>Dental Procedures</td>
<td>Saliva</td>
</tr>
<tr>
<td>Body Fluids</td>
<td>semen</td>
<td>Vaginal Fluids</td>
<td>Urine</td>
</tr>
</tbody>
</table>

The risk of transmission for a known positive BBV source (known HBV, HCV, HIV) is:

| • Hepatitis B  | (HBV)  | 30% | (1 in 3) |
| • Hepatitis C  | (HBC)  | 3%  | (1 in 30) |
| • HIV           |        | 0.3%| (1 in 300) |

The risk of transmission from a positive source depends on the nature of the injury and on the volume of blood transferred. Thus, splashes to mucous membranes including the conjunctivae are regarded as being lower risk than percutaneous injuries such as needlesticks, of which deep injuries involving hollow-bore needles removed from a blood vessel represent the greatest hazard.

However, the risk of transmission may be reduced if appropriate action is taken without delay.

Healthcare staff must avoid exposure to blood and body fluids wherever possible by adopting safe handling techniques and correct disposal of needles, syringes and sharp instruments, and by using gloves and eye protection where appropriate. If an exposure does occur however, the procedures described in this policy should be followed. A sharps injury first aid poster should be on display in clinical areas.

Staff should prepare and protect themselves from occupational exposure to BBV by the appropriate use of personal protective equipment – gloves and aprons.

Single use, protective, disposable, nitrile gloves must be worn when handling any sharps or touching disposal containers. The single use gloves should also be routinely worn during all procedures where contamination of the healthcare worker with blood is possible. This includes venepuncture, Research has revealed that the risk of BBV acquisition can be reduced if the needle has to penetrate glove material first. The glove fabric wipes most of the infection bio-burden off the sharp and thus can reduce the volume of contaminant inoculated into the persons underlying body tissues.

3.3.1 Prevention and Management of Sharps injury

Selection of safety engineered devices (safer needles) for venepuncture and intramuscular injection

The European Union (EU) Directive became law in May 2013 meaning that only safety engineered devices should be used as these are recognised as an effective means of preventing injuries (European Council 2010, RCN 2013).

- The principles are:
- The use of sharps should be avoided wherever possible.
- Where a sharp must be used, then a safety engineered device should be used
If a safety engineered device is unable to be used (e.g. pre-prepared IM medications, the staff member has not had training) the rationale must be clearly documented in the health record every time it is used.

**Intramuscular injections**

Prior to using any safety engineered devices, staff must undertake training on the techniques needed for use and be familiarised with the special safety features. Such training must be recorded.

Although not covered within the EU Directive 2010/32/EU, it is highly recommended that staff use ampoule breakers and blunt fill and filter needles when preparing intra-muscular injections from glass ampoules.

**Phlebotomy**

An evacuated system (such as “Vacutainer” or Monovette) should be used. Needles and syringes should only be used in exceptional circumstances (e.g. difficult to access veins) at which time, an approved transfer device must be used. Safer “butterfly” collection systems are now available and these should be selected for the latter group of patients.

Single use retractable lancets should be used for any skin piercing.

**Sharps Boxes Selection**

- Sharps containers must comply with UN 3921 and BS7320 standards
- Ensure sharps boxes are assembled correctly – the top is firmly fixed to the base.
- Ensure the label is filled in on assembling and on disposing
- The temporary closure must be employed when the sharps box is not in use and when being carried to point of use.
- Sharps Boxes must be taken to the point of use so that used sharps can be discarded directly into the sharps box - not put on tables, beds, trays, kidney dishes, etc.
- Carry the sharps bin away from the body using the handle provided or use “Near patient trays”
- Sharps Boxes must be kept out of the reach of children and at a height that enables safe disposal e.g. not on the floor or above shoulder height.
- Once “Fill Line” is reached, close, lock & complete the label.
- Discard full sharps box in a secure designated area away from public access
- Clinical sharps should be single use only
- The aperture of the bin selected should be designed to deter hand entry but be big enough to permit dropping of the used sharp into the bin as a single-handed procedure.
- The size of the bin selected should be relative to the quantity of sharps used weekly.

**DO NOT:**

- Pass sharps from hand to hand
- Recap (re-sheath), bend or disassemble after use
- Exceed the “Fill Line”
Place full sharps box in a clinical waste bag

Try to retrieve items from a sharps container

Try to press sharps down or shake the box to make more room

For staff carrying sharps boxes in their cars:

- Sharps boxes must only be carried by staff if there is no alternative for safe disposal of sharps in the service user’s environment
- The sharps box must be carried in a secure area of the car to prevent tipping over whilst driving, for example, the boot
- The sharps box must not be visible to passers-by
- The temporary closure must be used whilst transporting/carrying
- As the volume of sharp clinical waste is small in these circumstances, there is no requirement for the member of staff to display a ‘Hazard’ notice on their car
- Staff must dispose of full locked sharps boxes in a secure designated area away from public access whilst awaiting clinical waste collection

The clear responsibility for the initial safe disposal of any used ‘sharps’ generated by clinical activity rests with the person who has used it – this responsibility must not be delegated to another person.

In the event of a sharps injury: The actions listed on this poster must be followed

If you have a sharps injury/blood accident

REMEMBER..................

1. ENCOURAGE BLEEDING - e.g. squeeze wound but do not suck the puncture

2. FLUSH the wound under running water

3. COVER with waterproof plaster

4. REPORT accident to person in charge or a colleague

Report all incidents to your occupational health provider who will undertake a risk assessment and arrange source testing and follow up treatment.
1. First Aid – Encourage bleeding; wash/flush the site – do not suck; cover wound with a water repellent dressing

2. Report it –
   - To a senior colleague – Do not delay
   - To the occupational health provider - if there is a risk that the source may have a BBV, seek advice immediately from the occupational health provider (or if out-of-hours attend nearest A&E dept).
   - complete incident report

3. The senior colleague will need to undertake a risk assessment and implement suitable actions, specifically:
   - Gather information: helping (if necessary) the employee to complete the incident report. The information will assist OH or A&E with their infection risk assessment.
   - The recipient must be assisted with getting an expert opinion on the need to commence Post Exposure Prophylaxis medicines if there is a risk of HIV acquisition (i.e. contact Occupational Health or arrange for person to immediately attend A&E). PEP medicines should be commenced as soon as possible and certainly within 48 – 72 hours. A blood sample must be obtained prior to commencing PEP medicines (for FBC, LFT, Amylase, Renal Function, Urate, Glucose) – this is usually done by OH or at A&E.
   - Advise the recipient they must follow up any risk of Hepatitis B or C exposure. As a general principle, the recipient will be advised by OH to submit a blood specimen for storage. This specimen may be used to compare serology results should infection develop later.
   - If a Hepatitis B vaccination/ booster is needed the OH provider should arrange this when they see the person.

**Post Exposure Prophylaxis (PEP)**

In the context of this manual, PEP refers to:

   - Medicines that can be given to reduce the risk of HIV infection.
   - An accelerated course of Hepatitis B vaccination that can be given post exposure/inoculation injury
   - No PEP is available for Hepatitis C infection.

Where the identity of the source person is known, the individual may need to be approached and asked to consent to providing a blood specimen for screening for the presence of Blood Borne Viruses. This must not be undertaken by the recipient of the accidental blood/ body fluid exposure. A line manager or medical officer should undertake this role.

**Bleed Back Incident**

An incident in which the blood of a health care worker comes into contact with the blood /open tissues of a service user e.g.

   - Bleed back from a visible laceration to a Health Care Worker’s hand during an Exposure Prone Procedure (e.g. during surgery) (very unlikely in Primary Care).
   - Visible bleeding from a Health Care Worker from any site leading to significant bleed back into a patients open tissues or mucous membranes (unlikely in Primary Care).
• An invasive device or product contaminated by a member of staff is accidentally reused on a service user – for example if a hypodermic needle penetrates a member of staff and then penetrates a service user. All staff should be fully immunised according to national policy. In addition, all those handling sharps and have been risk assessed require a course of hepatitis B vaccine. A record of hepatitis B antibody response should be kept by occupational health for all clinical staff involved in ‘exposure prone procedures’ or where regular exposure to blood/blood stained body fluids occurs. Occupational Health can advise staff regarding their need for immunization and any necessary boosters.

3.4 Cleaning and Disinfecting

There is evidence demonstrating that shared equipment becomes contaminated with microorganisms (Loveday et al, 2014; NICE, 2012). A number of studies demonstrated that microorganisms can be recovered from a range of non-invasive clinical equipment, including stethoscopes, manual handling equipment and blood pressure cuffs (Loveday et al, 2014).

Shared equipment in a clinical environment usually comes into contact with intact skin and is unlikely to introduce infection; however, it can act as a vehicle by which microorganisms are transferred between patients, which may result in infection. Therefore such equipment must be appropriately decontaminated after each use with detergent and water and if visibly contaminated, follow this with disinfection with a chlorine releasing agent (Loveday et al, 2014).

Clinical staff are responsible for removing the bulk of contaminated substances from a surface and for disinfecting hard surfaces thus rendering the area safe for routine cleaning by contracted cleaning staff.

Cleaning is a process which physically removes contaminants, e.g. dust, dirt, grease and body fluids but does not necessarily destroy micro-organisms. The reduction of microbial contamination cannot be defined and will depend upon many factors including the efficiency of the cleaning process and the initial bio-burden. Cleaning can be achieved manually using a detergent and hot water; prepared in clean container/pulp product and using a disposable cloth. Drying is essential to prevent any remaining bacteria from multiplying.

Disinfection is a process used to reduce the number of viable micro-organisms however it may not necessarily inactivate some viruses and bacterial spores. Disinfection will not achieve the same reduction in microbial contamination levels as sterilisation. Two methods exist, heat and chemical disinfection. A chlorine releasing agent, such as Actichlor™, is commonly used in healthcare.

Sterilisation is a process used to render the object free from viable micro-organisms, including spores and viruses.

Choosing wipes, detergents and disinfectants

There are three main cleaning products that can be used by clinical staff.

Liquid detergent for cleaning – for example, Hospec™. When using hot water and liquid detergent for cleaning, you should use a clean container or pulp product (bowl) and paper towels/single use cloth or bucket and mop, remembering to remove the mop head after every use. Clean in a sweeping or “figure–of-eight” motion, starting at the top of the item and working your way to the bottom.
Wipes for cleaning/decontaminating – wipes are increasingly being used to decontaminate low risk (see table 3.1) patient equipment or environmental surfaces (RCN, 2011). The main purpose of detergent impregnated wipes is to remove contamination from surfaces. Additionally, some wipes may provide some antimicrobial activity by the inclusion of a disinfectant (alcohol or chlorine) although this activity might be limited based on contact time (the length of time the surface must stay wet to achieve a safe reduction in microbial load - if the wipe is too dry, it will be non-effective), type of surface (soft, absorbent, intact or hard) and contamination (type of microbe and level of contamination) (RCN, 2011). However, there is little evidence to support the antimicrobial properties of a disinfectant wipe (RCN, 2011).

CAUTION: Detergent and disinfectant wipes can damage plastic surfaces of medical devices if they are not compatible with the surface material.

Damaged surfaces may compromise the ability to decontaminate medical devices adequately and / or may interfere with device function (MDA/2013/019)

Chlorine releasing agent for disinfecting

Chlorine releasing agents - for example Actichlor™ - usually come in the form of a tablet that needs to be dissolved in water. The solution must be prepared in bottles provided by manufactures. The solution will remain active for up to 24hrs but must be disposed of after that time.

Dealing with Body Fluid Spill

- Blood and body fluids may carry infectious microorganisms, therefore all spillage should be considered potentially infectious regardless of the patient’s condition.
- Clinical staff are responsible for cleaning and disinfection of blood and body fluid spillages and should do so promptly wearing the correct personal protective equipment (PPE).
- All waste materials generated when cleaning up body fluid spills, should be treated as hazardous and disposed of into a clinical waste bag.
- Hands must be washed following removal of PPE.

Procedure for cleaning body fluid spillages (except for blood-see below) on a hard surface able to withstand a chlorine-releasing agent

1. Wear disposable single use nitrile gloves and apron.
2. Prepare chlorine releasing agent according to manufacturer’s instructions.
3. Remove as much of the spillage as possible using paper towels and place in clinical waste bag (or pulp product for maceration).
4. Clean area with hot soapy water in a pulp bowl and paper towel.
5. Dispose of paper towel into clinical waste bag.
6. Remove gloves and aprons, wash hands and don clean gloves and apron.
7. Place clean paper towel over contaminated area.
8. Gently pour the prepared chlorine releasing agent over the paper towel to achieve saturation.
9. Leave for 2 Minutes.
10. Remove paper towel, place in clinical waste bag.
11. Remove gloves and aprons, wash hands

Procedure for vertical surfaces,
1. Follow steps 1 to 7 above
2. Then “dab” contaminated area for 2 minutes with paper towel soaked in a chlorine releasing agent.
3. Remove gloves and aprons, wash hands

Procedure for surfaces that cannot withstand a chlorine-releasing agent
1. Follow steps 1, 3, 4, 5 and 6 above
2. Remove gloves and aprons, wash hands
3. Request a steam clean from contracted cleaners

Procedure for blood spillages
1. Don gloves and apron.
2. Prepare chlorine releasing agent according to manufacturer’s instructions. The strength of the chlorine releasing agent will differ from other body fluids.
3. Place paper towel over blood spillage and gently pour the prepared chlorine releasing agent over the paper towel to achieve saturation.
4. Leave for 2 minutes, remove paper towel and place in clinical waste bag.
5. Clean area with hot soapy water and paper towel. Dispose of paper towel into clinical waste bag.
6. Remove gloves and apron and wash hands.

Special precaution for urine and vomit spillages:
Chlorine releasing agents must never be poured directly onto urine or vomit as this causes chlorine gas to be released.

Single use Medical Devices and Equipment
The medical device is intended to be used once on an individual patient during a single procedure and then discarded. It is not intended to be re-processed or re-used on another patient.

When using a single use medical device, check
- That the wrapping is intact and clean and dry;
- That the expiry date has not been reached;
The symbol below indicates that a medical device is single use.
**Single Patient use Medical Devices and Equipment**

The medical device can be used more than once on one patient only, for example razors. The device may need to be cleaned between each use; the manufacturer will provide details of the appropriate method of decontamination of the device in this instance. The duration of use is dependent upon manufacturer’s instructions, and undertaking a risk assessment of individual risk factors.

The Medicines and Healthcare Regulations Authority guidance advises that reprocessing and re-using single use and single patient use items is associated with significant risk and is in breach of legislation, if the reprocessing method has not been validated.

The Consumer Protection Act 1987 will hold a person liable if a single use item is reused against the manufacturer’s recommendations. Liability under this legislation continues for 10 years.

**Re-usable Medical Devices and Equipment**

The medical device can be used for repeated episodes on different patients, but requires decontaminating between uses.

Re-usable equipment should be appropriately decontaminated between each patient using a risk assessment model (see 3.1 below). Use only the decontamination method advised by the manufacturer - using any other process may invalidate warranties and transfer liability from the manufacturer to the person using the equipment or authorising the process.

Medical equipment is categorised according to the risk that particular procedure poses to patients - by assessing the microbial status of the body area being manipulated during the procedure (see 3.1 below).

**Cleaning and Decontamination of equipment**

The Medical and Healthcare products Regulations Agency (MHRA) states:

Cleaning is an essential prerequisite of equipment decontamination to ensure effective disinfection or sterilisation can subsequently be carried out.

The aim of decontaminating equipment is to prevent potentially pathogenic organisms reaching a susceptible host in sufficient numbers to cause infection.

**Table 3.1 Choosing the Appropriate Method of Decontamination**
<table>
<thead>
<tr>
<th>Risk</th>
<th>Indication</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Items that penetrate skin/mucous membranes or enter sterile body areas e.g. hypodermic needles</td>
<td>Single use disposable items are recommended. If reusable instruments are used a compliant cleaning, disinfectant and sterilisation process will need to be in place.</td>
</tr>
<tr>
<td>Medium</td>
<td>Items in contact with intact mucous membranes, or contaminated with blood/body fluids e.g. thermometers, auroscope ear pieces</td>
<td>Cleaning followed by disinfection or single use disposal</td>
</tr>
<tr>
<td>Low</td>
<td>Items in contact with intact skin or not in direct patient contact e.g. stethoscopes, furniture</td>
<td>Cleaning and drying</td>
</tr>
</tbody>
</table>

**Purchase, maintenance and disposal of equipment**

Those involved in the purchase of equipment must consider how it will be cleaned **prior to purchasing**.

All equipment being sent for service or repair MUST be cleaned and disinfected using the manufacturer’s guidance. A decontamination certificate must be completed.

All equipment should be maintained in accordance with manufacturer’s instructions.

The guidance within HTM 07-01 Safe Management of Health Care Waste (2013) must be taken into consideration when disposing of all equipment.

**Cleaning records (schedules)**

The cleaning and disinfection of all equipment must be recorded. The record should include:

- The item to be cleaned;
- Who is responsible for it being cleaned
- How often it should be cleaned
- How it should be cleaned.
Environment standards
There are suites of building and environmental standards called Health Technical Memorandums and Health Building Notes that can be found at www.gov.uk

There is concise infection prevention guidance for health buildings call “Infection control in Healthcare Buildings” that can be found at:


In summary, this document states that all surfaces (ceilings, floors, walls, window sills, shelves, work surfaces, etc.) should be smooth, seamless and able to withstand disinfecting agents.

Work surfaces should be free from clutter to facilitate an effective cleaning regime.

Items should not be stored on top of cupboards to prevent dust falling onto faces when the item is removed from cupboard tops.

Items should not be stored on the floor to facilitate an effective cleaning regime.

Long term posters should be laminated and short term posters should be removed (and replaced) if they become torn, tatty or stained.

If there is a paper document such as a cleaning schedule that needs to be signed every day, this could be housed in a plastic wallet.

3.5  Linen and staff clothing/uniform

In most policies that cover the segregation of linen, the policy would discuss the standards for segregation of used and contaminated linen and how to protect laundry workers from contamination.

It is unlikely that this would be relevant in primary care.

However, guidance on the purchase and laundering of staff clothing is relevant.

Clothing worn by staff when carrying out their duties should be clean and fit for purpose. The purchase of staff clothing should be influenced by the potential need to wash clothing at a high temperature in the event of body fluid spillages or clothing contamination.

The purpose of laundering staff clothing is to reduce the biohazard of the microorganisms that a healthcare worker will accumulate during their working day.

Most transient microorganisms will be killed at 60˚C, however many fabrics will not withstand 60˚C and will be washed at a lower temperature, leaving some microorganisms remaining on the garment.

Many microorganisms will be killed if tumbled dried or if steam ironed.

Therefore, staff clothing should be washed at 60˚C OR tumbled dry OR steam ironed to achieve a reduction in the bio burden and the risk of cross contamination.
3.6 Segregation of waste

Waste disposal is a complex issue and reference to the full guidance is highly recommended.

http://www.dhsspsni.gov.uk/htm_07-01_final.pdf

All clinical/infectious waste should be discarded into a clinical waste bag (hazardous waste). This should be an orange bag however; some areas will use a yellow bag. The bag should be securely sealed and placed in a secure outside area away from public access.

What constitutes clinical waste is any item that is obviously contaminated by blood or body fluids or has been in contact with a person with a known or suspected infection.

Domestic waste should be placed in a black or green bag. The colour of the bag will depend on local arrangements for waste disposal. What constitutes domestic waste is any item that is not obviously contaminated by blood or body fluids and has not been in contact with a person with a known or suspected infection.

Some items can be re-cycled. It is recommended that organisations contact their local authority and discuss what can be re-cycled with the environmental waste officer.

For guidance on cyto-toxic/cyto-static waste, please refer to HTM 07-01 on the link above.

Principles

- waste should be segregated at the point of origin
- personal protective clothing should be worn when handling waste
- Clinical waste should be:
  - Orange 225 gauge bags
  - Only filled to ¾ full
  - Securely sealed and labelled with coded tags at point of use
  - Never used for sharps
  - Held within a rigid bin which has a foot operated lid and clearly labelled
  - Each clinic/consultation room should have a bin
- Double bag where:
  - The exterior of the bag is contaminated
  - The original bag is split, damaged or leaking
- Never decant into other bags

3.7 Isolation

The objective of isolation is to reduce the risk of micro-organisms from an affected person being transferred to others. Isolation is recommended for infections which can be transmitted through direct contact with service users or their environment; infections spread by respiratory secretions and via inhaled droplet nuclei (Wilson, 2006).

Primary medical care practices are not required to provide dedicated isolation facilities.
However, it is recommended that a process be developed in each organisation, to reduce the risk of transmission of infection to staff and others by those service users presenting with suspected communicable infections such as chicken pox or measles in communal areas and clinical areas.

3.8 Aseptic Technique

Any invasive procedure which breaches the body's natural defences, such as an injection, phlebotomy, wound cleaning or catheter insertion, increases the risk of invasive pathogens accessing the body's sterile sites.

An aseptic technique aims to prevent microorganisms on hands, surfaces or equipment being introduced to a these susceptible sites. Therefore an aseptic technique is vital in reducing the risk of healthcare associated infections and must be used during all invasive procedures that breach the body's natural defences for example: skin, mucous membranes or when handling equipment / instruments which will enter a normally sterile body cavity or area.

This can be achieved by ensuring that only sterile equipment, gloves and fluids are used during invasive medical and nursing procedures. The most common cause for spread of infection includes the hands of staff and inanimate objects i.e. instruments and clothes.

The overriding and basic principle is that the susceptible site should not come into contact with any item that is not sterile and that any items that have been in contact with a wound or other susceptible sites may be contaminated and should be discarded safely or decontaminated.

Asepsis is the purposeful prevention of the transfer of potentially pathogenic microorganisms and is an essential component in the prevention of Healthcare Associated Infections (HCAI), particularly those associated with the insertion and maintenance of invasive devices and the management of non-intact skin and wounds.

Aseptic Technique is a structured approach to ensuring the maintaining of a sterile/clean field.

Clean Technique is a modified aseptic technique. A clean technique can be used in certain situations e.g. application of dressing to wounds healing by secondary intention (healing by granulation) such as traumatic or chronic wounds, pressure ulcers, leg ulcers, burns, tracheostomy sites.

Healing by secondary intention is used to describe the process of healing in a wound when there is tissue loss and the gap must be gradually filled from the base by the new tissue (healing by granulation).

Non-Touch Technique is employed by both the ‘aseptic’ and ‘clean’ techniques and is essential to ensure that hands even though they have been washed/gloved, do not contaminate sterile connections or other items that will touch a susceptible site.

Aseptic Non-Touch Technique (ANTT) is a standard for safe and effective aseptic practice that can be applied to all aseptic procedures such as intravenous therapy, wound care and urinary catheterisation.

Principles of Asepsis

1. Keep environmental/air contamination exposure of the susceptible site to a minimum.
   (Close windows, do not use fans)
2. Ensure good hand decontamination technique prior to and during the technique
3. Correct use of Personal Protective Equipment (gloves and aprons)
4. Remove dressings carefully and slowly as a large amount of micro-organisms are shed into the air.
5. All fluids and materials must be sterile, sterile packs should be checked for evidence of damage or moisture penetration and for expiry date.
6. Contaminated or non-sterile items must not be placed on the sterile field.
7. Single use items must not be re-used.
8. Dispose of waste as per the Safe handling and disposal of waste

Clean Technique
Traumatic or chronic wounds may be heavily colonised by bacteria, although not necessarily showing signs of infection. The patient may therefore be an infection risk to others, but not to themselves. An occlusive dressing material should be considered to promote healing and to prevent contamination of the patient’s immediate environment

Where chronic wounds require cleaning or when a patient requires limbs to be immersed in water as part of their skin care regime or for cleansing traumatic wounds and leg ulcers, good quality potable (drinking) water rather than sterile saline is acceptable.

Good hand hygiene is essential, clean gloves rather than sterile gloves are acceptable and a disposable plastic apron should always be worn.

The basic principles of an Aseptic Technique must be adopted and sterile dressing pack and sterile dressings used.

Once opened onto a stable surface, the sterile pack provides a sterile field from which to work. Dressings and other requirements can be opened out onto the field for use.

Non-touch principles mean that no other implements are required to pick up objects.

Aseptic Technique Procedure
1. Prepare a clean dressing trolley/tray or suitable method for transporting the items required.
   a. Gather equipment,
   b. Identify key parts (those parts, which will be in direct contact with the wound or susceptible site)
   c. put on plastic apron, take cleaned trolley / tray to bedside / treatment area ensuring all key parts are protected
2. Explain procedure to patient and obtain verbal consent.
3. Close any windows turn off any fans
4. Ensure privacy and dignity. For example pull curtains around bed / treatment area, close doors.
5. Restrict activities around bed / treatment area, e.g. bed making, dusting etc
6. Decontaminate hands
7. Put on non-sterile gloves and remove old dressing, remove gloves, decontaminate hands, re-apply appropriate gloves.
8. Perform procedure using non-touch technique ensuring all key parts are protected.
9. Remove gloves and decontaminate hands
10. Dispose of waste bag into clinical waste bag.
11. Dispose of any single use item appropriately (sharps box or clinical waste bag).

Principles of ANTT:
1. Always wash hands effectively
2. Never contaminate key parts
3. Touch non key-parts with confidence
4. Take appropriate infection control precautions

Environmental / Air contamination
Due to airborne micro-organisms, a perfect sterile technique is not possible in typical health care or home setting. Practitioners can reduce the potential for contamination from the environment by taking sensible precautions such as not undertaking aseptic/clean technique soon after activities such as bed making when airborne bacteria levels are at their highest.

Community Setting
When carrying out aseptic/clean technique in a patient’s home, the healthcare worker does not have specific equipment as in a healthcare setting, for example a dressing trolley; therefore adaptations and creativity are often required to ensure the environment is conducive to the procedure being performed and the equipment remains sterile. In these circumstances, a dressing pack can provide a sterile area from which to work, otherwise, a clean surface such as a table can be covered with a paper towel to create a barrier between the home environment and the equipment needed for the procedure. Equipment must not be placed on the floor. Request that pets do not stay in the room while undertaking the procedure.

All staff who perform clinical procedures should be trained in aseptic technique.

3.9 Antimicrobial Prescribing
Antimicrobials are drugs that if used correctly, provide enormous benefits to the individual service user. However, if used injudiciously, they may cause harm to the individual and to the wider healthcare economy. For example, by selection of resistant organisms or increasing the risk of healthcare associated infections such as meticillin resistant Staphylococcus aureus (MRSA) or Clostridium difficile.

Antimicrobial is an agent that kills or inhibits the growth of micro-organisms. They can be grouped according to the micro-organism they primarily act against. For example anti-bacterials (antibiotics) are used to combat bacteria; anti-virals against viruses and anti-fungals against fungi.
Prudent prescribing is the use of antimicrobials in the most appropriate way for the treatment or prevention of human infectious diseases, having regard to the diagnosis (or presumed diagnosis), evidence of clinical effectiveness, likely benefits, safety, costs (in comparison with alternative choices) and propensity for the emergence of resistance. The most appropriate way implies that the choice, route, dose, frequency and duration of administration have been rigorously determined.

**Prudent antimicrobial prescribing**

The latest edition of the British National Formulary should be considered before starting any antimicrobial therapy: -

**Choice of suitable drug**

The selection of an antimicrobial must be based on two main factors: the patient and the known or likely causative organism.

Factors relating the patient which must be considered include history of allergy, renal and hepatic function, susceptibility to infection (i.e. whether immunocompromised), ability to tolerate drugs by mouth, severity of illness, ethnic origin, age, whether taking other medication and, if female, whether pregnant, breast feeding or taking oral contraceptive.

The known or likely causative organism and its sensitivity, in association with the above factors, will suggest one or more antimicrobials, the final choice depending on the microbiological, pharmacological, and toxicological properties.

**Before starting therapy**

The following precepts must be considered:

- **Viral infections must not be treated with antibiotics.**
- **Samples must be taken for culture and sensitivity testing; ‘blind’ prescribing can lead to difficulty in establishing the diagnosis and increases the risk of resistant organisms evolving.**
- **Narrow-spectrum antibacterials are preferred to broad-spectrum antibacterials unless there is a clear indication (e.g. life-threatening sepsis).**
- **The dose of an antimicrobial may vary according to a number of factors including age, weight, hepatic function, renal function, and severity of infection. Please check the latest edition of the CCG antibiotic formulary to ascertain if standard dose is appropriate.**
- **The route of administration of an antimicrobial often depends on the severity of the infection. Life threatening infections require intravenous therapy and therefore transfer to acute medical services.**
- **Duration of therapy depends on the nature of the infection and the response to treatment.**

Courses should not be unduly prolonged because they encourage resistance, they may lead to side effects and they are costly. However, in certain infections such as Tuberculosis or chronic osteomyelitis, it is necessary to treat for prolonged periods. Conversely a single dose of an antimicrobial may cure uncomplicated urinary-tract infections.

Primary Care prescribers must use the local antimicrobial formulary that can be found at:
The Royal College of General Practitioners website allows access to the TARGET Toolkit which will support prudent prescribing and can be found at:


Posters and Tools to further support prudent prescribing can be found at:


Advice can be sought from the CCG Medicines Management Team at Rushbrook House for the Ipswich and East Suffolk area and Suffolk House for the West Suffolk area.

3.10 Reporting of infections to Public Health England or local authority

Please refer to appendix A – Notifiable Diseases

3.11 Outbreaks and closures

Outbreaks of communicable disease

It is possible that primary care workers may detect a possible communicable disease outbreak. For example: children from the same school or persons living in a nursing home. Any such outbreak needs to be reported. The expectation is that the head teacher or home manger would report to official bodies such as Public Health Suffolk at Endeavour House Ipswich on 01473 260777 for education related outbreaks and the Regional Health Protection Unit at Croxton Way Thetford on 0344 225 3546 for Care Home related outbreaks. However, the primary care worker may need to notify the establishment to ensure that the outbreak is reported.

Primary care workers can request advice for specific infections or situations from the regional Health Protection Unit on 0344 225 3546.

Closure of rooms and premises

It is unlikely that primary care practices will be required to close premises as a direct consequence of infection. However, consideration should be made to development of a contingency plan in the case of needing to close a contaminated room until cleaning and disinfection can take place in the event of heavy contamination from an infectious source, such as MERS or SARS.

Control of outbreaks and infections associated with specific alert organism (MRSA and CD)

This manual, if followed, will reduce the risk of transmission of alert organisms to patients. for example antimicrobial prescribing policies that take account of Clostridium difficile risk. This manual will also cover management of patients infected with alert organisms in SECTION 4.
3.12 Packaging, handling and delivery of laboratory specimens
Clinical specimens include any substance, solid or liquid, removed from the patient for the purpose of analysis.

Staff should be trained to handle specimens safely and receive regularly updated immunisation cover.

Principles

- All specimens should be collected using standard precautions (i.e. wearing of appropriate gloves, disposable plastic apron and washing and drying of hands before and after the procedure).
- When a patient is asked to provide a specimen, they should be provided with the appropriate container and given instructions as to how to collect the specimen.
- Should a patient bring a specimen in an inappropriate container (i.e. pickle jars, old medicine pots), they should be given the correct container and asked to take their incorrectly presented specimen back home for disposal, as the surgery is unlikely to have any safe means of disposal. It may be possible to provide the specimen at the surgery to save an extra journey.
- Laboratory approved containers must be labelled with patient identification details, date of specimen and specimen details. The lids should be screwed on tightly. The container with the specimen must be placed in an individual transparent plastic transport bag as soon as it has been labelled.
- The transport bag must be sealed. The request form must always accompany the specimen but should not be put inside the bag with the specimen. If a wound swab, state type of wound, where on the body, whether deep or superficial and if antibiotics have been used either topical or systemic.
- Specimens must be sent to the laboratory as soon as possible after collection. This will mean planning work load carefully. Whilst awaiting transport, specimens should be stored securely, for as short a time as possible i.e. not overnight and away from food and medicines.
- If specimens have to be stored awaiting transport for more than 4 hours, specimens should be stored in an air tight container in a designated fridge - not a food fridge.
- Sputum specimens must be received by the laboratory within 24 hours.

NB. In the event of a suspected outbreak of infection it is important for specimens to be collected promptly and for the request form to be marked as ‘Possible Outbreak’. Stool specimens should be sent as soon as an outbreak is suspected e.g. the second loose stool.

3.13 Immunisation of service users and vaccine control
Immunisation and Vaccine control
There should be a system in place to identify those patients eligible to receive immunisation in line with ‘Immunisation against infectious disease (The Green Book).

Vaccines are biological products which need to be stored under controlled conditions. They may lose their effectiveness if they become too hot or too cold at any time.

Storage
In organisations such as GP surgeries or community health service providers, at least two individuals need to be nominated, one from the nursing team and one from the administration/management team. These people will be responsible for ordering, receipt and care of vaccines. They should ensure vaccines are stored in a refrigerator promptly after delivery and that the cold chain is maintained at all stages.

- Vaccine stocks should be monitored regularly by the nominated staff members to avoid shortages, under or over-ordering or stockpiling.
- On receipt of vaccines, staff should check them against the order for discrepancies and leakage or damage before accepting and signing for them.
- Vaccines must be refrigerated immediately and must not be left at room temperature.
- A specialised refrigerator must be used for vaccines and diluents. Ordinary domestic refrigerators must not be used. Food, drink and clinical specimens must never be stored in the same refrigerator as vaccines.
- The refrigerator is lockable or within a locked room. All vaccines are Prescription Only Medicines (POMs) and must be stored under locked conditions.
- The receipt of vaccines should be recorded on a stock inventory. It is the responsibility of the named individuals to ensure there is adequate recording of stock ordering and receipt of vaccine.
- The vaccine stock should be rotated within the refrigerator so that those with shorter expiry dates are at the front and used first.
- Vaccines must never be used past their expiry date. Any out-of-date stock should be clearly labelled, removed from the refrigerator immediately and disposed of according to local policies.
- Vaccine effectiveness cannot be guaranteed unless the vaccine has been stored correctly. Vaccines should be stored in the original packaging, retaining batch numbers and expiry dates.
- Vaccines should also be protected from light.

### Temperature control

- Vaccines must be kept between +2°C to +8°C during transportation, delivery and storage at the practice.
- The temperature within the vaccine refrigerator must be monitored continually with a maximum–minimum thermometer.
- Temperatures in the refrigerator must be monitored and recorded at least once each working day, and documented on a chart for recording temperatures.
- The person making the recording should take action if the temperature falls outside +2°C to +8°C and document this action.
- Within the refrigerator there should be sufficient space around the vaccine packages to allow air to circulate.
- Vaccines should be kept away from the side and back walls of the refrigerator; otherwise the vaccines may freeze rendering them inactive and unusable.
- Opening of the refrigerator door should be kept to a minimum in order to maintain a constant temperature.
\begin{itemize}
\item The fridge temperature gauge should be clearly visible to read without needing to open the fridge door.
\item the refrigerator is placed in a suitable position (ventilated and away from heat sources)
\item steps have been taken to reduce the probability of accidental interruption of electricity supply, such as installing a switchless socket or clearly labelling the vaccine refrigerator plug.
\end{itemize}

Administrations

\begin{itemize}
\item Vaccines should be reconstituted and drawn up when required in order to avoid errors and maintain vaccine efficacy and stability. Vaccines should not be drawn up in advance of an immunisation session.
\item Multi-dose vaccine vials should be used according to manufacturer’s recommendations, usually within 1-4 hours.
\item If the skin is clean, no further cleaning is necessary. Only visibly dirty skin need be washed with soap and water. Alcohol or antiseptic should not be used as they can inactivate live vaccines
\end{itemize}
SECTION 4: Organism Specific

4.1 Antibiotic resistance

What is the problem?
Antibiotic resistance is one of the most significant threats to patients’ safety in Europe.

Antibiotic resistance is an everyday problem in all healthcare settings across England and Europe.

The spread of resistant bacteria in hospitals or community healthcare settings is a major issue for patient safety:

- Infections with antibiotic-resistant bacteria increase levels of disease and death, as well as the length of time people stay in hospitals.
- Inappropriate use of antibiotics may increasingly cause patients to become colonised or infected with resistant bacteria.
- Few new antibiotics are being developed. As resistance in bacteria grows, it will become more difficult to treat infection, and this affects patient care.

There are an increasing number of organisms that are developing resistance to antibiotics – this is a significant challenge to all health and social care providers.

Antibiotic resistance can occur in several ways. Strains of bacteria can change (mutate) and, over time, become resistant to a specific antibiotic. The chance of this increases if a person does not finish the course of antibiotics they have been prescribed, as some bacteria may be left to develop resistance.

Antibiotics can also destroy many of the harmless strains of bacteria that live in and on the body. This allows resistant bacteria to multiply quickly and replace them.

The overuse of antibiotics in recent years has played a major part in antibiotic resistance. This includes using antibiotics to treat minor conditions that would have got better anyway.

It has led to the emergence of "superbugs". These are strains of bacteria that have developed resistance to many different types of antibiotics. For example:

- meticillin-resistant Staphylococcus aureus (MRSA)
- Clostridium difficile
- Multi-drug resistant tuberculosis (MDR-TB)
- Carbapenemase-producing Enterobacteriaceae (CPE) [also referred to as carbapenem-resistant Enterobacteriaceae (CRE)]

What is causing this problem?
The inappropriate use and prescribing of antibiotics is causing the development of resistance.

Inappropriate use includes:

- not taking your antibiotics as prescribed
- skipping doses of antibiotics
- not taking antibiotics at regular intervals
saving some for later
sharing antibiotics with others
Inappropriate prescribing includes:
unnecessary prescription of antibiotics; for example antibiotics prescribed for viral infections
unsuitable use of broad-spectrum antibiotics; narrow spectrum antibiotics should be prescribed
wrong selection of antibiotics; for example if sensitivities of organism is not identified by sending samples to a microbiology laboratory
inappropriate duration or dose of antibiotics; for example “long term” antibiotic prescriptions

How can it be addressed?
There are several ways antibiotic resistance can be addressed.

First, antibiotic prescribing should be made a strategic priority by:

- targeting antibiotic therapy – by sending samples and treating the infectious organism according to identified sensitivities
- implementing structured antimicrobial stewardship plans – peer review of antibiotic prescriptions
- reviewing local surveillance and assessing microbiological data
- implementing antibiotic stewardship tools
- compliance with local antibiotic formulary

In trying to combat the problem of antibiotic resistance, the NHS and health organisations across the world are trying to reduce the use of antibiotics, especially for conditions that are not serious.

These types of infections can be serious and challenging to treat, and are becoming an increasing cause of disability and death across the world. The World Health Organisation (WHO) estimates there are around 170,000 deaths related to MDR-TB each year.

Antibiotics are losing their effectiveness at an increasing rate. The more we use antibiotics, the greater the chance bacteria will become resistant to them and they can no longer be used to treat infections.

The biggest worry is new strains of bacteria may emerge that cannot be effectively treated by any existing antibiotics. Carbapenemase-producing Enterobacteriaceae are one such emerging group of bacteria, with several types. These bacteria are widespread in some parts of the world, including parts of Europe, and are beginning to be seen in the UK.

To slow down the development of antibiotic resistance, it is important to use antibiotics in the right way – to use the right drug, at the right dose, at the right time, for the right duration. Antibiotics should be taken as prescribed and never saved for later or shared with others.
4.2 Staphylococcus aureus/MRSA

What is Staphylococcus aureus?

Staphylococcus aureus is a bacterium that is commonly found on human skin and mucosa (lining of mouth, nose etc.). The bacterium lives completely harmlessly on the skin and in the nose of about one third of normal healthy people. This is called colonisation or carriage.

What illnesses are caused by Staphylococcus aureus?

Staphylococcus aureus can cause actual infection and disease, particularly if there is an opportunity for the bacteria to enter the body eg via a cut or an abrasion.

Staphylococcus aureus causes abscesses, boils, and it can infect wounds -- both accidental wounds such as grazes and deliberate wounds such as those made during surgery. These are called local infections. It may then spread further into the body and cause serious infections such as infections of the heart valves (endocarditis), pneumonia and bacteraemia (blood stream infection).

How is Staphylococcus aureus infection treated?

Most strains of S. aureus are sensitive to the more commonly used antibiotics, and infections can be effectively treated. Some S. aureus bacteria are more resistant. Those resistant to the antibiotic meticillin are termed meticillin resistant Staphylococcus aureus (MRSA) and often require different types of antibiotic to treat them. Those that are sensitive to meticillin are termed meticillin susceptible Staphylococcus aureus (MSSA). MRSA and MSSA only differ in their degree of antibiotic resistance: other than that there is no real difference between them.

What is MRSA?

MRSA stands for methicillin-resistant Staphylococcus aureus. They are varieties of Staphylococcus aureus that are resistant to methicillin (a type of penicillin) and usually to some of the other antibiotics that are normally used to treat Staphylococcus aureus infections.

Screening patients for MRSA carriage

Current screening guidance (DH 2014) targets those patients undergoing high risk interventions and those that have previous MRSA positive results. Screening usually takes place at the hospital however; there may be an odd occasion when Primary Care receives a request to screen an individual patient. If this occurs, seek guidance from the requesting hospital on how to obtain screening swabs.

Is MRSA treatable?

Carriage of MRSA should not be a reason for stopping admission to hospitals, nursing or residential homes or for discharge to their home. It is not generally necessary to treat MRSA colonisation or carriage except as a precaution for those going into hospital to have planned surgery. If decolonisation (clearance) is required, this process will usually be led by the hospital who will prescribe Mupirocin ointment for the nose and an anti-septic body wash such as Octenisan.

MRSA infection is no more dangerous or virulent than infection with MSSA, but it is more difficult to treat depending on whether it is resistant to any other antibiotics. Some of the antibiotics used to treat MRSA however can on occasion be more difficult to use or may cause side effects.

Obtaining samples is vital to ensure the correct antibiotic is prescribed based on the sensitivities of the organism.
Who is at risk of MRSA infection?
In general, healthy people are at a low risk of blood stream infection with MRSA. Most patients who are colonized with MRSA do not go on to develop an infection.

MRSA bacteraemia usually affects immuno-compromised, vulnerable or debilitated patients, such as patients in intensive care units, undergoing surgery interventions or have deep soft tissue infections.

How is MRSA spread?
Everyone sheds skin cells and those people who are colonised with MRSA will shed MRSA with their skin cells. These organisms can then contaminate hands, equipment and the environment. MRSA is then picked up and spread via hand-to-hand contact, or contact with equipment and the environment. It is important that healthcare workers wash their hands before and after visiting a patient, clean equipment after every patient use and ensure the environment is kept clean and dry.

What factors increase the risk of death in patients with MRSA infection?
Patients in hospital are more vulnerable to many infections, including those caused by MRSA, because devices such as intravenous catheters, or procedures such as surgery, provide an entry point for germs to enter the body. The most common types of infection caused by MRSA are local infections of the skin that can be treated successfully with proper skin care and antibiotics. Some MRSA infections can become life-threatening. Patients who are at particular risk are those who are seriously ill with another medical condition or whose immune system is weakened by diseases such as diabetes or kidney disease, or by treatments for conditions such as cancer.

Community-acquired MRSA

What is community-acquired MRSA?
Community-acquired MRSA infection (CA-MRSA) is when an MRSA infection occurs in a previously healthy individual who has no recognised risk factors associated with MRSA - for example, no previous hospitalisation, surgical procedures or prolonged antibiotic treatment.

4.3 Clostridium difficile

What is Clostridium *difficile* infection?
Clostridium *difficile* (C. *difficile*) is a bacterium that’s found in people’s intestines. However, it does not cause infection by its presence alone. It can be found in healthy people, where it causes no symptoms (up to 3% of adults and 66% of babies).

C. *difficile* causes infection when the normal bacteria in the gut are disadvantaged, usually by someone taking antibiotics. The antibiotics will kill the normal gut bacteria which hold C. *difficile* in check. Once the normal gut bacteria is killed by the antibiotic, C. difficile levels will to grow to unusually high levels allowing the toxin that some strains of C. difficile produce to reach levels where it attacks the intestines and causes mild to severe diarrhoea.

C. *difficile* infection (CDI) can lead to more serious infections of the intestines with severe inflammation of the bowel (pseudomembranous colitis). C. *difficile* is the biggest cause of infectious diarrhoea in hospitalised patients.
What are the symptoms of *C. difficile* infection?

Clostridium difficile causes diarrhoea (mild to severe) and, unusually, life threatening inflammation of the intestines. Other symptoms can include fever, loss of appetite, nausea and abdominal pain or tenderness.

How do you catch it?

Clostridium difficile bacterial spores are found in soil and some evidence suggests that it can found in the food chain. A person may acquire C. difficile bacterial spore by ingesting the bacteria through contact with the contaminated environment or another person. In most healthy people the C. difficile bacterial spore will not be able to multiply in the gut because their normal gut bacteria will keep it in check and they will not develop infection. In some more vulnerable people, particularly those whose normal gut bacteria have been disrupted by antibiotic treatment, the C. difficile bacterial spore may be able to multiply in the gut and go on to cause infection.

Thorough washing of hands, the environment and food stuffs will reduce the risk of acquiring the bacterial spore.

How is it treated?

In most patients the infection can be treated with specific antibiotics.

How *Clostridium difficile* infection diagnosed?

Suspicion of CDI can be based on the symptoms and patient history and assessment of the patient’s risk factors (e.g. having taken antibiotics, recent hospital stay, regularly taking medicines that affect gut motility such as laxatives and antacids). A faeces sample should be obtained and sent to the laboratory for MC&S. A preliminary diagnosis can initiate increased levels of infection control precautions, such as isolation of a patient in a single room, to prevent spread and cleaning with a chlorine-releasing agent. Treatment can be started on suspicion of CDI.

Who does it affect? Are some people more at risk?

Those who have taken antibiotics, particularly the elderly; over 80% of cases are reported in the over 65s. Children under the age of 2 years are not usually affected.

Also at risk are those regularly taking medicines that affect gut motility (laxatives, antacids, steroids, NSAIDs) and those with medical conditions that affect the bowel such as irritable bowel syndrome and Crohn’s disease.

Other risk factors include:

- gastrointestinal surgery/manipulation
- long length of stay in healthcare settings
- a serious underlying illness
- immunocompromising conditions

How can the risk of *Clostridium difficile* infection be reduced?

Prudent antimicrobial prescribing is vital in the control of CDI. Only prescribe antibiotics according to the Suffolk Antibiotic Formulary and send samples for suspected infections to ensure sensitivities are identified and appropriate antibiotics are prescribed.

When prescribing antibiotics, review current medication to assess if regular gut affecting medicines can be omitted for the duration of the antibiotic.
Identifying patients in the early stages of this infection is a key element to early treatment. When an antibiotic has been prescribed, ask the patient to report any loose stools that last more than a couple of days if this is not usual for the person.

If CDI is diagnosed, advise the patient to maintain scrupulous hand hygiene and clean with a chlorine releasing agent (bleach). Alcohol based products do not kill the C. difficile bacterial spore.

**Does somebody who has had a Clostridium difficile infection pose a risk to others?**

There should be no restriction on the discharge or transfer of patients who have had Clostridium difficile diarrhoea but have recovered (no longer has diarrhoea). Once someone has recovered clinically they are not a risk to others even if they continue to carry the organism in their intestines provided that they observe normal personal hygiene precautions such as hand washing after using the toilet. Thus having had Clostridium difficile infection is not a restriction to a patient returning to a care home/nursing home/community hospital.

**What if symptoms return?**

In some cases, the symptoms may return (relapse). If this occurs within 30 days, treatment should be given based on clinical symptoms and a sample does not need to be resent.

There is no need to obtain “clearance” samples as the organism may be passed in the stool for many weeks after symptoms resolve.
Treatment Algorithm 1

Algorithm 1. 1st episode of *Clostridium difficile* infection (CDI)

Diarrhoea AND one of the following:
Positive *C. difficile* toxin test OR Results of *C. difficile* toxin test pending AND clinical suspicion of CDI

If clinically appropriate discontinue non-*C. difficile* antibiotics to allow normal intestinal flora to be re-established
Suspected cases must be isolated

**Symptoms/signs: not severe CDI**
*(None of: WCC >15, acute rising creatinine and/or colitis)*
- Oral metronidazole 400mg 8-hourly 10-14 days

**Symptoms/signs: severe CDI**
- WCC >15, acute rising creatinine and/or colitis
- Oral vancomycin 125 mg 6-hourly 10-14 days.
- Consider oral fidaxomicin 200 mg 12-hourly 10-14 days in patients with multiple co-morbidities who are receiving concomitant antibiotics

**DAILY ASSESSMENT**

**Symptoms improving**
- Diarrhoea should resolve in 1-2 weeks
- Recurrence occurs in ~20% after 1st episode; 50-60% after 2nd episode

**Symptoms not improving or worsening**
- Should not normally be deemed a treatment failure until day 7 of treatment.
- However, if evidence of severe CDI: WCC >15, acute rising creatinine and/or signs/symptoms of colitis

Switch to oral vancomycin 125 mg 6-hourly 10-14 days

**Antimotility agents should not be prescribed in acute CDI**

**Surgery/GI/Micro/ID consultation**

**AND, depending on degree of ileus/prior treatment**
- **EITHER** Vancomycin 125-500 mg PO/NG 6-hourly +/- Metronidazole 500 mg IV 8-hourly x 10 days
- **OR** Fidaxomicin 200 mg PO 12-hourly
- **PLUS CONSIDER** Intracolonic vancomycin (500 mg in 100–500 ml saline 4–12-hourly) given as retention enema: 18 gauge Foley catheter with 30 ml balloon inserted per rectum; vancomycin instilled; catheter clamped for 60 minutes; deflate and remove

Further Surgery/GI/Micro/ID consultation
- Depending on choice of therapy (see above) consider:
  1. High dose oral/NG vancomycin (500mg PO 6-hourly)
  2. IV Immunoglobulin 400mg/kg 1 dose, consider repeat

**DAILY ASSESSMENT**

Symptoms not improving or worsening should not normally be deemed a treatment failure until day 7 of treatment. However, if evidence of severe CDI continues or worsens

**Treatment Algorithm 2**

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Algorithm 2 Recurrent *Clostridium difficile* infection (CDI)

Recurrent CDI occurs in ~15-30% of patients treated with metronidazole or vancomycin

Recurrence of diarrhoea (at least 3 consecutive type 5-7 stools) within ~30 days of a previous CDI episode **AND** positive *C. difficile* toxin test

Must discontinue non- *C. difficile* antibiotics if at all possible to allow normal intestinal flora to be re-established
- Review all drugs with gastrointestinal activity or side effects
  - (stop PPIs unless required acutely)
  - Suspected cases must be isolated

Symptoms/signs: not life-threatening CDI
- Oral fidaxomicin 200 mg 12-hourly for 10-14 days
  - (efficacy of fidaxomicin in patients with multiple recurrences is unclear)
  - Depending on local cost-effectiveness decision making,
  - Oral vancomycin 125 mg 6-hourly 10-14 days is an alternative

Daily Assessment
- (include review of severity markers, fluid/electrolytes)

Symptoms improving
- Diarrhoea should resolve in 1-2 weeks

**IF MULTIPLE RECURRENCES ESPECIALLY IF EVIDENCE OF MALNUTRITION, WASTING, etc.**

1. Review ALL antibiotic and other drug therapy (consider stopping PPIs and/or other GI active drugs)
2. Consider supervised trial of anti-motility agents alone
   - (no abdominal symptoms or signs of severe CDI)
   - Also consider on discussion with microbiology:
3. Fidaxomicin (if not received previously) 200 mg 12-hourly for 10-14 days
4. Vancomycin tapering/pulse therapy (4-6 week regimen)
   - (Am J Gastroenterol 2002;97:1769-75)
5. IV immunoglobulin, especially if worsening albumin status (J Antimicrob Chemother 2004;53:882-4)
4.4 Carbapenemase-producing Enterobacteriaceae (CPE) [also referred to as carbapenem-resistant Enterobacteriaceae (CRE)]

What are Carbapenemase-producing Enterobacteriaceae (CPE)

- Carbapenemases are enzymes e.g. KPC, OXA-48, NDM and VIM, that destroy carbapenem antibiotics (conferring resistance) made by a small but rapidly growing number of Enterobacteriaceae strains.

- Enterobacteriaceae (including Escherichia coli, Klebsiella spp. and Enterobacter spp.) usually colonise the gut of humans and animals.

- They are also some of the most common causes of opportunistic urinary tract infections, intra-abdominal and bloodstream infections.

- Carbapenems, including meropenem, ertapenem, imipenem and doripenem, are normally reserved for serious infections caused by drug-resistant Gram-negative bacteria – the “last line of defence”.

- Colonisation is more common than infection: duration of colonisation in unclear.

High Risk Groups

- Those with history of:
  - Hospitalisation abroad, particularly having received intensive care or undergone invasive treatment such as haemodialysis
  - Hospitalisation in UK hospital with prevalence of CPE
  - Being previously confirmed as a case or contact of case
  - Being a health tourist

What is required from primary care

- On receipt of positive result – inform and advise individual (and/or family as appropriate) and care setting

- Contact Public Health England to undertake risk assessment in relation to source and prevention of transmission

- Contact Microbiologist for advice on management of infection; referral to secondary care for management of severe infection.

- Communication of infection (or colonisation) status to any receiving healthcare providers.

Screening and early detection (only if requested)

Not routinely used in community; if required – rectal swab by competent practitioner (stool sample second choice); swabs from wounds and device-related sites may provide additional information if requested.

Decolonisation

Neither skin nor gut decolonisation are recommended.
Treatment of infection
Speak to microbiologist – according to susceptibility result; combined therapy recommended for severe infections – hospitalisation required.

Infection prevention and control
Generally standard precautions – see section 3 of this manual.

Communication
Robust inter-healthcare communications to inform care setting to which patient is being transferred/discharged of their status – whether colonised or infected.

4.5 Norovirus
Norovirus is the most common cause of outbreaks of gastro-enteritis in healthcare settings.

Outbreaks often affect both service users and staff and can lead to disrupted service provision and potentially the closure of services.

Norovirus is spread by person-to-person contact via several routes: faecal-oral; vomiting aerosols that contaminate the environment, for example uncovered food and water. However, the aetiology of most outbreaks cannot be determined.

Norovirus is highly infectious because only a low dose is necessary to acquire the infection; it is easily transmissible and can survive for long periods in the environment. Effective decontamination of hands and the environment, as well as appropriate handling of infected items, for example equipment and laundry, is the key to the prevention of transmission.

Laboratory reports on the prevalence of Norovirus in England and Wales has shown a year-on-year increase however, these figures represent only a small fraction of the true numbers because the majority of people do not seek medical help.

Infection is thought to provide short-lived immunity, however any immunity would be specific to the virus type and there are many virus types

The symptoms of viral gastro-enteritis are:

- Unexplained explosive diarrhoea (never bloody) and / or projectile vomiting
- Abdominal cramps
- Low grade fever, headache, myalgia and general malaise
- Symptoms may result in dehydration

The characteristics of viral gastro-enteritis are:

- Symptoms are often acute with sudden on-set
- Incubation period is usually 15-48 hours but can be as much as 72 hours.
- Duration of illness is normally 12-60 hours.
- Vomiting occurs in more than 50% of cases.
- Cause of diarrhoea is not attributable to other factors such as laxatives, antibiotics, medication, medical condition or recent intervention.

The **treatment** of viral gastro-enteritis is:

- Norovirus is a self-limiting infection and symptoms will normally resolve themselves.
- Anti-emetics can be used to treat vomiting.
- Antibiotics are NOT required.

**Primary Care**

Be aware of close communities such as Care Homes reporting increased incidence of gastro-enteric symptoms. Either give advice or refer the home to the local health protection unit.

If staff report symptoms suggestive of viral gastroenteritis, they should stay off work until 48 hours after their last symptom. If more than one person reports symptoms suggestive of gastroenteritis, consideration should be given to cleaning the environment with a hypo-chloride solution.

**ALCOHOL BASED HAND SANITISERS ARE NOT EFFECTIVE ON NOROVIRUS.**

**4.6 CJD/vCJD**

Creutzfeldt-Jakob disease (CJD) is a rare and ultimately fatal degenerative brain disease. It is one of a group of diseases called Transmissible Spongiform Encephalopathies (TSEs) that affect humans and animals. TSEs are thought to be caused by the build up of an abnormal form of the naturally occurring 'prion' protein in the brain.

Variant CJD is likely to be caused by consuming meat from a cow that has been infected with a similar prion disease called bovine spongiform encephalopathy (BSE), also known as ‘mad cow disease’.

**Iatrogenic transmission**

There is no evidence to suggest that CJD is spread from person to person by close contact, though it is known that transmission of CJD can occur in specific situations associated with medical interventions – iatrogenic infections. Due to the possibility of iatrogenic transmission of CJD, precautions need to be taken for certain procedures in healthcare, to prevent transmission.

**Symptomatic and “at increased risk” of CJD**

<table>
<thead>
<tr>
<th>Symptomatic patients</th>
<th>Patients who fulfill the diagnostic criteria for definite, probable or possible CJD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patients with neurological disease of unknown aetiology, who do not fit the criteria for possible CJD, but where the diagnosis of CJD is being actively considered.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Patients “at increased risk” from genetic forms of CJD</th>
<th>Individuals who have been shown by specific genetic testing to be at significant risk of developing CJD.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individuals who have a blood relative known to have a genetic mutation indicative of genetic CJD;</td>
</tr>
<tr>
<td><strong>Patients identified as “at increased risk” of vCJD through receipt of blood from a donor who later developed vCJD</strong></td>
<td>□ Individuals who have received labile blood components (whole blood, red cells, white cells or platelets) from a donor who later went on to develop vCJD.</td>
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<tr>
<td><strong>Patients identified as “at increased risk” of CJD through iatrogenic exposures</strong></td>
<td>□ Recipients of hormone derived from human pituitary glands, <em>e.g.</em> growth hormone, gonadotrophin, are “at increased risk” of transmission of sporadic CJD. In the UK the use of human-derived gonadotrophin was discontinued in 1973, and use of cadaver-derived human growth hormone was banned in 1985. However, use of human-derived products may have continued in other countries after these dates. □ Individuals who underwent intradural brain or intradural spinal surgery before August 1992 who received (or might have received) a graft of human-derived dura mater are “at increased risk” of transmission of sporadic CJD (unless evidence can be provided that human-derived dura mater was not used). □ Individuals who have had surgery using instruments that had been used on someone who went on to develop CJD, or was “at increased risk” of CJD; Individuals who have received an organ or tissue from a donor infected with CJD or “at increased risk” of CJD; □ Individuals who have been identified as having received blood or blood components from 300 or more donors since January 1990; □ Individuals who have given blood to someone who went on to develop vCJD; □ Individuals who have received blood from someone who has also given blood to a patient who went on to develop vCJD; □ Individuals who have been treated with certain implicated UK sourced plasma products between 1990 and 2001.</td>
</tr>
</tbody>
</table>

In most routine clinical contact, no additional precautions are needed for the care of patients in the “at increased risk” patient groups. However, when certain invasive interventions are performed, there is the potential for exposure to the agents of TSEs. In these situations it is essential that control measures are in place to prevent iatrogenic CJD transmission.

**Sample-taking and other invasive medical procedures**

When taking samples or performing other invasive procedures, the possible infectivity of the tissue(s) involved must be considered, and if the procedure is necessary, suitable precautions taken. **It is important to ensure that only trained staff, who are aware of the hazards, carry out invasive procedures that may lead to contact with medium or high risk tissue.**

Body secretions, body fluids (including saliva, blood, cerebrospinal fluid [CSF] and excreta) are all low risk for CJD. It is therefore likely that the majority of samples taken or procedures performed will be low risk. Contact with small volumes of blood (including inoculation injury) is considered low risk,
though it is known that transfusion of large volumes of blood and blood components may lead to vCJD transmission.

Blood and body fluid samples from patients with, or “at increased risk” of, CJD should be treated as potentially infectious for blood-borne viruses and handled with standard infection prevention and control precautions as for any other patient, i.e.;

- use of disposable gloves and eye protection where splashing may occur;
- avoidance of sharps injuries and other forms of parenteral exposure;
- safe disposal of sharps and contaminated waste in line with locally approved arrangements
- single-use disposable equipment should be used wherever practicable.

Samples from patients with, or “at increased risk” of, CJD should be marked with a ‘Biohazard’ label, and it is advisable to inform the laboratory in advance that a sample is being sent.

When a spillage of any fluid (including blood and CSF) from a patient with, or “at increased risk” of, CJD occurs in a healthcare setting, the main defence is efficient removal of the contaminating material and thorough cleaning of the surface.

Standard infection prevention and control precautions should be followed for any spillages, (see section 3 in this manual).

Standard disinfection for spillages (eg. 10,000ppm chlorine-releasing agent) should be used to decontaminate the surface after the spillage has been removed. It should be noted that none of the methods currently suggested by WHO for prion inactivation are likely to be fully effective.

Any waste (including cleaning tools such as mop heads, and PPE worn) should be disposed of as clinical waste.

**Effective decontamination is key to reducing the risk of transmission of CJD through surgery.**

For all patients with, or “at increased risk” of, CJD, the following precautions should be taken for surgical procedures:

- Wherever appropriate and possible, the intervention should be performed in an operating theatre;
- Where possible, procedures should be performed at the end of the list, to allow normal cleaning of theatre surfaces before the next session;
- Only the minimum number of healthcare personnel required should be involved;
- Protective clothing should be worn, *i.e.* liquid repellent operating gown, over a plastic apron, gloves, mask and goggles, or full-face visor;
- for symptomatic patients, this protective clothing should be single-use and disposed of in line with local policies;
- Single-use disposable surgical instruments and equipment should be used where possible, and subsequently destroyed by incineration or sent to the instrument store;
• Effective tracking of reusable instruments should be in place, so that instruments can be related to use on a particular patient.

• Where single-use instruments are not available, the handling of reusable instruments depends on:
  o how likely the patient is to be carrying the infectious agent (the patient’s risk status);
  o whether the patient has, or is “at increased risk” of, CJD; and
  o how likely it is that infection could be transmitted by the procedure being carried out i.e. whether there is contact with tissues of high or medium infectivity.

Community healthcare of CJD patients

People should not be dissuaded from routine contact with CJD patients as both CJD and vCJD are not thought to present a risk through normal social or routine clinical contact.

No special measures over and above standard infection prevention and control precautions are generally required for caring for CJD patients in the community.

GPs are asked to record their patient’s CJD risk status in their primary care records. The GP should also include this information in any referral letter should the patient require surgical, medical or dental procedures.

All people who are “at increased risk” of CJD are asked to help prevent any further possible transmission to other patients by following this advice:

• Don’t donate blood. No-one who is “at increased risk” of CJD, or who has received blood donated in the United Kingdom since 1980, should donate blood;
• Don’t donate organs or tissues, including bone marrow, sperm, eggs or breast milk;
• If you are going to have any medical, dental or surgical procedures, tell whoever is treating you beforehand so they can make special arrangements for the instruments used to treat you if you need certain types of surgery or investigation;
• You are advised to tell your family about your increased risk. Your family can tell the people who are treating you about your increased risk of CJD if you need medical or surgical procedures in the future and you are unable to tell them yourself.

For more details, follow this link:

SECTION 5: Staff Health

All registered providers should have a system in place to manage the occupational health needs and obligations of staff in relation to infection.

All staff should be able to access occupational health services or appropriate occupational health advice.

There should be policy on the prevention and management of communicable infections in care workers.

Immunisation of health care workers should be 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 employees if a risk assessment indicates that it is needed (COSHH Regulations 2002).

There should a record of relevant immunisations for staff.

Occupational health services

Occupational health services for staff should include:

- risk-based screening for communicable diseases and assessment of immunity to infection after a conditional offer of employment and on-going health surveillance;
- offer of relevant immunisations; and
- having arrangements in place for regularly reviewing the immunisation status of care workers and providing vaccinations to staff as necessary in line with Immunisation against infectious disease (‘The Green Book’) and other guidance from Public Health England

Occupational health services in respect of BBVs should include:

- having arrangements for identifying and managing healthcare staff infected with hepatitis B or C or HIV and advising about fitness for work and monitoring as necessary, in line with Department of Health guidance;
- liaising with the UK Advisory Panel for Healthcare Workers Infected with Blood-borne Viruses when advice is needed on procedures that may be carried out by BBV-infected care workers, or when advice on patient tracing, notification and offer of BBV testing may be needed;
- a risk assessment and appropriate referral after accidental occupational exposure to blood and body fluids; and
- management of occupational exposure to infection, which may include provision for emergency and out-of-hours treatment, possibly in conjunction with accident and emergency services and on-call infection prevention and control specialists.
  - This should include a specific risk assessment following an exposure prone procedure.

Occupational health services in respect of influenza should include arrangements for provision of influenza vaccination for healthcare workers where appropriate.
SECTION 6: Quality Assurances

The effective control of preventable infections is seen as an indicator of the quality of care a patient may receive. Activities such as standard setting and audit/improvement programmes have become essential components of an infection prevention programme. Clinical governance is as an umbrella term of these programmes. Its broad aim is to reassure people that quality is the essence of healthcare at all levels of the organisation.

All practitioners will be expected to follow practices that are clinically safe, effective and evidence based. Particular commitment should be given to following the guidelines and recommended practices within The Health and Social Care Act 2008, Code of Practice (Revised July 2015) and National Institute for Clinical Excellence (NICE).

It is essential to maintain public and patient confidence in the services offered by the production, implementation and audit of robust policies and the documentation of activities such as decontamination of equipment and the environment.

An audit tool can be used to monitor infection prevention practices and provide data on compliance with policies. Audit tools should state the standard to be audited and record the level of compliance. This data can be used in the planning of educational needs or evaluating the overall effectiveness of infection control programmes.

Following an audit, it is important that all relevant staff are given the opportunity to discuss the findings. Urgent problems identified in the audit would have to be addressed at that time.

A report should be written that recognises and highlights areas of good practice as well as those of concern. There should be an action plan, recommendations and time scales for their adoption.

Re-audit of the area will ensure that recommendations have been accepted.

Appendix B of this manual consists of a template for an Assurance Framework and Annual Plan of Improvement.

Appendix C of this manual consists of a description of the auditing process and some suggestions on undertaking audit and feedback.
SECTION 7: References and Resources

There are many infection prevention related documents available. These next few pages will give you some of the more robust evidence based references and resources available.

CQC
This web page will give you the CQC guidance and expectations from the CQC. This information is reviewed, updated and changed regularly so do check this webpage prior to CQC visits and periodically for updates.
http://www.cqc.org.uk/content/provider-handbooks

Legislation and Governmental guidance
There are a number of government directives that need to be taken into consideration with regards to infection prevention. The main one being

The following website gives details about the EU Sharps Directive. It also leads to a toolkit for assessing the need and implementation of the EU Directive and the Royal College of Nursing’s practical guidance.
http://www.hse.gov.uk/healthservices/needlesticks/eu-directive.htm

There is a suite of guidance called Health Technical Memorandums, Health Building Notes and Choice Framework for local policies and procedures that cover a number of infection prevention elements that can be found on the www.gov.uk website.

For Example:
Waste management guidance can be found at

Water systems management can be found at

Decontamination of surgical instruments can be found at

Infection Control in the built environment can be found at

Facilities for primary and community care services can be found at

Standard Precautions
There are two main documents for Standard Precautions.

NICE CG 139 at https://www.nice.org.uk/guidance/cg139
There are other NICE guidelines that may be useful such as
https://www.nice.org.uk/guidance/ng15 antimicrobial stewardship
https://www.nice.org.uk/guidance/cg69 Respiratory Tract Infections
https://www.nice.org.uk/guidance/cg74 Surgical site infection and others for Urinary Tract Infection in men women and under 16s.
The Royal College of Nursing has guidance on Standard Precautions, Healthcare waste management, Choosing wipes, managing diarrhoea and Sharp safety all of which can be found at www.rcn.org.uk/development/publications

Audit (Quality Improvement) Tools and other information can be found at the Infection Prevention Society website
http://www.ips.uk.net/professional-practice/quality-improvement-tools/quality-improvement-tools/

Antibiotic Stewardship Tools can be found at

Primary Care prescribers must use the local antimicrobial formulary that can be found at:
http://www.ipswichandeastssuffolkccg.nhs.uk/Portals/1/Content/Members%20Area/Clinical%20Area/Medicine%20management/CCG%20formularies/Medication%20formularies/Antibiotic%20Treatment%20tables%202014%20-%202016%20FINAL.pdf

The Royal College of General Practitioners website allows access to the TARGET Toolkit which will support prudent prescribing and can be found at:

Posters and Tools to further support prudent prescribing can be found at:

Cleaning
The Nation Patient Safety Agency developed guidance for cleanliness in Primary Care and an interactive cleaning audit tool that can still be accessed at
http://www.nrls.npsa.nhs.uk/resources/?entryid45=75241
Be aware that it is based on an older version of The Code of Practice but still very useful.

Good resource page
A good website for infection prevention resources can be found at (caution there is a cost to the materials on this site) www.infectionpreventioncontrol.co.uk

Specific infections
A good reliable and continuously updated website for all infections can be found at
https://www.gov.uk/topic/health-protection/infectious-diseases

If a patient would like to look up their infection (or other conditions) you can refer them to NHS Choices at http://www.nhs.uk/Conditions/Pages/hub.aspx
APPENDIX A: Notifiable Diseases

A notifiable disease is any disease that is required by law to be reported to the Health Protection Unit.

The Health Protection (Notification) Regulations 2010 (SI 2010/659) came into force on 6 April 2010 (except for provisions relating to laboratory notifications, which applied from 1 October 2010).

The new legislation adopts an “all hazards” approach and specifies the diseases that should be notified and is different from the list used until now. It also requires notification of other infections or contamination by chemicals or radiation which doctors believe present, or could present, a significant risk to human health.

Regulation Summary

If a Registered Medical Practitioner becomes aware of or suspects that a service user who he/she is attending is suffering from a notifiable disease or food poisoning, he/she has a legal obligation to inform the proper officer (Consultant in Communicable Diseases, CCDC) unless there are reasonable grounds for believing that some other registered medical practitioner has already done so (i.e. the Notification form has been completed and there is an entry confirming this in the health record).

Registered Medical Practitioners are requested to give an advance telephone alert (number below) to Norfolk, Suffolk & Cambridge HPU of cases with a particular Public Health significance e.g. invasive meningococcal disease, salmonella typhi or paratyphi, verotoxin producing escherichia coli etc.

The Registered Medical Practitioner concerned needs to fill out a Notification Form and send it (email or fax) as soon as the disease is suspected to ensure effective and timely surveillance of outbreaks or incidents with a public health interest.

An entry giving details of the decision and actions taken must be made in the health record by the medical practitioner concerned, this must state that the Notification Form notifying the disease to the CCDC has been sent.

If a service user has a gastrointestinal infection, infestation or bacterial intoxication, they should be informed by the Registered Medical Practitioner that an Environmental Health Officer may contact them to seek further details.

NB: Full guidance can be found at:


HPU Toolkit can be found at: http://www.cieh.org/WorkArea/showcontent.aspx?id=37814

Health Protection Unit Contact Details
Norfolk, Suffolk and Cambridge Health Protection Unit
Thetford Community Healthy Living Centre Telephone: 0344 225 3546
Croxton Road Secure Fax: 01842 765260
Thetford Generic email: anglia.hpu@phe.gov.uk
IP24 1JD Secure email: hpa.ang.adminnscp@nhs.net
List of Notifiable Diseases

Diseases notifiable (to Local Authority Proper Officers) under the Health Protection (Notification) Regulations 2010:

- Acute encephalitis
- Acute infectious hepatitis
- Acute meningitis
- Acute poliomyelitis
- Anthrax
- Botulism
- Brucellosis
- Cholera
- Diphtheria
- Enteric fever (typhoid or paratyphoid fever)
- Food poisoning
- Haemolytic uraemic syndrome (HUS)
- Infectious bloody diarrhoea
- Invasive group A streptococcal disease
- Legionnaires’ Disease
- Leprosy
- Malaria
- Measles
- Meningococcal septicaemia
- Mumps
- Plague
- Rabies
- Rubella
- SARS
- Scarlet fever
- Smallpox
- Tetanus
- Tuberculosis
- Typhus
- Viral haemorrhagic fever (VHF)
- Whooping cough
- Yellow fever
As of April 2010, it is no longer a requirement to notify the following diseases: Dysentery, Leptospirosis, Ophthalmia neonatorum, Relapsing fever and Viral hepatitis (replaced by Acute infectious hepatitis). These and other diseases that may present significant risk to human health may be reported under ‘Other significant disease’ category.
List of Causative Agents

Causative agents notifiable (to the Health Protection Agency) under the Health Protection (Notification) Regulations 2010:

Bacillus anthracis
Bacillus cereus (only if associated with food poisoning)
Bordetella pertussis
Borrelia spp
Brucella spp Burkholderia mallei
Burkholderia pseudomallei Campylobacter spp Chikungunya virus
Chlamydophila psittaci Clostridium botulinum
Clostridium perfringens (only if associated with food poisoning)
Clostridium tetani Corynebacterium diphtheriae Corynebacterium ulcerans
Coxiella burnetii
Crimean-Congo haemorrhagic fever virus
Cryptosporidium spp
Dengue virus
Ebola virus
Escherichia coli (including E.coli O157)
Entamoeba histolytica
Francisella tularensis
Giardia lamblia Guaranito virus
Haemophilus influenzae (invasive) Hanta virus
Hepatitis A, B, C, delta, and E viruses
Influenza virus
Junin virus
Kyasanur Forest disease virus
Lassa virus
Legionella spp
Leptospira interrogans Listeria monocytogenes Machupo virus
Marburg virus
Measles virus
Mumps virus
Mycobacterium tuberculosis complex
Neisseria meningitidis
Omsk haemorrhagic fever virus
Shigella spp
Plasmodium falciparum, vivax, ovale, malariae, knowlesi Streptococcus pneumoniae (invasive)
Polio virus (wild or vaccine types)
Streptococcus pyogenes (invasive)
Rabies virus (classical rabies and rabies-related lyssaviruses)
Rickettsia spp
Rift Valley fever virus
Rubella virus
Saba virus
Salmonella spp
SARS coronavirus
Variola virus
Varicella zoster virus
Verocytotoxigenic
Vibrio cholerae
West Nile Virus
Yellow fever virus
Yersinia pestis
**CONFIDENTIAL**

**Notification Form**

<table>
<thead>
<tr>
<th>Health Protection (Notification) Regulations 2010 notification to the proper officer of the local Registered Medical Practitioner reporting the case</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
</tr>
<tr>
<td><strong>Address</strong></td>
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<tr>
<td><strong>Post code</strong></td>
</tr>
<tr>
<td><strong>Contact number</strong></td>
</tr>
<tr>
<td><strong>Date of Notification</strong></td>
</tr>
<tr>
<td><strong>Notifiable disease</strong></td>
</tr>
<tr>
<td>Disease, infection or contamination</td>
</tr>
<tr>
<td><strong>Date of onset of symptoms</strong></td>
</tr>
<tr>
<td><strong>Date of diagnosis</strong></td>
</tr>
<tr>
<td><strong>Date of death (if patient died)</strong></td>
</tr>
<tr>
<td><strong>Index case details</strong></td>
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<tr>
<td><strong>First name</strong></td>
</tr>
<tr>
<td><strong>Surname</strong></td>
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<tr>
<td><strong>Gender (M/F)</strong></td>
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<td><strong>DOB</strong></td>
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<td><strong>Ethnicity</strong></td>
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<td><strong>NHS number</strong></td>
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<td><strong>Home address</strong></td>
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<td><strong>Post code</strong></td>
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<tr>
<td>Current residence if not home address</td>
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<td><strong>Post code</strong></td>
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<tr>
<td><strong>Contact number</strong></td>
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<tr>
<td><strong>Occupation (if relevant)</strong></td>
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<td><strong>Work/education address (if relevant)</strong></td>
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<td><strong>Post code</strong></td>
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<td><strong>Contact number</strong></td>
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<tr>
<td><strong>Overseas travel – destinations and dates</strong></td>
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</table>

Send to Health Protection Unit and file a copy in patient health record
APPENDIX B:

INFECTION PREVENTION AND CONTROL
Annual Healthcare Associated Infection Reduction Plan for
April 2015 – March 2016

Introduction

This section can act as your assurance statement.

Need to put in here a description of the infection prevention and control resources (staff, equipment, and training) and a statement such as “Infection Prevention and Control is a primary focus for this organisation” (name the organisation). With some examples such as infection prevention is everyone’s responsibility and is included in the job description of all staff; infection prevention is a standing item on all team meeting; and all staff receive induction training inclusive of infection prevention.

A vision statement like “no-one that uses this organisation (name the organisation) will be harmed by an avoidable infection”.

Then a summary of achievements in the last year – such as new products that have been introduced, new methods of working, new training approach or new staff.

Followed by a summary of goals for coming year such as introduction of new audits tools, the use of this template or joint working with other organisations.

About this annual plan

This plan has been developed to ensure the care environment and physical care interventions operated within this organisation are suitably managed to prevent infection or negate the risk of infection spread to patients, visitors and staff.

The prioritised actions for the forthcoming year are designed to ensure the organisation complies with all criteria stated in the Health and Social Care Act 2008 (rev.2015), Code of Practice on the prevention and control of infections and related guidance.


“Infection prevention including cleanliness programme should:
1.7 The infection prevention and control programme should:
• set objectives that meet the needs of the organisation and ensure the safety of service users, health care workers and the public
• identify priorities for action;
• provide evidence that relevant policies have been implemented; and
• report progress against the objectives of the programme in the DIPC’s annual report or the Infection Prevention Lead’s annual statement”.

The plan includes reference to the 10 specific criteria against which a provider will be assessed on how it complies with the registration requirement.

The table below is the “Code of Practice” for all providers of healthcare and adult social care on the prevention of infections under The Health and Social Care Act 2008. This sets out the 10 criteria against which a registered provider will be judged on how it complies with the registration requirements related to infection prevention. Not all criteria will apply to every regulated activity. Parts 3 and 4 of this document will help registered providers interpret the criteria and develop their own risk assessments.

<table>
<thead>
<tr>
<th>Compliance Criterion</th>
<th>What the registered provider will need to demonstrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Systems to manage and monitor the prevention and control of infection. These systems use risk assessments and consider the susceptibility of service users and any risks that their environment and other users may pose to them.</td>
</tr>
<tr>
<td>2</td>
<td>Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections.</td>
</tr>
<tr>
<td>3</td>
<td>Ensure appropriate antimicrobial use to optimise patient outcomes and to reduce the risk of adverse events and antimicrobial resistance</td>
</tr>
<tr>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>5</td>
<td>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.</td>
</tr>
<tr>
<td>6</td>
<td>Systems to ensure that all care workers (including contractors and volunteers) are aware of an discharge their responsibilities in the process of preventing and controlling infection.</td>
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<tr>
<td>7</td>
<td>Provide or secure adequate isolation facilities.</td>
</tr>
<tr>
<td>8</td>
<td>Secure adequate access to laboratory support as appropriate.</td>
</tr>
<tr>
<td>9</td>
<td>Have an adhere to policies, designed for the individual's care and provider organisations that will help to prevent and control infections.</td>
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<tr>
<td>10</td>
<td>Providers have a system in place to manage the occupational health needs and obligations of staff in relation to infection.</td>
</tr>
<tr>
<td>Topic and References</td>
<td>Description</td>
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</table>
| Criterion 1 Systems to manage and monitor the prevention and control of infection. These systems use risk assessments and consider the susceptible of service users and any risks that their environment and other users may pose to them | Maintain and/or improve organisational arrangements for risk assessing, monitoring, reporting and reduction for Infection prevention and control | **For Example:**  
There is an appropriately resourced/knowledgeable IPC team  

This annual programme will form part of the assurance framework and will be shared at team meetings  

The Assurance Framework will identify the key collective and individual responsibilities of staff within the organisation.  

The Infection Prevention Lead will provide updates at team meetings and provide the organisation with an annual report of progress against this plan.  

The Infection Prevention Lead will attend suitable training sessions and will disseminate learning to other staff within the organisation.  

Summaries of infection prevention practice will be made available to patients. | | |
<table>
<thead>
<tr>
<th>Topic and References</th>
<th>Description</th>
<th>What is currently in place</th>
<th>What is needed to improve current position and date it should be completed by</th>
<th>RAG rating</th>
</tr>
</thead>
</table>
| Criterion 2           | Provide and maintain a clean and appropriate environment in managed premises that facilitates the prevention and control of infections | **IPC involvement in all stages of selection of cleaning products and personnel; and any refurbishment or new buildings; and processes such as specimen transport, sharps and waste disposal services.** | **For Example:** *Working in collaboration with the contracted cleaners with regards to reducing the risk of infection.*  
*Undertake annual audit of cleanliness standards, record areas of non-compliance and ensure actions are taken to address non-compliance.*  
*Undertake an annual audit of maintenance standards, record areas of non-compliance and ensure actions are taken to address non-compliance.*  
*All staff to monitor the environment and report deficiencies in cleanliness and maintenance for action.*  
*The IPC Lead is involved in refurbishments, re-builds and new builds.*  
*All staff are aware of the process for disposal of sharps and clinical waste.*  
*All staff are aware of the process for ordering new equipment.* | |
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<th>Topic and References</th>
<th>Description</th>
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<th>What is needed to improve current position and date it should be completed by</th>
<th>RAG rating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Criterion 3</strong></td>
<td>Cleaning schedules are displayed or available on request.</td>
<td>For Example: Staff are signed up to antimicrobial guardianship by having access to the website. All prescribers use the TARGET Tools. <strong>Primary Care</strong>: Involvement in CCG Prescribing Work streams Undertaking audit of antimicrobial prescribing and share findings at team meeting. System in place to review prescriptions in light of laboratory results. Systematic review of previous infections prior to prescribing. All staff participates in Post infection reviews and Root Cause Analysis as required to establish lessons to be learnt. Prescribers follow the Primary Care Antimicrobial Formulary. <strong>Care Homes</strong>: Have a record of allergies, dose, duration and reason for treatment.</td>
<td></td>
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<tr>
<td><strong>Criterion 4</strong></td>
<td>Infection status of resident/patient is</td>
<td>For Example: Inter-healthcare transfer form is available for</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topic and References</td>
<td>Description</td>
<td>What is currently in place</td>
<td>What is needed to improve current position and date it should be completed by</td>
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| 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. | available to all relevant personnel on transfer between organisations | completion by staff when patient/resident is transferred between organisations.  
Particular emphasis is placed on informing ambulance crew and receiving organisations when viral diarrhoea is suspected.  
Actively seek accurate information on infections when a person is transferred into our care. | | |
| Criterion 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. | Care Home:  
GPs will provide initial advice.  
Care staff can also contact local health protection unit.  
Primary Care:  
Have a system in place to inform patients of infection and treatment. | For Example:  
Care Home:  
has named GP to access for advice about infections.  
staff know how to contact the local health protection unit.  
Staff know when and how to take samples  
Staff can identify the clinical signs of infection  
Primary Care:  
Have access to ICE (or similar system) which is monitored for incoming results.  
Results are communicated to patients via telephone.  
Persons at increased risk of infection are flagged on their notes. | | |
<table>
<thead>
<tr>
<th>Topic and References</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Criterion 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 infections.</td>
<td>IPC responsibilities stated on job descriptions. Everyone’s role in IPC is clearly understood. IPC is a standing item on team meeting agenda. Ensure that ALL staff receive suitable and sufficient training on the prevention and control of infection.</td>
<td>For Example: Copies of team meeting minutes include IPC items and report of progress on the annual plan. Evidence of participation in learning events including study days and Post Infection Reviews. IPC is included in all job descriptions. The Assurance Framework will identify the key collective and individual responsibilities of staff. Programme of annual audit of practice, policy and environment – audit schedule is reviewed annually. Action Plans are developed in response to audit. Actions are completed in a timely manner and lessons learnt shared at team meetings. IPC is included in induction programme for all new and temporary staff. All staff receive infection prevention training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topic and References</td>
<td>Description</td>
<td>What is currently in place</td>
<td>What is needed to improve current position and date it should be completed by</td>
<td>RAG rating</td>
</tr>
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<tr>
<td>Criterion 7</td>
<td>Provide or secure adequate isolation facilities</td>
<td>Ensure that service users in a shared environment are protected from the spread of infection. Primary Care – element not required. Care Home – all residents have their own room with en suite facilities.</td>
<td>For Example: The majority of residents are accommodated within single en suite rooms, if not, then a risk assessment process is used to manage the resident and the environment, protecting other service users, visitors and staff. Primary Care- written process to follow in the event of a service user accessing the facilities with a known or suspected infection. (personal protective equipment and level of cleaning needed)</td>
<td>For Example: Planned upgrades to en suites to take place in 2020</td>
</tr>
<tr>
<td>Criterion 8</td>
<td>Secure adequate access to laboratory support as appropriate</td>
<td>Ensure that key staff are able to access advice on laboratory reports, infection status.</td>
<td>For Example Primary care Have access to ICE (or similar system) which is monitored for incoming results.</td>
<td></td>
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<tr>
<td>Topic and References</td>
<td>Description</td>
<td>What is currently in place</td>
<td>What is needed to improve current position and date it should be completed by</td>
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<tr>
<td>Care Home: element not required</td>
<td>Access to standard operating guidance from relevant microbiology laboratories</td>
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<tr>
<td>Primary Care: Have access to laboratory results</td>
<td>Have access to specimen collection containers</td>
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<td></td>
<td>Have access to microbiologist when required for specific treatment advice</td>
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<tr>
<td>Criterion 9</td>
<td>Have access to the Suffolk Infection Prevention Manual</td>
<td>For Example: Electronic and paper copy of manual/policies available via the CCG website and in a yellow folder in the main office/behind reception.</td>
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<tr>
<td></td>
<td>Annual audit to ensure that compliance with Suffolk Infection Prevention Manual.</td>
<td>Hand hygiene posters available at all hand wash sinks.</td>
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<td></td>
<td></td>
<td>Monitor compliance with policies through a programme of audit – evidence of audit results</td>
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<tr>
<td>Criterion 10</td>
<td>All staff can assess occupational health advice</td>
<td>For Example: All staff know how to access occupational health advice</td>
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<tr>
<td></td>
<td>All clinical staff are</td>
<td>All staff are aware of their responsibilities</td>
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</tr>
<tr>
<td>Topic and References</td>
<td>Description</td>
<td>What is currently in place</td>
<td>What is needed to improve current position and date it should be completed by</td>
<td>RAG rating</td>
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<tr>
<td>of staff in relation to infection.</td>
<td>offered vaccination for occupational health related risks such as HepB and influenza.</td>
<td>under the Health and Safety at Work Act. (sharps and COSHH) Posters displaying how to manage and the process to follow after a sharps injury are displayed within the clinical setting.</td>
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</tbody>
</table>
APPENDIX C: The Auditing Process

The Code of Practice (DH 2015) requires that audit of practice is undertaken.

Audit forms part of the practice improvement process.

There are many practice improvement models available, however the most commonly used model in healthcare is the Plan, Do, Study, Act (PDSA) more information can be found at http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/plan_do_study_act.html

The four stages of the PDSA cycle are:
Plan – the change or practice improvement to be implemented
Do – implement the change or practice improvement
Study – compare data before and after change or practice improvement and reflect on what was learnt
Act – plan the next change cycle or practice improvement

There are three questions that need to be answered during the improvement process:

- Plan
  - Define the objective, questions and predictions. Plan to answer questions (who, what, where, when)
- Do
  - Carry out plan. Collect data
- Study
  - Complete analysis of the data
  - Compare data to predictions
  - Summarise what was learned
- Act
  - Plan the next cycle. Decide whether the change can be implemented
Audit looks at the standard (Standard Precautions section 3 of this manual) and assesses the compliance of your practice against that standard. Does an improvement need to be made? How can you make that improvement? Does this need to be achieved by taking many small steps? What are those steps? What resources do you need to achieve those steps? How long do you think it may take? How will you know when an improvement has been made? (through audit data)
Audits need to be undertaken regularly. Below is an example of an annual audit plan.

<table>
<thead>
<tr>
<th></th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
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<tbody>
<tr>
<td>Hand Hygiene</td>
<td>YES</td>
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<td>Sharps Safety</td>
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<td>Environmental</td>
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<td>Cleanliness</td>
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<td>Equipment Cleanliness</td>
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<td>Use of Personal</td>
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<td>YES</td>
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<td>Protective Equipment</td>
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<tr>
<td>Waste Management</td>
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<td>YES</td>
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<tr>
<td>Antibiotic</td>
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<td>YES</td>
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<tr>
<td>Prescribing</td>
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Hint: For Hand Hygiene audits, not all staff need to be audited every time, you could audit 25% of the staff each time so that all staff are audited at least once a year. Staff audits should include all staff to the level of their contractual obligations.

Different types of audit
Audits can be undertaken in different formats.

Observational audits, both overt and covert.
For example: watching a colleague wash their hands. This would not be very practical in real life clinic settings and may cause discomfort if there is a patient present, therefore group overt observation could be undertaken during a team meeting. (Caution should be noted when undertaking overt observational audits of the Hawthorn Effect.)

Self audit/Questionaire
This can be achieved by giving a colleague a list of standards for them to check. (no more than 10 standards at a time otherwise the task becomes too onerous and the audit becomes less robust at identifying practice improvements.) This is quite good for checking a colleague’s understanding of the standards and for something like a sharps audit. For example, below are some questions about sharps boxes and hand hygiene that could be answered by an individual.

Are all lids securely fitted onto the base of sharps boxes? 
Are all manufacturers’ front labels been correctly completed with the location and start date (i.e. the first day the sharps box was used for sharps disposal)?
Are all lids closed after use (on temporary closure)?
Is there a sliding closure mechanism?
Are the contents of all in-use sharps boxes below the fill line?
Is there a supply of new, empty sharps boxes available in the care area?
Is there a current Sharps poster displayed in a prominent position?
Are hand washing materials always available?
Are 6 step hand washing technique posters displayed at all designated staff hand wash sinks?
Could the member of staff demonstrate the correct hand hygiene technique

True or False

Water should be applied before soap when washing their hands and drying hands thoroughly with paper towels will help prevent dry/chapped skin
Alcohol gel is not effective on visibly dirty, protein contaminated skin and does not destroy some viruses or bacterial spores

When in direct contact with a patient or undertaking a clinical intervention, you should be ‘bare below the elbows’

New member of staff
Whenever a new member of staff starts to work at your organisation, they should undergo an induction process. Because all organisations operate slightly differently, it is highly recommended that the practice based infection prevention lead or their representative, ensure the new starter knows about how standard precautions are implemented at your practice. This can be achieved by listing the infection prevention priorities of your organisation and using a check list approach to inform the new starter. For example; below is a suggested format for new starters.

<table>
<thead>
<tr>
<th>Topic</th>
<th>New staff members signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HAND HYGIENE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I have been shown the location of designated staff hand wash basins in the area</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I understand that when washing my hands, I should wet them first, then apply soap, use the 6 step technique, rinse and dry thoroughly to ensure effective decontamination and protect my hands from becoming sore.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I have had my hand hygiene technique checked and have been passed as competent, having performed the hand positions in the correct order, correct manner and for the correct time.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I understand that alcohol based hand gels are not effective on dirty hands or some organisms such as Clostridium difficile and Norovirus</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>All circumstances that require hand washing have been explained to me.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I have been made aware of how to obtain supplies of soap or hand gel.</td>
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<tr>
<td></td>
<td><strong>Personal Protective Equipment</strong></td>
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<tr>
<td>7</td>
<td>I have been shown the location of single use, disposable, non-sterile Nitrile gloves, and these are available in the area, in a size that fits me.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I have been shown the location of disposable plastic aprons</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>The correct method of removing gloves and apron has been demonstrated to me.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Waste disposal</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>I understand that any waste that is visibly contaminated with blood or body fluids OR has been in contact with a service user with a known or suspected infection must be disposed of via the clinical waste stream.</td>
</tr>
<tr>
<td>11</td>
<td>I understand that all other waste can be disposed of via the domestic waste stream.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Sharps Safety</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>The system for obtaining new sharps boxes and for removing filled locked sharps boxes has been explained to me.</td>
</tr>
<tr>
<td>13</td>
<td>The principles of sharps box safety including, completing the label at the beginning and end of use; the need to close the lid when not in use; the manufacturers fill line and locking mechanism before final disposal, have all been demonstrated to me.</td>
</tr>
</tbody>
</table>
| 14 | The principles of safety engineered devices have been demonstrated to me.  
(If required for my job, I know how to access safer sharps training) |

<table>
<thead>
<tr>
<th></th>
<th><strong>Accidental blood exposure / penetrating sharps injury procedures.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>I have been shown the location of the poster showing actions to be followed after exposure and have been told how to report an incident.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Cleaning and Disinfection</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>I have been made aware of the need to clean (and disinfect if necessary) patient care equipment after each use.</td>
</tr>
<tr>
<td>17</td>
<td>I have been shown where the stocks of liquid detergent, wipes, and chlorine solution are.</td>
</tr>
<tr>
<td>18</td>
<td>I have been made aware of the local systems for recording cleaning of health care equipment, frequency and method</td>
</tr>
<tr>
<td>19</td>
<td>I have been shown how to clean body fluid spillages; how to dilute a hypo-chloride solution; the location of the tablets and dilution bottle</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Specimens</strong></th>
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</thead>
<tbody>
<tr>
<td>20</td>
<td>I have been informed of the system and timings for routine transport of specimens from the area.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Dress Code</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>I understand that when providing direct patient care (clinical intervention), I should be “bare below the elbows” (e.g. no stoned or engraved rings, no wrist jewellery; nails short and free from varnish or false nails).</td>
</tr>
<tr>
<td>22</td>
<td>I understand that I should not enter commercial premises in the same clothes I have been to work in.</td>
</tr>
<tr>
<td>23</td>
<td>I have been made aware that I should wear a clean, freshly laundered clothing for each shift; that my work clothes should be washed at 60°C or tumble dried or steam ironed to sufficiently reduce the microbial load.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th><strong>Sources of advice and assistance</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>I have been told who the practice-based infection prevention lead is.</td>
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<tr>
<td>25</td>
<td>I have been told who to report cleaning and maintenance issues to.</td>
</tr>
</tbody>
</table>
|26 | **Policy and Procedure**  
I have been shown how to access Infection Prevention and Control Policies and practice guidelines. |