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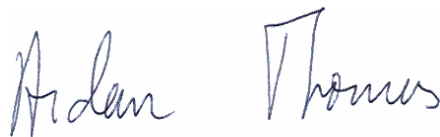
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Community Hospital Infection Control Guidelines

Relevant to: All PCT Staff

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Signed



Chief Executive

For Office Use Only

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WEST ESSEX INFECTION CONTROL TEAM COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES

SECTION A – INTRODUCTION AND CONTACTS

1. Introduction

These guidelines have been written for health care workers in the community hospital setting and approved by the West Essex infection control committee on behalf of the three former PCTs in West Essex, Epping Forest, Harlow and Uttlesford. They replace all previous infection control guidance from the North Essex and South Essex Community Infection Control Teams and the Essex Health Protection Unit.

Infection control is an important part of an effective risk management programme to improve the quality of patient care and the occupational health of staff.

2. Scope

The guidelines offer comprehensive advice on issues relating to infection control in the community hospital setting. The Infection Control Team should be contacted when specific advice or further discussion is required.

The guidelines are designed so that basic Infection Control principles are clarified, and should be applicable across all settings within the community hospital. Inpatient areas pose different Infection Control risks from Outpatient areas, but the same principles apply.

3. Responsibility

The philosophy of this manual is to encourage individual responsibility by **every** member of staff.

All staff practising within the community hospital must be aware of this local guidance whether they are employed by the host organisation or by another. Any discrepancies between the hospital guidance and the employer's Infection Control guidance must be brought to the attention of the individual's line manager and to the Infection Control teams of both organisations for resolution.

The Chief Executive is responsible for ensuring that there are effective arrangements in place for the control of infections.

4. Contacts

Communicable Disease and Infection Control advice is available via the Essex Health Protection Unit on 0845 1550069 or www.hpa.org.uk/essex

Users are encouraged to ensure they have access to this site as it has advice and information on a wide range of local communicable disease issues, and during incidents will be updated at least daily with the current state of affairs.

Out of working hours – for **URGENT** communicable disease enquiries:

Contact: 01245 444417, and ask them to page the on-call Public Health person.

WEST ESSEX INFECTION CONTROL TEAM COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES

SECTION B – INFECTION, ITS CAUSES AND SPREAD

1. The Causes of Infection

Microorganisms that cause infections are known as pathogens. They may be classified as follows:

Bacteria are minute organisms about one-thousandth to five thousandth of a millimetre in diameter. They are susceptible to a greater or lesser extent to antibiotics.

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

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

Protozoa are microscopic organisms, but larger than bacteria. Free-living and non-pathogenic protozoa include amoebae and paramecium. Examples of medical importance include: *Giardia lamblia* which causes an enteritis (symptoms of diarrhoea).

Parasites

Worms are not always microscopic in size but pathogenic worms do cause infection and some can spread from person to person. Examples include: threadworm and tapeworm.

Ectoparasites i.e. headlice and scabies.

Prions are infectious protein particles. Example: the prion causing (New) Variant Creutzfeldt-Jakob Disease.

2. The Spread of Infection

One feature that distinguishes infection from all other disease is that it can be spread, i.e. one person can 'catch' it from another or via a vector (e.g. crawling or flying insects).

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

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.).

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 transmit infections such as malaria or may become infected by bacterial pathogens.

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.

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.

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.

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

WEST ESSEX INFECTION CONTROL TEAM COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES

SECTION C – STANDARD/UNIVERSAL PRECAUTIONS ROUTINE PROCEDURES FOR THE CONTROL OF INFECTION

1. Standard/Universal Precautions

It is not always possible to identify people who may spread infection to others, therefore precautions to prevent the spread of infection must be followed at all times. These routine procedures are called **standard/universal precautions**.

Standard/Universal Precautions include:

- Handwashing and skin care
- Protective clothing
- Safe handling of sharps (including sharps injury management)
- Spillage management

All blood and body fluids are potentially infectious and precautions are necessary to prevent exposure to them. A disposable apron and latex or vinyl gloves should always be worn when dealing with excreta, blood and body fluids.

Everyone involved in providing care in the community hospital should know and apply the standard principles of hand decontamination, the use of protective clothing, the safe disposal of sharps and body fluid spillages.

Each member of staff is accountable for his/her actions and must follow safe practices.

2. Hand Hygiene and Skin Care

Handwashing is recognised as the single most effective method of controlling infection.

Hands must be washed:

- Before and after each work shift or work break. Remove jewellery (rings);
- Before and after physical contact with each client;
- After handling contaminated items such as dressings, bedpans, urinals and urine drainage bags;
- Before putting on, and after removing protective clothing, including gloves;
- After using the toilet, blowing your nose or covering a sneeze;
- Whenever hands become visibly soiled;
- Before preparing or serving food;
- Before eating, drinking or handling food and before and after smoking;
- The wearing of gloves is NOT a substitute for handwashing.

How to Wash Your Hands

Hands that are visibly soiled, or potentially grossly contaminated with dirt or organic material, must be washed with liquid soap and water.

	Method	Solution	Task
1	Social	Liquid soap	For all routine tasks
2	Hygienic hand disinfection (15-30 secs)	Antiseptics, e.g. chlorhexidine, povidone-iodine or alcohol hand-rub after social clean	In high risk areas and during outbreaks
3	Surgical scrub (2 mins)	Antiseptics, e.g. chlorhexidine, povidone-iodine, thorough and careful. Dry on sterile towels	Prior to surgical and other invasive procedures. Bars of soap not recommended

An effective handwashing technique involves three stages:

1. Preparation

Before washing hands, all wrist and ideally hand jewellery should be removed. Cuts and abrasions must be covered with waterproof dressings. Fingernails should be kept short, clean and free from nail polish. Hands should be wet under tepid running water before applying liquid soap or an antimicrobial soap preparation.



1. Palm to palm.



2. Right palm over left dorsum and left palm over right dorsum.



3. Palm to palm fingers interlaced.



4. Backs of fingers to opposing palms with fingers interlocked.



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



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

Handwashing technique. (Ayliffe et al. 1978; Lawrence 1985)

2. Washing and Rinsing

The handwash solution must come into contact with all of the surfaces of the hand. The hands must be rubbed together vigorously for a minimum of 10-15 seconds, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers. Hands should be rinsed thoroughly.

3. Drying

This is an essential part of hand hygiene. Dry hands thoroughly using good quality paper towels. In clinical settings, disposable paper towels are the method of choice because communal towels are a source of cross-contamination. Store paper towels in a wall-mounted dispenser next to the washbasin, and throw them away in a pedal operated waste bin. Do not use your hands to lift the lid or they will become re-contaminated.

Hot air dryers are not recommended in clinical settings. However if they are used in other areas, they must be regularly serviced and users must dry hands completely before moving away.

Hand sanitising agents

When decontaminating hands using an alcohol hand-rub, hands should be free from dirt and organic material. The hand-rub solution must come into contact with all surfaces of the hand. The hands must be rubbed together vigorously, paying particular attention to the tips of the fingers, the thumbs and the areas between the fingers, until the solution has evaporated and the hands are dry.

Hygienic Hand Disinfection for Outbreak Control

This can either be achieved by using antiseptic liquid soap, or by routine handwashing, followed by 5mls of an alcohol handrub or recommended sanitizer.

Surgical Hand Washing

Surgical hand washing destroys transient organisms and reduces resident flora before surgical or invasive procedures. An aqueous antiseptic solution is applied for two minutes. Preparations currently available are 4% chlorhexidine-detergent and 0.75% povidone/iodine solution-detergent.

This is required before minor surgery and invasive procedures.

Disposable, single use nailbrushes may be used to clean fingernails during the first surgical hand wash of the session. Nailbrushes must never be used on any other areas of the hands or forearms.

Hand Creams

An emollient hand cream should be applied regularly to protect skin from the drying effects of regular hand decontamination. If a particular soap, antimicrobial hand wash or alcohol product causes skin irritation; an occupational health team should be consulted.

Hand Washing Facilities

Facilities should be adequate and conveniently located. Hand wash basins must be placed in areas where needed and where client consultations take place. They should have elbow or foot-operated mixer taps. A separate sink should be available for other cleaning purposes - such as cleaning instruments.

- use wall-mounted liquid soap dispensers with disposable soap cartridges - keep them clean and replenished;
- place disposable paper towels next to the basins in wall-mounted dispensers - soft towels will help to avoid skin abrasions;
- position foot-operated pedal bins near the hand washbasin - make sure they are the right size.

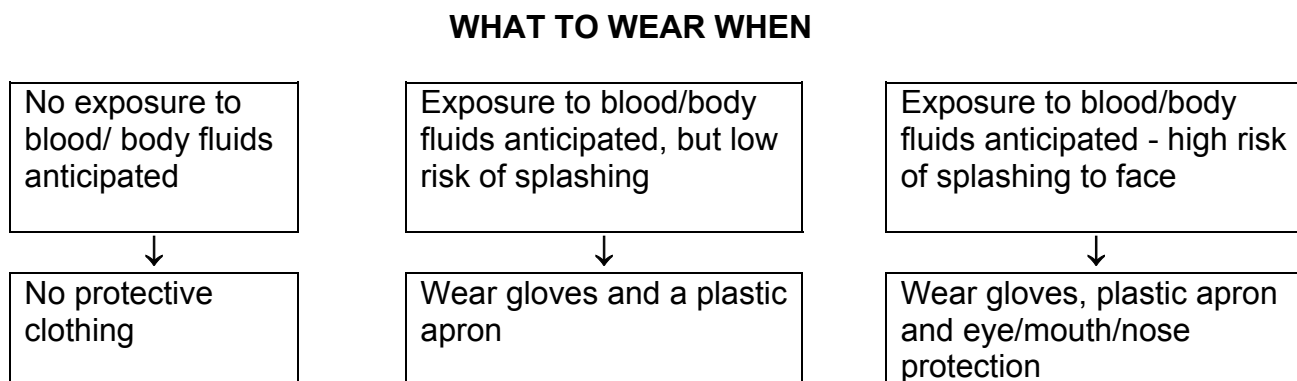
Handwashing in Individuals' Homes

Hands should be washed prior to any procedure in the patient's home and before departure. If handwashing facilities are inadequate (e.g. no warm water, no soap, no hand towel), the health care worker should carry either liquid soap and paper hand towels, baby/detergent wipes or alcohol handrub. However alcohol handrub should only be used if the hands are visibly clean.

3. Protective Clothing

Selection of protective equipment must be based on an assessment of the risk of transmission of infection between the patient and health care practitioner.

Assessment of Risk



Types of Protective Clothing

Disposable 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.

Gloves that are acceptable to healthcare personnel and that conform to European Community (CE) standards must be available.

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, and do not substitute for handwashing.

Gloves must be disposed of as clinical waste and hands decontaminated after the gloves have been removed.

Sensitivity to natural rubber latex in patients, carers and healthcare personnel must be documented. Alternatives to natural rubber latex gloves must be available.

To prevent transmission of infection, gloves must be discarded after each procedure. Gloves should **not** be washed between patients as the gloves may be damaged by the soap solution and, if punctured unknowingly, may cause body fluid to remain in direct contact with skin for prolonged periods.

1. Non Sterile Gloves

Should be used when hands may come into contact with body fluids or equipment contaminated with body fluids.

2. Sterile Gloves

Should be used when the hand is likely to come into contact with normally sterile areas or during any surgical procedure.

3. General Purpose Utility Gloves

General purpose utility gloves e.g. rubber household gloves, can be used for cleaning instruments prior to sterilisation, or when coming into contact with possible contaminated surfaces or items. Ideally, colour coding of such gloves should be used e.g. blue for the kitchen, yellow for general environmental cleaning, and red for 'dirty' clinical duties. This will help prevent cross-infection from one area of work to another. The gloves should be washed with general-purpose detergent and hot water, and dried between use. They should be discarded weekly, or more frequently if the gloves become damaged.

4. Polyurethane/polythene Gloves (Non Sterile and Sterile)

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.**

Disposable Plastic Aprons

Should 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.

Face Masks and Eye Protection

Must be worn where there is a risk of blood, body fluids, secretions or excretions splashing into the face and eyes.

Respiratory Protective Equipment

For example, a particulate filter mask must be used when clinically indicated for pulmonary tuberculosis. The Infection Control Team will advise when this is necessary.

4. Safe Handling of Sharps

All staff should be fully immunised according to national policy. In addition, all those handling sharps should have had a course of hepatitis B vaccine. A record of hepatitis B antibody response should be kept for all clinical staff involved in 'exposure prone procedures' or where regular exposure to blood/blood stained body fluids occurs. This record will normally be held by the Occupational Health department, but each health care practitioner has a responsibility to be aware of their vaccination status.

Care should be taken to avoid accidental needlestick injury as exposure to contaminated blood may be associated with transmission of Blood Borne Viruses.

Sharps include needles, scalpels, stitch cutters, glass ampoules, sharp instruments and broken crockery and glass. Sharps must be handled and disposed of safely to reduce the risk of exposure to bloodborne viruses. Always take extreme care when using and disposing of sharps. Avoid using sharps whenever possible.

- clinical sharps should be single use only;
- do not re-sheath a used needle - if this is necessary a safe method - for example, a re-sheathing device - must be used;
- discard sharps directly into a sharps container immediately after use and at the point of use;
- sharps containers should be available at each location where sharps are used;
- sharps containers must comply with UN 3921 and BS7320 standards;
- close the aperture to the sharps container when carrying or if left unsupervised to prevent spillage or tampering;
- place sharps containers on a level stable surface;
- do not place sharps containers on the floor, windowsills or above shoulder height - use wall or trolley brackets;
- assemble sharps containers by following the manufacturer's instructions;
- carry sharps containers by the handle - do not hold them close to the body;
- never leave sharps lying around;
- do not try to retrieve items from a sharps container;
- do not try to press sharps down to make more room;
- lock the container when it is three-quarters full using the closure mechanism;

- label sharps containers with the source details prior to disposal;
- place damaged sharps containers inside a larger container - lock and label prior to disposal. Do **not** place inside yellow clinical waste bag.

Giving Injections

Always wash hands thoroughly prior to giving an injection.

If visibly dirty, skin should be cleaned with an individually packed swab soaked in 70% isopropyl alcohol and left to dry. If skin is clean, this step is not necessary.

Venepuncture and injections should be carried out only by staff who are adequately trained and experienced.

For occupationally acquired sharps injuries see section E.

5. Spillage Management

Deal with blood and body fluid spills quickly and effectively. Spillage kits should be available in all clinical areas. All staff should be trained in the use of spillage kits.

1. Keep people away from the area.
2. Wear latex gloves and a disposable apron.
3. Soak up majority of spill with disposable towels or use proprietary spillage kit absorbent granules.
4. If spillage kits not available, a 1% hypochlorite solution (e.g. Household bleach or Milton) or sodium dichloroisocyanurate compound (e.g. Presept, Sanichlor) should be applied over the mopped spill and left for at least two minutes – to comply with COSHH 1988 – this compound should be stored in a locked cupboard.
5. Absorbent gel or paper towels should be disposed of in clinical waste bin.
6. Wipe surface with general-purpose detergent and hot water.
7. Dispose of protective clothing.
8. Wash and dry hands.

The kit should be immediately replenished after use.

N.B. – For spills on carpets and upholstery with or without visible blood

- wear protective clothing;

- mop up organic matter with paper towels or disposable cloths and/or absorbent powder e.g. vernagel;
- clean area with cold water;
- clean area thoroughly with detergent and hot water;
- discard protective clothing and paper towels as clinical waste;
- wash hands;
- once dry, go over area with a mechanical cleaner.

For staff working in a private household the following guidance should be adhered to as closely as possible:

- For spillage of high-risk body fluids such as blood, method 1 is recommended.
- For spillage of low-risk body fluids (non-blood containing excreta) such as excreta, vomit etc use method 2.

1. Hypochlorite / Sodium Dichloroisocyanurates (NaDCC) Method

- prevent access to the area containing the spillage until it has been safely dealt with;
- open the windows to ventilate the room if possible;
- wear protective clothing;
- soak up excess fluid using disposable paper towels and/or absorbent powder e.g. vernagel;
- cover area with NaDCC granules (e.g. Presept, Sanichlor);
- or
- cover area with towels soaked in 10,000 parts per million of available chlorine (1% hypochlorite solution = 1 part household bleach to 10 parts water) e.g. household bleach, Milton, and leave for at least two minutes;
- remove organic matter using the towels and discard as clinical waste;
- clean area with detergent and hot water, and dry thoroughly;
- clean the bucket/ bowl in fresh soapy water and dry;
- discard protective clothing as clinical waste;

- wash hands.

2. Detergent and Water Method

- prevent access to the area until spillage has been safely dealt with;
- wear protective clothing;
- mop up organic matter with paper towels or disposable cloths and/or absorbent powder e.g. vernagel;
- clean surface thoroughly using a solution of detergent and hot water and paper towels or disposable cloths;
- rinse the surface and dry thoroughly;
- dispose of materials as clinical waste;
- clean the bucket/ bowl in fresh hot, soapy water and dry;
- discard protective clothing as clinical waste;
- wash hands.

WEST ESSEX INFECTION CONTROL TEAM COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES

SECTION D – NOTIFICATION OF INFECTIOUS DISEASES

1. Introduction

This guideline sets out the procedures for staff to follow in respect of communicable disease control. It includes the reporting, documentation and notification procedures.

It also directs the action to be taken in the event of an outbreak of infectious disease.

2. The Responsibilities of Different Roles for Communicable Disease Control

Operational Directors

Should ensure the application of recommendations within their Directorates.

Managers

To support Operational Directors in the implementation of the guidelines within their directorate.

Clinical and Support Staff

- (a) All staff have an important role in the prevention and control of infection which is an integral quality issue in the care and management of patients and the health and safety of staff.
- (b) All staff need to follow all guidelines and participate in their audit.
- (c) All staff need to bring infection control issues to the attention of Senior Managers.
- (d) All staff need to maintain a high standard of infection control as a matter of good practice.

3. Notification Procedures

Explanatory note

Any registered medical practitioner who becomes aware or suspects that a patient (s)he is attending is suffering from a notifiable disease is required by law (Public Health Control of Disease Act 1984) to send a notification form to the local authority Proper Officer forthwith.

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

The law specifies that notification should be “forthwith” i.e. without any delay. Please send out notification forms on the same day the patient is seen and make sure they are not being “batched”. Whilst laboratories may report, this does not absolve clinicians from their responsibility to do so.

Which diseases are notifiable?

Anthrax	Plague
Cholera	Poliomyelitis
Diphtheria	Rabies
Dysentery (Amoebic or Bacillary)	Relapsing Fever
Encephalitis	Rubella
Food Poisoning*	Scarlet Fever
Leprosy	Smallpox
Leptospirosis	Tuberculosis
Malaria	Typhoid Fever
Measles	Typhus
Meningitis (all types)	Viral Haemorrhagic Fever
Meningococcal Septicaemia (without meningitis)	Viral Hepatitis
Mumps	Whooping Cough
Ophthalmia Neonatorum	Yellow Fever
Paratyphoid Fever	

*** Food poisoning: This category includes any infection which could be food or water borne e.g. *Campylobacter*, *salmonella*, *cryptosporidiosis*, *Giardia*.**

The aim of notification is to ensure public health action is taken promptly. The Essex Health Protection Unit (EHPU) should be contacted on the day of diagnosis on Telephone No: 01376 302282 on strong clinical suspicion for **all** except:

- Isolated cases and household contacts with dysentery;
- Isolated cases and household contacts with food poisoning (we would like to be telephoned about any *E coli* O157 and *Listeria*);
- Chronic hepatitis B and C;
- Leptospirosis;
- Malaria;
- Ophthalmia neonatorum;
- Scarlet fever;
- Cases of tuberculosis already under the care of a chest physician.

These may be notified by post utilising the usual notification forms.

Payments

There is a small payment for each formal notification received. Payments are made by EHPU on behalf of the Essex PCTs at quarterly intervals.

It is essential that the notifying doctor writes their name legibly so we know who to pay!

Where do I obtain notification forms?

These are available on application to the EHPU, who supply them on behalf of the Essex local authorities.

We would also like to know about cases of:

- Legionella;
- Suspected outbreaks of any infection

4. Reporting and Documentation of Illness for a suspected or confirmed outbreak of infection

Recognising Outbreaks of Infection

Any suspicion of an outbreak of communicable disease on a ward should be reported to the Infection Control Team immediately for further investigation, and management as appropriate.

The Infection Control Team should be contacted if:

- There are two or more individuals with vomiting and/or diarrhoea (amongst patients or staff);
- There are two or more patients suffering from the same infectious illness;
- There is a high sickness rate amongst staff, who appear to be suffering from the same infectious disease. In this instance, the Occupational Health department must also be informed.

If an inpatient area is affected the following guidance should be followed:

- Ward managers should contact the Infection Control Team without delay if they suspect there may be an outbreak of infection.
- Senior management must be informed so that adequate staffing can be arranged to cope with extra demands of managing an outbreak. Staff working in the affected ward should not work in other areas until the outbreak is declared over by the Infection Control Team.
- List all patients and staff affected, including age, area/ unit where resident/ working, onset of symptoms, symptoms suffered, duration of illness, GP and whether a sample has been taken (Copies are attached for information).

Specific Guidance for Outbreaks of Respiratory infection

- Isolate symptomatic patients in their own rooms with their own toilet facilities, or a designated commode if en-suite facilities are not available.
- Environmental cleaning to be increased. Particular attention should be paid to the toilets, bathrooms, door handles, support handrails etc. For the duration of the outbreak, environmental cleaning should be performed using detergent and hot water followed by a chlorine releasing solution (1 part household bleach to 10 parts water).
- All staff handwashing areas and the rooms of symptomatic patients should have an antibacterial liquid dispensed soap (or an alcohol hand rub following handwashing with a regular liquid soap) for the duration of the outbreak, then normal liquid dispensed soap should be used.
- Patients should be encouraged to wash their hands after using the toilet and before eating.
- Staff should pay attention to all infection control practices, particularly the washing of hands and wearing protective clothing. A new pair of latex or vinyl gloves and a plastic apron should be worn for each patient.
- Sputum samples should be obtained from patients and staff if they have symptoms. The microbiologist coordinating the investigation of the outbreak will request further samples as necessary.
- The Infection Control Team will advise whether the ward should be closed to admissions. If this occurs, the situation will continue until 48 hours after the last symptomatic patient has recovered.
- Symptomatic staff must go off duty and they must remain off work until recovery, at least 5 days after the onset of symptoms.
- Visitors should be informed of the outbreak and unnecessary visits should be discouraged. Those who choose to visit should wash their hands as they enter and leave the ward and comply with all other hygiene practices in place, as advised by staff.
- Patients should only be discharged once they are asymptomatic and with the full consent of anyone who may be required to care for them in the community.

RECORD OF OUTBREAK OF RESPIRATORY INFECTION (Patients)

Name of Hospital: _____

Record started by: _____

Date: _____

Ward _____

Reported to: Infection Control Team

Total number of patients on ward: _____

Tel: _____

Total number of patients affected: _____

Name of Patient	Age	Hospital number	Onset of symptoms	Symptoms				Duration of symptoms	Doctor		Sputum / serum	
									Name	Seen	Sample Sent	Result

RECORD OF OUTBREAK OF RESPIRATORY INFECTION (Staff)

Name of Hospital _____

Record started by: _____

Date:

Ward _____

Reported to Occupational Health Department Date:

Signature _____

Tel: _____

Total number of staff affected: _____

Name of Staff	Age	Area/Unit where employed	Onset of symptoms	Symptoms				Duration of symptoms	GP		Sputum / Serum	
									Name	Date Seen	Sample Sent	Result

Specific Guidance for Outbreaks of Diarrhoea and/or Vomiting

- Isolate symptomatic patients in their own rooms with their own toilet facilities, or a designated commode if en-suite facilities are not available.
- Environmental cleaning to be increased. Particular attention should be paid to the toilets, bathrooms, door handles, support handrails etc. For the duration of the outbreak, environmental cleaning should be performed using detergent and hot water followed by a chlorine releasing solution (1 part household bleach to 10 parts water).
- All staff handwashing areas and the rooms of symptomatic patients should have an antibacterial liquid dispensed soap (or an alcohol hand rub following handwashing with a regular liquid soap) for the duration of the outbreak, then normal liquid dispensed soap should be used.
- Patients should be encouraged to wash their hands after using the toilet and before eating.
- Staff should pay attention to all infection control practices, particularly the washing of hands and wearing protective clothing. A new pair of latex or vinyl gloves and a plastic apron should be worn for each patient.
- Faecal samples should be obtained from patients and staff if they have symptoms. The microbiology form accompanying the sample should clearly state it is part of an outbreak, as this will determine which specific tests are carried out in the laboratory. Samples of vomit are not required.
- The Infection Control Team will advise whether the ward should be closed to admissions. If this occurs, the situation will continue until 48 hours after the last symptomatic patient has recovered.
- Symptomatic staff must go off duty, a faecal sample must be taken and they must remain off work until 48 hours symptom free.
- Visitors should be informed of the outbreak and unnecessary visits should be discouraged. Those who choose to visit should wash their hands as they enter and leave the ward and comply with all other hygiene practices in place, as advised by staff.
- Patients should only be discharged once they are asymptomatic and with the full consent of anyone who may be required to care for them in the community.

RECORD OF OUTBREAK OF DIARRHOEA AND/OR VOMITING (Patients)

Name of Hospital: _____

Record started by: _____

Date: _____

Ward _____

Reported to: Infection Control Team

Total number of patients on ward: _____

Tel: _____

Total number of patients affected: _____

Name of Patient	Age	Hospital number	Onset of symptoms	Symptoms				Duration of symptoms	Doctor		Faecal Sample Sent	Result
				D	V	D&V	Other		Name	Seen		

RECORD OF OUTBREAK OF DIARRHOEA AND/OR VOMITING (Staff)

Name of Hospital _____

Record started by: _____

Date: _____

Ward _____

Reported to Occupational Health Department Date: _____

Signature _____

Tel: _____

Total number of staff affected: _____

Name of Staff	Age	Area/Unit where resident	Onset of symptoms	Symptoms				Duration of symptoms	GP		Faecal Sample Sent	Result
				D	V	D&V	Other		Name	Date Seen		

WEST ESSEX INFECTION CONTROL TEAM COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES

SECTION E – MANAGEMENT OF SHARPS INJURIES

1. Occupational Injuries

In the event of a sharp injury/contamination incident these guidelines should be followed.

A sharp injury/contamination incident includes:

- inoculation of blood by a needle or other 'sharp';
- contamination of broken skin with blood;
- blood splashes to mucous membrane e.g. eyes or mouth;
- swallowing a person's blood e.g. after mouth to mouth resuscitation;
- contamination where clothes have been soaked by blood;
- bites.

When a sharp injury/ contamination incident occurs:

1. Encourage bleeding from the wound.
2. Wash the wound in soap and warm running water (do not scrub).
3. Cover the wound with a dressing.
4. Skin, eyes or mouth, wash in plenty of water.
5. Ensure the sharp is disposed of safely i.e. using a non-touch method into a sharps container.
6. Report the incident to immediate supervisor. An incident form should be completed as soon as the recipient of the injury is able.
7. The incident should be reported to the Occupational Health department.

8. Attempt to identify source of the needle/sharp. Depending on the degree of exposure and the knowledge of the source patient/client it may be necessary to take further immediate action, see below.

2. Control Measures

Any staff working in a healthcare facility who handle sharps or clinical waste should receive a full course of hepatitis B vaccine and have their antibody level checked.

New staff or any existing staff who know they are not already protected should contact their occupational health department to arrange vaccination without delay.

Generally, staff in the community do not perform Exposure Prone Procedures (EPPs), with the exception of dental practitioners and community midwives.

However, all staff who do perform EPPs need to be aware of their obligations (see statements by the General Medical Council in Serious Communicable Diseases, 1997; General Dental Council in Maintaining Standards Guidance 1997; United Kingdom Central Council for Nursing, Midwifery and Health Visiting Registrar's letter 4/1994 Annex 1) i.e. to declare it if they know themselves to have been at risk of exposure to a blood borne virus infection (hepatitis B, C or HIV).

POST-EXPOSURE PROPHYLAXIS FOR THE RECIPIENT

Testing the Source Patient

In some instances it will not be possible to identify the source patient. However, if the source is identifiable and available for testing, a blood specimen should be obtained (with consent) and sent to the microbiology laboratory. This can be done on an urgent basis, in consultation with the laboratory. All donors should be tested for hepatitis B and C, and HIV if appropriate. Additional advice on risk assessment can be obtained from your occupational health department.

Investigation of the Person Receiving the Injury

Baseline serum should be obtained from the exposed person and stored in a secure archive at 20°C or below for at least two years.

HEPATITIS B PROPHYLAXIS

The following table summarises the action to be taken following any sharp injury/contamination incident in relation to protection against hepatitis B.

If the source is unknown follow the advice in table 1.

HBV Status of Person Exposed	Source HBsAg Positive	Source HBsAg Negative	Source Unknown
Less than 1 dose HB vaccine pre-exposure	Accelerated course of HB Vaccine* HBIG x 1	Initiate course of HB vaccine	Accelerated course of HB vaccine*
More than 2 doses HB vaccine pre-exposure (anti-HBs not known)	One dose of HB vaccine followed by second dose one month later.	Finish course of HB vaccine.	One dose of HB vaccine.
Known responder to HB vaccine	Consider booster dose of HB vaccine	Consider booster dose of HB vaccine	Consider booster dose of HB vaccine
Known non-responder to HB vaccine	HBIG x 1 Consider booster dose of HB vaccine	No HBIG Consider booster dose of HB vaccine	HBIG x 1 Consider booster dose of HB vaccine

* An accelerated course of vaccine doses at 0, 1 and 2 months, with a booster dose at 12 months to those at continuing risk of exposure to HBV.

HEPATITIS C VIRUS

There is no post exposure prophylaxis for hepatitis C.

In the event that the source patient cannot be tested, management of the healthcare worker should be based upon a risk assessment. Clinical information about the incident and/or the source patient should be reviewed. If the source patient is considered to be 'high risk' then the healthcare worker may be managed as if exposed to a source known to be positive (such exposures would normally be limited to sharps injuries contaminated with fresh blood from a known high-risk population such as IV drug users).

Summary of Investigation and Follow-up of Healthcare Workers

Known HCV infected source

- Obtain serum/EDTA for genome detection at 6 and 12 weeks;
- Obtain serum for anti-HCV at 12 and 24 weeks.

Source not known to be infected with HCV

- Obtain follow up serum if symptoms or signs of liver disease develop.

HCV status of source unknown

- Perform risk assessment.

Source Considered High Risk

- Manage as known infected source.

Source Considered Low Risk

- Obtain serum for anti-HCV at 24 weeks.

Genotyping of source and healthcare worker will help to confirm whether transmission from patient to the worker has occurred.

HUMAN IMMUNODEFICIENCY VIRUS

- The risk of acquiring HIV from a single percutaneous exposure is small and on average is estimated to be 0.3%;
- The risk of acquiring HIV through mucous membranes exposure is less than 0.1%.

Studies have suggested that taking zidovidine (AZT) as soon as possible after occupational exposure may reduce the risk.

WHEN TO CONSIDER POST-EXPOSURE PROPHYLAXIS (PEP)

Post exposure prophylaxis should be considered **only** when there has been exposure to blood or other high risk body fluids **known to be** or **strongly suspected** to be infected with HIV (these fluids include: amniotic fluid, vaginal secretions, semen, human breast milk, CSF, peritoneal fluid, pericardial fluid, pleural fluid, synovial fluid, saliva in association with dentistry, unfixed organs and tissues).

“Strongly suspected” includes individuals with clinical symptoms highly suggestive of HIV disease or individuals from countries where HIV is highly prevalent who may not yet have had a blood test.

Strongly suspected does not include an injury from an unknown source i.e. an inappropriately discarded needle in the healthcare setting or in a public place, nor an individual with a single lifestyle factor e.g. intravenous drug abuser.

Post-exposure prophylaxis should **not** be considered following contact through any route with **low risk** materials e.g. urine, vomit, saliva, faeces, unless they are visibly blood stained.

If post-exposure prophylaxis is indicated it should be started **as soon as possible** after the incident and ideally **within the hour** (however, Department of Health recommends it may be worth considering PEP even if 1-2 weeks have elapsed since the incident).

The individual should attend the nearest A&E department without delay.

3. Sharps Injuries In Members Of The Public

Assess whether a significant injury has occurred (see list above). If not, reassure.

The source is rarely known (i.e. discarded needle) and members of the public are usually managed as for an unknown source.

A rapid course of hepatitis B vaccine should be offered and serum taken for a serum save.

Testing for hepatitis B antibodies should be undertaken at 6 months, and if the patient requests it hepatitis C and HIV as well.



What to do after a ... Sharps Injury



Directions for the management of needle - sticks, and cuts and penetrating wounds



Wash cuts thoroughly with soap and warm Water & gently encourage to bleed.
Apply a dressing if necessary



Splashes to the eyes or mouth should be thoroughly rinsed with running water



Report incident to the manager immediately

Take 10 ml clotted blood from both the source of the sharp (with informed consent) and the injured person. Send to microbiology clearly identifying the source and the injured person, and mark 'Needlestick Injury'



Complete an accident form

Insert your local arrangements

Tel no



Please Note

If the source is known or a high risk of having HIV the injured person should contact either Accident and Emergency or the Genito Urinary Medicine Clinic and attend if possible within the hour

Remember

Be Prepared- If you are at risk of exposure- get immunised against Hepatitis B Virus

WEST ESSEX INFECTION CONTROL TEAM COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES

SECTION F – MANAGEMENT OF INFECTIOUS DISEASES

1. Introduction

This document comprises the series of information sheets produced by the Essex Health Protection Unit.

The information sheets include information on incubation periods, method of spread, period of infectivity, exclusion periods and where appropriate the management of contacts.

The information sheets can be photocopied and passed to members of the public.

In addition, there is extended text on meningococcal disease, antibiotic-related colitis (*Clostridium difficile*) and MRSA. The management of headlouse infestations and scabies is included within section G.

2. Information Sheets

Information sheets on the following are available free of charge by accessing the EHPU website; www.ehpt.nhs.uk

- Biting Bugs
- Blood borne viruses
- Chlamydia
- Conjunctivitis
- Cytomegalovirus
- Chickenpox
- Cryptosporidium
- Diarrhoea and Vomiting
- Farm & Zoo Visits
- Glandular Fever
- Group A Streptococci
- Hand, Foot and Mouth
- Hepatitis A
- Hepatitis B
- Hepatitis C
- Herpes
- Immunisation – General Information
- Impetigo
- Influenza
- Legionnaire's Disease
- Leptospirosis
- Listeria
- Lyme Disease
- Measles
- Meningitis
- MMR Information for Parents
- Molluscum Contagiosum
- MRSA
- Mumps
- Parvovirus
- Polio
- Rabies
- Rashes in childhood
- Ringworm
- Rubella
- Scabies
- Shingles
- Threadworms
- Toxoplasmosis
- Tuberculosis

- Verrucas

3. Meningococcal and Hib Disease

Of all the possible bacterial causes of meningitis it is only meningococcal and Haemophilus influenzae type b (Hib) that will require public health involvement to trace contacts.

Usually staff employed by the admitting hospital will notify the Essex Health Protection Unit (EHPU) or Public Health doctor on call at the time of the case.

The EHPU will ascertain a list of contacts who require prophylaxis and may enlist the GP to prescribe the prophylaxis where the contact is a registered patient. EHPU contacts the GP if these same contacts required prophylactic vaccination against Group A, C, Y or W135 meningococcal disease in the event that the index case was confirmed as infected with one of those groups.

Where the index case attends a school the EHPU will undertake the necessary liaison, prepare letters to parents if required etc.

The working definition of a 'contact' according to national guidelines is:

“Those who have had close personal and prolonged contact with a confirmed or probable case during the seven days before the onset of illness”.

This includes:

- Household or household equivalent contacts:
 - Those sleeping in the same household/overnight stays;
 - Close social contacts;
 - Intimate 'kissing contacts' i.e. girlfriend/boyfriends;
 - It does not include casual contacts such as:
 - cheek kissing
 - attendance at birthday parties and other social events
 - presence in same office or classroom
 - sharing cans of drink or cigarettes
- Health Care Workers (HCWs) who have been in contact during resuscitation. In general this applies to staff who:
 - have inserted an endotracheal tube;

- gave mouth-to-mouth resuscitation.

When staff members have had significant contact with a patient known or suspected to have meningococcal or Hib disease, the Essex Health Protection Unit will liaise with the Occupational Health department in organising prophylaxis.

PROPHYLAXIS

Rationale for Prophylaxis

People who live in the same household are at a higher risk of developing disease than other members of the community – the attack rate is increased by about 500-1200 times. The risk is highest in the first seven days after a case and falls rapidly thereafter.

The aim of chemoprophylaxis is to eliminate carriage from the network of close contacts. Although there is evidence that chemoprophylaxis at least delays the onset of further cases in a family, it is not known whether the total number of further cases is reduced due to a lack of comparative studies.

Pregnancy

Current guidelines suggest that prophylaxis is recommended for pregnant women, and any contacts who are pregnant should be carefully counselled as to risks and benefits of prophylaxis.

Drug Interactions Should Be Considered

People offered prophylaxis **must** be informed of possible side effects of rifampicin including:

- orange staining of urine and other body fluids;
- orange staining of soft contact lenses;
- possible interaction with oral contraceptives. Women should be advised to take additional contraceptive precautions for at least four weeks post-prophylaxis.

PATIENT INFORMATION (fact sheet available on EHPU website www.ehpt.nhs.uk)

Contacts receiving prophylaxis should be advised:

- The purpose of prophylaxis is to eliminate carriage from the close social network;

- It will not prevent infection in someone currently incubating the disease;
- 98% of cases of meningococcal disease are sporadic i.e. not linked to any other case;
- The risk to contacts is actually **very** low – one in several thousand;
- The risk is greatest in the first seven days post exposure;
- They will only be offered vaccine if the strain is confirmed as either C, A, Y or W135. The protective effect of antibiotic prophylaxis lasts for several weeks and so the vaccine can be given later e.g. up to a month post antibiotics and sometimes longer;
- The most important thing is to have a high index of suspicion for any unusual symptoms and to contact a doctor without delay;
- How to recognise the early symptoms and signs of meningococcal disease;
- Numbers of helplines they can contact for further information if they are still worried. National Meningitis Trust 0845 6000800 (24hr Helpline) and The Meningitis Research Foundation 0808 8003344 (24hr helpline);
- Contacts of 'contacts' are not at risk.

4. Guidelines for the Management of *Clostridium difficile*

What is *Clostridium difficile*?

Clostridium difficile is a gram positive anaerobic bacterium that forms spores which are resistant to drying and heat. They survive in the environment and are considered to be the main transmissible form of the organism. Laboratory confirmation is made by the identification of the toxin, produced by the bacterium, in the stool.

What does it cause?

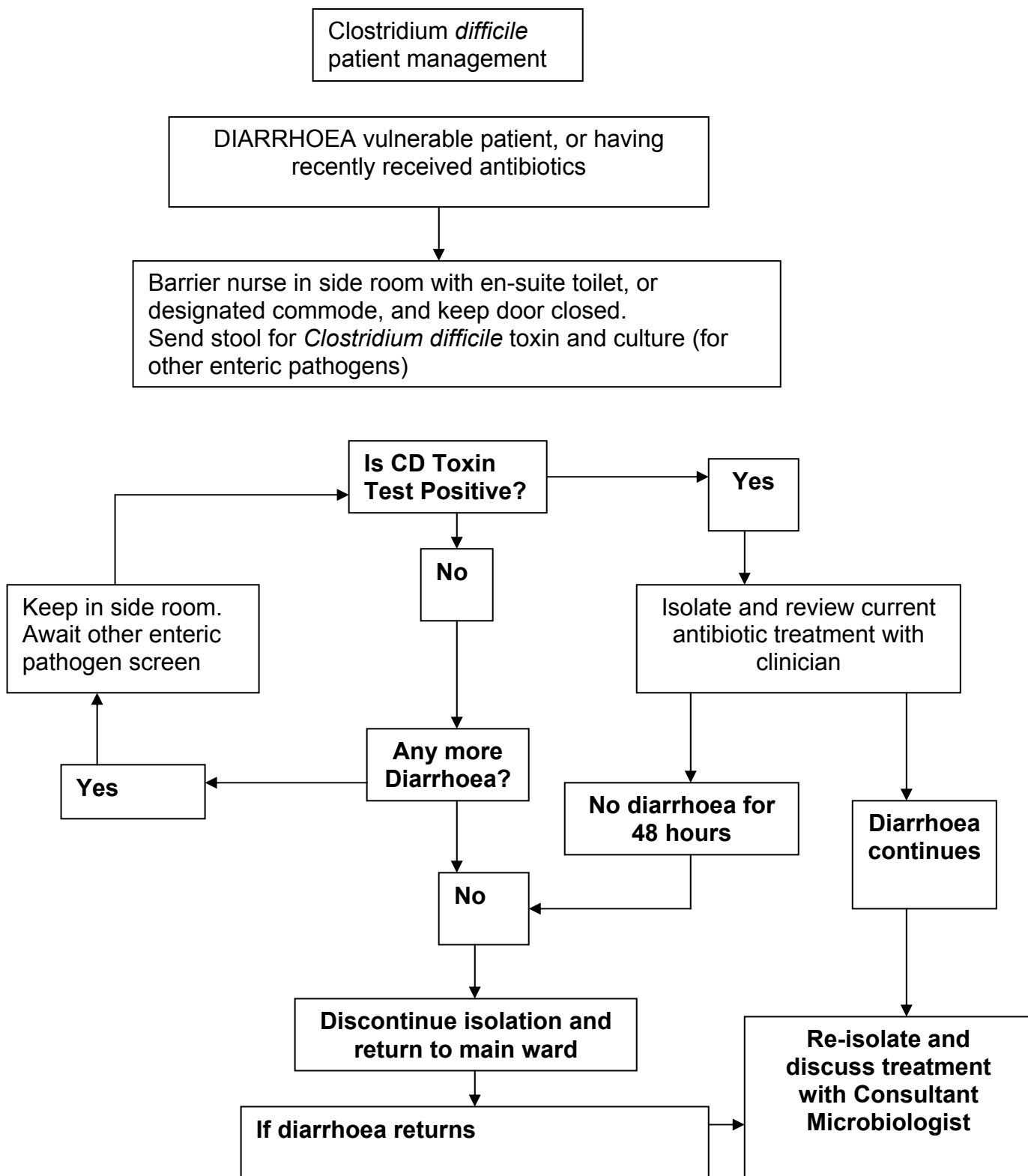
Clostridium difficile diarrhoea is usually triggered by the use of broad-spectrum antibiotics. These reduce the numbers of normal flora within the bowel and allow the numbers of *Clostridium difficile* bacteria to escalate. When this happens, the bacteria produce large amounts of a toxin which irritates the lining of the bowel. This irritation causes diarrhoea, which may be trivial or may develop into a life-threatening pseudo-membranous colitis. The diarrhoea may recur at intervals.

How is it spread?

Clostridium difficile is thought to spread from patient to patient by the faecal-oral route. Poor environmental hygiene standards will contribute to the spread of the spores. The hands of healthcare workers are also likely to contribute towards cross infection.

Prevention and Control

- Control of antibiotic use;
- Handwashing by staff and patients;
- Environmental cleaning;
- Cleaning, disinfection and sterilisation of equipment;
- Isolation of all patients with diarrhoea.



Ref: Suspected Clostridium difficile flow chart
(adapted from Wilkins 1993)

5. Guidelines for the Management of MRSA in Community Hospitals

What is MRSA?

MRSA stands for **Methicillin Resistant *Staphylococcus aureus***.

It is a strain of *Staphylococcus aureus*, which has become resistant to some antistaphylococcal antibiotics. Just like any other *Staphylococcus aureus*, MRSA is an organism that can colonise the nose and other skin sites causing no harm. However, in common with many other microorganisms, MRSA has the potential to cause serious infections in particularly vulnerable people.

What is the difference between Colonisation and Infection?

Colonisation - means the MRSA is living on the skin (usually nose, throat, axilla or groin), causing no problem to the individual.

Infection - means that the MRSA is causing an active infection i.e. the wound is red, hot, inflamed, there may be a discharge and pain.

What Precautions do you need to take?

MRSA patients are **not** strictly barrier nursed in the community hospital setting because the risk of developing an infection is low. Ideally they are in a single room, or share a room with someone who does not have an open wound or invasive device e.g. urinary catheter, intravenous device.

Patients with MRSA at risk of developing an infection as listed below may benefit from the MRSA decontamination protocol. The decontamination protocol is described at the end of this section.

Whilst the patient is on the decontamination they can mix with other patients socially and at mealtimes.

Groups at risk of developing an infection

- Patients with open wounds
- Patients with skin surface breaks
- Patients with catheters of all types
- Patients likely to return to an acute setting for surgery or for any invasive procedures.

Advice and support is also available from the ICT.

Routes of Transmission

- Direct personal contact with skin
- Shed from contaminated fomites e.g. bedding or shed from skin
- Shed from wounds colonised with the organisms
- It can colonise patient and staff (e.g. nasal colonisation) without causing illness, but may then spread to another host

MRSA screening sites

The sensitivity of detection of MRSA carriage depends on the patient sites sampled. Routine screening includes the nose, throat, lesions or wounds, manipulated sites (irrespective of whether or not they appear clinically infected), intravenous and stoma sites, tracheostomies, perineum/groin, urine from catheterised patients and sputum if available. Occasionally other specimens, such as vaginal swabs, may be taken if clinically indicated.

The perineum is the main carriage site on normal skin, but is inconvenient for routine screening. The groin is often preferred but may be less sensitive.

Request MRSA screen. Fill in only one bacteriology form listing all sites screened, and please label all swabs with identification details.

Decontamination protocol

Mupirocin sensitive or low level Mupirocin resistant MRSA carriage

1. mupirocin nasal ointment well massaged into both nostrils
Given three times daily for 5 days
2. Triclosan Skin Cleanser. Bath the patient daily for 5 days
3. Chlorhexidine powder. Applied to perineum, axillae and other skin creases following bathing. Once daily for 5 days.
4. Chlorhexidine surgical scrub. Use as hair shampoo only on day 1 of the treatment.

High Level Mupirocin Resistant MRSA carriage

The ICT will advise on the nasal ointment required. Otherwise protocol as above.

In addition to these precautions:

- i. environmental cleaning should be reinforced to help prevent further spread;
Dust should not be allowed to accumulate.

- ii. change clothing and bed linen daily during treatment
- iii. after the patient is discharged the room should be thoroughly cleaned and curtains removed for laundering.

Please seek further advice from the Infection Control Team if required.

Screening

1. Patient: after the initial screen, further screening may be done on the advice of the ICT or the clinician.
2. Others in contact with known case: Routine screening of patients in contact with the index cases should only be done on the advice of the ICT. In the event of there being two or more cases identified on a ward, screening will usually be recommended. If screening is recommended swab the sites as recommended above, however the ICT will advise.

Staff screening is rarely indicated and will only be undertaken on the recommendation of the ICT and the Occupational Health department. Swabs sent directly to the Microbiology department not requested by the ICT or Occupational health department will not be processed.

Wound Management

When MRSA is identified in a wound, the practitioner managing the wound must arrange an assessment to determine the need for antibiotic treatment. In many cases, particularly chronic wounds, the wound bed is colonised with MRSA rather than infected. Clinical assessment is essential and only if there are signs of infection should antimicrobial chemotherapy be considered.

The state of the wound should be assessed and documented by a nurse trained in wound assessment:

- size, depth and condition of wound;
- Does it look infected (is it red, hot, inflamed or has a discharge?).

Continued and documented wound assessment will inform the future management of the wound. The advice of the specialist nurse for tissue viability should be sought if required.

- if the wound is healing - do not routinely swab;
- if the wound does not appear to be healing, re-swab after 4 weeks and at 4 weekly intervals thereafter until there is evidence of healing, to check whether antibiotic treatment is indicated.

Closure of wards

This recommendation will be made by the ICT in consultation with the clinicians and managers. Such advice will depend on a number of factors i.e. the type of ward, number of patients affected, morbidity of patients affected etc. an outbreak control group will be assembled before any such decision is made.

Transfer of MRSA patient to other departments/hospitals

Inform the relevant department prior to the patients' arrival so suitable arrangements can be made. This may be required for clinical reasons, e.g. X – Ray department or other specialist units. A sheet should be placed round the shoulders and the body of the patient, in transit and in the care area, to minimise the risk of MRSA dispersal via skin scales into the environment.

Admission and Care to Residential/Nursing Home

No home is allowed to refuse admission of a patient/resident/client because they happen to have MRSA. However, if a resident does have MRSA (either colonisation or infection) that resident should:

- i. be in a single room
- ii. be in a shared room, but the other resident must not have an open wound or a urinary catheter, or any other invasive device.

For information on issues not covered in this policy please contact the ICT

Mobile: 07810 881316

Other measures

Antibiotic treatment if any will vary depending upon the clinical situation of the individual patient. Please contact the consultant microbiologist if in need of advice.

ESSEX LOCAL HEALTH PROTECTION UNIT COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES

SECTION G – INFESTATIONS

1. Prevention and Control of Headlice in Community Hospitals

Introduction

This strategy is written to enable healthcare staff to access information about headlice when required.

Headlice are transferred from person to person wherever people congregate i.e. schools, playing fields, parks, homes, brownies, scouts etc. However, the home is the most common place where transfer of lice occurs.

Half the people with headlice are adults or pre-school children. Many infected adults and some newly infected children do not itch and are unaware they have headlice. Most infections are caught out of school. Parents and other relatives are frequent sources of headlice. Headlice are transferred by direct head to head contact lasting around one minute.

Some Facts about Headlice and Nits (*Pediculus humanus capitis*)

The headlouse is a small insect, which feeds by sucking blood and likes to stay close to the scalp for warmth.

The head of a headlouse bears two five-jointed antennae. At the top of each is a dish-shaped depression containing heat sensitive hairs, called papillae. If the tip of either antennae registers a temperature of less than 31°C, then the insect turns toward the warmer side. This keeps the lice tight against the skin, near to their only food source, blood.

Headlice, therefore, have an invisible territorial boundary, the 31°C contour, outside which they will not voluntarily go. All their eggs are glued onto hair close to the scalp within this warm zone, which means that nearly all are laid at the base of hair shafts. Within their warm zone, the insects spread out over the scalp quite evenly. They only seek each other in order to mate.

The human louse cannot live on any other animal. It moves by crawling on hair and can neither jump nor fly. It grows to full size (a little smaller than a match head) in about 10 days, with a life span of perhaps two weeks. Whilst growing it changes its skin three times. Cast skins and louse faeces (which look like black dust) may be found on the pillows of infected people.

The female lays five to eight flesh coloured eggs glued to the base of the hair each night. These take five to seven days to hatch. The empty eggshells, called nits, grow out with the hair at about one centimetre per month.

Lice move fast and can easily be missed when a head is inspected. They have no particular preference for hair colour, length or state of cleanliness. Short hair allows easy transfer from one head to another.

Headlice are injured by vigorous combing. An injured louse cannot grip onto the hair and can easily be combed out.

Headlice infections eventually cause itching. This is a reaction to the saliva of the louse. It may take some months of infection before the person becomes sensitised enough to react by itching.

Re-infection may occur rapidly between intimate contacts.

Prevention

People in contact with potentially infected children should have their own fine-toothed headlouse detection comb and be taught to use it. Children and adults should comb their hair twice a day. This will help prevent any infection becoming established.

They should watch for signs of early infection (black dust on the pillow) and use a detector comb if ever they suspect an infection and whenever warned of a possible contact.

There are products which claim to deter headlice infections from becoming established (e.g. Rappel). These are not routinely recommended.

Headlice lotions (or shampoos) should not be used as a preventative measure.

When one member of the household has been found to have headlice, all other members of the household must be carefully checked using the detection comb.

If the person identified as having headlice is a hospital inpatient, the immediate family members must be informed so that they can check themselves for infestation and treat any affected family members. It is not generally necessary to check all the other hospital patients on the ward if one is identified as having headlice.

Members of staff must check themselves and their families as occasionally the patient will have acquired headlice from a member of staff.

Treatment - for when Live Headlice are Found

Only treat those with a proven headlice infection.

There are two options for the treatment of headlice:

1. Wet Combing

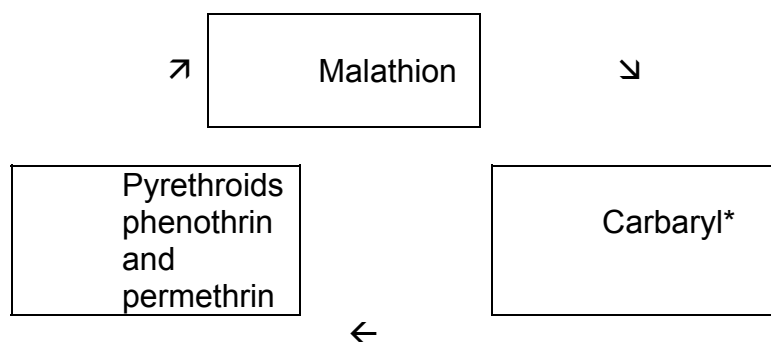
This method does require perseverance but some parents may find it preferable to using a chemical product on their child's head. However, if this treatment appears to continually fail, treatment with insecticides may still be required.

- Wash the hair in the normal way with an ordinary shampoo.
- Using lots of hair conditioner (approximately 3 times the amount you would usually use) and while the hair is very wet, comb through the hair from the roots with a fine-toothed comb/headlice comb.
- Make sure the teeth of the comb slot into the hair at the roots with every stroke. This should be done over a pale surface, such as a paper towel or the bath.
- Clear the comb of lice between each stroke.
- Wet lice find it difficult to escape, and hair which is slippery from conditioner makes it hard for them to keep a grip - so removal with the comb is easier.
- When all the hair has been checked, rinse off the conditioner.
- This routine should be repeated every day for 2 weeks, so that any lice emerging from the eggs are removed before they can mature, mate and lay more eggs.

2. Insecticides

No single insecticide is promoted at any given point in time.

There are three main chemicals used. All must be used according to manufactures guidance.



* Carbaryl can only be prescribed by a healthcare professional, the other two chemicals can be bought over the counter or may be prescribed.

For individuals that suffer from asthma, eczema, etc, alcohol based products should be avoided. Aqueous (water) based products are safe to use.

	PYRETHROIDS	MALATHION	CARBARYL
Aqueous (water) based	Fullmarks liquid Fullmarks mousse	Derbac M Quellada M	Derbac C Carylderm liquid
Alcohol based	Fullmarks	Prioderm Suleo M	Suleo C Carylderm lotion

Insecticides should **ONLY** be used if live lice are found.

Insecticides must not be used more than once a week, and not for more than 3 consecutive weeks.

Headlice shampoos and cream rinses are not recommended as they are poor at killing headlice and do not kill eggs. They should not be used to get rid of lice, nor as a preventive measure.

After treatment, ensuring manufacturer's guidance has been followed and the lotion has been in contact with the hair for the recommended amount of

time, shampoo and condition the hair. Whilst the conditioner is still on the hair, use a fine toothcomb to remove dead lice and nits. It could take up to 24 hours for lice to die, so do not assume the treatment has not worked.

To ensure the treatment has been successful, detection combing on wet hair should be carried out on all treated persons three times during the next 7 days.

Re-treat on the 7th day whether or not live headlice are found. This is to ensure that lice hatching from any viable eggs are killed before reaching maturity.

- If very small lice are found - this could be due to eggs having survived treatment and re-application with the recommended product should be carried out 7 days after the initial treatment.
- If large lice are found - re-infection from an outside source is likely. There is evidence to show that infection and re-infection of school age children is not primarily from within the child's class, but from the family, extended family and friends. A repeat treatment should take place and careful contact tracing is required to identify the source of re-infestation.

Babies under the age of 6 months should only be treated under medical supervision and if the presence of lice has been confirmed in their hair. If there is a member of the family with a proven infection, un-infected babies should simply have their hair combed with a detector comb daily for a week. Small numbers of lice in babies can be managed and treated using the wet combing method.

As chlorine may weaken the effect of insecticides, it is recommended that if the person has been swimming in a chlorinated pool in the 72 hours before treatment, their hair should be washed and dried before the lotion is applied. The patient should not swim in a chlorinated pool for 48 hours after application.

There is no reason to keep children away from school.

Contact Tracing

Contact tracing, screening and treating is a vital part of the control of headlice.

Contact tracing is the family's responsibility. All close contacts including grandparents, friends, social groups, playgroups and the school must be considered as possible contacts.

The person with lice will have caught them from another person who already had headlice and with whom they had head-to-head contact. That person will be someone who is known to the family, and may not themselves be aware they have lice.

Each person with headlice should formulate a list of every person they have had head-to-head contact with lasting one minute or more in the past month. This list will be fairly short, but if the list is complete, the original donor of the headlice can be identified.

Every person on the list should then be told that they have been in contact with a person who has had headlice and that they should have their own hair checked.

Alternative Therapies

Aromatherapy / Essential Oils

Many products are now available on the market. Advice from the Insect Research and Development Centre is that these products should not be recommended as a method of treatment and/or prevention of headlice as:

1. There is no scientific evidence to support its effectiveness against headlice.
2. Misuse in the application of such oils can easily occur and there have been reports of children acquiring superficial burns as a result of oils not being correctly diluted.
3. Some of the oils used in “headlice preparations” may aggravate medical conditions, for example people who suffer from epilepsy and asthma should avoid eucalyptus oil. To date no such warnings have appeared on these preparations.
4. It is the physical act of combing that actually removes lice from the hair.

2. Prevention and Control of Scabies in Community Hospitals

Introduction

Scabies is an allergic response to an infestation of the skin by the mite *Sarcoptes scabiei*. The mites penetrate through the skin and excavate burrows at the epidermal/dermal junction. The female mite lays eggs, which hatch after 3-4 days. Newly hatched larvae exit the burrows and appear on the surface of the skin before forming their own tunnels. The burden of mites can range from 10-20 to several thousand in people who are severely immuno-compromised. Scabies is distributed worldwide and is endemic in many developing countries.

Recognition of Symptoms

The most frequent symptom is itching which may affect all parts of the body and is particularly severe at night.

Occasionally small vesicles may be visible along the areas where the mites have burrowed. A papular rash may be visible in areas such as around the waist, inside the thighs, lower buttocks, lower legs, ankles and wrists. Firm nodules may develop on the front folds of the axillae and around the naval and in males around the groin. Pale burrows described as a “greyish line resembling a pencil mark” may be present in the skin between the fingers, but are less commonly seen than textbooks suggest.

Failure to find burrows does **not** exclude scabies as a diagnosis.

It should be emphasised that scabies may be difficult to recognise particularly if scratching, inflammation or infection have obscured the presentation. Also scabies can look atypical in anyone with immature or impaired immunity such as very young children, those with Down’s Syndrome, alcoholics or the very elderly. In immunosuppressed people, such as those with AIDS or those on immunosuppressive therapy, a more severe hyperkeratotic form may develop.

Mode of Transmission

Scabies mites are generally not capable of surviving off the host long enough to establish a new infection as they quickly become too dehydrated and weak.

Mites are passed directly from the skin of one person to another. The likelihood of transmission increases with the duration and frequency of skin-to-skin contact.

Fomites and animals are not implicated in transmission.

Incubation

The incubation period is up to 8 weeks after contact with an affected person.

Outbreaks

Outbreaks occur particularly in residential/nursing homes, mental health care establishments, long stay hospital wards and pre-school nurseries.

Treatment in a Residential Establishment (Care Home) or long-term inpatient setting

When a single suspected case of Scabies occurs in a residential establishment or is diagnosed in the community hospital, the Infection Control Team should be alerted promptly to investigate. It may be necessary to treat all patients and anyone with whom they have had close contact.

If this action is required, it is important that all staff who have come into direct contact with patients also treat themselves because they may be incubating the disease without showing any symptoms. Family members of asymptomatic staff need not be treated routinely but asked to report any later symptoms.

As far as possible all staff members should receive the treatment on the same day that their unit is treated. Staff should not work in any other area until treatments have been completed throughout the home.

Symptomatic people should be treated using 2 applications of insecticidal cream at 7-day intervals. The EHPU will make an individual assessment and advise.

Following Treatment

It is not uncommon for a person to have itching for up to 4 weeks after successful treatment. Antihistamines may be helpful.

Treatment in a Household

Scabies is easily treated but the treatment must be done thoroughly and conscientiously otherwise failure will occur.

Symptomatic cases in the community should be treated using 2 applications of scabicide cream at 7-day intervals. Their **asymptomatic household contacts** should be given a single course of treatment at the same time as the index case's initial application of cream.

People should be regarded as infectious until one application of scabicide cream has been applied.

Once treatment has commenced the person cannot transmit the mite.

Children need not be excluded from school or nursery having commenced treatment.

If Scabies is left untreated for a long period of time it can have an immunodepressive effect and cause a more severe form to develop.

NB: Treatment of babies, young children under 2 years and pregnant women should be supervised by a GP. The recommended treatment is Lyclear dermal cream for which there are no contraindications in these groups.

LYCLEAR DERMAL CREAM IS THE TREATMENT OF CHOICE

Lyclear dermal cream is suitable for use by adults, including the elderly and children over 2 months old. Children between 2 months and 2 years should be treated under medical supervision. Pregnant women should seek medical advice.

- Carefully follow the instructions enclosed with the cream (see below).
- **Ensure that the entire surface of the body is covered from the hairline on the head to the soles of the feet.** This should include the area behind the ears and the face, avoiding the area around the eyes, otherwise the treatment may not be effective. **If the person to be treated has little or no hair the scalp should also be included.**
- Areas of skin normally covered by extensive dressings should be exposed, and Lyclear cream applied onto the intact skin up to and around the wound. The dressing may then be replaced.
- Apply the cream to clean, dry and cool skin. Do not apply following a bath or shower.
- Pay particular attention to the areas behind the ears, between the fingers and toes, wrists, under the arms, external genitalia, buttocks and under finger and toenails.
- The whole body should be washed thoroughly 8 - 12 hours after treatment.
- Be sure to reapply any lotion washed off during the treatment period e.g. after hand washing.
- Directly after treatment, change bed linen and wear freshly laundered clothes.
- Lyclear Dermal Cream disappears when rubbed gently into the skin. It is not necessary to apply the cream until it remains detectable on the surface.

- Where possible, the cream is best applied by someone other than the person receiving treatment. This makes it easier to get to difficult to reach parts of the body.

It may be necessary to prescribe two tubes of cream to ensure all areas of the body are covered thoroughly bearing in mind very dry areas of skin will absorb more of the cream.

The following table shows the approximate amount of cream to be used as a single application:

Adults and children over 12 years	Up to 1 tube, may require up to 2 tubes but no more than 2 tubes
Children aged 5 to 12 years	Up to half a tube
Children aged 1 to 5 years	Up to one quarter of a tube
Children aged 2 months to 1 year	Up to one eighth of a tube

NB: Following discussions with the Entomology Centre in Cambridge it is now recommended to apply scabicide lotions/creams to the face avoiding the area around the eyes.

This may conflict with some manufacturers' guidance. However, there is increasing evidence that scabies may also affect the face and failure to treat this area could result in an incomplete and therefore unsuccessful treatment.

<p style="text-align: center;">WEST ESSEX INFECTION CONTROL TEAM COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES</p>

SECTION H – CLINICAL PRACTICE

The Clinical Practices included in the section are:

- Aseptic Technique
- Barrier Nursing
- Decontamination of Equipment
- Endoscopy
- Enteral Feeding
- Intravenous Therapy
- Laundry Management
- Management of Non Infectious and Infectious Deceased Clients
- Minor Surgery Specification
- Prevention of Infection associated with Urinary Catheters
- Safe Handling of Specimens
- Vaccine Control
- Waste Management

1. Aseptic Technique

Aseptic technique is the term used to describe the methods used to prevent contamination of wounds and other susceptible sites by organisms that could cause infection (Marsden Manual of Clinical Nursing Procedures).

The aims of aseptic technique are:

- To prevent the introduction of pathogens to the site;
- To prevent the transfer of pathogens from one patient to another.

An aseptic technique should be implemented during any invasive procedure that bypasses the body's natural defences.

An aseptic technique should also be adopted when undertaking the following procedures:

- Dressing wounds;
- Removal of sutures or clips;
- Dressing peripheral or centrally sited intravenous lines;
- Removal of drains;
- Endotracheal suction;
- Dressing tracheostomy site.

Forceps have traditionally been used for the procedure. However, forceps are cumbersome to use and do not prevent the transfer of bacteria from the wound to the hands.

The procedure can be performed more easily holding sterile swabs in the latex sterile-gloved hands. Hands should be washed before and after the technique.

Many aseptic techniques include a ritualistic practice of cleaning trolleys with alcohol between patients. It is now felt that this serves no useful purpose, and that an area cleaned by detergent and hot water is sufficient, as the sterile field will be created by the sterile towel contained within the dressing pack.

Bacteria acquired on the clothing during the procedure may be transferred into the wound of another patient, therefore a clean disposable apron should be used for each dressing procedure.

Management of Chronic Wounds

If dressings are removed by soaking, a plastic impermeable liner/bag should be placed in the bucket/bowl before filling with water.

After the wound has been washed then water should be disposed of in a sluice or a sink, which is separate from the handwash sink.

The plastic liner should be disposed of and the bath or bowl should be thoroughly cleaned with detergent solution and then dried to ensure that pathogens are removed.

This process should be undertaken after each separate patient episode.

2. Care Of Patients with Known Infectious Diseases – Barrier Nursing

Barrier nursing is the term used to describe the methods used in the inpatient setting, to minimise the risk of transmission of a potential pathogen from one patient to another.

Staff caring for clients in their own homes or in residential care homes will not need to implement the traditionally recognised methods of barrier nursing. This is because there are generally no other vulnerable clients who need to be protected from cross infection, apart from staff and other people who live in the house, for whom the practice of universal precautions will suffice.

Barrier Nursing - Practice

The main diseases requiring isolation are diarrhoeal infections and untreated pulmonary tuberculosis. The Infection Control Team may also advise that patients identified as having an infection caused by any antibiotic resistant organism are barrier nursed (see management of patients with MRSA).

The patient requiring barrier nursing should be accommodated in a single room equipped with a handwash basin and, ideally, a separate en-suite cloakroom or shower room facility. If en-suite facilities are not available, precautions must be taken to prevent contact between patients using the ward facilities, and to ensure that shared facilities are appropriately cleaned and disinfected between uses.

The isolation room must not contain unnecessary furniture, and all surfaces must be easily cleaned.

The door of the room must be kept closed at all times.

The possibility of adverse psychological effects of isolation on the patient must be considered and addressed within the Care Plan.

Standard/Universal Precautions should be adhered to at all times (see Section D)

Once a diagnosis has been made, the patient (and family) must have their infectious disease carefully explained, the mode of spread and its significance if any, for the patient's condition.

Personal Protective Equipment (PPE)

A risk assessment must be made for each patient contact episode in order that the correct protective clothing is worn. If the staff member is not planning to have any direct contact with the patient or the immediate surroundings, protective clothing may not need to be worn.

Supplies of disposable gloves, aprons and masks (if necessary) should be accessible outside the isolation room and donned prior to entering the room. Hands must be sanitised prior to the wearing of protective clothing.

Hand Hygiene

Alcohol hand rub should be used after normal handwashing, or an antibacterial soap should be used to wash hands.

Disposal of Potentially Infected Items

Contaminated dressings and all disposable items and protective clothing should be disposed of as clinical waste. The clinical waste bag must be situated inside the isolation room, and hands must always be washed inside the room after protective clothing is removed. Hands should also be sanitised immediately after leaving the room.

Medical Equipment

Disposable equipment should be used whenever possible. Non-disposable equipment such as sphygmomanometers, stethoscopes etc. should remain in the room and be terminally cleaned once the patient is discharged.

Urinals and Bedpans

Contents should be emptied down the toilet and flushed away. In the community hospital setting an automated process achieving a temperature of at least 80°C for 1 minute should be used for the decontamination of these items. A service contract for these machines must be in place, and provision made for the prompt replacement or repair in the event of malfunction.

If the automated system is temporarily unavailable the following process may be used:

- Care should be taken when cleaning the urinal or bedpan to avoid splashing.
- A plastic apron and non-sterile latex or vinyl gloves should be worn.
- The item should be cleaned with General Purpose Detergent and hot water prior to disinfection with a sodium hypochlorite solution (strength 10,000 p.p.m. (1 part household bleach to 10 parts water) and left for 10 minutes).
- The bedpan/urinal should be dried and stored inverted.

Linen

Should be segregated into dissolvable laundry bags thereby minimising any risk to portering or laundry staff.

Crockery and Cutlery

Disposable items are not required. A dishwasher capable of achieving a temperature of at least 80°C for at least 1 minute should be used. A service contract for these machines must be in place, and provision made for the prompt replacement or repair of the machine in the event of malfunction.

Transporting Patients

Clients should only be sent to other department/premises (i.e. care homes, hospital Out-patient or In-patient departments) when it is essential. Staff involved in the direct care of the client should be informed of the risk, so that relevant control measures can be implemented.

Daily Cleaning of Isolation Rooms

All rooms must be cleaned at least daily using freshly prepared General Purpose Detergent solution. Horizontal surfaces should be kept dust free and any spillages cleaned immediately. Isolation rooms should be cleaned after the other areas of the ward and all equipment such as cloths and mops should be disposable or laundered after each use.

Terminal Cleaning of Isolation Rooms

Disinfection is not generally required although the Infection Control Team for specific situations may recommend it.

It is unnecessary to wash walls and ceilings unless they are visibly contaminated.

All horizontal surfaces and equipment inside the room, including bedframes, mattresses, other furniture and equipment, must be cleaned using disposable cloths and freshly prepared general purpose detergent solution. All items and surfaces must then be dried.

Equipment, which is to be returned to a central equipment store, must be returned promptly and accompanied by a decontamination notice.

Please contact the Infection Control Team if further advice is required.

Diseases

More detailed information about diseases can be found in section F of this manual

DISEASE	DURATION of BARRIER NURSING PRECAUTIONS
Beta-haemolytic streptococci Group A Erysipelas (Bacterial infection of skin caused by Streptococcus pyogenes)	Until 24 hours after the start of appropriate antibiotic therapy.
Chickenpox Shingles	Until vesicles are dry
Diarrhoea due to Shigella, Salmonella, Clostridium difficile. (Pseudomembranous Colitis) Gastro-enteritis (Vomiting and/or diarrhoea – cause unknown)	Until diarrhoea has ceased for 48 hours.
Hepatitis A	Until 7 days after the onset of jaundice
Hepatitis B + C IF bleeding externally.	The client remains infectious whilst the increased risk of exposure to body fluids remains
HIV only if bleeding externally.	The client remains infectious whilst the increased risk of exposure to body fluids remains

Impetigo	24 hours after the commencement of appropriate antibiotic therapy.
Mumps	Until 9 days after onset of swelling
Rubella	The client remains infectious for 4 days from onset of rash. Non-immune pregnant staff should not nurse these patients
Scabies	The client remains infectious until successful treatment has been completed.
Pulmonary Tuberculosis (Open)	Until the client has received at least two weeks of appropriate antibiotic therapy

Precautions should also be taken with clients suffering from the following symptoms, until a diagnosis is confirmed:

- Diarrhoea of unexplained origin;
- Pyrexia of unknown origin;
- Excessive bleeding;
- Rashes of unknown aetiology;
- Excessive vomiting.

3. Decontamination of Equipment

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

Certain items are classified as single-use only. These items must never be re-used. If in doubt, refer to the manufacturer's recommendations.

Re-usable equipment should be appropriately decontaminated between each patient using a risk assessment model. Use only the method advised by the manufacturer - using any other process may invalidate warranties and transfer liability from the manufacturer to the person using or authorising the process. If you have any doubts about the manufacturer's recommendations, seek further advice.

The Medical and Healthcare products Regulations Agency (MHRA) defines the following terms:

- Cleaning 'is a process which physically removes contamination but does not necessarily destroy microorganisms.' 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 is an essential prerequisite of equipment decontamination to ensure effective disinfection or sterilisation can subsequently be carried out.
- Disinfection 'is a process used to reduce the number of viable microorganisms, which may not necessarily inactivate some viruses and bacterial spores.' Disinfection will not achieve the same reduction in microbial contamination levels as sterilisation.
- Sterilisation 'is a process used to render the object free from viable microorganisms, including spores and viruses'.

RISK ASSESSMENT

Medical equipment is categorised according to the risk that particular procedures pose to patients - by assessing the microbial status of the body area being manipulated during the procedure. For example, items that come into contact with intact mucous membranes are classified as intermediate risk and require disinfection between each use as a minimum standard. Items that enter normally sterile body areas, or come into contact with broken mucous membranes, are classified as high risk and must be sterile before use.

Some high-risk devices cannot tolerate high temperatures, and must either be single use or disinfected between each use - for example fibre-optic endoscopes. Items used in the vagina or cervix must be single use or sterilised between each use.

Risk Assessment for Decontamination of Equipment

Risk	Application of Item	Minimum Standard
Low	<ul style="list-style-type: none"> In contact with healthy skin or Not in contact with patient e.g. furniture, mattresses, surfaces, commodes 	Clean
Intermediate	<ul style="list-style-type: none"> in contact with intact mucous membranes or contaminated with virulent or readily transmissible organisms (body fluids) or prior to use on immuno-compromised patients e.g. thermometers, auroscope earpieces. Items used in the vagina or cervix must be sterilised 	Disinfect, or single use
High	<ul style="list-style-type: none"> in contact with a break in the skin or mucous membrane or for introduction into sterile body areas for example uterine sounds, instruments used for surgical/ operative procedures 	Sterilise, or single use

Adapted from Medical Devices Agency, Part 2 (1996) now MHRA

CLEANING METHODS

Cleaning is the first step in the decontamination process. It must be carried out before disinfection and sterilisation to make these processes effective. Thorough cleaning is extremely important in reducing the possible transmission of all microorganisms, including the abnormal prion protein that causes vCJD.

Thorough cleaning with detergent and warm water - maximum temperature 35°C - will remove many microorganisms. Hot water should not be used as it will coagulate protein making it more difficult to remove from the equipment.

Mechanical cleaning using a washer/disinfector or ultrasonic bath is recommended as these can be validated.

Manual cleaning must be undertaken in a designated sink, which is deep enough to completely immerse the items to be cleaned. Scrubbing can generate aerosols, which may convey infective agents. Therefore if scrubbing is necessary it must be carried out with the brush and item beneath the surface of the water.

Personal protective equipment, including aprons, gloves and goggles or visors, must be readily available for staff.

Cleaning equipment - such as brushes, cloths and ultrasonic washers must be stored clean and dry between uses. Use single use, non-shredding cloths rather than re-usable cloths. Do not store brushes in disinfectant solutions.

After cleaning and thorough rinsing, the items should be dried using a disposable non-shredding absorbent cloth.

Ultra sonic cleaning baths:

- use a detergent solution as recommended by the manufacturer;
- empty at least twice daily before the solution becomes heavily contaminated depending on workload;
- empty, clean and dry at the end of the session/day;
- staff must record the results of periodic testing in accordance with HTM2030 and manufacturer's instructions;
- service frequently - include checking the power output of the transducer;
- inspect instruments for residual debris after cleaning, and repeat if necessary;
- document all servicing and repairs.

NB: Compatibility of all materials and items to be processed should be established by reference to the manufacturer's instructions. For example, plastics and other similar materials, which absorb the ultrasonic energy, are not successfully cleaned by this method. Cannulated instruments must be flushed with the cleaning solution in addition to ultrasonication.

DISINFECTION METHODS

Disinfection methods apply to handwashing, skin preparation and equipment. Disinfection of equipment should be limited and, where possible, disposable or autoclavable equipment used instead. If disinfection is required, use the method recommended by the manufacturer.

Chemical	Advantages	Disadvantages	Uses
Chlorine-based: Hypochlorites (e.g. Domestos, Milton) NB Undiluted commercial hypochlorite contains approx. 100,000ppm available chlorine	wide range of bacterial, virucidal, sporicidal and fungicidal activity rapid action non-toxic in low concentrations can be used in food preparation cheap	inactivated by organic matter corrosive to metals diluted solutions can be unstable need to be freshly prepared does not penetrate organic matter bleaches fabrics need ventilation	can be used on surfaces and for body fluid spills
Sodium Dichloroisocyanurates (NaDCC) e.g. Presept, Haz- Tab, Sanichlor	slightly more resistant to inactivation by organic matter slightly less corrosive more convenient long shelf-life	as above	as above
Alcohol 70% e.g. isopropanol	good bactericidal, fungicidal and virucidal activity rapid action leaves surfaces dry non-corrosive	non-sporicidal flammable does not penetrate organic matter requires evaporation time	can be used on surfaces, or for skin and hand decontamination
Chlorhexidine e.g. hibiscrub, chlorhexidine wound cleaning sachets	most useful as disinfectants for skin good fungicidal activity low toxicity and irritancy	limited activity against viruses no activity against bacterial spores inactivated by organic matter	For skin and hand decontamination

STERILISATION METHODS

Sterile instruments are obtained by:

- **Purchasing pre-sterilised single use items**
These avoid the need for re-sterilisation and are a practical and safe method. You must store items using a stock rotation system according to manufacturer's instructions.
- **Using a sterile supplies department (SSD)**
SSDs may provide a cost effective and efficient service. There should be a contract specifying the responsibilities of both parties. Since June 1998 SSDs have been bound by the Medical Devices Directive 93/42/EEC, which requires the department to have a quality system of audit and to have been assessed and validated as CE compliant. The PCT or GP practice should seek legal and risk management advice if the contracted SSD has not been assessed as being CE compliant.
- **Clinics may sterilise their own equipment using a bench top steam steriliser/ vacuum steam steriliser**
Increasingly health care providers are required to comply with a number of quality assurance standards, outlined in the following pages of this document.

Sterilisation of Instruments – Responsibilities

If sterilisation is to be carried out, then management and other personnel are required to ensure that the sterilisers are operated safely and effectively and in compliance with legislation and standards. This is dependant on training and a sound general knowledge of the principles of sterilisation.

The key responsibilities of management can be summarised as follows:

- To ensure that sterilisation is carried out in compliance with the law and with the policy of the UK health departments.
- To ensure all personnel connected with sterilisation, including any contractors, are suitably qualified and trained for their responsibilities.
- To ensure that purchased sterilisers conform to legal requirements, the minimum specifications set out in British and European standards and any additional requirements of the UK health departments.
- To ensure that sterilisers are installed correctly and safely with regard to proper functioning, safety of personnel and environmental protection.

- To ensure that newly installed sterilisers are subject to a documented scheme of validation comprising installation checks and tests, commissioning and performance qualification tests before they are put into service.
- To ensure that sterilisers are subject to a documented scheme of prevention maintenance.
- To ensure that sterilisers are subject to a documented scheme of periodic tests at yearly, quarterly, weekly and daily intervals.
- To ensure that procedures for production, quality control and safe working are documented and adhered to in the light of statutory requirements and accepted best practice.
- To ensure that procedures for dealing with malfunctions, accidents and dangerous occurrences are documented and adhered to.
- To ensure that there is a procedure for the de-commissioning of unsafe units and removing from service.

Installation and Validation

HTM 2010 contains detailed DoH advice on installation, maintenance and operation. After installation the steriliser must be validated prior to use.

Validation is a documented procedure for obtaining, recording and interpreting data required to show that a process will consistently comply with predetermined specifications. The process of validation consists of performance qualification. The owner should retain all records of the validation process for inspection.

Following validation a schedule for periodic testing and planned preventative maintenance should be drawn up.

An appropriately qualified person should carry out validation of the steriliser. This will probably be the person who also conducts the required periodic testing and maintenance. The manufacturers programme of planned maintenance should be used. If no manufacturer's programme is available then advice should be sought from an appropriately qualified maintenance engineer.

Periodic Testing of Benchtop High Temperature Steam Sterilisers

NB: Failure to carry out periodic tests and maintenance tasks could compromise safety and may have legal and insurance implications for the user or owner of the steriliser.

Sterilisation is a process whose efficiency cannot be verified retrospectively by inspection or testing of the product. Routine monitoring of the process, combined with periodic testing of the sterilisers performance is therefore needed to give assurance that sterilising conditions are consistently being achieved.

A daily, weekly, quarterly and yearly testing schedule is required.

Each steriliser should have a logbook in which details of maintenance, tests, faults and modifications are recorded.

Daily Testing

The owner/user is responsible for daily testing. These tests are designed to show that the operating cycle functions are correctly shown by the values of the cycle variables indicated and recorded by the instruments fitted to the steriliser.

If practitioners from different disciplines use the same autoclave i.e. podiatry and dental services, each discipline must keep records of the daily test undertaken on the machine by their staff. Each discipline is responsible for the processing of their own instruments and for the record keeping pertaining to the cycles used for this reprocessing.

Procedures for Daily Testing

1. A normal cycle is operated with the chamber empty except for the usual chamber "furniture" (e.g. trays, shelves, etc.).
2. A record should be made in the log book of the elapsed time and indicated temperature and pressure (the values shown on the dials or other visual displays fitted to the steriliser) at all significant points of the operating cycle – the beginning and end of each stage or sub-stage, and the maximum temperature and pressure values attained during the holding time.
3. If the steriliser is fitted with a temperature and pressure recorder, the printout should be compared with the records in the steriliser logbook and retained for future inspection.

The test can only be considered satisfactory if all the following apply:

- A visual display of "cycle complete" is indicated;

- The value of the cycle variables are within the limits established by the manufacturer as giving satisfactory results;
- The steriliser hold time is not less than that specified in Table 1;
- The temperatures during the hold time are within the appropriate temperature range specified in Table 1;
- The door cannot be opened until the cycle is complete;
- No mechanical or other anomaly is observed;
- If the steriliser is fitted with a temperature and pressure recorder, then during the plateau period:
 - the indicated and recorded chamber temperatures are within the appropriate sterilisation temperature range;
 - the difference between the indicated and recorded temperatures does not exceed 2°C;
 - the difference between the indicated and recorded pressure does not exceed 0.1 bar.

Table 1 - Sterilisation temperature ranges, holding times and pressure for sterilisers with high temperature steam

Option	Sterilisation Temperature Range (°C)			Approx. Pressure (bar)	Minimum Hold (min)
	Normal	Minimum	Maximum		
A	136	134	137	2.25	3
B	127.5	126	129	1.50	10
C	122.5	121	124	1.15	15

Weekly Testing

- examine the door seal, check security and performance of door safety devices;
- check that safety valves, or other pressure limiting devices are free to operate.

Quarterly and Annual Checks

A suitably qualified person should conduct these tests as they require the use of specialised equipment and will probably be conducted by the person who undertakes the maintenance. Guidance on these tests is contained in HTM 2010.

Technical Aspects and Safety Considerations

1. Steam sterilisation is dependant on direct contact between the load material and saturated steam under pressure, at one of the temperatures shown in Table 1, in the absence of air.
2. Benchtop steam sterilisers achieve the above conditions by electrically heating water (usually sterile water for irrigation, but manufacturers may recommend purified) within the chamber to produce steam at the required pressure and temperature, with air being passively displaced from the chamber by steam.
3. During the sterilising cycle the steriliser door must prevent access to the chamber whilst it is under pressure. The door should not be able to be opened until the “cycle complete” signal is indicated.

Maintenance of Sterilisers

Record sheet

Unwrapped Instrument Steriliser

Daily weekly record

Clinic:

Week Commencing:

Machine reference number:

Warm up cycle completed? YES / NO

Daily test results	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Cycle counter number							
Cycle start time							
Time to attain temp							
Pressure gauge reading							
Temp. gauge reading							
Time at 134°C (min 3mins)							
Total Cycle time							
Initial of authorised user							

Note: in the event of a malfunction notify the engineer at once

Comments:

Use Of Downward Displacement Bench-Top Steam Autoclaves

British Standard 3970

Autoclaves vary in sophistication, and it is essential that the downward displacement bench-top steriliser be to an acceptable standard, such as British Standard 3970. There are only 3 machines in the current market that meet all 4 parts of the BS 3970 (Prestige Medical Series 2100, SES Little Sister 3 and Instaclave).

Maintenance

Regular maintenance is advised to ensure the monitoring equipment is functioning correctly (refer to previous pages).

Temperatures and Pressures

Each autoclave should include temperature and pressure indicating equipment, a cycle stage indicator, and a fault and cycle complete indicator. Temperatures and pressures achieved should be observed each time it is used, and documented at least once for each day that it is used (refer to previous pages). Retain records for 11 years.

Solutions

Only use sterile, distilled, de-ionised water or water for irrigation in sterilisers per manufacturer's guidance. Reservoir should be emptied and cleaned as per manufacturer's guidance.

Protective Clothing

The use of protective clothing is recommended when handling or dealing with blood and/ or body fluids. As these instruments will have been contaminated with blood and body fluids, and whilst the action of cleaning such instruments may give rise to splashing with these fluids, disposable latex gloves, disposable aprons and eye protection should be worn.

Pre-cleaning

The physical cleaning of instruments is a pre-requisite to sterilisation, as this will ensure all surfaces are free of debris and able to be completely sterilised. Hot soapy water is recognised as the most thorough and cost-effective means for physical cleaning. A better alternative is an ultrasonic cleaner.

Scrubbing Brushes

Whilst the use of scrubbing brushes is generally not advocated, it may prove impossible to effectively clean instruments without them. Therefore if they are

used it is suggested they are either single-use or they are themselves sterilised after use.

Inspection

Prior to sterilisation, items should be checked for both cleanliness and operation i.e. that forceps align, the handle grip is firm, joints move freely - but are not loose, instruments are not rusted etc.

Loading the Machine

When loading instruments into the steriliser, ensure they are dry and not touching. Place bowls and receivers on edge and leave hinged instruments open. Do not overload machine.

Unwrapped Instruments

A downward displacement steam autoclave should be used with unwrapped instruments.

It is essential that instruments be sterilised unwrapped (unless a specific porous load autoclave is used). If instruments are wrapped prior to sterilisation in the bench-top downward displacement steam autoclave, there is no guarantee that the instruments inside the wrapping will be sterilised (**Hollow-lumen items will not be effectively sterilised in a downward displacement autoclave**). It is equally important to ensure that the steam can reach all surfaces of the instruments, i.e. they do not overlap or touch when loaded into the autoclave.

Use of Instruments

Instruments should be used immediately (up to 3 hours after the cycle is finished when the door remains shut) after sterilisation, as no adequate method exists to store and also maintain sterility when instruments have been sterilised unwrapped.

For non-invasive procedures store instruments in a clean, dry and dust-free place, preferably a drawer or covered box.

Training

Training of personnel to use the equipment correctly is an essential part of ensuring a safe procedure. No staff should be expected to use such equipment, or be involved in the sterilisation procedure unless a clear understanding is first ensured.

SINGLE USE EQUIPMENT

Single use means that the manufacturer:

- intends the item to be used once, then thrown away;
- considers the item unsuitable for use on more than one occasion;
- has insufficient evidence to confirm that re-use would be safe.

Single patient use means that the item can be reused if re-processed using an appropriate method and is used on the **same patient only**. The duration of use is dependant upon undertaking a risk assessment of individual risk factors.

The MDA (1995) guidance suggests that reprocessing and re-using such items may pose hazards for patients and staff, if the reprocessing method has not been validated. Therefore re-use of single use products is not advisable unless the outcomes have been taken into account. The Consumer Protection Act 1987 will hold a person liable if a single use item is reused against the manufacturer's recommendations.

A-Z OF EQUIPMENT AND THE DECONTAMINATION METHOD

EQUIPMENT	CLEANING METHOD
Babies feeding bottles and teats	Disposables preferred. Non-disposables - as dummies and feeding equipment (see below).
Baby changing mats	Cover with paper towel and change between each baby. Clean at end of session or when the mat is soiled, with General Purpose Detergent (GPD) and water.
Baths	To be cleaned between users. With gloved hand, clean bath surface, grab rails and taps with hot water, GPD and paper towels. Rinse.
Bath water additives	There are no antiseptic solutions that should be added to the bath. When antiseptic bathing is prescribed, the agent should be applied directly to the skin instead of soap.
Bedpans (non-disposable)	Wearing disposable plastic apron and gloves, flush away contents and clean thoroughly using paper towels, warm water and GPD. Rinse, dry and store inverted. Disinfection using sodium hypochlorite solution 100ppm (1 part bleach to 10 parts water) will be required if the client has enteric symptoms.
Bedpan washers/ macerators	These should be used, cleaned and serviced according to manufacturer's guidance.
Beds, backrests, bed cradles and mattresses	To be cleaned between users with hot water and GPD. If soiling is evident then immediately clean as above and then wipe over with chlorine-releasing compound.
Bidets	To be cleaned after each use. Clean surface of pan and taps with hot water and GPD, using disposable paper towels and gloved hand and then flush.
Bowls - patient washing	Clean between each use with hot water and GPD, using disposal paper towels. Rinse and store dry.
Commode armrests and seats	If no soiling is evident, clean with hot water and GPD, and dry using paper disposable towels. If soiling is evident, or there is an outbreak of diarrhoea, or the previous user had a loose stool, clean with hot water and GPD. Wipe over with a chlorine-releasing compound (e.g. Presept, Chlortabs). Use

	separate wipes for armrests and seats.
Dummies and feeding equipment	Single use preferred. Communal sterilising tanks must <u>not</u> be used. Single person use sterilising tanks should be cleaned thoroughly with hot water and GPD, and rinsed before use. Ensure total immersion of equipment in Milton (or similar) solution. Tank must be cleaned daily and fresh solution prepared. Electric steam steriliser should be used as per manufacturer's guidance.
Ear pieces from auroscopes	Clean thoroughly with GPD and hot water, using thin brushes to clean inside. Rinse and dry thoroughly before storage.
Ear syringe 'Propulse'	Before first use of the day and after each patient use – clean earpieces in GPD and warm water solution. Fill tank with sodium hypochlorite solution (Milton) 125ppm. Run this solution through the tubing ensuring the absence of any air bubbles. Allow at least 10 minutes in order for disinfection to take place. Empty tank and tubing, rinse with sterile water for irrigation, dry with disposable, non-shredding paper towel and try to ensure that tubing is as dry as possible.
ECG Equipment - Electrodes - Straps - Machine	- Use disposable - Wash well with hot water - Wipe over with damp cloth, keep covered when not in use
Examination couches	Surface must be in good repair, clean with hot water and GPD at start and finish of each session or if becomes soiled. Cover with disposable paper roll and change between each client use.
Family Planning Vaginal specula	All reusable items entering the vagina must be adequately decontaminated between uses. This can only be achieved by a heat method of sterilisation, not by disinfectant or boiling water. Use single-use wherever possible. For re-usable, either return to CSSD, or pre-clean and sterilise in a downward replacement autoclave.
Trial size caps and IUCD instruments	Use single-use wherever possible. Following Department of Health instructions, all articles inserted into the vagina should be sterilised.
Hoists and slings	After each client use, clean thoroughly using hot water and

	GPD and store dry. Single use patient slings are also available.
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Nail brushes	Single use only.
Nebulisers	<p>Use disposable where possible. Clients should have their own nebuliser, which should be washed with hot water and GPD between uses. Store dry. On completion of treatment, dispose of nebuliser.</p> <p>Nebulisers which are used in the surgery or loaned to clients must be thoroughly decontaminated between patient uses. All tubing, mask, and filters should be disposed of after use, and replaced with new, disposable components before the item is used by another client.</p> <p>Staff must maintain a register of use (giving patient details and date of use) for each nebuliser including a record of the decontamination process detailing the date, time, cleaning method used, items replaced, and the signature and name of the member of staff responsible.</p>
Suction equipment	<p>Disposable suction units are recommended. After each use (or 24 hours if in frequent use) the disposable components should be disposed of as clinical waste.</p> <p>Non-disposable bottles - ensuring appropriate staff protection, empty the contents into the toilet, rinse with cold water. Clean using hot water and GPD, store dry.</p> <p>Tubing should be disposable.</p> <p>Filters - These should be replaced when wet and at appropriate intervals in keeping with the Manufacturer's instructions.</p>
Thermometers	<p>Use disposable sheaths on wards for single patient use: <u>After each use, wash with GPD and water and store dry.</u></p> <p>In clinics, GP's etc., use disposable sheaths. Clean with GPD and cold water and store dry.</p>
Trolleys (dressing trolleys)	Clean top and all surfaces with hot water and GPD daily. Dry thoroughly. If trolley becomes contaminated between patient uses, wash with GPD and hot water again.
Toys	These should be launderable or able to be washed in hot water and GPD. Wood is not suitable.

Urinals (non-disposable)	<p>The use of disposable urinals is advised, as manual cleaning is both difficult and unsatisfactory.</p> <p>Non-disposable urinals - wearing disposable plastic apron and gloves, empty urine into the toilet, clean thoroughly using paper towels, hot water and GPD. Rinse, dry and store inverted.</p> <p>Ideally each patient should have a designated urinal.</p>
Urine jugs (non disposable)	<p>The use of disposable jugs is advised. Wearing gloves and apron, a separate clean jug should be used for each urine collection. Empty the contents into the toilet and rinse. Clean thoroughly with hot water and GPD using disposable paper towels. Rinse and dry. Store inverted.</p>
Weighing scales	<p>Line with disposable paper towel. Washbowl of scales with GPD and hot water if they become soiled before next baby is weighed and at the end of each clinic session.</p>
Work surfaces	<p>General Cleaning Use GPD and hot water. Contaminated Surfaces Clean with GPD and hot water and then wipe with 1% sodium hypochlorite solution.</p>

ENVIRONMENTAL CLEANING

The environment plays a relatively minor role in transmitting infection, but dust, dirt and liquid residues will increase the risk. They should be kept to a minimum by regular cleaning and by good design features in buildings, fittings and fixtures.

A written cleaning schedule should be devised specifying the persons responsible for cleaning, the frequency of cleaning and methods to be used and the expected outcomes:

- Work surfaces and floors should be smooth-finished, intact, durable of good quality, washable and should not allow pooling of liquids and be impervious to fluids.
- Carpets are not recommended in treatment rooms or areas where clinical procedures will take place because of the risk of body fluid spills.
- Where carpets are in place, there should be procedures or contracts for regular steam cleaning and dealing with spills.

- Keep mops and buckets clean, dry and store inverted.
- Mop head should be removable for frequent laundering, or single use if this is not possible.
- Provide single use, non-shedding cloths or paper roll for cleaning.
- Keep equipment and materials used for general cleaning separate from those used for cleaning up body fluids.
- Colour code cleaning equipment, such as mop heads, gloves and cloths for toilets, kitchens and clinical areas. Use different colours for each area.
- Use general-purpose detergent for all environmental cleaning - follow the manufacturer's instructions.

DOMESTIC	CLEANING
Bucket (plastic)	Empty contents down toilet or slop hopper. Rinse with hypochlorite solution and dry
Mop (wet)	Rinse, dry and store head up after use; heat disinfect in washing machine and dry thoroughly weekly
Mop (dry)	Vacuum after each use
Lavatory brushes	Rinse in flushing water and store dry
Suggested colour coding of cleaning equipment	Red: toilet bathroom/ sluice Blue: kitchen/ pantry Yellow: all other areas
Floors	Dust control - dry mop Wet cleaning - wet mop, wash with hot water and GPD If known contamination - follow with hypochlorite 1000 ppm
Furniture and fittings	Damp dust with hot water and detergent. If known contamination - follow with hypochlorite 1000 ppm
Lavatory seat and handle	If soiling is evident, or there is an outbreak of diarrhoea, or the previous user had a loose stool, clean with hot water and GPD followed by chlorine-releasing compound (i.e. Presept, Chlortabs) 1000 ppm
Showers	Should be clean and maintained. Launder curtains 3 monthly. Shower heads should be de-scaled when necessary
Walls and ceilings	Not an infection problem. When visibly soiled use hot water and detergent. Splashes of blood, urine or known contaminated material should be cleaned promptly with hypochlorite solution

DECONTAMINATION EQUIPMENT PRIOR TO INSPECTION, SERVICE, REPAIR OR LOAN

Do not send contaminated equipment elsewhere without decontaminating first. Before dispatch, complete and attach a certificate that states the method of decontamination used, or the reason why it was not possible (NHS Management Executive 1993). Equipment that is impossible to decontaminate is likely to be complex, high technology and heat-sensitive. Often it cannot be decontaminated without being dismantled by an engineer - in this case attach a biohazard label to the item. Complete the clearance certificate and advise staff on protective measures.

DOCUMENTATION

A completed clearance certificate must be attached to the equipment prior to work being carried out. A suggested letter is:

From:

To:

Make and description of equipment item:

Model/Serial/Batch Number:

Other distinguishing marks:

This equipment/ item has not been in contact with blood or other body fluids. It has been cleaned in preparation for inspection, servicing or repair.

This equipment has been decontaminated. The method used was

This equipment could not be decontaminated. The nature of risk, and safety precautions to be adopted are:

Signed

Date

Position

Address

4. Endoscopes

Endoscopic procedures are widely used in the investigation and treatment of patients. The risk of infection associated with these devices depends on a number of factors and can be classified according to the degree of invasiveness of the procedure.

Where practical, single-use devices should be used. Where single-use options are not available, reusable accessories and rigid endoscopes should be reprocessed by an accredited Sterile Supplies Department. All endoscopes and accessories should be identifiable and traceable in accordance with HSC2000/032.

Endoscopes that are passed into normally sterile body cavities should be sterilised using steam or gas plasma. If the endoscope is not compatible with these processes, high-level chemical disinfection may be used. High-level chemical disinfection using liquid chemical disinfectants is suitable for non-invasive procedures where the endoscope comes into contact with intact mucous membranes.

Record Keeping

Written procedures for the decontamination of endoscopes and accessories must be in place in all areas where these items are in use. The manufacturer of the endoscope and accessories must have endorsed the decontamination method in use. All members of staff that are involved in the decontamination of endoscopes must have undergone an appropriate, documented, training programme.

It is essential that organisations undertaking endoscopy can ensure that endoscopes, together with all reusable accessories, can be traced to the patients on whom they have been used.

Reprocessing should be undertaken before the endoscopy list, between each procedure, at the end of the list and prior to inspection, service or repair. A record of this reprocessing must be maintained for each endoscope.

Reprocessing

Flexible endoscopes are more complex than rigid scopes and are therefore more complicated to decontaminate effectively.

Cleaning

Effective cleaning is an essential pre-requisite to disinfection and sterilisation. Staff handling the contaminated endoscope must wear appropriate protective clothing. A manual cleaning procedure, incorporating brushing of each channel at least three times, should precede further processing using an Automated

Endoscope Reprocessor (AER). Thorough cleaning will remove adherent infectious agents as well as the organic matter that protects them.

A solution of neutral or enzymatic detergent is recommended. The detergent solution must be freshly prepared and changed at a frequency recommended by the manufacturer to prevent contamination with organic matter. Single-use detergents are available.

Cleaning brushes must be compatible with the endoscope.

Channel cleaning brushes and the valve on the biopsy/instrument channel port should be disposed as clinical waste after each use.

Disinfection

Immersion in static disinfectant has been shown to have limitations and for this reason the use of an Automated Endoscope Reprocessor (AER) is recommended. It must be remembered that AERs may themselves be a source of infectious agents, leading to endoscope contamination and subsequent patient infection and/or misdiagnosis. The AER must comply with the recommendations made in HTM2030 and should be supported by a service contract and regular testing and validation regime. Testing of the quality of the rinse water may also be recommended by the EHPU.

Serial processing of endoscopes in automated systems may reduce the disinfectant potency and many AERs include automatic disinfectant concentration monitoring within the cycle.

Sterilisation

Steam under pressure is preferable to the use of liquid chemical disinfectants, and should be used for all heat-tolerant items. Unfortunately flexible endoscopes are generally heat sensitive and the manufacturer's advice should be sought when identifying the most suitable method of high-level disinfection.

Types of Disinfectant

All decontamination procedures must be carried out in accordance with the endoscope, AER and disinfectant manufacturer's instructions. The organisation must also be assured that the chosen disinfectant is compatible with the endoscope.

Alcohols

Ethanol or isopropanol (70%) has good bactericidal, fungicidal and virucidal properties but does not penetrate organic matter and is a poor sporicide. It is useful as a surface disinfectant and may be used as a base for other bactericides.

- **Aldehydes eg Cidex®**

Glutaraldehyde is less commonly used than in the past due to problems of staff sensitisation and the necessary monitoring of occupational health of operatives and environmental considerations especially with regard to room ventilation. A 2% solution requires a three hour contact time in order to achieve high-level disinfection and a 60 minute contact time if contamination with *Mycobacteria* is suspected.

Ortho-phthalaldehyde (OPA) is a fast-acting high-level disinfectant but it has limited activity against bacterial spores.

Glutaraldehyde and OPA have fixative qualities which tend to stabilise rather than inactivate prions. Non-fixative disinfectants are therefore preferable.

- **Chlorine dioxide eg Tristel®**

Chlorine dioxide is rapidly bactericidal (including *Mycobacteria*) and virucidal achieving high-level disinfection within 5 minutes and is sporicidal within 10 minutes.

- **Peroxygen compounds eg Steris®**

High-level disinfection is achieved by a 0.2% peracetic acid solution at 45°C used within an AER.

- **Superoxidised saline eg Sterilox®**

High-level disinfection is rapidly achieved but organic matter affects the solution so the items must be scrupulously clean.

Storage of Endoscopes

The manufacturer's recommendations should be followed when devising the local policy on the storage of endoscopes.

Disinfected endoscopes should be purged with compressed air or 70% alcohol to dry all internal surfaces and channels. Flexible endoscopes should be stored

suspended vertically in ventilated storage cabinets and should not be in contact with other endoscopes, accessories or surfaces.

5. Enteral Feeding

Preparation and Storage of Feeds

Effective hand decontamination must be carried out before starting feed preparation.

Wherever possible pre-packed, ready to use feeds should be used in preference to feeds requiring decanting, reconstitution or dilution. Feeds should be stored according to the manufacturer's instructions and, where applicable, food hygiene legislation.

When decanting, reconstituting or diluting feeds, a clean working area should be prepared and equipment dedicated for enteral feed use only should be used. Where ready to use feeds are not available, feeds may be prepared in advance, stored in a refrigerator, and used within 24 hours. **This is not generally acceptable within the community hospital setting and the advice of the Infection Control Team should be sought.**

Feeds should be mixed using cooled boiled water or freshly opened sterile water and a no-touch technique.

The system selected should require minimal handling to assemble, and be compatible with the patient's enteral feeding tube.

Administration of Feeds

Minimal handling and an aseptic no-touch technique should be used to connect the administration system to the enteral feeding tube.

Ready to use feeds may be given for a whole administration session, up to a maximum of 24 hours.

Reconstituted feeds should be administered over a maximum 4-hour period.

Administration sets and feed containers are for single use and must be discarded after each feeding session.

If single-patient-use syringes are used to administer drugs these should be disposed of after use.

Care of insertion site and enteral feeding tube

The stoma should be washed daily with water and dried thoroughly.

To prevent blockage, the enteral feeding tube should be flushed with fresh tap water before and after feeding or administering medications. The consultant microbiologist should be consulted and may require sterile water to be used within the community hospital.

Enteral feeding tubes for patients who are immunosuppressed should be flushed with either cooled freshly boiled water or sterile water from a freshly opened container.

6. Intravenous Therapy

Control of Infection in Intravenous Therapy is of paramount importance. Catheter-related sepsis causes significant morbidity and mortality. The incidence of Central Venous catheter related infections is 4-20%. Staphylococci are implicated in 50% of episodes. Other microorganisms include:

- Candida
- E.coli
- Klebsiella
- Pseudomonas

Intravenous therapy may be accessed via a peripheral vein or a central line. A central line catheter is inserted into the superior Vena Cava and is often tunnelled under the skin in the chest wall e.g. a 'Hickman' Line. Another access point into a central line is through an entry port in the arm or chest wall e.g. Porta Cath.

These various devices may be left in situ for different lengths of time. Individual instructions on care of specific lines can be obtained either from the health care premises that the patient attended, or from the manufacturer.

INTRAVENOUS CANULATION AND THERAPY

Factors influencing development of sepsis include:

- Initial skin preparation;
- Care of the insertion site;
- Type of connector;
- Skin microflora and type of dressing;
- Care of entry port.

RECOGNISING CATHETER ASSOCIATED INFECTIONS

The insertion site should be inspected at least daily, and the findings noted in the patient's care plan. Any dressing changes, reinsertions and giving set and filter changes must also be similarly recorded.

Localised effects may occur at the insertion site or along the track of a tunnelled device. These include:

- Thrombophlebitis;
- Exudate formation;
- Heat at site;
- Oedema;
- Pain;
- Irritation;
- Erythema.

Systemic effects include:

- Pyrexia;
- White cell count elevated.

ACTION TO TAKE IN THE EVENT OF AN INFECTION OCCURRING

- Do not inject via the catheter or use the intravenous line;
- Contact the Doctor in charge of the patient's care - an alternative route or site of administration should be considered (cannula should be removed at first indication of local infection);
- Take swab for Microbiology culture and sensitivity;
- May need blood cultures whilst still in-situ from:
 - Peripheral Line
 - Central Line
- Mid-stream specimen of urine (MSU) chest x-ray, throat swabs.

EXTRAVASATION

Occurs when a cannula pulls out of a vein and the fluid accumulates around the cannula site in the surrounding tissues.

Possible signs are:

- Swelling;
- Discomfort;
- Burning;
- Pain.

Action:

- Do not use intravenous line;
- Inform Doctor in charge of the patient's care;
- Elevate the limb to promote venous drainage;
- Monitor vital signs.

General Principles For The Control Of Infection In Intravenous Lines

- Insertion - sterile procedure;
- Hand washing;
- A clean procedure for all manipulations;
- Wear appropriate gloves;
- Keep handling to a minimum;
- In general, administration sets in continuous use need not be replaced more frequently than at 72 hour intervals, unless they become disconnected or a catheter-related infection is suspected and/or documented;
- Administration sets for blood and blood components should be changed every 12 hours, or according to manufacturer's recommendations;
- Use bio connectors whenever possible;

- Clean all connections with either alcohol or an alcoholic solution of chlorhexidine gluconate before and after each access (check manufacturers instructions);
- Flush with sterile 0.9% sodium chloride solution (unless otherwise stated) after each bolus injection (as prescribed by GP/Doctor);
- When recommended by the manufacturer, implanted ports or open-ended catheter lumens should be flushed and locked with heparin sodium flush solutions;
- Examine all IV fluid bags and drugs for administration for dates of expiry and evidence of damage or contamination. Also check fluid against prescribed medication chart.

FILTERS

Anti-bacterial filters may be incorporated into the administration sets to prevent debris entering the patient (Debris will encourage thrombus formation and infection). However they should be used routinely for infection prevention. These filters must be changed every 96 hours (4 days).

DRESSINGS

In the absence of guidance from the discharging hospital, the following can be implemented:

1. This is an aseptic procedure.
2. Sterile gloved hands.
3. An alcoholic chlorhexidine gluconate solution should be used to clean the catheter site, and allowed to air dry. (An aqueous solution of chlorhexidine gluconate should be used if the manufacturer's recommendations prohibit the use of alcohol with the product).
4. Sterile transparent and non occlusive dressing, may be left in situ for up to 7 days, but inspect daily.
5. Healed sites do not need a dressing.

TOTAL PARENTERAL NUTRITION

- Parenteral nutrition (PN) is the administration of nutrient solutions via a central or peripheral vein. It is most commonly administered through a peripherally inserted central venous catheter into the superior vena cava and it is only used when the patient's gastro-intestinal tract is not functional.

- Preferably a single lumen catheter should be used to administer parenteral nutrition.
- Strict asepsis is required when dealing with parenteral nutrition procedures.
- Administration sets should be changed every 24 hours.
- All clients are self-caring with advice and support from the Nutrition Support Team.
- The Nutrition Nurse Specialist team are available 24 hours a day via your local hospital.

7. Laundry Management

Microorganisms are physically removed from the linen by the detergent and water, and the high temperature of the wash destroys most organisms. Any organism that remains is likely to be destroyed by further processes of tumble drying and ironing.

Staff handling used linen should wear gloves and apron. Staff must wash their hands after removing their protective clothing.

SENDING LAUNDRY TO A COMMERCIAL OR HOSPITAL LAUNDRY

If patients' laundry is sent to an outside laundry, by collection or delivery, any special instructions must be complied with e.g. a colour coding system. Conventionally, laundry bags are colour coded in the following way:

- Used linen - a white bag
- Foul linen - a sealed clear soluble bag within a white or blue bag
- Infected linen - a sealed clear soluble bag within a red bag.

All staff must take care that neither patients' belongings nor medical equipment is sent to the laundry. Careful segregation will minimise the chances of this occurring.

Soiled linen must be removed from patient care areas as soon as possible, and stored in a secure area awaiting collection.

Clean laundry must be stored in a designated cupboard, which is kept clean and tidy. Linen must never be stored in 'dirty' areas of the ward or on the floor.

The ward manager must ensure an adequate supply of linen at all times.

There may be occasions when extra supplies are required i.e. during an outbreak of infectious enteric disease and there should be a contingency plan to meet this potential added demand.

In Outpatients departments

It is recommended that linen be kept to a minimum.

Couches

- The surface of all couches must be of a washable impermeable fabric;

- The condition of the surface of all couches should be regularly checked (minimum once monthly) to ensure the fabric remains intact;
- The couch should be covered with disposable paper towel, which must be changed between patients;
- If the paper towel becomes soiled and the soiling seeps through to the surface of the couch, the couch must be decontaminated before use by another patient. If contaminated with blood use a sodium dichloroisocyanurate compound (e.g. Presept, Sanichlor);
- If the contaminate is another body fluid, general purpose detergent and warm water is sufficient to decontaminate the surface of the couch;
- Pillows are not considered essential as all couches should have head-tilts. However, if pillows are used, they should be sealed within a plastic impermeable cover. Disposable pillowcases should then be used. These should be discarded once weekly or more frequently if they become soiled. If standard pillowcases are used, they must be washed weekly or more frequently if they become soiled;
- Blankets/sheets are not considered essential. For modesty, a length of disposable paper towel should be used to cover exposed parts of the body.

When Linen is Used:

- Terry towels must be changed daily;
- All other linen must be changed at least weekly, or more frequently if soiled;
- Place linen soiled with body fluids in a leak-proof, water-soluble bag and arrange prompt laundering;
- Used linen must be laundered at 71°C for 3 minutes or 65°C for 10 minutes. For staff health reasons and quality control issues (as domestic washing machines are not generally designed to comply with this standard), it is not acceptable for linen to be laundered by any member of staff using their own personal facilities i.e. at home.

IN THE PATIENT'S OWN HOME

Staff caring for clients in their own homes may be involved in the laundering of client's clothes or linen. The following principles should be noted:

- The germs in most soiled and fouled linen are unlikely to cause infection in healthy workers provided that care is taken. But to further minimise the risk:
 - wear a waterproof apron and gloves when dealing with used laundry;

- ensure that adequate hand washing facilities are available;
 - remove any protective clothing and wash hands before returning to other duties;
 - do not smoke or eat while dealing with laundry;
 - cover cuts and abrasions with waterproof dressing.
- In the client's own home, a domestic washing machine may be used. Soiled and foul linen should be pre-washed and then washed at the highest temperature that the material will withstand. Soiled or foul linen should not be washed by hand.

STAFF UNIFORMS OR WORK CLOTHES

Staff who are at risk of contaminating their clothes by body fluids should always change into 'home' clothes as soon as possible - preferably before leaving the work place or as soon as home is reached.

Under no circumstances should staff go out socialising in clothes that may have been in contact with body fluids.

Uniforms or work clothes should be washed as soon as possible on as hot a wash as the fabric will tolerate. Cardigans/jumpers should be washed at least weekly.

Uniforms should not be washed with new-born baby, elderly persons or immuno-compromised persons clothing.

Worn uniforms should be stored away from other household washing.

The majority of bacteria and viruses will not survive away from the host and would not present a high risk of infection on clothing. However, within a mass of body fluid, organisms would survive longer.

Shoes should be cleaned immediately if contaminated with body fluids, using general purpose detergent and hot water - disposable gloves should be worn.

8. Management of Non Infectious And Infectious Deceased Patients

This guideline sets out the procedures for staff to follow for the management of non-infectious and infectious deceased patients.

MANAGEMENT OF DECEASED CLIENTS

The deceased should be treated with the due respect and dignity appropriate to their religious and cultural background. Last Offices, which vary according to religious and cultural practices, may be compromised by the need for specific measures if an infectious disease was associated with the death, or co-existed at the time of death. Any problems should be discussed with the Consultant Microbiologist or EHPU.

Most bodies are not infectious, however through the natural process of decomposition the body may become a source of potential infection whether previously infected or not, therefore sensible precautions should be taken routinely.

- Disposable gloves and aprons should be worn when washing and preparing the body.
- Washing the body with soap and water is adequate.
- Dressings, drainage tubes, etc. should be removed unless the death occurred within 24 hours of an operation or was unexpected in which cases a post-mortem is likely.
- Clean dressings should be applied to any wounds.
- Profusely leaking orifices may be packed with gauze or cotton wool.

ADDITIONAL LAST OFFICES FOR A KNOWN INFECTED BODY

The body of a person who has been suffering from an infectious disease may remain infectious to those who handle it.

Body bags are available from either the undertaker or the stores centre from where all other care equipment is requested.

The mortuary/funeral director staff should be informed of the potential infectious risk.

If the deceased has died from one of the following infectious diseases listed below, the body will need to be placed in a cadaver bag.

- Anthrax
- Brucellosis
- Chickenpox/shingles
- Cholera
- Diphtheria
- Food Poisoning (if faeces is present)
- Hepatitis B
- Hepatitis C
- HIV/AIDS
- Leprosy
- Meningococcal Septicaemia (with or without meningitis)
- Plague
- Acute poliomyelitis
- Psittacosis
- Pyrexia of unknown origin
- Q fever
- Rabies
- Tuberculosis (infective)
- Viral Haemorrhagic fever
- Yellow fever

or if there are large quantities of body fluids present.

A 'Notification of Death' label and a 'Danger of Infection' label should be attached discreetly to the outside of the bag. Neither label should state the diagnosis, which is confidential information. It is the responsibility of the certifying clinician to ensure the funeral directors have sufficient information about the level of risk of infection and stating the type of precautions required.

Once the body is sealed in the body bag, protective clothing will no longer be necessary.

Relatives and friends who wish to view the body should do so as soon after death as possible. A member of staff wearing gloves and plastic apron can open the bag, but relatives should be told that there is a risk of infection and should be advised to refrain from kissing or hugging the body. In some rare instances the bag could not be opened e.g. if the patient suffered from Anthrax, Plague, Rabies and Viral Haemorrhagic Fever.

Further advice on specific infectious diseases can be found in the Infection Control Guidelines for Funeral Directors, or advice can be sought from the Essex Health Protection Unit.

9. Service Specification – Infection Control Guidelines For General Practitioners Performing Minor Surgical Procedures

This specification describes the working practices, standards and procedures that WEST ESSEX INFECTION CONTROL TEAM recommends General Practitioners who have registered with the Primary Care Trust to follow when performing minor surgery. For the purposes of this document minor surgical procedures are considered under three different groups so as to reflect the need for a higher standard of infection control as the procedures become more invasive.

Group One: Injections
 Aspirations
 Curette, cautery and cryocautery

(as referred to in the “Red Book” - DHO. Statement of Fees and Allowances payable to General Medical Practitioners in England and Wales. 1996 Edition.)

These minor surgical procedures require a standard of good basic infection control procedures, and can be found in Appendix One.

Group Two: Incisions *
 Excisions *
 Endoscopy

Group Three: Lumps and bumps
HSG (96) 31 Vasectomy
 Other services or procedures under HSG(96)31

* at the discretion of the practitioner, some incisions and excisions (e.g. warts and removal of toe nails) may fall into Group One, as they could be seen as very minor.

Please note that there may be additional requirements for specialised procedures.

INTRODUCTION

Infection control is an important part of an effective risk management programme to improve the quality of patients’ care and the occupational health of staff.

Patients undergoing invasive procedures such as minor surgery will have an increased susceptibility to infection. There is evidence that adherence to good infection control principles can significantly reduce the risk of infection post procedure.

The Primary Care Trust, as a purchaser of healthcare services for its population has a concern for the general standards of quality of these services.

AIMS AND OBJECTIVES

- To ensure an adequate infection control programme is in place for the protection of patients undergoing minor surgical procedures within General Practice premises.
- To ensure practitioners involved in minor surgery are protected against infectious hazards by maximising occupational and procedural safety.

ACTION REQUIRED BY GENERAL PRACTITIONERS PERFORMING MINOR SURGICAL PROCEDURES THAT FALL UNDER GROUPS TWO AND THREE

Each General Practice/Practitioner should comply with the following:

1. Environment - Designated* room where minor surgery is performed

- Ceiling and walls should have an intact, washable surface and be visibly clean. A suitable covering should be used i.e. washable emulsion paint.
- Flooring should be intact, impervious, washable, and visibly clean.
- Windows should be in a good condition and state of repair, and be visibly clean. Frosted glass should be used if the inside of the room is visible from the exterior unless blinds are always used. All window coverings should be blinds that are washable.
- Cupboards must be structurally sound and in a good state of repair, washable and visibly clean. There should be sufficient storage space, to aid cleaning and prevent accumulation of dust. Open shelving is not recommended.
- Work surfaces should be intact, seamless and easily washable. They should be kept clear of unnecessary items.
- The lighting in the room should allow good visibility to perform the procedure. The light fitting should be easy to clean. All fluorescent tubes should be covered with a diffuser.
- The couch material should be impervious to body fluids. Disposable paper towelling should be used for each individual patient, not linen.
- Ideally a dirty utility area should be available for the decontamination of equipment and it should be within easy access to the procedure room. In the absence of such facilities, there should be a designated area, with a designated sink for the pre-cleaning of contaminated equipment, within the room itself. The workload should be managed in such a way to allow

for decontamination of equipment to take place after each case, once the patient has left the room.

- There should be a designated hand washbasin with elbow-operated taps, which is not used for the decontamination of equipment. Access should be clear and sinks should be visibly clean.

* Designated room - these procedures should be performed in a controlled environment i.e. the fabric of the room should be intact and clean.

2. Equipment

- Wall mounted liquid soap dispensers should be available at all sinks in clinical/treatment areas. Bar soap should not be present in these areas.
- The practitioner should ensure his/her hands are effectively cleaned to prevent cross-infection. Anti-bacterial soap (e.g. hibiscrub, betadine) should be available for minor surgical procedures.
- Wall mounted dispensers for paper towels for drying hands should be available at all sinks.
- Single-use sterile surgeons gloves should be available and worn by the person/s performing minor surgical procedures.
- Single-use unsterile, unpowdered and low protein, latex gloves should only be worn by those not directly involved in the minor surgical procedure, for all contact with body fluids.
- Single-use disposable plastic aprons should be available. All personnel must wear these if they are likely to come into contact with body fluids.
- Plastic goggles and masks/visor should be available for use if it is anticipated that there may be splashing of body fluids.
- Single use items must **never** be re-used.
- Sterile products should be stored above floor level.
- Where sterile equipment is obtained from Sterile Services Department (SSD):
 - the equipment should be rotated to ensure products are used
 - within expiry times
 - clean equipment should be stored in cupboards

- used equipment should be stored separately in a designated safe area prior to collection
- equipment must be collected within a 7-day period.
- Where practices sterilise their own equipment; a steam autoclave meeting all 4 parts of BS 3970, should be used, and operated according to standards laid out in Health Technical Memorandum 2010 part 1 (HTM 2010).
- A stainless steel, free-standing dressing trolley, designated for use in minor surgical procedures, should be structurally sound and in a good state of repair.
- Sharps containers used should conform to BS 7320. They should be correctly assembled and stored off the floor.
- Yellow clinical waste bags should be supported in a lidded, foot operated, rigid bin.
- A spillage kit for body fluids should be available.

3. Procedures

- The workload should be managed to assure adequate time for infection control procedures to be effectively carried out between patients. This may require varying intervals of time between cases to allow decontamination and re-sterilisation of equipment.
- Protective clothing should be used whenever handling body fluids and changed between each patient.
- Hands should be washed between each patient activity with liquid soap using the social handwashing method, and with anti-bacterial soap (e.g. Hibiscrub) before minor surgical procedures.
- Only sterile, single-use nailbrushes should be used.
- All equipment should be pre-cleaned by being fully immersed in detergent and hot water and then rinsed, before sterilising in an autoclave.
- Staff must only operate autoclaves when they have been fully trained in their use.

- Equipment for minor surgical procedures should be autoclaved and used directly from the autoclave within 3 hours. **It is essential that instruments are sterilised unwrapped (unless a specific porous load autoclave is used).**
- Staff should be fully aware of the requirements of HTM 2010 with regard to checks and monitoring of the autoclave.
- All staff must follow the protocol for removing spillages of body fluids.
- Specimens should be collected using universal precautions. The specimen container should be clearly labelled and secured in a clear plastic bag.
- Specimens should be stored in a designated safe area (refrigerators used for foods and vaccines must not be used). They should be transferred to the laboratory under controlled conditions.
- All clinical/household waste should be identified and segregated at source into colour-coded bags.
- Waste bags should be no more than 3/4 full. The bag must be sealed and labelled to identify source once in transit. All waste should be collected on a regular basis, at least once weekly.
- There should be a designated area to store all waste prior to collection. It should be kept secure from unauthorised persons, entry by animals and free from infestations.
- Sharps containers should be positioned near to the operator and disposed of when 3/4 full.
- All staff must observe the sharps injury protocol.
- If the couch becomes contaminated with body fluids it should be cleaned with detergent and hot water and the disposable sheet should be changed between each patient. If contaminated with blood, a sodium hypochlorite solution should be used.
- Dressing trolleys must be washed down with detergent and hot water before each session commences, or if the trolley becomes contaminated with body fluids. The trolley should be wiped down with 70% alcohol between each patient.
- There should be a programme for environmental cleaning that includes the walls, ceiling, lighting, flooring, cupboards and work surfaces.

- The infection control policy should be readily accessible to all staff.

4. Occupational Health

- All staff involved in minor surgical procedures should be vaccinated against Hepatitis B and have documented proof of immunity.
- Staff carrying out Exposure Prone Procedures must follow current guidelines regarding testing for Hepatitis C and HIV. This should be monitored and supervised by the Occupational Health provider.
- All staff should adhere to “Health and Safety at Work” - Guidance for GPs. General Medical Services Committee, BMA. April 1995.

APPENDIX ONE - Action required by general practitioners performing minor surgical procedures that fall under Group One

1. Equipment

- Liquid soap should be available at all sinks in clinical/treatment areas. Bar soap should not be present in these areas.
- Paper towels for drying hands should be available at all sinks.
- Single-use unsterile, unpowdered and low protein latex gloves should be worn.
- Single-use disposable plastic aprons should be available. All personnel involved in the minor surgical procedure must wear these.
- Single-use items must **never** be re-used.
- Sterile products should be stored above floor level.
- Where sterile equipment is obtained from Sterile Services Department (SSD):
 - stock rotation must be implemented to ensure products are used within expiry times;
 - clean equipment should be stored in cupboards;
 - used equipment should be stored separately in a designated safe area prior to collection;
 - contaminated equipment must be collected within a 7-day period.
- Where practices sterilise their own sterile equipment, a steam autoclave meeting BS3970 should be used and operated according to standards laid out in HTM 2010.
- A stainless steel, free-standing dressing trolley, designated for use in minor surgical procedures, should be structurally sound and in a good state of repair.
- Sharps containers used should conform to BS 7320. They should be correctly assembled and stored off the floor.
- Yellow clinical waste bags should be supported in a foot operated, rigid bin.

- A spillage kit for body fluids should be available.

2. Procedures

- Protective clothing should be used whenever handling body fluids and changed between each patient.
- Hands should be washed between each patient activity with liquid soap using the social handwashing method.
- For re-usable equipment such as currettes, these should be decontaminated after use as per specification 3.5 - 3.8.
- All staff must follow the protocol for removing spillages of body fluids.
- Specimens should be collected using universal precautions. The specimen container should be clearly labelled and secured in a clear plastic bag. Where a specimen carries a likely "Infectious Risk" this should be indicated on the container and request form.
- Specimens should be stored in a designated safe area (refrigerators used for food or vaccines must not be used). They should be transferred to the laboratory under controlled conditions.
- Waste should be handled as per specification 3.12 - 3.15.
- All staff must observe the sharps injury protocol.
- Dressing trolleys must be washed down with detergent and hot water before each session commences, or if the trolley becomes contaminated with body fluids. The trolley should be wiped down with 70% alcohol between each patient.
- The infection control policy should be readily accessible to all staff.

10. Prevention And Control Of Infection In Urinary Catheter Care

ROUTES OF ENTRY FOR INFECTION

Urinary catheters are inserted to provide urinary drainage. They may be introduced via the urethra or into the bladder through a supra pubic procedure.

Comprehensive information, advice and support are available from the continence advisors. They can be contacted on:

- **Basildon & Thurrock** **01375 394968**
- **Mid Essex** **01245 344875**
- **Southend** **01702 434444 Ext 2561**
- **North West** **01279 444455**
- **North East** **01206 742238**

or from the District Nursing Service

Bacteria may enter the bladder of the catheterised patient in one of four ways:

- introduced with the catheter at the time of insertion;
- travel along the outside of the catheter;
- travel along the inside lumen of the catheter;
- through a break in the closed system.

ASSESSMENT FOR CATHETER EQUIPMENT

Once the decision to insert a urinary catheter has been made an individual assessment needs to be completed by the nurse or continence advisor for:

- size, length and type of catheter;
- appropriate drainage and securing system.

Manufacturers guidelines **must always** be followed.

The catheter size should be the smallest that is capable of providing adequate drainage. Catheters are available in paediatric, female and male (standard)

lengths. In some instances it may be more appropriate to use a male length for a female patient.

- Short-term catheters can be used for 7 days only, and are made from PVC.
- Medium-term catheters can be used for up to 3 weeks and are PTFE-coated or silicone-coated.
- Long-term catheters can be used for up to 3 months and are made from silicone or hydrogel coated.

The retaining balloon should be filled with sterile water to the volume indicated by the manufacturer (usually 10mls).

INSERTION

This should be an **aseptic** technique. The **ONLY** exception to this may be when an individual performs intermittent **self**-catheterisation, when a clean technique is required.

OTHER EQUIPMENT

Typical equipment consists of: Catheter, Leg Bag and Night Bag.

The leg bag, attached to the end of the catheter can remain in place for up to 7 days. Should it be removed or become detached for any reason before that, then a new sterile bag is required.

To provide the client with a greater capacity of drainage a night bag can be attached to the end of the leg bag. If the client is self caring, this bag can then be removed, rinsed with water, drained dry, the connector tube capped and then stored in a clean place and re-used for up to 7 consecutive nights.

When more than one carer is delivering care single-use, non-drainable, night bags should be used.

Non-drainable bags should be emptied by snipping the bottom corner of the bag and emptying the contents down the toilet. Gloves and a plastic apron should be worn for this procedure.

When emptying the bags, or for any manipulation of joints, disposable aprons and gloves should be worn. Hands must be washed and dried after removal of gloves.

STRAPS

A catheter should always be securely positioned, usually to the patient's leg to prevent trauma and potential infection. Velcro (MG) straps **ONLY** are suitable for this purpose, they are available on GP prescription.

Manufacturer's straps should be used to secure the leg bags.

Night Bags should be securely fastened to a drainage bag stand.

WASHOUTS

Appropriately trained nurses should only perform washouts. As the correct technique is of paramount importance, clients/ carers should **NOT** perform washouts without prior instruction. Washouts should be sterile commercially prepared packs. Advice about regimes and technique is available from the Continence Advisor.

Hands should be washed and sterile disposable gloves worn. Although the logistics of manipulating catheter, catheter bag and wash-out may mean that the procedure becomes unsterile, every attempt should be made to keep it sterile, by a non-touch technique of sterile areas.

CARE OF CATHETERS

The catheter bag should **ALWAYS** hang at least 30cms below the bladder, this assists in a good flow of urine and prevents stagnation of urine.

When a catheter bag is emptied it should be performed whilst wearing latex or vinyl gloves and apron and into a specified individual container for each client. This container should then be washed with detergent and water and stored dry.

Urine can be disposed of into the toilet or the sluice.

Good personal hygiene should be maintained at all times. This can be achieved with soap and water by washing the genital area from front to back and taking care not to contaminate the catheter itself. The use of talc and lotions should be avoided.

If an infection is suspected (presence of pyrexia, groin pain, foul smelling and cloudy urine), a specimen of urine should be taken and bacteria identified before antibiotics are commenced. Specimens of urine should only be taken from the sample port on a leg bag and not from the drainage tap. All specimens need to be in the laboratory within two hours.

Supra pubic urinary catheters require the same assessment and drainage procedures.

A sterile dressing will be necessary until the entry/exit site heals and then normal washing/bathing may resume.

If a catheter becomes blocked with debris or a blood clot it may be necessary to use a 'bladder' syringe filled with sterile water to clear the blockage. This should only be performed after adequate instruction/training.

To remove an indwelling urinary catheter the retaining balloon must be deflated using a syringe. Once removed the balloon should be re-inflated to ensure it is

intact and therefore no debris is left inside the bladder. If the balloon or catheter is not complete the client needs a urologist referral.

11. Safe Handling of 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.

General Principles

- All specimens should be collected using **Standard/Universal 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 workload 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 airtight container in a designated fridge - **not a food fridge**.
- The laboratory must receive sputum specimens 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.

12. Vaccine Control

Vaccines are biological products that need to be stored under controlled conditions to maintain their potency and efficacy.

STORAGE

- On arrival, vaccines should be checked to ensure the cold chain has not been broken and for signs of damage or leakage.
- A nominated person, who has received specific training in this practice, should make sure vaccines are correctly stored and handled by staff.
- Store vaccines in a fridge designed for this purpose.
- Ensure strict stock rotation with new vaccines being placed behind older stock.
- Discard expired vaccines safely.
- Prevent overstocking and allow air to circulate around all stock.
- Do not store in fridge door or in separate drawers in the bottom of the fridge as air cannot circulate.
- Ensure systems are in place to prevent accidental disconnection of the electricity.
- Do not store items other than vaccines in the same fridge.
- Defrost and clean regularly, storing vaccines in an alternative fridge during the procedure.

TEMPERATURE CONTROL

- Vaccines must be kept between 2⁰C and 8⁰C during transportation and delivery, and must not directly touch ice packs.
- Store vaccine between 2⁰C and 8⁰C and not below freezing. Monitor fridge temperature using a minimum/ maximum thermometer, and record results daily.

ADMINISTRATION

- Use reconstituted vaccine according to the manufacturer's recommendations, usually within one to four hours.

- Remove vaccines from the fridge for the minimum length of time before administration - discard any opened in error.
- Do not allow oral polio vaccine (OPV) to remain at room temperature awaiting or following an immunisation as this may decrease the potency of the vaccine.
- Do not prepare vaccine in advance of immunisation as this increases the risk of administering the wrong vaccine and may affect the temperature. Prepare each vaccine for the individual who is to receive it.
- You do not have to routinely cleanse skin unless it is visibly dirty. If alcohol or other antiseptics are used, they must be completely dry otherwise the live vaccines may be inactivated.
- Multi-dose vials may be used for one session only - discard any remaining at the end of the session.
- Dispose by heat inactivation or incineration.

13. Waste Management

1. RESPONSIBILITY

All healthcare organisations have a legal responsibility to dispose of waste safely, ensuring no harm is caused either to staff, members of the public or the environment. This responsibility begins when waste is generated and ends with its final disposal even where properly authorised agents are used.

It is essential that persons handling waste exercise care to prevent injury or transmission of infection to themselves or others. This is to fulfil their responsibilities under the current legislation (for list see end of this Section).

2. DEFINITION OF CLINICAL WASTE

Clinical waste is:

- a) any waste which consists wholly or partly of human or animal tissue, blood or other body fluids, excretions, drugs or other pharmaceutical products, soiled swabs or dressings, or syringes, needles or other sharp instruments, being waste which, unless rendered safe, may prove to be hazardous to any person coming into contact with it; and
- b) any other waste arising from medical, nursing, dental, veterinary, pharmaceutical or similar practice, investigation, treatment care, teaching or research, or the collection of blood for transfusion, being waste which may cause infection to any other person coming into contact with it.

(Controlled Waste Regulations 1992)

Clinical waste is categorised by the Health and Safety Executive as follows:

GROUP A

- a) Soiled surgical dressings, swabs and all other contaminated waste from treatment areas.
- b) Materials other than re-usable linen from cases of infectious disease.
- c) All human tissue from hospitals or laboratories, and all related swabs and dressings.

GROUP B

Discarded syringes, needles, cartridges, broken glass and any other contaminated disposable sharp instrument or items.

GROUP C

Microbiological cultures and potentially infected waste from Pathology Department, Laboratories, post-mortem rooms and other Clinical or Research Laboratories.

GROUP D

Certain pharmaceutical and chemical wastes (*those falling within the definition of clinical waste*). Special care should be taken with any waste that contains mercury or its compounds. Mercury should be recovered whenever possible. In particular, laboratories should remove mercury from aqueous solutions, specimens and the like before these are discharged to sewers.

GROUP E

Items used to dispose of urine, faeces and other bodily secretions or excretions not found in Group A. This is to include used disposable bedpans or bedpan liners, incontinence pads, stoma bags and urine containers.

3. SEGREGATION OF WASTE

The key to the safe disposal of waste is for all staff to conform to the system of segregation shown in the table below. This system enables clear identification of the different types of waste encountered and indicates the disposal procedures that apply to each category.

TYPE OF WASTE	RECEPTACLE
Clinical Waste	Yellow Plastic Bags (225 gauge)
Sharps - Needles, Blades etc	BS 7320/UN 3291 Approved Sharps Container
General (domestic type) Waste	Black Plastic Bags
Glass and Aerosol Cans	Plastic bag lined cardboard boxes that are clearly labelled ' Glass and aerosol cans: not to be incinerated '

4. HANDLING OF WASTE

- Waste should be segregated at the point of origin;
- Personal protective clothing should be worn when handling waste;
- Clinical waste should be:
 - correctly bagged in yellow bags of 225 gauge to prevent spillage
 - double bagged where:
 - the exterior of the bag is contaminated
 - the original bag is split, damaged or leaking
 - kept in a rigid-sided holder or container with a foot operated lid, and so far as is reasonably practicable, out of the reach of children
 - only filled to $\frac{3}{4}$ full
 - securely sealed and labelled with coded tags at the point of use to identify their source.
- Clinical waste should not be:
 - decanted into other bags, regardless of volume
 - contaminated on the outside
 - re-used
 - Sharps must be disposed of into approved sharps containers that meet BS7320/UN3291
 - Sharps container should **NEVER** be placed into a yellow clinical waste bag

5. DISPOSAL OF WASTE

Clinical waste should be placed in a yellow bag (minimum gauge 225mm).

The bag should be removed and securely fastened at least once a day or when $\frac{3}{4}$ full, labelled with its place of origin (e.g. surgery details) and placed in the designated clinical waste collection point.

Disposal of sharps

Syringes, needles, razors, ampoules and other sharps should always be placed in a sharps container. These items should never be placed in a waste bag of any kind.

Care should be taken to ensure that sharps containers are correctly assembled according to the manufacturer's instructions.

Use the appropriately sized sharps container to prevent used sharps being stored for long periods of time.

It is the responsibility of the person who uses a sharp to dispose of it safely.

Always place sharps in the sharps container as soon as possible.

Sharps containers must be sealed, labelled with the point of origin and placed in the designated clinical waste collection point when 3/4 full.

Sharps containers should conform to BS 7230/UN 3291.

Sharps containers should be kept in a safe location (on a flat surface, below eye level but not on the floor). This will reduce the risk of injury to patients, visitors and staff.

For community staff carrying sharps boxes in their cars:

- Sharps should only be carried by staff if there is no alternative for safe disposal;
- Sharps should be placed into the sharps container at the point of use;
- The container should be carried in a secure area of the car, to prevent tipping over whilst driving;
- The container carried should be out of sight;
- The employer may request the member of staff displays a 'Hazard' notice in the car. It is recommended that this be a standard hazard notice, rather than a notice stating that sharps are carried.

Diabetic Sharps

All diabetic sharps should go into a sharps container (this includes lancets).

General Practitioners can now prescribe sharps boxes on FP10. General Practitioners should ensure that the patient is aware of the correct method for disposal of the filled sharps bin. Alternative approaches may include: returning it to the General Practice, returning it to a local clinic, or returning it to a local pharmacy.

Disposal of Aerosol Cans/Glass/Bottles/Broken Crockery/Dry Cell Batteries

These must never be placed in any waste bag, especially a yellow clinical waste bag, which is destined to be incinerated.

These items should always be placed in a designated cardboard box, lined with a plastic bag to render it leak-proof. The box should be labelled to indicate its contents and method of disposal.

Disposal of Pharmaceutical Waste - Special Waste

Pharmaceutical waste includes all part used and out of date medicines, cream and ointment tubes and aerosols. Other associated waste e.g. empty blister packs and alcohol wipe containers can be disposed of in the domestic waste stream (black bag).

All pharmaceutical waste should be placed directly into the pharmaceutical waste container, or returned to the local chemist for them to place into their pharmaceutical waste container.

When $\frac{3}{4}$ full, the container must be sealed, labelled to identify its source with contact details and placed in the designated collection point.

It must be ensured the container is clearly labelled, and that all associated documentation is signed off at the time of collection.

6. STORAGE OF CLINICAL WASTE

Clinical waste should be removed from point of generation as frequently as circumstances demand, and at least weekly.

Between collections, waste should be:

- stored in correctly coded bags, with bags of each colour code kept separate;
- situated in a centrally designated area of adequate size related to the frequency of collection;
- sited on a well-drained, impervious hard standing floor, which is provided with wash down facilities;
- kept secure from unauthorised persons, entry by animals and free from infestations;
- accessible to collection vehicles.

7. MANAGEMENT OF CLINICAL WASTE IN HEALTH AND SOCIAL CARE ESTABLISHMENTS

The above guidance should be followed in full.

Each health and social care employer is responsible for ensuring that contracts are in place to collect clinical waste from their premises. They are also responsible for monitoring the performance of their staff and waste contractors.

8. MANAGEMENT OF CLINICAL WASTE FROM A PRIVATE HOUSEHOLD

(this does **NOT** include private residential care establishments)

Although a householder has no legal duty of care to dispose of clinical waste in the way described above, any health or social care worker who provides care in a private household does e.g. NHS Trust, Social services, care agency staff.

In practice the legislation around clinical waste generated in a private household is not fully implemented nor enforced.

Most enforcing authorities choose not to prosecute health and social care organisations as the volume of clinical waste generated is small, provided sensible and safe precautions are taken.

If an employing organisation elects to adopt these sensible precautions, it should note that the legislation currently states that **all** clinical waste should be incinerated.

9. SENSIBLE AND SAFE PRECAUTIONS

A risk assessment should be undertaken to determine whether there is an increased risk of transmission of infection due to;

- The risk of potential exposure to waste to a third party. For example; waste placed in the household waste stream is collected and crushed/compacted in a collection vehicle. If body fluids within the waste are crushed, these may then spread over an area and possibly contaminate the collection operative.
- The waste is saturated with body fluids such that if lightly compressed, free-flowing blood and/or body fluids would result.
- The waste is a used sharp e.g. needle and/or syringe, lancet. Sharps must be discarded into a sharps container (BS 7320, UN 3291). In some instances, a filled container may be exchanged for a new sharps container at a local pharmacy or health centre.

In these instances a clinical waste collection should be arranged.

A clinical waste collection can be arranged by ringing the local Primary Care Organisation. Enter details below.

Name	Telephone Number	Fax Number
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Please ensure that all the relevant information is included on the fax:

- Client's name;
- Full address (including post code);
- Telephone number for client;
- How often the waste needs collecting;
- What type of waste it is e.g. soft waste in bags or sharps;
- Contact details of the person making the referral.

New regulations in force since 01.01.2002 state that all health care risk wastes (clinical waste) must be contained in UN approved rigid packaging when transported on the road. Current practice is that Primary Care Organisation staff do not carry clinical waste except sharps containers (which are already rigid – and should be carried out of sight and in as stable an area as possible).

For waste that does not fall into the above groups, but would previously have been defined as clinical waste, the following action should be carried out:

Dressings smeared with dried blood and/or body fluids

- These should be double wrapped in plastic bags before being placed in the household waste.

Stoma and urinary catheters bags

- The contents should be fully and carefully emptied down the toilet (taking care not to create a splash back) and flushed away;
- The emptied bag should then be double wrapped in plastic bags before being placed in the household waste.

Incontinence sheets/pads

- If the contaminate is solid and can be easily and safely emptied down the toilet and flushed away, it should be;
- The sheet should be double wrapped in plastic bags before being placed in the household waste.

Dialysis equipment

- When a programme of home dialysis is commenced it should include a collection service of used items. Usually as new equipment is delivered, used items are collected.

10. CURRENT LEGISLATION

- Health & Safety at Work etc Act 1974;
- Control of Pollution Act 1974;
- Collection and Disposal of Waste Regulations 1988;
- Control of Pollution (Amendment) Act 1989;
- Environmental Protection Act 1990;
- Environmental Protection (Duty of Care) Regulations 1991;
- Controlled Waste Regulations 1992;
- The Special Waste Regulations 1996;
- The Safe Disposal of Clinical Waste 1999;
- Health Care Waste Management and Minimisation 2000.

WEST ESSEX INFECTION CONTROL TEAM COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES

SECTION I – VACCINATIONS

1. Where Can I Get Advice On Childhood Immunisations?

The Department of Health's reference manual on childhood immunisation is currently "**1996 Immunisation against Infectious Disease**", available from the HMSO Publications Centre 0207-873-9090.

The full text is also available on the web www.doh.gov.uk/greenbook/ where you can download the full document in pdf format.

If you have a specific issue or query not covered by the Green Book you can contact your District Immunisation Co-ordinator:

Basildon Child Health Department (covering Basildon & Thurrock PCTs, and also the Billericay & Wickford part of BBW PCT) Child Health System Dbase Manager Basildon Hospital Nethermayne Basildon Essex SS16 5NL	Dr Myint	01268 533911 01268 593254
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Brentwood (covering the Brentwood part of Billericay, Brentwood & Wickford PCT only) The Willows, St George's Hospital 117 Suttons Lane Hornchurch, RM12 6RS	Dr to be allocated	01708 465495
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<p>Mid Essex (covering Chelmsford, Maldon and South Chelmsford and Witham, Braintree & Halstead PCTs) Child Health Department Unit 12, Atlantic Square Station Road Witham, CM8 2TL</p>	Dr Gail Bridgeman	01376 302612 Fax: 01376 302618
<p>North East Essex (covering Colchester and Tendring PCTs) East Lodge, Central Clinic High Street Colchester, CO1 1UJ</p>	Dr Bhattacharyya	01206 744052 Fax: 01206 744095
<p>Southend Child Health Department (covering Southend and Castle Point & Rochford PCTs) Child Health System Dbase Manager Southend Hospital Prittlewell Chase Westcliff on Sea Essex, SS0 0RY</p>	Dr Margaron (Secretary)	01702 435555 Ext: 2868 01702 578010
<p>Thurrock (covering Thurrock PCT) Child Development Centre Gifford House Thurrock Hospital Long Lane, Grays, RM15 2PX</p>	Dr Jayakumar	01375 390044 Ext: 5544
<p>West Essex (covering Epping Forest, Harlow and Uttlesford PCTs) Child Development Centre Hamstel House Hamstel Road Harlow, CM20 1RB</p>	Dr Amadi	01279 827178 Fax: 01279 444298

You can also contact the Essex Health Protection Unit on 01376 302282.

2. Where Can I Refer Patients For Advice?

Useful websites for patients where they can obtain additional information on the vaccines are:

- www.immunisation.nhs.uk and www.mmrthefacts.nhs.uk
- The Essex Health Protection Unit has also produced information sheets for parents on MMR which can be accessed via www.ehpt.nhs.uk

Each District Immunisation Co-ordinator runs a regular vaccine advice/contraindications clinic. If you are unfamiliar with the arrangements for booking appointments you can contact the relevant office number.

3. Where Can I Obtain Advice On Travel Vaccinations?

The Department of Health has a reference manual "**Health Information for Overseas Travel**" 2001 edition HMSO, which can be ordered on 0870-600-5522 or via www.thestationeryoffice.com.

'On-line' advice is available for health professionals via www.nathnac.org and www.travax.nhs.uk and for the public on www.fitfortravel.scot.nhs.uk

There are advice pay lines available to the public:

- Hospital for Tropical Diseases 09061 337733
- MASTA Travellers Health Line 0906 224100

Further information

Copies of the current vaccination schedule and the algorithm "Vaccination of Individuals with Uncertain or Incomplete Immunisation Status" is available on www.hpa.org.uk Select "immunisation" in the A- Z of topics.

IMMUNISATION PROCEDURE FOR INDIVIDUALS FROM ABROAD WHERE IMMUNISATION HISTORY IS NOT CERTAIN AT PRESENTATION

1. Firstly check whether there is any single practical way of corroborating their prior vaccination history e.g.:
 - Can they check with a relative?
 - Can they confirm with their previous doctor in their country of origin?
 - Can you compare their history with the normal vaccination schedule for their country?

National vaccine schedules are available on the WHO web site www.who.int/vaccines-documents/. Select the relevant document entitled “WHO vaccine preventable diseases: monitoring system”. However bear in mind the national programme may have broken down in countries with political problems or civil unrest.

If it is a child who will be returning abroad within one year, it is best to keep to the schedule of that country (if possible) including vaccines such as Hib or Men C that may not be provided abroad.

2. If the vaccination history remains unknown you should start a complete vaccination programme according to age.

NB. Individuals above the age of 15 can be immunised in accordance with the recommendation for those aged 10 to 15 although at present there are no national guidelines for this.

OTHER THINGS TO CONSIDER

BCG Vaccine

Should be considered to children born to immigrants from countries with a high prevalence of tuberculosis if not already given. This also applies to children who will be returning to “high risk” countries for stays longer than one-month/visiting relatives etc.

Hepatitis B Vaccine

Hepatitis B screening and vaccine should be considered for families with a higher prevalence of Hepatitis B. (Refer to section Hepatitis B in the Green Book “Immunisation against Infectious Disease.”)

4. Patients Without a Functioning Spleen

After splenectomy patients are at major long-term risk of serious infections.

Splenic macrophages have an important filtering and phagocytic role in removing bacteria and parasitised red blood cells from the circulation. Though the liver can perform this function in the absence of a spleen higher levels of specific antibody and an intact complement system are probably required.

Other categories of patient may be functionally asplenic. These include patients with:

- Sickle cell anaemia;

- Thalassaemia;
- Thrombocytopaenia;
- Some lympho proliferative diseases.

Patients without a functioning spleen should be identified and should receive:

- Pneumococcal vaccine (with a booster at 5 yearly intervals);
- Haemophilus influenzae type b vaccine;
- Influenza vaccine (yearly);
- Conjugated meningococcal C vaccine.

Antibiotic Prophylaxis

Adult dose: Penicillin V 500mg bd

This should be given lifelong but at least for 2 years post splenectomy if patients refuse to take it long-term.

Where a patient is no longer taking antibiotic prophylaxis they should be given a short course of Amoxil to keep at home, which they should start taking at the start of any febrile illness.

NB. Patients allergic to penicillin should receive erythromycin 500mg bd.

Travel

- Asplenic patients should be strongly advised of the increased risk of severe falciparum malaria and should be discouraged from travelling to areas where malaria is endemic. Where travel is undertaken patients should be advised about chemoprophylaxis relevant to local patterns of resistance and measures to reduce exposure to malaria parasites.
- Tick bites - Babesiosis - is a rare tick-borne illness endemic in certain parts of the USA, China, Taiwan, South Africa and Egypt. Some species have caused human infections in Europe. Clinical presentation is with fever, fatigue and haemolytic anaemia. Patients (particularly those in contact with animals) should be warned about the danger of tick bites spreading the disease. Protective clothing may be beneficial.
- Quadrivalent ACYWVAX (SKB) is recommended for all those travelling to some sub-Saharan African countries and for pilgrims to Mecca. Consult the 'Yellow Book' - Health Information for Overseas Travel 1995 (now slightly

out-of-date) or the WHO or CDC Atlanta travel websites for up to date information (refer to travel health advice section).

- Patients who are not otherwise taking antibiotic prophylaxis should do so during periods of travel and should keep a therapeutic course of antibiotics with them for the duration of the holiday.

Animal Bites

Asplenic patients are especially vulnerable to invasive infection following dog and other animal bites from the organism *Capnocytophaga canimorsus*. They should receive a 5-day course of co-amoxiclav (erythromycin in allergic patients).

General

Patients should be encouraged to carry a Medic-Alert disc and carry a card with information about their lack of spleen.

'I have no functioning spleen cards' are available from the Department of Health, PO Box 410, Wetherly LS23 7LL, fax 01937 845381. They are currently being updated to include new advice regarding Men C vaccine.

WEST ESSEX INFECTION CONTROL TEAM COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES

SECTION J – FOOD HYGIENE

1. Introduction

This guideline sets out the procedures for staff to follow for food hygiene in the community hospital.

2. Legislation

All individuals who handle food should follow basic food hygiene practices to ensure contamination and subsequent disease does not occur.

All staff involved in the handling of food should be aware of the legislation relevant to food management. The main legislation is the Food Safety Act 1990 and its related regulations (General Food Hygiene Regulations (1995) and The Food Safety (Temperature Control) Regulations (1995)).

3. Basic Requirements for Food Safety

- Food purchased must be of good and wholesome quality and is subsequently stored, prepared, cooked and served in hygienic conditions.
- Check “use by” dates. Use food within recommended times.
- Do not eat food containing uncooked eggs. Keep eggs in the fridge.
- **Food Preparation Areas.** All food preparation surfaces should be cleaned before use with hot water and general-purpose detergent.
- **Pets.** Keep pets away from food, dishes and worktops.
- **Cross Contamination.** Care is taken not to contaminate cooked foods with raw foods. Ideally there should be a separate chopping board and utensils for each type of food (e.g. raw meat, cooked meat and raw and cooked perishables).
- **Hands and Hand-washing.** Hands **must** be washed thoroughly following any cleaning session, after toilet visits, before handling food and between handling different food types e.g. raw and cooked meats.

- **Refrigerators.** All fridges should be defrosted and cleaned regularly. Should a spillage occur or food become stale the whole interior of the fridge should be cleaned with hot water and general purpose detergent and dried thoroughly.
- **Food.** Food should be stored at the correct temperature. The fridge should be kept at 5°C or lower. The freezer should be kept at minus 18°C or below. Bacteria will grow in temperatures between 10-65°C.
- A daily record of fridge and freezer temperatures must be maintained.
- **Storage.** Store raw meat and fish at the bottom of the fridge ensuring juices do not drip on to salads and vegetables. Raw meat and defrosting foods should be stored in covered dishes, or boxes, which can catch drips.

All sealed dry foods should be stored on shelves or in cupboards. Food should not be stored on the floor. Open packs of food should be stored in containers or packaging sealed to inhibit the entry of animals. Open bottles, such as squash, sauces and jams may require storage in the refrigerator. Follow manufacturer's guidelines.

- **Defrosting.** All foods should be defrosted in the fridge or microwave, not at room temperature (unless specified on the packaging). Do not re-freeze uncooked food. Cook before you freeze again.
- **Cooking.** Always follow cooking times on the labels and in cookbooks. Cook food thoroughly so that the temperature reaches 70°C for at least 2 minutes. Ideally food should be eaten as soon as it is cooked or prepared. Never re-heat food more than once.
- **Leftovers.** These should not be left out unnecessarily. Cold food should be covered and put directly into the fridge. Hot food should be cooled for one hour at room temperature and then placed in the fridge. All leftovers should be eaten within 2 days. **It is not appropriate to keep leftovers within the community hospital setting.**
- **Crockery and Cutlery.** If a dishwashing machine is not available, hot water and general purpose detergent should be used for washing. Wherever possible, dry with disposable heavy-duty paper towel. If used, tea towels are to be changed regularly and laundered at 60°C.
- **Dishcloths.** Should be changed daily and laundered at 60°C.

WEST ESSEX INFECTION CONTROL TEAM COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES

SECTION K – PETS and PESTS

1. Pets

Pets can often enhance the quality of life for the ageing and the ill. However, many types of animal often kept as pets can be the source of human infection, including exotic species such as reptiles, fish or birds. Sensible precautions can reduce any infection risk to an acceptable level.

All animals should be regularly groomed and checked for signs of infection, flea infestation, or other illness. If pets become ill, diagnosis and treatment by a vet should be sought. All animals should have received relevant inoculations. Dogs and cats should be wormed regularly, as directed by a vet and be subject to a regular programme of flea prevention.

Hands should be washed following any contact with animals, their bedding or litter.

Pets should not be fed in the kitchen or other food preparation areas and their dishes and utensils should be washed separately from other household articles. Once opened, pet food containers should be kept separate from food for human consumption. Food not consumed in one hour should be taken away or covered to prevent attracting pests.

2. Litter Box Care

The litter box should not be sited near food preparation, storage or eating areas. If possible, fit a disposable liner to the box for easy cleaning.

The litter box should be disinfected whenever the litter is changed by being filled with boiling water, which is allowed to stand for at least 5 minutes in order to kill toxoplasmosis eggs and other organisms.

Soiled litter should be changed daily by being sealed in a plastic bag and disposed of in household waste.

All staff must always wear a protective apron and gloves when cleaning the litter box and must always wash hands immediately after removing protective clothing.

Pregnant staff must never deal with a cat's litter box.

3. Pets As Therapy (PAT) Visitors

PAT animals pose the same potential hazards to patients as resident pets although the duration of contact is likely to be shorter. The ward or hospital manager must be assured by the PAT animal's keeper that the animal is in optimum health and fully vaccinated as detailed above. All staff must be aware of the risks that PAT animals may pose and should challenge the owner if the animal appears unwell in any way.

Any patients or staff that have physical contact with the animal must wash their hands afterwards and in particular, before eating or drinking.

4. Pests

These include:

- **Insects** - ants, flies, cockroaches, fleas, silverfish.
- **Rodents** - rats and mice.
- **Birds** - pigeons, magpies, sparrows, etc.
- **Feral cats and foxes**

Control measures should include the following:

- Stop pests getting in by fly screens, well fitting doors, covered drains and bird netting.
- Look out for droppings, nests, chew-marks on wood or cables.
- Discard any foodstuffs or other articles affected by pests, including milk from bottles, the tops of which have been pecked by birds.
- Clean up any spillage and decaying food immediately. Carry out regular inspection and rotate any stock. Use rodent-proof containers with well-fitting lids. Store food off the ground.

If any pests are found the PCT Estates Department should be contacted in the first instance. The local Environmental Health Officer should also be informed.

<p style="text-align: center;">WEST ESSEX INFECTION CONTROL TEAM COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES</p>

SECTION L – INFECTION CONTROL ENVIRONMENTAL AUDIT

FOR OUT PATIENTS' AREAS AND CLINICS

This audit tool covers the following areas:

- Environment
- Hand hygiene
- Protective Clothing
- Decontamination
- Spillages
- Specimens
- Waste disposal
- Handling of sharps
- Vaccine control
- Guidelines and policies

AREA _____

DATE _____ TIME _____

NAME OF PRACTITIONER _____

NAME OF Infection Control Nurse _____

ENVIRONMENT

The environment is in good order and in a good standard of repair, to assure cross-infection does not take place.

The following are:

	Ceiling	Walls	Floor	Windows	Cupboards
In good repair	_____	_____	_____	_____	_____
Visibly clean	_____	_____	_____	_____	_____
Washable	_____	_____	_____	_____	_____

Cupboards

- There is sufficient storage space _____
- There is no clutter on surfaces _____

Couch

- Washable _____
- Disposable cover is used _____
- Any linen is changed at least weekly _____

Curtains

- Are laundered 3 monthly _____

Is there a dirty utility area? _____

Any other comments

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HAND HYGIENE

To minimise the risk of cross infection, all staff have access to hand cleansing facilities, using a technique recommended by Infection Control Specialists.

1. Access to hand basins is clear _____
2. Liquid soap is available at all sinks in the clinical areas for social handwashing _____
3. Paper towels are available at all sinks in the clinical areas _____
4. There are no nailbrushes present on sinks _____
5. Bar soap is not present on sinks in clinical areas _____
6. Elbow/mixer taps are available at all sinks in the clinical area _____
7. Sinks are visibly clean _____
8. Alcohol hand rub is available for use at all sinks in clinical areas for hand disinfection _____
9. There are sinks in each clinical area _____

Any other comments

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PROTECTIVE CLOTHING

The health care worker demonstrates the appropriate usage of protective clothing.

1. The following items are readily available to use:
 - single use unsterile latex/vinyl based gloves _____
 - a range of sizes are available _____
 - single use, disposable colour coded plastic aprons _____

- single use disposable sterile gloves _____
 - plastic goggles or face visors _____
 - single use face masks _____
2. After use, all disposable protective clothing is disposed of in a clinical waste bag. _____

Any other comments

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SPECIMENS

All specimens are collected, labelled, and transported safely to prevent the risk of contamination or infection.

1. Specimens are collected using universal precautions _____
2. The specimen is well secured and in a re-sealed clear plastic bag _____
3. The specimen is clearly labelled, on both the specimen itself and the accompanying form _____
4. Specimens are stored in a separate designated area _____
5. Specimens are transferred to the lab, under controlled circumstances _____
6. Any specimen that is potentially hazardous to health, is clearly identified with a bio hazard label _____

Any other comments

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DECONTAMINATION

1. All equipment will be cleaned, disinfected and/or sterilised, after use or prior to inspection, service or repair, to prevent the risk of infection. _____
2. A designated sink is available for decontamination of equipment _____
3. A detergent is used to pre-clean equipment _____
4. Items are fully immersed when cleaning _____
5. Items are rinsed after cleaning _____
6. If an ultrasonic cleaner/washer disinfectant is used, it is used according to manufacturers instructions _____
7. There is a contract for the maintenance and service of the above _____
8. There is no evidence of single use items being re-used _____
9. Sterile products are stored above floor level _____
10. Where there is access to CSSD services, which organisation provides this service? _____

ULTRA-SONIC CLEANERS

1. The ultra sonic cleaner can only be operated whilst the lid is sealed _____
2. All staff have been trained in the use of the cleaner and are aware that devices will require further decontamination prior to further use _____
3. Cannulated instruments are securely attached to nozzles ensuring that lumens are effectively cleaned _____
4. Low-foaming enzymatic detergent at the correct concentration is used _____
5. The transducers are tested daily, or prior to each session. _____
6. Test results are recorded, and records maintained for _____

- 11 years _____
7. Who is the 'owner' of the cleaner? _____
 8. Who is the 'user' of the cleaner? _____
 9. Who installed and validated the cleaner? _____
 10. Is there a certificate of validation? _____
 11. How often is the cleaner serviced? _____
 12. What is the name of the service company? _____
 13. Is the service engineer certificated to perform HTM2030 tests? _____
 14. How often is the water reservoir drained and re-filled? _____
 15. What type of water is used in the water reservoir?
Tap / Irrigation / Sterile / Other please state _____
 16. Staff wear protective clothing whilst inspecting instruments prior to further processing _____
 17. Automated Washer-Disinfectors (AERs)
An AER meeting BS2745, is available.
Please give make and model _____
 18. Equipment processed in the AER is compatible with the process _____
 19. Lumens and endoscope channels must be connected to nozzles ensuring that disinfectant reaches all parts of the device. _____
 20. Is the AER equipped with means to independently monitor all processing parameters? _____
 21. Who is the 'owner' of the AER? _____
 22. Who is the 'user' of the AER? _____
 23. Who installed and validated the AER? _____
 24. Is there a certificate of validation? _____

25. How often is the AER serviced? _____
26. What is the name of the service company? _____

27. Is the service engineer certificated to perform HTM2030 tests? _____
28. Before each session, is the AER on an empty cycle and the operating parameters recorded? _____
29. Is a process log detailing each process cycle and identifying the device (i.e. endoscope) maintained? _____
30. Are these records maintained for 11 years? _____
31. What type of water supplies the AER?
Tap / Irrigation / Sterile / Other please state _____
32. Are routine housekeeping tasks undertaken according to the manufacturer's instructions and recorded? _____
33. Are these records kept? _____
34. Freshly disinfected equipment for use without further processing, is used directly from the AER, within 3 hours of processing? _____
35. All equipment for non-sterile use is stored dry, and is covered? _____

AUTOCLAVES

1. A steam autoclave, meeting British Standard 3970, is available.
Please give make and model _____
2. Is this autoclave downward steam displacement or vacuum? _____
3. **For vacuum autoclaves**, how often are steam penetration tests used? What steam penetration test is used?

4. Are instruments sterilised wrapped or unwrapped? _____
5. Are hollow or tubular instruments sterilised in this autoclave? _____
6. There are no rusty instruments in the surgery _____
7. Who is the 'owner' of the autoclave? _____
8. Who is the 'user' of the autoclave? _____

9. Who installed and validated the autoclave? _____
10. Is there a certificate of validation? _____
11. How often is the autoclave serviced? _____
12. What is the name of the service company? _____
13. Is the service engineer certificated to perform HTM2010 tests? _____
14. Does the autoclave have an annual pressure vessel inspection? _____
15. Before each session, is the autoclave operated on an empty cycle and the temperature, pressure and holding time recorded? _____
16. Is this record kept? _____
17. How often is the water reservoir drained and re-filled? _____
18. What type of water is used in the water reservoir?
Tap / Irrigation / Sterile / Other please state _____
19. Are temperature, pressure and holding times recorded for all cycles? _____
20. Are these records kept? _____
21. Is the door seal and pressure safety devices examined weekly? _____
22. Are these records kept? _____
23. Freshly autoclaved equipment for sterile use, is used directly from the autoclave? _____
24. All equipment for non-sterile use is stored dry, and is covered? _____

SPILLAGES

The health care worker will demonstrate safe handling and disposal of all body fluids.

1. Staff are familiar with the policy for dealing with spills of body fluids. _____
2. A Sodium Hypochlorite solution, or proprietary spillage kit, is readily available for use. _____
3. The procedure for clearing away spillages is followed as per Community Infection Control guidelines. _____

Any other comments

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WASTE DISPOSAL

All waste from health care premises is segregated and identified at source, transported and disposed of safely without risk of contamination, infection or injury to health care staff and the general public.

1. Correct segregation of glass, clinical and household waste and correct colour coded bags are used _____
2. Waste bags are no more than 2/3rds full, sealed/labelled as per policy. _____
3. Bins are clean inside and out _____
4. There is a designated area to store all waste prior to collection and this would present no fire or health and safety risk _____
5. All waste is collected on a regular basis - at least once weekly _____

- 6. The producer of the clinical waste realises their duty of care to ensure clinical waste is incinerated _____

Any other comments

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HANDLING OF SHARPS

All sharps will be handled and disposed of safely from the point of use to the site of incineration to prevent the risk of sharps injury.

- 1. Sharps container used conforms to BS 7320, and is assembled correctly _____
- 2. They are stored safely and off the floor _____
- 3. They are available when any clinical practice including the use of sharps is in process _____
- 4. The box is less than 2/3rds full and there are no protruding sharps _____
- 5. All staff are aware of what action should be taken following a sharps injury _____
- 6. Clinical staff are vaccinated against Hepatitis B, and there is documented proof of this _____
- 7. Sharps containers are available to staff for home visits _____

Any other comments

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VACCINE CONTROL

1. Vaccines are stored in a designated fridge _____
2. Fridge temperatures are recorded daily (must be between 2 - 8°C) _____
3. Vaccines are not stored in the door of the fridge _____

Any other comments

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GUIDELINES, POLICIES AND STANDARDS

There are written policies and procedures that demonstrate infection prevention and control for all patient/client care.

1. The infection control policy is easily accessible to all staff _____
2. There are at least 2 members of staff aware of its content _____
3. The manual is up to date _____
4. Staff are aware of the notification procedure for the notifiable infectious diseases _____
5. Staff involved in minor surgery or in the decontamination of medical devices have had the Hepatitis B vaccine _____

Any other comments

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WEST ESSEX INFECTION CONTROL TEAM COMMUNITY HOSPITAL INFECTION CONTROL GUIDELINES

SECTION M – REFERENCES

Decontamination

Babb J., (1994) Methods of Cleaning and Disinfection. British Journal of Theatre Nursing 3(10) Jan 12-29.

Bassett WH (1992) Clay's Handbook of Environmental Health. 16th Edition. London.

DOH (2003) Transmissible Spongiform Encephalopathy Agents: Safe Working and the Prevention of Infection. London.

MDA (2002) Benchtop Steam Sterilizers – Guidance on Purchase, Operation and Maintenance. MDA DB 2002(06).

MDA (2000) guidance on the Purchase, Operation and Maintenance of Vacuum benchtop steam sterilisers MDA DB 2000(05)

MDA (2002) Decontamination of Endoscopes MDA DB2002(05)

NHS Estates (1994) Health Technical Memorandum 2010. London.

NHS Estates (1997) Health Technical Memorandum 2030. London.

NHS Estates (1997) Health Technical Memorandum 2031. London

PHLS (1993) Chemical Disinfection in Hospitals. London.

Enteral Feeding

ICNA (2003) Enteral Feeding – Infection Control Guidelines. London

Exclusion of Food Handlers

DoH (1994). Management of Outbreaks of Foodborne Illness. HMSO. London.

DoH (1995) Food Handlers: Fitness to work. Guidance for Food Businesses, Enforcement Officers and Health Professionals. London.

Handwashing

Gould et al 2000. *Improving hand hygiene in community health settings*. Journal of Clinical Nursing 9-95-102

ICNA (1999) Guidelines for Hand Hygiene. London.

Health and Safety

Health and Safety Commission (1974). Health and Safety at Work Act. HMSO. London.

Health and Safety Executive (1994). Control of Substances Hazardous to Health Regulations. HMSO. London.

Infection Control

Ayliffe G, Fraise A, Geddes A, Mitchell K, (2000) Control of Hospital Infection – A Practical Handbook. Fourth edition. London

DOH (2003) Transmissible Spongiform Encephalopathy Agents: Safe Working and the Prevention of Infection. London.

Hawker J, Begg N, Blair I, Reintjes R, Weinberg J (2001) Communicable Disease Control Handbook. London.

Lawrence, J., May, D., (2003) infection Control in the Community. Churchill Livingstone. London.

McCulloch, J. (2000) Infection Control - Science, management and practice. London.

MEERS P, McPherson M, SEDGWICK J (1997) Infection Control in Health Care. 2nd edition. Thomas Cheltenham.

NATIONAL INSTITUTE FOR CLINICAL EXCELLENCE (2003) Infection Control – Prevention of healthcare-associated infection in primary and community care.

Pritchard, A.P., Mallet, J. (Eds) (1992). The Royal Marsden Hospital Manual and Clinical Nursing Procedures, Blackwell, London

Wilson J. 2000 Infection Control in Clinical Practice. Bailliere Tindall London

Infectious Diseases

British Society for Antimicrobial Chemotherapy (1995) Guidelines on the control of methicillin-resistant *Staphylococcus aureus* in the community. *Journal of Hospital Infection*, 31, 1-12.

BTS (2000) Control and prevention of tuberculosis in the United Kingdom. *Code of Practice 2000*. *Thorax* 2000; 55: 887-901.

Burgess, I. (1995) Management guidelines for lice and scabies. *Prescribers*. 5 May 87-107.

Chin J., (2000) *Control of Communicable Diseases Manual*. 17th Edition. Washington

DoH (1998) *Guidance for Clinical Health Care Workers: Protection against infection with blood-borne viruses*. London.

DoH (2000) *HIV Post-Exposure Prophylaxis: Guidance from the UK Chief Medical Officers' Expert Advisory Group on AIDs*. London

DoH (2000) *Recommendations for the prevention and control of Tuberculosis at local level*.

Greenwood D, Slack R, Peutherer J. (1992) *Medical Microbiology a guide to Microbial Infections: Pathogenesis, Immunity, Laboratory Diagnosis and Control*. 14th edition. Churchill Livingstone, London

Healing TD, Hoffman PN, young SEJ, (1995). *The Infection Hazards of Human Cadavers*. *Communicable Disease Report*. Vol5:No5.

McDonald, P. (2000) *Diagnosis and treatment of headlice in children*. *Prescribers*. 5 Feb. 71-74

NHS Executive (1999) *Reducing mother to baby transmission of HIV*. HSC 1999/183. London.

NHS Executive (1998) *Screening of pregnant women for Hepatitis B and immunisation of babies at risk*. HSC 1998/127. London.

PHLS (1995) *Control of meningococcal disease: guidance for consultants in communicable disease control*. *CDR Review* Vol. 5, Number 13, 8 December 1995.

PHLS (1999) *Guidance for the control of Parvovirus B19 infection in healthcare settings and the community*. London.

PHLS. (2000) Guidelines for the control of infection with Vero cytotoxin producing Escherichia coli (VTEC)

Ramsey, M.E. (1999) Guidance on the investigation and management of occupational exposure to hepatitis C. Communicable Disease and Public Health. Vol. 2. No. 4. 258-262.

RCN (2000) Methicillin Resistant Staphylococcus Aureus (MRSA) -Guidance for Nurses. London.

Laundry

NHS Executive (1995). Hospital Laundry Arrangements for Used and Infected Linen HSG(95)18.

Protective Clothing

ICNA (1999) Glove Usage Guidelines. London.

ICNA (2002) A Comprehensive Glove Choice. London

ICNA (2002) Protective Clothing – Principles and Guidance

Public Health

DoE (1990) Environmental Protection Act 1990. HMSO. London.

DoH(1961) Public Health Act 1961. HMSO. London.

DoH (1988) The Public Health (Infectious Diseases) Regulations 1988. HMSO. London

Sharps

ICNA (2003) Reducing Sharps Injury – Prevention and risk management. London

Single-use

MDA (2000) Single-use Medical Devices: Implications and Consequences of Reuse. London.

Waste

HSC (1999) Safe Disposal of Clinical Waste. London

IWM (2000) Healthcare Waste Management and Minimisation. London

Phillips G (1999) Microbiological Aspects of Clinical Waste. Journal of Hospital Infection 41:1-6.