<table>
<thead>
<tr>
<th>Name of Policy, Procedure or Guidance</th>
<th>Control of Infection Policy and Procedures</th>
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<tr>
<td><strong>Reference Number</strong> <em>(to be inserted by Intranet Manager)</em></td>
<td>IC 1 Section 2 INFECTION CONTROL</td>
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<tr>
<td><strong>Who should read the objectives of this policy/procedure</strong></td>
<td>All staff including medical, nursing and contractors working onsite</td>
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<tr>
<td><strong>Executive Summary</strong></td>
<td>To maintain an effective programme for the prevention of healthcare associated infections and the containment of infections brought into the hospital by patients, staff or visitors.</td>
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<tr>
<td><strong>Committee &amp; date approved</strong></td>
<td>Infection Control Committee – September 2009</td>
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<td><strong>Ratified by Trust Board on:</strong></td>
<td><em>(only insert date if appropriate)</em></td>
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<tr>
<td><strong>Review Date</strong></td>
<td>September 2011 or at an earlier date if new guidance or recommendations are published from a referenced source.</td>
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<tr>
<td><strong>Director(s) responsible for ensuring this document is implemented</strong></td>
<td>All Directors</td>
</tr>
<tr>
<td><strong>For further information contact</strong></td>
<td>Infection Control Team</td>
</tr>
</tbody>
</table>
| The formal/legal documents forming the basis of this document are | Department of Health: Health Service Circulars, Medical Device Agency and Health Service Guidance  
Department of Health (2005) Saving Lives: A delivery programme to reduce healthcare associated infection including MRSA.  
Healthcare Commission (2006) Investigation into outbreaks of *Clostridium difficile* at Stoke Mandeville Hospital, Buckinghamshire Hospital NHS Trust.  
| --- | --- |
| Cross reference to | Section 3 Control of Specific Communicable Diseases  
IC3 Outbreak Control Plan  
IC8 Control and Management of *Clostridium difficile*  
IC10 MRSA Screening and Management Policy  
IC11 Operational Escalation Plan for opening an Isolation ward |

**Section 2**

**PRINCIPLES & PRACTICES OF INFECTION CONTROL**
2.1. PRINCIPLES OF INFECTION CONTROL

Key Points

**Methods of spread of infection**

**Isolation/Patient placement and movement policy**

**Risk to visitors**

**Types of isolation** & Isolation notices

**Personal Protective Equipment (PPE)**

**Dress Code**

**Hand Hygiene policy**

For infection to spread, there must be a source of the infecting organism, a means or route of transmission and a susceptible host. A clear idea of the route of transmission of an organism will allow simple and sensible precautions to be taken to prevent its spread.

**COMMON SOURCES OF INFECTION**

**Exogenous**

*From a healthcare worker, a carer or visitor*

*From the contaminated environment*

*From food*

**Endogenous**

*From the patient's own flora*

**THE SUSCEPTIBLE HOST**

Many patients in hospital are more susceptible to infections than they would be at home. They are more likely to be immunosuppressed due to drugs or underlying disease or because of poor nutritional status or because they have wounds.
Direct contact
Via attendant's hands: this is the most common route of spread of organisms responsible for cross-infection in hospital. This method will effectively transmit staphylococci and coliforms between patients and may be responsible for transmitting some enteric (indirect faecal-oral route) or respiratory pathogens.

Indirect contact
Via inanimate objects such as personal equipment (pens and stethoscopes), commodes or endoscopic equipment.

Air-borne
Via aerosol droplets: important in the spread of measles, chickenpox, Legionnaires' disease and tuberculosis. Via dust: may be a route of spread for staphylococci but probably less important than hand-borne transmission.

Inoculation
Direct inoculation of bacteria such as staphylococci, streptococci or pseudomonads into wounds, cuts or grazes is common among personnel in a hospital. Inoculation of blood or other body fluids on sharp instruments or needles may transmit certain viruses (e.g., HBV, HIV, HCV) or bacteria (e.g., syphilis) or even protozoa (e.g., malaria). These organisms can also be transmitted by transfusion of blood and blood products.

Sexual route
This is not important in hospital practice in the U.K., but is relevant in terms of contact tracing and advising partners of patients with sexually transmitted infections.

Food-borne
Attention to food hygiene is crucial to prevent large outbreaks of gastroenteritis in hospital patients and staff.

Methods of spread are indicated in the table for individual disease (section 3 of this manual). The method of spread indicates the key methods for preventing cross infection.

Vector-borne
Pests such as cockroaches and mice can spread diseases.
1. INTRODUCTION AND BACKGROUND

1.1 The risks of health care associated infection (HCAI) are exacerbated by extensive movement of patients within the hospital, by very high bed occupancy and by an absence of suitable isolation facilities (DoH, Winning Ways 2003). More recently, the need for restricting movement of infected patients between wards and for the rapid isolation of infected patients has been emphasised in Healthcare Commission reports into outbreaks of *Clostridium difficile* (Healthcare Commission, 2006 and 2007).

1.2 This policy identifies the process by which the Trust ensures that placement and management of patients with confirmed or suspected infectious conditions is appropriate and timely and that unnecessary patient movement is minimized.

2. SCOPE

2.1 It applies to all staff involved in patient care and management including patient placement and should be used in conjunction with other infection control policies and guidelines including:

- Section 3 Control of Specific Communicable Diseases
- IC3 Outbreak Control Plan
- IC8 Control and Management of *Clostridium difficile*
- IC10 MRSA Screening and Management Policy
- IC11 Operational Escalation Plan for opening an Isolation ward

3. DUTIES/RESPONSIBILITIES

3.1 Trust Board

The Director of Operations, on behalf of the Chief Executive and the Trust Board, has a responsibility to promote a high level of compliance with this policy. This responsibility will be demonstrated by:

- Regarding lapses in compliance as a serious operational issue
- Involving the Infection Prevention and Control Team in the planning process for service developments, new builds and escalation planning.

3.2 Business Units (BU)

Each Business Unit has a responsibility to actively encourage compliance with the policy by:

- giving due consideration to the recommendations of the infection prevention & control team with regard to the provision and use of single room and cohort isolation facilities.
- consulting at an early stage in planning of any service developments or building works to enable the infection prevention & control team to assess impact and advise on infection prevention and control.
- Considering lapses to this policy at Integrated Governance Committee meetings and identifying corrective measures
3.3 Infection Prevention & Control Team (IPCT)

The IPCT will:

- Advise the Trust on current best practice/policy for isolation or segregation of infectious patients.

- Advise the Trust on current best practice in planning isolation facilities for new construction and refurbishment work.

- Provide advice to clinical teams regarding individual patient infection risks, risk assessment and minimisation, and isolation. The IPCT cannot provide advice in response to every new alert organism identified in the laboratory but they provide policies, guidelines and training to ensure that clinical teams have the knowledge and resources to implement appropriate control measures in most circumstances. However, they will provide advice on request of the clinical team or when extraordinary measures are required that ward staff cannot be expected to determine for themselves.

- Undertake an annual audit of patient placement, risk assessment and side room utilisation. The IPCT will feedback to wards/departments.

- Present audit results to the Infection Prevention & Control Committee and include them in the Infection Prevention & Control Annual Report.

3.4 Clinical staff providing patient care

Clinical staff have a responsibility to:

- Assess patients on admission for risk of infection (refer section 4 and 5), including ensuring that there are systems in place to check for infection control alerts on PAS on admission

- Ensure that suspected and confirmed infectious conditions/infection risks are clearly documented in the care record.

- Ensure that patients with an infection control alert are not transferred to other wards unless clinically indicated. (refer section 7)

- Ensure that information about the infectious condition is communicated to receiving wards and departments in advance to ensure that appropriate facilities are available and any special arrangements are in place

- Complete an incident form if it is identified that patients with an infection control alert have been transferred unnecessarily and/or without communication

3.7 Site Management Team

The team is responsible for ensuring that:

- Isolation facilities are provided promptly when the need is identified.

- Allocation of single rooms is based on a clinical risk assessment with infection control requirements given priority over bed management/capacity issues (Healthcare Commission, 2006).
• When isolation facilities are not available that the infection control team are informed and their advice taken on risk minimisation

• Patients with infection control alerts are not transferred to other wards unless their clinical need dictates (refer section 6).

4. INFECTION RISK ASSESSMENT ON/PRIOR TO ADMISSION

On or prior to the admission of a patient with a known or suspected infection or infectious condition, a systematic assessment of the potential risks to the individual, other patients and healthcare workers must be undertaken. The assessment of whether isolation is necessary will be influenced by a number of factors, which include:

• Route of transmission e.g. contact, airborne, or blood borne.
• Infectivity i.e. is the organism easily transmitted from person to person either because it is airborne e.g. Tuberculosis, Influenza, Measles, Chickenpox, or because contamination of the environment is important e.g. Clostridium difficile infection and Norovirus.
• Potential consequences to the operations of the Trust e.g. failure to isolate likely to result in ward closures
• Clinical area i.e. the susceptibility of other patients in a given specialty e.g. a greater need to isolate MRSA in high risk areas, such as Orthopaedic surgical wards, than in low risk areas.
• Morbidity and mortality associated with the organism/condition disease i.e. might not be easily transmitted but is associated with high mortality rate

It is important to document the risk assessment process and the outcome.

5. PRIORITISING PATIENTS FOR SINGLE ROOM ACCOMMODATION

5.1 When the number of patients with infectious conditions exceeds the single rooms available priority for the single rooms goes to the following:

Negative Pressure Room is a must for:

• Patients with suspected/known multi drug resistant tuberculosis (MDR TB)
• Patients with suspected/known influenza in pandemic setting

NB: Syon 2 and Intensive Care Unit have two and one negative pressure rooms respectively.
HIGH PRIORITY FOR SIDE ROOM

Patients with:
- Definite or clinically suspected tuberculosis (negative pressure room if available)
- Suspected SARS or influenza (negative pressure room if available)
- Chickenpox (negative pressure room if available)
- Disseminated shingles in an immunocompromised patient (negative pressure room if available)
- Measles (negative pressure room if available)
- Bronchiolitis (Children)
- Meningitis – meningococcal, viral
- Diarrhoea +/- vomiting
- MRSA in sputum

MEDIUM PRIORITY FOR SIDE ROOM

Patients with:
- Rashes and cellulitis
- MRSA – all other sites
- C. difficile toxin positive
- Hepatitis A and E
- Group A streptococcal infection
- Glycopeptide Resistant Enterococci
- Resistant Gram negative infections such as ESBL
- Pyrexia of unknown origin (PUO) with a travel history of being abroad

LOW PRIORITY FOR SIDE ROOM

Patients with:
- Hepatitis B
- Hepatitis C
- HIV

5.2 To make additional accommodation available the following action should be taken:
- Remove non infectious patients from single rooms, wherever segregation of gender allows
- Check that patients with infection control alerts remain infectious and still need to be in single rooms
- Identify patients with MRSA and check:
  - Latest MRSA screening results
  - Whether patients have been decolonised recently or are still being decolonised
  - Whether they have had any post treatment screens
With this information an assessment can be made to determine which patient poses the least risk to others e.g.
  - A patient with a recent clear MRSA screen poses less risk than one who remains MRSA positive
  - Among patients that remain MRSA positive, those who have recently completed the decolonisation protocol or are still undergoing decolonisation are less risk than those who have not.
If MRSA +ve patients have to be managed in a bay, the decolonisation protocol should be commenced immediately and care taken not to place next to patients with open wounds, central lines or catheters.

6. MOVEMENT OF INFECTIOUS PATIENTS BETWEEN WARDS AND DEPARTMENTS

6.1 Assess the need to move the patient. If an inter-ward transfer can be postponed, or an investigation/procedure avoided until the patient is no longer infectious, without compromising the patient's care and management in any way, then it should be delayed.

6.2 Communication between wards and departments regarding the “infection status” of a patient is essential and enables the receiving department to put its local procedure in place.

6.3 A patient being nursed in isolation should only be transferred between wards for the benefit of that individual’s clinical needs.

6.4 During bed capacity escalation procedures, patients with an infection control alert or those who require isolation must not be transferred to other wards or temporary in-patient facilities.

6.5 Once vacated, an isolation room (or bed space, if not in a single room) must be terminally cleaned before reoccupation.

7. INTER-HEALTHCARE TRANSFER

The infection control section of the transfer form must be completed and accompany patients requiring transfer to other hospitals or other care providers.

8. INFECTION CONTROL TEAM AND SITE MANAGEMENT TEAM LIAISON

8.1 Close liaison is essential.

8.2 An Infection Control Team representative will provide regular information on relevant issues at the daily bed capacity meeting.

8.3 Out of office hours advice can be sought from the on call infection control nurse via the hospital switchboard.

8.4 A member of the Site Practitioner Team will attend infection outbreak/incident meetings when the outbreak/incident impacts on bed availability.

9. MONITORING

9.1 This policy's effectiveness is monitored using the following methods:
   • by the Infection Prevention & Control Team whilst undertaking routine clinical visits to wards
   • through an annual audit of patient placement, risk assessment and side room utilization undertaken by the infection control team
9.2 The Prevention and Control of Infection Management Team will be responsible for ensuring that the findings/recommendations of the audit are acted upon.

VISITORS

The hospital has a duty of care to protect visitors against the risks of catching infection. For this reason the number of visitors should be kept to a minimum for isolated patients; immunocompromised patients should be advised not to visit. It is therefore important that the risks are clearly explained to anyone who enters the room of a patient in Source Isolation. All visitors are encouraged either to wash their hands or use the hygienic hand rub on entering and leaving the isolation room and the clinical area. In general, it is not necessary for visitors to wear protective clothing (aprons and gloves) unless there is a risk of soiling the clothes with body fluids. However, one exception would be to use masks for those visiting a patient with open tuberculosis. Surgical masks are ineffective at protecting against aerosols. The problem with dust-mist masks is that they are difficult to put on and wear properly so that they are effective. The staff will have to make a risk assessment as to whether to recommend the wearing of such masks and then teach the visitor(s) how to use them (See Section 3.3).

Visitors to patients who are family members and have lived with the patient at home during the period while they were perceived to be infectious before they were diagnosed need not wear a mask. However, immunosuppressed visitors, especially those with HIV, if they need to visit, should be encouraged to wear one. It may be difficult for staff to discuss this with visitors who might rightly consider this to be an intrusion. The best way to approach this difficult issue is to hand the visitor a leaflet explaining the risks. The patient leaflets are available on the intranet and from IPC Team.

Information for patients and the public: Information leaflets are available for patients on preventative measures relating to HCAI (hand hygiene) and on specific alert organisms. An infection control leaflet is available for relatives/visitors explaining ways they can reduce the risk of spreading infection. At entrances to all clinical areas such as the wards, outpatient clinics and the Accident and Emergency department have large floor stickers, reminding staff and visitors to clean their hands. In addition floor and wall projectors display similar messages in the main atrium.

TYPES OF ISOLATION

There are three types of isolation:

Source Isolation (yellow sign) and Airborne Isolation (blue sign) aimed to confine the infectious agent and prevent its spread.

Protective Isolation (white sign) aimed to protect an immunocompromised patient who is at special risk from environmental organisms or those carried by attending staff and visitors.

Occasionally a staff member may be found to be an asymptomatic carrier of a potentially pathogenic organism and may be considered to be a potential source of infection. In these cases it may be necessary to treat staff in order to eradicate carriage of the organism, using a systemic antibiotic (e.g. for Streptococcus pyogenes, also known as Group A Steptococcus) or by topical preparations (e.g. for methicillin-resistant Staphylococcus aureus). An infectious staff carrier of a blood-borne virus such as HIV.
or HBV needs full assessment in Occupational Health and may not be allowed to perform invasive exposure prone procedures.

A basic understanding of the way in which particular organisms are spread will enable staff to apply a common sense approach to isolation, thus providing a safe environment and avoiding unnecessary psychological trauma to patients and relatives. Information and detailed protocols on various specific diseases are given in the tables and protocols in section 3.

The decision to isolate a patient is taken by the medical team caring for the patient, in consultation with the nursing staff and Infection Prevention & Control Team. Isolation is usually carried out in single rooms with hand washing facilities and the door should be kept closed. Occasionally, a group of patients with a particular infection may be cohort nursed together in a defined ward area. A patient or groups of patients (a cohort) can be successfully barrier nursed in a ward, but this should only be done as a last resort.

### SOURCE & AIRBORNE ISOLATION

**Key Points**

**Planning** For Source Isolation  
*(Risk Assessment and Preparation of Room & Patient)*

- **Planning Equipment for the Room**
- **Source Isolation Procedure:**
  - Clean Hands
  - Use Plastic Aprons and Gloves
  - Wearing of appropriate masks (for airborne risk)
  - Discard Protective Clothing into the Yellow Bin/Sack in the Room
  - Clean Hands
  - Cleaning the Room or Bed Space

#### PLANNING

Do a risk assessment to decide whether it is necessary to source isolate a patient for the protection of others. Record this in the patient’s notes and clearly state the reasons. You may ask for and the patient may request a visit from a member of the Infection Control Team for a fuller explanation. Alternatively refer to the bed priority list:

Patient transfers should be restricted as feasibly possible. It is good practice also to separate the admission of elective and emergency patients.

#### RISK ASSESSMENT

If the number of side rooms is limited, then the following hierarchy of risk should be used when deciding who should go into a side room.

1. Fever of unknown origin from sub-Saharan Africa (See Section 3.7)
2. Tuberculosis, chicken pox, measles, mumps and rubella (See Section 3.3. and Section 3.7) airborne source isolation

3. Diarrhoea (See Section 2.9. and Section 3.11.)

4. Patients with alert organisms (Streptococcus pyogenes, MRSA [See Section 3.2.], GRE). Patients with MRSA in wounds and respiratory tract should take precedence over those colonised in carrier sites only

5. Patients with undiagnosed rash illness, cellulitis

It may be necessary to cohort nurse all patients with a particular condition (e.g. diarrhoea) in a section of the ward or whole ward. A decision then has to be made as to whether to close a ward because of an unacceptable risk to new admissions. (refer to IC11 Operational escalation plan for opening of an Isolation Ward)

PROCEDURE

Prior to moving the patient into a single room:

- Explain the need for isolation to the patient and provide information leaflet (general information, and for specific condition where available).
- Remove all unnecessary equipment from the room.
- Ensure that the mattress has a protective cover and the pillow is wipeable.
- Place a Source Isolation notice on the door of the room, yellow for contact source isolation and blue for airborne source isolation.
- Consider whether people entering the room should be immune to the patient's disease (important for rubella, measles, chickenpox and tuberculosis).
- Record in the nursing care plan and the medical notes the reason for isolation, the date started and any special precautions necessary to prevent the spread of infection.
- Inform the Infection Control Nurse
- If appropriate, inform household and catering departments

SOURCE ISOLATION PROCEDURE

STAFF
Before entering room

Consider which staff need to enter the room; only essential staff should enter. Staff must:

- Remove jackets or outside clothing (preferably leave on hook outside room)
- Remove wrist watch and jewellery (other than a plain wedding band) and roll up sleeves
- Wash and dry hands thoroughly or, if hands are clean, use hygienic hand rub
- Put on a plastic apron and disposable gloves
- Close the door behind you on entering the room

For airborne isolation put on mask
Inside the room (or visiting bed space)

- Perform patient procedure (change disposable gloves if they become soiled during the procedure)
- Do not touch the patient or anything else in the room unnecessarily
- Do not sit on the bed
- Sharps must be disposed of in the sharps box inside the isolation room

Before leaving the room or bed space

- Remove gloves and apron and discard into yellow clinical waste bin, using the foot pedal to open the bin
- Double bag linen in red alginate bag and outer red plastic bag
- Wash hands and dry thoroughly or use the hygienic hand rub (hands must be washed if the patient has diarrhoea or known or suspected *C. difficile*.)

Outside room

- Close the door after leaving the room
- Remove mask and discard to yellow clinical waste bin
- Place red linen bag in sluice room for collection by porters
- Wash hands again
  OR
- Rub hands using hygienic hand gel (hands must be washed if the patient has diarrhoea or known or suspected *C. difficile*.)

VISITORS

- The risks to visitors should be assessed (low for MRSA, high for chickenpox): if in doubt, ask the infection control team before allowing visits. Visits by children should be discouraged.
- Visitors should be informed of the risks of catching infection.
- Visitors should remove outdoor clothing before entering the room and use the hygienic hand rub.
- There is usually no need for visitors to wear protective clothing.
- They should not sit on the patient’s bed.
- They should not eat in the patient’s room.
- They should be encouraged to wash their hands or use hygienic hand rub before leaving the room and not to attend to other patients.
EQUIPMENT

If equipment is removed from the room it must be decontaminated according to the disinfection policy. If it is to be serviced, a 'Permit to Work' certificate, to ensure safety of the maintenance staff, is required (See Section 6a.).

Decontamination of the room

General notes

The nursing staff should:

- Deal with any spillages of blood and body fluid, and clean and remove used equipment.
- Strip bed of all linen. Linen should be double-bagged in a red alginate stitched bag and red clear plastic bag before being brought out and placed in the sluice room for collection by the porters.
- Clean the mattress with Chlor-Clean disinfectant and attach the decontamination label
- If it is necessary to remove equipment, this should be wiped down with Chlor-Clean disinfectant or sporidical wipe
- Discard any rubbish and disposables into a yellow clinical waste bin.
- Nursing staff must complete the Bed/Room Ready Checklist when they have completed their cleaning and following the completion of the cleaning done by domestic and HTS staff.

Domestic staff can then proceed with cleaning

DOMESTIC CLEANING OF ROOMS USED FOR SOURCE ISOLATION

Domestic staff must wear protective clothing (yellow plastic apron and domestic rubber gloves).

Daily cleaning

Should be done by ward Domestic staff after cleaning the rest of the ward. Disposable cloths will be used and discarded after use in one room. Domestic staff should use Marigold gloves or equivalent, not clinical gloves, and wash them after use in each room.

- Surfaces, ledges, furniture and the bed locker will be damp-dusted using Chlor-Clean disinfectant. Room surfaces should be done first, then bathroom fittings, then toilets.
- Vacuum cleaning may be necessary to remove dust from behind fixtures and fittings e.g. pipes and radiators.
- The floor should be damp-cleaned using Chlor-Clean disinfectant solution using a mop with a disposable head, which must be discarded or use steam cleaner.

ADDITIONAL ACTION ON DISCHARGE OF THE PATIENT

Special disinfection (also Section 6a.)

After discharge of patients harbouring methicillin-resistant Staphylococcus aureus (MRSA), Clostridium difficile (CDT), glycopeptide-resistant enterococci (GRE) and
Streptococcus pyogenes, and other diseases at the discretion of the Infection Control Team, special cleaning will be performed.

Curtains will be taken down and sent for laundering in a red alginate bag inside a red plastic bag prior to cleaning the bed area.

When the surfaces have been cleaned with Chlor-Clean detergent, allow to dry or use sporicidal wipes.

On completion of the cleaning, the bucket and the mop must be cleaned. The Domestic should then remove their plastic apron and discard it into the yellow bag. The bag must be secured before sending for incineration.

Domestic rubber gloves should be washed whilst still wearing them and then placed with the mop bucket. Throw them away if they are perforated. Thorough hand washing should then be carried out before leaving the room and again after disposing of the yellow bag. Later, return and replenish soap, paper towels, and replace the curtains. Inform local nursing staff and supervisor that the task is complete.

For further details, see Section 6a. - Decontamination and Disinfection Policy and the Domestic Cleaning Policies held in the Ecovert Office.

PROTECTIVE ISOLATION

**Key Points**

- Explain the need for isolation to the patient
- Remove all unnecessary equipment from the room
- Ensure that all equipment and surfaces in the room are clean
- Contact housekeeping / domestic department for special cleaning of cubicle if required
- Place "Protective Isolation" (white) notice on the door
- Record action in nursing care plan and medical notes (include reason for isolation, date started and any special precautions thought necessary)
- Inform Infection Prevention and Control Nurse

The majority of cases susceptible to infection are nursed in a separate room with simple precautions to prevent acquisition of attendants' and other patients' micro-organisms. These precautions are listed below.

**PLANNING**

- Remember: in order to protect the immunosuppressed individual, staff and visitors who are unwell in any way, for example with coughs and colds, sore throats, herpes
simplex, diarrhoea or infected skin lesions, must NOT enter the isolation room. If in doubt, consult the Infection Prevention and Control Team.

Patients requiring Protective Isolation may also require Source Isolation if they have an infective condition.

**PROTECTIVE ISOLATION PROCEDURE**

**STAFF**

**Before entering the room**

- Staff should remove jackets or outside clothing, and bags
- Remove wristwatch, bracelets and rings other than a plain wedding band
- Wash hands using soap and water and dry thoroughly, or use hygienic hand rub. Then put on white apron and gloves if intending to have direct patient contact.

**Inside the room**

- Wear clean (non-sterile) gloves for patient examination
- Wear sterile procedure gloves when handling intravenous lines, sites and wounds
- On completing the task remove clinical waste and linen from the room

**On leaving the room**

- Close the door
- Remove gloves and apron outside room and discard into yellow bin
- Wash hands in liquid soap and dry
  
  OR

- Use hygienic hand rub

**NOTE:** Hygienic hand gel can be used as a substitute for thorough hand washing before performing a patient task providing the hands are not soiled.

**Domestic cleaning**

Daily cleaning of the room should be completed by the ward domestic preferably before cleaning the rest of the ward/floor.

**On discharge of patient**

**Nurses should:**

- Deal with any spillages of blood, secretion or excreta according to the spillage policy
- Clean used medical or nursing equipment with general purpose detergent in hot water, in appropriate manner
- Strip the bed and dispose of linen according to the linen policy
- Clean the mattress with Chlor-Clean disinfectant and attach the decontamination label

Domestics should then perform ordinary cleaning after patient discharge.

If the patient in Protective Isolation was also infected with, say, MRSA or *Streptococcus pyogenes*, or glycopeptide-resistant enterococci, even though he was
in *protective* isolation, proper room decontamination should be done before a new patient is admitted. (See above and Section 6a.). Equipment sent for service or to other units must be accompanied by a permit to work (See Section 6a.).

**ISOLATION NOTICES**

**CONTACT SOURCE ISOLATION (YELLOW)**

To contain infection transmitted by contact and faecal-oral routes.

- **Visitors**: Must report to nurse in charge before entering room.
- **Clothing**: Remove outdoor clothing, wristwatch and jewellery, other than a plain wedding band.
- **Hands**: Wash hands or use hygienic hand rub before touching the patient.
- **Aprons**: Wear a plastic apron on entering the room.
- **Gloves**: Wear if you are to have direct contact with the patient, or indirect contact with items such as bed linen, secretions, medical notes, equipment.
- **Door**: Must be kept closed.
- **Equipment**: Must be decontaminated and tagged when it leaves this room.
- **Linen**: All soiled and used linen to be treated as infected linen. Dispose of into a red alginate bag, which is placed in an outer plastic red bag.
- **On leaving**: Discard gloves and apron inside and wash hands before you leave the room.
- **Masks**: Wear surgical type if exposed to splashes, droplets etc. Consider wearing goggles or a visor if potential for eye splashes.

Wash hands again outside or use hygienic hand rub.

Cleaning: Daily, **AFTER** other areas.

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**CONTACT SOURCE ISOLATION**

Please see nurse in charge

**STAFF ONLY**

- **Clothing**: Remove outdoor clothing and bags.
- **Hands**: Decontaminate hands before entering and when leaving the room.
- **Gloves**: Please put on gloves.
- **Aprons**: Put on before entering the room.
- **Door**: Please keep closed.
- **Equipment**: Must be decontaminated before it leaves the room.

**Visitors**

- Put on protective clothing before entering the room.
- (Do not return clothing change area as they need to be decontaminated).

**On Leaving**

- Remove protective clothing and dispose of it inside the room.
- Wash hands.
- Exit room.
- Decontaminate hands with alcohol handrub.

For detailed precautions see the Infection Control Manual.
AIRBORNE SOURCE ISOLATION (BLUE)

To contain infection transmitted by the respiratory route

SEE NURSE IN CHARGE BEFORE ENTERING ROOM

- **Clothing**: Remove white coats and outdoor clothing, wristwatch and jewellery, other than a plain wedding band.
- **Door**: Must be kept closed.
- **Hands**: Wash hands before touching the patient.
- **Mask**: Wear dust and mist filter type mask
- **Aprons**: Wear a plastic apron on entering the room.
- **Gloves**: Wear if you are to have direct contact with the patient, or indirect contact with items such as bed linen, secretions, medical notes, equipment.
- **Equipment**: Must be decontaminated and tagged when it leaves this room.
- **Linen**: All soiled and used linen to be treated as infected linen. Dispose of into a red alginate bag, which is placed in an outer plastic red bag.
- **Visitors**: To wear mask as above.
- **On Leaving**: Remove gloves and apron and wash hands.

**WASH HANDS BEFORE YOU LEAVE THE ROOM AND USE HYGIENIC HAND RUB OUTSIDE**

**Cleaning**: Daily. **AFTER** other areas.

PROTECTIVE ISOLATION (WHITE)

For protection of immunocompromised patients against exogenous infection (infection originating externally to the patient).

- **Visitors**: Must report to nurse in charge before entering the room.
- **Clothing**: Remove outdoor clothing and white coats, wristwatch and jewellery other than a plain wedding band.
- **Hands**: Wash hands or use hygienic hand rub before putting on gloves.
- **Apron**: Put on a white apron before entering the room.
- **Gloves**: Put on gloves if you are to have direct contact with the patient, or indirect contact with items such as bed linen, secretions, medical notes, equipment...
- **Door**: Must be kept closed.
- **On leaving**: Remove gloves and aprons outside the room, dispose into the yellow bin and decontaminate hands.

**Cleaning**: Clean **BEFORE** other areas.
PERSONAL PROTECTIVE EQUIPMENT (PPE)

PROTECTIVE CLOTHING - Glove usage

Gloves have a dual role:

1. To provide a barrier for personal protection* (use non-sterile gloves)
2. To reduce the risk of transmission of infection to patients (use surgical gloves)
   *(and thus form part of the Personal Protective Equipment under the Health and Safety at Work Act 1974)

Gloves should be worn when dealing with body fluids, secretions and excretions, and for nursing patients in isolation. Gloves must be changed after nursing each patient or when they have been contaminated. They should be removed immediately and discarded into yellow clinical waste bins; hands should then be decontaminated.

**Important:** Make a risk assessment of the procedure and decide whether to wear gloves. Choose your gloves according to the procedure to be carried out:

The risk assessment should include:

- The nature of the task (is patient or carer protection or both required?)
- The risk of exposure to blood or body fluids
- The risk of contamination
- The barrier efficacy of the gloves
- The choice of gloves (sterile, non-sterile, type of material)
- The risk of sensitisation

For aseptic techniques (mainly in the operating theatre, but also whenever an aseptic procedure is done at ward level), choose sterile gloves. For all other procedures, if gloves are considered necessary to protect the carer from contact with blood or other body fluids, choose non-sterile gloves. **Remember that organisms from the hands get onto the gloves when they are put on and organisms picked up during a procedure are put back onto the hands when they are removed. Therefore gloves are no substitute for hand hygiene.**

Gloves must fit properly. For this reason non-elastic gloves (plastic and vinyl) are generally not satisfactory. Tight gloves increase the risk of derm-abrasion and finger muscle fatigue. Long term wearing of gloves leads to air occlusion and excessive sweating.

Gloves other than domestic (e.g. Marigold-type) are single use only. They must be discarded as clinical waste (yellow bin). There must be sufficient supplies of appropriate glove types and sizes in clinical areas.

**PERFORATIONS**
In surgery, perforations of gloves occur in 13-43% of operations. Double gloving is recommended for exposure prone procedures especially when perforation is a risk. Using two colour gloves will indicate perforation and the inner glove generally remains intact.

**RECOMMENDED GLOVE USAGE**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Choose</th>
<th>Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>All surgery</td>
<td>Sterile Latex</td>
<td>Nitrile or polypropylene</td>
</tr>
<tr>
<td>All aseptic procedures with blood exposure. Sterile pharmaceutical procedures.</td>
<td>Sterile Latex</td>
<td>Nitrile or polypropylene</td>
</tr>
<tr>
<td>Non aseptic procedures with exposure to blood. Handling sharps. Handling cytotoxics. Handling disinfectants. Tasks which may pull, twist or stretch gloves.</td>
<td>Non-sterile latex</td>
<td>Non-sterile nitrile or polypropylene</td>
</tr>
<tr>
<td>Handling aldehydes.</td>
<td>Non-sterile nitrile or polypropylene</td>
<td></td>
</tr>
<tr>
<td>Aseptic procedures, contact with blood unlikely.</td>
<td>Sterile vinyl</td>
<td></td>
</tr>
<tr>
<td>Short-lived and non-manipulative tasks. Low risk of contact with blood. Tasks unlikely to pull, twist or stretch gloves. Cleaning with detergent.</td>
<td>Non-sterile vinyl</td>
<td></td>
</tr>
<tr>
<td>Food handling.</td>
<td>Non-sterile polythene</td>
<td></td>
</tr>
<tr>
<td>Cleaning.</td>
<td>Domestic quality (e.g. Marigold)</td>
<td></td>
</tr>
</tbody>
</table>

**GLOVE MATERIALS**

**Natural rubber latex NRL**

**NRL with hydrogel**
Easy to put on.

**Nitrile (acrylonitrile)**
Good biological barrier and resistant to glutaraldehyde. Similar chemical range as NRL. Occasional sensitivity seen. Difficult to sterilise. Release cyanide on incineration.

**Tactylon (multipolymer synthetic styrene-ethylene-butadine-styrene)**
Similar elasticity and strength to NRL. No NRL proteins and chemicals. Rapidly broken down with non-solid methacrylates (eg bone cement).

**Neoprene (polychloroprene)**
Good alternative to NRL.

**Vinyl (polyvinyl chloride)**
Lower strength than NRL. Increased permeability to viruses. Leakage rate up to 63%. Inflexible. Cheap. Reserve for activities with no blood contact, brief activities with no glove stress. Incineration leads to vinyl chloride (carcinogenic).

**Polythene (ethylene co-polymer)**

**Cornstarch powder**
Replaced talc. But may also cause peritonitis and granulomas. When airborne as dust may carry chemicals from NRL. May contaminate prosthetic materials and act as a nidus of infection. Must not be used.

**NOTE:** Polythene gloves are not recommended.

**SENSITISATION**

If gloves supplied cause irritation, then staff must consult Occupational Health. It is wise to take an example of the glove and its name with you if visiting OH to discuss this problem. Reactions to gloves must be reported to the Medical Devices Agency by Occupational Health.

Natural latex gloves are associated with hypersensitivity reactions in between 6 and 18%. Alternative materials are therefore used. The preferred alternative material for sterile surgical gloves is synthetic nitrile/polypropylene and for non-surgical procedures is vinyl or polythene.

Natural rubber has many chemicals added during processing. These are partially washed off after the gloves have been made. However, residual chemicals may be allergenic. Cornstarch increases leaching of chemicals from rubber. Atopic people (with eczema and asthma) and those allergic to foods (eg avocado, passion fruit, banana, chestnut and potato) are more likely to be sensitised. Frequent use increase risk of sensitisation. Patients may be sensitive if repeatedly exposed. Their notes should be marked. Carers with suspected allergy must go to Occupational Health for advice. Once sensitized, many household effects may cause problems. Type 1 hypersensitivity is dangerous (risk of anaphylaxis) so appropriate precautions must be taken and a risk assessment be performed as to appropriateness of employment. It is almost impossible to construct an NRL-free environment.

This policy should be read in conjunction with Latex Policy.

**PROTECTIVE CLOTHING - PLASTIC APRONS**

The general use of plastic aprons is for protection of clothing.

To ensure that aprons are used correctly a system of colour-coded aprons has been introduced in certain departments such as intensive care unit. Here a different coloured apron is used to care for each patient.

Blue aprons should be worn for serving meals.

**DISPOSAL**

Aprons used for source isolation, or that have been contaminated with blood or body fluids, should be discarded immediately into a **yellow** clinical waste bin.
Aprons used for other purposes should be discarded into a black bag for domestic waste.

**BEFORE LEAVING A CLINICAL AREA**
Aprons must be removed and discarded appropriately. Hands should then be either washed and dried or decontaminated with hygienic hand rub.

**FACE PROTECTION**
Goggles and visors must be worn to prevent splashing of body fluids to the eye, face and mouth when performing risky procedures.

**MASKS**
Surgical masks do not protect against aerosol inhalation but may protect against splashes in surgery. For airborne isolation a dust-mist (FFP2) mask, eg “Tecnol PFR 95”, must be worn. (See Section 3.3 – Protective Masks)

**DRESS CODE**
For full details refer to the Trust Dress Code and Conduct Policy.

As professionals working in a clinical environment, it is the responsibility of each staff member to ensure that his/her uniform is worn according to hospital policy and is neat. Uniform wearers must wear a clean uniform every day.

Dress according to the hospital policy (short sleeves only)

**A name badge must be worn by all staff**

**Jewellery - only the following may be worn:**
- Ring - single plain metal band
- Earrings - small studs only
- Fob watch

**Do not wear a wristwatch, wrist bracelets or dress rings**

**Hair should be kept neat and tidy. Long hair must be tied back.**

**Fingernails should be kept short. No nail varnish or false nails.**
2.2. HAND HYGIENE POLICY

Hand hygiene forms an integral part of risk management and clinical governance within the Trust. It is essential that Healthcare workers recognize the importance of hand hygiene in relation to their own personal safety and that of their patients or clients.

Patients are put at risk of developing a Healthcare Associated Infection (HCAI) when a healthcare practitioner caring for them has contaminated hands. Effective hand hygiene can greatly reduce the transmission of infection and decrease the incidence of preventable healthcare associated infection, leading to a reduction in patient morbidity and mortality.

The Health & Safety at Work Act 1974 and COSHH Regulations (Amendment) 2003 require all employees to follow safe working practices, which involve effective hand decontamination. The adoption of safe working practices will assist in the control of existing infectious diseases and help to prevent the acquisition of infection at work.

The following guidance outlines measures relating to hand hygiene that must be taken by all members of staff in order to prevent the acquisition or spread of infection. As clinical care is provided in a variety of settings in both hospital and community, the prevention of infection is essential in any healthcare environment. Consequently, this guidance applies to any area where healthcare is performed.

1. DEFINITION OF TERMS

Transient micro-organisms - are not constantly present on the skin but are acquired by touch from direct patient contact, equipment or the general environment. They can, however, survive on hands and are easily transmitted to others and items of equipment. They can easily be removed by handwashing.

Resident micro-organisms - live on the skin and protect the skin against invasion by harmful bacteria/transient micro-organisms. Unlike transient micro-organisms, they are not easily removed by the friction of handwashing but their removal is desirable when handwashing before procedures which break the patient’s natural defences e.g., surgical procedures.

Social handwashing - the aim is to remove transient micro-organisms during a 40 - 60 second handwash with liquid soap and running water by mechanical action/friction.

Hygienic hand disinfection - the aim is to destroy and remove transient micro-organisms by the use of antiseptic agents and running water. Prior to and following most clinical activity a social handwash should be adequate. If providing treatment or care to a patient in isolation, or prior to an aseptic procedure, a social handwash can be followed by the application of an hygienic hand rub. Topical antiseptics should not routinely be used unless for surgical scrub purposes.

Surgical scrub/handwash - will be necessary in situations where a reduction in resident micro-organisms is required. Antiseptic agents should be used with running water; hands should be washed for a minimum of two minutes. Some antiseptic agents have a residual effect to provide continued anti-microbial activity. The on-going activity is of benefit during surgical procedures if glove punctures occur.
2. HAND DECONTAMINATION – INDICATIONS FOR HANDWASHING

Hand decontamination has a dual function to protect both the patient and the Healthcare worker from acquiring micro-organisms, which may subsequently cause harm.

To prevent the transfer of micro-organisms it is essential to decontaminate hands immediately before each and every episode of direct patient contact/care and after any activity or contact that potentially results in hands becoming contaminated.

Hands readily pick up and transfer micro-organisms and should be decontaminated between any activities that will result in more than superficial contact. There is no set frequency for hand decontamination as it is determined by clinical actions; those completed and those intended to be performed.

Healthcare workers need to assess the risks of their clinical environment, as some patients may be more vulnerable than others.

There will be differences in the requirements for hand decontamination between an Intensive Care Unit where highly invasive procedures are routine, compared to areas where little invasive treatment is delivered.

There is no set frequency for hand hygiene. This is determined by the action of the Health Care Worker and to ensure that any chain of transmission is broken, thus preventing any healthcare associated Infections. Hand Hygiene should be carried out in accordance with ‘the five moments for hand hygiene’ (See Table 1 - Your 5 moments for hand hygiene at the point of care).

Hand Hygiene should not be regarded as merely ‘before and after’ patient care. It may be required several times depending on the Health Care Worker’s actions.

Hand decontamination must also be observed away from the point of care by both clinical and non clinical members of staff (See Table 2 for examples of when to wash your hands.)
Table 1

<table>
<thead>
<tr>
<th>Moment</th>
<th>When</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before Patient Contact</strong></td>
<td>Clean your hands before touching a patient when approaching him/her</td>
<td>To protect the patient against harmful germs carried on your hands</td>
</tr>
<tr>
<td><strong>Before a Clean/Aseptic Procedure</strong></td>
<td>Clean your hands immediately before any clean/aseptic procedure</td>
<td>To protect the patient against harmful germs, including the patient’s own, from entering his/her body</td>
</tr>
<tr>
<td><strong>After Body Fluid Exposure Risk</strong></td>
<td>Clean your hands immediately after an exposure risk to body fluids</td>
<td>To protect yourself and the healthcare environment from harmful patient germs</td>
</tr>
<tr>
<td><strong>After Patient Contact</strong></td>
<td>Clean your hands after touching a patient and her/his immediate surroundings when leaving the patient’s side</td>
<td>To protect yourself and the healthcare environment from harmful patient germs</td>
</tr>
<tr>
<td><strong>After Contact with Patient Surroundings</strong></td>
<td>Clean your hands after touching any object or furniture in the patient’s immediate surroundings when leaving - even if the patient has not been touched</td>
<td>To protect yourself and the healthcare environment from harmful patient germs</td>
</tr>
</tbody>
</table>

Based on WHO poster ‘Your 5 moments for hand hygiene’ and reproduced with their kind permission
Table 2 – Examples of When to Wash Your Hands

<table>
<thead>
<tr>
<th>BEFORE</th>
<th>AFTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Starting duty or when entering a client’s home</td>
<td>• After performing invasive procedures, manipulating medical/invasive</td>
</tr>
<tr>
<td>• Before any episode of direct patient contact</td>
<td>devices or performing aseptic procedures</td>
</tr>
<tr>
<td>• Before performing invasive procedures, before manipulating medical/invasive devices or performing aseptic procedures</td>
<td>• After dealing with a patient with Clostridium difficile, diarrhoea &amp; vomiting, or another enteric pathogen</td>
</tr>
<tr>
<td>• Before caring for susceptible patients, e.g., immuno-compromised</td>
<td>• After situations during which contamination of the hands is likely to have occurred – e.g., handling linen and bedding</td>
</tr>
<tr>
<td>• Before preparing or serving food/drinks or medicines</td>
<td>handling waste</td>
</tr>
<tr>
<td>• Before dispensing ear.eye drops</td>
<td>cleaning equipment or spillages</td>
</tr>
<tr>
<td>• Between different procedures on the same patient (when moving from a</td>
<td>direct patient contact</td>
</tr>
<tr>
<td>contaminated site on a patient’s body to an uncontaminated site)</td>
<td>• After applying topical preparations</td>
</tr>
<tr>
<td>• Before eating or drinking</td>
<td>• After dispensing ear.eye drops</td>
</tr>
<tr>
<td>• Before taking breaks or leaving the ward/department</td>
<td>• After visiting other departments</td>
</tr>
<tr>
<td>• After dealing with blood/body substances</td>
<td>• After removing protective clothing – including gloves</td>
</tr>
<tr>
<td>• After visiting the toilet or toileting others</td>
<td>• After dealing with blood/body substances</td>
</tr>
<tr>
<td>• After eating or drinking</td>
<td>• After visiting the toilet or toileting others</td>
</tr>
<tr>
<td>• After leaving a single room or cohort bay used for isolation nursing</td>
<td>• After eating or drinking</td>
</tr>
</tbody>
</table>

Please note that this is not an exhaustive list.

2.1. Types of Cleansing Agents

**Soap and water** - the type of solution used to wash hands is less important than the handwashing technique used.

For most routine activities, handwashing with soap and water is sufficient. Within all healthcare premises, soap must be supplied as liquid soap in sealed units. Liquid soap dispensers should be regularly maintained and kept clean to prevent contamination.

All hand products; liquid soap, hygienic hand rub and hand cream should be dispensed from single use containers.

In the home setting, where possible, liquid soap or a designated bar of soap should be provided for the visiting Healthcare worker.
**hygienic hand rubs** - these are an accepted alternative to soap and water when handwashing facilities are not available, or there is a frequent need for hands to be decontaminated. Hygienic hand rub should not replace handwashing and should not be used if hands are visibly dirty.

If used appropriately, however, alcohol gel preparations can reduce the carriage of transient micro-organisms. They will not be effective against *Clostridium difficile*.

The application of hygienic hand rub does not mechanically remove micro-organisms but destroys them by chemical activity. Whilst alcohol solutions are effective against most viruses and bacteria, they should not be used in the presence of visible soiling or organic matter – e.g., blood, faeces, urine, sputum etc. The chemical activity will be inactivated by organic material.

Personal gel pumps may be provided for staff involved in direct patient care, where access to wall mounted hygienic hand rub is not available. Individual pumps must be kept clean and on no account be refilled. Personal pumps should not be used routinely as the gel is available in a dispenser.

Staff should be encouraged to use the wall mounted, bed mounted or mobile dispensers before and after patient contact, where hand washing with soap and water is not indicated. Hygienic hand rub must be used on entry to a ward and on leaving, even if contact with patients is not anticipated. Staff will be entering a clinical area and hand decontamination is therefore required.

“Hand Hygiene Stations” are situated at the entrance to each ward and will consist of a hygienic hand rub dispenser and educational posters or boards.

All visitors to the ward (staff and relatives) are expected to decontaminate their hands on entering and leaving the ward, unless a proper handwash is required for clinical purposes e.g., *Clostridium difficile* or another enteric pathogen.

Hygienic hand rub dispensers (and soap/hand cream dispensers) require regular maintenance and cleaning.

If providing treatment or care to a patient in isolation, or prior to an aseptic procedure, a social handwash with soap and water can be followed by the application of hygienic gel. (See Table 3 – When to use hygienic hand rub)

### 2.2. **Hygienic hand rub products – Guidance for Use**

a. Alcohol is an accepted alternative to soap and water, when handwashing facilities are not available, or if minimal patient contact has occurred. Hygienic hand rub should not replace handwashing, but if used appropriately can reduce the carriage of transient micro-organisms.

b. All areas of the hands should be covered with the solution to ensure that certain areas (e.g., tips of the fingers and thumbs) are not missed.

c. If after several applications hands start to feel slightly sticky, this indicates that hands need washing with soap and water.
Table 3- When to use hygienic hand rub – do's & don't's

<table>
<thead>
<tr>
<th>Do use ✓</th>
<th>Don't use X – WASH HANDS INSTEAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Before and after minimal patient contact-clean procedures only</td>
<td>X If hands contain visible soiling or organic matter</td>
</tr>
<tr>
<td>✓ If performing multiple tasks on the same patient</td>
<td>X After contact with dressings, catheters, or cannulae</td>
</tr>
<tr>
<td>✓ Within the same bay after minimal contact – i.e.: taking observations</td>
<td>X If moving from bay to bay or ward to ward</td>
</tr>
<tr>
<td>✓ In an emergency situation; moving to another patient</td>
<td>X Following removal of gloves</td>
</tr>
<tr>
<td>✓ During ward rounds providing dressings/wounds are not handled</td>
<td>X If hands start to feel sticky after several applications</td>
</tr>
<tr>
<td>✓ In the community setting where handwashing facilities may not be available</td>
<td>X If patients/the environment are currently affected by Clostridium difficile</td>
</tr>
<tr>
<td>✓ Following isolation nursing, providing hands are washed initially with liquid soap</td>
<td></td>
</tr>
<tr>
<td>✓ After a handwash with liquid soap to provide a higher level of disinfection prior to performing clinical procedures</td>
<td></td>
</tr>
</tbody>
</table>

Antiseptic solutions - used with water, e.g., Chlorhexidine, Iodine, Triclosan, should be limited to specialist areas e.g., ICU, NICU, and Theatres, and only be used prior to highly invasive procedures.

Solutions should be dispensed from a wall mounted container or pump dispenser. Regular cleaning of the dispenser must be maintained.

2.3. Hand Decontamination Technique

A good technique covering all surfaces of the hands at the right time is more important than the agent used, or length of time taken to perform it. The ideal technique should be quick and thorough.

Preparation of the hands prior to decontamination - The efficacy of hand decontamination is improved if the following principles are adhered to;

a. Keep nails short and pay attention to them when washing hands – most microbes on the hands come from beneath the fingernails.

b. Total bacterial counts on hands are higher when rings are worn. Do not wear rings with ridges or stones as bacteria can harbour in crevices and around stone settings. Plain rings with smooth surfaces are acceptable, providing they are kept to minimum; one wedding band.
c. Do not wear artificial nails; nail extensions or nail polish as they discourage vigorous handwashing. Nail polish can flake and crack and become a source of contamination. Ridges caused by cracked nail polish can also harbour bacteria.

d. Nail extensions and false nails can cause fungal infections; additionally certain types of bacteria can thrive under false nails. Therefore, false nails and nail extensions must not be worn in clinical areas.

e. Remove wristwatches, bracelets and roll up long sleeves prior to handwashing. Wrist watches, bracelets etc must not be worn by those performing prolonged patient care – e.g., nursing/midwifery/therapy staff, or by staff whose watches or other jewellery will become contaminated during the course of their work.

NB: Ornamental rings and other jewellery may also penetrate gloves.

**Routine hand decontamination using soap and water** - Handwashing is generally defined as a vigorous, brief rubbing together of all surfaces of lathered hands, followed by rinsing under running water.

The correct technique for routine handwashing involves:

a. Wetting the hands under running water.
b. Applying the soap and covering all surfaces of lathered hands for 40-60 seconds.
c. Rinsing hands under running water to remove residual soap.
d. Thoroughly drying hands.

During handwashing, particular attention should be paid to those areas of the hands, which are most frequently missed; thumbs, tips of fingers and in between fingers.

See following diagram for areas commonly missed during handwashing:

**Areas Commonly Missed During Handwashing:**

![Diagram of Areas Commonly Missed During Handwashing](image)
The following diagram outlines the recommended and widely recognised ‘eight step technique’ for handwashing (including wetting your hands before and drying afterwards) for use of hygienic gel that can be used to ensure that all parts of the hands are covered. Each step consists of five strokes forward and five strokes backwards.

Routine hand decontamination using hygienic hand rub products -

a. Apply hygienic hand rub to clean, dry hands.

b. Rub hands together covering all surfaces following the technique as above and finishing with the wrists. Continue until hands are dry (This takes about 20-30 seconds).

c. Follow manufacturer’s recommendations on the volume of product to be used. If hands become unduly sticky after several consistent applications, ensure hands are washed with soap and water.
**Surgical hand decontamination** - There are a number of alternative methods for preparing the hands, nails and forearms prior to undertaking a surgical procedure;

1. Wash hands with an aqueous antiseptic solution for 3-5 minutes.
OR
2. Apply a hygienic hand rub to clean hands for 3 minutes.
OR
3. Wash hands with an aqueous antiseptic solution for 3 minutes, followed by an alcohol-based product for 4-5 minutes.

NB: Before using any type of soap or antiseptic solution, hands must first be wet to prevent the risk of dermatitis developing.

**Hand drying** - Effective drying of hands after washing is important as wet surfaces can transfer micro-organisms more effectively than dry ones. Additionally, inadequately dried hands are more prone to skin damage.

Cloth towels are not suitable for use in healthcare facilities as hands that have been washed can be re-contaminated. Paper disposal hand towels are quicker and more effective than warm air dryers.

Additionally, paper towels not only dry the skin but can also rub away transient micro-organisms and dead skin cells loosely attached to the surface of the hands. Hand towels must be sterile if used prior to a surgical procedure.

**Limited options for hand decontamination** - In certain circumstances, options for hand decontamination may be reduced or limited, for instance;

a. Within the patient's/client's own home.
b. Clinics and other healthcare establishments with limited handwashing facilities.
c. During the loss of water supply to a domestic or healthcare setting.

Hand hygiene under any of the above circumstances can consist of the following;

a. Hand wash with specifically designated soap and towel (provided by patient/client for use in the home).
b. Hand wash with liquid soap and paper towels (provided by place of work for use in the home).
c. Detergent based hand wipes followed by hygienic hand rub. (Only during loss of water supply)
d. Alcohol based preparation.

**Patient/Client hand hygiene** - Whilst this Protocol focuses on the need for Healthcare workers to practice effective hand decontamination methods, it is important to consider the hygiene needs of patients, clients, visitors and members of the public.

If the hands of patients or clients become contaminated through contact with faecal matter, wounds or other body substances, there is an increased risk of acquiring infections. Furthermore, the environment and equipment is likely to become contaminated, placing other patients/clients and Healthcare workers at risk from a variety of infections.

Where practically possible, patients/clients should be provided with, and encouraged to use, soap and water for hand hygiene purposes. Sporicidal hand wipes containing a mild detergent should be provided as an alternative method if mobility is restricted.
Visitors to the ward should be encouraged to use hygienic hand rub prior to and after visiting. Some visitors may prefer to wash their hands instead. Visitors entering side rooms used for isolation nursing should be instructed to wash their hands prior to both entering and leaving or use hygienic hand rub appropriately.

Hand Hygiene leaflets are available to Wards/Departments and can be ordered for patients, staff and visitors.

3. SKIN CARE

Occupations within the healthcare profession where frequent handwashing is required can cause the individual to be susceptible to long-term changes in the skin. This can result in irritant contact dermatitis and eczema if preventative steps are not taken. The repeated use of harsh, abrasive soaps or solutions may produce a contact dermatitis, whilst failure to remove jewellery can result in eczema developing under a ring and subsequently spreading over the hand.

Bacterial counts rise when the skin is damaged, increasing the risk of cross-infection, while skin lesions and cracked or sore skin provide a disincentive to correct hand hygiene.

Prevention of skin damage - Skin damage can be associated with the detergent base of the preparation and/or poor handwashing technique.

To minimise the risk of skin damage, hands should always be wetted before applying soap or antiseptic solutions. After washing, hands should be thoroughly rinsed to remove residual soap and then dried carefully. Hand cream should be applied 3 times per shift to protect the skin and maintain moisture. Moisturisers have been removed from liquid soap to prevent allergies; therefore, it is necessary to replace with an additional moisturising cream.

If a particular preparation causes skin irritation advice should be sought from the Occupational Health Department. When the hands are not visibly soiled, hygienic hand rub can be used instead of soap and water, as it is associated with less skin damage.

Hand cream available in staff rooms should be applied regularly (3 times per shift) to the hands to protect the skin from the potential drying effects of frequent hand decontamination. Communal containers must not be used as the contents may become contaminated and subsequently become a source of cross-infection.

Hand cream must be dispensed in single shot units and be compatible with the soap/hand rub in use.

All breaks in the skin must be covered with a waterproof dressing.

4. ROLES AND RESPONSIBILITIES (DUTIES)

It is the responsibility of every individual working within the Trust to ensure that the Hand Hygiene Protocol is complied with.

It is the responsibility of the Trust and Ward/Departmental Managers to ensure that adequate facilities are provided so that staff are encouraged to wash their hands regularly and appropriately. This must include the adequate provision of hand washbasins containing wrist or elbow mixer taps, liquid soap and disposable paper towels.
Hygienic hand rub and surgical scrub solutions must be provided within the appropriate areas. It is also the responsibility of Ward/Departmental Managers to ensure that staff within their area maintains compliance with the Hand Hygiene Protocol. The Infection Prevention and Control Service incorporate hand hygiene training into all Infection Control sessions; on induction, annual mandatory updates and as part of all in-service training.

Additionally, hand hygiene campaigns will periodically offer an opportunity for the updating of hand hygiene awareness.

5. LEGISLATION, GUIDANCE AND REFERENCES


COSHH regulations (Amendment 2003)
London: HMSO

Department of Health (2006)
London: DOH.

Gould (2001)
Encouraging Health Professionals to Practice Hand Hygiene safely in Hospital Infection UK 1: 1
Health & Safety at Work Act (1974)
London: HMSO

Infection Control Nurses Association (2002)
Hand Decontamination Guidelines.

National Patient Safety Agency [2008] Cleanyourhands Campaign

Effectiveness of a hospital-wide programme to improve compliance with hand hygiene,
The Lancet, Vol.356


6. PROTOCOL MANAGEMENT

This Protocol has been updated in 2009 and ratified by Infection Prevention and Control Committee.

Compliance with this Protocol is required by all members of staff within West Middlesex University Hospitals NHS Trust. Infection Prevention and Control Training centers around key aspects of this Protocol and therefore staff receiving Infection Prevention and Control training will be advised in relation to hand hygiene practices at every formal and informal educational session.

Compliance with the Hand Hygiene Protocol will be measured during the Infection Prevention and Control audit process and informally whilst visiting clinical areas and observing practice.
7.1. Responsibility for Monitoring
It is the overall responsibility of the clinical staff to monitor compliance with Infection Prevention and Control Protocols, through the audit process. It is the responsibility of the clinical staff in each clinical area to audit the hand hygiene compliance on a weekly basis and the infection prevention and control team to audit quarterly and feedback to staff.

In accordance with the Health and Social Care Act, 2008 (Code of practice for the Prevention and Control of Healthcare Associated Infections) and the NHS Litigation Authority standards, Managers must ensure that the implementation of this protocol is audited after its initiation and thereafter annually. It is the Manager’s responsibility to investigate and rectify any discrepancies identified by the audit process and ensure that the audit results are reported through the Business Units and actions required are devolved to the appropriate personnel within the relevant wards and departments.

7.2. Training
Managers must ensure that staff involved in the delivery of patient care are trained to decontaminate their hands at appropriate intervals and using an effective technique. Specific training may be required in relation to hand hygiene within clinical areas and this should be accessed through the IPCS or the ward/department’s Infection Control Link Practitioner.

Training for Infection Prevention and Control will be delivered in the following ways;

- **Clinical Updates** – covering strategic and clinical aspects of Infection Prevention and Control, national initiatives, MRSA, *Clostridium difficile*, outbreak management, or any other aspects of local epidemiology/surveillance.
- **Annual Mandatory Updates** - Yearly for clinical staff, every 3 years for non-clinical staff. This training includes hand hygiene.
- **Practical Updates** – covering the practical application of protocols and good Infection Prevention and Control practice e.g. hand hygiene, Sharps management, Personal Protective Equipment and decontamination. These sessions may be ad hoc and ward based according to audit results, or a specific campaign e.g., hand hygiene.
- **Induction** – all new starters will receive a brief presentation on Infection Prevention and Control. This training includes hand hygiene.
- **On request** – specific topics can be covered for both specialist and general areas. Ward meetings, clinical audit sessions or targeted training sessions can be arranged for this purpose.
- **Accredited Courses** - arranged ad hoc.

Staff not attending training as required will be followed up in the monthly Infection Prevention & Control Business Unit meetings by the Infection Prevention & Control Team through their respective manager. (Refer to IC1 Section 1 under training)

2.3. DISEASES REQUIRING TRANSFER TO REGIONAL INFECTIOUS DISEASES UNIT

**Key Point**

If a patient with a highly infectious disease is suspected, call the clinical microbiologist straight away

HIGHLY INFECTIOUS OR FATAL DISEASES
Some rare diseases are thought to require a greater degree of isolation than can be provided in this hospital. Examples are pulmonary anthrax, diphtheria or viral haemorrhagic fevers. See Section 3.1.

PERFORM A RISK ASSESSMENT

Most of these patients will have been abroad. They are often first seen in the A&E department, but may well be admitted to general wards with a diagnosis of PUO, from abroad, and there is usually a very sketchy history. These patients must not be transferred within the hospital but must be placed in Source Isolation or Airborne Isolation according to the standard protocol. Keep the number of staff and other contacts to a minimum. Make a list of all contacts in case follow up surveillance is required.

ACTION

Inform Consultant Microbiologist (ext 5784, 6882 or 6808 during working hours or via switchboard at other times).

Transfer to the **Regional Isolation Unit** will be arranged by the medical staff in liaison with the Infection Control Team and Consultant in Communicable Disease Control. See lines of communication for contact telephone numbers.

For specific guidance on management of highly infectious diseases, see Section 3.7. - Viral Haemorrhagic Fevers.

Do not admit anyone to a room, which has been occupied by a patient transferred for these reasons without consulting the Infection Prevention and Control Team. Special decontamination may be necessary.
### Patient or Visitor Contact Tracing List

#### INDEX case:

<table>
<thead>
<tr>
<th>Name</th>
<th>Hospital number</th>
<th>Dob</th>
<th>Consultant</th>
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<td>Home address</td>
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<td>Date/time of contact</td>
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<td>Date of discharge</td>
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<th>Name</th>
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<td>Date of admission</td>
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<td>GP telephone number</td>
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</tbody>
</table>
Staff Tracing List:

Index case:

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<th>Name</th>
<th>Position*</th>
<th>Contact telephone number</th>
<th>Time/date of contact</th>
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</tbody>
</table>

*Position codes:

M = Matron  S = Sister  C/N = Charge Nurse
SS/N = Senior Staff Nurse  S/N = Staff Nurse  Stu/N = Student Nurse
HCA = Healthcare Assistant  Dr = Doctor  M/S = Medical Student
Other – please state
2.4. LAST OFFICES ON INFECTED PATIENTS

Key Points

Always place patients who have died in waterproof body bags
Use the same precautions handling the body which were used when the patient was alive
Take care not to have a Sharps Injury and avoid contact with body fluids

PROCEDURE

For hygienic reasons, all bodies will be placed in waterproof cadaver bags before transport to the mortuary or undertakers. Plastic aprons and disposable procedure gloves should be worn when performing Last Offices on infected patients. In addition, patients who were being nursed in Source Isolation prior to death must continue to have the same precautions taken throughout the laying-out procedure.

Exceptional care must be taken to avoid splashing body fluids when redressing wounds and removing urinary or intravenous catheters. Eye or face protection is recommended when splashing is likely. Look out for SHARPS that may have been left on the bed in the urgency of resuscitation.

Viewing by relatives should take place before the body leaves the ward. If this is not possible, viewing of infected bodies may take place in the mortuary. In certain circumstances it may be wise not to reopen the cadaver bag (eg patients with extensive untreated tuberculosis or anthrax). If relatives become distressed because they cannot view a body, the medical staff who cared for the deceased must discuss the matter with them.

No religious procedure that carries the risk of transmitting infection should be performed on a cadaver. Medical staff should be prepared to discuss this with relatives and religious leaders if necessary. Post mortems should be arranged by the medical staff and carried out in a suitably equipped post-mortem room.

ANATOMICAL TECHNICIANS

The physicians looking after a patient have a duty to inform morticians about the infectious state of a patient (particularly tuberculosis) if a post mortem is considered.

TESTING PRIOR TO AUTOPSY

Doctors may only undertake testing of a deceased patient for communicable disease (eg HIV) in order to establish the cause of death in the following circumstances: Where a post-mortem has been authorised or ordered the patient can be tested for communicable diseases where relevant to the investigation of the cause of death. This should not be done routinely, and if there is reason to believe the patient had a serious communicable disease the body should be assumed to be infectious and precautions must be taken to protect health care workers from infection.

Testing may also be done if you have good reason to think that the patient may have been infected and a health care worker has been exposed to the patient’s blood or other body fluid. You should usually seek the agreement of a relative before testing. If the test shows the patient was a carrier of the virus you may inform close contacts of the patient who were at risk of infection in order to protect them from risk of death or serious harm, e.g. a sexual contact of the patient. You must not disclose information to other contacts who have not been and are not at risk of infection.
CATEGORY ‘A’ PATHOGENS
There are a number of rare infections which are caused by designated Category ‘A’ pathogens. Patients suffering from these and other dangerous diseases should be treated in high security isolation. Although there are no such facilities in our hospitals, a patient may be admitted and die before transfer. Subsequently the patient may be considered to have had or be found to have been infected with a dangerous pathogen and special precautions must be taken with the body. Examples of these diseases are: rabies, viral haemorrhagic fevers, Lassa fever, Marburg virus, Ebola virus and pulmonary anthrax. Advice must be sought from the Infection Control Team if any of these diseases are suspected.

CERTIFICATES FOR TRANSPORT ABROAD
There is no legal requirement for certification of “Freedom of Infection” in English law. It may be requested by the airline or by the country of destination. If requested, it does not pertain to the dead body (which would be transported in a hermetically sealed coffin if infection was confirmed or suspected), but to the declaration that there is no epidemic or outbreak of infectious disease in the district of residence or death. The appropriate Consultant in Communicable Disease Control is the person who traditionally writes and signs the certificate.
2.5. NOTIFICATION OF INFECTIOUS DISEASES IN ENGLAND AND WALES

Key Points
Doctors have a statutory responsibility to notify if they suspect one of their patients has an infectious disease

A simple way of doing this is through the Infection Control Team

THE LAW

Section 11(1) of the Public Health (Control of Disease) Act 1984

“If a registered medical practitioner becomes aware, or suspects, that a patient whom he is attending within the district of a local authority is suffering from a notifiable disease or from food poisoning, he shall, unless he believes, and has reasonable grounds for believing, that some other registered medical practitioner has complied with the subsection with respect to the patient, forthwith send to the proper officer of the local authority for the district a certificate stating:

(a) the name, age and sex of the patient and the address where the patient is,
(b) the disease, or as the case may be, particulars of the poisoning from which the patient is, or is suspected to be, suffering and the date, or approximate date, of its onset, and
(c) If the premises are a hospital, the day on which the patient was admitted, the address of the premises from which he came there and whether or not, in the opinion of the person giving the certificate, the disease or poisoning from which the patient is, or suspected to be, suffering was contracted in the hospital.”

GUIDELINES

General Medical Council. Duties of a doctor. Serious Communicable Diseases. 1999

“You must disclose information about serious communicable diseases in accordance with the law. For example, the appropriate authority must be informed where a notifiable disease is diagnosed….”

IN-HOUSE INTERPRETATION

At the very least, the consultant in charge of a case has a duty to notify ward staff if a patient with an infection which is a risk to staff is admitted or is to be admitted.

DISEASES INCLUDED ON THE LIST

The diseases listed below require Notification to the proper authorities. The aim of Notification is to identify infection risks and institute appropriate control measures.

**IF YOU ADMIT A PATIENT KNOWN TO HAVE ANY OF THESE DISEASES, PLEASE INFORM THE INFECTION PREVENTION AND CONTROL TEAM AT THE EARLIEST OPPORTUNITY.**

If a patient is admitted to hospital with a diagnosis of, or suspected of having, any of the diseases listed below, the clinician in charge has a legal responsibility to notify
the disease to the Consultant in Communicable Disease Control (Proper Officer). This duty is normally carried out by the junior medical staff but is the responsibility of the doctor in charge of the patient.

In an emergency, a microbiologist or infection prevention & control nurse will telephone the Proper Officer (usually the Consultant in Communicable Disease Control or an Environmental Health Officer) on duty for that district. This single path of referral will ensure that the appropriate action is taken as quickly as possible.

Official Notification Books are also kept on certain wards where many patients suffering from infectious diseases are admitted, e.g. paediatric wards. Notification of diseases on these wards can therefore be made directly, but Infection Control and the Respiratory Specialist Nurse (for tuberculosis only) must be informed by telephone so that records are complete.

**STATUTORILY NOTIFIABLE DISEASES, 1988**

<table>
<thead>
<tr>
<th>Anthrax</th>
<th>Plague</th>
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<tbody>
<tr>
<td>Cholera</td>
<td>Poliomyelitis (acute)</td>
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<tr>
<td>Diphtheria</td>
<td>Rabies</td>
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<tr>
<td>Dysentery</td>
<td>Relapsing fever</td>
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<tr>
<td>Encephalitis (acute)</td>
<td>Rubella</td>
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<tr>
<td>Food poisoning</td>
<td>Scarlet fever</td>
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<tr>
<td>Leprosy</td>
<td>Smallpox</td>
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<tr>
<td>Leptospirosis</td>
<td>Tetanus</td>
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<tr>
<td>Malaria</td>
<td>Tuberculosis</td>
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<tr>
<td>Measles</td>
<td>Typhoid</td>
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<tr>
<td>Meningitis (acute)</td>
<td>Typhus fever</td>
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<tr>
<td>Meningococcal septicaemia</td>
<td>Viral Haemorrhagic fever</td>
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<tr>
<td>Mumps</td>
<td>*Viral Hepatitis</td>
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<tr>
<td>Ophthalmia neonatorium</td>
<td>Whooping cough</td>
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<tr>
<td>Paratyphoid fever</td>
<td>Yellow fever</td>
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</table>

NOTE: In addition, all potentially infectious diseases within the District should be reported to the Infection Prevention & Control Team. Some diseases such as legionellosis and cryptosporidiosis are reported to the Consultant in Communicable Diseases Control even though they are not formally "Notifiable".

*There is some controversy about whether to notify Hepatitis C or Hepatitis B virus infection when it is first discovered in a patient with chronic infection because the law relates to “viral hepatitis”. In Hepatitis C, the acute infection is usually asymptomatic.*
Please inform the North West London Health Protection Unit (24 hour service) of the following:

**URGENT / IMMEDIATE**

- Anthrax
- Botulism
- Cholera
- Diphtheria
- *E. coli* 0157
- Food poisoning outbreaks
- Legionnaires disease
- West Nile Virus
- Measles
- Meningitis
- Meningococcal septicaemia
- Plague
- Poliomyelitis
- Rabies
- Viral haemorrhagic fevers (Lassa, Marburg etc.)

Chickenpox when exposure of immunocompromised or pregnant patients has occurred.

**BY MORNING OF NEXT WORKING DAY**

- Antibiotic resistance
- Amoebic dysentery
- Brucellosis
- Campylobacter
- Cryptosporidium
- Giardia
- Hepatitis
- Leprosy
- Leptospirosis
- Listeriosis
- Lyme disease
- Malaria
- Norovirus
- Ophthalmia neonatorum
- Psittacosis
- Q fever
- Relapsing fever
- Rotavirus
- Rubella
- Salmonella
- Shigella
- Typhoid, Paratyphoid
- Toxoplasma
- Tuberculosis
- Typhus
- Whooping cough
- Yellow fever

**Contact North West London Health Protection Unit**

**Office hours** 020 8327 7181 9am - 5 pm Mon-Fri

**Out of hours** via Hillingdon hospital switchboard on 01895 238282 and ask for public health duty doctor

October 2005
2.6. OUTBREAK MANAGEMENT

Key Points

If you suspect an outbreak, inform the Infection Control Team

Make a list of those affected with admission dates and date of onset of the infection

This policy must be read in conjunction with IC3 Outbreak Control Plan

Two or more cases of infection with indistinguishable symptoms/organisms in one area constitute an outbreak and suggest a breakdown in normal hygiene practice. The infections may manifest themselves in patients on the same ward. However, different wards may be involved, the patients having a common source of infection.

It is usually impossible to be absolutely certain that two isolates of bacteria or viruses are the same, so they are generally referred to as indistinguishable.

Commonly detected outbreaks involve:

- Meticillin resistant *Staphylococcus aureus* (MRSA) (See IC10 & Section 3.2)
- Aminoglycoside or multiply resistant coliforms or pseudomonads, including *Acinetobacter*
- Diarrhoeal or respiratory pathogens (See Section 3.11)
- *Clostridium difficile* enterocolitis (See IC8 & Section 3.12)
- Legionnaires’ disease (See Section 3.13)
- Tuberculosis in HIV wards (See Section 3.3)

MANAGEMENT

**ON FIRST SUSPICION,** ward staff should:

- Record all the cases, noting the time of onset of symptoms in each suspected case, and dates of admission to the hospital and ward
- Inform the Infection Control Nurse
- Collect appropriate microbiology specimens after consultation
- Isolate the index cases where possible

ACTION -

Decisions as to what action to take are made in consultation with the Infection Control Team, with Nursing Staff, Managers and Consultants involved.

The urgency of a situation is determined by the virulence of an organism, by the nature of the disease involved, and by the vulnerability of the patients concerned.

It may be necessary to close a high-risk ward to new admissions if isolation is not possible (e.g. more than 2 cases of diarrhoea).

**Movement of staff or patients**
Visiting may need to be restricted. No movement of staff or patients from the outbreak ward is allowed until the outbreak is over, except for discharge home. Nursing staff (permanent, students and agency) should remain permanently attached to the ward if at all possible. Extra domestic cleaning support may be needed.

The microbiologists may wish to screen patients, staff and the environment for a particular organism if an outbreak has occurred.

Most outbreaks are dealt with on a day-to-day basis by the Infection Prevention & Control Team, but in the case of large, serious or community-associated outbreaks or epidemics, an *ad hoc* working committee will be formed and will meet daily to determine action. This will be convened by Microbiologists with Consultants in Communicable Disease Control and appropriate administrator, and will co-opt appropriate personnel (e.g. A&E Consultants, Occupational Health Physicians), depending on the nature of the outbreak and will be rapidly disbanded when the problem is resolved.

For more specific details see policies on Food Poisoning (See Section 3.11.), MRSA (See Section 3.2.), and tuberculosis (See Section 3.3.).

**INVESTIGATION OF SUSPECTED FOOD POISONING/VIRAL GASTROENTERITIS**

**Definition**

Food poisoning may be suspected because staff are ill (particularly with vomiting, diarrhoea or both), because more than one patient in a ward becomes ill or because indistinguishable isolates from staff or patient are identified in the microbiology laboratory. Remember that some food poisons are toxins which may cause unusual symptoms.

Staff must report episodes of diarrhoea and/or vomiting to Occupational Health. Diarrhoeal stool specimens should be sent to Microbiology for bacteriological and virological examination either directly from the place of work or via Occupational Health. Indicate clearly on the form that the specimen is from STAFF, so that confidentiality can be preserved.

**If food poisoning is suspected**

- In a ward patient: the Nurse-in-charge should report to the Infection Control Team
- In a staff member: Occupational Health should report to the Infection Control Team

Individual staff are encouraged to report directly to the Infection Prevention & Control Team. (See Section 1.4. - Lines of Communication)

**Action**

The Infection Prevention & Control Team will investigate the suspected outbreak. If preliminary investigations confirm the suspicion, the outbreak control committee will be set up according to the Outbreak Control Plan (IC3).
Closure of wards to new admissions

It may be necessary to close a high-risk ward to new admissions if isolation is not possible (e.g. more than 2 cases of diarrhoea).

Closure is defined as no new patients to be admitted to the affected ward and no patients should be transferred or discharged to any other healthcare setting from the affected ward until advised by the infection prevention & control team.

After assessing the extent of the outbreak a decision will be made by the infection prevention & control team whether or not to advise closure of wards to new admissions. The relevant matron of the area affected and the bed manager will be informed.

If ward closure is agreed by all parties the infection prevention & control team will inform the Chief Executive, the Medical Director and the Consultant in Communicable Disease Control of the decision. The infection prevention & control team will continue to provide advice on precautions and document events.

If the ward closure is not possible for any reasons the infection prevention & control team will advise precautions, document events and will inform the Chief Executive, the Medical Director and the Consultant in Communicable Disease Control. The infection prevention & control team will meet daily with relevant matron and consultants to review arrangements and re-consider closure.

During periods of bed pressures the decision to admit patients to an outbreak ward should be made by the on call director and the infection prevention & control team.

The patients on the ward will be reviewed daily by the infection prevention & control team until the symptoms in all affected patients have ceased for a minimum of 48 to 72 hours.

The affected ward will not be reopened until after the enhanced environmental cleaning has taken place.

If the outbreak cannot be contained the escalation plan to open an isolation ward may need to be operational. (Refer to IC11 – Operation Escalation Plan for an Isolation Ward)
2.7. NOSOCOMIAL (Healthcare-Associated) INFECTION SURVEILLANCE

Key Points

Aims

Methods of surveillance

Examples of alert organisms

Examples of alert conditions

AIMS

The main objectives of surveillance of healthcare-associated infections are:

- Early detection of outbreaks
- Timely investigation and institution of control measures
- Assessment of infection rates with time

Surveillance is part of the routine infection control programme. It helps to identify risks of infection and reinforces the need for good practices. Preventing outbreaks depends on prompt recognition of one or more infections with alert organisms and instituting special control measures to reduce the risk of spread of the organism. Collection of accurate data allows comparison with other units and measurement of response to changes in practice (audit).

MANDATORY SURVEILLANCE SCHEME OF HEALTHCARE ASSOCIATED INFECTIONS

In October 2000, all Trusts are required to monitor levels of healthcare associated infections as directed by the Department of Health. Mandatory healthcare associated infection surveillance scheme reported through the Health Protection Agency commenced in 2001. The reporting was extended to include serious untoward incidents associated with infection in 2003. This information is used as the basis of a performance management indicator which forms part of the balanced scorecard with contribution to the Star Ratings for acute hospital Trusts.

METHODS OF SURVEILLANCE

Laboratory-based ward liaison surveillance is used in conjunction with “Alert organism/Alert condition” surveillance. The system is managed by the Infection Control Team and details are reported back to the Infection Control Committee and Clinical Directorates.
Laboratory-based ward liaison surveillance (Alert organisms)

Positive microbiology reports are screened and may result in a case review, a search for other carriers or infected patients and ward visits by the Infection Control Nurses. Approximately 70% of infections and alert organisms are detected in this way. A patient may be placed in source isolation or discharged from hospital if considered to be a risk of infection to others.

<table>
<thead>
<tr>
<th>Examples of ALERT ORGANISMS</th>
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<tbody>
<tr>
<td><strong>BACTERIA</strong></td>
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<tr>
<td>Methicillin-resistant <em>Staphylococcus aureus</em></td>
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<tr>
<td>Other resistant <em>Staphylococcus aureus</em></td>
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<tr>
<td><em>Streptococcus pyogenes</em> (Streptococcus Group A)</td>
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<td><em>Streptococcus agalactiae</em> (Streptococcus Group B)</td>
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<tr>
<td>Penicillin-resistant <em>Streptococcus pneumoniae</em></td>
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<tr>
<td><em>Haemophilus influenzae</em></td>
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<tr>
<td><em>Legionella</em> spp.</td>
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<tr>
<td>Glycopeptide-resistant enterococci</td>
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<tr>
<td><em>Neisseria</em> spp.</td>
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<tr>
<td><em>Clostridium</em> spp.</td>
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<tr>
<td><em>Salmonella</em> or <em>Shigella</em> spp</td>
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<tr>
<td><em>Escherichia coli</em> O157</td>
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<tr>
<td>Multi-resistant Gram negative bacilli</td>
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<tr>
<td>Any unusual bacteria</td>
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<tr>
<td><strong>VIRUSES</strong></td>
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<tr>
<td><em>Rotavirus</em></td>
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<tr>
<td>Small round structured virus (Norovirus)</td>
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<tr>
<td><em>Respiratory Syncytial virus</em></td>
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<tr>
<td><em>Varicella zoster</em></td>
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<tr>
<td><em>Influenza virus</em></td>
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<tr>
<td><em>Rubella</em></td>
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<tr>
<td><em>Parvovirus</em></td>
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<tr>
<td><em>Measles</em></td>
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</table>
Ward based surveillance (Alert conditions)

Alert conditions are medical syndromes such as chicken pox or diarrhoea which immediately suggest a risk of infection. It is the responsibility of the ward staff to notify the infection prevention & control team if they suspect an infection which may be a risk to others. Appropriate specimens must be taken and sent promptly, properly labelled, to the laboratory (For example, the first diarrhoeal stool from a patient must be sent for exclusion of salmonellosis and *Clostridium difficile* infection). Source isolation precautions must be instituted immediately if infection is suspected.

### Examples of ALERT CONDITIONS

<table>
<thead>
<tr>
<th>Condition</th>
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<tr>
<td>Post surgical sepsis</td>
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<tr>
<td>Diarrhoea and/or vomiting</td>
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<td>Diarrhoea with blood (dysentery or colitis)</td>
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<td>Cellulitis</td>
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<tr>
<td>Tuberculosis</td>
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<tr>
<td>Exanthemata (rashes)</td>
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<tr>
<td>Chicken pox or shingles</td>
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<tr>
<td>Mumps, measles, rubella, parvovirus</td>
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<tr>
<td>Whooping cough</td>
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<tr>
<td>Poliomyelitis</td>
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<tr>
<td>Diphtheria</td>
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<tr>
<td>Scabies</td>
</tr>
<tr>
<td>Meningitis</td>
</tr>
<tr>
<td>Viral hepatitis</td>
</tr>
<tr>
<td>Ophthalmia neonatorum</td>
</tr>
<tr>
<td>Pyrexia of unknown origin</td>
</tr>
<tr>
<td>Typhoid and paratyphoid fevers</td>
</tr>
<tr>
<td>Viral haemorrhagic fever</td>
</tr>
</tbody>
</table>

**Targeted surveillance**

Detailed targeted surveillance in specific areas will be performed. An example would be surgical site infection surveillance. Results are fed back to appropriate clinical units.