

INFECTION PREVENTION AND CONTROL POLICY SECTION F ISOLATION PRECAUTIONS

Prevention and control of infection is part of total patient care. All care must be planned and based on an informed knowledge of fact, (Worsley *et. al.* 1990).
All healthcare workers who are in direct contact with patients/clients in isolation have a responsibility to observe the precautions outlined in these guidelines.

Routes of transmission of infection have been understood for many years and this knowledge has been used to develop policies and procedures on isolation of patients with communicable disease or epidemiologically important micro-organisms. It is important to emphasise that these guidelines can only offer protection if used consistently and appropriately.

Infection Prevention and Control measures that are outlined in this section are designed to **interrupt** the routes of transmission of infection. The correct application of infection prevention and control procedures therefore requires knowledge of the way the infection is spread, i.e. in the air, by contact etc.

The guidelines in this section should be applied in conjunction with the routine precautions which should be carried out at all times (see page 3 in Section F and also Section B of the Guidelines). These practices are designed for the care of all patients regardless of their diagnosis or presumed infectious status.

The additional precautions in this section are grouped into various categories depending on how the infection may spread. It is important to realise that some infections may spread in a number of different ways therefore more than one category of precautions may be required.

Isolation for the control of infection can be applied in two different ways:-

- 1. Source isolation** – The aim of this is to prevent the transfer of a patient’s infection to others, e.g. other patients, staff, relatives and visitors. Precautions are therefore put in place to minimise the risk of an infection spreading to others.
- 2. Protective Isolation** – The aim of this is to prevent the transfer of infective micro-organisms to patients at special risk, e.g. those in whom treatment or disease has resulted in an immuno-compromised state. Precautions are therefore put in place to minimise the risk of a client/patient acquiring an infection.

KEY POINTS

- All visitors must report to the nurse-in-charge before entering the room so that they can be informed about any special instructions that may be required.
- Hands should be washed immediately after providing direct care to a patient with an infection to avoid transfer of micro-organisms to other patients or the environment.
- If possible, attend to the patient in source isolation last, after dealing with non infected patients/clients.
- Patients with an infection should have their own equipment; if the use of common equipment is unavoidable items must be adequately decontaminated in between each patient use.
- Area should be terminally cleaned after discharge of the patient who has been isolated.
- It is important to consider the psychological effect of isolation on patients and ensure that effective rehabilitation is maintained throughout the period of isolation.

Always contact the Infection Control Service for further advice/information regarding specific infections and necessary precautions.

NOTIFICATION

Medical staff have a statutory duty to give notification of certain infectious diseases which are diagnosed or suspected in patients whom they are attending, to the Consultant in Communicable Disease Control (CCDC) who is acting as Proper Officer for the Local Authority. Telephone reporting of infections with serious implications for public health, whether or not they are legally notifiable is also important. It is the responsibility of both medical and nursing staff that if they suspect an incident of communicable disease or food poisoning in a ward, hospital or Trust facility that they report it immediately to the Infection Control Doctor and/or CCDC.

The following list of infectious diseases must be notified to the Local Authority's Proper Officer, (DoH 1988). This is the CCDC for Worcestershire who is based at the Health Authority

LIST OF NOTIFIABLE DISEASES IN THE UNITED KINGDOM

Acute encephalitis	Measles	Scarlet Fever
Acute poliomyelitis	Meningitis	Smallpox
Anthrax	Meningococcal septicaemia	Tetanus
Cholera	(without meningitis)	Tuberculosis
Dysentery	Mumps	Typhoid fever
Diphtheria	Ophthalmia neonatorum	Typhus
(amoebic or bacillary)	Paratyphoid fever	Viral haemorrhagic
Food poisoning	Plague	fevers
Leprosy	Rabies	Viral hepatitis
Leptospirosis	Relapsing fever	Whooping cough
Malaria	Rubella	Yellow fever

NOTIFICATION OF HIV/AIDS

AIDS is not a notifiable disease, but doctors are urged to report in a voluntary confidential scheme. AIDS cases should be reported on a special AIDS form in strict medical confidence to the Director, Public Health Laboratory Service, Communicable Disease Surveillance Centre (CDSC), 61 Colindale Avenue, London. NW9 5EQ. Advice about the reporting of cases may be obtained from CDSC (Tel: 0181 200 6868), or locally from the CCDC.

Cases of HIV infection and AIDS seen by paediatricians are reported through the British Paediatric Association Surveillance Unit, while in pregnant women they are reported through the Royal College of Obstetricians and Gynaecologists survey of HIV in Pregnancy. Reports of both are received by the Department of Epidemiology, Institute of Child Health, Guilford Street, London. WC1N 1EH. (Tel: 0171 829 8688).

All reporting is voluntary and confidential. Within the Trust this is usually carried out by the Clinical Nurse Specialists in Sexual Health and the microbiology laboratory upon processing the results of tests.

REPORTING OUTBREAKS OF INFECTION AND/OR UNUSUAL INCIDENTS

Always seek early advice if your judgement causes you to suspect an outbreak of infection. When considering what and when to report always seek advice at the earliest possible stage. Damani (1997).

RECOGNITION

An outbreak may be defined as two or more cases of an infection occurring around the same time **or** an increase in the number of infections that would normally be expected. A single case of some diseases e.g. Diphtheria in any setting would also be considered an outbreak.

It is important to recognise potential outbreaks promptly to enable control measures to be implemented as soon as possible to prevent further cases.

All healthcare staff should be aware of possible signs of infection (fever, diarrhoea, vomiting) and should report these to the manager of the area at that time. This information should then be passed onto the Infection Prevention and Control Nurse or Doctor for further management advice.

The following should always be reported promptly to the Infection Prevention and Control Nurse or Doctor, (incidents involving a member of staff should also be reported to Occupational Health).

- An increased incidence of vomiting and/or diarrhoea occurring either over a short or extended period amongst staff patients/clients and/or staff.
- Several cases of a similar infection (based on clinical diagnosis) in patients and staff who have had close contact with each other.
- An unusually high number of absences amongst staff.

MANAGEMENT

Advice and assistance on the control of an outbreak must be obtained from the Infection Prevention and Control Nurse or Doctor. In the case of outbreaks in the community the CCDC will be notified or in the case of suspected food related outbreaks the relevant Environmental Health Officer will be informed.

Control plans relating to major outbreaks in the community, hospitals or for a flu pandemic are available from the Infection Prevention and Control Team.

RECORDING OF INFECTION

A record must be made in the individual's case notes and this should include the type of infection and how it is to be managed.

Central documentation is also essential in an outbreak situation, an example of this is shown on page 3a.

KEY POINTS TO BE FOLLOWED BY ICT

- Confirm the existence of an outbreak.
- Verify the diagnosis.
- Create a case definition.
- Identify and count cases/exposures.
- Tabulate and set the data in terms of time, place and person.
- Take immediate control measures.
- Communicate information to relevant personnel.
- Screen personnel and the environment as indicated.

OUTBREAK CHART

NAME	HOSP No.	CLINICAL DETAILS Medication	DATE														
			am	pm	am												

Please indicate episodes of the following for each patient using the following key: D – Diarrhoea V – Vomiting S – Specimen (This page can be photocopied)

ISOLATION PRECAUTIONS NECESSARY FOR SPECIFIC INFECTIONS

This table lists various infections and the necessary precautions that should be taken by staff when caring for patients/clients who have one of the conditions listed. Specific guidance is also available on pages 8 to 16 regarding the category of isolation and appropriate precautions. Further guidance for the care and management of specific infections is also detailed on pages 17 to 47.

DISEASES	CATEGORY OF ISOLATION AND PRECAUTIONS	DURATION OF INFECTION CONTROL PRECAUTIONS	COMMENTS
Acquired immune Deficiency Syndrome (AIDS)	Blood and Body fluids	-	See page 17-19 for details. Isolation is only required in special circumstances.
Amoebiasis Dysentery	Enteric	As long as cysts appear in faeces.	-
Liver abscess	None	-	-
Ascariasis	None	-	-
Aspergillosis	None	-	-
Botulism	None	-	-
Brucellosis	Contact	Precautions only if draining lesion(s)	Person to person transmission is rare.
Campylobacter	Enteric	Duration of diarrhoea	Not usually transmitted from person to person.
Candidiasis	Contact	Duration of illness	-
Cat Scratch fever	None	-	-
Chickenpox (Varicella)	Respiratory and Contact	Exclusion should continue until lesions are crusted and dry. (Patient is infectious from 2 days before until 5 days after rash appears).	See page 21 for details. Healthcare workers should have had chickenpox or know they are immune. Visitors who have not had chickenpox should be warned of the risks.
Clostridium perfringens -Food poisoning -Gas Gangrene	None Contact	- Duration of illness	- Not transmitted from person to person. Isolation not necessary.
Clostridium difficile	Enteric	Duration of diarrhoea	See page 23 for details in addition to additional separate <i>C.diff</i> section of these Guidelines
Conjunctivitis --Viral or bacterial	Contact	Until appropriate treatment has begun and inflammation has started to resolve.	Isolation not necessary.
Cryptosporidiosis	Enteric	Duration of diarrhoea	-
Cytomegalavirus	Usually none	-	Pregnant staff should avoid contact, particularly with urine.
Diarrhoea	Enteric	-	See page 4 and 26.
Handwashing is the single most important factor to prevent the spread of infection.			

DISEASES	CATEGORY OF ISOLATION AND PRECAUTIONS	DURATION OF INFECTION CONTROL PRECAUTIONS	COMMENTS
Gas gangrene	Contact	Duration of illness	Not transmitted from person to person. Isolation not necessary.
Gastroenteritis	Enteric	-	See page 26 for details
Glandular fever	Oral secretions precautions	Until acute phase is over.	Isolation not necessary.
German measles (Rubella)	Respiratory	From 7 days before to 10 days after onset of rash.	Exclude non immune women (staff/visitors) of childbearing age.
Hepatitis (viral) -Type A	Enteric	7 days before to 7 days after onset of jaundice.	Hepatitis A is most contagious before jaundice and is infectious in the early febrile stage of the illness. Close contacts may be given gamma globulin.
-Type B	Blood/body fluids	-	See page 19 for details
-Type C	Blood/body fluids	-	See page 19 for details
-Type E	Enteric	Duration of diarrhoea.	-
Herpes simplex	Contact	Until vesicles have healed.	Wear gloves when hands are in contact with oral/genital secretions. Staff with cold sores should not work with immunocompromised patients.
Herpes Zoster (Shingles)	Contact	Until vesicles are dry.	As this can lead to cases of chickenpox, susceptible individuals and staff who have not had chickenpox must be excluded from contact with the patient. Visitors who have not had chickenpox should be warned of the risks. See page 21.
HIV (Human Immuno-deficiency virus)	Blood and body fluids	-	Isolation only required in special circumstances See page 18 for details.
Hookworms	None	-	Family contacts may require treatment.
Immuno-compromised state	Protective	At the discretion of the clinician.	See page 16 for details.
Impetigo	Contact	For 24 hours after start of effective treatment.	-
Influenza	Respiratory	Prior to onset and 5 days after onset.	Immunization is available. See page 27 for details.
Legionnaires disease	None	-	Inform ICD and CCDC. Isolation of patients not necessary
Malaria	None	-	-
Handwashing is the single most important factor to prevent the spread of infection.			

DISEASES	CATEGORY OF ISOLATION AND PRECAUTIONS	DURATION OF INFECTION CONTROL PRECAUTIONS	COMMENTS
Measles	Respiratory	For 5 days after start of rash. In immuno-compromised patient precautions should be maintained for duration of illness.	-
Meningitis	Dependant on infecting agent.	-	See page 30 for further details
Meningococcal septicaemia	Respiratory	For 48 hours after start of effective antibiotic therapy.	See page 30 for further details
MRSA	Dependant on site of infection.	-	See page 33 for further details
Multi resistant Gram negative organisms	Contact	-	See page 41 for further details
Mumps	Respiratory	7 days before to 9 days after onset of swelling.	Exclude non immune staff. Inform visitors who are not immune of the risk.
Pinworm infection	None	-	-
Pneumonia	Usually none – see comments	-	Isolation required with respiratory precautions for MRSA, psittacosis and <i>Strep. Pneumonia</i> resistant to penicillin.
Poliomyelitis	Respiratory and enteric	Until stools negative for polio virus or 7 days after onset.	Visitors and staff should be immunized. Gamma globulin may be given to non immune contacts. No elective surgery on non immune contacts.
Psittacosis	Respiratory	For 7 days after onset.	Inform ICD and notify CCDC.
Rabies	Contact	Duration of hospitalization.	-
Ringworm	Contact	-	Gloves must be worn by staff applying topical treatments.
Rubella	Respiratory	From 7 days before to 10 days after onset of rash.	Exclude non immune women (staff/visitors) of childbearing age.
Salmonellosis (not typhoid or paratyphoid)	Enteric	Duration of diarrhoea.	Staff (except in catering or food handler) may return to work when free of symptoms. Catering staff/Food handlers need to seek further advice from occupational health or ICD.
Scabies	Contact	Until completion of treatment.	See page 42 for further details.
Handwashing is the single most important factor to prevent the spread of infection.			

DISEASES	CATEGORY OF ISOLATION AND PRECAUTIONS	DURATION OF INFECTION CONTROL PRECAUTIONS	COMMENTS
Schistosomiasis (Bilharzia)	None	-	-
Shigellosis	Enteric	Until three negative stool specimens obtained.	-
Streptococci β Haemolytic -Group A	Contact	Until off antibiotics and cultures are negative.	-
-Group B	Usually none	-	-
-Group C	Usually none	-	-
-Group G	Usually none	-	-
Staphylococcal food poisoning	None	-	-
Syphilis -Congenital, primary and secondary	Contact	For 48 hours after effective therapy.	Contact precautions must be followed.
-Latent and without lesions	None	-	-
Tetanus	None	-	-
Threadworm	None	-	-
Tuberculosis -Pulmonary open	Respiratory	Two weeks after start of effective antibiotic therapy.	See page 43 for further details.
-Closed	None	-	-
Typhoid/ Paratyphoid fever	Enteric	Until 6-12 consecutive stools are negative and urine if appropriate.	Inform ICD and notify CCDC.
Viral Haemorrhagic fevers	Strict	Duration of hospitalization.	See page 46 for further details.
VRE Vancomycin resistant enterococci	Contact	-	See page 45 for further details.
Whip worm	None	-	-
Whooping cough (Pertussis)	Respiratory	Until 3 weeks after onset of paroxysmal cough or 7 days after start of effective antibiotic therapy.	Discharge patient home if clinical condition permits. Visiting by children should be restricted to those that are immune. Prophylactic antibiotics may be recommended for close contacts.
Handwashing is the single most important factor to prevent the spread of infection.			

GUIDELINES FOR USE WITH RESPIRATORY ISOLATION

This is used for infections that are transmitted by droplet nuclei. Droplets are generated in the course of talking, sneezing, and during procedures involving the respiratory tract such as suction, physiotherapy.

Location

- A single room with a wash hand basin and preferably an en-suite toilet.
- The door must be kept closed at all times except for necessary entrances and exits.
- Remove any unnecessary furniture before admitting the patient.
- Ensure that there is an adequate supply of liquid soap, disposable paper towels and alcohol hand rub available.
- Ensure that there is a clinical waste bin with a yellow bag available within the room.

Staff

- Only staff who have an immunity against varicella (have had chickenpox or are immune) or measles should care for patients/clients with these infections. If possible their numbers should be restricted. Refer to page 47-F for information regarding patients/clients with pulmonary tuberculosis, all staff caring for these patients/clients should have had a BCG vaccination.

Visitors

- All visitors must seek advice from the nurse in charge of the ward before visiting.

Protective Clothing

This should always be worn in accordance with the guidelines in section B. Extra usage includes:-

- Gloves – Must be worn for contact with respiratory secretions or contact with articles that have been contaminated with respiratory secretions.
- Plastic aprons – Must be worn when having direct contact with the patient and their clothing.
- Masks – Not usually necessary. If nursing someone with pulmonary tuberculosis refer to page 47-F.
- Eye protection – Only necessary when carrying out procedures which may generate splashing to the eyes/face, particularly in relation to carrying out suction or respiratory therapy that may generate aerosols.

Visitors do not need to wear protective clothing unless providing direct care.

Hand Hygiene

- Wash hands thoroughly with liquid soap and dry with paper towel. Hands must be washed after touching the patient or potentially contaminated articles and before taking care of another patient/client. Alcohol hand rub should be used on leaving the room.

Laundry

- Process all laundry as infected.

Equipment

- Single use disposable respiratory equipment should be used where possible. If items of equipment are re-used then they should be thoroughly cleaned and disinfected or sterilized.
- Respiratory equipment must be cleaned and heat disinfected preferably in CSSD. Inform the CSSD manager of the risk of infection from the equipment and in some cases it may be advised to transport equipment in alginate bags.
- Always ask for advice from the IPCN if you are unsure about the decontamination of contaminated equipment.

Decontamination

- Any equipment which may be soiled with respiratory secretions should be thoroughly cleaned with hot soapy water and general purpose detergent (GPD). Staff should wear appropriate protective clothing when cleaning equipment.

Waste disposal

- All waste, including items that are contaminated with respiratory secretions must be discarded of as clinical waste into a yellow bag.

Body fluid spills

- Any spillage or gross contamination by respiratory secretions must be cleaned immediately using disposable cloths and general purpose detergent. Follow guidelines on page 7-C.

Interdepartmental visits

- Limit the movement and transport of the patient/client to essential purposes only. Seek advice from the Infection Control Nurse regarding individual cases.

Laboratory Specimens

- If pulmonary tuberculosis is suspected, or confirmed record this on the request form and label sputum specimen and request form with a Biohazard/Danger of Infection label.

Last offices

- The infection prevention and control precautions applied during life must be continued after death. In the case of open tuberculosis the body must be labelled with a danger of infection label on the wrist, the wrapping sheet or shroud and on the information sheet. The body should also be placed in a cadaver bag. These are available in all the community hospitals.

Safe working practices should be followed at **all** time with **all** patients.

Specific advice is available in these guidelines on the following infections. It should be read in conjunction with the guidelines respiratory isolation.

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Chickenpox	21
Influenza	27
Meningitis	30
MRSA in sputum with a productive cough	33
Tuberculosis including multi drug resistant TB	43

GUIDELINES FOR USE WITH CONTACT ISOLATION

These precautions are used to prevent the transmission of communicable disease and epidemiologically important micro-organisms which are causing infection/colonization and can be transmitted by direct patient/client contact or in-directly with the patient's environment.

Location

- A single room with a wash hand basin and preferably an en-suite toilet is necessary if the infective agent can be disseminated into the environment or is particularly resistant. (If the source of infection can be occluded i.e. by applying an occlusive dressing it may be appropriate for the patient/client to be nursed on an open ward with care being taken when dressings are changed. Seek advice from a member of the Infection Prevention and Control Team).
- Ensure that there is an adequate supply of liquid soap, disposable paper towels and alcohol hand rub available.
- Ensure that there is a clinical waste bin with a yellow bag available within the room.

Staff

- Usually none – in some cases staff with an exacerbation of certain skin conditions may need to be excluded. They should seek advice from Occupational Health.

Visitors

- All visitors must seek advice from the nurse in charge of the ward before visiting.

Protective Clothing

This should always be worn in accordance with the guidelines in Section B. Extra usage includes:-

- Gloves – Wear close fitting non sterile single use disposable gloves for contact with the infected site, dressings or secretions.
- Plastic aprons – Wear a disposable plastic apron for the delivery of direct care. Must be disposed of as clinical waste after use.
- Gowns – Not usually necessary, occasionally recommended by infection control if extensive physical contact with gross soiling is likely. A plastic apron should be worn under the gown on these occasions.
- Masks – Not usually necessary.
- Eye protection – Only necessary when carrying out procedures which may generate splashing to the eyes/face.

Visitors do not need to wear protective clothing unless providing direct care.

Hand Hygiene

- Wash hands thoroughly with a liquid soap and dry with paper towel. Hands must be washed after touching the patient/client or potentially contaminated articles and before taking care of another patient/client. Alcohol hand rub should be used before leaving the room/caring for another patient/client.

Laundry

- All soiled laundry should be processed as infected.
- Patients own clothing that may be sent to on site laundry at Evesham should be placed in a red alginate bag and then placed in a green bag as normal.

Equipment

- Articles contaminated with infective material should be discarded if they are single use disposable, or cleaned and disinfected preferably in CSSD.

Decontamination

- Any non-disposable equipment that may be soiled should be thoroughly cleaned with hot water and general purpose detergent (GPD). It must be dried thoroughly using disposable paper towel. Appropriate protective clothing must be worn.
- Non disposable instruments should be sent to CSSD for disinfection/sterilization.

Waste disposal

- All contaminated waste must be discarded of as clinical waste into a yellow bag.

Body fluid spills

- Disinfect and clean the spills from infected secretions as outlined on page 7-C.

Interdepartmental visits

- Seek advice from the Infection Prevention and Control Nurse regarding individual cases.

Safe working practices should be followed at **all** time with **all** patients.

Specific advice is available in these guidelines on the following infections. It should be read in conjunction with the guidelines for contact isolation.

	Page
Shingles (Herpes Zoster)	21
MRSA (wound site or around invasive device etc.)	33
Scabies	42
Vancomycin resistant enterococci	45

GUIDELINES FOR USE WITH ENTERIC ISOLATION

These guidelines are for use with all infections that are spread by the faecal oral route. All patients with an enteric infection should be requested to wash their hands with soap under running water after using the toilet. In areas where children are being cared for, parents and staff should be reminded to wash and dry their hands thoroughly after changing a nappy.

Location

- A single room with a wash hand basin and preferably an en-suite toilet.
- Check that an adequate supply of toilet tissue is available in the toilet area.
- Ensure that there is an adequate supply of liquid soap, disposable paper towels and alcohol hand rub available.
- Ensure that there is a clinical waste bin with a yellow bag available within the room.

Staff

- No exclusions.

Visitors

- All visitors must seek advice from the nurse in charge of the ward before visiting and to receive advice pertaining to the infection prevention and control measures. Hand washing on leaving the room should be encouraged and the use of alcohol hand rub should be promoted if viral diarrhoea is suspected.

Protective Clothing

This should always be worn in accordance with the guidelines in section B. Extra usage includes:-

- Gloves – Must always be worn for contact with faecal material any item that is likely to be contaminated with infective material.
- Plastic aprons – Are worn for the delivery of direct patient care or for contact with faecal materials or items that are likely to be contaminated with infective material.
- Masks – Not necessary.
- Eye protection – Only necessary when carrying out procedures which may generate splashing to the eyes/face.

Visitors do not need to wear protective clothing unless providing direct care.

Hand Hygiene

- Wash hands thoroughly with liquid soap and dry with paper towel. Hands must be washed after touching the patient/client or potentially contaminated articles, after removing gloves and before taking care of another patient/client.
- Alcohol hand rub can be used as an adjunct to hand washing and will provide rapid disinfection of hands. This is of particular use in an outbreak of viral diarrhoea.

Laundry

- Process all soiled laundry as infected.
- Manual sluicing of soiled clothing should not be undertaken at ward level.

Equipment

- When bed pans or commodes are used they should be reserved for the patient's exclusive use. They must only be returned to communal use after enteric precautions are no longer

- in place. Prior to returning to communal use they must be thoroughly cleaned with hot water and GPD and disinfected either with a chlorine solution or alcohol wipe.
- Disposable bed pans if used must be disposed of into a macerator unit.
- Other items or equipment which may have faecal contamination must be thoroughly cleaned and disinfected using either heat or a suitable chemical disinfectant.

Decontamination

- Any equipment which may be soiled must be thoroughly cleaned with hot soapy water and general purpose detergent (GPD).

Waste disposal

- All waste, including items that are contaminated with faecal material must be discarded of as clinical waste into a yellow bag.

CSSD

- No specific precautions.

Body fluid spills

- Any spillage of faecal material should be cleaned up immediately using disposable cloths/wipes and disinfected with a chlorine solution for environmental disinfection if appropriate. Follow guidelines on page 7-C.

Transfers

- Patients with diarrhoea should not routinely be transferred to another area whilst symptomatic.
- If a patient with diarrhoea is transferred to another area staff should ensure that the receiving area are aware of the relevant infection control precautions **prior** to the transfer being arranged and are happy to accept the patient.

Laboratory Specimens

- A stool specimen should be sent as soon as possible to establish the cause of diarrhoea if not known.
- If food poisoning or a notifiable disease is identified the CCDC or Environmental Health Officer must be informed.

Safe working practices should be followed at **all** time with **all** patients.
In the case of an outbreak of diarrhoea and vomiting it is essential that the checklist on page 4-F is followed.

Specific advice is available in these guidelines on the following infections. It should be read in conjunction with the guidelines for enteric isolation.

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Viral diarrhoea and vomiting (outbreak)	4
Clostridium difficile	21
Gastro-intestinal illness/food poisoning	26
Viral meningitis if enteric virus possible cause	30

GUIDELINES FOR USE WITH BLOOD AND BODY FLUIDS ISOLATION

These guidelines should be used for infections that have the potential to spread through blood/body fluids. Isolation is not usually necessary unless the patient/client is bleeding or likely to bleed, have diarrhoea or other infections. Patients/Clients with a healing wound, those who have open lesions or a drain inserted or those who are unconscious, uncooperative or fitting should be nursed in a single room.

Location

- Isolation in a single ward is not usually necessary, (see note above).

Staff

- All cuts, abrasions or broken skin must be covered with an impermeable dressing.
- Exclude staff who have extensive areas of broken skin that cannot be covered by an impermeable dressing.

Protective Clothing

This should always be worn in accordance with the guidelines in section B. Extra usage includes:-

- Gloves – Must be worn in situations where soiling of blood or body fluid exposure is likely.
- Plastic aprons – Must be worn for any activity where blood or body fluid exposure is likely.
- Masks – Not usually necessary.
- Eye protection – Must be worn when blood/body fluid splashes are likely.

Visitors do not need to wear protective clothing.

Hand Hygiene

- Wash hands thoroughly with a liquid soap and dry with paper towel.
- Hands must be washed immediately if contaminated with blood/body fluids, after removing protective clothing and before taking care of another patient.
- Alcohol hand rub can be used on physically clean hands.

Laundry

- All laundry contaminated with blood/body fluids must be processed as infected linen.

Equipment

- Any re-usable equipment that has been contaminated with blood or body fluids must be thoroughly cleaned and disinfected by heat or by using a suitable viricidal agent.

Decontamination

- All CSSD items must be placed in a clear water soluble bag and sealed prior to placing in the normal CSSD bag. The CSSD manager should be informed that the equipment was used on a high risk patient to ensure that appropriate precautions are taken when cleaning equipment. Staff in clinical areas should not attempt to clean these items but ensure that they are returned immediately to the CSSD.

Waste disposal

- All waste that is contaminated with blood/body fluids must be discarded of as clinical waste in to a yellow bag.

Body fluid spills

- Spillages of blood must be disinfected and cleaned using a chlorine based disinfectant where possible. Follow guidelines on page 7-C.

Interdepartmental visits

- No restrictions provided that appropriate infection control measures are maintained.

Laboratory Specimens

- Laboratory specimens from the patient must not be collected by untrained medical staff or those inexperienced in phlebotomy. They must be handled carefully, ensuring that the outside of the container is not contaminated. They must also be correctly labelled and packaged, i.e. the request form must be kept separate from the specimen in a plastic bag. Specimens must have a “Danger of Infection – Take Special Care” label both on the request form and on the specimen. All specimens should be transported in an appropriate container to the laboratory.

Last offices

- The infection control precautions applied during life must be continued after death. All bleeding points must be covered with an impermeable dressing.
- All relevant personnel should be notified about the danger of infection.
- The body must be transported in a body bag. These are available in all the community hospitals.
- A “Danger of Infection” sticker must be attached to the identity band, the wrapping sheet or shroud and to the outside of the body bag.
- Only minimal handling of the body is recommended. The body must not be embalmed.

Safe working practices should be followed at **all** time with **all** patients.

Specific advice is available in these guidelines on the following infections. It should be read in conjunction with the guidelines for blood/body fluid isolation.

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Acquired Immune Deficiency Syndrome (AIDS)	17
Hepatitis B	17
Hepatitis C	17
Hepatitis D	17
Hepatitis G	18
Human Immuno-deficiency Virus	18

GUIDELINES FOR USE WITH PROTECTIVE ISOLATION

Protective isolation should be used for severely immuno-compromised patients who are highly susceptible and need protection from persons and the environment. It is important that these patients are kept separate from other patients who have infections or conditions that make the transmission of infection likely.

Location

- A single room with a wash hand basin and preferably an en-suite toilet.
- The room and equipment must be cleaned before the patient enters.
- The door must be kept closed at all times except for necessary entrances and exits.
- Ensure that there is an adequate supply of liquid soap, disposable paper towels and alcohol hand rub available.

Staff

- Staff who have or may have an infectious condition must not attend patients in this category.

Visitors

- All visitors must seek advice from the nurse in charge of the ward before visiting. Visitors who have, or may have an infectious condition may need to be excluded.

Protective Clothing

This should always be worn in accordance with the guidelines in section B. Extra usage includes:-

- Gloves – Not necessary.
- Plastic aprons – Disposable plastic aprons should be worn by staff delivering direct patient care.
- Masks – Not necessary.
- Eye protection – Not necessary.

Visitors do not need to wear protective clothing.

Hand Hygiene

- Hands must be washed thoroughly and dried with disposable paper towels before and after contact with the patient.

Equipment

- It may be necessary to disinfect some items of equipment prior to use. A member of the infection prevention and control team should be consulted for advice.

Interdepartmental visits

- Should be arranged so that the patient is seen immediately to avoid contact with other patients who may have an infectious condition.

Safe working practices should be followed at **all** time with **all** patients.

GUIDELINES FOR THE CARE OF PATIENTS WITH BLOOD BORNE VIRUS INFECTIONS (HIV, HBV, HCV)

Blood borne infections are those where the infectious agents in a person's blood can be transmitted to another person giving rise to infection. In the healthcare setting all staff are reminded that they should always follow the safe working practices in section B of these guidelines to prevent transmission of blood borne viruses (BBV).

Immunization against hepatitis B infection is an effective means of protection against hepatitis B virus but should not be used as a substitute for good practice, not all those who receive the vaccine will respond. All staff who have potential contact with blood/body fluids should be offered the vaccine by Occupational Health. It will protect against hepatitis B infection, but will not offer protection against hepatitis C, HIV and other viruses transmitted via the blood borne route.

The term BBV used in these guidelines covers HIV, Hepatitis B, C and other blood borne hepatitis viruses.

Viral Hepatitis

To date, six types of viral hepatitis have been identified, i.e. hepatitis A, B, C, D, E and most recently G, (Zuckerman 1997). Hepatitis A and E are transmitted by faecal-oral route and staff should use enteric precautions when dealing with these infections, see page 14-F. Hepatitis B, C and G are transmitted by the blood borne route.

Hepatitis B virus (HBV)

HBV is a member of the Hepadnavirus family. The mean incubation period of acute HBV is 75 days but it may range from 45-180 days. After exposure to the virus most infected individuals recover completely from the acute illness, non-apparent infections are common particularly in children. A small proportion of individuals do not clear hepatitis B surface antigen (HBsAg), which is found circulating in blood at the end of the incubation period and during the acute phase of HBV. These individuals become carriers (shed HbsAg in blood/body fluids for more than 6 months) following acute infection.

Hepatitis C virus (HCV)

HCV belongs to the Flaviviridae family. Incubation periods range from 20 days to 13 weeks. The acute phase of HCV is usually asymptomatic or mild and patients/clients are often unaware of the infection. Most people will complain of fatigue but a few have a history of acute hepatitis or jaundice. The most common complaint is fatigue. Up to 80% of people who have had HCV may continue to carry the virus, this can cause slow ongoing damage to their liver.

Hepatitis D virus (HDV)

HDV previously known as the "Delta agent" is a defective virus that requires the presence and help of HBV before it can multiply. HDV can be transmitted with hepatitis B infection or can infect chronic hepatitis B carriers. The mean incubation period is 35 days and transmission is mainly through the parenteral route, i.e. inoculation or injection. Hepatitis caused by HDV is usually severe and individuals with a double infection HBV and HDV usually develop rapidly progressive disease and cirrhosis at an earlier age than those with HBV alone do.

Hepatitis G (HGV)

More research into this virus is currently being carried out. The diagnosis of HGV in clinical settings relies purely on laboratory testing of blood samples. Three types of HGV virus have been recognised to date and in a significant proportion of patients/clients there is co-infection with HBV or HCV.

Human Immunodeficiency Virus (HIV)

HIV is a member of the retrovirus family and responsible for HIV infections and cases of Acquired Immunodeficiency Syndrome (AIDS). It was first isolated in 1983. HIV 2, isolated in 1986 has been distinguished from HIV 1 and is a distinct variant prevalent in certain West African countries. The two varieties of HIV present similar hazards and cause similar illness except the progression of HIV 2 tends to be slower. The term HIV in these guidelines is used to cover both types of virus.

Transmission

Blood borne viruses are transmitted through the entry of **blood** or **high risk body fluids** that contain the virus into an individual.

They may occur by:-

- Unprotected penetrative sexual intercourse with an infected person.
- Skin puncture by blood contaminated sharp objects, i.e.
 - ≈ Sharing of used needles and syringes.
 - ≈ Receipt of tattoos, ear piercing, acupuncture, electrolysis etc.
 - ≈ Inoculation injuries from contaminated sharp objects.
 - ≈ Child birth from an infected mother to her baby or through breast feeding.
 - ≈ Via infected blood products, donation of semen, skin grafts or transplants from someone who is infected.
- It can also be transmitted through contamination of open wounds and skin lesions, e.g. eczema, splashing to mucous membranes of the eye, nose or mouth or through human bites when blood is drawn.

Blood is not the only concern as various other body fluids are classed as high risk, these include cerebrospinal, peritoneal, pleural, pericardial, amniotic, synovial, semen, vaginal secretions and any other body fluid containing visible blood. All tissues, organs and parts of the bodies that are unfixed are also hazardous.

Exposure to low risk body fluids such as urine, faeces, vomit, nasal secretions, tears, saliva and sputum present a minimal risk of blood borne viral infection unless contaminated with blood although they may contain other bacteria/viruses.

Occupational risks to staff (DoH 1998^a)

In the healthcare setting the risk of acquiring a blood borne infection is proportional to the prevalence of infection in the population served and the chance of an inoculation accident occurring. The risk of acquiring infection following a needlestick injury from a known infected source patient is listed below (cited in Damani 1997):-

Hepatitis B (if not protected by vaccination)	estimated to be between 5-30%.
Hepatitis C	estimated to be 3-10%.
HIV	estimated between 0.2-0.5%.

All healthcare workers who have an inoculation injury must follow the blood borne contamination incident policy, (see Appendix 1).

Responsibility of healthcare workers to their patients/clients (DOH 1998^b) See page 2-D. Transmission of hepatitis B, C and HIV from infected healthcare workers has been documented. Staff who believe that they may have been exposed to these infections must declare this and discuss it in complete confidence with the Consultant in Occupational Health Medicine, either at their initial screening or when they first become aware of the risk.

Infection Control Precautions

Infection control precautions for patients with known or suspected to be infected with blood borne virus should follow the isolation precautions outlined on page 16-F. The main points are listed below:-

- Safe working practices/Universal precautions—since many carriers of blood borne viruses are unidentified, it is vital that safe working practices are followed with all patients, at all times.
- Carriers of HBV, HCV and HIV may be nursed in open wards provided that care is taken to prevent cross infection from high risk body fluids. They should be allowed to do the same activities as other patients and should use communal areas.
- Patients with acute hepatitis should be nursed with enteric precautions (see page 14-F) as well as blood/body fluid precautions until laboratory results for Hepatitis A,B,C,E are known.
- Care should be undertaken in a single room for patients with acute Hepatitis B and for patients with AIDS who have other transmissible infections such as TB or salmonella with the appropriate precautions being employed.
- Every care must be taken to prevent inoculation (sharps) injuries by following safety guidelines and taking care with all procedures.
- Cuts and abrasions on staff hands and forearms should be covered with waterproof dressings and appropriate protective clothing should be worn to prevent personal contamination with high risk fluids.
- If inoculation injury occurs, stop and attend to the injury. Encourage bleeding, then wash the area well with soap and running water. Splashes of high risk fluid into eyes, nose or mouth should be washed out immediately with water. Seek advice without delay from Occupational Health Department (out of hours from Accident and Emergency Department).
- Spillages of blood and body fluids should be promptly dealt with and appropriate decontamination of the area undertaken (see treatment of spillage policy on page 7-C).
- Dispose of clinical waste and sharps with care and according to policy.
- Equipment used must be appropriately processed or decontaminated after use e.g. linen, instruments and equipment.
- Specimen containers and form must be labelled with “Danger of Infection” or “Biohazard” label.
- Follow additional specific guidelines for care in special areas e.g. theatre, endoscopy etc.
- Hepatitis is a notifiable disease, for notification of HIV infection see page 2-F.
- A (cadaver) body bag must be used if patient/client dies.

In a household setting, contacts of people infected with BBV should keep their open cuts and wounds covered with waterproof dressing and avoid sharing razors and toothbrushes. Blood spillages should be cleaned with household bleach (diluted 1:10) the wearing of household gloves or latex gloves is necessary and a disposable plastic apron is necessary, see page 7-C.

<p>The advice of the Infection Control Team should be sought where more detailed information is required or specific problems arise with the management of individual patients.</p>

Infection Control precautions during surgical procedures

In addition to the routine precautions outlined on page 16-F and 21-F, if the patient/client requires surgery, the following precautions are recommended.

- The doctor in charge of the patient/client is responsible for ensuring that all members of the team know of the infection hazards and take appropriate precautions. It may help theatre decontamination if cases are last on the list but this is not essential, (Rhodes *et. al.* 1995).
- Unnecessary equipment should be removed from the theatre in order to reduce the amount of decontamination required after the operation. Disposable drapes should be used.
- All equipment used should be decontaminated by CSSD or be disposable. Staff should return used instruments to CSSD in a hot water soluble bag with a danger of infection sticker clearly visible on the outside.
- Depilatory creams should be used for essential hair removal.
- All staff in theatre should wear a disposable plastic apron under their gowns. A water impermeable gown should be worn if gross contamination with blood or body fluids is likely.
- The surgical team should wear a mask and double glove. All skin lesions must be covered by a waterproof dressing/impermeable dressing. Spectacles/goggles should be worn by those taking part in the operation if splashing to eyes/face is likely.
- Fenestrated footwear must never be worn in situations where sharps are handled. For tasks involving blood it is recommended that wellington boots are worn rather than clogs or shoes. Contaminated footwear must be decontaminated after use, staff must take appropriate precautions when doing this.
- Procedures that lessen the handling of sharp instruments between surgeon and scrub nurse are recommended.
- Blood should be cleaned off the patient's/client's skin as far as possible at the end of the operation and a wound dressing used that will contain exudate with an impervious outer coating.
- Used needles must not be re-sheathed, they should be disposed of into a sharps box immediately after use.
- Spillages of blood/body fluids should be treated as stated on page 7-C.
- Theatre cleaning should be carried out with freshly prepared Hypochlorite solution (1000ppm dilution). Walls and other surfaces do not require cleaning unless contaminated with blood. Large volumes of fluid should be used for cleaning and gloves and a plastic apron worn by the operator. Thorough rinsing is necessary after a Hypochlorite solution has been used to minimise potential damage to surfaces. The theatre can be used for the next case immediately after cleaning and drying has occurred..
- Specimens should be labelled with a "Danger of Infection" sticker.
- The nurse caring for the patient/client in the recovery area should wear gloves and a plastic apron.
- Used linen and theatre clothing should be placed in a water soluble bag and then placed in a red bag and labelled "Danger of Infection".

GUIDELINES FOR THE CARE AND MANAGEMENT OF PATIENTS/CLIENTS WITH CHICKEN POX OR SHINGLES

Chickenpox is an acute, generalised viral disease caused by Varicella Zoster Virus (VZV). The onset of disease is characterised by a slight fever and a rash that is initially flat red spots which become raised and fill with fluid to become blistered for 3-4 days and leave a granular scab after 3-4 days.

Shingles (Herpes Zoster) is a localised re-activation of an old varicella infection occurring in the nerve ending, (dorsal root ganglia). Vesicles with a blistered appearance are restricted to the area supplied by the nerve giving the appearance of a line.

In the case of **chickenpox** the virus is spread by respiratory secretions from up to 5 days before the rash appears and then from skin lesions for about 7 days until the rash dries up and scabs over. In **shingles**, the virus is shed from the skin lesions until they have dried and formed scabs.

The following measures should be considered in the control of chickenpox/shingles infection in the healthcare setting, (Benenson 1995):-

- All patients with clinically suspected chickenpox should be nursed in a side ward. Staff should use respiratory isolation precautions and contact isolation precautions, see pages 10-F to 13-F. Staff caring for these patients/clients should have had or have an immunity to chicken pox. Infected patients may be cohort nursed together when necessary.
- Patients with shingles should be nursed using contact precautions see page 12-F, they can be nursed on the main ward. If the face is affected by the rash from shingles it is preferable to nurse the patient/client in a side ward.
- Patients/Clients with chickenpox and susceptible non immune people exposed within the previous 21 days should not be hospitalised unless absolutely necessary. In-patients who develop chickenpox and susceptible patients who have been exposed should be discharged as soon as their clinical condition permits.
- Exposed susceptible patients, when they must be hospitalised should be kept in respiratory isolation from 10 days following their earliest exposure to chickenpox until 21 days after their most recent exposure.

Varicella Zoster Immunoglobulin (VZIG) prophylaxis is recommended in **non immune individuals** where their clinical condition increases the risk of them acquiring varicella, (DoH 1996). This includes the following groups:-

- ≈ Pregnant women at certain stages of pregnancy, refer to Infection Control team for further advice before administering VZIG.
- ≈ Neonates (Babies born before 30 weeks or below 1kg), contact infection control team before administering VZIG.
- ≈ Patients with reduced immunity i.e. patients/clients with cancer, especially of lymphoid tissue, patients with leukaemia etc.
- ≈ Patients/Clients on systemic steroid drugs. Patients or parents of children at risk who use systemic corticosteroids should be advised to take reasonable steps to avoid close contact with chickenpox or shingles and to seek urgent medical attention if exposed to chickenpox.

The following dose of Varicella Zoster Immunoglobulin (VZIG) are recommended for various age groups:

Age	Dose
0 – 5 years	250mg
6 – 10 years	500mg
11 – 14 years	750mg
15 years and over	1000mg

VZIG is given by intramuscular injection as soon as possible and not later than 10 days after exposure. It must not be given intravenously. If a second exposure occurs after 3 weeks a further dose is required. VZIG does not necessarily prevent infection.

Always consult a member of the infection control team for further advice regarding the use and need for VZIG.

GUIDELINES FOR THE CARE OF PATIENTS/CLIENTS WITH CLOSTRIDIUM DIFFICILE.

PLEASE SEE SEPARATE SECTION

GUIDELINES FOR THE CARE AND MANAGEMENT OF A CLIENT WITH VARIANT CREUTZVELD-JACKOB DISEASE (vCJD).

Creutzfeldt-Jacob Disease (CJD) in its classical form was first described in the 1920's. It is a one of a group of diseases called Transmissible Spongiform Encephalopathies (TSEs) which can occur in people or animals. The diseases are characterised by degeneration of the nervous system and are invariably fatal.

These guidelines are based on advice issued by the Advisory Committee on Dangerous Pathogens Spongiform Encephalopathy TSEs Advisory Committee (1999) and HSC 1999/178. Copies of these documents are available from the Infection Control Nurse.

CJD in its classical form is the commonest form of the human TSEs but it is still rare with an annual incidence of 0.5-1.0 cases per million of the population. In Britain there have been about 35 cases a year. The average onset of classical CJD is between 55-75 years. Classical CJD has no known cause in the majority of cases, however 1% in the past has been transmitted as a result of medical treatments such as human pituitary growth hormone injections, corneal transplants and brain surgery involving contaminated instruments.

Early in 1996, a form of CJD that differed from previously recognised types of the disease was identified. The individuals affected were younger, their symptoms were different and the appearance of their brain tissue after death was not the same as in the classical form. The disease was initially labelled new variant CJD and is now known as variant CJD. The incubation period is unknown but thought to be between 2-15 years or more depending on the route of transfer.

The diagnosis can be made on clinical grounds based on the history of a rapidly progressive dementia, the presence of myoclonic movements and a characteristic EEG.

Management

- Available evidence suggests that normal social or routine clinical contact with a patient suffering from CJD **does not** present a risk to healthcare workers, relatives and the general population. Isolation of patients with CJD is not considered necessary and they can be nursed in an open ward with no particular precautions beyond the routine infection control precautions used for all patients/clients detailed in section B.
- All clinical waste generated from patients/clients with known or suspected CJD must be destroyed by incineration.
- Spillages of blood/body fluids should be treated as stated on page 7-C however the bleach solution needs to be at a dilution of 20,000 parts per million of available chlorine.
- All procedures carried out on patients/clients with known or suspected CJD involving sharps should be carried out by trained staff who are aware of the risks. In the event of a blood borne contamination incident the advice in Appendix 1 should be followed.
- Employers are required to keep a list of employees exposed to CJD of any type. This list must include the type of care/treatment being provided.

Safeguards against transmission

- The abnormal prion proteins associated with TSEs including vCJD is very resistant to all common methods of decontamination and may not be inactivated by normal sterilisation. In the healthcare setting the most common route of transmission would be via contaminated surgical instruments.
- All endoscopes used in the Trust must have a unique identifier and this should be recorded in the department detailing every patient usage and disinfection cycle undergone.
- Expert advice is that effective cleaning of surgical instruments prior to sterilization is of the utmost importance in reducing the risk of transmission of vCJD via surgical procedures.
- Devices designated for single episodes of use must not be re-used as they are not intended to be re-processed, it will be impossible to ensure that they are decontaminated properly.

It is essential that all cleaning and sterilization procedures operate to the highest standards.

Instruments used on known or suspected vCJD patients

The guidance available on the use and disposal of surgical, diagnostic or other instruments involved in the care of patients who have or who are suspected of having any type of CJD states that:-

- Instruments and equipment used in the care of patients with confirmed CJD of any type must not be reused and must be disposed of by incineration
- Instruments used on patients suspected of having CJD of any type should be quarantined pending confirmation of diagnosis. If a definitive alternative diagnosis is not made then the quarantined instruments must be destroyed by incineration.
- Single use instruments and equipment should be used wherever possible in cases involving individuals in an at risk category as defined in the guidance.
- At risk categories include:-
 - ≈ Recipients of hormones derived from pituitary glands
 - ≈ Recipients of human dura mater grafts
 - ≈ Individuals with a family history of CJD
- It is strongly recommended that any case involving an individual with one or more of the above risk factors are referred to a centre with the necessary facilities to comply with the above guidance for any surgical procedure.

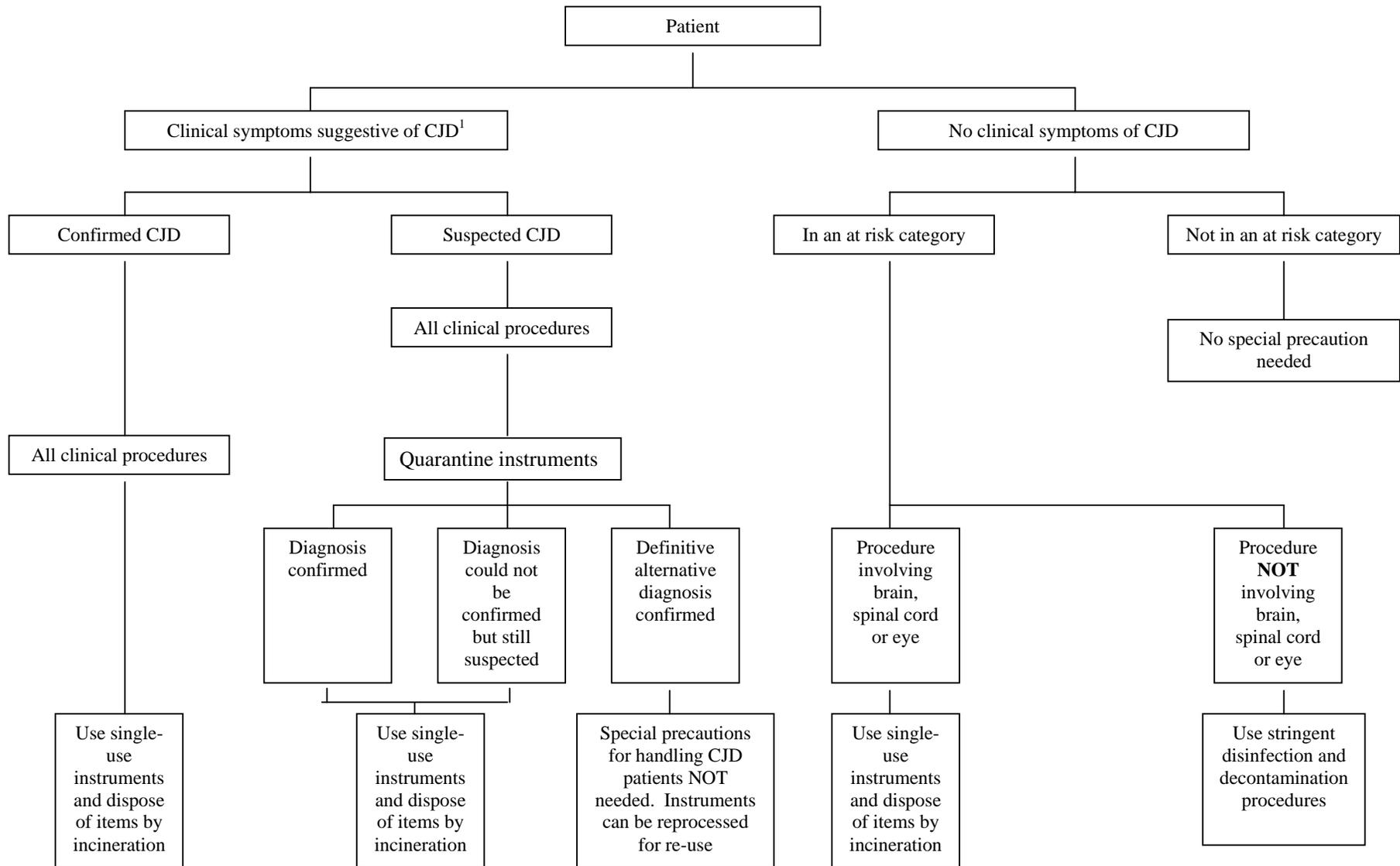
The flow chart on page 25 details the necessary precautions for clinical procedures on known, suspected or at risk patients.

Notification of new cases

Any patient/clients suspected on clinical grounds of having CJD of any type should be referred to:-

Professor R.G. Will,
Director, National CJD Surveillance Unit
Western General Hospital,
Crewe Road,
Edinburgh EH4 2XUT

Algorithm chart for precautions for clinical procedures on known, suspect or at risk¹ patients



¹ includes classical sporadic CJD, nvCJD, GSS, FFI and kuru

GUIDELINES FOR THE CARE AND MANAGEMENT OF GASTRO-INTESTINAL INFECTIONS AND FOOD POISONING

Diarrhoea and vomiting may be caused by many agents, both infective and non infective. The world health organisation define food poisoning as a disease of an infectious or toxic nature caused by or thought to be caused by the consumption of food or water.

- All cases of gastro-enteritis should be regarded as potentially infectious until appropriate investigations are completed. In hospital patients should be isolated in a single room where possible and staff must carry out enteric precautions (see page 12). Cases should be reported immediately to a member of the Infection Control Team.
- In an outbreak situation the Infection Control Team will liaise with the CCDC regarding the management of the outbreak.
- Infection should be excluded in in-patients/clients who have diarrhoea prior to their transfer to other healthcare facilities, (i.e. a negative stool specimen or symptom free for 48 hours) unless isolation facilities are available or the patient/client needs to be transferred as a medical emergency.
- In the community it is the responsibility of the GP to report all communicable diseases and food poisoning to the Consultant in Communicable Disease Control (CCDC) who will assess the situation and implement the relevant control measures if necessary.
- Persons in occupations or circumstances where there is a special risk of spreading gastro-intestinal infection are defined in four groups of risk:-

Group 1	Food Handlers
Group 2	Staff in health care facilities
Group 3	Children under 5 years of age
Group 4	Older children and adults who may find it difficult to implement good standards of personal hygiene
- It is normal practice to exclude someone with gastro-enteritis or food poisoning infection from work or school until they are free from diarrhoea and vomiting and if necessary appropriate clear specimens have been provided.
- The circumstances of each case should be considered individually and factors such as standard of hygiene etc should be taken in to account.
- Members of staff suffering from gastro-intestinal or food poisoning infection should notify their manager and inform the Trust's Occupational Health provider. If the member of staff works in a kitchen area or area where food/enteral feeds are prepared the Infection Control Team should be informed.
- Agents causing gastro-enteritis may be excreted for long periods after recovery from symptoms. Transmission in these circumstances is unlikely providing good standards of personal hygiene are maintained, (DoH 1994).

All suspected outbreaks of gastro-intestinal infection among staff and patients in the hospital **must** be reported to a member of the Infection Control Team as a matter of urgency and outbreak documentation **must** be kept. The incident will be investigated and if necessary the CCDC informed.

GUIDELINES FOR THE CARE/MANAGEMENT OF A PATIENT/CLIENT WITH INFLUENZA

Influenza (Flu) is an illness that is caused by a virus. Many people confuse flu with a heavy cold but flu has symptoms that you do not get with a cold. Immunization is available each year and offered to a predetermined group of the population, (Chin 2000).

Symptoms of flu include:

≈ High fever	≈ Shivery feeling and sweating
≈ Headache	≈ Aching limbs and no energy
≈ Loss of appetite	≈ Chestiness

- Most cases of flu will be seen and remain in the community. In the event of a flu pandemic the Trust's Pandemic Influenza Contingency plan will be followed. Copies of this are available on request from the Chief Executive's Department.
- A pandemic occurs when a new strain of influenza A virus appears to which the population has little or non immunity. Attack rates with these viruses can be as high as 25% of the general population. A pandemic can occur at any time of the year. The peak usually last for 6-9 weeks but can continue at a lower level for 3-4 months. On previous cases there has been about six months warning between the new strain causing the first cases of illness and reaching the UK.

Care and treatment (Chin 2000)

- Within in-patient areas respiratory precautions (see page 8 for further details) should be followed for at least 5 days after onset of symptoms.
- Patients/Client should be encouraged to keep warm and rest as much as possible.
- If a fever is present they should not wrap up as this may increase their temperature and make them feel worse.
- Antibiotics will not kill viruses and therefore do not help a flu sufferer. They will however be required if secondary bacterial infection occurs, (bronchitis or pneumonia).
- Paracetamol can help to control the fever and relieve aches and pains.
- Frequent drinks should be taken to replace the fluids lost during the fever. Dietary intake should also be encouraged.
- If a patient/client develops influenza and has any of the following conditions their medical practitioner must be informed.

≈ Diabetes	≈ Chronic chest or heart conditions
≈ Renal problems	≈ A lowered immunity.
- The medical practitioner should also be informed if the symptoms get worse, temperature does not settle after 4-5 days or the patient/client develops chest pain or becomes short of breath.

Staff with flu should be encouraged to stay at home to avoid infecting others.

GUIDELINES FOR THE CARE AND MANAGEMENT OF PATIENTS/CLIENTS WITH LICE

Lice are small wingless blood sucking insects, three species of which are known to infect man. Infestation may be symptomless but can cause severe itching and excoriation in some individuals, Guidelines for the management of clients with lice refers to Aston *et. al.* (1997).

Head lice

- Head lice are flat greyish/ brown insects about the size of a rice grain.
- They are typically found in the hair on the head.
- They live and breed close to the scalp and feed by biting into the scalp to feed on blood.
- The female louse lays between 6 - 8 eggs a night gluing them to the base of individual hairs.
- Head lice are spread directly from head to head, (*not spread on combs, hats etc.*)
- Head lice are common in both children and adults of all ages.
- Infection can often go undetected for some considerable time.

DETECTION → TREATMENT → CONTACT TRACING

Detection of Head lice involves looking for live lice by combing the hair with a lice detection comb (fine toothed - “nit” comb). The whole head needs to be checked systematically and treatment undertaken if lice are found. Hair should be wet or conditioned prior to detection combing as static from dry hair can throw lice onto the examiner.

Treatment is with a recommended cream rinse or lotion (i.e. Lyclear Creme Rinse, Derbac-M or Quellada-M lotions).

The manufacturer’s instructions for use must always be followed.

Lyclear Creme Rinse - one full bottle (59ml) will treat one person with shoulder length hair (more will be required for thick or long hair).

1. Wash hair with a mild non-medicated shampoo and towel dry.
2. Apply treatment all over the scalp and hair.
3. Leave on for 10 minutes, then rinse off.
4. Comb the hair using the lice detection comb to remove the dead and dying lice.
5. Treatment should be repeated after one week

Derbac-M or Quellada-M lotion - one full bottle (50ml.) will treat one person with shoulder length hair (more will be required for thick or long hair).

1. Use on dry hair.
2. Apply treatment all over the scalp and hair and leave to dry naturally.
3. After twelve hours shampoo hair, rinse and remove dead lice with detection comb.
4. Repeat treatment after one week.

No special treatment of the environment is required as spread is by personal contact.

Contact tracing - this is a vital part of head lice control as an infected individual may have passed head lice on to close contacts. A checklist of those who have had head to head contact with the individual should be made. All these people should be advised to check their own hair for lice using a detection comb.

Body Lice

Body lice are uncommon in Britain. They are associated with poverty and poor hygiene, especially with individuals having and wearing only one set of clothing. Body lice lay their eggs in the seams and folds of clothing (and bedding). They are likely to be found on the body (around waist and arm pits) when the lice are feeding.

Prevention and treatment

- Regular changing and laundering of clothes will prevent infestation.
- Staff should wear gloves and aprons when providing care to a patient/client with body lice.
- If clothes or bedding is found to be infested it should be laundered on a hot wash cycle. Within healthcare setting laundry should be treated as infected. (Heat labile garments can be dry-cleaned or chemically treated).
- Treatment of the patient/client can include the use of Malathion powder after ensuring that they have bathed and changed into clean clothing.
- No special treatment of the environment is required as spread is by personal contact. Body lice are however capable of surviving for a limited time in stored clothing.

Pubic lice

Pubic (crab) lice can be found on any part of the body where there is coarse hair, (arm pits, beards, eyelashes) not just the pubic region. They are spread by close intimate contact between people.

Treatment

Treatment is by lotion, this should be applied to all areas of body hair including the pubic area.

- Suitable treatment includes Derbac-M or Quellada. It is important to choose lotions that do not contain alcohol as this will irritate sensitive skin. A medical practitioner should prescribe treatment.
- Close/intimate contacts will need to be treated at the same time.
- No special treatment of the environment is required as spread is by personal contact.

GUIDELINES FOR THE TREATMENT OF FLEAS

Infestation is usually with cat, dog or bird fleas. They will bite humans in the absence of their preferred host. The human flea is rare. Fleas are able to survive for some months in the environment without feeding. Elimination of the host and or treatment of the pets and the use of a suitable insecticides on environment surfaces and soft furnishings is essential.

Control measures

- Identify the flea and if possible, treat or remove the host.
- Vacuum clean floors, carpets, upholstery, soft furnishings, fabrics etc.
- If infestation is apparent on clothing/bedding within an in-patient area it should be treated as infected linen.
- Contact the Facilities Call Centre on 01386 50 **2555** to ensure appropriate treatment of the environment is carried out. For clients in the community, Environmental Health Departments at local councils can be contacted to arrange treatment of infestation. This service does carry a small charge.

GUIDELINES FOR THE CARE AND MANAGEMENT OF PATIENTS/CLIENTS WITH MENINGITIS

Meningitis (inflammation of the meninges, the membrane covering the brain and spinal cord) may be caused by many different types of micro-organism: viral and bacterial meningitis being most frequently seen.

Viral meningitis

Viral meningitis is generally the most common form of meningitis but is rarely fatal. Active illness seldom exceeds 10 days. Residual signs lasting a year or more may include weakness, muscle spasm, insomnia and personality changes. Recovery is usually complete.

Bacterial meningitis

Bacterial forms require urgent antibiotic treatment. Bacterial meningitis is fatal in about 1 in 10 cases (in septicaemia fatality rates are around 20%) and 1 in 7 are left with some severe handicap such as deafness or brain injury.

The main types of bacterial meningitis are:

- Meningococcal (caused by *Neisseria meningitidis*)
- Pneumococcal

The incidence of *Haemophilus influenzae* type (Hib) meningitis has now been reduced due to the successful vaccination programme.

Transmission

Transmission is by direct contact, via respiratory droplets and discharges from the nose and throat of an infected person (eg kissing contact). Such exposure may result in asymptomatic or mild infection such as sore throat, runny nose and only rarely will it overcome the body's defences and cause serious illness.

Meningitis is not a highly infectious disease, most cases are isolated incidents and are not related to another case or "outbreak". "Clusters" of meningococcal disease however have been reported in many different parts of the country and secondary cases of *haempophilus* meningitis may occur in families and child day care facilities. For this reason very close family and "kissing" contacts of a case of meningococcal disease and in some cases Hib meningitis are offered chemoprophylaxis. The need for this will be established by the CCDC.

Normal contact at work, at school or of any medical personnel does not represent a significant risk or need for chemoprophylaxis to be prescribed.

Management (Kaczmarek *et. al.* 1995; PHLS 1995.)

- If a suspected case of meningococcal meningitis presents in a Trust Minor injuries Unit, appropriate antibiotics should be given before the patient is transferred to an acute hospital. This should happen immediately.
- Patients with meningococcal disease (meningitis or septicaemia) or those with Hib meningitis should be nurse in a single room (source isolation) for 48 hours after the commencement of appropriate antibiotic treatment and a full course of chemoprophylaxis has been given.
Respiratory precautions should be taken.
- Masks are only required for anyone who comes into **very close** (face to face) contact with the patient when they are likely to cough or splutter into their face.
- Gloves and plastic apron should be worn when direct contact with infective material is likely.

- Enteric precautions are indicated in viral meningitis for 7 days after the onset of illness, unless a non-enteric viral diagnosis is established.
- Meningitis is a notifiable disease. - In all cases of suspected or confirmed meningococcal disease or in the case of haemophilus meningitis the information **must** be telephoned without delay to the Consultant for Communicable Disease Control (CCDC). Other causes of meningitis cases should be notified in the normal manner.
- Chemoprophylaxis and advice should be offered to contacts within 24 hours. (Treatment regime is as listed below).

It is the responsibility of the CCDC to ensure that contacts are offered appropriate prophylaxis. This is usually done in conjunction with the attending hospital doctor.

Chemoprophylaxis regime in *Haemophilus influenzae*, invasive type B disease (Hib)

Treat:

- Household contacts, if there is a child less than 3 years of age in the household, other than the index case, where exposure has occurred in the previous month.
- Room contacts – teachers and children – where two or more cases have occurred in a playgroup, nursery or crèche, within 120 days.
- Index case prior to discharge.

Regime

ADULTS	600mg RIFAMPICIN – once a day for four days
CHILDREN (3 months +)	20mg/kg RIFAMPICIN – once a day for four days

Exceptions:

- Children under 3 months old; anyone with severe hepatic impairment; pregnant women; breast feeding mothers.
- Where Rifampicin is contraindicated in a close contact, the CCDC will give advice on an alternative.

Advice to contacts of *Haemophilus influenzae* meningitis

- Possible adverse effects of Rifampicin.
 - ≈ Interference with oral contraception: users should follow Family Planning Association advice for “missed pill”, as outlined in the British National Formulary.
 - ≈ Red colouration of urine and tears; soft contact lenses may be permanently stained.
 - ≈ Itching, skin rash and gastrointestinal upset may occur.
- Contacts should be reminded of the persisting risk of disease, whether or not prophylaxis is given, and of the need to contact their GP urgently if they develop any symptoms suggestive of meningitis.

Chemoprophylaxis in Meningococcal Disease

Treat

- Household contacts, that is people living and sleeping in the same accommodation within 10 days of illness.
- People who have kissed patient mouth to mouth, or have had other direct contact with the patient saliva, within 10 days of onset of illness.
- Index case prior to discharge.
- Infant contacts in pre school nurseries and day care institutions on the advice of the CCDC.

Regime

ADULTS	600mg RIFAMPICIN twice a day for two days
CHILDREN (1 – 12 years)	10mg/kg RIFAMPICIN twice a day for two days
BABIES (3 mths – 1 year)	5mg/kg RIFAMPICIN twice a day for two days

Exceptions

- Children under 3 months old; anyone with severe hepatic impairment; pregnant women; breast feeding mothers.
- Where Rifampicin is contra-indicated, in a close contact, the CCDC should be consulted for advice.
- Hospital staff do not need chemoprophylaxis unless they have had mouth to mouth contact with the patient.

Advice to contacts of Meningococcal meningitis

- Possible adverse effects of Rifampicin.
 - ≈ Interference with oral contraception: users should follow Family Planning Association advice for “missed pill”, as outlined in the British National Formulary.
 - ≈ Red colouration of urine and tears; soft contact lenses may be permanently stained.
 - ≈ Itching, skin rash and gastrointestinal upset may occur.
- Contacts should be reminded of the persisting risk of disease, whether or not prophylaxis is given, and of the need to contact their GP urgently if they develop any symptoms suggestive of meningococcal disease.

GUIDELINES FOR THE CARE AND MANAGEMENT OF A PATIENT/CLIENT WITH METHICILLIN RESISTANT *STAPHYLOCOCCUS AUREUS* (MRSA)

Please also refer to separate MRSA guidance for information on treatment and ongoing management, generic information only is detailed below.

INTRODUCTION

Staphylococcus aureus are bacteria that are found on the skin, in the nose and throat of about a third of the population and they usually present no problems at all.

However, this bacteria is the most common cause of simple, uncomplicated skin and wound infections. Occasionally, they may be responsible for more serious infections and those most at risk are hospital patients undergoing major surgery or those who require intensive care.

MRSA (Methicillin Resistant *Staphylococcus aureus*) is a strain of this bacteria which has become resistant to commonly used antibiotics. It should be noted that the infections caused by the resistant strains (MRSA) are no different or any more dangerous than those caused by ordinary strains.

MRSA is most commonly spread on the hands of carers during direct contact with infected/colonised sites. The organisms “stick” to the carers hands and may pass onto another person if the carer does not wash their hands.

There are many different strains of MRSA and these vary in the degree of ease with which they spread and/or cause infection, and the seriousness of any infection. Control measures also vary and are tailored to suit these different circumstances.

MANAGEMENT OF MRSA

The course of action followed when MRSA is confirmed must be based upon a risk assessment that depends on:

- **The virulence of the MRSA strain (i.e. ability to spread and cause serious infection.)**

Currently, the majority of MRSA strains seen in the Trust tend to cause local infection or colonisation. Surveillance by the Infection Control Team ensures that more virulent problematic strains of MRSA will be identified promptly.

- **The site/s of infection/colonization**

In some settings, sites infected with MRSA that can be covered with a dressing or clothing do not present a cross infection risk and need not restrict patient/client movement or activity.

- **Where the patient/client is being cared for. e.g. surgical ward, community setting, own home.**

Patients/clients with MRSA may need to be isolated in areas where other patients are at a higher risk of infection e.g. post-operative patients, those with invasive devices, wounds etc.

- **Vulnerability of patient/client to further infection.**

Where patients/clients who are infected/colonised with MRSA are at risk of further infection there may be some value in reducing their MRSA carriage by using topical treatment regimens.

<p>Hand washing is the single most important means of preventing the spread of MRSA and must be carried out following all hands on care to patients/clients.</p>

The guidelines for the management of MRSA in the Trust are based upon three different settings and reflect guidance issued by the BSAC/HIS/ICNA working group (1998).

- Ward areas within the Community Hospitals page 35
- Clients/Patients in their own homes – guidelines for community staff page 37
- Trust residential accommodation and mental health wards page 38

An information sheet explaining MRSA (see page 27 in Section H of the Guidelines (General Advice Sheets) can be photocopied and given to patients/clients or their family/friends as required.

It must be remembered that regardless of the setting good hygiene practice by staff and patients/clients is the single most important infection control measure.

The basic principles of infection control practice that should be followed at all times regardless of a patient's/clients MRSA status include the following:-

- Disposable gloves and aprons should be worn when attending to dressings, performing aseptic techniques, dealing with blood and body fluids or providing direct care.
- Eye/Face protection should be worn if splashing with blood/body fluid is a possibility.
- Cuts, sores and wounds in staff and residents should be covered with an impermeable dressing.
- Staff should avoid invasive procedures if suffering from chronic skin lesions on hands.
- Approved procedures for decontamination of instruments, equipment and the environment should be followed.
- Spillages of blood and other body fluids should be cleared up promptly.
- A safe procedure for the disposal of contaminated waste should be in place.
- All staff should be aware of, understand and adhere to infection control policies and procedures.

All staff should be aware that the most important precautions that prevent the spread of MRSA include:-

- | | |
|--|--|
| <ul style="list-style-type: none">• Hand cleansing• Environmental cleanliness | <ul style="list-style-type: none">• Use of protective clothing• Disposal and safe handling of linen/waste |
|--|--|

Is there a risk to staff? Staff who care for patients/clients with MRSA are at very little risk of acquiring the infection (UNISON 1998). This is because they follow basic infection control practices i.e. hand washing and use of protective clothing (see section B) and because they are generally healthy with intact skin.

Staff can carry the organism, mainly on their hands and transfer it to vulnerable patients within their care. **Hand hygiene is essential.** The use of alcohol hand rub should also be considered by all staff who have direct contact with an infected patient/client. There is no risk of staff taking the infection home to their families and friends providing routine hygiene precautions are followed.

If further advice or information is needed **always** contact the Infection Control Nurse or Microbiology Department.

GUIDELINES FOR THE CARE AND MANAGEMENT OF IN-PATIENTS IN COMMUNITY HOSPITALS WITH MRSA

Due to the client group it may be detrimental to nurse certain patients in isolation if they are found to be MRSA positive.

If a patient is found to be MRSA positive, a screen is taken comprising of the following sites:- nose, throat, groins, wounds, any sites of invasive devices and urine if a catheter is insitu. A form to record results on is found on page 40. Within the hospital setting three sets of clear swabs are required before the patient can be considered MRSA negative. Screens should be taken at weekly intervals.

Prior to screening/swabbing any topical treatments used for MRSA should be withheld for 24- 48 hours prior to swabbing

Prior to surgery, some patients/clients may be screened at pre op clinics to determine their MRSA status.

Colonization will usually be treated if:-

- The patient/client has a known infection with MRSA.
- The patient/client is being discharged into a continuing care facility.
- The patient/client is a frequent hospital attender.
- The patient/client is awaiting surgery.

If MRSA positive patients are to remain on the open ward, they should either be cohort nursed with other MRSA positive patients, **or** care should be taken to ensure that they are not nursed near a patient who has a wound or invasive device e.g. catheter, central line, gastrostomy feeding tube etc.

Colonization with MRSA is not a contra-indication for care, rehabilitation or treatment.

Always seek advice from the Infection Control Team regarding the individual care and management of patients with MRSA.

Patients/Clients who have positive MRSA screens or who are colonised with MRSA. The need to isolate these patients/clients initially depends on the degree of colonization and the possibility of infection being passed on to others. Refer to the Infection Control Team or microbiology department for further advice. Patients/Clients who are MRSA positive nasally or have throat carriage rarely need to be isolated. If a patient/client is colonized and has dry skin or an underlying condition such as eczema or psoriasis they may require a side ward.

Patients/Clients with MRSA positive wound sites. Preferably wound sites should be covered with an occlusive dressing, i.e. Tegaderm, in these instances contact precaution (see page 10) should be followed when dressings are being changed.

Patients/Clients with MRSA infections around invasive devices

If possible the device should be removed immediately and re-sited elsewhere. If this is not possible the area should be kept clean and dry and contact precautions (see page 10) should be followed. The use of systemic antibiotics may be necessary, topical mupirocin should not be applied around latex tubing, i.e. catheters.

Patients/Clients with MRSA positive sputum and a productive cough. Ideally should be nursed in a single room and respiratory precautions must be followed, (see page 8). If possible they should be encouraged to cough into a tissue.

Patients/Clients with MRSA positive sputum and a non productive cough. Staff need to assess whether patient/client is coughing. If not productive they can be nursed in the main ward, staff should follow safe working practices as detailed in Section B and the patient/client should be encouraged to cough into a tissue. Staff should assess the adjacent patient/client group on the ward to assess their vulnerability to infection.

Patients/Clients who are catheterized with MRSA positive urine. Can be nursed on a main ward with staff following safe working practices. If the patient/client has noticeable signs of infection, e.g. fever etc the catheter should be removed and appropriate antibiotics started prior to re-catheterization.

Patients/Clients with MRSA positive urine. These patients/clients can be nursed on an open ward.

Patients/Clients with MRSA in eye. These patients/clients can be nursed on an open ward with contact precautions, (see page 10). Appropriate topical preparations should be prescribed for each eye. Care should be taken by staff to ensure that cross infection between each eye does not occur, this includes using separate swabs and ensuring a good standard of hand hygiene is practised in between the treatment of each eye.

Always refer to the microbiology results to determine appropriate treatment.

GUIDELINES FOR THE CARE AND MANAGEMENT OF A PATIENT/CLIENT WITH MRSA IN THE COMMUNITY

The management of MRSA within the community is based on basic infection control principles.
Routine screening is not advised unless there is a specific clinical problem.

Handwashing

- Good hand washing must be ensured. Hands should be washed with soap and water and dried thoroughly. Alcohol hand rub should be used as an adjunct to hand washing. The provision of Aquasept or Hibiscrub for use on staff's hands is unnecessary.

Protective Clothing

- A single use disposable apron and gloves should be worn if carrying out direct care or contact with blood/body fluid is expected.

Equipment

- A minimal amount of equipment/dressings should be left within the patient's/client's home. When equipment/dressings are left they should be protected from contamination. This can be achieved by placing them in a plastic bag. Some areas have lidded plastic boxes for this purpose which are more than adequate. Dressings that have been opened in the house and are no longer required should be discarded and not distributed to other patients/clients.

Waste

- A risk assessment should be carried out as normal. The presence of MRSA alone does not mean that waste needs to be disposed of as clinical waste, (see page 10 of Section B of the Guidance).

Communication

- Infection/Colonization with MRSA is not a contra-indication to rehabilitation. Clients may still attend day services, physiotherapy, or any diagnostic or therapeutic service they require. It is essential that staff providing these services are made aware of the patient's/client's MRSA status and are told of any specific precautions they need to take.

Swabbing

- Wound swabs should not be taken as a matter of routine. The only time a wound swab should be collected is if there is a clinical problem, i.e. the wound is not healing, has deteriorated or the patient/client is exhibiting signs of infection. Re-swabbing after treatment is only necessary if clinically indicated. There is no need for three clear swabs to be obtained if staff are satisfied with the patient's/client's clinical progress.
- To reduce the possibility of self re-infection, if the client/patient is newly diagnosed with MRSA in a wound it can be worthwhile to treat colonization to prevent re-infection. The following screen would be advised. (Please confirm that the General Practitioner is in agreement.)

Nose swab, throat swab, groin swab, other wounds and sites of invasive devices.

Please refer to pages 18 to 20 in Section E of the guidelines for further information.

Screening

- Occasionally staff may be asked to obtain screening swabs prior to some surgical procedures, e.g. orthopaedic surgery. The hospital will usually specify the screening that is required. This may include nose, throat, groin, wounds etc. Dependant upon the result of this screen, staff may be asked to start MRSA eradication treatment immediately prior to the patient's/client's admission to hospital.

- Re screening after a course of treatment is only necessary if the patient/client is still showing signs of infection.

Treatment

- If a patient/client is discharged from hospital on an MRSA eradication programme, this should be completed. There is no need to re screen on completion of treatment unless clinical symptoms persist
- Usually the only sites treated for MRSA are one that have been found positive by microbiological analysis.
- Always refer to the General Practitioner and/or Medical Microbiologist to establish an effective treatment plan.

GUIDELINES FOR THE CARE AND MANAGEMENT OF CLIENTS/RESIDENTS WITH MRSA IN MENTAL HEALTH AREAS OR SMALL GROUP HOMES

The management of MRSA within mental health area and small group homes is based on basic infection control principles that should be in place with all patients at all times regardless of whether they have a known infection.

A number of simple precautions need to be followed to prevent the spread of MRSA in these settings to other clients/residents and to allow the individual with MRSA to participate in day to day activities.

Hand washing

- Good hand washing must be ensured. Hands should be washed with soap and water and dried thoroughly.
- Hands should be washed following all hands on care to residents/clients, e.g. bathing, toileting, dressing etc. Hands should also be washed following bed making and after handling used/soiled linen or care equipment and on removal of gloves.
- Cuts and abrasions on the hands of staff should be routinely covered with a waterproof dressing.

Staff should be aware that **thorough hand washing** is the single most important practice in preventing the spread of MRSA.

Protective Clothing

- A single use disposable apron and gloves should be worn if providing direct care or contact with blood/body fluid is expected. These should be discarded immediately after use.

Communication

- Infection/Colonization with MRSA is not a contra-indication to rehabilitation, clients may still attend day services, physiotherapy, or any diagnostic/therapeutic service they require. It is essential that staff providing these services are aware of the client's MRSA status.

Accommodation

- Single room occupancy in the residential care setting is preferred but not essential.
- Routine daily vacuuming and damp dusting of the resident's room should be undertaken.
- All residents/clients who have wounds must have them covered with a dry occlusive dressing.

Swabbing

- Occasionally staff may be asked to obtain screening swabs prior to some surgical procedures, e.g. orthopaedic surgery. The hospital will usually specify the screening that is required. This may include nose, throat, groin, wounds etc. Dependant upon the result of this screen, staff may be asked to start MRSA eradication treatment immediately prior to the patient/clients admission to hospital.
- Re-screening after a course of treatment is only necessary if the patient/client is still showing signs of infection.

Treatment

- If a resident/client is discharged from hospital on an MRSA eradication programme, this should be completed. There is no need to re screen on completion of treatment unless clinical symptoms of infection persist
- Usually the only sites treated for MRSA are ones that have been found positive by microbiological analysis.

MRSA RESULT CHART - this form must be included in the bedside notes only if patient has a +ve result.

Affix Patient Label or Fill in Details:

First Name.....
Surname.....
Hospital Number.....
Date of Birth.....

Initial Positive Site.....
Initial Isolate Lab No.....
Positive on pre-admission screen **YES / NO**

WARD NAME.....
HOSPITAL.....
Known positive prior to admission **YES / NO**

SITE	1 DATE & RESULT	2 DATE & RESULT	3 DATE & RESULT	4 DATE & RESULT	5 DATE & RESULT	6 DATE & RESULT	7 DATE & RESULT	8 DATE & RESULT	9 DATE & RESULT	10 DATE & RESULT
Nose										
Groins										
Sputum (if productive)										
Urine (cath.)										
Wound (state)										

GUIDELINES FOR THE CARE AND MANAGEMENT OF A PATIENT/CLIENT WITH MULTIPLY RESISTANT GRAM-NEGATIVE BACTERIA

Gram negative bacteria include *Klebsiella*, *Serratia*, *Enterobacter* *Proteus* spp, *Pseudomonas aerogenosa* etc. These organisms can cause problems throughout hospitals because of their ability to acquire resistance to antibiotics. These bacteria are more widespread in hospital environments as a result of antibiotic usage and invasive techniques. (Mimms *et. al.* 1998).

The bacteria tend to be found in wet environments throughout the hospital and can be spread between patients from health care staff and attendants by contaminated hands from the environment.

The following practices are necessary to reduce the risk of these bacteria infecting other patients/clients:-

- Compliance with hand washing procedures is essential.
- Use of communal equipment will increase the risk of cross infection, therefore ward equipment must be stored dry and soaking of equipment/instruments in disinfectant solutions must be avoided. Where possible equipment such as bed-pans should either be disposable or disinfected in a bed pan washer.
- If disinfectants/detergent solutions are used they should be made up when required and disposed of immediately after use. They should not be put in spray containers and used as required.
- Cleaning cloths should be disposed of after use. Mop heads should not be left soaking, they should be stored dry and laundered regularly.
- Suction jars and tubing should be changed in between each patient/client and on at least a daily basis if used on the same patient/client. Filters should be checked to ensure that they remain dry at all times. (Refer to page 2-E for further advice on suctioning procedures).
- Insertion of urinary catheters should be carried out as an aseptic procedure. Urine drainage bags must be emptied by the tap, for which single use disposable gloves should be used and hands should be washed after the procedure. Do not break/reconnect circuits more than necessary. A separate jug or container should be used for each patient/client when emptying urine drainage bags. This container should either be heat disinfected or single use disposable. (Refer to page 6-E for further advice on urinary catheter care).
- Excessive use of broad spectrum antibiotics should be discouraged. The use of antibiotic prophylaxis prior to surgery should be in compliance with the antibiotic prescribing policy for Worcestershire.
- If a patient/client is to be transferred to another ward/hospital or healthcare provider it is essential that they are informed of the diagnosis and the infection control precautions that are necessary and have been in place.

GUIDELINES FOR THE CARE AND TREATMENT OF A CLIENT WITH SCABIES

Scabies is caused by a mite called *Sarcoptes scabiei*. The severe itching is caused by an allergic reaction to the presence of a small mite which burrows into the top layer of the skin. Consequently the reaction does not appear immediately but develops 4-6 weeks after infection. However, many symptoms may appear earlier (1 to 4 days) if the patient/client has had a previous exposure. The main symptom is intense itching and a rash that is symmetrical in its pattern, (Chu 1997).

- Scabies is transmitted from person-to-person after prolonged and intimate contact. Hand holding or patient support for long periods is thought to be responsible for most hospital acquired infections, (Lettau 1991). Spread from bedding, clothing and surfaces is not considered to be a risk.
- “Crusted” scabies formerly known as “Norwegian” scabies can occur in elderly or immunosuppressed patients. This form of scabies is highly contagious because mites multiply rapidly and large numbers of them are present in dead skin scales. Patients/Clients with crusted scabies are highly contagious and **must** be nursed in a single room with contact isolation precautions until treatment is complete.

Treatment

- Treatment is with a scabicide lotion e.g. **Permethrin** (Lyclear Dermal Cream) or **Malathion** (Derbac M or Quelleda M). The manufacturer’s recommendations should always be followed when applying these products.
- Treatment must always be prescribed by a medical practitioner. Asthmatics, children under 6 months and pregnant women should only be treated on advice from their General Practitioner.
- The whole family should be treated at the same time even if only one person in the family has obvious scabies. All close contacts also need to be treated at the same time.

Scabies remains infectious until the treatment period is complete.

How to apply scabicide preparations

- The lotion should be applied by hand. Patients/Clients can apply their own lotion if they are able to. Healthcare staff that apply the lotion should be wearing single use disposable gloves and a plastic apron.
- The application of a thin smear of lotion to cover the whole body, excluding the face is necessary.
- It is important that all other areas of the body are treated, these include:-
 - ≈ Behind the ears
 - ≈ Around the hairline and scalp especially where the hair is thinning or balding
 - ≈ Soles of the feet
 - ≈ Palms of hands and underneath finger nails
 - ≈ Skin webs between fingers and toes
 - ≈ Buttocks, groins and genital area
- The lotion **must** be re-applied to the hands each time they are washed during the treatment period.
- The success of treatment depends on how well it is applied.

All identified contacts should receive the same treatment at the same time and should apply the lotion in the same way. **Non compliance by just one individual may make the difference between a successful planned treatment or not.**

GUIDELINES FOR THE CARE OF PATIENTS WITH TUBERCULOSIS

The classic symptoms of respiratory Tuberculosis (Open Pulmonary TB) are cough, weight loss, malaise, fever and occasionally haemoptysis. Some patients may be asymptomatic.
(Inter-Departmental Working Group 1996)

There are three special points to note about the transmission of TB:-

- Only patients with smear-positive pulmonary tuberculosis spread the disease. Extra-pulmonary tuberculosis and sputum negative patients are non-infectious for practical purposes although dressings from discharging abscesses or urine from renal TB patients should be treated with appropriate contact precautions.
- Smear positive patients do not readily transmit the disease, especially if they shield coughs and expectorate into closed containers. Masks are generally unnecessary (except when carrying out suctioning or procedures which are likely to generate aerosols or splashing).
- Patients with smear-positive tuberculosis are probably non-infectious after two weeks of chemotherapy which includes Rifampicin.

INVESTIGATIONS

- Examination of direct sputum for acid and alcohol fast bacilli, (AAFB's). Well taken early morning specimens (**sputum not saliva**) are required on three consecutive days. Provisional results will be available in 48 hours however full examination of the specimen can take up to 8 weeks.
- Chest x-rays will nearly always show abnormality.

MANAGEMENT (Joint Tuberculosis Committee of the British Thoracic Society 1994)

Patients with newly diagnosed pulmonary TB pose a risk to other patients who may be particularly susceptible to infection.

Respiratory precautions are used to prevent the spread of TB by respiratory droplets.

- **Single room.** All suspected or confirmed (sputum smear (AAFB) positive) patients including those who are diagnosed by bronchoscopy should be nursed in isolation for the first two weeks of treatment with the door closed to prevent airborne spread. Staff should follow respiratory precautions see page 10-F.
- Adult patients with pulmonary TB with three negative smear samples and patients with non pulmonary TB (with the exception of those with infected discharging wounds) should be regarded as non infectious and can be nursed on an open ward.
- No patient with suspected or confirmed respiratory tuberculosis whatever the sputum status should be admitted to an open ward containing immuno-compromised patients such as HIV infected or oncology patients.
- Staff attending to or caring for the patient should be immune to the disease, eg. BCG vaccinated. The number of different staff caring for the patient during the first two weeks should be kept to a minimum. Voluntary workers should not enter the room unless the patient is non infective.
- All patients should be informed that their infection is spread to others by the respiratory route. Patients should be asked to cover their nose and mouth with disposable paper tissue when coughing. If non compliant with this and needing to visit other departments it is possible that the patient/client can be given a mask to wear.

- Gloves and plastic aprons are necessary only for procedures which may involve handling respiratory secretion and sputum. If carrying out suctioning or procedures that are likely to generate aerosols or splashing a single use disposable mask should be worn. Hands should be washed after removing protective clothing and gloves.
- If it is deemed that there is a high likelihood of multi drug resistant tuberculosis then staff need to wear HEPA masks when caring out direct care procedures that potentially may cause aerosols. These masks should be close fitting and filter particles of 1-5 microns. Use of a mask is not a substitute for good infection control management.
- Dispose of respiratory secretions in sputum pots and paper tissues into yellow clinical waste bags for incineration. Encourage the patient/client where possible to dispose of tissues directly into a clinical waste bag.
- Crockery and cutlery can be returned to the central washing-up area for processing through a dishwasher cycle or processed through a dishwasher at ward level. Disposable cutlery/crockery is not required.
- Linen soiled with sputum or respiratory secretions should be sent as “infected linen”.
- Visiting – family and other close contacts of the patient may visit. It is advisable that babies and young children are excluded from visiting, if possible, until the patient is non-infectious (approximately two weeks after starting treatment). Visitors are not required to wear masks or any other protective clothing.
- If the patient is visiting other departments in the hospital or being transferred to another healthcare provider, advice should be sought from the Infection Control Doctor and staff in the receiving area should be made aware of the appropriate precautions they should take.
- Tuberculosis is a notifiable disease, (see page 2).
- Contact follow-up may be necessary for patients with pulmonary TB. This is undertaken by the TB Health Visitor via the Chest Clinic.
- Staff contact follow-up when necessary is done by the Occupational Health Department. It is advisable for ward staff to keep a list of all staff who have direct contact with the patient/client during the first two weeks, this will be used by occupational health.
- A cadaver bag must be used if the patient dies. These are available in all the community hospitals

Multi Drug Resistant Tuberculosis (MDR-TB)

MDR-TB is a tuberculosis that is resistant to two or more of the main line anti-tuberculosis drugs, (usually isoniazid and rifampicin with or without other drugs), (Inter-Departmental Working Group 1998). The implications are serious for both the individual and public health because of the limitations for alternative treatment.

Drug resistant disease should be considered when there is:-

- A history of previous incomplete or non compliant treatment.
- Contact with a patient with known drug resistant disease.
- Disease probably acquired in a country where there is a high incidence of drug resistant Tb.
- Disease not responding to treatment.

Sensitivities are undertaken on all TB specimens and MDR-TB is most likely to be diagnosed then.

Additional precautions may be required for patients with MDR-Tb which should be considered on a case by case basis with the Infection Control Doctor.

GUIDELINES FOR THE CARE AND MANAGEMENT OF A PATIENT/CLIENT WITH VANCOMYCIN RESISTANT ENTEROCOCCI

The incidence of colonization or infection in hospitals with *Enterococci* species has been rising steadily since 1980. Bacteria have become resistant to antibiotics thus treatment options are often limited to combinations of drugs, (Lam *et. al.* 1995).

The following patients/clients are at an increased risk of colonization or infection:-

- Treatment with previous vancomycin and/or multi antibiotic treatment.
- Critically ill patients/clients.
- Patients/Clients with severe underlying disease or who are immunosuppressed.
- Patients/Clients who have had intra abdominal or cardiothoracic surgery and/or an indwelling urinary catheter or central venous catheter with prolonged stay in hospital.

Enterococci can be found in the normal gastrointestinal and female genital tracts. Most infections arise from within the individual. Recent reports of outbreaks and infection have indicated that patient to patient transmission can occur through direct or indirect contact via hands of staff or contaminated patient care equipment or environmental surfaces.

Strict compliance by all staff is required to limit spread. The following infection control measures are recommended to prevent patient to patient transmission:-

- Isolate all infected/colonised patients/clients in a side room or cohort nurse them with other infected/colonized patients/clients in a bay.
- Dedicated equipment should be used on these patients/clients, eg. stethoscopes, thermometers, sphygmomanometers etc. Surfaces should be cleaned with General Purpose Detergent and hot water. Equipment should be dried thoroughly and then cleaned with an alcohol wipe or 70% solution of isopropyl alcohol. Adequate cleaning and disinfection of equipment must be carried out before equipment is re-used on other patients/clients.
- Wear non sterile disposable gloves when in contact with infected or colonised patients/clients or their environment. Hands must be washed and an alcohol gel used before leaving the area.
- Prior to transfer of patients/clients to other areas or hospitals a member of the Infection Control Team should be consulted. It is essential that the receiving area are informed of the diagnosis and infection control precautions in place.
- Environmental cleaning using hot water and detergent should be carried out on a regular basis.
- Screening swabs for culture from multiple body sites i.e. stool or rectal swabs, mouth, axilla, areas of broken skin (i.e. ulcers and wounds), CSU from catheterized patients etc. Advice will be given by the Infection Control Team on sites that need to be swabbed in an outbreak situation or to establish carrier status.
- Antibiotic prescribing must be carried out in consultation with the microbiologist.

Patients/Clients can remain colonized for a long time after discharge from hospital therefore it is important that these patients/clients infected or colonized should be promptly identified and placed on isolation precautions upon re-admission to the hospital. If transfer to another ward/hospital is necessary the Infection Control Team must be made aware.

GUIDELINES FOR THE CARE AND MANAGEMENT OF A PATIENT/CLIENT WITH A VIRAL HAEMORRHAGIC FEVER

Viral Haemorrhagic Fevers (VHF) are severe and life threatening disease caused by a range of viruses. Most are endemic in a number of parts of the world, most notably Africa, parts of South America and some rural parts of the Middle East and Eastern Europe. Four agents of VHF are of concern in the UK because of possible person-to-person spread. These are *Lassa*, *Ebola*, *Marburg* and *Crimean/Congo haemorrhagic fevers*.

All VHF have a significant mortality rate and there is no vaccine available. The incubation period of the infection is usually between 7-10 days (can range from 3-17 days). For infection control purposes if no infection has occurred in a period of up to 21 days from exposure, a contact is usually taken to be free from infection.

A firm diagnosis is not always possible but both clinical and epidemiological evidence needs to be considered for any patient/client presenting with undiagnosed fever within three weeks of return from an endemic area. The most important clinical signs includes pyrexia, sore throat, rigor, nausea, vomiting and diarrhoea, headache, haemorrhage and myalgia. The possibility of malaria should also be considered.

The Advisory Committee on Dangerous Pathogens 1998^B gives advice relating to management and control of VHF. This must be followed at all times. Risk categories are defined within this booklet and the relevant precautions that must be taken are listed. Each Minor Injuries Unit within the Worcestershire Community and Mental Health NHS Trust has been issued with a copy of this.

There is a possibility that such a provisional diagnosis might be made in a Minor Injuries Department or in a patient being nursed on a general ward area. The following action must be taken:-

- The patient/client **must be** isolated in a single room following strict isolation precautions. They **must not** be moved from ward/department.
- The Microbiologist, Infection Control Doctor and CCDC must be informed as a matter of urgency.
- The absolute minimum of staff must have contact with the patient/client, ie. one doctor and one nurse. The doctor involved in making the diagnosis should seek advice from the Microbiologist and CCDC. In such circumstances no other staff should be invited to assist in the diagnosis to minimise the risk to health care workers.
- Advice will be given to the ambulance service by the CCDC about the danger of infection and precautions needed to transfer the patient/client.
- The CCDC in consultation with the Infection Control Team will arrange for any necessary decontamination measures of rooms and equipment.
- In consultation with the Occupational Health Department and the Infection Control Team the CCDC will arrange any necessary isolation and surveillance of staff who have been in contact with the patient/client
- The CCDC will also advise as to surveillance measures necessary for other patients/clients and inform on restrictions relating to admission, discharge or transfer of any patient/client or any restrictions on visiting.

ALWAYS REFER TO ADVISORY COMMITTEE BOOKLET AND CONTACT THE CCDC IMMEDIATELY IF VHF IS SUSPECTED.

DISCHARGE/TRANSFER PROCEDURES FOR USE WHEN A PATIENT/CLIENT HAS A KNOWN INFECTION

Always refer to guidelines for care and management of the specific infection (see pages 4 – 46) prior to transferring, discharging or accepting patients/clients with a known infections.

Discharge to a nursing/residential home

Before discharge the ward staff/care co-ordinator must inform the nursing/residential home about the nature of the patient/clients infection to enable them to put the necessary precautions in place. Nursing/Residential homes can obtain further advice from the Community Infection Control Nurse Advisors in Public Health at Worcestershire Health Authority, (see contacts page 8-A). Discharge to these settings should never occur during a ward outbreak of diarrhoea and vomiting.

Discharge to own home with district nursing input

The ward staff or care co-ordinator should inform the District Nurse Team prior to the discharge of the patient/client to ensure the necessary precautions can be put in place up on discharge and treatment protocols as appropriate can be continued.

Discharge to own home with non-nursing support services

The infection Control Nurse is able to liaise with other care agencies to advise on the necessary precautions and explain the potential cross infection risks. Additional support can be arranged via the Community Infection Control Nurse Advisor in Public Health

Transfers to other hospitals

The ward staff or care co-ordinator should inform the Infection Control Nurse of the transfer so that they may liaise with the receiving hospital.

If MRSA screening is required (please note in-patients within the county of Worcestershire do not need routine screening for MRSA prior to transfer), ward staff should be aware that it can take up to three days for results to be obtained.

If a patient is to be transferred to another hospital, they should **always** be informed of the following:-

- ≈ Name and date of birth
- ≈ Diagnosis
- ≈ Nature of infection and relevant microbiology results
- ≈ Infection Control precautions in place
- ≈ Treatment (Antibiotic therapy, dressing regimen etc.)

Trust staff should ensure that staff at the receiving hospital have accepted the transfer and are aware of the necessary infection control precautions.

Transfers into the Trust from other hospitals

If a patient/client with a known infection is being admitted/transferred into the Trust, staff should be aware of their:-

- ≈ Name and date of birth
- ≈ Diagnosis
- ≈ Nature of infection and microbiology results
- ≈ Infection Control precautions in place
- ≈ Treatment (Antibiotic therapy, dressing regimen etc.)

Before accepting a patient staff should ensure that they are able to comply with the necessary precautions needed to care for the patient/client, i.e. side ward, appropriate dressings etc.

Always contact a member of the Infection Control Team for further advice relating to discharge or transfers of patients/clients with a known infection.

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