

INFECTION PREVENTION AND CONTROL POLICY AND PROCEDURES **Sussex Partnership NHS Foundation Trust (The Trust)**

ICP21

INFECTIONS WITH SPECIFIC ALERT ORGANISMS

INTRODUCTION

Safe infection prevention and control precautions require knowledge of micro-organisms, the diseases they cause and how they spread between people.

To assist staff the following list provides basic information on common infectious diseases, causative organism, mode of transmission and specific information relating to clinical care.

Staff should consult the following list to determine the risk posed to others and how to manage service users safely.

Advice may be sought from the local Infection Prevention Control Lead / clinician on the management of service users or service users' household contacts with these infections.

COMMON ALERT ORGANISMS

Meticillin Resistant Staphylococcus Aureus (MRSA)
Clostridium Difficile (*C.difficile*)
Blood Borne Viruses (BBVs)
Tuberculosis (TB)
Ectoparasites (Head Lice, Body Lice, Pubic Lice and Scabies Mite)
Influenza
Varicella Zoster Virus (Chickenpox) and Herpes Zoster (Shingles)

NOTIFICATION OF INFECTIOUS DISEASES

Health Protection Legislation requires statutory notification of certain infectious diseases. Notification is the responsibility of a Registered Medical Practitioner. See Management Policy for list of Notifiable Diseases and Public Health England (PHE) notification forms, etc.

METICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA)

INTRODUCTION

Meticillin Resistant *Staphylococcus Aureus* (MRSA) has now become a serious problem in the UK. When this organism gains a foothold in a hospital or community, the potentially serious nature of the infections they may cause and the limited options for antibiotic treatments may have important and life threatening consequences.

Although *Staphylococcus aureus* is capable of causing infection, most infections are easily treated with antibiotics.

Some strains of *Staphylococcus aureus* have developed resistance to some of the more commonly used antibiotics; these are known as Meticillin Resistant *Staphylococcus aureus* (MRSA). Meticillin is an antibiotic that is closely related to Flucloxacillin.

BACKGROUND

Staphylococcus aureus is an organism which approximately one third of the population carries on their skin and in their nose and throat without any associated problems; this is known as colonisation.

The risk of MRSA is greatest to those service users in acute hospitals in high risk specialty settings such as vascular, renal / dialysis, neurosurgery, cardiothoracic surgery, haematology / oncology / bone marrow transplant, orthopaedics / trauma, and all intensive care units (adult / paediatric ICUs, Neonatal Intensive Care Units, High dependency units, Coronary Care Units).

AIM

To highlight an awareness of the potential impact of MRSA on any person and to manage the care of an affected individual appropriately. Although service users within Sussex Partnership NHS Foundation Trust care are considered to be a lower risk from MRSA, staff should be alert to potential problems and attempt to limit infection.

However vigilance and strict adherence to procedure and infection prevention and control advice is vital in order to keep the risk to all recipients of care within the Trust as low as possible.

- Service users found to be infected or colonised by MRSA should be nursed in a single room where possible.
- In the event of a substantial number of cases being isolated it may be necessary to review the bay / ward arrangement. This decision will be made following consultation with the infection prevention and control team.

MRSA WITHIN THE COMMUNITY

Service users within the mental health setting are at a lower risk from MRSA acquisition as they are less likely to be physically seriously ill, less likely to have an indwelling device and less likely to come into contact with other colonised individuals.

Service users and the public are increasingly seeing MRSA and rates of MRSA infection as indicators of the quality of service user care wherever that care is delivered.

HIGH RISK SERVICE USERS

Some client groups are known to be at higher risk of being colonised with MRSA than others. Service users at higher risk of carriage of MRSA may include those who are:

- Service users known to be previously infected or colonised with MRSA
- Service users admitted following surgery or any admission from an acute hospital or nursing home within the past twelve months
- Intravenous drug users
- Service users who self-harm
- Service users with surgical wounds, boils and carbuncles or chronic wounds e.g. leg ulcers or pressure ulcers
- Service users with indwelling devices e.g. urinary catheters
- Service users presenting with clinical signs of infection including delirium

SERVICE USER SCREENING

Although routine screening is not mandatory, the Department of Health (DH) has recently updated guidance on screening for MRSA - Implementation of modified admission MRSA screening guidance for NHS (2014). This is mainly of relevance in acute care settings and states: *'it is recommended that the current practice of mandatory MRSA screening of acute and elective admissions to NHS hospitals in England is streamlined to the following:*

- *All patients admitted to high risk units.*
- *All patients previously identified as colonised with or infected by MR'.*

There is no requirement for routine admission screening in mental health settings but a local policy should be in place which provides clear guidance to staff.

The following is a guide to the screening procedures that **may** be requested by the infection control team when MRSA has been identified or in the above 'at risk' group (see introduction):-.

SINGLE CASE

Swabs should be obtained from the following areas:

Full screen:

- Nose
- Axilla
- Groin
- Any skin lesions / wounds / catheter specimen of urine if catheter in situ / swab from any medical invasive device (e.g. Venflon) / sputum specimen if expectorating.

NB Moist swab in sterile saline first.

MULTIPLE CASES

- The service users found to be infected or colonised should have a full screen as above.
- Other service users on the ward may be asked to have the following swabs sent on discussion with the infection prevention and control team:
 - Nose
 - Throat
 - Wound or open lesions

STAFF SCREENING

There is no need for routine screening of staff.

Staff screening **may** be indicated if a sudden rise in MRSA acquisition is identified, however advice should be sought from the Infection Prevention and Control Lead in conjunction with the local Health Protection Team (HPT) at Public Health England (PHE) prior to any staff screening.

Any staff found to be carriers will be advised by the Occupational Health Department and infection prevention and control service. Advice should be sought following confirmation of infection.

MODE OF TRANSMISSION

MRSA is transmitted most frequently by direct contact (i.e. skin-to-skin) or contact with shared items or surfaces

PREVENTION OF SPREAD

The single most important preventative factor is effective hand hygiene. All staff who have direct contact with the service user or their immediate environment must wash their hands thoroughly using liquid soap and disposable paper / clean hand towels before and after contact. Alternatively, an alcohol hand gel can be used for hand decontamination. Gloves must be worn when handling dressings, infected wounds or specimens.

MANAGING MRSA POSITIVE SERVICE USERS

Standard Infection Control Precautions should be applied with strict attention to the principles of asepsis when caring for invasive medical devices in all hospital wards, units and residential homes.

Disposable aprons and gloves should be worn when performing dressings, aseptic technique, when dealing with blood and body fluids and when dealing with bed linen or performing direct personal care.

Routine screening of in-patients in a mental health environment or community setting is not required.

It may be necessary to consider the placement of service users with MRSA colonisation if they share a room with other service users who have wounds including pressure sores, or invasive devices. Decisions should be made on a case-by-case basis.

The colonised service user should not share a room with another service user who has open lesions.

It is not necessary to restrict the movements of colonised service users.

All cuts or breaks in the skin of staff and service users should be covered with an occlusive dressing. Wound swabs should only be taken if clinical signs of infection are present.

A colonised service user should have their wounds covered with an impermeable dressing where possible.

Dressings should be changed in service user's room or clinical / treatment room NOT in shared areas.

Equipment used by a colonised resident should be cleaned with detergent and warm water.

There are no special requirements for dealing with crockery or cutlery. Any service user who has been identified as infected or colonised with MRSA at any time should have their clinical notes marked with an identifying sticker available from the infection prevention and control team.

Clinical waste should be dealt with in the usual manner.

Clothes should be machine-washed or dry cleaned if unsuitable for machine washing. Linen should be laundered through the laundry system or, in the case of community homes, machine washed on a hot setting.

HAND WASHING

High standards of hand decontamination by staff, service users and visitors is the single most important infection control measure and is essential to prevent the spread of MRSA as well as other infections.

Staff must follow the hand decontamination procedure – see policy for Hand Hygiene.

Service users / residents must be encouraged or assisted to adopt thorough hand-washing practice as well as staff.

TREATMENT

Decolonisation treatment will be commenced by the medical staff as advised by the infection prevention and control service. Topical treatment will only be recommended if the service user has intact skin i.e. no wounds or lesions. If recommended, the decolonisation treatment consists of a course of skin applications - Nasal ointment and skin decontaminants may be prescribed.

Service users should be screened forty-eight hours after treatment has been completed.

Precautionary or isolation procedures put in place should continue (and the swabs repeated as directed) until clear sets of swabs obtained. Isolation procedures, where initiated, should only be discontinued on the advice of the infection prevention and control team.

SERVICE USERS ATTENDING ACUTE HOSPITAL ENVIRONMENTS

Service users attending an acute hospital environment, either for an out-patient appointment or for in-patient care may pose a risk of cross-infection. It is essential that ward staff inform the receiving department if a service user is known to be colonised with MRSA and they will advise of any precautions that may need to be taken.

DISCHARGE OF SERVICE USERS

Inform the GP and other healthcare agencies involved in the service user's care prior to discharge.

If the service user is being transferred to a nursing / care home, inform the nursing or care staff in advance.

Carriage of MRSA is **not** a contra-indication to the transfer of a service user to a nursing home / care home. The rehabilitation of service users must not be delayed because of MRSA.

DOMESTIC HYGIENE

On discharge, send bedding to the laundry in appropriate bags for infected linen.

All waste sacks must be treated as clinical waste and discarded in the orange sacks.

Floor surfaces and equipment surfaces should be terminally disinfected with sodium hypochlorite solution 1,000 ppm.

DEATHS

No special precautions are required when dealing with a deceased service user who has been infected, colonised or in contact with MRSA, other than those laid down for Last Offices.

CLOSTRIDIUM DIFFICILE (*C.difficile*)

INTRODUCTION

Clostridium difficile is a gram positive spore forming toxin-producing organism that can invade the human bowel and cause disease.

Clostridium difficile is most commonly found in people who are unwell but is also found in the gut of a small percentage of the population who are healthy. More than 80% of cases are in elderly people, and elderly people with underlying disease are most at risk. However infection can occur in **anyone** who:

- Has had a recent hospital admission (within last three months)
- Is in the older age group (over 65 years)
- Has had recent (within last three months) antibiotic administration especially broad spectrum antibiotics
- Has had bowel interventions including laxatives, enemas, colonoscopy etc.
- Has had naso-gastric tubes with or without enteral feeding
- Has had recent administration of Proton Pump Inhibitors.
- Has a compromised immune system where resistance to infection is impaired.

BACKGROUND

Clostridium difficile can be acquired exogenously by a service user / member of staff whose intestinal colonisation resistance is compromised in some manner. Many symptomatic cases have also previously been treated with broad-spectrum antibiotics (usually the cephalosporin's), which can eliminate a wide range of normal flora present in the human gut. This can lead to an imbalance in the normal bacteria population in the gut, which gives *C.difficile* the ability to flourish and subsequently produce a toxin that causes foul smelling, watery diarrhoea. Elderly service users

and those who are immunocompromised are most susceptible. Disease can range from mild diarrhoeal illness to mucosal damage and ulceration known as Pseudomembranous Colitis (PMC) or Toxic Megacolon. In severe cases this can lead to perforation and death.

The infection prevention and control team / infection prevention and control lead / infection prevention and control link practitioner for your area should be notified immediately on notification of a positive *C.difficile* toxin result by microbiology services. Isolation procedures and standard infection control precautions should be implemented immediately for any person with diarrhoea.

Microbiology laboratories identifying *C.difficile* in samples are required to report to the Public Health England (PHE) using mandatory reporting systems. The infection is then attributed to a hospital or community organisation depending on when the sample was taken. Samples taken within three days of admission are deemed pre-admission acquisition. The Department of Health (DH) has set reduction targets for all NHS Acute Trusts and Clinical Commissioning Groups. Toxin positive samples from service users in mental health trusts will count towards the reduction targets set for CCGs. This means that mental health trusts will be contacted by the local CCG to participate in a case review (root cause analysis (RCA)) if a service user contracts a toxin positive *C.difficile* infection. This is a constructive review, designed to learn lessons from incidents and to prevent recurrence.

MODES OF TRANSMISSION

Clostridium difficile is usually transmitted by direct or in-direct contact via the faecal/oral route by ingestion of bacterial spores and involves contact with spores on equipment, hands or in the environment. Environmental spores can survive months on surfaces.

CLINICAL FEATURES OF CLOSTRIDIUM DIFFICILE

Common symptoms include:

- Fever
- Loss of appetite
- Nausea and abdominal pain or tenderness
- Mild to severe diarrhoea – foul smelling/brown watery fluid
- Blood stained stools

DIAGNOSIS

Clostridium difficile is difficult to diagnose on the basis of symptoms alone and requires a stool specimen for microbiology.

If clostridium *difficile* is suspected, the stool specimen should be marked for CDT toxin.

Diagnosis is by identification of *C.difficile* toxins in diarrhoeal samples.

NB: Microbiology laboratories will ONLY test Type 6 / 7 samples for *C.difficile*. (Type 6 / 7 diarrhoea is a liquid stool sample which 'takes the shape of the pot', see policy for Management of an outbreak of Viral Gastrointestinal Illness Appendix 3 an example of the Bristol Stool Chart)

All liquid stools of service users aged sixty-five years and over are routinely tested for *C. difficile* toxins. In acute hospitals, all stool samples are routinely tested in those aged two years and over.

MANAGEMENT OF SERVICE USERS WITH DIARRHOEAL ILLNESS:

Service users with moderate / severe *C.difficile* infection are likely to be cared for in an acute hospital as they are acutely ill and may require intravenous (IV) antibiotics and rehydration. Service users with mild infection may be cared for in their usual environment.

C.difficile should be considered in service users with more than one episode of type 7 diarrhoea in twenty-four hours where risk factors are present and there are no clear alternative diagnoses for the diarrhoea. *C.difficile* diarrhoea has a characteristic obnoxious smell which may assist in differential diagnosis.

C.difficile needs to be strictly managed in order to prevent or reduce spread. Immediate isolation of the patient to a single room is essential. Service users with diarrhoea and a possible infective diagnosis should ideally be kept in their rooms whilst symptomatic.

An accurate and up-to-date stool chart is essential (see policy – Management of an outbreak of Viral Gastrointestinal Illness for charts).

Standard Infection Control Precautions should be applied.

As with all cases of infectious diarrhoea, alcohol gel / rub should **NOT** be used when caring for service users with *C.difficile* infection. Hands should be washed with liquid soap and water and dried using disposable paper towels.

Service users who do not have access to en-suite facilities should have a commode provided for their use or have individual access to ablutions close at hand. If the service user is incontinent due to the explosive nature of the diarrhoea, then enteric infection control precautions along with isolation practices and procedures need to be implemented as soon as possible.

C.difficile spores can remain viable on hard surfaces for many months. High standards of environmental cleaning of surfaces can help to eliminate an environmental reservoir and reduce the risk of spread. During cleaning, particular attention should be paid to toilet / washing areas as well as commodes and lifting equipment. Chemical disinfection is required for such cleaning and a chlorine-based solution of 1,000 ppm must be used for all hard surfaces.

Service users who need to be moved following confirmation of *C.difficile* must have the bed space thoroughly cleaned with 1,000 ppm chlorine-based solution such as Actichlor Plus or Chlorclean.

Any equipment required for patient management / care must be dedicated for that service user only or disposable, including equipment such as BP cuffs, moving and handling equipment, etc.

The service user should be prescribed appropriate antibiotic therapy to treat the *C.difficile* toxin. Treatment for *C.difficile* is Metronidazole 400 mg tds. (three times daily), for ten - fourteen days. The local Consultant Medical Microbiologist should be contacted for advice on treatment. It is important to continue to assess a service user who has had symptomatic *C.difficile*, as a certain number of service users treated apparently successfully will relapse and require further treatment.

Service users who have been re-infected must be isolated immediately.

All service users, staff and visitors must undertake thorough and frequent hand washing to reduce the risk of transmission.

All soiled linen should be handled as infected linen and placed in red alginate bags.

Terminal disinfection of the room should be undertaken when the service user is discharged using sporicidal disinfectant. Curtains should be changed.

PERIOD OF INCREASED INCIDENCE OF C.DIFFICILE (PII)

This is defined as two cases in a week or three cases in a month in one ward / area.

Such incidents must be thoroughly investigated to determine whether an outbreak has occurred. PIIs must be reported as Serious Incidents and reported on the Strategic Executive Information System (STEIS), within two working days of the original report.

If a PII occurs in a mental health setting the Health Protection Team (HPT) or Clinical Commissioning Group (CCG) may instigate an investigation and make recommendations to the facility based on positive laboratory results.

BLOOD BORNE VIRUSES (BBVs)

INTRODUCTION

In recent years new and additional concerns for healthcare staff have arisen in relation to occupational exposure to blood borne viruses (BBVs). This has principally been due to the advent of human immunodeficiency virus (HIV) infections and identification of the causative agent; and more recently hepatitis C along with increased awareness of the risk of hepatitis B infection.

BACKGROUND

Risks of the transmission of blood borne viruses to healthcare workers arise from the exposure to blood and body fluids. All healthcare workers are instructed to adopt SICPs in all dealings with blood and body fluids to reduce the risk of transmission.

Viruses transmitted by blood and blood-stained body fluids are of particular importance to care workers who may be at risk of acquiring infection during the course of their work. The most significant route of spread (in occupational exposure) is via contaminated sharps.

The most important blood borne viruses are:

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

This policy should be read in conjunction with other Trust policies:

- Safe Use and Disposal of Sharps
- Management of Occupational Exposure to Blood Borne Viruses
- Decontamination of Medical Equipment
- Spillages of Blood and Body Fluids

AIM

Although the risk of acquiring a blood borne virus through occupational exposure is low, the consequences can be serious. Not all individuals infected with BBV's have had their infections diagnosed or are aware that they carry a virus. It is therefore important that all blood and body fluids are regarded as infectious and staff should follow standard infection control precautions (SICPs) with all service users all of the time.

HEPATITIS B VIRUS (HBV)

Hepatitis B Virus (HBV) causes inflammation of the liver. It can cause an acute illness with various symptoms, including a mild fever, nausea and lethargy or in

some cases no illness at all. Only about half the people who have hepatitis infection have jaundice and an enlarged liver. The illness usually lasts for about six - eight weeks. Some people become carriers of HBV and remain asymptomatic. However, they still have the potential to transmit the infection to other people.

Most infections caused by this virus are mild, however in a few cases extensive liver damage and liver failure may prove fatal.

Between 2-10% of those infected do not completely eliminate the virus and become chronic carriers.

Some groups are at increased risk of acquiring HBV; these include but are not restricted to:

- Service users receiving renal dialysis
- Haemophiliacs
- Intravenous drug users who share needles
- Families of chronic carriers
- Residents of institutions whose behaviour may facilitate transmission e.g. biting

MODE OF TRANSMISSION

It is possible to contract HBV in a number of ways, including:

- From hetero and / or homo and / or bi-sexual intercourse with an infected partner
- From coming into contact with blood from an infected person
- By sharing used needles with an intravenous drug user who is already HBV positive
- From an infected mother to her baby during birth
- On instruments,
- Via damaged skin or through splashing contact with mucous membranes.

HBV has been isolated from almost all body fluids. However, the following body fluids are those most implicated in the transmission of the virus:

- Blood
- Semen
- Vaginal fluids

Healthcare workers are at risk of acquiring HBV from sharp injuries, scratches, bites and from body fluid splash incidents.

Service users are at risk of acquiring HBV from inadequately decontaminated medical devices; biting or scratching from other service users or through exchange of body fluids e.g. sexual intercourse.

MANAGING PATIENTS WITH HBV INFECTION

- Infection cannot be transmitted through social contact with service users.
- Isolation or segregation of service users with HBV is not necessary unless there is excessive bleeding.
- Standard infection control precautions are sufficient when caring for HBV infected service users.
- All HBV positive service users need to have broken skin areas covered.

HEPATITIS C (HCV)

Hepatitis C Virus (HCV) causes inflammation of the liver. The most common means of becoming infected with HCV is by sharing used needles with an infected intravenous drug user. It is also possible, although less common, to become infected by the methods listed above for HBV. Very few people who have the HCV infection have symptoms like jaundice and an enlarged liver. It is believed that everyone infected with HCV will become a long-term carrier.

Primary infection with HCV is often mild, asymptomatic and rarely associated with jaundice. 85 % of those infected become chronic carriers.

MODES OF TRANSMISSION

The infection can be transmitted by blood transfusion, although in developed countries this has been eliminated by the introduction of blood donor screening.

Transmission is also possible by the following routes:

- Intravenous drug users who share needles
- Sexual intercourse
- Perinatally from mother to baby

Healthcare workers are at risk of acquiring HCV from sharp injuries, scratches, bites and from body fluid splash incidents.

Service users are at risk of acquiring HCV from inadequately decontaminated medical devices.

MANAGING PATIENTS WITH HCV INFECTION

As listed above under Hepatitis B

HUMAN IMMUNODEFICIENCY VIRUS (HIV) AND ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

AIDS is a severe life threatening clinical condition first recognised as a distinct syndrome in 1981. AIDS is the later clinical stage of infection caused by the Human Immunodeficiency Virus (HIV). This virus invades and destroys cells responsible for ensuring the immune system is capable of protecting individuals from infection.

Infection with HIV will persist indefinitely once seroconversion has occurred.

MODE OF TRANSMISSION

The route of transmission is similar to that of HBV, namely exposure / contact with blood or body fluids of an infected individual, sexual contact with an infected individual, sharing of HIV contaminated needles or perinatally.

Infection can be transmitted to others from an infected individual soon after they have acquired the infection (when the virus is replicating rapidly) but becomes more infectious as immunodeficiency decreases and the amount of virus in the blood increases.

HIV is transmitted via the following routes:

- Sexual intercourse
- By inoculation of infected body fluids
- Through damaged skin or on to mucous membranes e.g. conjunctivae, mouth
- By transfusion of contaminated blood
- Perinatally via the placenta, during delivery and from breast milk

The greatest concentration of virus is found in blood or body fluids containing visible blood.

Occupational transmission of HIV has been reported. Healthcare workers are at risk of acquiring HIV via the following exposures:

- Inoculation of infected blood / body fluid into body tissues by a needle or other sharp device including by human bites
- Splash incidents with infected blood / body fluids into the eyes or mouth or through damaged skin

Service users are at risk of acquiring HIV via inadequately decontaminated medical devices.

MANAGING SERVICE USERS WITH BLOODBORNE VIRUSES

This infection cannot be transmitted by social contact.

Isolation or segregation of service users with HIV infection is not necessary unless there is excessive uncontrolled bleeding.

Service users should be managed as identified in managing HBV cases.

Standard infection control precautions apply.

Protective clothing is necessary only for direct contact with blood or body fluid.

Specimens should be labelled as 'high risk' as per specimen collection policy.

REDUCING THE RISK OF OCCUPATIONAL EXPOSURE

Injury with a contaminated sharp device / instrument is the most likely route of transmission to a healthcare worker, therefore all staff should be aware of safe working practices when handling and disposing of used sharp instruments.

Staff should be made aware of the action to be followed in the event of accidental sharps injury or splash incident.

Staff should adopt standard infection control precautions for all service users regardless of the perceived risk of infection.

TRANSMISSIBLE SPONGIFORM ENCEPHALOPATHIES (TSEs)

INTRODUCTION

Transmissible spongiform encephalopathies (TSEs), also known as prion diseases, are rare, chronic fatal degenerative brain diseases of humans and certain other animal species, whose natural mode of transmission is unknown but is thought to be passed by inoculation and in some cases by ingestion of high risk tissue.

The infecting agent is of virus size but is an unconventional protein known as a prion, which replicates extremely slowly with an extended incubation period. The infectious agent is thought to be restricted to the central nervous system and lymphoid tissue. There is now some suggestion that some cells in the blood may also be affected. There appears to be no antibody or other immune response to the infection making it difficult to detect. Diagnosis is by clinical signs and symptoms and characteristic changes in the brain.

A common feature of all TSEs is the appearance of microscopic vacuoles (holes) in the grey matter in the brain, giving a sponge-like appearance, from which the conditions derive their name. The human form of TSEs includes Creutzfeldt-Jakob Disease (CJD and vCJD), Gerstmann-Straussler-Scheinker syndrome (GSS), fatal familial insomnia (FFI) and Kuru.

Evidence does not suggest that CJD or vCJD can be spread from person to person by close contact. It is known that transmission of sporadic CJD can occur in specific situations associated with medical conditions (iatrogenic infections) including the use of inadequately decontaminated instruments.

These agents are very resistant to both heat and chemical disinfection and could therefore pose a potential risk to staff and service users via contaminated surgical instruments. Stringent management arrangements are required for the re-processing of certain types of surgical instruments and other medical devices that may potentially have been contaminated with TSEs. Such instruments are unlikely to be used in a mental health setting.

There have been no confirmed cases of TSE in healthcare staff as a result of occupational exposure to an infected service user.

Standard infection control practice should be routinely followed as described in this infection control policy.

SERVICE USER RISK GROUPS

When considering measures to prevent transmission to service users or staff in the healthcare setting it is useful to make a distinction between symptomatic service users i.e. those who fulfil the diagnostic criteria for definite, probable or possible CJD or vCJD, and the asymptomatic service users i.e. those with no clinical symptoms but who are potentially at risk of developing one of the diseases.

The infection prevention and control service / consultant microbiologist should be notified immediately of any service user with a known or suspected TSE. The practices that should be implemented are based on nationally

accepted criteria and for this reason the relevant infection prevention and control service should be approached for advice and guidance on service user management at the earliest opportunity.

See Appendix 2 for Categorisation of Service Users by Risk.

KNOWN OR SUSPECTED TSE SERVICE USERS

Includes those service users with:

- An established diagnosis of classical sporadic Creutzfeldt-Jakob Disease (CJD), variant CJD (vCJD), Gerstmann-Straussler-Scheinker Syndrome (GSS), Fatal Familial Insomnia (FFI) or Kuru.
- Service users suspected of having a TSE or a related disorder whose clinical symptoms are suggestive of TSE.

AT RISK SERVICE USERS

Rarely, asymptomatic service users may be identified as potentially at risk of developing TSE related disorders.

MANAGING KNOWN, SUSPECTED OR AT RISK SERVICE USERS

Advice should be sought from the Infection Prevention and Control Lead / Health Protection Team or Public Health England.

- Normal social or routine clinical contact does not present a risk to staff, relatives and the community.
- Isolation of service users with CJD is not necessary.
- The use of standard infection control precautions will minimise the exposure of individuals involved in the healthcare of service users who have or may develop TSE.
- All waste material must be classed as clinical waste and disposed of according to the Management of Healthcare Waste policy.
- All contaminated linen (body fluids and / or excreta) must be treated as infected.
- Sharps or inoculation injury must be reported and dealt with according to the sharps injury procedure.
- All cases where CJD is a possible diagnosis should be reported to the National CJD Surveillance Unit without delay:

The National Creutzfeldt-Jakob Disease Research & Surveillance Unit
Western General Hospital
Crewe Road
Edinburgh EH4 2XU

Telephone:

Main Office +44 (0)131 537 1980/2128/3103

Neuropathology Laboratory +44 (0)131 537 3084

CSF Referrals +44 (0)131 242 6253

Fax: +44 (0)131 343 1404

Email: jan.mackenzie@ed.ac.uk

CLINICAL / INVESTIGATION PROCEDURES ON KNOWN OR SUSPECT PATIENTS

Advice should be sought from the Infection Prevention and Control team / Consultant Microbiologist before any invasive procedure is undertaken.

- Disposable gloves and eye protection must be worn where splashing may occur.
- Contact Pathology Department prior to sending **ANY** specimens and label with 'Added Risk' sticker/hazard labels.
- Standard infection control precautions should be implemented when clearing up any spillage of blood or body fluid. All waste, including mop heads, gloves and aprons must be disposed of as clinical waste.
- Use single use disposable instruments and equipment where possible. **If disposable items are not available the instruments should not be re-used under any circumstances and must be disposed of according to the advice of the clinical waste contractor for the Trust.**

AFTER DEATH

- Inform the mortuary of diagnosis prior to transfer.
- The body should be placed in a body bag prior to transfer to the mortuary.
- An infection control notification sheet must be completed prior to transfer. This will be provided by the infection prevention and control service or the pathology department.

TUBERCULOSIS (TB)

INTRODUCTION

Tuberculosis (TB) is an infectious disease caused by *mycobacterium*. There are a number of bacteria within the Mycobacteria family and these are widely distributed throughout the world but only a few species cause disease in man. The most common tuberculosis infections are caused by *Mycobacterium tuberculosis* although *Mycobacterium avium intracellulare* (or MAI or Mycobacterium complex) is commonly seen in immunocompromised service users.

In recent years tuberculosis (TB) has increased. Tuberculosis is an infection caused by a bacterium of the *Mycobacterium tuberculosis* complex, which may affect any part of the body, but most commonly affects the lungs (pulmonary tuberculosis) or the lymph nodes. Other areas include: bones, joints, the brain and meninges and other internal organs may be affected.

TB infections in sites other than the lung are not normally infectious. Some infections with TB remain dormant (and non-infective) for many years; this is called latent TB infection. Such service users may develop active infection later in life, often following debilitating illness.

It is not easy to become infected with TB but risk is increased through prolonged close contact (a cumulative period of 8 hours is considered sufficient) with an infected case (e.g. household contact) and even then only 30% of healthy people will become infected and of those only 5-10% will develop active disease. Those more at risk of acquiring disease are:

- Household contacts
- Those living in unhealthy or overcrowded environments
- Prolonged exposure in a country with high incidence of TB
- The very young or elderly
- Immunosuppressed (such as with HIV)
- Those with a history of drug or alcohol misuse or detainment in prison
- The children of parents whose country of origin has a high incidence of TB

Casual contacts such as work colleagues and friends are not considered to be at increased risk. The TB specialist team will, however, make an informed decision on whether to screen work colleagues or friends depending on level of contact and level of infectiousness of the case.

Those affected with pulmonary TB most commonly present with a persistent cough, weight loss, severe night sweats, tiredness and some may present with coughing up of blood (haemoptysis).

Incubation is most commonly four to twelve weeks. For some people the infection will lay dormant (latent) but they may, however, develop active disease later in life if predisposed with another debilitating illness.

DIAGNOSIS

Initial diagnosis of pulmonary TB is made clinically or microbiologically from the demonstration of organisms (Acid fast bacilli – AFBs) on microscopy or investigation of sputum.

- Smear positive service users are highly infectious and must be isolated.
- Smear negative service users need to be discussed with the Infection Prevention and Control Service before the decision to cease isolation is taken.

Confirmation of this diagnosis requires a positive culture of the organism, which may take several weeks.

TB IS A NOTIFIABLE DISEASE UNDER THE HEALTH PROTECTION LEGISLATION (ENGLAND) GUIDANCE 2010 (Notification of Infectious Diseases (NOIDs)). The infection prevention and control service must be informed immediately in the event of a service user / resident being found to have TB.

Guidance issued in 2016 by the National Institute of Health and Clinical Excellence – Tuberculosis (NICE guidance CG 33) gives instruction on potential screening (including the street homeless and new entrants at Port of Arrival centres, prisoners, etc.) and occupational health requirements for staff, in addition to investigation, treatment and monitoring procedures. These will not be replicated within this document but guidance on assessment, diagnosis and treatment interventions can be obtained from the acute trust respiratory medicine / TB specialists. Advice must be sought from TB services and infection prevention and control services in any incident of known or suspected TB. This will lead to appropriate guidance and management.

SPUTUM SPECIMENS

Three sputum specimens are required to determine the presence, or absence, of mycobacterial type organisms (Acid Fast Bacilli- AFBs). It is important to ensure the specimen consists of purulent secretions coughed up from the bronchi and is not merely saliva from the mouth. Suitable specimens are best collected during a bout of coughing soon after the service user wakes in the morning.

Care must always be taken with specimens to ensure that the lid of the container is secured tightly and there is no trace of the specimen on the outside of the container.

A biohazard label must be attached to the specimen and the request form.

A positive AFB result indicates that someone has tuberculosis, but does not confirm active TB disease. A full culture and sensitivity testing is required which may take several weeks.

INTERFERON GAMMA RELEASE ASSAY (IGRA)

The interferon gamma release assay (IGRA) is a newer type of blood test to aid in diagnosing of mycobacterium TB. However this is not widely used in all groups who require testing.

MULTI-DRUG RESISTANT TUBERCULOSIS (MDR-TB)

There are now increasing numbers of service users being identified with a tuberculosis infection which is resistant to more than one of the usually prescribed drugs used for treatment. Once identified these service users are usually cared for in hospital until they are no longer infectious. However it is possible that care staff may have cared for the service user prior to admission. In such cases, guidance will be provided by the local Health Protection Team in collaboration with Occupational Health, Chest Physician and Infection Prevention and Control Lead.

RISK FACTORS

Any of the following factors should increase suspicion that a service user might have multi-drug resistant TB (MDR-TB).

- Any past history of TB, particularly if there has been erratic or incomplete TB treatment recently or in the past.
- Contact with a person with known drug-resistant disease.
- Birth, travel or residence in an area with a high prevalence of drug resistance e.g. countries in Asia, Africa, Latin America and Eastern Europe.
- Failure to respond clinically to a standard treatment regime, e.g. temperature still elevated after two weeks' treatment.
- Persistently positive sputum smears after two months anti-TB treatment, or positive sputum culture after three months treatment.

APPROPRIATE PRECAUTIONS TO PREVENT THE SPREAD OF INFECTION

- Most service users with tuberculosis are treated at home; a few need hospital admission for severe illness, adverse effects of chemotherapy or social reasons.
- Special precautions, other than care in disposal of infected exudates, are only required when the service user has confirmed or suspected open pulmonary tuberculosis i.e. AFB positive service users.

CARE PROTOCOL FOR FIRST TWO WEEKS

Once a person has been commenced on treatment for suspected tuberculosis, they generally remain infectious only for the first two weeks of treatment unless there is a suspicion of a resistant or multi-resistant strain of tuberculosis. In a healthcare environment they will require single room isolation with mechanical ventilation during this period.

The service user will usually remain at home as directed by the Chest Physician or TB Nurse Specialist with restricted visitors until confirmatory diagnosis and up to fourteen days of specific chemotherapy has been completed (advice will be given by the TB Nurse Specialist).

CARE PROTOCOL THROUGHOUT THE SERVICE USER'S ILLNESS

Encourage service user to cough into disposable tissues which are then disposed of immediately. If in a healthcare setting, they should be placed into a clinical waste bag.

Encourage the service user to expectorate into a sputum pot which is kept covered and disposed of on at least a daily basis. This must be disposed of without opening the lid. If in a clinical setting, it should be placed into a clinical waste bag.

Ensure the service user turns their head away from others when coughing or expectorating.

Ensure the service user undertakes effective hand washing particularly before meals and after coughing.

There is no need for separate crockery or cutlery.

In the care setting, ensure the service user's room is thoroughly cleaned and dusted daily and the room is well ventilated when weather conditions allow.

Medication compliance is essential and will require supervision by the TB Nurse Specialist when the service user is cared for in the community. Early referral to the TB team is therefore essential. Failure to comply with treatment may cause complications and will encourage the development of Multi-Drug Resistant Tuberculosis (MDR-TB) and increase infectivity. Service users in mental health settings undergoing treatment for TB will have their treatment monitored by the TB specialist team who will provide advice to care staff on ensuring compliance.

If a service user dies with active tuberculosis the body should be placed in a body bag, and clearly labelled as a risk of infection to alert the mortuary/undertakers staff to the risks. Encourage relatives and friends to view the body before sealing the bag and removal, where possible.

MANAGEMENT OF SERVICE USERS WITH TUBERCULOSIS

ISOLATION

- Aerosol transmissions can normally be prevented by isolation of service users who are sputum positive in a single room, preferably with measures to prevent airflow outwards to other service users, i.e. negative pressure ventilation. Negative pressure rooms are available in acute trust settings.
- The door must be kept closed as much as possible.
- Sputum smear positive patients should not use communal washing facilities.

RECOMMENDATIONS FOR THE USE OF MASKS

Respiratory protection is recommended to be worn:

- By all persons entering the room of a service user with suspected or confirmed infectious MDR-TB.
- By all persons during cough inducing or aerosol generating procedures on service users with suspected or confirmed pulmonary TB.
- By healthcare workers caring for any high dependency service user with known or suspected infectious tuberculosis.
- Risk assessment may be required in other situations.

For MDR-TB service users: Particulate filter masks are required.

For drug sensitive TB service users: good quality surgical masks / one-way filter masks are required.

REDUCTION OF INFECTED RESPIRATORY DROPLETS

For sputum smear positive cases:

- Service users should receive active training and supplies to ensure they cough into tissues or cover their mouth fully when tissues are not available.
- Service users should wear good quality surgical masks if being transported through public or service user areas.
- Staff should wear masks, as described above, when direct exposure to respiratory secretions is unavoidable, e.g. during cough-inducing procedures, bronchoscopy or prolonged care of high dependency service users.
- Cough-inducing procedures should never be performed in an open bay or ward.

For all TB service users, confirmed or suspected:

- No cough-inducing procedures should be performed in open ward / shared bay / shared room.
- Infected body secretions should be disposed of as clinical waste for incineration.
- Sputum specimens should be transported in appropriate pots in plastic specimen bags and a hazard label added.

DISINFECTION OF EQUIPMENT

- For routine care of equipment, seek advice from infection prevention and control service

OTHER INFECTION CONTROL MEASURES

- Visitors should, as far as possible, be limited to those who have already been in close contact with the service user before diagnosis.
- Staff should be kept to a reasonable minimum without compromising service user care.

TERMINATION OF ISOLATION

This will be decided by **THE INFECTION PREVENTION AND CONTROL SERVICE ONLY.**

The following are the criteria for discontinuation of isolation for service users with drug-sensitive and non-MDR pulmonary TB.

- The service user has had a minimum of two weeks of appropriate drug therapy.
- At least three consecutive negative sputum microscopy smears taken on different days (or complete resolution of cough) over a period appropriate for the drug susceptibility of the disease but at the minimum over fourteen days.
- Definite clinical improvements as a response to treatment e.g. remaining afebrile for at least one week.
- Demonstrated tolerance of the prescribed treatment and an ability and agreement to adhere to treatment.

DISCHARGE FROM HOSPITAL

Prior to discharge from hospital, all relevant people should be informed. One person needs to be designated responsible for ensuring all correct procedures are carried out.

- Adherence to drug treatment.
- Follow up bacteriological tests.
- Follow up appointments.

STAFF PROTECTION / CONTACT TRACING

Staff that are caring for service users with open pulmonary TB within the first two weeks of treatment are not usually required to wear masks. Close fitting FFP3 masks are required when undertaking sputum producing procedures which is unlikely to happen in a mental health setting. If masks are required for any other care activity this would be directed by the TB Specialist team.

All close staff contacts of sputum smear positive (AFB positive) service users will be checked and followed up by the OH staff / TB nurse specialist as appropriate. A contact list will be compiled in conjunction with the Infection Prevention and Control Lead and the local Health Protection Team at Public Health England

Contact tracing is an integral part of the routine management of patients with TB and should be carried out in accordance with current British Thoracic Society Guidelines. The Health Protection Team will be involved in this process, via the infection prevention and control services.

Staff members in contact with an infected service user should liaise with Occupational Health regarding BCG (Bacillus Calmette-Guerin) vaccine status.

Any employee of the organisation who develops an illness suggestive of tuberculosis should seek medical advice either from the Occupational Health Department or their own GP as soon as possible.

DEATH

If a service user has died as a result of **active** TB, the body must be placed in a cadaver bag, available from porters.

The face of a deceased service user with suspected or confirmed sputum positive pulmonary TB, should be covered when the body is lifted as air may be expelled. Health Services Advisory Committee guidance recommends that relatives and friends are discouraged from touching or kissing the body of deceased persons with TB.

On completion of last offices, the identification bracelet on the ankle of the deceased must indicate a risk. The appropriate hazard label must also be attached to the shroud and the outside of the plastic enclosure.

ECTOPARASITES (FLEAS, HEAD LICE, BODY LICE, PUBIC LICE AND SCABIES MITE)

INTRODUCTION

Suspected infestation should be investigated quickly to diagnose the cause of irritation. Treatment should be in accordance with infection control team advice. Biting insects and burrowing mites may cause irritation and scratching

FLEAS

Infestation is usually with cat or dog fleas, which will bite humans in the absence of preferred hosts. Bites are most often seen around the trunk in groups of two - three bites.

REMOVAL METHODS

- Bathing should remove them from the service user.
- Clothing and linen should be treated as infected.
- Vacuum cleaning will help eliminate fleas from carpets, upholstery, etc.
- Suitable insecticides may be used on pets, their bedding and other infected areas.

LICE

Lice live on the skin or inner layers of clothing. Once parted from their host, they soon die, although the nits or eggs may remain viable for long periods.

Lice feed on human blood and can be seen as a dark red spots. Bites cannot be felt but irritation occurs and blue / grey skin lesions can be seen.

Head lice are mainly found in their specific areas, but also in other hairy areas, including eyebrows.

Pubic (crab) lice are generally found in the pubic and perineal region, but may also be in the armpits, hairy chests, beard, eyebrows and eyelashes. It is more firmly attached and less likely to transfer to healthcare staff.

Body Lice are mainly found in clothing but also on body surfaces, especially in axillae and around the waist where bite marks will be evident.

MODE OF TRANSMISSION

Transmission is by contact either with the hair (head or pubic lice) or clothing (body lice) of the host.

The live head lice are transmitted by prolonged head to head contact, which must be for at least thirty seconds.

Lice cannot jump or fly but crawl quickly in dry hair from one head to another.

Pubic lice are normally acquired by intimate contact e.g. sexual intercourse.

HEAD LICE (*PEDICULUS HUMANUS CAPITIS*)

The adult louse is approximately three mm long and lives for about twenty days. The female head louse produces on average fifty-six eggs after a single insemination, at the rate of approximately six eggs per day. It feeds on human blood. Bites cannot be felt but repeated bites lead to sensitisation and irritation (itching) of the scalp. Irritation to the scalp is also due to an allergic reaction to louse faeces. Once the infected person is sensitised to the bites the itch is continuous.

The eggs, which are difficult to see, are glued to individual hairs just above the roots and are tear shaped and approximately one mm long. They hatch after seven - eleven days and reach adult stage within six – twelve days. The empty egg shells (nits) are white and shiny and are harmless. As the hair grows the empty egg shells can be found further along the hair shaft.

DIAGNOSIS

Diagnosis is by identification of a live moving louse on the hair which is most effectively done by the wet combing method (described below). Children aged four - eleven years are the most frequently affected so it is important for control measures that families check their hair for infection regularly and treat appropriately.

WET COMBING DETECTION METHOD

Wash the hair in the normal way.

Using a fine-toothed comb and lots of conditioner, firstly comb the tangles out of the hair over a pale surface or paper towel. Clean the comb between each stroke using a piece of tissue. Then repeat the process with a fine-toothed comb. Combing a small section of hair from the roots to the end and cleaning the comb after each stroke.

Examine the tissue after each combing for traces of lice or eggs.

After completing the combing, rinse and dry the hair in the usual way.

If live lice are identified, then an appropriate eradication method should be used.

If lice are found then all other close contacts should be checked for infestation by use of the wet combing method and **only those who are found to be affected should be treated.**

PRODUCTS FOR TREATING HEAD LICE (Insecticides)

Lotions should be used in preference to shampoos, which are not in contact with the hair long enough, and are normally diluted too much in use to be effective. All manufacturers' recommendations should be followed.

A variety of treatments are available. Please seek advice from a Pharmacy before commencing treatment.

The Pharmacist will be able to give advice on suitable lotions. There are four main types of insecticide treatments available:

- Carbaryl
- Malathion
- Synthetic pyrethroids, phenothrin and permethrin
- Dimeticone which is not an insecticide, but works by immobilising the lice

Alcohol based treatments must not be used on babies or people with asthma, when a water based treatment must be used.

Staff should wear a plastic apron and gloves while carrying out the treatment.

Apply lotion according to the instructions and rub gently into scalp, avoiding contact with the eyes. Repeat until hair is thoroughly wet. Allow hair to dry naturally.

After the recommended contact time wash hair with normal shampoo, rinse using lots of conditioner. While the hair is wet, comb with a fine toothed comb, making sure that the teeth of the comb slot into the roots of the hair every time to remove lice and nits, clear the comb after each stroke.

An insecticide treatment should be repeated seven days later. This is because the insecticide is not 100% effective at eradicating all the eggs which may then hatch during the following seven days. The second application ensures that the nymph stage lice (young lice) are eradicated before being able to lay eggs.

Two - three days after the second application of the insecticide the hair should be combed through with a detection comb. If any adult lice are found this is either due to treatment failure or re-infestation. In either case a second choice of insecticide should be chosen so as to prevent resistance to the treatment occurring. This is called the mosaic approach to treatment.

WET-COMBING ERADICATION METHOD

Wet combing should be performed on days 1, 5, 9 and 13 over a fourteen day period and should follow the same method as the wet-combing detection method described above. It is important that, between each stroke, lice are cleaned from the comb and that the entire head and length of hair is checked during the process.

PERIOD OF COMMUNICABILITY

Until case is treated.

EXCLUSION

None.

BODY LICE

The adult body louse is larger than the head louse and also feeds on human blood. It is associated with poor living conditions, lack of cleanliness and lack of adequate nutrition. The presenting signs are pinpoint lesions, excoriation and pigmentation of the skin. Eggs are laid on the clothing of the host, in the lining, seams and underwear and occasionally on the body hairs.

MODE OF TRANSMISSION

The body louse may be transferred by direct contact, but more often by wearing infested clothing or sleeping in infested bedding.

TREATMENT

Bathing will remove them from the service user.

Treatment does not usually require pesticides.

Body lice are seldom found on the skin after clothing has been removed. The louse only transfers in the dark therefore remove clothing in a well-lit room.

It is recommended that staff wear gloves and a plastic apron while assisting service users.

Collect clothing and bed linen in water-soluble linen bags.

Clothes should be turned inside out and tumbled dried at 50⁰ C for thirty minutes. This will be sufficient to kill both lice and eggs. Clothes can then be washed in the usual way.

No special environmental measures are required.

TREATMENT

Treatment is with Malathion or Carbaryl lotions or shampoo or as directed by a Pharmacist.

An aqueous based lotion should be used on the genital or other areas as necessary.

Clothing should be washed and ironed.

Staff should wear gloves if required to carry out the treatment.

Sexual partners should be treated simultaneously whether infection is confirmed with them or not.

SCABIES

The incidence of scabies fluctuates. It is caused by a small mite that lives in the deeper layers of the epidermis and can move up to five mm a day by burrowing horizontally through the skin. As it travels the female lays two - three eggs daily. Although the original infecting mite dies after three – six weeks, its eggs hatch, migrate to the skin and continue the cycle.

Infection with the scabies mite is currently increasing and there have been a number of cases of resistance to the usual treatments.

Scabies is an infestation of the skin by the microscopic mite *Sarcoptes scabiei*, which burrows into the skin. These burrows are often visible as a discoloured, raised line, which may be straight, tortuous or dotted on the wrists, back of the hands and between the fingers.

DIAGNOSIS

Infection with scabies presents with intense itching caused by an allergic reaction to the faeces of the mite. The burrowing itself may also cause itching. Burrows are only seen on a minority of service users. The mite tends to burrow into warm skin creases so elbows, armpits, beneath the breasts, waist, groin, genitalia, buttocks, knees and ankles are also often affected. The head and neck are not normally affected. Itching is usually worse at night.

Infection with the scabies mite is very difficult to detect until the infested individual becomes allergic to proteins in the excreta of the mite which takes from two – six weeks. This causes increasingly intensive itching particularly at night.

There are two particular types of scabies to note:

- **Classical scabies** which presents in otherwise healthy individuals. There are few mites present and few associated complications.
- **Norwegian scabies** (also known as crusted scabies) which can occur in those with impaired immunity. The mite multiplies rapidly and causes widespread dry, crusty areas. Infestation is with large numbers of mites, reaching possibly thousands and affecting the entire body. Typical burrows may not be seen and the service user may present with a rash resembling a chronic dermatitis. The classical itch may be absent. This form of scabies is highly infectious and can cause environmental contamination.

A dermatologist can usually confirm the diagnosis. On examination of skin scrapings in the laboratory, evidence of the mites and the eggs may be found.

The most important factor is to consider the diagnosis of scabies in any patient with a rash, particularly if it is associated with itching.

MODE OF TRANSMISSION

Extended direct contact (i.e. skin to skin for three - five minutes) is required for transmission of the mite.

Transmission of scabies infection occurs during very close skin-to-skin contact with an infected individual and spreads rapidly under crowded conditions where frequent skin-to-skin contact is unavoidable such as in hospitals, care homes and childcare facilities.

As many elderly people are affected by dry skin it is often extremely difficult to diagnose scabies infestation in the elderly. Referral to a dermatologist for confirmation of diagnosis is often the most effective method of determining an accurate diagnosis particularly if other treatment regimens have failed.

TREATMENT

Confirm diagnosis – infection prevention and control service to be advised if suspected or confirmed.

Risk assessment should be carried out.

Treatment is for all on an infected ward including medical, nursing and other healthcare staff is necessary.

Only the families of symptomatic members of staff should be treated.

Those diagnosed with scabies, as well as their sexual partners and any other close contacts that may have had close prolonged contact within the preceding six weeks should be treated. These treatments should be given on the same day.

A malathion or permethrin based lotion are the current treatments of choice.

NB Always check the manufacturer's instructions regarding skin contact time, areas to apply lotion to and number of treatments required.

Instructions for treatment

- A sketch map should be made of the distribution of lesions before the treatment to check afterwards whether any persist, are slow to heal, or if there are fresh eruptions.
- The lotion or cream should be applied from the chin downwards. All areas of the body, including genitalia, must be treated, except for the face and neck. It should be left on for the instructed length of time, after which the service user should bath or shower.
- Any cream washed off during the course of treatment should be re-applied until the treatment time has elapsed.
- Those who are infected will need to receive a second treatment three – five days later. Unaffected contacts will only need to receive one treatment.

- All bed linen and clothing worn just before treatment must be washed on a high temperature. If items are not washable then they should be ironed with a hot iron.
- It is important to note that itching may persist for several weeks after treatment. Antihistamines may be recommended to reduce itching.
- Further medical attention should be sought if itching persists after four weeks.

The two most common causes for treatment failure are:

- Failure to treat all contacts simultaneously so the chances of re-infection are increased.
- Failure to re-apply the treatment during the treatment phase after washing hands.

A hot bath before treatment is NOT recommended. If the service user is dirty a cool bath may be given, and treatment should then be delayed for at least two hours following the bath. Bathing before treatment increases absorption of the lotion into the bloodstream and away from the skin area which requires treatment.

Staff should wear gloves and plastic aprons for direct contact during treatment.

Expert advice should be sought for the treatment of crusted (Norwegian) scabies as in some rare cases systemic treatments may be necessary.

Review after seven - ten days. If treatment is successful, old lesions shrivel and dry and may resolve completely. If new pustules or papules are present, further treatment may be required – check manufacturer's instructions and discuss with ICT.

RECOMMENDATIONS

Staff infected outside the healthcare environment should be excluded from work until twenty-four hours after completion of the treatment.

Staff infected by service users they are caring for may return to work after treatment but should not work elsewhere until twenty-four hours after treatment.

Visitors should be discouraged from close contact with the service user / client until twenty-four hours after completion of treatment.

Service users should not visit Day Units, Lunch Clubs, Occupational Therapy units, etc. until treatment is completed.

If an admission to hospital is required, the Nurse in Charge of the ward must be informed of the diagnosis and treatments already given.

Seek guidance from Infection Prevention and Control Lead or Public Health England, if there is the likelihood of more than one case of scabies i.e. an outbreak.

INFLUENZA

INTRODUCTION

Influenza is an acute viral infection and is highly infectious. It has a short incubation period of one - three days and can spread rapidly especially in the elderly and other residential care settings.

Influenza can be more severe in certain people, such as:

- anyone aged 65 and over
- pregnant women
- children and adults with an underlying health condition (particularly long-term heart or respiratory disease)
- children and adults with weakened immune systems

AIM

To reduce the incidence and consequences of an influenza outbreak and to ensure that essential services are maintained. An essential component of this procedure is prevention and the aim is to:

- Ensure immunisation of the most vulnerable groups prior to the influenza season (October and early November each year)
- Reduce the risk of transmission by isolating affected service users.
- Ensure that in-patient, out-patient, day care and home care services are maintained.

BACKGROUND

Influenza generally presents with an abrupt onset of fever, chills, headaches, myalgia and often a dry cough. In uncomplicated cases the symptoms resolve in three - five days although a short period of fatigue may follow recovery. Influenza is generally milder in children than adults and more severe in those with underlying disease, particularly chronic respiratory and cardiac disease, renal and liver failure and diabetes mellitus. Those who are immunocompromised due to illness or treatment, or the elderly or frail are also at risk.

In the event of a **flu pandemic**, separate Trust guidance will be issued to all staff as advised by the Health Protection Team (HPT) / World Health Organisation (WHO) / Department of Health (DH).

OUTBREAK IDENTIFICATION AND MANAGEMENT

- The definition of influenza is any individual who complains of one or more of the following symptoms:
 - an acute infection (viral) with an abrupt onset,
 - chills,
 - headache,
 - myalgia,
 - pyrexia,
 - dry cough.
- The infection prevention and control team should be advised if there is a single case of influenza amongst service users or staff. Inform Occupational Health Department. Due to the rapid spread of the virus it is essential that an outbreak strategy is developed in the early stages of such a scenario.
- The infection prevention and control team will assess the situation and co-ordinate action with healthcare staff and Occupational Health Services and any additional agencies as appropriate.
- An outbreak will usually be suspected when there are more than two cases in a defined area. However it is important that the infection prevention and control team is alerted as soon as possible if there is an individual case so that effective action can be taken quickly.
- The action taken will depend upon the numbers of service users and staff cases and may include:
 - Isolation or cohort nursing of affected cases.
 - Recommend that affected staff remain off duty until they are free from signs and symptoms of infection for forty-eight hours.
 - Consideration will be given to the administration of prophylaxis in some areas.
- Service users with influenza will require reassurance, rest, warmth, plenty of fluids and mild analgesia to minimise the symptoms.

IMMUNISATION

CONTRAINDICATIONS

The vaccine is prepared in hens eggs and should not be given to those individuals where there is a known hypersensitivity to egg products. Although there is no evidence that the vaccine will damage the foetus it is not recommended in pregnancy.

In the event of a flu pandemic, guidance will be separately issued relating to vaccination programmes.

ADVERSE REACTIONS

The influenza vaccine is usually well tolerated apart from occasional soreness at the vaccination site. In rare instances it may cause fever, malaise, myalgia and / or arthralgia beginning six - twelve hours after injection and lasting up to forty-eight hours.

Even more rarely, reactions such as urticaria, angio-oedema, allergic asthma and anaphylaxis may occur which are most likely to be due to hypersensitivity to egg protein.

The influenza virus contains inactivated virus and therefore cannot cause influenza. However, service users should be warned that influenza-like illness caused by other respiratory viruses may occur and the vaccine will not prevent these.

VARICELLA ZOSTER VIRUS (CHICKENPOX) AND HERPES ZOSTER (SHINGLES)

INTRODUCTION

Chickenpox and shingles are both caused by the Herpes Virus. For chickenpox the varicella zoster virus (VZV) poses a significant risk of foetal morbidity and mortality during pregnancy. Pregnant members of staff who have not had chickenpox must consult their Occupational Health Service as soon as possible following exposure to the VZV.

Following advice from the Joint Committee on Vaccination and Immunisation (JCVI), varicella immunisation is now recommended for non-immune healthcare workers who work in primary care and in hospitals and who have direct service user contact.

AIM

To ensure that service users are supported appropriately and that potential or actual risks for service users and staff are reduced.

BACKGROUND

Whilst chickenpox is a relatively mild disease in childhood, it can have a major impact on health for adults as well as posing risks in relation to pregnant women as

above. Infection prevention and control services and occupational health departments will advise both service users and staff in the event of exposure to this virus.

CHICKENPOX – Primary Infection

- This virus is communicable via upper respiratory tract secretions for up to four days **prior** to the spots appearing.
- An individual will remain infectious until all the vesicles (fluid filled spots) have dried and crusted (usually about five days after the appearance of the last vesicle).
- If a person has had chickenpox in the past, they are not usually susceptible to a second infection and they will also not pass the virus on to others. The only exception to this is if the person is immunocompromised.

SHINGLES – Reactivation

- Shingles (Herpes Zoster Virus) only occurs in service users who have already had chickenpox.
- The virus reactivates in sensory nerve cells and erupts as a vesicular rash in the cutaneous distribution of the nerve.
- The virus is present in the vesicular fluid until the vesicles have dried and crusted.
- Individuals who have not had chickenpox may acquire it from service users with shingles.

MANAGEMENT OF INFECTED INDIVIDUALS

Service users with shingles or chickenpox in clinical areas should be isolated in a single room with the door shut, until all lesions have dried or can be occluded with dressings. In some environments it may not be appropriate or possible to isolate service users but efforts should be made to restrict contact with others at risk.

Personal protective clothing, such as plastic aprons and gloves, should be worn for direct service user care and bed-making.

As far as possible, service users should be cared for by staff that have had chickenpox and are therefore immune. Staff and other service user contacts can be serologically tested to check their immune status if they have no previous history of chickenpox infection; contact the Occupational Health Service for further advice.