



Community Infection Prevention and Control Guidance for Health and Social Care

MRSA

MRSA

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MRSA (METICILLIN RESISTANT STAPHYLOCOCCUS AUREUS)

1. Introduction

Staphylococcus aureus is a common bacteria that is frequently found on the skin or in the nose of healthy people without causing an infection.

If the bacteria invades the skin or deeper tissues, and multiplies, an infection can develop. This can be minor (such as pimples, boils and other skin conditions) or serious (such as bacteraemia, wound infections or pneumonia).

Meticillin (previously known as Methicillin) is an antibiotic that was commonly used to treat *Staphylococcus aureus*, until some strains of the bacteria developed resistance to it. These resistant bacteria are called Meticillin Resistant *Staphylococcus aureus* (MRSA). Strains identified as meticillin resistant in the laboratory will not be susceptible to flucloxacillin – the standard treatment for many staphylococcal infections. These strains may also be resistant to a range of other antibiotics.

MRSA is not usually a risk to healthy people. Research has shown that health and social care workers, who become colonised, have acquired the bacteria through their work, but the MRSA is usually present for a short time only.

2. Colonisation and infection

Colonisation means that MRSA is present on or in the body without causing an infection.

Up to 50% of the general population at any one time are colonised with *Staphylococcus aureus* (including MRSA) on areas of their body, e.g., nose, skin, axilla, groin. It can live on a healthy body without causing harm and most people who are colonised do not go on to develop infection. Less than 5% of colonising strains in the healthy population who have not been in hospital are Meticillin resistant, but it is more common in vulnerable people who are in contact with the health and social care system.

Infection means that the MRSA is present on or in the body and is multiplying causing clinical signs of infection, such as in the case of septicaemia or pneumonia, or for example, in a wound causing redness, swelling, pain and or discharge.

MRSA infections usually occur in health and social care settings and in particular vulnerable service users. Clinical infection with MRSA occurs either

from the service user's own resident MRSA (if they are colonised) or by transmission of infection from another person, who could be an asymptomatic carrier or have a clinical infection. *Staphylococcus aureus* infects a range of tissues and body systems causing symptoms that may be common to different infections caused by other bacteria.

3. Service users at risk of infection from MRSA

- Service users with an underlying illness.
- The elderly – particularly if they have a chronic illness.
- The very ill – patients in intensive care.
- Those with open wounds or who have had major surgery.
- Service users with invasive devices such as urinary catheters, central venous catheters.

4. Routes of transmission

- Direct spread via hands of health and social care workers or service users.
- Equipment that has not been appropriately decontaminated.
- Environmental contamination (*Staphylococci* that spread into the environment may survive for long periods in dust).

5. Treatment

Any treatment required will be on an individual service user basis. Antibiotic treatment should only be prescribed if there are **clinical signs of infection** and following discussion with the clinician or the Consultant Microbiologist. Service users who are **colonised** with MRSA, i.e., no clinical signs of infection, **do not usually** need treatment.

6. Decolonisation and screening

Decolonisation/suppression treatment and screening in the community setting is not routinely required, however in certain situations this may be undertaken. Screening for MRSA will take place for planned admissions to hospitals. For specific advice contact the admitting hospital.

Decolonisation/suppression treatment (see Appendix 1) consists of:

- an antibacterial solution, e.g., octenisan, Hibiscrub, or Prontoderm Foam, daily for 5 days, following the manufacturer's instructions
- for dermatology service users, those with pre-existing skin problems, if not otherwise contraindicated, use octenisan or Prontoderm Foam, daily for 5 days
- nasal Mupirocin 2% ointment, e.g., Bactroban nasal, three times a day for 5 days
- topical Mupirocin 2% cream, e.g., Bactroban, for superficial wound areas, e.g., PEG sites (separate tube)
- for urine or wound carriage, please contact the Consultant Microbiologist.

Compliance with the above programme is important and once commenced should be completed in order to prevent resistance to Mupiricin.

Further screening or treatment is not required unless advised by the infection control team.

7. Infection control precautions for service users with MRSA in the community

Colonisation with MRSA may be long term. MRSA does not present a risk to other healthy individuals and carriers should, therefore, continue to live a normal life without restriction. Good hand hygiene practice and standard infection precautions should be followed by all staff at all times, to reduce the risk of transmission of infection.

- There is no justification for refusing to admit service users with MRSA into community care settings, e.g., care homes.
- Service users with MRSA should not be prevented from visiting day centres, etc.
- Service users with MRSA in the community setting do not usually require isolation, they can share a room provided that the persons they are sharing with do not have open wounds, catheters or intravenous infusions.
- Service users with MRSA can visit communal areas, e.g., dining room, television room and can mix with other service users.
- Standard precaution (please refer to Standard Precautions Guidance) should be taken by all health and social care staff, including:
 - hand hygiene essential before and after service user contact using either liquid soap and warm water or alcohol handrub (please refer to Hand Hygiene Guidance)
 - disposable gloves and apron should be worn for direct care or when handling items contaminated with blood and/or body fluids

- normal laundry procedures are adequate with items washed either by a laundry or in a washing machine on a hot wash cycle. Items that are heat labile should be washed at the highest temperature the garment will withstand.
- Staff should ensure that the service user's wounds are covered with an impermeable dressing.
- Wound dressings, if possible, should be undertaken in the service user's own room with the door closed or if attending the GP practice should be scheduled at the end of the session.
- Staff with eczema/psoriasis should seek advice from their GP or Occupational Health Department. Persistent skin problems should be reported/investigated. Cuts and abrasions need to be covered with a waterproof plaster/dressing whilst at work.
- No special precautions are required for crockery/cutlery and they should be dealt with in the normal manner.
- All clinical waste should be disposed of as infectious waste (please refer to Waste Management Guidance for further details).
- There is no need to restrict visitors, but they should be advised to wash hands on leaving.

8. Environmental cleaning

- In a care home establishment there are no special requirements for cleaning a MRSA positive service user's room.
- If a MRSA positive service user has attended the GP practice for a procedure, then the immediate area should be cleaned with detergent and warm water followed by a hypochlorite solution, e.g., Chlor-Clean, Haz tabs, Presept and dried.

9. Transfer of service users between health and social care settings

Staff preparing to transfer a service user between one health and social care environment to another must complete the Inter-health and Social Care Infection Control Transfer Form, see Appendix 2 (please refer to the Inter-Health and Social Care Transfer form). This must accompany the service user. The department should be made aware of the service user's MRSA status so that appropriate infection control measures can be put in place before the service user arrives, e.g., the provision of a single room.

10. Precautions for MRSA positive service users attending health and social care settings

OUTPATIENT DEPARTMENTS/GP PRACTICES

MRSA service users should, wherever possible, be seen at the end of the session/clinic. Staff should wear disposable gloves and apron for direct patient care and the immediate environment cleaned afterwards with detergent and a hypochlorite solution, e.g., Haz tabs or Chlor-Clean.

AMBULANCE TRANSPORTATION

There is no evidence that ambulance personnel or their contacts are put at risk by transporting service users with MRSA. However, to minimise the risk of transmission of MRSA to other service users, the ambulance staff or patient transport service staff should, as for every service user, decontaminate their hands before and after contact with a service user with MRSA.

Most MRSA carriers can be transported with others in the same car or ambulance. However, service users with invasive devices or who are immunocompromised/neutropaenic should not travel with service users who are known to be MRSA carriers. It is important to discuss any infection control issues with the ambulance service when booking patient transport so that appropriate segregation of service users can be maintained. No additional cleaning of the ambulance is usually required after transporting a service user with MRSA, routine linen changes and cleaning of the mattress is sufficient.

ROUTE CAUSE ANALYSIS

MRSA bloodstream infections (bacteraemia) can be difficult to treat because of antibiotic resistance and are a significant cause of morbidity and mortality. Prevention of MRSA bacteraemia is, therefore, of vital importance. All MRSA bacteraemia are reported regardless of whether they are acute or community acquired.

A Post Infection Review (PIR) is undertaken to identify any possible failings in care and to identify the organisation best placed to ensure improvements are made. This is a national requirement and may be completed alongside a Route Cause Analysis (RCA). If the Clinical Commissioning Group (CCG) is leading a PIR for a case where the service user is an inpatient, the local Community Infection Prevention and Control or Public Health England team will liaise with the relevant hospital team and relevant community services providing care to the service user, e.g., GP, care home, domiciliary care. Findings will be discussed with relevant services and any necessary improvement actions must be acted on and reviewed, timescales and responsibilities should be defined.

Ways in which MRSA bacteraemia may be prevented are:

- scrupulous hand hygiene and standard precautions

- scrupulous aseptic technique for the management of wounds and insertion and management of invasive devices
- correct use of antimicrobials – the correct antibiotic via the correct route, for the correct length of course.

DEATH OF A SERVICE USER WITH MRSA

Standard infection control precautions should be used when dealing with all deceased service users whether known to have had MRSA or not. Any lesions should be covered with impermeable dressings. Body bags are not required unless there is a risk of seepage from the body. Routine infection control precautions should be maintained by relatives, mortuary staff and undertakers.

PVL-SA

Panton-Valentine Leukocidin (PVL) is a toxin produced by less than 2% of *Staphylococcus aureus* (SA). It is associated with an increased ability to cause disease. PVL-SA causes recurrent skin and soft tissue infection, but can also cause invasive infections, including haemorrhagic pneumonia, in otherwise healthy young people in the community. Although several other countries have encountered widespread problems with PVL-SA related disease, infections caused by PVL-SA producing strains remain uncommon in the UK. To date, most have been acquired in the community, but not all have been caused by bacteria which are susceptible to meticillin (PVL-MSSA), some are meticillin resistant (PVL-MRSA).

Further information has been produced by the Health Protection Agency and is available on the Public Health England website.

11. Information for service users and family/visitors in health and social care settings

Information about the infection should be given to service users and/or family and visitors. Information and factsheets are available to download at www.infectionpreventioncontrol.co.uk.

12. Additional IPC resources

The Community Infection Prevention and Control (IPC) team have produced a wide range of innovative educational and IPC resources designed to assist your organisation in achieving compliance with the Health and Social Care Act 2008 and CQC registration requirements.

These resources are either free to download from the website or available at a minimal cost covering administration and printing:

- Over 20 IPC Guidance documents (Policies)

- Preventing Infection Workbooks
- 'IPC CQC Inspection Preparation Pack for Care Homes'
- IPC posters, leaflets and factsheets
- Audit tools

In addition, we hold educational study events in North Yorkshire and can arrange bespoke training packages and 'Mock IPC CQC Inspections'. Prices vary depending on your requirements and location.

Further information on these high quality evidence-based resources is available at www.infectionpreventioncontrol.co.uk.

13. References

Department of Health (2013) *Prevention and control of infection in care homes*

Department of Health (2010) *The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance*

Department of Health (2007) *Essential Steps to safe, clean care managing MRSA in a non-acute setting: a summary of best practice*

Health Protection Agency (2008) *Guidance on the diagnosis and management of PVL-associated Staphylococcus aureus (PVL-SA) infections in England*
http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1218699411960

NHS England (2014) *Guidance on the reporting and monitoring arrangements and post infection review process for MRSA bloodstream infections version 2*

NHS Commissioning Board (2013) *Guidance on the reporting and monitoring arrangements and post infection review process for MRSA bloodstream infections*

14. Appendices

Appendix 1: MRSA Suppression Treatment Instructions for service users in the community

Appendix 2: Inter-Health and Social Care Infection Control Transfer Form



MRSA Suppression Treatment Instructions for service users in the community

Meticillin resistant *Staphylococcus aureus* (MRSA) suppression treatment helps to reduce the numbers of MRSA bacteria a person has or may carry. This treatment reduces the chances of developing an MRSA infection. If you do not wish to have suppression treatment, please discuss this with your GP or a community Infection Prevention and Control Nurse.

This information aims to assist you to use MRSA suppression treatment correctly. The treatment is a combination of **two separate treatments** to be used over a 5 day period. It is important that you complete the 5 day course to reduce the possibility of developing an MRSA infection.

Body wash treatment (step-by-step guide on the back of this sheet)

An antibacterial washing lotion called octenisan which should be used for body and hair washing.

- You will need to bathe, strip wash or shower **once** daily for 5 days using the lotion.
- The lotion should also be used as a hair shampoo and will need to be used to wash your hair twice during the 5 day period. Hair can be washed as normal on other days during the treatment. Hair conditioner can be used as normal after using the hair lotion.
- If you require assistance to perform this task please discuss with your GP.

Nasal ointment treatment

A nasal ointment called Bactroban which should be used **three** times a day for 5 days.



1. Wash and dry your hands.



2. Unscrew the cap and squeeze a small amount of ointment, about the size of a match-head onto your little finger.



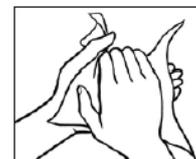
3. Apply ointment to the inside of one nostril.



4. Repeat steps 2 and 3 for the other nostril.



5. Close your nostrils by pressing the sides of the nose together for a moment. This will spread the ointment inside each nostril.



6. Wash and dry your hands. Then replace the cap on the tube.

If you have any questions, please contact your local Community Infection Prevention and Control or Public Health England team.



octenisan® 5 day antimicrobial wash protocol

Instructions for use

- Apply octenisan® undiluted onto a clean, damp washcloth
- Rub onto the areas of the body to be cleansed and wash off
- For showering or hair washing, simply use octenisan® in the same manner as other hair and skin washing preparations
- Always observe the recommended contact time of 1 minute*



*tested according to EN 12054



<p>Step 1</p> <p>Ensure Hair and Body are Wet</p>	<p>Step 2</p> <p>Apply octenisan® undiluted</p>	<p>Step 3</p> <p>Apply octenisan® evenly all over the body & hair (recommended skin contact time 1 minute*)</p> <p>All over Hair & Body. Focus on areas a, b, c</p>	<p>Step 4</p> <p>Rinse off thoroughly</p>	<p>Step 5</p> <p>Dry with Clean towel</p>	<p>Step 6</p> <p>Put on clean clothing & bedding</p>
Day 1	Day 2	Day 3	Day 4	Day 5	
Body	Body & Hair	Body	Body & Hair	Body	Body

Date: 08/2017, Author: Schülke & Mayr UK Ltd., Approved: 08/2017.



Inter-Health and Social Care Infection Control Transfer Form

The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance (Department of Health 2010)

“A registered provider must ensure that it provides suitable and sufficient information on a service user’s infection status whenever it arranges for that person to be moved from the care of one organisation to another, or from a service user’s home, so that any risks to the service user and others from infection may be minimised. If appropriate, providers of a service user’s transport should be informed of any infection.”

HOW TO USE THIS FORM

- Complete the form for every service user transfer to another health and social care provider. Please refer to the ‘Inter-Health and Social Care Transfer Guidance’ for full guidance on transfers and discharges at www.infectionpreventionandcontrol.co.uk.
- Complete the form prior to booking ambulance or other transport.
- A ‘confirmed risk’ service user is one who has been confirmed as being colonised or infected with organisms such as MRSA, glycopeptides-resistant enterococci, pulmonary tuberculosis and enteric infections including *Clostridium difficile*.
- Service users with ‘suspected risks’ include those who are awaiting laboratory tests to identify infections/organisms or who have been in recent contact with infected service users, e.g., in close proximity to an infected service user.
- Service users with ‘no known risks’ do not meet either of the two criteria above.
- For service users with diarrhoeal illness, please use the Bristol Stool Form Scale to indicate the frequency and type of stools over the past week. Please indicate in the ‘confirmed’ or ‘suspected’ risk box if the diarrhoea is known or suspected to be infectious.
- Please use the ‘Other information’ box to list personal protective equipment being used to assist in service user care. This equipment may include gloves, aprons or masks.
- Please print your name and contact details in the box provided.
- This form should accompany the service user during transfer and be given to the receiving facility. A copy should also be retained for evidence purposes and filed in the notes.

<p>Service user details (insert label if available)</p> <p>Name:</p> <p>Address:</p> <p>NHS number:</p> <p>Date of birth:</p>	<p>Consultant:</p> <p>GP:</p> <p>Current patient location:</p> <hr/> <p>Transferring facility: (e.g. hospital – ward / care home)</p> <p>Contact No:</p> <p>Date of Transfer:</p> <p>Have ICT been informed of the transfer of those service users with a confirmed/suspected risk: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></p>															
<p>Receiving facility: (e.g. hospital – ward / care home / district nurse)</p> <p>Contact no:</p> <p>Have the following been informed of the transfer of those service users with a confirmed/suspected risk:</p> <p>Receiving ICT*: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></p> <p>Transport provider: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></p> <p>(*ICT = Infection Control team or Community Infection Prevention and Control team)</p>	<p>Is the service user an infection risk? <i>Please tick most appropriate box and give confirmed or suspected organism</i></p> <p><input type="checkbox"/> Confirmed risk Organism:</p> <p><input type="checkbox"/> Confirmed risk Organism:</p> <p><input type="checkbox"/> Suspected risk Organism:</p> <p><input type="checkbox"/> No known risk</p> <p>Service user exposed to others with infection: (e.g., D&V) Yes <input type="checkbox"/> No <input type="checkbox"/></p>															
<p>If service user has diarrhoeal illness, please indicate bowel history for last week: (based on Bristol Stool Form Scale)</p> <p>Is diarrhoea thought to be of an infectious nature? Yes <input type="checkbox"/> No <input type="checkbox"/></p>																
<p>Relevant specimen results – MRSA (including admission screens), multi-resistant gram negative bacteria (e.g., ESBL), <i>Clostridium difficile</i>:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Specimen:</td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> </tr> <tr> <td>Date:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Result:</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		Specimen:					Date:					Result:				
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Date:																
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<p>Treatment information including antimicrobial therapy:</p>																
<p>Other information:</p>																
<p>Is the service user aware of their diagnosis/risk of infection? Yes <input type="checkbox"/> No <input type="checkbox"/></p>																
<p>Does the service user require isolation? (If the service user requires isolation, please phone the receiving unit in advance.) Yes <input type="checkbox"/> No <input type="checkbox"/></p>																
<p>Form completed by: Contact No: Date:</p>																

For further advice, please contact your local Community Infection Prevention and Control or Public Health England Team