



St. Helens Council



Shaping a healthier Warrington
Analysis Improvement Protection

PROCEDURE FOR MANAGEMENT OF PATIENTS WITH METICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA)

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|-----------------------------|--------------|--|---------------|

Contents

| | Section | Page |
|-----|--|-------------|
| 1 | Introduction..... | 1 |
| 2 | Scope..... | 1 |
| 3 | What is MRSA? | 1 |
| 3.1 | MRSA Colonisation | 1 |
| 3.2 | MRSA Infection | 1 |
| 3.3 | MRSA bacteraemia | 1 |
| 4 | Transmission of MRSA | 2 |
| 4.1 | Is MRSA a risk to other people? | 2 |
| 4.2 | How is MRSA transmitted..... | 2 |
| 4.3 | Risk factors associated with acquiring an MRSA infection..... | 2 |
| 5 | Screening for MRSA..... | 2 |
| 6 | Treatment of MRSA..... | 3 |
| 6.1 | MRSA Colonisation..... | 3 |
| 6.2 | Individuals with a clinical infection..... | 3 |
| 7 | Care in the community..... | 3 |
| 8 | Consultation..... | 4 |
| 9 | References..... | |
| 4 | | |
| | Appendix 1 : Information regarding MRSA screening for GP Practice..... | 5 |
| | Appendix 2 Patient information leaflet for suppression treatment..... | 6 |
| | Appendix 2 Key principles for nursing patients with MRSA in the community..... | 7 |
| | Appendix 3 Care plan for use with Patients in the Care home setting..... | 8 |

METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA)

1. Introduction

The purpose of this document is to provide health and social care workers with evidence based information about Methicillin Resistant Staphylococcus aureus (MRSA). This includes the way it is transmitted, screening of patients and ways to reduce the risk of cross infection.

The consequences of developing a serious infection with MRSA can be life threatening. Evidence to date strongly implicates MRSA as a significant cause of Health Care Associated Infection (HCAI) resulting in increased morbidity and mortality in addition to increased healthcare costs.

2. Scope

This procedure applies to all members of health and social care staff.

3. What is MRSA?

Staphylococcus aureus is an antibiotic sensitive bacterium that colonises the nose, throat and skin (axilla, perineum and umbilicus) in 20-40% of the population without causing infection. Staphylococcus aureus has shown resistance to methicillin and a variety of antibiotics over the past 40 years. When the bacterium is resistant to methicillin it is called Methicillin Resistant Staphylococcus aureus or MRSA.

3.1 Colonisation with MRSA

MRSA that lives harmlessly on the skin and in the nose of some people is described as colonisation. It can also be referred to as a carrier of MRSA. It describes individuals who are carrying MRSA but are not ill because of it.

3.2 MRSA Infection

MRSA infection occurs if the organism invades the skin or deeper tissues and multiplies to cause an immune response i.e. a local or systemic reaction causing pain, redness, swelling, pus, pyrexia etc. Infections can range from minor skin lesions to deep abscesses, chest infections, pneumonia and urinary tract infections. MRSA should be suspected if wound exudate increases, or if healing is slow and for any infection that is not responding to antibiotics.

3.3 MRSA bacteraemia.

An MRSA bacteraemia is an infection of the circulating blood stream. This can become a life threatening sepsis if not diagnosed early and treated effectively. The infection control nurses are required by the Department of Health to carry out a Post Infection review to look at all MRSA bacteraemia reported and the patients journey prior to getting the bacteraemia.

4. Transmission of MRSA

4.1 Is MRSA a risk to other people?

People may carry MRSA without causing harm to themselves or others. They are said to be carriers or to be colonised with MRSA. If good hand hygiene is followed, MRSA carriers are not a hazard to other clients, members of their family, visitors or staff. Carriage of MRSA is not a reason for refusing community care or admission to a care home.

4.2 How is MRSA transmitted?

The main routes of transmission are, direct skin to skin contact or indirectly.

- Direct contact, which involves skin to skin contact from a colonised or infected patient.
- Patients can transfer MRSA from one part of the body into wounds (self infection).
- Transferred by a member of staff on unwashed hands.
- Indirect contact via a contaminated item e.g. bed linen, instruments, equipment etc.
- Airborne bacteria carried on skin scales or flakes.

4.3 Risk factors associated with acquiring an MRSA infection.

There are many factors that can increase the risk of patients developing an **infection**. These include:

- History of MRSA or partners MRSA positive
- Hospitalisation in the past year.
- Transfers from hospital abroad.
- Recent surgery or trauma.
- Recent or frequent antibiotic use or incomplete course of antibiotics.
- Patients in long term care (care home or hospice)
- Immunocompromised eg - Dialysis and end stage renal failure, Diabetes Mellitus
- Indwelling medical device or catheter that bypasses the body's defences.
- Venous ulcers/Pressure ulcers.
- Long term wounds or chronic wounds.
- Skin disease: Eczema, Psoriasis or Dermatitis.

5. Screening for MRSA

When patients are admitted to hospital or are due planned surgery they will be screened for MRSA carriage. Swabs will be taken from nose, groin and any wounds they may have.

- If swabs are needed to be taken in the community then swabs should be moistened with sterile saline and then rubbed over the sample area:
 - anterior nares
 - perineum/groin
 - wound swabs should be sent from any existing skin lesion/wound

See appendix 1 for information regarding MRSA screening and treatment.

6. Treatment of MRSA.

6.1 MRSA Colonisation

Following swabs being taken if patients are found to be positive for MRSA colonisation they may be given suppression therapy. This involves using a body wash for 5 days (Chlorhexadine 4%) based wash and a nasal ointment (Mupiricin) three times a day for 5 days.

(See Appendix 2 for patient information leaflet regarding suppression therapy).

Treatment of colonisation with MRSA can be complicated, and is generally not required in a community setting. If treatment has already commenced prior to discharge from hospital it should be completed according to the prescribed regime. If a positive swab comes from a resident in a care home the community infection control nurses will carry out a risk assessment to see if suppression therapy should be prescribed. They will look at the individual's own risk factors – for example, the presence of invasive devices, any wounds, the need for surgery and whether they are immunocompromised etc, or if living in communal setting.

Unless specifically requested by the hospital or the community infection control nurses no follow up swabbing or repeat treatment should be undertaken.

6.2 Individuals with a clinical infection

Patients will usually require a course of systemic antibiotics. The choice of antibiotic depends upon the site of infection and on the particular strain of MRSA. Some antibiotics may only be given intravenously. (See Pan Mersey Antibiotic Policy for primary care for antibiotics to be used).

7. Care in the community

Good infection control precautions need to be followed. People colonised with MRSA are not a hazard to other members of their family, visitors, other residents or staff in nursing or residential homes. This includes healthy babies, children and pregnant women.

Colonisation with MRSA should not be a reason for preventing admission to a nursing or residential home. People with MRSA should be treated like any other client – with dignity, respect and in confidence. Patients should not be refused treatment, investigation or therapy because of MRSA.

Patients / clients should be encouraged to continue with their normal activities, of daily living and visitors should be assured that they are normally at no special risk. If a relative is immunosuppressed or awaiting surgery, discuss with their GP or seek advice from the Community Infection Control Specialist Nurse.

For advice on caring for patients with MRSA in the community see Appendix 3
For care plan for caring for residents with MRSA in Care homes see Appendix 4

8. Consultation

Public Health Infection control group members
Care home Infection control link group
Community Infection control Specialist nurses.

9. References

Department of health (2006) screening for Methicillin resistant Staphylococcus Aureus (MRSA) colonisation: A strategy for NHS trusts: a summary of best practice DOH London.

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyandGuidance/DH_063188

Department of Health (2013) Prevention and Control of infection in Care Homes: A summary for staff.

Epic3: National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England. Journal of Hospital Infection. Volume 86. Supplement 1. January 2014. Pages s1- s 70.

DOH (2010) – Health and Social Care Act 2008.

APPENDIX 1 INFORMATION REGARDING MRSA SCREENING FOR GP PRACTICE.

MRSA screening

Patients admitted to Acute trusts are screened according to Department of Health Operational guidance. *Screening for MRSA colonisation – a strategy for NHS trusts* (DH, 2008, updated in 2010).

Swabs are taken from the nose, axilla or groin areas whilst an inpatient and may be treated with a course of suppression therapy in hospital. However if the results are not available until after the patient has been discharged then the relevant GP will be informed. A risk assessment would need to be taken

Patients may be at risk due to invasive devices –

- urinary catheters,
- PICC lines,
- enteral feeding lines
- history of wounds
- scheduled surgery

If the patient has any of the above it would be advisable to prescribe suppression therapy. Please contact the infection control nurses if you would like to discuss your patient.

If the patient is clinically infected please contact the Trust Medical Microbiologists for antibiotic advice.

Suppression treatment may not be necessary in the Community, however if the patient should present at your surgery and be unwell then consider the MRSA diagnosis with regard to prescribing.

If a patient resides in a care or residential home then the Community Infection Control Team would perform the risk assessment and arrange management of patient.

Suppression therapy regime

Daily body wash containing Chlorhexidine 4% or Triclosan 2%. i.e. Oilatum plus, Hibiscrub. This should be used according to dispensing advice, for 5 days. Hair to be washed with body wash solution on day 1, 3 and 5.

Mupirocin 2% nasal ointment to be applied to the inside of each nostril 3 times a day for 5 days.

Your patient does not need to be re-screened following completion of suppression therapy.

Telephone contact information for **Infection Control team: 01925 843723**

APPENDIX 2

PATIENT INFORMATION LEAFLET FOR SUPPRESSION TREATMENT.

Skinwash (Hibiscrub) – if you have an existing skin condition your GP may prescribe Oilatum plus (see below)

To apply:

Wet skin

Apply about 30mls of the product directly onto the skin using your hands or a disposable cloth

Wash **daily** for a total of 5 days, starting the treatment 2 days prior to your planned procedure. You must continue to wash daily with the solution on the day of your procedure and for the 2 days following your operation

Wash from head to toe, paying particular attention around the following areas:-

Around the nostrils

Between the legs / buttocks, groins and perineum

Feet

Hair should be washed **on alternate days**, starting on the first day of the treatment

Please note that the product should be in contact with the skin for about 1 minute

Rinse – head to toe

Dry using a clean towel

After washing, put on clean clothing (change personal towel and flannel)

Change bed linen daily

Skinwash (Oilatum Plus)

Oilatum Plus should always be diluted with water

It is an effective cleanser and should not be used with soap

In an eight inch bath, add 2 capfuls (In a four inch bath, add 1 capful)

Bath daily for 5 days, starting 2 days prior to your planned procedure, the day of surgery and for the 2 days following your surgery, paying particular attention around the following areas:-

Around the nostrils

Under the arms

Between the legs / buttocks, groins and perineum

Feet

Hair is to be washed on **alternate days** starting on the first day of treatment.

Rinse – head to toe

Dry using a clean towel

After washing, put on clean clothing (change personal towel and flannel)

Change bed lined daily

Nasal Ointment (Mupiricin 2%)

Apply ointment to the inner surface of each nostril area, 3 times a day for 5 days (2 days prior to your planned procedure, the day of surgery and the 2 days following your operation).

**APPENDIX 3
MRSA IN THE HOME SETTING**

| | RECOMMENDATIONS | COMMENT |
|----------------------------|---|--|
| Own home | No isolation in patients own home | Socialize as normal |
| GP practice | Standard infection control precautions | |
| Crockery and cutlery | No special precautions needed | |
| Domestic services | Damp dust and vacuum daily Clean bath after use – as normal | |
| Hand washing | After giving personal care After bed making After removing protective clothing | Patient should be encouraged to wash hands. |
| Hand washing products | Liquid soap | |
| Laundry | No need to segregate if wash temperature 60 degrees C or more, but wash separately if washed at a temperature below 60 degrees C. | Wash at the highest temperature if the fabric allows. Tumble dry if possible. |
| Dressings | Areas of broken skin must be covered with an occlusive dressing | Advice on MRSA in wound for Community Infection Control Nurse (CICN) and Microbiologist. |
| Protective clothing | Disposable gloves and aprons. | Use when giving personal care. Use when making bed. Wash hands after removal. |
| Personal hygiene | Encourage good hand and personal hygiene. Advise patient not to share personal items(e.g. towels, razors or face cloths) | |
| Social activities | No need for restriction | |
| Sports | If infected skin lesions, avoid participation in contact sports. | |
| Staff with skin disorders. | Ensure skin lesions are covered | e.g. eczema, psoriasis. Advice from CICN |
| Visitors | No restrictions | |
| Waste | Dispose as domestic waste unless categorized as clinical waste. | |

APPENDIX 4

Care plan for use with residents colonised with MRSA in the care home setting.

| Date | No | Problem | Action to be taken | On-going assessment/review date | Signature | comments |
|------|----|--------------------------------------|--|---------------------------------|-----------|--|
| | 1 | Accommodation | Single room preferable Standard infection control precautions | | | Can share with another resident with MRSA. If already sharing, ensure separate toilets, etc. |
| | 2 | Hand hygiene | Hand hygiene must be performed with liquid soap and water - After giving personal care - After bed making - After removing protective clothing Use gloves to prevent hand contamination Ensure hand hygiene facilities are offered to patient especially after using toilet and prior to eating | | | Should have hand wash basin in patients room. |
| | 3 | Personal Protective Equipment (PPE) | Disposable gloves and aprons must be worn for all direct contact with patients infected wound and disposed of as clinical waste. For performing personal care Whilst making bed Hands must be washed following removal of PPE | | | |
| | 4 | Decontamination of patient equipment | Crockery /cutlery/medicine pots can be washed in the normal way | | | |
| | 5 | Specimens | Infection Control Nurses will advise | | | |

| | | | | | |
|----|--|---|--|--|---|
| 6 | Laundry | No need to segregate if wash temperature 60 degrees C or more, but wash separately if washed at a temperature below 60 degrees C. | | | Wash at the highest temperature if the fabric allows. |
| 7 | Waste | Dispose as domestic waste unless categorized as clinical waste. | | | |
| 8 | Environmental cleaning | Domestic/cleaner should clean daily using a disposable cloth. | | | |
| 9 | Visitors | No restrictions Hand hygiene on entering and leaving the home | | | |
| 10 | Personal Clothing | There are no special washing instructions. Relatives should wash their hands after handling used linen. | | | |
| 11 | Transfer to another department or hospital | Prior to transfer (where possible) the receiving area must be informed of the patients MRSA status by filling in the Infection Control Transfer form in the Red Bag | | | |
| 12 | Dressings | Wound with MRSA infection needs to be dressed as per wound care plan and be covered at all times. | | | |