University Hospitals of Derby and Burton
NHS Foundation Trust

TRUST POLICY AND PROCEDURES FOR METICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA)

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Contact for Review	Lead Nurse Infection Prevention and Control
Executive Lead Signature	Executive Chief Nurse, Director of Patient Experience, Infection Prevention and Control & Facilities Management
Approving Executive Signature	Executive Chief Nurse, Director of Patient Experience, Infection Prevention and Control & Facilities Management

TRUST POLICY AND PROCEDURES FOR METICILLIN RESISTANT STAPHYLOCOCCUS AUREUS (MRSA)

Contents

1. Introduction

Staphylococcus aureus is a bacterium that can reside harmlessly on the skin and nose of about one third of healthy individuals. Meticillin resistant strains of Staphylococcus aureus are known as MRSA.

When MRSA is isolated on the skin or in the nose it does not mean that person has or will develop an infection. Such patients, who carry the organism but do not have an infection, are termed colonised.

MRSA has the same abilities to spread as Meticillin Sensitive Staphylococcus aureus (MSSA) and is no more likely to cause infections. Infections with MRSA are treatable, but the antibiotic options are limited. Vancomycin or Teicoplanin remains the mainstay of treatment for MRSA infections.

MRSA can spread via the hands of healthcare workers, contaminated equipment or the environment.

Since 2005 it has been mandatory for Trusts to report all MRSA blood stream infections to Public Health England. A Root Cause Analysis (RCA) will be undertaken on all cases of MRSA blood stream infections.

2. Purpose and Outcomes

The purpose of this policy is to provide instruction on the:

- Management of patients with, or suspected of having MRSA in order to prevent cross infection within the organisation.
- The MRSA screening protocol, as directed by national guidance.
- Decolonisation therapy for patients identified as MRSA positive.

The principles contained within the policy reflect best practice and should be adopted by all staff in all clinical areas of the Trust where patients are screened for MRSA and where they may be cared for.

Adherence to the policy will minimise the risk of spread of MRSA within the organisation and reduce the risk of patients identified as being MRSA positive developing a serious MRSA infection, e.g. wound infection, bacteraemia.

3. Managing the Policy and Procedure for MRSA

3.1 Mode of Transmission

Many patients carry MRSA harmlessly either in their noses or on their skin along with their own skin flora. Infections may occur when these bacteria enter the body, e.g. through a surgical wound or via invasive devices. This is referred to as endogenous infection.

MRSA can also be transmitted by direct person-to-person contact, although the bacteria may also be contracted by contact with contaminated equipment / environment. This is referred to as exogenous infection. The main mode of transmission to patients is via the contaminated hands of healthcare workers.

Effective and appropriate hand hygiene i.e. washing with soap and water or using an alcohol-based hand sanitiser, between patient contacts and handling potentially contaminated equipment is the most effective measure to prevent transmission. In addition adherence to the principles of Aseptic No Touch Technique (ANTT) when undertaking any invasive procedure or other intervention and the cleaning of equipment between patients will also minimise the risk of transmission.

3.2 Screening

The Department of Health guidance for MRSA screening was revised in 2014 to move towards a risk based approach to screening.

The following patients admitted to University Hospitals of Derby and Burton NHS Foundation Trust will be screened for MRSA, irrespective of the ward to which they are admitted:

- All admissions in to Adult Critical Care
- All admissions into Coronary Care Unit
- Haematology or Oncology patients
- Vascular patients
- Renal patients
- Orthopaedic patients
- Patients undergoing surgery that involves implants and grafts
- Patients transferred into the Trust from other Acute hospitals
- Patients previously identified as MRSA positive
- Others patients on the advice of the Infection Prevention and Control Team

Patients admitted on the elective pathway will have their MRSA screening carried out within the 12 weeks preceding their admission. If the admission is more than twelve weeks after the MRSA screen it must be repeated on admission.

Those patients undergoing surgery involving implants and vascular grafts must have their MRSA screen performed to allow sufficient time between screening and admission, to enable completions of MRSA eradication. This involves the patient having 2 cycles of decolonisation therapy and 3 negative MRSA screens, each screen a week apart. When three negative swabs are reported the patient should be booked for surgery within seven days. A further course of decolonisation therapy is required for the five days immediately preceding admission. Isolation is not required on admission for patients who achieve 3 negative MRSA screens. Patients who do not achieve negative MRSA screens must be discussed with their Consultant. The decision to perform surgery / diagnostic procedures lies with the Consultant. (See Appendix One)

Patients who require urgent admission for implant surgery should have an MRSA screen performed when the decision for surgery is made. Decolonisation therapy should be commenced, prior to admission, if the patient is previously known as MRSA positive, transferred from another healthcare facility or had a hospital admission in the previous 12 months. Antibiotic prophylaxis should be given on induction, as per antibiotic guidelines. Decolonisation therapy should continue until the result of the screen is available. The therapy can be discontinued if the screen result is negative but must continue for the full 5 day course if the screen is reported as positive.

The patients Consultant must be informed of all MRSA positive admission screen results. The decision to go ahead and perform surgery / diagnostic procedures lies with the lead Consultant. Surgical prophylaxis to include MRSA must be given to these patients.

Patients admitted on the non-elective pathway should have their MRSA screened performed within 48 hours of admission, ideally on the day of admission.

3.2.1 Additional MRSA Screening

Additional screening for MRSA is required in the following circumstance:

- Any patient who requires vascular access for renal dialysis
- Oncology / Haematology patients who require long term vascular access
- Prior to insertion of Central lines / PEG's
- Weekly for all patients nursed on ITU and Step down unit.
- Any patient diagnosed with a MRSA bacteraemia to determine possible MRSA sites.

If an infection is suspected samples should be sent for MC&S as well as an MRSA screen

3.2.2 Screening Sites

The MRSA screen consists of:

Nasal swab – 1 swab can be used to swab both nostrils.

In addition, if any of the following are present a swab / sample should be collected on admission

- Wound swab – any surgical wound, leg ulcers, pressure sores, break in the skin or other lesions.
- Intra-vascular access sites, drain sites.
- PEG sites
- Urine sample if the patient has an indwelling urethral catheter
- Sputum sample if the patient is productive
- Any site previously identified as MRSA positive

N.B. Unless it is a 'wet' site, swabs should be moistened prior to taking the swab using the transport medium.

Ensure all swabs are correctly labelled and sent to the laboratory with a microbiology request form. A negative result is available after 24 hours, with confirmation of a positive result available after 48-72 hours.

3.2.3 Decolonisation Therapy

All patients who test positive for MRSA should be prescribed decolonisation therapy. All patients should continue to be classed as MRSA positive and isolated unless advised otherwise by the Infection Prevention and Control Team.

Sensitivity to Mupiricin must be checked prior to prescribing decolonisation. Patients resistant to Mupiricin must have an alternative prescribed. Allergy to peanuts must be checked prior to administering Naseptin.

3.2.4 Re-Screening Post Decolonisation Therapy

There is no requirement to routinely re-screen patients following decolonisation therapy. The Infection Prevention and Control Team will advise if re-screening is necessary.

The exception to this is with patients that undergo surgery that involves an implant, see section 3.2

3.2.5 Staff Screening

There is no national guidance or requirement for staff to be routinely screened for MRSA. Staff carriage tends to be transient, this will be gone within a day or so of removal from contact with MRSA positive patients and carries little risk of onward transmission. Staff screening for MRSA may be initiated by the Infection Prevention and Control Team when there is an outbreak on a high risk area or infections continue to spread despite control measures.

The decision to exclude a staff member from work is taken by their line manager, in consultation with Occupational Health, the Infection Prevention and Control team / Consultant Microbiologist, taking into account the area a staff member works, clearance screens, duties of the healthcare worker, etc.

3.3 MRSA Blood Stream Infections

All MRSA blood stream infections identified and reported by the Trust laboratory will be reported to Public Health England (PHE) via the data capture system, by the IPCT.

UHDB will only investigate those MRSA blood stream infection cases that are attributed to the organisation. The IPCT will refer all MRSA blood stream infection cases not attributed to UHDB to the relevant CCG infection prevention and control team for investigation.

The Business Unit / Division are responsible for writing the investigation report. A summary report will be presented to the UHDB IPCC by the IPCT.

3.4 Infection Prevention and Control Precautions

3.4.1 Isolation

Patients found to be either colonised or infected with MRSA should be nursed in source isolation. If single room availability prevents a patient from being isolated advice should be sought from the bed manager / Infection Prevention and Control Team. The Patient Flow Manager will be able to assist out of hours.

Patients must be isolated in a single room if previously identified as MRSA positive or when transferred from another healthcare facility, until the results of the screen are known. Discuss with the Infection Prevention and Control team prior to taking a MRSA positive patient out of isolation.

Patients should not be prevented from undergoing clinical investigations or procedures because of a MRSA diagnosis. Care of patients must not be compromised by them being in isolation

3.6 Visits to other departments / Discharge

- Patients with MRSA may leave the single room and mobilise in non-patient areas i.e. hospital entrances, corridors.
- Patients may attend other departments for investigations or treatment. It is essential that ward staff ensure that the receiving area is aware of the patient's MRSA status to allow sufficient time for preparation. If possible the patient should be "last on the list" and a visit kept as short as possible, this includes visits to therapy areas.
- Equipment used must be cleaned with 1000ppm available Chlorine (or alternative agreed by the IPCT) and be dry before use on the next patient. Specialised equipment must be decontaminated as per manufacturer's instructions.
- Portering staff are not required to wear protective equipment when transporting patients in the hospital. Hands must be decontaminated after each patient episode and the wheelchair / trolley cleaned with 1000ppm available Chlorine, (or alternative agreed by the IPCT).
- MRSA diagnosis should not prevent discharge, but any receiving hospitals / healthcare facility must be informed prior to transfer, this includes the ambulance service.
- Patients with exfoliative skin conditions, have wounds from which the exudates is difficult to control or have a productive cough, with an MRSA positive sputum result, must not be transferred to the discharge lounge.
- Transfer forms, district nurse forms and GP letters must include information that the patient has / had MRSA and the details of any treatment / decolonisation.

3.75 Guidance for Patients and Carers

MRSA is not a problem for healthy individuals, therefore, there is no reason why relatives and friends should not have contact with a person who is colonised or infected with MRSA. They should be advised to decontaminate their hands after visiting. They do not need to wear gloves and aprons when

visiting, these are only recommended if the relative is involved in the patients' care.

4. Definitions Used

Endemic	Commonly found in a particular location
Colonised	The bacteria is present on the skin or in the nose without causing an infection
Resistance	Micro-organism demonstrating properties that stop the actions of antibiotics
Virulence	The disease producing ability of a micro-organism
Decolonisation Therapy	An attempt to reduce the microbial load on a patient's skin to a level which will lower the risk of subsequent serious infections
Bacteraemia	Invasion of the blood stream by bacteria

5. Key Responsibilities and Duties

5.1 Director of Infection Prevention and Control (DIPaC)

- Will oversee infection prevention and control policies and their implementation.
- Will report directly to the Chief Executive and the Trust Board.
- Will challenge inappropriate infection prevention and control and antimicrobial prescribing practices.

5.2 Infection Prevention and Control Committee

- Will endorse the MRSA policy
- Will receive root cause analysis reports and action plans from Divisions
- Will agree and monitor Divisional / Business Unit action plans.

5.3 Infection Control Operational Group

- Will review and agree the MRSA policy.
- Will receive and monitor MRSA screening compliance data from Business Unit.
- Will escalate areas of concern to the Infection Prevention and Control Committee

5.4 Infection Prevention and Control Team

- Will review and update the MRSA policy
- Will inform the clinical teams of MRSA positive results

- Will give additional advice regarding the management of MRSA where required
- Will promote good infection prevention and control practice and challenge poor practice
- Will assist Mangers, in conjunction with Occupational Health, to undertake risk assessment to determine whether MRSA positive staff members should remain at work
- Will assist clinical teams with Root Cause Analysis (RCA) of MRSA blood stream infections
- Will ensure Trust clinical systems are flagged with MRSA positive results

5.5 Infection Control Doctor / Consultant Microbiologist

- Will inform the medical team and infection prevention and control team of all MRSA blood stream infection and advise on appropriate investigations and management
- Will inform clinical teams of significant MRSA positive results out of hours
- Will assist with the RCA process as required
- Will challenge inappropriate antibiotic prescribing
- Will assist Mangers, in conjunction with Occupational Health, to undertake risk assessment to determine whether MRSA positive staff members should remain at work
- Will advise clinical teams regarding antibiotic prophylaxis and decolonisation as required

5.6 Antimicrobial Stewardship Group

- Will review and update antibiotic guidelines and policy
- Will work with the infection prevention and control team to find alternatives in situations where some or all of usual decolonisation regime is unavailable
- Will challenge inappropriate antibiotic prescribing

5.7 Divisional Nurse Directors/Divisional Medical Directors/Matrons/Clinical Directors/Clinical Service Manager/Senior Sisters/Consultants

- Will ensure compliance with infection prevention and control policies.
- Will contribute to and participate in RCA review meetings. The senior Divisional Management team will chair the MRSA blood stream infection RCA review meeting
- Will report findings of RCA review meeting to the Infection Control Operational Group and Infection Control Committee
- Will monitor compliance with actions required following RCA
- Will complete relevant actions required following RCA

5.8 Medical Teams

- Will ensure compliance with infection prevention and control policies

- Will ensure compliance with antibiotic prescribing guidelines and policies.
- Will follow the advice of the Consultant Microbiologist relating to treatment of MRSA infections, including blood stream infections, and document this advice.
- Will contribute to and participate in RCA of MRSA blood stream infections, including attendance at RCA meetings.
- Will complete relevant actions required following RCA
- Will ensure patients are aware of their MRSA infection / colonisation and the necessary treatment options.
- Will ensure that the patients GP is informed of the MRSA status on patient discharge

5.9 All Healthcare Staff

- Will be familiar with and adhere to infection prevention and control policies to reduce the risk of cross infection of patients with MRSA
- Are responsible for undertaking MRSA screening in line with the MRSA policy
- Are responsible for informing patients why an MRSA screen is being taken
- Will promote good practice and challenge poor practice
- Will refer to the infection prevention and control team if unable to follow the policy guidelines
- Will keep their patients informed of their MRSA status and provide information as necessary
- Will ensure patients understand the need for isolation.
- Will assist with RCA on all MRSA blood stream infections and attend RCA meetings
- Will complete relevant actions required following RCA
- Any healthcare worker found to be MRSA positive will inform Occupational Health.

5.10 Occupational Health Department

- Will prescribe decolonisation, as appropriate, and ensure follow up screening is carried out for staff. A patient group directive (PGD) can be used for this purpose
- Will participate in outbreak meetings and co-ordinate staff screening programme if required.

6. Monitoring Compliance and Effectiveness

Monitoring Requirement :	• The IPCT will monitor compliance with the management of all patients with diagnosed as MRSA positive, including adherence to decolonisation therapy and isolation. • Any non compliance issues will be reported to the division Matron or the site manager as appropriate. • Compliance with MRSA screening will be provided to Divisions on a monthly basis and reported and monitored at the infection control

	operational group (ICOG) and Infection Prevention and Control Committee (IPCC) • Daily compliance reports will be provided to business unit Matrons
Monitoring Method:	• Compliance with antibiotic prescribing will be monitored by regular audits • All MRSA blood stream infections will have a root cause analysis undertaken, findings of which will be reported to the Trust Infection Prevention and Control Committee and the CCG.
Report Prepared by:	Lead Nurse Infection Prevention and Control Divisional Nursing Director / Matron
Monitoring Report presented to:	Infection Control Operational Group / Infection Prevention and Control Committee
Frequency of Report	Monthly / As required

7. References

NHS England, 2014. Guidance on the reporting and monitoring arrangements and post infection review process for MRSA bloodstream infections from April 2014

Department of Health 2006, Screening for meticillin-resistant staphylococcus aureus (MRSA) colonisation; A strategy for NHS trusts; a summary of best practice. www.dh.gov.uk/reducingmrsa

Department of Health, 2007. Saving Lives: reducing infection, delivering clean safe care

Guidelines for the control and prevention of MRSA in healthcare facilities by the Joint BSAC/HIS/ICNA Working Party on MRSA. J.Hosp Infect 2006; 63(suppl one)

Darzi. A. 2007. NHS Next Stage Review interim report. Department of Health.

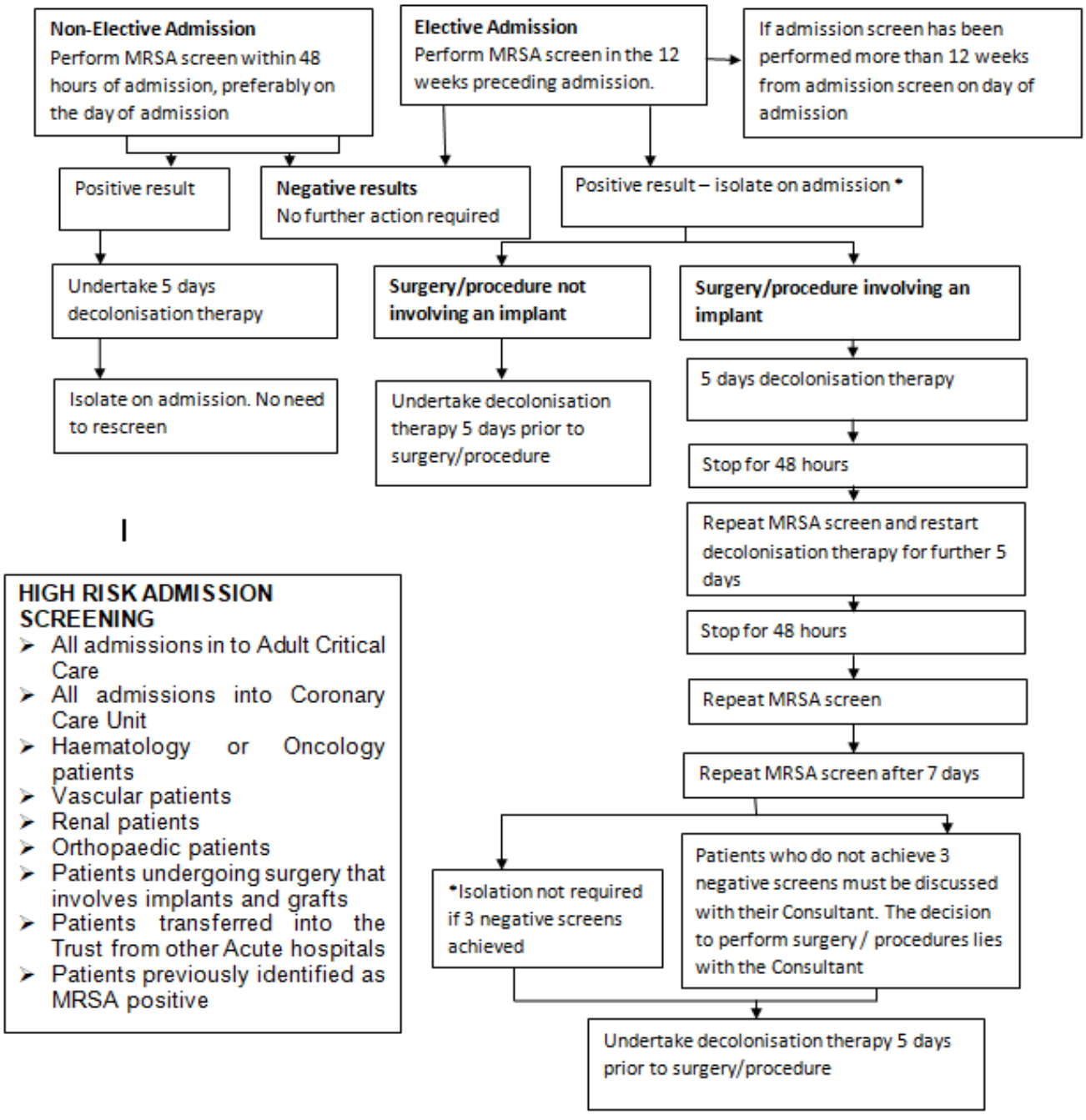
Department of Health 2008. MRSA Screening – Operational Guidance. Gateway reference 11123

Department of Health 2008. The Health and Social Care Act.

Department of Health. 2014. Implementation of modified admission MRSA screening guidance for NHS. Department of Health expert advisory committee on Antimicrobial Resistance and Healthcare Associated Infection (ARHAI)

Appendix One

MRSA ADMISSION SCREENING FOR PATIENTS IN A HIGH RISK SCREENING CATEGORY



HIGH RISK ADMISSION SCREENING

- All admissions in to Adult Critical Care
- All admissions into Coronary Care Unit
- Haematology or Oncology patients
- Vascular patients
- Renal patients
- Orthopaedic patients
- Patients undergoing surgery that involves implants and grafts
- Patients transferred into the Trust from other Acute hospitals
- Patients previously identified as MRSA positive

Information on antibiotic prophylaxis can be found in the antibiotic/sepsis section on the polices / guideline pages

Infection Prevention and Control Team. November 2019