

Ramsay Health Care UK

GROUP POLICIES AND PROCEDURES

Policy: Meticillin-resistant Staphylococcus aureus (MRSA)

Category: Infection Prevention and Control


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Responsible person: Jane Cameron - Director of Clinical Services

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Name/Title	Signature	Date
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Date of Revision/Amendment	Name & Signature of Custodian Inserting Revision or Amendment
30 April 2008	Annette Shannon – clarification of screening swabs and local decisions for screening
18 March 2009	Annette Shannon – addition of mandatory NHS screening protocol <ul style="list-style-type: none"> - addition of timeframes for screening - amendment to screening risk assessment to conform to agreed IHAS risk assessment - addition of HPA mandatory reporting requirements

MRSA

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Appendix A

1. Summary and Purpose

This document is divided into two parts. The first (sections 1-7) details the basic requirements and responsibilities of members of staff. From this are cross-referenced policies and procedures that may be required in certain circumstances. The second (sections 8-23) details procedures relevant to the management and control of MRSA.

This policy recognises that Meticillin-resistant (or Multi-resistant) *Staphylococcus aureus* is now endemic throughout UK hospitals and healthcare establishments. Although the Lord Darzi report advocates the implementation of screening all admissions for MRSA carriage, resources should be focused at reducing the rate of spread and targeting high-risk clinical areas (e.g. Critical Care, surgical wards) and practices e.g. hand washing, intravascular catheter care and ensuring that colonised and infected patients receive eradication therapy.

The national guidance for NHS organisations recommends MRSA screening for all elective patients. The Independent Healthcare Advisory Services (IHAS) have compared this guidance with the current MRSA *risk assessment approach* taken by the sector, and concluded that the current approach to screening remains the most appropriate in view of:

- The extremely low incidence of MRSA bacteraemia and surgical site infection across the sector
- The elective nature of the existing case mix
- The availability of single rooms in the vast majority of cases
- The lack of evidence, nationally and internationally, regarding clear patient benefit resulting from screening all elective (including daycase) admissions

Ramsay Health Care UK has, however, given assurance to the Department of Health that all NHS patients receiving treatment in Ramsay Health Care UK hospitals and treatment centres will be screened according to the NHS screening requirements.

The most effective means of preventing cross infection and colonisation with MRSA is good hand hygiene and targeted patient isolation.

Screening for MRSA is advocated in the following circumstances:

- a) Readmission of a patient known to have previously been colonised
- b) Patients who have frequent contact with Healthcare services and/or have been resident within the last six months in long stay healthcare facilities including other hospitals and nursing homes. This includes direct admissions from other hospitals or nursing/residential homes
- c) All newly identified cases of MRSA to determine the extent of colonisation
- d) Colonised patients after each round of eradication therapy
- e) Patients in certain high dependency units (e.g. Critical Care)
- f) Preoperatively in patients undergoing the certain high risk surgical procedures (orthopaedic, neurosurgery, cardiac surgery, any other high risk surgery or treatment e.g. chemotherapy and as per local risk assessment and decision by local Infection Control Committee).
- g) Evidence of increased incidence of MRSA bacteraemia/surgical site infection.

h) Specific contractual requirements i.e. All NHS patients as per NHS MRSA screening operational guidance – see appendix A. Exclusions to screening NHS patients as per Appendix A excepting where the patient risk is assessed as required in the above criteria.

Colonised patients should be offered MRSA eradication treatment and followed up with further screening.

2. Objective and Target Audience

The objective of this policy is to ensure that patients colonised or infected with MRSA receive effective and appropriate care and to minimise the risk of transmission of MRSA.

This policy applies to all Ramsay staff.

3. Introduction

Staphylococcus aureus is one of a number of bacteria that colonizes human skin, nasal passages and the mouth. Between 20% and 40% of the population carry this organism without any ill effects.

Meticillin-resistant *S. aureus* is a bacterium that is resistant to antibiotics that would traditionally be used to treat *S. aureus* infections. This can make infections more difficult to treat due to a limited choice of antibiotics. Whilst MRSA is capable of causing serious and life-threatening infections, it is generally carried in the nose or the skin without causing any harm. Where MRSA is isolated without evidence of infection this is called colonisation. Patients will be identified as being colonised or infected with MRSA through screening swabs or routine microbiological investigation.

Epidemic strains of MRSA (EMRSA) have a propensity for transmission and have been particularly implicated in cross-infection. In the United Kingdom, EMRSA-15 and EMRSA-16 are the commonest strains. MRSA is now endemic nationally in hospital and other healthcare establishments.

4. Susceptibility to MRSA

People who are most susceptible to MRSA are the very old, young, those who are immunocompromised or are undergoing invasive procedures, patients with open wounds, ITU patients and those with prosthetic implants.

However all patients cared for in an acute hospital setting are potentially at risk of acquiring MRSA. Many patients may be colonised with MRSA before admission to hospital and MRSA can be acquired from this colonised population.

5. Patients who pose a high cross infection risk

The following patient groups present a high cross infection risk

- Sputum positive (especially those with upper respiratory tract infection who are coughing and sneezing)
- Exfoliating skin conditions
- Extensive wounds
- Positive in multiple sites

6. Routes of spread or transmission

The most common route of MRSA transmission is via hands which may become contaminated by contact with colonised or infected patients. MRSA survives well in the environment in skin scales and dust and there is a possibility of airborne spread. Other routes include colonised or infected body sites of the health care worker themselves or contaminated equipment or surfaces.

7. Isolation.

Contact isolation procedures should be taken when isolating patients.

In high-risk areas patients infected or colonised with MRSA should be nursed in a single room with the door closed.

High risk assessed patients admitted as urgent or emergency and screening results unknown should be treated as high risk and isolated until screening results are known.

Patients in moderate and low risk areas may not need isolation; the advice of the infection control team should be sought if there is any doubt.

Single room isolation is advised in **all areas** where the patient is MRSA positive in several sites, a positive sputum result or has an exfoliating skin condition.

The patient's medical and psychological welfare should not be compromised; restrictions may be modified dependant on risk assessment.

Where single room accommodation is not available risk assessment should be undertaken in conjunction with the infection control team.

Cohort nursing is a possibility if there are insufficient single rooms or in a residential facility.

Isolation must be continued until 3 negative results have been obtained, each screen one week apart, or on the advice of the infection control team.

If the risk assessment suggests the patient should be isolated and this is not possible a member of the multi-disciplinary team must record this in the medical notes.

8.0 Screening for carriage of MRSA.

Screening is required to identify MRSA colonised and infected patients. (Swabs required for MRSA screens are outlined in section 9.0)

Re-emergence of resistant strains is common and can occur over a period of up to a year or more, therefore previously positive patients should be considered carriers and re-swabbed on subsequent admissions.

ALL patients who fulfil the high risk criteria below should be screened on admission or in preadmission:

- Patient is previously known to be colonised or infected with MRSA.
- Transfers from another hospital (UK or abroad)
- Transfers from a nursing or residential home.
- Patients with frequent admissions into hospital (admissions in the previous 12 months) or regular contact with health environments e.g. regular visits for outpatient/daycase treatments.
- Patients who are being admitted for Orthopaedic, Cardiac Surgery, Neurosurgery procedures should be screened for MRSA. Any other specified patient groups attending for procedures considered to be a risk as agreed by local Infection Control Committee.
- Oncology or chemotherapy patients
- Other high risk groups as locally defined
- ALL NHS patients as per guidance in Appendix A

9.0 Screening swabs

- Nose (one swab should be used for both nostrils)
- Groin / perineum (one swab should be used for both groins) OR Axilla (one swab should be used for both axilla)
- All open skin lesions (e.g. leg ulcers, pressure sores)
- All invasive device entry sites. (e.g. IV lines, Peg sites)
- Sputum (if productive cough)
- Urine (if catheter in-situ)

Units should check with the laboratory that carries out their screening testing what screening method is used and confirm what swabs should be used. A local procedure should be in place for the MRSA swabbing process in line with the laboratory methods used.

The timeframe for screening patients is ideally as close to the patient admission as is practicable prior to their admission. Current opportunities should be used for screening within a six week timeframe. Should the patient admission be delayed or postponed outside of the six week timeframe, re-screening to provide a result within the timeframe will be required.

10.0 Sending specimens to microbiology

All individual sites should be accurately recorded on the specimen form and container / swab. The site and type of wound should be noted in clinical details (e.g. surgical wound, pressure sore, leg ulcer).

Antibiotic therapy must be completed in the space provided on the specimen form. Ensure patient details are clearly written or ID labels are stuck onto each layer of the request form.

11.0 Results of swabs

A Positive result for MRSA may be from a routine screen or from a specimen sent for clinical reasons. – **In all cases the patient will require decontamination and/or treatment if clinically infected.**

12.0 Patient information.

A member of the nursing staff or a member of the medical team should inform the patient of any positive results.

The member of staff who informs them of the result should give the patient an information leaflet on MRSA.

If the patient has any questions they should be answered by a member of the nursing or medical staff with up to date knowledge of MRSA or referred to the infection control link nurses.

Information given to the patient should be recorded in the medical notes.

13.0 Specific infection control measures

To minimise the risks of cross-infection standard precautions should be taken. If the patient is isolated Contact Isolation precautions should be followed. Infection control measures must be taken to prevent contact transmission whether the patient is isolated or being nursed on an open area.

Hand hygiene.

- **Hand hygiene is the most effective way to prevent the spread of MRSA.**
- Hands should be decontaminated before and after every patient contact.
- Hands should be decontaminated after contact with the patient's environment (i.e. curtains)
- If the patient is in isolation hands should be decontaminated prior to leaving the room, and again after exiting the room.

Linen

- Bed linen and towels should be changed daily.
- Care should be taken when handling bed linen to reduce the dispersal of organisms.
- Linen should be disposed of as infected linen into a red linen bag.

Medical equipment

- Disposable equipment should be used where possible
- If using non-disposable equipment e.g. hoist slings they should be designated where possible for MRSA patients.
- All non-disposable items must be washed with a general-purpose detergent, rinsed and dried thoroughly before it is returned to ward use.

Aprons

All staff in direct contact with the patient or having contact with the patient's immediate environment should wear aprons. When removed it should be discarded as clinical waste.

Gloves

Should be worn if in contact with body fluids and hands must be washed on removing gloves. The gloves must be discarded as clinical waste.

For further information please refer to the isolation policy.

Daily and terminal cleaning of single room / area.

The single rooms are cleaned at least once per day with a chlorine-releasing agent; particular attention should be given to all horizontal and dust collecting areas. The ward manager or nurse in charge of the shift may request additional cleaning.

Terminal cleaning is carried out on discharge of the patient. The room and all surfaces must be cleaned with a chlorine releasing agent - 1000 ppm.

The curtains are to be changed on discharge. If the patient is transferred or discharged out housekeeping usual working hours i.e. overnight, the curtains should be changed the following day and terminal clean carried out prior to a new patient being admitted.

14.0 Treatment of MRSA positive patients.

Systemic treatment.

Systemic antibiotics may be required if there is clinical evidence of infection, according to laboratory sensitivities. Advice on antibiotic prescribing can be obtained from the consultant microbiologist.

Topical treatment.

The aim of MRSA eradication in the hospital setting is to reduce the risk of cross infection and hospital-acquired infection.

Anti-staphylococcal agents should be prescribed to eradicate skin colonisation of positive sites these are for example:

Mupirocin 2% nasal ointment QDS

Chlorhexidine Acetate Ph.Eur 4% Skin wash daily and hair wash twice per week.

Topical treatment should continue for five days only.

Screening must not take place during topical treatment, and for 2 days after completing treatment and with systemic antibiotics to which the MRSA is sensitive:

- i. Glycopeptides – Teicoplanin or Vancomycin.
- ii. Linezolid.
- iii. Rifampicin, Fucidin, Trimethoprim and Doxycycline.

MRSA Bacteraemia or MRSA wound infection

A root cause analysis (RCA) will be completed for all patients with MRSA Bacteraemia and wound infection and forwarded to the Infection Prevention and Control Committee (IPCC) for

review within 14 days. All MRSA Bacteraemia infections will be reported to the DH mandatory reporting Health Associated Infection web site by the IPCC. All dataset information must be forwarded to the Clinical Risk Manager within 48 hours and reported to the DH via the Health Protection Agency web site within the reporting timeframes.

15.0 Assessing the effectiveness of treatment

In order to ascertain if a patient has been cleared from MRSA at least 3 negative swabs from previously positive sites should be obtained.

The 1st Repeat screening swabs should be taken 48 hours after the completion of Decolonisation Therapy and the 2nd and 3rd at weekly intervals after the first.

Weekly screens should be completed for **all patients with a history of MRSA** while an in-patient.

Appropriate specimens should be taken if patient displays clinical signs of infection or if there is deterioration in patient's condition.

If the patient remains positive after completion of 2 treatments seek advice from the Microbiologist.

16.0 Patient transfer

If the patient is to be transferred, it is the responsibility of the patient's medical team to ensure the receiving ward, hospital or nursing home is informed of MRSA status.

A record of this information (whom it was given by and to whom) must be recorded in the medical notes.

If the patient is being discharged home and will require community nursing support, the same information as above must be communicated to the community nurse/nursing team. If the patient requires an ambulance for transfer, an ambulance for an infectious patient must be booked.

17.0 Movement to other departments

Patients who are MRSA positive can still attend other departments for investigations or treatment, but the appropriate Department Manager must be informed in advance. This will enable the department to take appropriate precautions with hand hygiene, appropriate protective clothing and post treatment/investigation cleaning of the area.

During transfer, the patient should have a blanket/sheet around their shoulders and body, to minimise the risk of MRSA dispersal of skin scales into the environment.

The chair/trolley must, after use, be washed with soapy water, dried and then wiped over with Hypochlorite 1000ppm.

18.0 MRSA positive staff members

When a member of staff becomes infected or colonised with MRSA, each case will be assessed on an individual basis by the Consultant Microbiologist and Occupational Health Physician and Infection Control Link Nurse to identify a management plan.

The planned management will be discussed with the individual and, if they are to be removed from work, with their Manager.

Only staff who have an identified epidemiological link with a cluster/outbreak in their clinical area will be removed from work.

Staff who remain at work will be on protocol whilst at work and will stop protocol on days off, prior to re-screening.

All MRSA positive staff will be referred to the Occupational Health Department.

OH will comply with the most recent guidance published by Department of Health.

19.0 Discharge from hospital

Patients with MRSA can be discharged home as soon as appropriate. It is not necessary for patients colonised with MRSA to remain in hospital if medically fit for discharge.

The General practitioner and district nurse (if required) should be informed verbally and in writing so that continuity of treatment and re-screening can be carried out if appropriate.

Residential and nursing homes should be informed of MRSA status as soon as the possibility of discharge is known.

20.0 Previous positive patients

Patients who have previously been MRSA positive but remain as in-patients after three negative screens have been obtained, will need to be screened on a regular basis to identify whether re-colonisation has occurred.

The frequency will be discussed on an individual basis between the Infection Control Doctor and Nurse. The Infection Control Nurse will advise the relevant clinical area when screening swabs are required.

21.0 Ward Closures

Wards will only be closed during an outbreak situation. The decision to close a ward will be made by the Registered Manager / Matron and Microbiologist.

22.0 Data Collection

As a minimum, all units must ensure a robust process is in place to collect the following data each month period, identifying NHS and private patients;

- Number of MRSA screening tests performed
- Number of positive tests

- Locally - any other data required as requested and agreed with your local SHA/PCT

Definition screening test; for this purpose the definition of a screening test is the set of screening swabs taken at one time from the same patient.

23.0 Education and Training

The Registered Manager with the ward/departmental manager is responsible for ensuring staff involved in the procedures outlined in this policy have received suitable education/training and can demonstrate competence

24.0 Policy Monitoring

Responsibility for implementation of this policy lies with the Registered Manager and/or Ward/Department Manager for the areas in which this policy applies.

Incidents where non-compliance with this policy are considered to pose an actual or potential risk staff/patient safety and must be documented on an incident report form, by the person witnessing the incident.

This policy will be reviewed within 2 years from the date of authorship. If new guidance is received or circumstances change this policy will be reviewed and updated accordingly.

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Appendix A

NHS Patients to be screened from March 2009

- All elective admissions should be routinely screened.

The Department of Health has identified within elective admission and attendances the following patient groups who should not be routinely screened:

- Day case ophthalmology
- Day case dental
- Day case endoscopy
- Minor dermatology procedures, e.g. warts or other liquid nitrogen applications
- Children/paediatrics unless already in a high risk group
- Maternity/obstetrics except for elective caesareans and any high risk cases, i.e. high risk of complications in the mother and/or potential complications in the baby, (e.g. likely to need SCBU, NICU because of size or known complications or risk factors.)
- Mental Health Patients - as per specific guidance on screening for mental health patients on the Safe Clean Care web site.

In addition, it is important to continue to assess **all** patient admissions groups for screening according to risk.

Reference: *Annex C 'MRSA Screening – Operational Guidance 2', 31st December 2008, Gateway reference number 11123*