Infection Prevention and Control

MRSA Screening Policy

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1 Introduction

The Department of Health set targets for the implementation of MRSA screening of all elective hospital admissions by March 2009 and relevant emergency admissions by December 2010. Paediatrics however were excluded from the requirement to implement blanket screening; instead we were required to screen ‘high-risk’ groups of elective and emergency patients.

The Birmingham Children’s Hospital NHS Foundation Trust (BCHFT) approach to screening from 2010 onwards continues to be based on universal screening (elective and emergency cases) of PICU and Cardiology/Cardiac Surgery patients. These patient groups were identified as our high-risk groups based on an analysis of 10 years experience of the pattern of colonisation and infection with MRSA at BCHFT, which showed that they accounted for around 80% of all cases of MRSA. Initially screening performance for these patient groups was reported externally, however this is no longer required. Compliance of screening in these groups is now reported to Trust Board as a quality performance indicator with the performance target set at 100%; colour coded scoring is set as Green ≥ 98%, Amber 95-98% and Red <95%.

The MRSA screening pilot evaluation of elective surgical admissions undertaken in 2009 to determine the prevalence of MRSA in these lower-risk patient groups has identified the other patient groups that will be screened on admission and this has now been extended to include emergency as well as elective admissions. These areas are identified in this Policy. Performance in screening these groups are monitored internally with the same rigour as PICU and Cardiac services, but are not reported externally.

Children that are transferred to BCH from other hospitals are also screened on admission and children having central lines inserted are also screened prior to their line being inserted.

Recent DH guidance March 2010 identifies that children admitted as emergencies should be treated the same as elective admissions (screening is only required for high risk groups i.e. children with lines and children needing high dependency care) and that children with long-term conditions e.g. cystic fibrosis, who are admitted as emergencies should already have MRSA screens at planned intervals.

2 Purpose

The purpose of this policy is to define the current MRSA screening process at BCHFT, including sample collection, sample testing, communication of results, management of positive patients and assurance processes. This policy should be read in conjunction with the Policy for the Control of MRSA.

3 Duties

3.1 Duties within the Organisation

- The Trust Board has overall responsibility for:
  - Ensuring that the Trust has an MRSA screening policy that meets nationally published requirements
  - Being assured of compliance with the policy, and in particular that screening is offered to 100% of eligible patients
  - Ensuring that adequate resources are available to support staff in the implementation of the MRSA Screening policy
• Clinical Directors / Heads of Nursing have responsibly for ensuring that:
  o MRSA screening is being undertaken as outlined in this policy
  o There are robust systems in place for ensuring compliance at ward/department level on a day-to-day basis
  o Sufficient time and resource is allocated to staff to enable them to comply with the requirements for MRSA screening and for monitoring compliance
  o MRSA Screening compliance results are monitored, fed back with appropriate actions taken and included in Reports, as applicable.

• Ward Managers have the responsibility for:
  o Ensuring that staff comply with this Policy
  o Local monitoring of the MRSA screening process
  o Ensuring that screening targets are achieved, including taking any necessary action to improve compliance where required
  o Reporting by exception to the Directorate Management Team and Infection Control Team (ICT) any instances where screening is declined.

• Medical staff are responsible for ensuring that:
  o Topical decolonisation treatment is prescribed promptly, for all inpatients.
  o Follow up screening is carried out, where patients remain in-patients.

• All staff are responsible for ensuring that:
  o MRSA screening, and any appropriate follow-up actions, are undertaken in accordance with this policy
  o MRSA screening leaflets are available for patients and families
  o Relevant community staff (including ambulance services) are informed of MRSA results on discharge

• The ICT is responsible for:
  o Ensuring that the case notes of patients found to have MRSA are appropriately labelled
  o Communicating positive results to General Practitioners for all newly isolated MRSA patients.
  o Informing parents/ patients of none in-patients of any positive MRSA results
  o Ensuring that laboratory testing methods are up-to-date and meet the needs of the Trust
  o Ensuring that staff are suitably informed and trained about MRSA screening
  o Undertaking audits of this policy, as appropriate
- Working with Informatics staff to monitor screening uptake rates
- Keeping the epidemiology of MRSA at BCHFT under regular review to ensure that this policy remains fit for purpose.

3.2 Identification of Stakeholders

This policy is applicable for all staff working at Birmingham Children’s NHS Foundation Trust. Key stakeholders include the following:

- Director of Infection Prevention and Control
- Heads of Nursing
- Clinical Directors
- All staff groups that are involved in the MRSA screening process including medical and nursing staff
- Laboratory staff involved in the testing process of the MRSA swabs

4 Method for development

4.1 Consultation and Communication with Stakeholders

Comments and points of discussion relating to the initial MRSA screening policy were sought from a wide range of individuals including all of the stakeholders identified above. The revised policy was agreed by a working group of the Infection Prevention & Control Committee.

5 Content

5.1 High Risk Patient Groups where screening must be offered. Screening compliance reported internally; may be required to be reported externally

5.1.1 High-risk groups have been identified through analysis of ten years of prospectively collected data on all cases of MRSA and bloodstream infections at BCHFT

5.1.2 The possibility of emergence of other groups of high risk patients emerging will be kept under surveillance through regular analysis of clinical and epidemiological data. Data sources will include:

- Root cause analyses of any bloodstream infections with MRSA
- Quarterly reports of the occurrence of all cases of MRSA in the Trust, that are presented to the Infection Prevention & Control Committee and Clinical Risk & Quality Assurance Committee

5.1.3 Additional high-risk patient groups may be identified at any time. However, a formal assessment of all patient groups will be undertaken at the end of each financial year, and will be included in the Annual Report of the Director of Infection Prevention and Control. Any recommended changes will be included in the Infection Control Annual Programme.
5.1.4 Currently, patients in the following groups are identified as being at high risk and must therefore routinely be offered screening for MRSA:

- All admission and transfers to PICU (screening should take place within 6 hours of admission)
- All admissions and transfers to cardiology and cardiac surgery (screening should take place before or within 2 hours of admission)

5.2 Other Patient Groups where screening must be offered. Screening compliance reported internally

5.2.1 Routine screening of some other non-day case surgical admissions has been undertaken and evaluated. Whilst screening performance in these groups of patients is not reported externally, it is essential that a high level of compliance is obtained in order to ensure that the sample screened is representative of all patients in these categories.

5.2.2 Screening must be offered to non-day case patients in the following groups:

- All admissions to the surgical wards (wards 9 and 10); both elective and emergency
- All elective and emergency surgical patients admitted to ward 14
- All (elective and emergency) admissions to Neonatal Surgery
- All overnight admissions (elective and emergency) to the Burns Unit

In all of these cases MRSA screening should be undertaken within two hours of admission

5.2.3 Other patients identified as having increased risk of MRSA include children that have been transferred from other hospitals and children having central venous catheters and dialysis lines inserted. Screening should be offered to both of these groups of patients. This will normally be a nasal swab and a swab from any invasive device site e.g. PEG site.

- In addition to the above swabs, children who have a femoral line inserted should also have a swab taken from the groin.

5.2.4 Screening should also be considered, where appropriate, on high risk patients involving surgical implants.

5.2.5 No request for a patient to be screened for MRSA should normally be declined.

5.3 Screening of other individuals following detection of an MRSA carrier

5.3.1 Parents and other family members of a child with MRSA should not routinely be screened for MRSA at BCHFT. However, there may be occasions when the ICT considers that it would be useful for infection control or epidemiological purposes to screen household contacts.

5.3.2 Family members and others should otherwise be advised to contact their GP if they wish to discuss being screened for MRSA.
5.4 Management of patients where MRSA screening is declined or felt inappropriate

We do not anticipate that this scenario will arise very often. Any such instances should be reported to the ICT by exception.

5.5 Samples required for screening

5.5.1 In most cases the requirement for MRSA screening is a nose swab only. Both nostrils should be sampled using the same moistened swab.

5.5.2 For patients admitted to neonatal surgery nose and umbilical swabs are required.

5.5.3 For patients undergoing orthopaedic procedures involving a surgical implant nose and groin swabs are required.

5.5.4 In all cases any skin lesions that may be infected should also be swabbed.

5.5.5 Where patients have had MRSA isolated in the preceding twelve months a full MRSA screen is required (see Policy for the control of meticillin-resistant Staphylococcus aureus (MRSA)).

5.6 Methods of MRSA screening

5.6.1 In most circumstances swabs are cultured using a chromogenic medium that gives a provisional result on the next working day.

5.6.2 MRSA admission nose swabs for patients on PICU are tested by PCR, which can give a definitive result within 1-2 hours.

5.7 Communication of MRSA-positive results

5.7.1 Inpatients

- The Microbiology laboratory will immediately inform a member of the ICT when a new case of MRSA is identified.

- The ICT will immediately:
  - inform the nurse and/or doctor caring for the patient of the result,
  - apply an ‘alert’ sticker to the front of the notes
  - complete the ‘Front Sheet’ of the patient’s notes with relevant details.
  - Inform the GP of any new MRSA isolates (Appendix A)

- The patient’s clinical team will:
  - Inform the patient &/or his or her family about the MRSA result as soon as possible
  - Provide family with MRSA information leaflet
Ensure that the Policy for control of meticillin-resistant *Staphylococcus aureus* (MRSA) is followed.

On discharge, ensure that the patient’s General Practitioner (GP) is updated on the MRSA status of the patient. This will include any relevant information about decolonisation treatment, post-treatment swabs etc and any further instructions needed to the GP (Appendix B).

Ensure that relevant community-based staff (e.g. ambulance staff, community nurses, health visitors) are informed of the diagnosis.

### 5.7.2 Non-inpatient Groups

- The Microbiology laboratory will immediately inform a member of the ICT when a new case of MRSA is identified.
- The ICT will:
  - Inform the parents/child of the MRSA positive result, send them an MRSA information leaflet and ask them to contact the GP to arrange decolonisation treatment (Appendix C).
  - Inform the GP and ask them to arrange topical decolonisation treatment (Appendix A).
  - Inform the patient’s Consultant secretary of the MRSA positive result. Please note, where treatment, other than topical decolonisation treatment is required, this should be done by the patient medical team.
  - Ensure that an ‘Alert’ sticker is applied to the front of the notes and that the ‘Front Sheet’ of the patient’s notes is completed with relevant details.
- The Secretary receiving the result is responsible for:
  - Ensuring that the Consultant in charge of the case and relevant Wards or Departments (including theatres) are aware of patient MRSA positive result. The Consultant is responsible for following up with the GP where any treatment, other than topical decolonisation treatment is required.

### 5.8 Decolonisation Treatment

#### 5.8.1 All patients who are found to be MRSA-positive must be prescribed decolonisation treatment. This will either be prescribed by the hospital clinical team or the General Practitioner.

#### 5.8.2 In-patients

- All patients who are in-patients when MRSA is detected will be prescribed decolonisation treatment in accordance with the Policy for control of meticillin-resistant *Staphylococcus aureus* (MRSA) by the patient’s clinical team.
- Decolonisation treatment must be commenced immediately. Where children have a central line in situ which cannot be removed, a
chlorhexidine impregnated dressing i.e. Biopatch® should be applied around the central line.

- The ICT will follow up all new MRSA patients who are In-patients to ensure that the patient has been commenced on decolonisation treatment. In the event of decolonisation treatment not being prescribed within 24 hours of the MRSA result being transmitted and IR1 form will be completed.
- For patients due to have a procedure where antibiotic prophylaxis is indicated the patient should receive antibiotic prophylaxis that includes activity against MRSA

5.9 **Follow-up of In-Patients after decolonisation treatment**

- Patients who are still in hospital 2 days after decolonisation treatment has been completed should have post-treatment swabs collected.
- Post-treatment swabs will be collected in accordance with the Policy for Control of Meticillin-Resistant *Staphylococcus aureus* (MRSA). That is that a full set of screening swabs is required, regardless of which sites were colonised before treatment.
- Patients who remain as in-patients must remain isolated until three sets of negative swabs, collected at least one week apart, have been obtained.

6 **Monitoring Compliance With and the Effectiveness of the policy**

6.1 **Process for Monitoring Compliance and Effectiveness**

- 6.1.1 The Infection Control, in conjunction with Informatics, is responsible for ensuring that reports of MRSA screening uptake are produced on at least a monthly basis
- 6.1.2 Serious breaches of this policy must be reported on an Incident Report Form
- 6.1.3 The Annual Infection Control Programme includes planned audits of a number of Infection Prevention & Control Policies: this policy may at some stage be include in such a programme

6.2 **Standards/Key Performance Indicators**

- 6.2.1 The KPI for MRSA screening uptake in PICU and Cardiology is reported to Trust Board as a quality performance indicator. The performance target set at 100% of patients remaining as in-patients for at least 6 hours and 2 hours, respectively. KPI is colour coded (Green ≥ 98%, Amber 95-98% and Red <95%).
- 6.2.2 The KPI for MRSA screening uptake in other surgical patient groups is 95% for patients remaining as in-patients for at least 2 hours.
- 6.2.3 Implementation of other aspects of this policy may be the subject of audits undertaken by the ICT
7 Associated Documentation


Birmingham Childrens Hospital NHS Foundation Trust – Policy for the control of meticillin-resistant *Staphylococcus aureus* (MRSA)
Appendix A: ICT letter to General Practitioners

Date: ___/___/_____

Dear Doctor

**Patient Details**

Name: Hospital Number:

DOB: Consultant:

Address:

I am writing to inform you about a new positive MRSA result on one of your patients.

A Nose / Throat / Other ……………… swab was taken on the ___/___/______ and has been confirmed as MRSA positive on the ___/___/______ as positive. The swab was taken whilst the child was an outpatient /inpatient on Ward ……………

The child has remains an in-patient / was discharged on ___/___/______ circle as appropriate

- Where the child is still an in-patient, the clinical team caring for this patient will contact you on discharge about current status, decolonisation treatment and further post-treatment swabs.

- Where the child has been discharged/ not admitted, the parents have been informed by the IC team and sent an MRSA leaflet. They have been asked to arrange an appointment for MRSA decolonisation treatment to be prescribed.

Where decolonisation treatment is prescribed the regimen that we recommend at BCH is as follows:

- Nasal Mupirocin 2% (bactroban) nasal cream. Applied to anterior nares 3 times daily for 5 days.
- 4% chlorhexidine gluconate body wash/shampoo for daily bathing for 5 days.

If you require any further information or guidance please contact the Infection Control Team who will be happy to assist you.

Regards

Infection Control Team

0121 333 9966
Appendix B: MRSA Decolonisation and Screening Summary Information for GPs

Dear Doctor

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<td>DOB:</td>
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<tr>
<td>Patient Address:</td>
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(circle as appropriate)

The above patient was found to be MRSA positive from a nose / groin / umbilicus / other __________ on _ _ / _ _ / _ _ _ _.

The patient was discharged home on _ _ / _ _ / _ _ _ _.

Decolonisation Treatment

- [ ] Course commenced _ _ / _ _ / _ _ _ _ and completed _ _ / _ _ / _ _ _ _
- [ ] Decolonisation treatment not been given

Post-treatment swabs

- [ ] Taken & negative
- [ ] Taken & still positive
- [ ] Not taken

Further action

- [ ] None required
- [ ] Please prescribe decolonisation treatment, collect post-treatment swabs & manage accordingly thereafter
- [ ] Please collect post-treatment swabs & manage accordingly thereafter

If you have any questions or queries about this, please contact the Consultant Secretary via switchboard on 0121 333 9999

Thank you

Name: Job Title:

Date:
Appendix C: Parent/Patient information for those found to be MRSA positive who are not in-patients

Dear

Patient Details
Name: Hospital Number:
DOB: Consultant:
Address:

Your child had a test for MRSA on / / which is positive. **Please do not be alarmed about this.** We have sent you a MRSA information leaflet which should help answer any questions that you may have.

☐ Please arrange an appointment for your child with their GP so that some treatment can be prescribed.

The treatment

We have informed your GP so that he or she knows that some topical eradication treatment should be started. We have advised the following:

  o A nasal ointment called ‘Bactroban’ or Mupirocin. This is applied just inside both nostrils three times a day for five days
  o A skin antiseptic called ‘Chlorhexidine’ which is used for bathing/ washing/ showering daily for five days.

Your GP will be able to give you more information about this.

More information

We have sent you a MRSA leaflet that will help answer some of the questions about MRSA that you may have. If you have any more questions about MRSA after you have seen your GP, you can contact your community Infection Control Nurses. Your GP should be able to give you a contact number.

If you have any questions about how MRSA will affect your treatment in hospital please contact your Consultant’s Secretary at the Children’s Hospital (0121 333 9999), and they will direct your query to the most appropriate person.

Thank you

Name Job title Date