Meticillin Resistant *Staphylococcus aureus* (M.R.S.A.)
Emergency Admission Screening Policy

The Trust is committed to promoting an environment that values diversity. All staff are responsible for ensuring that all patients and their carers are treated equally and fairly and not discriminated against on the grounds of race, sex, disability, religion, age, sexual orientation or any other unjustifiable reason in the application of this Policy, and recognising the need to work in partnership with and seek guidance from other agencies and services to ensure that special needs are met.
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1. INTRODUCTION

Methicillin Resistant Staphylococcus aureus (MRSA) is an antibiotic resistant form of the bacterium Staphylococcus aureus (Staph. aureus). Staph. aureus is a bacterium, which is found on the skin of approximately 30% of normal healthy people, usually causing no harm. In some circumstances, particularly if the skin is broken, the bacteria can cause skin and other infections. MRSA behaves in the same way as other Staph aureus, however in the event of it causing an infection, it can be more difficult to treat as it is susceptible to fewer antibiotics.

Colonisation by MRSA is harmless but is a significant issue in healthcare settings because:

- Patients colonised with MRSA who undergo invasive procedures are at risk of developing an MRSA infection.
- Presence of patients colonised with MRSA in hospitals is a potential source of infection for other patients.
- Will MRSA infections develop they are harder to treat as the antibiotics they are susceptible to are more limited.

MRSA is now endemic in many UK hospitals can cause serious illness and results in significant additional healthcare costs. The transmission of MRSA and the risk of infection can only be effectively tackled, if measures are taken to identify MRSA carriers as potential sources, and, by treating those carriers to reduce the risk of transmission to others. Therefore, screening of patients for MRSA before or at the point of admission is required to identify carriers and implement a decolonisation regime.

Screening of Emergency admissions will commence on 1st September 2010 with a minimum expectation of 50% compliance in September, 75% in October and 100% thereafter.

2. AIM

This document has been developed specifically to assist with the local implementation of the Department of Health guidance of March 2010, ‘MRSA Screening-Operational Guidance 3, Gateway reference number 13482’. This guidance requires the introduction of MRSA screening for all relevant emergency admissions to West Hertfordshire Hospitals NHS Trust and must be implemented by 31st December 2010.

This policy sets out the responsibilities of our healthcare workers and their contribution and involvement in the screening of patients and implementation of this policy. It also identifies the interventions required to ensure that ‘emergency’ patients who are screened for MRSA are appropriately managed when MRSA screen results are positive.

This document must be read in conjunction with the following West Hertfordshire Hospitals NHS Trust policies:

- Management of MRSA Policy;
- Isolation Policy;
- Hand Hygiene Policy;
- Standard Infection Control Precautions Policy.
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Ratifying Committee: Infection Control Committee
Date: 20th Jan 2014

- Department of Health guidance:
  'Screening for MRSA colonisation-a strategy for NHS Trusts: a summary of best practice’2007
  ‘MRSA Screening-Operational Guidance’ July 2008, Gateway reference 10324
  ‘MRSA Screening-Operational Guidance 2’, Gateway reference number 11123, December 2008

3. DUTIES & RESPONSIBILITIES

3.1 Director of Infection Prevention and Control (DIPC) is responsible for providing assurance to Trust Board that MRSA screening is being implemented as per Department of Health (DH) guidance.

3.2 Infection Prevention and Control Team are responsible for:
- Advising and training clinical staff on the screening process for MRSA.
- Advising patients if requested by clinical staff on any issues relating to MRSA and the screening process.
- Providing advice and training to areas where performance is less than that required.

3.3 Ward and Department Managers are responsible for:
- Ensuring that staff in their area understand and implement and comply with the screening practices outlined in this policy.
- Instigating remedial action to address any issues around screening compliance in their area.

3.4 Consultant Medical Staff are responsible for ensuring their junior staff understand and implement the screening practices outlined in this policy.

3.5 All Clinical Staff are responsible for:
- Complying with all aspects of this policy.
- Ensuring that all relevant ‘emergency’ patients are screened on admission, results checked and where patients are found to be MRSA positive that appropriate action is taken to manage these inpatients in line with the Trust MRSA policy.

3.6 Laboratory staff are responsible for recording and processing of specimens and for the appropriate reporting of results to the areas where the screen was initially completed.

4. WHO WILL BE SCREENED FOR MRSA?

The following emergency hospital admissions will be screened, as soon as possible after admission:
- All emergency medical admissions (excluding paediatrics and neonates).
- All emergency surgical admissions in General Surgery, Urology, Gynaecology, and Orthopaedics (excluding Paediatrics and Neonates).
- MRSA screening for Paediatrics/Neonates Emergency Admissions will be undertaken and based on a risk assessment and identification of ‘risk factors’, which will include those who:
  a) Are directly transferred to the Trust from other hospitals.
  b) Previously positive patients
  c) Admissions from environments with an endemic MRSA problem e.g. hospitals.
  d) Patients who have had frequent previous admissions to hospital/other healthcare facility
  e) Patients with chronic wounds
  f) Patients with long term indwelling devices
ITU / HDU
All patients admitted to ITU or HDU are screened on admission to the unit and then at weekly intervals.

‘Direct ward/unit’ admissions
All emergency patients admitted to a ‘ward’ directly (not transferred from AAU, from another ward) will be screened on admission to that area. This will include patients admitted directly to CCU, Stroke Unit, and fractured neck of femur patients admitted to Cleves ward.

5. PATIENT PATHWAY – PLACE/POINT WHERE PATIENT TO BE SCREENED
The location where patients are screened will be determined locally and agreed with the Infection Control Team.

6. UNDERTAKING THE MRSA SCREEN

- **Patient Information**
  A patient information leaflet on MRSA screening is available to download from the Trust intranet. Further advice for patients on MRSA can be acquired from the Infection Prevention and Control team.

- **What sites will be screened for MRSA?**
  All emergency admissions will have a ‘full’ MRSA screen, which includes swabs from all the following sites:
  - Nose (anterior nares - one swab to both nostrils)
  - Perineum (Groin only when access to the perineum is impossible & post-partum women)
  - Sputum (if expectorating)
  - Catheter Specimen Urine (CSU) – only if indwelling catheter present
  - Any wound sites
  - Insertion sites of any indwelling device e.g. Gastrostomy sites, long-term intravenous device

- **Procedure for Screening**
  The following steps will be taken when obtaining a swab:
  - Decontaminate hands immediately before swabbing.
  - When swabs are taken from ‘dry’ parts of the body e.g. the groin the swab must be moistened prior to sampling using the swab medium, sterile water or sterile saline.
  - Moisten swabs if necessary.
  - Rub and rotate the swab firmly on each area.
  - Place swab in the medium tube and label
  - Each patient screen will be accompanied by a microbiology request form labelled MRSA screen.
  - Samples are collected from ward/department and delivered by porter to specimen reception, level 2 Pathology WGH
  - Laboratory staff collect samples and take to Microbiology for processing
7 LABORATORY INVESTIGATION/PROCESS

Once specimens received in the laboratory, they will be sorted, checked for suitability, labelled and recorded onto LIMS. Samples will then be distributed to the appropriate processing bench accompanied by plate labels.

- Primary culture plates will be labelled
- Swabs are inoculated onto ¼ plates
- Incubation of plates for 18-24hrs followed by reading of cultures
- Results will be recorded on request form
- Confirmation tests and sensitivities undertaken
- Final report recorded on back of request form and entered onto LIMS
- Results/LIMS reports are authorised
- Results available on ‘REVIVE’ & can be accessed by ward/department staff
- Communication and notification of positive results to ICT
- Infection Control Nurses inform the ward of positive results

8. MANAGEMENT OF PATIENTS WITH A NEGATIVE MRSA SCREEN.

MRSA negative screen results will be available on ‘revive’ (the trusts current computer reporting system) for medical and nursing staff to access when and as required. The management and care pathway for patients whose screen is MRSA negative will continue as normal.

9. MANAGEMENT OF PATIENTS WITH A POSITIVE MRSA SCREEN

The microbiology laboratory staff will inform the Infection Control Nurse of all ‘new’ MRSA positive results. In turn, the ICN will inform the medical/nursing staff in the area/department where the patient screen was undertaken. The following actions will be advised and required to be implemented for patients who are identified MRSA positive:

- The case notes of MRSA affected patient will be suitably labelled by ward/department staff.
- The ICT will update computer records/patient administration systems to identify MRSA positive status.
- The patient will be admitted to a side-room and nursed with the Standard Isolation procedures and the Trusts Isolation Policy applied. Where appropriate and in line with the department operational policy, the patient will be transferred to the Isolation Ward/Unit.
- Implementation of the Trusts MRSA decontamination/decolonisation protocol, nasal bactroban/mupirocin, Triclosan/hibiscrub body washes, ‘wound’ ointments where appropriate)

10. DECONTAMINATION PROTOCOL FOR MRSA POSITIVE PATIENTS

A) SKIN

Adults and children – Wash patient daily with an antiseptic detergent e.g. Triclosan or 4% chlorhexidine gluconate for 5 days. Apply directly to the skin on a wet disposable cloth, like soap, rather than diluted in bath water. Rinse with water and dry thoroughly.

Neonates - Wash daily with Triclosan diluted 50% in water. Apply to the skin with a disposable cloth. Rinse with water and dry thoroughly.

Antiseptic body washes will be prescribed on the patients drug chart in all areas with the exception of ITU/HDU where all patients are washed daily with antiseptic body washes.
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B) HAIR - Wash hair with an antiseptic shampoo e.g. Triclosan, as for skin, twice a week if the patient's condition allows.

C) LINEN - Change bed linen daily after antiseptic bath/wash.

D) CLOTHES - Change all nightclothes daily (after washing).

E) NASAL CARRIAGE -
1) Mupirocin sensitive strains of MRSA
   2% mupirocin in a paraffin base (Bactroban nasal cream) is applied to the inside of the anterior nares three times a day for five days.

2) Mupirocin resistant strains of MRSA
   4% Chlorhexidine or Naseptin Cream is applied to the inside of the anterior nares four times a day for five days.

F) WOUNDS/LESIONS
1) Mupirocin sensitive strains of MRSA
   Apply 2%mupirocin in a polyethylene base (Bactroban Ointment) or 2% mupirocin in a cream base (Bactroban Cream) three times a day for five days. Cover with an appropriate dressing.

   NB
   • Do not use on burns greater than 10% or other large areas (nephrotoxic).
   • Do not use on indwelling plastic or polyurethane catheters e.g. central line sites or gastrostomy sites. 2% Mupirocin in a paraffin base may be used instead.
   • The application of 2% Mupirocin ointment to some wounds may not be appropriate. The Infection Control Team will advise on alternative products.
   • If the antiseptics cause irritation, cease use immediately and notify a member of the Infection Control Team.

2) Mupirocin resistant strains of MRSA
   The Infection Control Team will recommend alternative products such as silver or povidone iodine impregnated dressings.

Follow up post decontamination protocol

a) 48 hours after stopping treatment, the patient is screened i.e. the following sites are swabbed and sent for culture to the hospital laboratory.

   • Nose (anterior nares - one swab to both nostrils)
   • Perineum (Groin only when access to the perineum is impossible & post-partum women)
   • CSU (if catheterised)
   • Sputum (if expectorating)
   • Insertion sites of any indwelling device e.g. Gastrostomy sites
   • Wounds/skin lesions

b) If this screen is negative, then the patient is screened for a second time. If negative, a third screen is to be taken.

c) If all three sets of screening are negative, then the patient is considered not to be carrying MRSA and may be nursed on the open ward. Seek the advice of the Infection Control Nurse before discontinuing isolation.
11. MOVEMENT OF MRSA POSITIVE PATIENTS

It is a fundamental tenet of good Infection Control practice that patients will not be moved unnecessarily within wards or between wards. This applies particularly to patients colonised or infected with transmissible microorganisms including MRSA. It is of course necessary and appropriate for patients to visit diagnostic departments and attend other parts of the hospital for diagnostic and therapeutic care including surgical operations. It is essential that patients with MRSA have access to these areas and that appropriate precautions are taken.

11.1 Transfers within the Hospital
a) Prior to transfer

Medical and nursing staff will liaise with the receiving ward/unit and bed manager (where appropriate) to ensure that Infection Control precautions, decontamination protocols or antibiotic treatment can be arranged and are continued. The Infection Prevention & Control Nurse will be advised of the transfer.

Whenever possible, the patient will:
- Have clean clothing
- Be transferred to a bed with clean linen (the original bed linen will be left behind on the ward)
- Lesions including wounds and pressure sores and insertion sites for intravenous devices will be covered, whenever possible, with a dressing.

b) At the time of transfer
- Attendants will wear disposable plastic aprons if they are likely to be in direct contact. Aprons will be removed after this contact has finished and disposed of as clinical waste.
- Gloves need only be worn if a member of staff transporting the patient has skin lesions.
- After use, the trolley or chair will be cleaned with a detergent/disinfectant e.g. ChlorClean.
- The staff involved in transferring patients will wash their hands after dealing with the patient and equipment used.

11.2 Visits to Specialist Departments

Prior arrangements will be made with senior staff of the receiving department so that control of infection measures for that department can be implemented. These will include:

- Dealing with these patients at the end of session.
- Ensuring that such a patient spends a minimum of time in this department and has the minimum contact with other patients.
- Staff will wear disposable gloves and aprons and wash their hands before and after contact with the patient.
- Minimising the number of staff in contact with and equipment used for that patient.
- Surfaces with which the patient has direct contact will be cleaned appropriately.
- Linen in contact with the patient will be treated as fouled/infected linen.
11.3 Surgical Operations

Ideally MRSA colonisation or infection would be eliminated/treated before surgery. This will require close liaison with the Infection Control Team and others involved in the care including those who may receive the patient for rehabilitation or convalescence. In any case:

a) Prior to theatre

Refer to 12.1a above, and in addition:

- Theatre staff will be informed and the patient treated last on the operating list, if practicable.
- The decontamination protocol (including nasal mupirocin as appropriate) will have been prescribed and instituted.
- On the day of the operation the patient will be bathed using antiseptic detergent.
- MRSA affected lesions will be covered with an impermeable dressing.
- Antibiotic prophylaxis is appropriate. Substitution or addition of Teicoplanin to the usual regime will be considered. The advice of a Consultant Microbiologist will be sought regarding prophylaxis.

b) Transfer to Theatre

Refer to 12.1b, above and in addition:

c) At the end of the operation

- If possible, patients will be allowed to recover in theatre or in an area not occupied by other patients.
- Theatre surfaces in contact with the patient or near the patient will be cleaned appropriately before reuse.

11.4 Transfers to other Hospitals/Trusts

The communication and screening requirements of the receiving hospital will be followed. Where MRSA colonisation/infection is known, this information will be communicated between the clinical teams and the Infection Control teams at the transferring and receiving hospitals. The former will need to notify those involved in transport arrangements.

Ambulance services have their own protocols for the safe transport of MRSA patients. These are likely to include:

- The use of an alcoholic hand rub after contact with an MRSA patient.
- Changing linen and bedding used by an MRSA patient.
- It is not usually necessary to transfer MRSA patients individually.

Each patient will be assessed for his or her ability to transmit. Patients with wide spread colonised skin lesions (e.g. eczema or psoriasis) or with discharging lesions not completely enclosed by an impermeable dressing present a higher than average risk. In these circumstances it may be necessary to transport the patient alone and for ambulance staff to wear plastic aprons and/or non-sterile gloves and for surfaces to be wiped down with 70% alcohol afterwards in addition to the usual measures. The onus is on the clinical team to inform the ambulance service when these circumstances arise.
12. **DISCHARGE OF PATIENTS SCREENED FOR MRSA**

   a) **Patients discharged prior to positive result known**  
   The laboratory will report MRSA positive results, as usual, to the department/ward where the specimens were taken. It is then the responsibility of the clinical team to inform the patients' GP.

   b) **Patients discharged following MRSA treatment/decolonisation**  
   MRSA patients will be discharged from the hospital as soon as possible when their clinical condition allows. MRSA carriage will not be a barrier to the transfer of patients to a nursing or convalescent home.

   MRSA status, details of decontamination protocol being employed, antibiotic treatment, need to send screening swabs etc will be part of the normal information transfer between clinical teams/others involved in the discharge/reception of the patient.

   The completion of five days of decontamination protocol following discharge from the hospital to the general community is recommended. Other health care facilities are at liberty to make their own policy decisions or exceptions for individual patients transferred to their care. However, occasional exceptions do occur and in such a situation the Infection Control Team can be contacted for advice.

   Routine screening before hospital discharge is not usually indicated.

13. **FURTHER MANAGEMENT OF MRSA CARRIAGE IN THE COMMUNITY**  
   The infection control nurses will notify the GP of any patients who are identified as MRSA positive following discharge. Patients can then be treated if appropriate as per the community MRSA policy.

14. **COMPLIANCE MONITORING**  
   The protocol developed to monitor compliance with Elective Admission MRSA Screening will be extended and adapted to include Emergency Admissions. A line listing of emergency admissions to AAU, Medical and Surgical Wards (including Orthopaedics), CCU, ITU, Stroke Wards will be cross referenced with laboratory screening records for the same time periods – initially weekly moving to monthly when the system has been embedded and compliance is at least 90%. It is anticipated that the data may be in arrears to allow for collection of a complete dataset. Outcomes will be reported to the Divisions of Medicine and Surgery with sufficient detail on non-compliance to allow investigation by the Divisions in the first instance. Summary data will inform internal and external processes. There is no reliable and practical way to monitor compliance with risk based screening of patients on an ongoing basis.

15. **REVIEW**  
   This policy will be reviewed formally in 2 years or sooner if there are any major changes to practice. Informal quarterly reviews will include, as a minimum, consideration of the value of this practice based on number of new cases of colonisation detected, the cost, and impact on MRSA infection, including bacteraemia.
16. REFERENCES

Department of Health, (July 2008) MRSA Screening-Operational Guidance, Gateway reference 10324


Department of Health, (December 2008) MRSA Screening-Operational Guidance 2, Gateway reference number 11123

Department of Health, (March 2010), MRSA Screening-Operational Guidance 3, Gateway reference number 13482


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