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PURPOSE OF GUIDANCE

- To reduce spread of MRSA to an absolute minimum.
- To manage patients colonized with MRSA safely and appropriately.

INTRODUCTION

Meticillin-Resistant *Staphylococcus aureus* (MRSA) has been known about for over 50 years and has posed an increasing problem to all hospitals over the last decade. MRSA is resistant to antibiotics such as flucloxacillin, the standard treatment for *Staphylococcus aureus* infection. MRSA infection remains treatable but requires use of antibiotics such as vancomycin and teicoplanin. These agents are expensive, have to be given by injection and may have side effects. Resistance to these agents has also been reported. Because of these features, emphasis is placed on preventing the spread of MRSA between patients.

SCREENING OF PATIENTS FOR MRSA CARRIAGE

Screening method

See Annex A for screening method.

Pre-admission Screening:

All elective admissions (apart from the exclusions listed below) must be screened for MRSA prior to admission. The following groups of patients are exempt from the requirement for screening:

- Day case ophthalmology.
- Day case dental.
- Day case endoscopy.
- Minor dermatological procedures.
- Maternity/obstetrics (except for elective caesarian sections or where baby is likely to require admission to the Neonatal Unit).

Patients found to be colonised with MRSA should undergo effective decolonisation before admission. It is the responsibility of the transferring hospital or patient’s General Practitioner, if in the community, to undertake this in accordance with the method in Annex C. Patients remaining persistently MRSA positive or who require urgent admission should be discussed with the Infection Control Team.

Full details on screening and management for elective procedures can be found in Annex F.

Patients listed for elective procedures should be screened for MRSA carriage before admission. Ideally, this should be done less than six weeks before and more than two weeks before the planned admission date. Patients who have ongoing exposure to MRSA (nursing home residents, health care workers, patients admitted to hospital in the interval between screening and their elective procedure) should be admitted to a side room pending the results of a further screen.

Admission Screening:

Patients in the following groups are at increased risk of MRSA carriage and should therefore be screened on admission:

- Known to be MRSA positive in the past. A full screen, including the site(s) originally colonised with MRSA should be obtained. A decolonisation regime (see Annex C) should be commenced immediately. Annex C should be consulted for further management.
- Frequently readmitted to healthcare facilities.
- Recent inpatient in hospital abroad.
- Transfers direct from another hospital outwith the Trust.
• Residents of residential care facilities with a high incidence of MRSA carriage (the Infection Control Team will notify ward staff of homes experiencing outbreaks and the need to screen their residents).

Patients on the following clinical areas are at increased risk of poor outcome from MRSA infection and should be screened on admission and thereafter as indicated.

**ICU/HDU**
- Screen all patients on admission and weekly thereafter. Admit all patients transferred from another hospital or other areas of high MRSA prevalence direct to a side room.

Commence the MRSA decolonisation regime (see Annex C) whilst awaiting the results of the initial screen. This may be discontinued if initial screen is negative and patient does not have a past history of MRSA.

**SCBU**
- Screen all patients on admission and weekly thereafter. Admit all patients transferred from another hospital or other areas of high MRSA prevalence to a side room.

**ASPull Ward (Emergency Orthopaedic)**
- Admissions (elective and trauma) to Aspull Ward at RAEI should be screened on admission. Commence the MRSA decolonisation regime (see Annex C) whilst awaiting the results of the initial screen. This may be discontinued if the initial screen is negative and patient does not have a past history of MRSA. Patients from other specialities present on the ward should also be managed as above until transfer or discharge.

**N.B.** Details of previous MRSA colonization are given within the allergies section of the front sheet in the patient’s case notes and in the “Alerts” section of the electronic patient record. Previously MRSA positive patients are also flagged on the laboratory computer system.

**Screening for MRSA in Areas with Increased Incidence**

MRSA colonisations are continually monitored by the Infection Control Team. Decisions to screen patient contacts will be made by the Team following assessment based on: ward type, number of new detections, staffing levels and availability of isolation facilities.

Staff screening is not routinely performed. However, staff will be asked about skin lesions. Staff with skin lesions are at increased risk of MRSA colonisation and transmission. Staff with skin lesions will be referred to the Occupational Health Department for screening and management.

Staff screening may be instigated by the Infection Control Team in the following circumstances:

- Continued transmission in a unit despite active control measures.
- Epidemiology suggestive of staff carriage.
MANAGING A MRSA COLONIZED PATIENT

Informing Patients about MRSA Carriage

Patients should be informed of their MRSA status. It is the responsibility of the Clinician caring for the patient when MRSA is first detected to do this.

All MRSA positive patients should be managed using a combination of Standard Infection Control Precautions and Contact Infection Control Precautions. Details are given below.

Standard Infection Control Precautions

These measures apply to all patients, regardless of MRSA status.

- High standards of hand decontamination are required to minimise the risk of cross infection. Hands should be decontaminated before and after every patient contact.
- Handwashing should be with liquid soap and water. Alcohol hand rub may be used as an alternative (see Handwashing Guidelines).
- Visitors having only social contact with the patient do not need to wear protective clothing.
- Maintain high standards of aseptic technique.
- Maintain high standards of ward cleanliness.
- All linen should be handled in accordance with Trust Laundry Policy.
- All waste should be disposed of in accordance with Trust Policy.
- Re-usable equipment must be decontaminated before use on another patient. Trust Decontamination and Disinfection Guidelines should be followed.
- Antibiotics should be used in accordance with Trust Antibiotic Guidelines.
- Minimise inter-ward transfer of patients.
- Avoid overcrowding of patients.
- Maintain adequate and appropriately skilled nursing and other staff levels.

Contact Infection Control Precautions

In addition to the Standard Precautions given above, the following additional precautions should be used for all MRSA positive patients:

- Place patient in a single room with en-suite facilities (see Annex B for further information).
- If a side room is unavailable, may be managed in ward bays next to a sink following agreement with the Infection Control Team.
- If a number of MRSA positive patients are present, these may be managed in a cohort. This should only occur following discussion with the Infection Control Team.
- Wear gloves and disposable plastic aprons when handling the patient or having contact with their immediate environment.
- All waste should be regarded as clinical waste and to be disposed of in yellow waste bags.
- All linen to be treated as contaminated/infected and to be disposed of in an inner red alginate bag or alginate seamed/stitched bag placed within a white plastic outer.
- Gowns may be required where extensive contact with the patient is anticipated.

Oral Hygiene

All MRSA positive patients require to maintain good standards of oral hygiene to minimise the occurrence of parotitis and abscess.

Patients with particular oral problems (e.g. decay, ulcers etc.) should be referred to the dental department for assessment. Patients unable to maintain their own hygiene or need to be assisted in this by nursing staff and all interventions documented.
MRSA Guidelines

MRSA Guidelines

Dr R Nelson, Mrs L Barkess-Jones

March 2009

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MRSA BACTERAEMIA

MRSA bacteraemia (MRSA grown in blood cultures) is reportable through the Department of Health’s Mandatory Surveillance Scheme. Every episode of MRSA bacteraemia is entered onto the enhanced surveillance scheme website by a Consultant Microbiologist and verified monthly by the Chief Executive.

All episodes of MRSA bacteraemia must undergo root cause analysis (RCA). This is to be performed by the Matron in charge of the area from which the blood culture originated with the assistance of the Infection Control Team. The Trust Guidance document on RCA together with the RCA data collection form are available on the Infection Control website or direct from the Infection Control Team. Clinical teams will be informed of MRSA bacteraemia episodes by the Infection Control Team one working day from occurrence.

TRANSFER AND DISCHARGE OF MRSA POSITIVE PATIENTS

Transfers within the Trust (Excluding Transfers to Wrightington)

- The receiving ward or department must be informed of the patient's MRSA status.
- Lesions should be covered with an impermeable dressing where possible.
- Porters only require to wear aprons where contact with the patient is likely. Gloves are only required if skin lesions are present on the staff member.
- The patient should be transferred to a bed with clean linen. The patient's original bed and bed linen should remain on the original ward for decontamination.
- The trolley or chair should be cleaned after use with alcohol containing agent ("Chlorclean").
- Staff should thoroughly wash their hands with soap and water after removing any gloves and aprons. Alcohol gel may be used as an alternative.

Transfers from within the Trust to Wrightington Hospital – All Patients regardless of MRSA status

- All patients being transferred to Wrightington Hospital must be screened for MRSA carriage regardless of MRSA status.
- Review notes to determine patient's past MRSA status.
- Obtain a MRSA screen (see Annex A).
- Negative MRSA screens will normally have results available on the laboratory system one working day from receipt.
- If screening results are negative for MRSA in a patient not known to be MRSA positive in the past, transfer can occur within five days of taking these specimens unless they have been in direct contact with MRSA after the screen was taken.
- If patient was known to be MRSA positive in the past or if screen reveals MRSA colonisation then commence decolonisation (see Annex C) and contact Infection Control Department for advice on further management.
- Patients known to be MRSA positive requiring immediate transfer should be discussed with the Infection Control Department.

Ambulance Transportation

This will be in accordance with the Ambulance Service MRSA Policy. The following points should be noted.

- Most MRSA positive patients can be transported with others in the same ambulance without any special precautions.
- If patient is a heavy disperser e.g. discharging lesion that cannot be covered by an impermeable dressing, advice should be obtained from a member of the Infection Control Team.
- No additional cleaning of the ambulance is required.
Transfer to Hospitals External to the Trust

- MRSA colonization should not be a barrier to good clinical care and transfers for good clinical reasons should not be prevented.
- Unnecessary movement should be avoided.
- Before a transfer, the Infection Control Team and the ward at the receiving hospital must be informed. It is the responsibility of the clinician to inform them directly or via the Trust Infection Control Team.

VISITS TO OUTPATIENTS AND OTHER SPECIALIST DEPARTMENTS

Visits by MRSA positive patients should be kept to a minimum. However, MRSA colonization must not prevent necessary investigations or treatment from being performed.

- The ward referring the patient must inform the department of the patient’s MRSA status at the time of request.
- Patients should be dealt with at the end of the list if possible.
- The patient should spend minimum time necessary in the department, being summoned from the ward only when the department is ready.
- Staff coming into close contact should wear aprons and gloves. Hands should be washed in soap and water after glove removal. Alcohol gel may be used as an alternative.
- Equipment and staff attending should be kept to a minimum.
- Surfaces with which the patient had direct contact should be washed after use with a chlorine containing agent (“Chlorclean” made up as directed in Trust guidance).

SURGICAL/INVASIVE PROCEDURES IN MRSA POSITIVE PATIENTS

Elimination of MRSA colonization should be attempted before admission for elective surgery using the decolonization regime (see Annex C). If decolonisation fails, or in an emergency, the following should be undertaken to reduce the bacterial inoculum that may be introduced into the wound.

- Daily skin washes with an antiseptic agent should begin forty-eight hours pre-operatively (see Annex C for method). Apply skin wash directly to all areas and rinse off. **Do not dilute skin wash in bath water.**
- Apply Bactroban nasal ointment to the nose from forty-eight hours before the operation.
- Cover affected lesions with an impermeable dressing immediately preoperatively.
- Antibiotic prophylaxis requirements should be discussed with the Consultant Microbiologist. Standard regimes do not cover MRSA.
- Theatre surfaces in contact with, or near to the patient (e.g. operating table, instrument trolley), should be washed with a chlorine containing agent (“Chlorclean” made up as directed in Trust guidance) after the procedure.
- Theatre ventilation systems remove bacteria from the air within 15 minutes. Therefore, MRSA patients do not routinely need to be placed at the end of a list. However, it may be operationally simpler to place them at the end of the list to ensure there is adequate time to decontaminate surfaces.
- If the patient is to be transported on their own bed, the frame must be washed with a chlorine containing agent (“Chlorclean” made up as directed in Trust guidance) and clean linen put on prior to use.
- Continue the decolonisation regime (see Annex C) post operatively.

DECEASED PATIENTS WITH MRSA

- MRSA poses minimal risk to those handling deceased patients providing the same Standard Infection Control precautions used with live patients are continued after death.
- Lesions should be covered with impermeable dressings.
- Cadaver bags are **not** necessary for MRSA positive patients.
DISCHARGE OF MRSA POSITIVE PATIENTS

- Generally, there is no need for MRSA positive patients to continue with eradication protocols following discharge. This may be varied in the event of anticipated readmission, especially for a planned invasive procedure.
- Individuals involved in further care of the patient should be informed of the patient’s MRSA status at discharge.
- Patients and their appropriate contacts should be given relevant information on MRSA, its significance and implications prior to discharge, in order to reduce unnecessary anxiety and concern when returning to the home environment.

REFERENCES:


ANNEX A  SCREENING METHOD FOR MRSA

1) Routine microbiology swabs should be used.
2) The swab should be moistened with sterile saline.
3) The swab should be rubbed and rotated 10 to 20 times over the area to be sampled.
4) The swab should be labelled with patient name, number, date, ward, sampling site. Swabs taken for preadmission screens for elective procedures must be appropriately labelled as being from a preadmission clinic. They must not be labelled as originating from a Ward area as this will lead to failure to identify them as preadmission screening samples.
5) The following sites should be sampled in all cases:
   - Nose.
   - Perineum.
   - Umbilicus (neonates only).
6) The following should also be sampled if present:
   - Lesions/wounds.
   - Catheter urine.
   - Intravascular catheter sites.
   - Tracheostomy site.
   - Sputum if productive cough present.

Other sites will not be routinely processed by the Laboratory.

7) The samples should be sent with a completed request form to the Microbiology Laboratory at RAEI. If they cannot be sent immediately, they should be refrigerated at 4°C.
8) The minimum interval between MRSA screens is 48 hours.
9) Three sets of negative screens are necessary for clearance. They must all include the site(s) originally found to be positive for MRSA. The patient must have discontinued any treatment for MRSA (including antibiotics active against MRSA such as teicoplanin) at least 48 hours before the screens are taken.
10) Screening samples from those colonized with MRSA in the community will only be processed if a relevant clinical indication is given e.g. awaiting surgery.
ANNEX B

ISOLATION OF MRSA PATIENTS

Facilities

MRSA patients should be managed in a single room with en-suite facilities. The door should remain closed, particularly if the generation of aerosols is likely. If a number of MRSA cases exist it may be possible to cohort them together. This should only be done after consultation with the Infection Control Team.

If, after discussion with the Infection Control Team, the patient is to be isolated on the open ward, this should occur within the area bounded by the curtain space. The area chosen should be nearest to the available sink.

Basic Set-up of Side Rooms for Isolation

- Ensure side room has been terminally decontaminated on the discharge of the previous occupant.
- The side room should ideally contain en-suite facilities and a clinical hand hygiene sink. If there is no toilet, a dedicated commode should be used.
- Place appropriate information notices on the outside of the side room door (see Patient Isolation Guidelines).
- The sink should have adequate supplies of liquid soap and paper towels. Alcohol hand rub may be used to augment hand hygiene.
- Unnecessary furniture and equipment should be removed from the room before use.
- Gloves, aprons and any other protective equipment required should be kept outside at the entrance to the side room. Don equipment on entry and dispose of within the side room on completion.
- Hands must always be washed before leaving the side room. Alcohol gel may be used to augment this. Use of gloves does not remove need to wash hands.
- Clinical waste bags should only contain clinical waste generated within the side room.
- Used linen should be placed in red alginate bags or alginate seamed/stitched bags and placed within a white polythene outer bag within the side room. These should not be over filled.
- Ensure all equipment used for the care of the patient is appropriately decontaminated on its removal from the room.

Protective Clothing

- Disposable aprons should be worn by all staff handling the patient or having contact with their immediate environment.
- Gloves should be worn when handling the patient or their immediate environment, their secretions or contaminated dressings or linen.
- Masks – these are not required.

Cleaning and Disinfection

- Liquid soap must be available for handwashing.
- Alcohol hand rub may be used as an alternative for hand hygiene (see Handwashing Guidelines).
- Hands must be washed before and after contact with the patient or their environment. The wearing of gloves does not remove the need for this.
- Ward equipment e.g. sphygmomanometers, stethoscopes, lifting slings etc. should be dedicated to the patient. If this is not possible, they must be decontaminated before use on another patient.
- After the patient has vacated the side room, it must be cleaned, even if another MRSA patient is to use it. Curtains should be removed and sent for laundering before beginning to clean. If blinds are present, they should be sponged down. A chlorine containing agent (“Chlorclean” made up as directed in Trust guidance) should be used for all cleaning.
Horizontal surfaces and dust collecting areas require special attention. Pillows, duvets and mattresses should be checked for damage. Uncovered cloth pillows should be discarded. Covered pillows should be checked for damage and wiped down with ‘Chlorclean’. Duvets should be wiped down with ‘Chlorclean’. Therapy mattresses will require special decontamination methods as recommended by the manufacturer.

**Linen**

- Handle carefully to minimise the spreading of skin scales. Fold sheets carefully into the centre of the bed to prevent distribution of skin scales.
- Place in a red alginate bag or alginate stitched/seamed bag then a white polythene outer for sending to laundry.

**Clinical Waste**

- Handle carefully.
- Dispose of according to Clinical Waste Policy.

**Crockery**

- Disposable crockery is **not** required.
- Used crockery should be returned to the kitchen for washing together with crockery from the rest of the ward.

**Visitors**

- Visitors should seek permission from the nurse in charge before entering the room.
- Visitors only having social contact with the patient **do not** require to wear gloves or aprons.
- If more extensive contact is anticipated then protective clothing should be worn.
- Visitors must be instructed on handwashing and wash hands on leaving the room.
- Visitors should be discouraged from visiting other patients on the ward.
ANNEX C  DECOLONISATION OF MRSA POSITIVE PATIENTS

Decolonisation method

Use of Mupirocin – (‘Bactroban Nasal’)

- Apply a small amount of mupirocin (‘Bactroban Nasal’) to the inside of both nostrils with a cotton-wool swab three times daily for five days. Alternatively, the tip of a gloved finger may be used.
- If the strain is resistant to mupirocin, the Infection Control Team will advise on alternative agents.
- Mupirocin should always be used in conjunction with antiseptic skin wash (see below).
- Do not re-sample the nose until treatment has been stopped for at least 48 hours.
- Mupirocin should not normally be used for more than two 5-day courses.

Application of antiseptic skin wash

- Patients should bathe or shower daily for 5 days with antiseptic skin wash using the following method:
  - The skin should be moistened and the antiseptic skin wash applied directly to all areas before rinsing in a bath or shower. The skin wash should not be added to the bath water.
  - Particular attention should be paid to known carriage sites: axilla, groin and perineum.
  - The hair should be washed daily with the same antiseptic skin wash preparation.
  - The hair may subsequently be washed with conventional shampoo if desired.
  - If skin irritation develops, the Infection Control Team should be contacted.
  - The standard antiseptic skin wash is “Octenisan” containing 0.3% octenidin hydrochloride. Alternative preparations that can be used in case of intolerance/allergy or product non-availability include:
    - 4% Chlorhexidine cleansing solution (Hibiscrub).
    - 7.5% or 10% povidone iodine skin wash (Betadine, Videne).
    - 2% triclosan skin wash (Aquasept).

- Patients who are pregnant, have abnormal thyroid function or are hypersensitive to iodine should not use skin washes containing iodine.
- Patients with eczema, dermatitis or other skin conditions are likely to require treatment for these before eradication therapy. The Dermatology Department should be consulted for advice.
- Clean clothing and bedding should be provided each day and at the end of a course of treatment.

Decolonisation regime

Follow flow charts below for either:

- New MRSA positive patients (Figure C1).
- Emergency admission of patients known previously to be MRSA positive (Figure C2).

The decolonisation regime should recommence immediately after the screen is obtained. If the screening result is negative then decolonisation can stop immediately.
FIGURE C1 - SCREENING AND DECOLONISATION OF NEW MRSA POSITIVE PATIENTS

New MRSA positive patient

Obtain full MRSA screen

Commence decolonisation regime – skin wash and Bactroban

Stop decolonisation regime after completing five full days

Re-screen 48 hours after stopping decolonisation regime and then commence a further cycle of the decolonisation regime

Check for MRSA screen results from 1 working day after submission to laboratory

MRSA Screen Result

MRSA detected

MRSA negative

Stop decolonisation regime immediately

Re-screen ≥ 48 hours after stopping decolonisation regime

MRSA detected

MRSA Screen Result

MRSA negative

Re-screen ≥ 48 hours after previous MRSA screen

MRSA detected

MRSA Screen Result

MRSA negative

Cleared of MRSA. Manage using Standard Infection Control Precautions
FIGURE C2 - SCREENING AND DECOLONISATION OF EMERGENCY ADMISSIONS KNOWN PREVIOUSLY TO BE MRSA POSITIVE

Previously MRSA positive patient admitted as an emergency

Obtain full MRSA screen

Commence decolonisation regime – skin wash and nasal Bactroban

Review and record the number of negative MRSA screens present on the laboratory system since last MRSA positive result

Review results of current MRSA screen from 1 working day onwards after submission to laboratory

Admission MRSA Screen Result

MRSA detected

Complete 5 full days of decolonisation regime (skin wash and Bactroban)

MRSA negative

One or more negative MRSA screen results in past?

Yes

Stop the decolonisation regime

No

Wait 48 hours and re-screen

MRSA Screen Result

MRSA detected

Re-screen ≥ 48 hours after stopping decolonisation regime and then recommence decolonisation regime

MRSA negative

Wait 48 hours and re-screen

MRSA Screen Result

MRSA detected

Three negative MRSA Screens obtained since last positive result?

Yes

MRSA is cleared

No

Wait 48 hours and re-screen

MRSA negative

Re-screen ≥ 48 hours after stopping decolonisation regime and then recommence decolonisation regime
ANNEX D  MRSA COLONISED OR INFECTED HEALTH CARE WORKERS

Health Care Workers may be found to be colonised with MRSA either from screening during an outbreak or on routine clinical specimens taken for other reasons.

All colonised staff will be referred to the Occupational Health Department (OHD) and assessed in conjunction with the Infection Control Team.

Staff Working on ‘High Risk’ Areas (ICU/HDU, Neonatal Unit, Orthopaedic Surgery, Vascular Surgery)

1) A full screen for MRSA will be obtained (see Annex A).
2) The OHD will determine if infected lesions are present.
3) A decolonisation regime using antiseptic skin wash and nasal mupirocin should be commenced (see Annex C).
4) Staff with infected or colonised hand lesions should remain off work until clearance is achieved or lesions have healed.
5) Staff with infected lesions (other than on the hands) may continue to work in non ‘high-risk’ areas provided lesions are covered with an impermeable dressing and they have commenced nasal mupirocin and antiseptic skin wash.
6) Staff without infected lesions may return to work 48 hours after commencing treatment with nasal mupirocin and antiseptic skin wash.
7) Staff without infected skin lesions may also work on non ‘high-risk’ areas immediately upon commencing nasal mupirocin and antiseptic skin wash.

Staff Working on Other Clinical Areas

1) A full screen for MRSA will be obtained (see Annex A).
2) The OHD will determine if infected lesions are present.
3) A decolonisation regime using antiseptic skin wash and nasal mupirocin (see Annex C) should be commenced.
4) Staff with infected or colonised hand lesions should remain off work until clearance is achieved or lesions have healed.
5) Staff with infected lesions (other than on the hands) may continue to work provided lesions are covered with an impermeable dressing and they have commenced nasal mupirocin and antiseptic skin wash.
6) Staff without infected lesions may return to work immediately upon commencing nasal mupirocin and antiseptic skin wash.

Follow-up of Colonised/Infected Staff

The OHD will make arrangements to obtain a full MRSA screen 48 hours or more after completing the decolonisation regime. A decolonisation regime using antiseptic skin wash and nasal mupirocin (see Annex C) should be commenced. Two further screens should be obtained at a minimum interval of 48 hours. Three sets of negative screens indicate that clearance of MRSA has been achieved. However, in staff members with chronic conditions or previous relapse of MRSA carriage, additional screens may be judged necessary by the Infection Control or Occupational Health Departments.

Staff members failing to clear MRSA after a second decolonisation course may require referral to other specialists such as a dermatologist. Further action will be decided upon on discussion between OHD and the Infection Control Team.
ANNEX E     MRSA COLONISATION IN PREGNANCY

Routine screening of pregnant women is not performed due to the low incidence of MRSA in pregnancy. However, women who are booked for elective caesarian sections or at high-risk of complications in the mother and/or baby should be screened for MRSA carriage prior to admission for delivery. MRSA colonisation may also on occasion be detected in swabs taken for other reasons. Patients may also report, on attending for antenatal care, that they have previously been colonised with MRSA.

Patients found to be MRSA positive in the antenatal period or with a past history of MRSA should be managed as follows:

1. Obtain full MRSA screen (see Annex A).
2. Inform the Infection Control Team.
3. Eradication of MRSA colonisation should be attempted as detailed in Annex C. Note that iodine containing products such as Betadine or Videne should not be used.
4. At least forty-eight hours after completing decolonisation treatment, a further full screen (including the initial site of colonisation) should be taken.
5. If MRSA negative, two further sets of screens should be obtained at a minimum interval of 48-hours.
6. If still MRSA positive, consult the Infection Control Team to discuss further action.
7. A final screen should be performed at 38 weeks gestation (or within a 5 day period before an elective admission if <38 weeks gestation) to ensure patient remains clear of MRSA.
8. Patients with three negative screens post decolonisation and a negative screen at 38 weeks gestation can be considered as MRSA-negative and managed with Standard Infection Control precautions during the delivery and post-natal care.
9. Patients known to remain MRSA positive at admission or who have not had a preadmission screen should be admitted to a side room and managed in accordance with the precautions detailed in Annex B. Procedures requiring antibiotic prophylaxis (e.g. caesarean section) should be covered with agents active against MRSA. This would normally be teicoplanin 400mg IV at induction. Further advice may be obtained from the Consultant Microbiologist.

Patients found to be MRSA-positive postnatally should be managed as detailed in Annex B and C of this guideline.

Babies born to mothers who are MRSA-positive should be managed as follows:

1. Obtain a full MRSA screen (nose, perineum, umbilicus, lesions) from the baby at birth.
2. Ensure the Team caring for the baby are aware of the potential for MRSA colonisation. This is of particular importance if being transferred to the Neonatal Special Care Unit.
3. Contact the Infection Control Department to discuss further management.
ANNEX F  GUIDELINES FOR PREADMISSION SCREENING FOR MRSA IN PATIENTS LISTED FOR ELECTIVE PROCEDURES

INTRODUCTION

Active screening of elective admissions for MRSA carriage is required under Department of Health Guidance. The procedure to be followed is detailed below.

WHO IS TO BE SCREENED?

All elective admissions, including day case admissions, should be routinely screened for MRSA carriage. The only exceptions are patients in the following groups:

- Day case ophthalmology.
- Day case dental.
- Day case endoscopy.
- Minor dermatology procedures e.g. warts or other liquid nitrogen applications.
- Maternity/obstetrics except for elective caesareans or any other high-risk cases i.e. high-risk of complications in the mother and/or potential complications in the baby.

WHERE IS SCREENING TO BE PERFORMED?

Preadmission screens will normally be performed in one of the Trust's dedicated preoperative admission clinics. Patients being admitted from out with the PCT area may on occasions attend their own General Practitioner for MRSA screening if this is more convenient. However, screening must be performed in accordance with this guideline and screening results must be supplied to the relevant Trust preadmission clinic.

WHAT SAMPLES ARE TO BE TAKEN FOR A MRSA SCREEN?

The following sites should be sampled:

- Nose.
- Perineum.

The following sites should also be sampled if present:

- Lesions/wounds.
- Catheter urine sample.
- Intravascular catheter sites.
- Tracheostomy site.
- Sputum if productive cough is present.

Further information on the taking of samples can be found in the Trust's MRSA Guidelines.

WHEN SHOULD SCREENING BE PERFORMED?

All patients listed for an elective procedure should be screened for MRSA carriage between listing and operation. Ideally, screening should be performed a maximum of six weeks before and a minimum of two weeks before the planned admission date.

Patients requiring urgent elective admission should be screened at the earliest opportunity. If admission occurs before a screen has been obtained or the screening results are available, the patient should be admitted directly to a side room and the MRSA decolonisation regime commenced. If a negative screen is subsequently obtained the decolonisation regime can be discontinued immediately.
WHEN WILL SCREENING RESULTS BECOME AVAILABLE?

Results from screening samples that are negative for MRSA will normally be available one working day after their arrival in the laboratory. Negative MRSA screen results are available to view on the laboratory system at the time of completion. Specimens that have grown MRSA or potential MRSA will normally take an additional 24-48 hours processing time before the result becomes available.

HOW ARE POSITIVE MRSA SCREENS TO BE FOLLOWED UP?

It is the responsibility of the person requesting the specimen to ensure that appropriate follow up is undertaken. This will normally fall to the preadmission clinic that took the sample. The General Practitioner for the patient should be made aware of the positive result and the date of planned surgery and requested to commence a decolonisation regime.

HOW SHOULD PATIENTS WITH A PAST HISTORY OF MRSA BE MANAGED?

Patients with a past history of MRSA carriage should be screened as above. If they are negative on MRSA screening, their Microbiology result should be reviewed to determine if they have evidence of three negative MRSA screens since their last growth of MRSA. If less than three sets of negative MRSA screens have been taken, two further sets of MRSA screens should be obtained at a minimum interval of 48-hours. If they screen positive for MRSA they should be decolonised as detailed below.

HOW SHOULD POSITIVE PATIENTS BE DECOLONISED?

Patients should commence a decolonisation regime in accordance with that detailed in Annex C. This will normally consist of a five-day course of Octenisan skin wash and Bactroban nasal ointment. The skin wash should be applied directly to all areas of the body on a daily basis. In addition, it should be used to wash the hair daily. Bactroban nasal ointment should be applied to both nostrils three times per day concurrently with the skin washes.

WHAT FURTHER SCREENING SAMPLES ARE REQUIRED FROM MRSA POSITIVE PATIENTS?

On completion of the five-day period of decolonisation, the patient should stop the skin washes and nasal ointment. After a minimum period of 48 hours a further MRSA screen should be obtained.

WHAT HAPPENS IF THE TREATED PATIENT SCREENS NEGATIVE FOR MRSA?

If a negative screen is obtained, two further screens should be taken with a minimum interval of 48 hours between each. If three negative screens have been obtained in total (these must include the original site of colonisation), no further screening is required and the patient can be regarded as clear of MRSA.

WHAT HAPPENS IF THE PATIENT REMAINS MRSA POSITIVE AFTER A PERIOD OF DECOLONISATION?

A further five-day decolonisation regime of skin wash and bactroban should be commenced. After a minimum interval of 48 hours after completion of the regime a further MRSA screen should be obtained. If this is negative then the patient should be managed as above. If the patient remains positive at this stage then the Infection Control Department should be contacted for further advice.

WHAT HAPPENS IF A PATIENT WHO HAS BEEN SCREENED AND ADMITTED RECENTLY REQUIRES A FURTHER ADMISSION?

The patient will require to be re-screened for MRSA before any further elective admissions.
IS THERE INFORMATION AVAILABLE FOR PATIENTS ON MRSA SCREENING AND MRSA CARRIAGE?

Yes, information leaflets are available on the Trust Intranet site.

WHAT HAPPENS IF A PATIENT REFUSES MRSA SCREENING?

The benefits of MRSA screening should be explained to the patient. If the patient continues to refuse screening the necessity for the procedure to be performed and the risk of MRSA carriage will need to be assessed by the admitting clinician. If the decision is taken to admit a patient who has refused screening for MRSA then they should be admitted directly to a side room and treated as a MRSA-positive case.

HOW WILL UPTAKE OF SCREENING BE MONITORED?

The Trust is required to report the number of MRSA screens taken together with the number of admissions that required screening under current Department of Health guidance. Trusts are required to achieve a ratio of one or more screens per admission per month.