Trust Policy for Methicillin Resistant Staphylococcus Aureus (M.R.S.A)

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**MRSA Summary Sheet**

Check PAS/CLINICOM for MRSA Alert & Complete Nursing Patient Risk Assessment Form

All patients with previous history of MRSA must be cared in ‘source isolation’

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**Elective Admissions**

All elective (planned) admissions must be screened before admission (No routine screening to the children’s ward unless ‘high risk’)

**Emergency Admissions**

All patients admitted as emergency aged >16 years with or without MRSA risk factors should be screened

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**Sites to screen**

- Both nostrils (use one swab to sample both nostrils)
- Perineum (groin only when access to the perineum is impossible and post partum women)
- Skin lesions and wounds
- Invasive device sites, e.g. tracheostomy, PEG, PVC, PICC etc.
- If urinary catheter in situ then take a catheter specimen of urine, using an aseptic technique via the needle-free sampling port, and specifically request MRSA screen.
  - Sputum from patients with a productive cough

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**Screening technique:**

- 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.
  - 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/dept and delivered by porter to specimen reception, level 2 Pathology WGH

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**Immediate care to be implemented (Previous Positive & New Positive cases)**

- Hand hygiene
- Source Isolation of patient
- Wear gloves and aprons & wear mask for cough inducing procedures
- Explain to the patient about MRSA (information leaflet - Appendix 12)
- MRSA Decolonisation

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**Treatment of MRSA carriers (Decolonisation)**

- All adult in-patients found to be MRSA positive should be prescribed topical decolonisation treatment.
- Treatment for neonates and paediatrics is dependent on age and clinical condition. Therefore on a case by case basis between the Infection Prevention and Control Team/microbiologist and paediatricians may be required.

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**On Discharge**

- Medical Staff to record patient’s MRSA inpatient screening results on discharge summary
- Arrange for Terminal Clean of the bed space/side room by the cleaning contractor:
  - Curtains changed, Strip linen and bag appropriately.
  - Clean the pillows, mattress and all clinical equipment within the room, including commode with chlorine based disinfectant).
  - Decontaminate with 1000ppm of chlorine releasing agent(chlor-clean) all remaining non disposable equipments in the room
  - Redress bed, replenish disposables & prepare for new admission
1. **Aim**

The purpose of this policy is to help West Hertfordshire NHS Trust (WHHT) staff understand and implement measures to control MRSA and prevent its transmission from one patient, or staff to another. When implemented, the control measures outlined in this policy will reduce the risk of patients (and staff) acquiring MRSA and/or spreading it to other patients.

The policy aims to provide a safe environment for all patients, staff and visitors. The policy outlines arrangements through which the Trust will comply with the Department of Health (DH) strategy for the control of MRSA.

This policy is based on the DH guidance (2006, 2008, 2010, and 2014). This policy also specifies the requirement of MRSA screening for all relevant emergency admissions and elective admissions to West Hertfordshire Hospitals NHS Trust have implemented.

2. **Objectives**

This policy sets out the responsibilities of our healthcare workers and their contribution and involvement in the screening of patients, treatment 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.

3. **Definitions**

3.1 **Bacteraemia:** Bacteraemia occurs when bacteria get into the bloodstream. It is commonly detected by blood culture - often referred to as a blood stream infection.

3.2 **Carrier of MRSA:** A person who is colonised with MRSA, with no signs of clinical disease, but who is a potential source of spread of MRSA to others. The organism may be present in the nose, sputum, urine, an open wound, in the stool or on the skin. The carriage of MRSA can be transient, intermittent or long term. A carrier may transmit the organism to another person through direct contact, usually by contact with hands.

3.3 **Cohort:** A group of MRSA positive patients (infected or colonised) who are physically separated, but grouped together and cared for by staff who do not care for MRSA negative patients.

3.4 **Colonisation:** This is when an organism (e.g. MRSA) establishes itself in a particular environment such as a body surface without producing disease or symptoms. Screening patients for MRSA helps identify those who are colonised with MRSA and measures are implemented to reduce the risk of them spreading MRSA to other patients and staff.
3.5 **Decolonisation:** A programme of topical treatment aimed at reducing the amount of MRSA living on the skin and nose. This reduces the risk of MRSA getting into wounds and decreases the risk of spread of MRSA to others. Decolonisation is sometimes referred to as suppression as many decolonised patients will continue to carry MRSA in numbers that are too small to detect and are less likely to spread.

3.6 **Elective admission:** A patient admitted following a planned period of waiting.

3.7 **Emergency admissions:** Patients being admitted to WHHT hospital on an emergency basis, regardless of route of attendance – includes admissions through Accident and Emergency, General Practitioner referral and other routes of admission such as via outpatient clinics and minor injuries unit.

3.8 **Infection:** The entry of harmful organisms (e.g. MRSA) into the body and their multiplication and possible invasion of the tissues causing an infection. Signs of infection may include some or all of the following: purulent discharge, fever, pain/tenderness, swelling, redness etc.

3.9 **MRSA Positive:** MRSA is present on a patient’s skin or in any other part of the body such as nose, wounds, urine, bloodstream etc or found in a patient's sample e.g. sputum, urine, blood etc.

3.10 **Outbreak of MRSA:** two or more hospital-acquired cases which are epidemiologically associated by person, time, or place.

3.11 **Prophylaxis:** The administration of an antimicrobial agent in order to prevent infection.

3.12 **Standard infection control practices**
A set of activities used by all healthcare workers for all patients in order to reduce transmission of micro-organisms from both recognised and unrecognised sources of infection/colonisation. The activities include effective hand hygiene, appropriate use of personal protective equipment during direct patient care, safe disposal of sharps and waste, hospital environmental hygiene, including decontamination of shared patient equipment and, effective communication between staff and between staff and patients, relatives and visitors.

3.13 **Surveillance**
Active, systematic monitoring of patient data to determine incidence and prevalence of infections and distribution in a facility.
4. Scope

Staphylococcus aureus (Staph aureus) is a bacterium that can reside on the skin and is found in the nose of about one-third of healthy individuals. Staph aureus can also cause a variety of infections which can involve any part of the body. Some of the common infections caused by Staph aureus include infections of the skin and soft tissues (cellulitis), postsurgical wounds, bone, joint and infections related to indwelling devices such as venous lines and urinary catheters. Some of these infections can result in severe infection including bloodstream infections (bacteraemia).

Most strains of Staph aureus are sensitive to several antibiotics and infections are easily treatable. Flucloxacillin has been the main antibiotic used for the treatment of infections caused by Staph aureus, however a number of Staph aureus strains have emerged which are resistant to Flucloxacillin and several other antibiotics including all penicillins, cephalosporins and carbapenems. These multi-resistant Staph aureus strains are referred to as Meticillin-resistant Staphylococcus aureus (MRSA).

It is necessary to prevent and control MRSA as infections caused by MRSA are more difficult to treat and there is a limited choice of antibiotics that can be used. MRSA is a significant healthcare associated infection resulting in additional morbidity and mortality as well as contributing to healthcare costs. Furthermore, patients and the public increasingly see MRSA and rates of MRSA infections as indicators of the quality of care. They require reassurance that all healthcare professionals are taking reasonable and sensible precautions to minimize spread. MRSA control measures have been shown to be effective, resulting in reduced mortality as well as helping to contain healthcare costs.

MRSA is now endemic in many UK hospitals and 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 patient for MRSA before or at the point of admission is required to identify carriers and implement a decolonisation regime.

This policy applies to all staff employed by the Trust including honorary contracts, non-executive directors, bank and agency staff, locums, volunteers, trainees and students.
5. Roles and Responsibilities

5.1 Board
WHHT Board is committed to and responsible for the control and prevention of infections including MRSA. The Board will ensure that patients, staff and visitors are protected against risks of acquiring MRSA by ensuring the provision of appropriate care, in suitable facilities.

5.2 Director of Infection Prevention and Control (DIPC)
- Currently post is held by the Chief Nurse
- Is responsible for providing assurance to Trust Board that MRSA screening is being implemented as per Department of Health (DH) guidance
- Reports to the Chief Executive, Quality and Safety Group and the Trust Board any changes in legislation or national guidance relating to MRSA
- Oversee the implementation of this policy
- Challenge inappropriate clinical practice
- Ensure that the Trust provides adequate resources to enable implementation of this policy

5.3 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
- Regularly review and promote this policy
- Informing the ward/clinical area staff when a patient has been found to be newly MRSA positive
- Advise on infection control precautions to be taken
- Ensure an MRSA flag/alert is added to the patient’s records on Clinicom and clinical notes are updated as appropriate
- Monitor numbers of hospital acquired and community acquired MRSA within clinical areas and feed back to the directorate and individual clinical areas
- In collaboration with the clinical area, investigate clusters or outbreaks of infection or colonisation with MRSA and advise on action
- Report all MRSA bacteraemia to Public Health England as required by the Department of Health
- Undertake post-infection reviews following MRSA bloodstream infections, in conjunction with clinical teams
- Regularly review and update written information for the patients and public
- Respond to complaints relating to MRSA in collaboration with the patient’s clinical team
5.4 Ward and Department Managers are responsible for:
- Ensuring that staff in their area understand and implement and comply with the screening control/treatment practices outlined in this policy
- Instigating remedial action to address any issues around screening compliance in their area

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

5.6 All Clinical Staff are responsible for:
- Complying with all aspects of this policy
- Ensuring that all relevant ‘elective’ and ‘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. This includes informing GP & Other Health Care Environments/Institutions on discharge/transfer of patients

5.7 Microbiology Department
The microbiology laboratory and medical microbiologists are responsible for:
- Ensuring that appropriate tests are available for identification of MRSA
- Ensuring that results are communicated promptly to clinical teams
- Providing timely advice to clinicians regarding appropriate treatment, where relevant

5.8 Head of Facilities and Estates
- Ensure wards and departments are cleaned as per national cleaning standards. Co-ordinate responses in outbreak situations promptly
- Ensure wards and departments are maintained to a satisfactory standard to eliminate environmental risks of Health Care Associated Infections

5.9 Operational Management Team
- Allocation of appropriate beds/single rooms for patients with known and suspected infection within the adult bed base of Medicine and Surgery on guidance from Infection Prevention & Control around what siderooms/patients are priority to isolate

5.10 Occupational Health staff
- Coordinate and managing staff screening (when indicated by the Infection Prevention and Control Team)
- Coordinate the management of staff found to be MRSA positive together with other relevant clinicians
6. MRSA Screening /Procedure

6.1 MRSA Risk Assessment

All patients must be assessed when referred to the hospital and regularly thereafter for their susceptibility to acquiring an infection with MRSA, or the likelihood that they may pass it on to others if they are already colonised or infected. The risk posed by each patient may vary throughout the time that they require care and they MUST therefore be reassessed regularly.

Categorising risk for acquisition of or for spreading MRSA

6.1.1 High MRSA risk individuals:

(i) Individuals at high risk of acquiring MRSA:
- Those who have undergone major surgery including orthopaedic joint replacement
- Patients with central line(s) in situ or other intravascular (IV) lines
- Those with large unhealed skin lesions due to trauma, surgery, pressure injury or ischaemia e.g. pressure sores, chronic ulcers
- Patients who require other invasive device e.g. urinary catheter, percutaneous endoscopic gastrostomy (PEG) tube, tracheostomy and ventilation.
- Those with exfoliative skin conditions, i.e. eczema, psoriasis, etc where the affected area cannot be covered
- Frequent care in health care settings both in the UK and abroad or long term residential/ nursing home facilities

(ii) Individuals with a high risk of spreading MRSA
- Patients with MRSA in their sputum or tracheostomy site who are coughing or require suctioning
- Those with exfoliative skin conditions, i.e. eczema, psoriasis, etc where the affected area cannot be covered
- Those with extensive skin lesions, e.g. pressure sores

(iii) Elderly (>65 years)
- Following local risk assessment, patient aged over 65 years also fall into the “High risk” category as they are more likely to be colonised or infected with MRSA than others
- People in the groups above are referred to as “High Risk” of MRSA in this document

Clinical areas with patients at high risk of suffering serious disease if they developed clinical MRSA infections include the following:
- Intensive Care Unit (ICU)
- Special Care Baby Unit (SCBU)
• Orthopaedics

6.1.2. Low MRSA risk individuals

(i) Low risk of acquiring MRSA
- Those with no wounds, healed wounds or small wounds covered with an occlusive dressing
- Those without invasive devices

(ii) Low risk of spreading MRSA
- Those with colonisation in the nose or other body sites covered with clothing, such as axillae or perineum, but with no open skin lesions or indwelling devices

6.2 Screening for MRSA

Microbiology: MRSA screening is the microbiological testing of samples taken from the potential carriage sites of a patient, for the presence of MRSA. It is the process by which patients who are colonised with MRSA are identified wherever possible. Apart from SCBU all other patients who are MRSA positive should be actively decolonised as per decolonisation procedure.

The purpose of screening: Colonised and infected patients are the primary reservoir of MRSA infection for others. Identifying MRSA positive patients in hospital by active screening allows limited isolation and co-horting facilities to be targeted on positive patients and decolonisation of a subset of patients. This minimizes the risk of onward transmission to other patients. Patients found to be MRSA positive should also receive Teicoplanin (if they require peri-operative antibiotic prophylaxis) in addition to, or instead of, their normal prophylaxis regimen (refer to the Trust antibiotic prophylaxis guidelines). Microbiology advice should be sought in instances.

Patient Groups that MUST be screened

6.2.1 ELECTIVE ADMISSIONS (excluding maternity and paediatrics)

All elective (planned) admissions must be screened before admission. This includes elective admissions for:

General medical purposes
- Cardiac catheter laboratory for Pacemakers or Reveal device insertion
- Chemotherapy (urgent, 1st admission and subsequent cycle admissions)

General surgery
Breast surgery
Hand surgery at St Albans hospitals
Urology
ENT
Invasive pain relief under the care of anaesthetist
Orthopaedics
Gynaecology
Cardiac interventions
Ophthalmology

(Patients NOT requiring screening (unless high-risk) children, dental include day-case endoscopy or bronchoscopy, minor dermatology procedures and out-patient procedures in Helen Donald Unit)

Obstetrics:
- Elective caesarean sections
- ‘High-risk’ cases of complications in the mother and/or potential complications in the baby
- Patients with frequent hospital admissions in last year etc.

Children:
- There is no routine screening of elective admissions to the children’s ward unless ‘high risk’

Elective admissions should be screened no earlier than eight weeks before their admission. Patients who are MRSA positive should be treated with the skin decolonisation protocol no earlier than one week before admission. Elective admissions who are booked late (i.e. ≤ 14 days) prior to their procedure should be screened and advised to start on the Octenisan® antiseptic skin wash one week prior to admission without waiting for results. Results should be actively followed up by the pre-op team prior to the procedure as they may affect the choice of peri-operative surgical prophylaxis.

N.B. Any elective admission, listed above, that had not been screened prior to admission must be screened within 24 hours of admission.

6.2.2 EMERGENCY ADMISSIONS (excluding maternity and paediatrics)
The following patients admitted as an emergency admission should be screened for MRSA within 24 hours of admission:
- All patients aged >16 years with or without MRSA risk factors
- 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 and ITU
6.2.3 MATERNITY ADMISSIONS

The following pregnant women should be screened for MRSA:

- Elective caesarean sections
- Emergency caesarean sections
- Antenatal admissions to Victoria ward
- In-utero transfers from another hospital
- Pregnant women admitted for normal vaginal delivery who are not at high risk of complications to mother or baby need not be screened
- Patient with risk factors/high risk, hospital admission within two weeks

**Elective admissions for a caesarean section** should be screened when the date for the elective caesarean section is booked from the antenatal clinic (Appendix 3). Information leaflet should be given to all maternity patients prior to being screened (Appendix 12).

**Admissions for an emergency caesarean section** should be screened prior to transfer to the operating theatre, if there is sufficient time to do so without jeopardising maternal or foetal well being. If this is not possible swabs should be taken in the recovery area following the procedure (Appendix 3). All other admissions to maternity that fulfil the criteria to be screened should be screened within 24 hours of admission.

6.2.4 PAEDIATRIC ADMISSIONS (including SCBU)

Any children aged ≤ 16 in the following high risk categories must be screened within 24 hours of admission:

- Known to be previously infected or colonised with MRSA
- Transfers from other care facilities (e.g. hospitals and care homes)/or been inpatient in last year
- Presence of chronic open skin lesions
- Presence of long term indwelling devices (e.g. PEG, suprapubic catheters, urinary catheters, long term intravenous lines, tracheostomies)
- Admission to Special Care Baby Unit (SCBU) (Appendix 16)

6.2.5 Weekly MRSA screening for MRSA NEGATIVE high-risk inpatients.

Undertake weekly in-patient screening on MRSA - negative patients if any of the following risk factors are present:

- All post-surgery patients or patients with previous positive history on high risk/surgical/other area
- Continuing presence of an invasive device for >72 hours e.g. tracheostomy tube, PEG, central line, urinary catheter in situ, peripheral intravenous line, surgical drains including stents
- Chronic ulcers/pressure sores
● All patients in ITU/HDU and SCBU (Procedure also for patients with no previous positive history)
● Screen inpatients for MRSA at the time of any new episode of sepsis

6.3 Sites to Screen
Screen the following sites:

● Both nostrils (use one swab to sample both nostrils)
● Perineum (groin only when access to the perineum is impossible and post partum women)
● Skin lesions and wounds
● Invasive device sites, e.g. tracheostomy, PEG, PVC, PICC etc.
● If urinary catheter in situ then take a catheter specimen of urine, (CSU) using an aseptic technique via the needle-free sampling port, and specifically request MRSA screen
● Sputum from patients with a productive cough

6.4 Technique of screening patients
Screening technique:
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 or nose, the swab must be moistened prior to sampling using the swab medium, sterile water or sterile saline
● Rub and rotate the swab firmly on each area
  Nose – anterior noses
  Wounds- technique/principle
  ‘Clean to dirty’
● Place swab in the medium tube and label
● Each patient screen will be accompanied by a microbiology request form labelled MRSA screen and sites screened identified.
● 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. Handling of MRSA screen positive results

The microbiology laboratory staff will inform the Infection Prevention & Control Nurses of all ‘new’ MRSA positive results. In turn, the IPCN will inform the medical/nursing staff in the area/department where the patients 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 with a yellow sticker
- The Infection Prevention & control Team will update computer records/patient administration systems to identify MRSA positive status.
- For inpatients, the patient will be admitted to a side-room and nursed with the Standard Isolation procedures and the Trusts Isolation Policy applied.
- Implementation of the Trusts MRSA decontamination/decolonisation protocol e.g. nasal ointment, antiseptic body wash, ‘wound’ ointments where appropriate
- Patients found to be MRSA positive should be managed using the MRSA Care Plan in Appendix 10. In POA/Out patients follow this process
- If patient is found to be positive while in a bay with other patients. All the other patients in that bay should be screened for MRSA after the patient has been moved into an isolation room. Or screen contacts if transferred/discharged prior to positive patient (index) being isolated

7.1 Reporting MRSA screen positive results (nose and perineum/groin swabs) to clinicians and specialties

i) Elective admissions (Pre-op and Medical patients): It is the responsibility of staff in Pre-op, DSU or OPD to inform the patient and the patient’s GP about the results and the Pre-op, DSU and OPD to arrange for 5 days of decolonisation treatment before admission.

ii) Maternity out-patients: It is the responsibility of maternity staff to contact the patient and to arrange for her to collect the decolonisation protocol

iii) SCBU patients: Results will be telephoned to SCBU by the Microbiologist. The Infection Prevention and Control Nurse will visit SCBU to ensure correct precautions are followed and answer any questions from staff and parents.

iv) Emergency adult admission and other inpatients: Infection Prevention and Control Nurse will verbally inform staff followed by a visit to the ward. Answer any questions from staff and patients.

v) Positive results available after patient has been discharged: The DH recommends that (adult) patients found to be colonised with MRSA should be offered decolonisation treatment. Therefore, the positive MRSA screen results available after a patient has been discharged will be sent to the patient’s GP by the Infection Prevention and Control Team in the form of a letter.

7.2 MRSA Alert System on PAS (CLINICOM/Patient Centre)
All patients found to be MRSA positive from screening will have an ‘MRSA Alert’ placed on their PAS records. This alert will remain on the patient’s records even after they have had 3 or more negative MRSA screens and therefore indicates that the patient is an ‘MRSA risk’ and not necessarily ‘MRSA positive’.

It is the responsibility of clinical staff to check for an alert on PAS when the patient is admitted and isolate the patient until the screen results are known.

8. Treatment of MRSA positive patients
All adult inpatients found to be MRSA positive should be managed using the MRSA care plan (appendix 10)

8.1 Treatment of MRSA carriers (Decolonisation)

- All adult in-patients found to be MRSA positive for the first time will be prescribed topical decolonisation treatment
- The objectives of the skin decolonisation treatment is to reduce the risk of the patient developing an MRSA infection with their own MRSA during medical or surgical treatment and to reduce the risk of transmission of MRSA to another patient
- The decolonisation regimen is only 50–60% effective for long-term clearance but as soon as the treatment starts the presence and shedding of MRSA are reduced significantly
- All patients undergoing MRSA decolonisation should be given the information leaflet (Appendix 12)
- Treatment for neonates and paediatrics will depend on their age and clinical condition and therefore will be discussed on a case by case basis between the Infection Prevention and Control Team/microbiologist and paediatricians

8.1.1 Timing of the treatment of MRSA carriers (Decolonisation)

(i) Elective admissions: The decolonisation regimen for MRSA positive patients should be commenced a week before admission (not any earlier). There is no requirement to cancel a patient’s procedure unless MRSA eradication has been unsuccessful (2 attempts usual) and discussions with surgeon doing the procedure required.

(ii) Emergency admissions to ITU/HDU, and/or with emergency orthopaedic trauma: Commence Octenisan® body wash after screening swabs have been taken – i.e. do not wait for MRSA screening results. If swabs are found to be MRSA positive then add in Mupirocin nasal cream. (Inpatient wards that currently commence antiseptic body washes on all patients are ITU. In orthopaedic wards at Watford (Ridge & Cleves) antiseptic body washes should commence on emergency
for orthopaedic patients prior to going to Theatre and this practice should continue until the patient is discharged home.

(iii) Patients admitted to all other wards should wait for the MRSA screening results, unless advised otherwise by a member of the IPCT.

8.2 Topical treatment for MRSA decolonisation

This is a five day course which combines use of nasal Mupirocin plus antiseptic body & hair Wash (Octenisan® body wash):

(i) Nasal Mupirocin:

Apply a small amount of Mupirocin 2% nasal cream (Bactroban) to the inner surface of each nostril three times daily for 5 days, squeezing the nostrils together after application.

The patient should be able to taste Mupirocin at the back of the throat after application.

Prolonged (more than 5 days) or repeated courses of Mupirocin (more than two courses in a single hospital admission) must not be given because of the risk of the development of resistance. Furthermore, prolonged or repeated courses of eradication treatment may be unsuccessful. Mupirocin should not be given until a positive MRSA result is confirmed. If the MRSA is resistant to Mupirocin, prescribe Naseptin nasal cream 4 times/day for 10 days. NB avoid in patients with peanut allergy and contact a member of the IPCT or pharmacist for advice.

(ii) Topical Antiseptic wash:

- Bath daily for 5 days with Octenisan® antiseptic body wash to reduce the staphylococcal load on the skin or 10 days if naseptin used
- Moisten the skin and then apply the antiseptic thoroughly to all areas in place of soap, leave for 1-3 minutes before rinsing in the bath or shower
- Special attention should be paid to known possible carriage sites including axilla, groin and perineum
- If possible, wash hair twice weekly with the Octenisan® antiseptic body wash.
- Bed linen/clothing: when patient is in hospital, give the patient clean sheets, towels and pyjamas daily
- If there are no supplies of Octenisan®, Supplies will source an alternative such as Triclosan
- The patient must be given their own un-opened bottle for the duration of their treatment that must be labelled with their name, & date of opening
NOTE: Antiseptic solutions should be used with caution on patients with dermatitis. Dermatological advice on the appropriate treatment for these individual patients should be sought.

**Topical Treatment Protocol**

<table>
<thead>
<tr>
<th>Formulation</th>
<th>Frequency</th>
<th>Duration</th>
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<tbody>
<tr>
<td>Nasal Mupirocin (Bactroban) 2% <strong>nasal ointment</strong></td>
<td>Three Times Daily</td>
<td>5 days</td>
</tr>
<tr>
<td>Mupirocin 2% <strong>cream</strong> for secondarily infected traumatic lesions (not greater than 10cm² in area or 10cm in length)</td>
<td>Up to 3 Times Daily</td>
<td>May be given up to 10 days, but re-evaluate after 3-5 days</td>
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<tr>
<td><strong>Body Wash- Octenisan</strong></td>
<td>Daily, apply to skin before entering bath or shower</td>
<td>5 Days</td>
</tr>
<tr>
<td><strong>Shampooing Octenisan</strong></td>
<td>Twice Weekly</td>
<td>5 Days</td>
</tr>
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</table>

**What is octenisan?**

Octenisan® is an antimicrobial hair and body wash effective against a broad range of microorganisms whilst caring for the skin.

**How to use octenisan**

Octenisan® 5 day antimicrobial wash protocol.

<table>
<thead>
<tr>
<th>DAY 1</th>
<th>DAY 2</th>
<th>DAY 3</th>
<th>DAY 4</th>
<th>DAY 5</th>
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</table>

- **Step 1**: Wet skin and/or hair
- **Step 2**: Apply an adequate amount of octenisan® undiluted onto a damp wash cloth
- **Step 3**: Apply octenisan® evenly all over the body & hair (recommended skin contact time 1 minute*)

**Do not forget:**

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**Paying particular attention to:**

- a) Armpits
- b) Groin
- c) Perineum (area of skin around bottom)

- **Step 4**: Rinse off
- **Step 5**: Dry with a clean towel
- **Step 6**: Put on clean clothing and clean bedding

**Important**: Bath or shower daily using octenisan® and following this procedure.

Ensure that you are the sole user of the washcloth and towel or that these are disposable.

Use a clean and dry washcloth and towel for each shower or bath and ensure that these are properly cleaned and dried before using again.

If you experience any difficulty in following this procedure, please seek help from a carer or healthcare professional.
After protocol, apply clean clothing, bedding and supply clean towels.

- Disposable flannels should be used for washing patients.
- Disposable washbowls must be used for MRSA positive patients.
- For high level Mupirocin resistance, Naseptin may be advised nasally 4 times a day for 10 days per protocol in place of Mupirocin (NB: Naseptin contains peanut oil).

8.3 Treatment of Clinical infection

Systemic antibiotics should not be given unless a patient has evidence of infection or for peri-operative prophylaxis or advised by consultant microbiologist.

Systemic antibiotic therapy may be necessary if a patient has moderate to severe infection with MRSA.

Mild MRSA infections can be treated with oral antibiotics – ALWAYS DISCUSS WITH MICROBIOLOGIST if oral treatment for MRSA infection is required.

For severe infections requiring IV antibiotics, Teicoplanin is the antibiotic of choice for this Trust. DISCUSS WITH MICROBIOLOGIST.

If the patient develops a wound infection postoperatively they should be treated empirically with IV Teicoplanin. DISCUSS WITH MICROBIOLOGIST.
Always seek advice of the consultant microbiologist and/or refer to the Trust Antimicrobial guidelines on the Intranet.

8.4 Surgical prophylaxis

All MRSA positive patients (including those for caesarean sections) should have IV Teicoplanin in addition to (or instead of) their routine prophylaxis for that procedure. Teicoplanin covers Streptococci and Staphylococci, therefore, there is no need to use Benzylpenicillin and/or Flucloxacillin if Teicoplanin is used. Access Trust antibiotic policy for local practice.

9. Care of MRSA colonised or infected patients
9.1 Immediate care to be implemented

(i) Hand hygiene: the single most important factor in preventing infection and transmission to other patients is through hand hygiene. Use an alcohol hand rub or soap and water. (See Hand Hygiene Policy)

(ii) Isolation of patient: The patient should be isolated in a single room with ensuite/or dedicated corridor. It is particularly critical that patients with open skin lesions, skin disorders like psoriasis or indwelling devices are isolated. The door should be kept closed at all times. If there are insufficient single rooms available then MRSA positive patients can be coholed together in a bay on the ward but patient need to be assessed to ensure they are not having other ‘infections’ present eg diarrhoea etc. A nurse should be dedicated to caring for only MRSA positive patients. The decision to cohort must be made in liaison with the Infection Prevention and Control Team.

Isolated in a side room:
- Display the “Isolation sign” on the outside of room door and ensure it is completed appropriately
- Place gloves, aprons, observations folder, alcohol hand rub outside room (mask for cough inducing procedures or if patients productive)
- Ensure alcohol hand rub soap, paper towels are in adequate supply inside as well as gel, gloves, apron, are also available inside the room
- Place disposable BP cuff, and clinical waste bag inside room

In a bay:
- Ensure alcohol hand rub is at end of each bed
- Ensure all staff are aware of the MRSA status of patients
- Where possible, do not nurse next to other patients with wounds, other skin lesions, or invasive devices e.g. urinary catheters, PEG tubes
(iii) **Wear gloves and aprons** when carrying out significant hands-on care e.g. handling dressings, infected wounds, collection of specimens and handling body fluids. Remove gloves and aprons and wash hands before leaving the room (unless they are being worn to carry body fluids to the sluice).

Visitors are not required to wear protective clothing unless providing/assisting with direct care
Refer to isolation policy

(iv) **Explain to the patient about MRSA**, clinical implications and the role of isolation to patient and family. There is no need for visitors to wear gloves and aprons, unless they are going to help carry out significant hands-on care, such as bed bathing. Give MRSA information leaflet to patient and relatives but must be asked to decontaminate their hands on entering and leaving the isolation room/area.

(v) **MRSA Decolonisation**: Ensure topical decolonisation regimen has been prescribed if Appropriate.

(vi) **Perform all dressings** and ward-based clinical procedures in the patient’s room or at their bedside

(vii) **Invasive devices**: If patients have invasive devices they are at increased risk of developing an infection. Ensure all invasive devices, such as peripheral cannulas, urinary catheters, central lines, PEGs etc, and any wounds are cared for according to trust policies and care plans maintained to reflect practices.

9.2 **Ongoing care of MRSA positive patients**

(i) **Equipment**: Use dedicated single use/single patient use equipment wherever possible. If it is not possible to dedicate equipment to an MRSA positive patient, clean with a chlorine based solution e.g. Chlor clean (1000 ppm av chlorine) before use on another patient.

(ii) **Bath and toilet use**: Where possible the patient should use a shower. If a bath is used ensure that it is cleaned thoroughly after use. No special toilet facilities are required.

(iii) **Linen and patient’s clothing**: Linen and patient’s night clothes should be changed on a daily basis. Excess linen should not be stored in the isolation room. Used linen should be disposed of in a red alginate bag.

(iv) **Waste** should be disposed of according to the Trust Waste Management Policy.

(v) **Environmental cleaning**: Keep domestic staff informed. Domestic staff must clean the room on a daily basis using a chlorine based disinfectant.

**This must include:**
- Damp dusting of all surfaces, including locker, bedside table and chair
- All accessible parts of the bed frame
- Special attention to frequently touched surfaces such as taps, door handles, nurse call and bed control
- Outside of waste bin (if applicable), floor
- En suite bathroom/toilet (if applicable)

10.  MRSA positive patient Movement/Transfer

10.1  Transfer of MRSA colonised or infected patients to another ward or department within the hospital

Avoid visits to other hospital departments where possible, e.g. portable X-ray or ECG can be used. Notify the receiving ward/dept in advance so that they can be extra vigilant with infection control precautions.

Standard Infection Control Precautions (SICP) will suffice during transfers/visits to other departments. If patient is transferred via a wheelchair remind porter that wheelchair must be cleaned with chlorine based disinfectant after use. Gloves and aprons should be worn if having close contact to assist the patient into a chair. These should be removed and hands decontaminated prior to taking the patient for their procedure.

Precautions to be taken by receiving department, e.g. X-ray, Theatres.
- Allocate patient to a slot at the end of the session if clinically feasible
- Wear gloves and aprons for any significant direct patient contact
- After patient leaves, clean the environment and equipment using chlorine based disinfectant

10.2  Transfer of MRSA colonised or infected patients between care sectors

If transfer by ambulance is necessary, the clinical team must notify the service of the patient’s MRSA status. Risk is minimal in patients who have no open skin lesions or indwelling devices. Good infection control practices and routine cleaning should suffice to prevent cross transmission.

When a patient is to be transferred to another care facility eg hospital, care home, the receiving facility must be notified in advance by the ward manager. The MRSA status must be recorded in the transfer letter.

When a patient is discharged the GP must be informed in the discharge letter. When district nurse input is required, the district nurse must be informed in advance and in writing.
Relaying this information is the responsibility of the clinical team organising the discharge or transfer.

The presence of MRSA is not a contraindication to discharge a patient to their own home or to a care facility such as a residential or care home.

11. Post treatment screening

(i) In some circumstances, it may be required to establish MRSA clearance or suitability to stop source isolation. In such cases, it is necessary to obtain three negative screens, each screen being taken 7 days apart 48 hours after decolonisation treatment has been completed. However negative screening results are not an absolute indication that MRSA has been eradicated but is helpful for nursing guidance purposes only if there is pressure to free up single rooms. This should only be undertaken following discussion with the Infection Prevention and Control Team.

There is no value in re-screening MRSA positive patients until wounds have healed and invasive devices have been removed. It is unlikely that MRSA in a wound or site of an in situ indwelling device will be cleared until the wound has healed. Negative MRSA screens in a patient with open skin lesions should not be regarded as MRSA free. Current MRSA screening tests can fail to detect small numbers of MRSA present at a site.

(ii) If an MRSA positive patient is likely to need transfer to another hospital which requests that the patient has topical eradication treatment, then please discuss with the Infection Prevention and Control Team.

(iii) Screening swabs for MRSA clearance are of no use if taken whilst a patient is receiving systemic MRSA antimicrobials such as Vancomycin or Teicoplanin.

12. On Discharge

Patient's MRSA Positive status and the management given must be included on the discharge summary. If being discharged to a care or nursing home, the ward manager/nurse in charge must inform the receiving home manager

12.1 Nursing staff

Arrange for Terminal Clean of the bed space/side room by the cleaning contractor:
Strip linen and bag appropriately.
Clean the pillows, mattress and all clinical equipment within the room, including commode with a chlorine based disinfectant).
12.2. Cleaning contractor

- Place all waste in a clinical waste bag, close and remove from the room
- Clean the following surfaces: locker, bedside table and chair, all surfaces of bed frame, outer surfaces of waste bin (if applicable), special attention to frequently touched surfaces such as taps, door handles, nurse call and bed control
- Mop the floor

13. Staff members and MRSA

13.1 Screening for staff

Staff do not need to be screened for MRSA after contact with patients with MRSA. Staff may be screened for MRSA as part of an investigation into a possible MRSA outbreak/transmission in a clinical area where the epidemiology suggests possible staff to patient transmission. In such a situation screening must only be undertaken following a request from the Infection Prevention and Control Team and in conjunction with the Occupational Health (OH) Department. Screening should be carried out at the beginning of a shift to avoid detecting transient carriage. Results will be sent to Occupational Health. Staff may also be screened if they are patients at the hospital and fall under the category for screening. The result from such screening will be sent to the requesting doctor.

13.2 Staff found to be colonised with MRSA – incidentally and not in an outbreak investigation

The staff member should be referred to OH where they will be risk assessed for any lesions that might increase the risk of spreading MRSA. If present, the lesions will be investigated and treated accordingly. If no lesions are present, the staff member should receive the 5 day course of decolonisation protocol. OH should re-emphasize the need to observe good hand hygiene standards. There is no need for the MRSA positive staff member to take time off work. There is no need to re-screen for MRSA carriage after completion of decolonisation.

13.3 Staff found to be infected with MRSA

The staff member should report the infection to Occupational Health (OH). OH should inform the Infection Prevention and Control Team the staff member’s name and work area.
The Infection Prevention & Control Team will investigate to see if there are MRSA cases that may be related to the staff member in the clinical area and act accordingly. Decisions relating to re-screening will be based on a case by case basis.

13.4 **Staff found to be colonised with MRSA during an outbreak investigation**

The staff member should be referred to OH where they will be risk assessed for any lesions that might increase the risk of spreading MRSA. If no lesions are present, the staff member should receive the 5 day course of decolonisation protocol. OH should re-emphasize the need to observe good hand hygiene standards. For the first 48 hours of decolonisation, the staff member should not work with patients or have contact with their environment. Five days after completion of the decolonisation regimen; the staff member should be re-screened again for MRSA. If found to be MRSA positive on the first re-screen, the staff member should be offered another 5 day course of the decolonisation regimen and advised to avoid patient contact for the initial 48 hours of the 5-day course.

Seven days after completion of the second decolonisation regimen, the staff member should be re-screened again. If they remain MRSA positive after the second decolonisation regimen, they should be managed case by case after discussion with the staff member, OH and Infection Prevention and Control Team.

14. **Panton-Valentine Leukocidin (PVL) producing MRSA (PVL MRSA)**

See Appendix 17

15. **Training**

Staffs that need to undertake screening will receive training from the Infection Prevention & Control. Standard Infection Prevention & Control Practices will be covered during all Mandatory Infection Prevention & Control Updates. During specific Clinical Updates for nurses, more detailed coverage will be given to prevention and management of patients with MRSA. Ward based training sessions will delivered by the Infection Prevention & Control Nurses in response to an increase in the incidence of MRSA within that setting.

16. **Evaluation Measures**

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>Lead</th>
<th>Frequency</th>
<th>Reporting arrangements</th>
<th>Acting on recommendations</th>
<th>Change in practice and lessons to be shared</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRSA Screening Matrons</td>
<td>Monthly</td>
<td>Results will be included in the Monthly IPC dashboard</td>
<td>Matrons</td>
<td>Results discussed at individual Divisional Governance meetings</td>
<td></td>
</tr>
<tr>
<td>Clusters of hospital Acquired MRSA in clinical areas</td>
<td>IPCT</td>
<td>Continuous</td>
<td>Numbers of new hospital acquired MRSA cases will be included in the IPC dashboard</td>
<td>Matrons and ward managers</td>
<td>Clusters discussed at individual Divisional Governance meetings</td>
</tr>
</tbody>
</table>
17. References


NICE quality standard(2014) Guidelines for Infection Prevention and Control


18. Related Policies

- Standard Infection Control Precautions Policy.
- Hand hygiene policy
- Outbreak policy
- Isolation Policy
- Dress code/uniform policy
19. Equality Impact Assessment Statement

<table>
<thead>
<tr>
<th></th>
<th>Yes/No</th>
<th>Comments</th>
</tr>
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<tbody>
<tr>
<td>1. Does the policy/guidance affect one group less or more favourably than another on the basis of:</td>
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<tr>
<td>Race</td>
<td>No</td>
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<tr>
<td>Ethnic origins (including gypsies and travellers)</td>
<td>No</td>
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<td>Nationality</td>
<td>No</td>
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<tr>
<td>Gender</td>
<td>No</td>
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<tr>
<td>Culture</td>
<td>No</td>
<td></td>
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<tr>
<td>Religion or belief</td>
<td>No</td>
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<tr>
<td>Sexual orientation including lesbian, gay and bisexual people</td>
<td>No</td>
<td></td>
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<tr>
<td>Age</td>
<td></td>
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<tr>
<td>Disability - learning disabilities, physical disability, sensory impairment and mental health problems</td>
<td>No</td>
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<tr>
<td>2. Is there any evidence that some groups are affected differently?</td>
<td>No</td>
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<td>3. If you have identified potential discrimination, are any exceptions valid, legal and/or justifiable?</td>
<td>N/A</td>
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<tr>
<td>4. Is the impact of the policy/guidance likely to be negative?</td>
<td>No</td>
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<td>5. If so can the impact be avoided?</td>
<td>N/A</td>
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<tr>
<td>6. What alternatives are there to achieving the policy/guidance without the impact?</td>
<td>N/A</td>
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<tr>
<td>7. Can we reduce the impact by taking different action?</td>
<td>N/A</td>
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If you have identified a potential discriminatory impact of this procedural document, please refer it to Nyarayi Mukombe, Assistant Director Infection Prevention & Control together with any suggestions as to the action required to avoid/reduce this impact.

For advice in respect of answering the above questions, please contact Jiovanna Foley, Lead Infection Prevention & Control Nurse.
## Policy and Procedure Sign-off Sheet

**Policy Name and Number:** Trust Policy for Meticillin Resistant Staphylococcus aureus (M.R.S.A)

**Version Number and Date:** 17th January 2017 No: Version 2

**Service Location:** Trust wide

All staff members must sign to confirm they have read and understood this policy.

<table>
<thead>
<tr>
<th>Name</th>
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Appendix 1  Surgical Assessment MRSA Screening Flowchart

MRSA STATUS

PRE-OPERATIVE ASSESSMENT (POA) PROTOCOL FOR PLANNED ADMISSION OF ADULT ELECTIVE SURGICAL PATIENTS

Swabs/specimens from nose, perineum/groin, wounds/skin lesions, and any indwelling devices will be taken in POA clinic and tested for MRSA

POA staff to check the MRSA screen results of their patients (48-72hrs results available on ICE system)

If MRSA positive:
Commence MRSA topical decolonisation regime as per Trust MRSA policy (Mupirocin 2% (Bactroban) ointment to nasal nares, and Octenisan washlotion.

If MRSA negative & previous +ve
If MRSA negative & not previous +ve: Proceed with admission

Patient to commence full course of decolonisation treatment and attend POA for re-screening.

If positive – all patients:
- Inform patient and consultant of result
- Arrange for Consultant to see patient to discuss plan of care – appointment and decision to be made within one month.
- Action: Pause 18 week wait, pending response from Consultant (1).
- Repeat decolonisation regime and repeat swabs

If admission is to proceed, then provide patient with 5 days of body wash to use prior to admission.

Complete communication sheet to inform infection control team, Matron, and surgeon re MRSA status, date of admission.

Patient who is MRSA positive must be admitted to side room for source isolation.

ORTHOPAEDIC PATIENTS

If MRSA negative:
- Request room for source isolation and arrange admission as soon as possible.
- Provide patient with body wash to be used 5 days prior to admission and throughout hospital stay.

No further screening is required.

Non ORTHOPAEDIC PATIENTS

If MRSA negative:
Complete a further two screenings. If all negative, patient may be admitted into the open ward. If a screening returns positive, proceed as per positive (left hand box)

Provide patient with body wash to be used 5 days prior to admission and throughout hospital stay

If admission exceeds seven days, re-screen weekly & treat as per Trust MRSA policy.

(1) MRSA Screening – Operational guidance 2 DH Gateway 11123 December 31 2008.
Appendix 2  Medical Assessment MRSA Screening Flowchart

MRSA STATUS
PROTOCOL FOR PLANNED ADMISSION OF MEDICAL PATIENTS

Swabs/specimens from nose, groin, wounds/skin lesions, and any indwelling devices will be taken in pre-assessment and tested for MRSA.

Nursing staff from cardiac catheter laboratory or Helen Donald awaiting confirmation & if screening needed? frequency unit to check the MRSA screen results of their patients

If MRSA positive: Print results.
- One copy to file in patient notes
- One copy to fax to GP and request prescription for MRSA topical treatment as per Trust MRSA policy.
  (Mupirocin 2% (Bactroban) ointment to nasal nares, and Octenisan wash lotion.

Inform patient of result and arrange for collection of prescription. Application of de-colonisation treatment regime to be explained to patient.

Inform consultant of action taken

Cardiac catheter laboratory waiting list administrator to be informed of patient’s MRSA status.

Heronsgate/ Gade ward sister to be informed of patient’s MRSA status and side room requested for source isolation.

Ensure patient has sufficient body wash for use 1 week prior to admission and to continue throughout hospital stay.

Heronsgate/Gade: 1 negative MRSA screen is required prior to admission where possible. Request side room for source isolation.

Cardiac catheter laboratory: schedule patient for the end of the list. If admitted, request side room for source isolation.
Appendix 3 Obstetric Assessment MRSA Screening Flowchart

MRSA STATUS
PROTOCOL FOR PLANNED ADMISSION OF OBSTETRIC PATIENTS

Women booked for lower segment caesarean section (LSCS), to be screened for MRSA (nose, groin or perineum, wounds/skin lesions, and any indwelling devices) in antenatal preoperative assessment clinic (APOA).

Women who are an in-patient prior to their delivery are to be screened by Victoria ward or Delivery suite staff as appropriate.

If screened late, surgery is not to be delayed

MRSA information leaflet to be given to woman at time of screening.
Women are able to refuse screening if they wish.

If MRSA positive:
- Midwife in maternity assessment unit (MAU) to contact woman to inform her of result.

If MRSA negative & prev +ve

If MRSA negative & not prev +ve:
No further action required.

If screening refused:
Low risk – No further action required.
High risk – Treat as MRSA positive and commence MRSA decontamination protocol as per Trust policy

Medical and midwifery/nursing staff to be informed of MRSA status

Sufficient time for treatment:
Woman to collect MRSA topical treatment from MDAU (Mupirocin 2% (Bactroban) ointment to nasal nares, and Octenisan wash lotion and commence 5 day course of treatment as per Trust policy.

Insufficient time for treatment:
Request side room for source isolation.
Topical treatment to commence on day of admission / operation.

Request side room for source isolation.

Schedule patient for the end of the LSCS list.

For monitoring purposes, the screening status of all women must be documented on the data sheet / ciconia maternity information system (CMIS).
<table>
<thead>
<tr>
<th>CHECKLIST</th>
<th>COMMENCED</th>
<th>SIGNED</th>
<th>DATE OF RESULT</th>
<th>SWAB RESULT</th>
<th>POSITIVE</th>
<th>NEGATIVE</th>
<th>PLANNED C/S DATE</th>
<th>DECLINED</th>
<th>ACCEPTED DATE</th>
<th>NAME / ADDRESSOGRAPH</th>
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</table>
Appendix 5

Algorithm to follow in the event of identifying MRSA positive blood cultures:

Trust MRSA Bacteraemia PIR Investigation

WHHT Microbiology Laboratory identifies an MRSA in a blood culture.

Consultant Microbiologist

Infection Prevention & Control (IPC) Nurse

(i) Requester
(ii) CCG in weekly HCAI report
(iii) PHE via Co-Surv

Clinical Team

Division to complete Serious Incident Report

Report result on DCS (MESS) (same / next working day where possible)

Inform relevant Trust, CCG and HCT staff (same / next working day)

DCS assigns case to WHHT or CCG by e.mail (day 0)

Division to organise PIR meeting on day 3 – day 5

If provisionally / anticipated WHHT

If CCG/HCT leads on PIR and is responsible for uploading data.

Report completed post PIR meeting by Division by day 6

Division e.mail the completed PIR form to IPC Nurse / Team & Take further actions with learning identified from the PIR

IPC Team enter PIR data on DCS by day 7

Failure by the Division to complete RCA with key stake holders within 5 working days will result in the Trust CEO arranging the RCA.

CCG – Clinical Commissioning Group
DCS – Data Capture System
HCT – Hertfordshire Community Trust
PHE – Public Health England
PIR – Post Infection Review

June 2013
Appendix 6  

GP Letter Template

GP Name & address

Dear Dr ………………………

Emergency Admissions Screening for MRSA

Re: Patient Name …………………………………………………

DOB ……………… NHS No …………………………..

Within the national requirement for screening for MRSA of emergency admissions to the Trust, the above patient was confirmed to be MRSA

Positive on ………………………. (date)

Site(s) ……………………………………………………..

Mupirocin……..Sensitive/Resistant (delete as appropriate)

This result may not have been available until after the patient was discharged.

The clinical view is that those patients who are screened for MRSA and found to be positive only need to be considered for decolonisation/decontamination in the following circumstances:

1. Patients with a planned admission within three months
2. Patients with an indwelling device
3. Patients with a wound that appears not to be healing normally

If any of these criteria apply, this patient was discharged back to Primary Care before the result was available and decolonisation is indicated, please prescribe the attached protocol. An instruction sheet for the patient is enclosed.

Yours sincerely

Assistant Director Infection Prevention & Control
Appendix 7  Instruction Sheet for MRSA Decolonisation

The **MRSA** treatment consists of ‘Hibiscrub (Chlorhexidine gluconate 4% w/v) Body Wash and ‘Mupirocin’ Nasal Ointment – instructions for use are given below. Please use them exactly as directed.

How to use your MRSA Body Wash and Nasal Ointment

**Body Wash:**
- Use the Body Wash **once a day for 5 consecutive days**
- Apply the Body Wash **directly** on to your body, and then wash off using water
- Apply the Body Wash **all over** your body – including your back
- **Do not pour** the Body Wash into the water in your bath or sink/basin as this will dilute it and make it less effective
- **Do not use** bubble bath or shower gel with the Body Wash
- You may use a **flannel**, but this must be **changed each day** for a clean one
- You should also use a **clean towel** every day
- Use the Body Wash as a **shampoo** twice in the 5 days – e.g., on day 1 & day 5 (You may put conditioner on your hair afterwards if you wish.)

**Nasal Ointment:**
- Put a small amount of the Nasal Ointment inside each nostril **three times a day**
- **Wash your hands** after each application

**After 5 days:**
- **Stop** the use of the Body Wash and Nasal Ointment

**Your 5-Day Programme ‘At a Glance’**

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Body Wash</td>
<td>Use Body Wash</td>
<td>Use Body Wash</td>
<td>Use Body Wash</td>
<td>Use Body Wash</td>
</tr>
<tr>
<td>Apply Nasal Ointment to both nostrils 3 times during the day</td>
<td>Apply Nasal Ointment to both nostrils 3 times during the day</td>
<td>Apply Nasal Ointment to both nostrils 3 times during the day</td>
<td>Apply Nasal Ointment to both nostrils 3 times during the day</td>
<td>Apply Nasal Ointment to both nostrils 3 times during the day</td>
</tr>
<tr>
<td>Shampoo hair with Body Wash</td>
<td>Shampoo hair with Body Wash</td>
<td>Shampoo hair with Body Wash</td>
<td>Shampoo hair with Body Wash</td>
<td>Shampoo hair with Body Wash</td>
</tr>
</tbody>
</table>
Appendix 8  Instruction Sheet for MRSA Decolonisation (Mupirocin Resistance)

The MRSA treatment for patients who have Mupirocin Resistance consists of ‘Hibiscrub (Chlorhexidine gluconate 4% w/v)’ Body Wash and ‘Naseptin’ Nasal Ointment. N.B. Do not use Naseptin if allergic to peanuts or soya. Instructions for use are given below. Please use them exactly as directed.

How to use your MRSA Body Wash and Nasal Ointment

Body Wash:
- Use the Body Wash **once a day for 10 consecutive days**
- Apply the Body Wash **directly** on to your body, and then wash off using water
- Apply the Body Wash **all over** your body – including your back
- **Do not pour** the Body Wash into the water in your bath or sink/basin as this will dilute it and make it less effective
- **Do not use** bubble bath or shower gel with the Body Wash
- You may use a **flannel**, but this must be **changed each day** for a clean one
- You should also use a **clean towel** every day
- Use the Body Wash **as a shampoo** four times in the 10 days – e.g. on day 1, day 4, day 7 & day 10
  (You may put conditioner on your hair afterwards if you wish)

Nasal Ointment:
- Put a small amount of the Nasal Ointment inside **each** nostril **four times a day**
- **Wash your hands** after each application

After 10 days:
- **Stop** the use of the Body Wash and Nasal Ointment

Your 10-Day Programme ‘At a Glance’

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
<th>Day 6</th>
<th>Day 7</th>
<th>Day 8</th>
<th>Day 9</th>
<th>Day 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Wash &amp; Shampoo hair</td>
<td>Body Wash</td>
<td>Body Wash</td>
<td>Body Wash</td>
<td>Body Wash &amp; Shampoo hair</td>
<td>Body Wash</td>
<td>Body Wash</td>
<td>Body Wash &amp; Shampoo hair</td>
<td>Body Wash</td>
<td>Body Wash &amp; Shampoo hair</td>
</tr>
<tr>
<td>Apply nasal ointment X 4 during the day</td>
<td>Apply nasal ointment X 4 during the day</td>
<td>Apply nasal ointment X 4 during the day</td>
<td>Apply nasal ointment X 4 during the day</td>
<td>Apply nasal ointment X 4 during the day</td>
<td>Apply nasal ointment X 4 during the day</td>
<td>Apply nasal ointment X 4 during the day</td>
<td>Apply nasal ointment X 4 during the day</td>
<td>Apply nasal ointment X 4 during the day</td>
<td>Apply nasal ointment X 4 during the day</td>
</tr>
</tbody>
</table>
Appendix 9  GP Letter for Elective results

GP Name & address

Dear Dr ..........................

Elective Admissions Screening for MRSA

Re: Patient Name .............................................................

DOB ....................  NHS No .................................

The above patient was confirmed to be MRSA

Positive on .........................  (date)

Site(s)  .........................................................

Mupirocin........Sensitive/Resistant (delete as appropriate)

This result may not have been available until after the patient was discharged.

The clinical view is that those patients who are screened for MRSA and found to be positive only need to be considered for decolonisation/decontamination in the following circumstances:

1. Patients with a planned admission within three months
2. Patients with an indwelling device
3. Patients with a wound that appears not to be healing normally

If any of these criteria apply, this patient was discharged back to Primary Care before the result was available and decolonisation is indicated, please prescribe the attached protocol. An instruction sheet for the patient is enclosed.

Yours sincerely

Assistant Director Infection Prevention & Control
Appendix 10

MRSA Care Plan

Methicillin Resistant Staphylococcus Aureus (MRSA)

### Additional instruction/information
- Topical treatment, if prescribed, should be discontinued after 5 days
- Post treatment swabs should be undertaken 48 hours after topical treatment has been discontinued
- All relevant personnel, e.g. X-ray, theatres etc, should be informed of MRSA status
- MRSA sticker to be placed on the front cover of patients notes by ward/department staff.
- For additional guidance please refer to the Trust MRSA Policy, Chapter G, in the Infection Control Manual

### Patient label / details

| Name: _____________________________ |
| D.O.B: _____________________________ |
| Hosp No: ___________________________ |
| Consultant: __________________________ |

### Problem/s:

__________________ is Methicillin Resistant Staphylococcus Aureus (MRSA) positive in:

(please state initial site/sites)_____________________________________________________________

Please insert date when initial result reported: ________________________

### Aims of Care / Goal:

- To reduce / eradicate MRSA colonisation / infection
- To prevent and control the transmission of MRSA to others
- To minimise the potential psychological effects of isolation

### Nursing Actions:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>MRSA information sheet and verbal explanation given to patient</td>
</tr>
<tr>
<td></td>
<td>Date given:</td>
</tr>
<tr>
<td>2.</td>
<td>Patient is nursed in source isolation</td>
</tr>
<tr>
<td></td>
<td>Date isolated:</td>
</tr>
<tr>
<td>3.</td>
<td>Source isolation card is on the front of room door and appropriate boxes on the card are ticked to increase compliance</td>
</tr>
<tr>
<td>4.</td>
<td>A full MRSA Screen is completed according to hospital policy</td>
</tr>
<tr>
<td></td>
<td>Date Screened:</td>
</tr>
<tr>
<td>5.</td>
<td>Commence topical treatment as advised and if MRSA is sensitive to Bactroban (Mupirocin), usual 5 day topical treatment protocol is:</td>
</tr>
<tr>
<td></td>
<td>- 2% Nasal Bactroban three times daily to the nose</td>
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<tr>
<td></td>
<td>- 2% Bactroban wound ointment to positive wounds TDS if appropriate</td>
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<tr>
<td></td>
<td>- Daily body wash with skin disinfectant – Triclosan or Hibiscrub</td>
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<tr>
<td></td>
<td>- Twice weekly hair wash with antiseptic shampoo</td>
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<tr>
<td></td>
<td><strong>NB If MRSA isolate is resistant to Bactroban contact Infection Control Nurse for advice</strong></td>
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<tr>
<td>6.</td>
<td>Bed linen, towels, flannels/washcloths and clothing to be changed daily.</td>
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<tr>
<td>7.</td>
<td>Stop topical treatment protocol after 5 days and then complete a full screen after 48hrs</td>
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<tr>
<td>8.</td>
<td>Await results of first set of swabs before sending subsequent sets of MRSA swabs. (3 consecutive negative screens are required before isolation can be discontinued).</td>
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<td>9.</td>
<td>IF POSITIVE SWAB RESULT IS OBTAINED post topical treatment, CONTACT IPCN for advice</td>
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<td>10.</td>
<td>Inform the Infection Prevention and Control Nurse if isolation is discontinued whatever the reason</td>
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Name of Nurse: ____________________ Signature: ______________________ Date: __________
MRSA TOPICAL TREATMENT: Please insert dates and tick appropriate boxes

<table>
<thead>
<tr>
<th>Topical Treatment</th>
<th>Start Date</th>
<th>Stop Date</th>
<th>Nasal Ointment</th>
<th>Wound Ointment/Cream</th>
<th>Octinesan</th>
<th>Other</th>
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<tr>
<td>1\textsuperscript{st} Attempt</td>
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</table>

Microbiology swab results

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<th>Areas being screened</th>
<th>Site</th>
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</table>

Date | Comments | Signature

Name of Nurse:____________________  Signature: ______________________  Date: __________
# Topical Mupirocin Resistant Decolonisation Sticker

## Topical Mupirocin Resistant Decolonisation Checklist: 1st Treatment Cycle

### Drug hypersensitivity / Nut allergies: Please state if none

<table>
<thead>
<tr>
<th>Start date:</th>
<th>Stop date:</th>
</tr>
</thead>
</table>

**Prescribers Signature**

(This is a prescription therefore lack of signature is a drug error)

**Hair washed using Octenisan as shampoo (four days only) – Initial date performed.**

**Patient has a shower / bath. Octenisan use disposable wipes and clean towel.**

**Topical Naseptin ointment to nose as per prescription QDS. (Must commence 8am Day 1).**

<table>
<thead>
<tr>
<th>Day</th>
<th>Day</th>
<th>Day</th>
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<th>Day</th>
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<tbody>
<tr>
<td>0800</td>
<td>1200</td>
<td>1800</td>
<td>2200</td>
<td>0800</td>
<td>1200</td>
<td>1800</td>
<td>2200</td>
</tr>
</tbody>
</table>

**Patient’s nightclothes and bedding changed each day following bath / shower.**

**Authorisation to administer/supply on discharge: Signature Date:**

**Day 1**

**Day 2**

**Day 3**

**Post 1st Treatment Screening Schedule**

Take 1st on day 3 after completing protocol. Screen weekly until 3 consecutive negative screens are obtained from all relevant screening sites. **If any of the screens are positive – commence 2nd Mupirocin Resistant decolonisation programme**

<table>
<thead>
<tr>
<th>Screen</th>
<th>Date taken &amp; Initial</th>
<th>Nose</th>
<th>Groin</th>
<th>CSU</th>
<th>Wound (state site)</th>
<th>Wound (state site)</th>
<th>Wound (state site)</th>
<th>PEG</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

**If all three screens are negative re-integrate back into the ward and screen patient weekly**

<table>
<thead>
<tr>
<th>Initial</th>
<th>Date</th>
</tr>
</thead>
</table>

Is the patient to be discharged with protocol to finish the course

Yes [ ] No [ ]

## Topical Mupirocin Resistant Decolonisation Checklist: 2nd Treatment Cycle (to be given if screening sites are +ve post 1st protocol).

### Drug hypersensitivity / Nut allergies: Please state if none

<table>
<thead>
<tr>
<th>Start date:</th>
<th>Stop date:</th>
</tr>
</thead>
</table>
Prescribers Signature

(This is a prescription therefore lack of signature is a drug error)

<table>
<thead>
<tr>
<th>Prescribers Signature</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
<th>Day 4</th>
<th>Day 5</th>
<th>Day 6</th>
<th>Day 7</th>
<th>Day 8</th>
<th>Day 9</th>
<th>Day 10</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Day &amp; Initial</td>
<td>Day &amp; Initial</td>
<td>Day &amp; Initial</td>
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<td>Day &amp; Initial</td>
<td>Day &amp; Initial</td>
</tr>
</tbody>
</table>

Hair washed using Hibiscrub (Chlorhexidine gluconate 4% w/v), or Octenisan for Chlorhexidine sensitive patients, as shampoo (four days only) – Initial date performed.

Patient has a shower / bath using Hibiscrub (Chlorhexidine gluconate 4% w/v), or Octenisan for Chlorhexidine sensitive patients, as shower gel - use disposable wipes and clean towel.

Topical Naseptin ointment to nose as per prescription QDS. (Must commence 8am Day 1).

Patient's nightclothes and bedding changed each day following bath / shower.

Authorisation to administer/supply on discharge: Signature Date:

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Patient has a two day rest period from topical treatment

**Post 2nd Treatment Screening Schedule**

Take 1st on day 3 after completing protocol. Screen weekly until 3 consecutive negative screens are obtained from all relevant screening sites.

<table>
<thead>
<tr>
<th>Screen</th>
<th>Date taken &amp; Initial</th>
<th>Nose</th>
<th>Groin</th>
<th>CSU</th>
<th>Wound (state site)</th>
<th>Wound (state site)</th>
<th>Wound (state site)</th>
<th>PEG</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>+</td>
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<td>+</td>
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</tr>
</tbody>
</table>

If all three screens are negative re-integrate back into the ward and screen patient weekly

If any sites are still positive after 2nd treatment cycle, continue to nurse in isolation and screen for MRSA weekly. Record results on weekly screen chart

Is the patient to be discharged with protocol to finish the course Yes ☐ No ☐
Appendix 12 MRSA Patient Information Leaflet

Further information
Please visit Department of Health website
www.dh.gov.uk/reducingmrna

How to contact us
Infection Prevention and Control Department
Watford General Hospital
West Hertfordshire Hospitals NHS Trust
Vicarage Road
Watford
Hertfordshire
WD18 0HB

Tel: 01923 217309
Email: nyarayi.mukombe@whht.nhs.uk

If you need this leaflet in another language, large print, Braille or audio version, please call 01923 217187 or email pals@whht.nhs.uk

MRSA
Methicillin Resistant Staphylococcus Aureus.

MRSA - Patient Information
Infection Prevention and Control Department
Watford General Hospital
**MRSA - Patient Information**

**What is MRSA?**
There are lots of micro-organisms (germs) on our skin and in the environment around us. Most of them are harmless, some are beneficial and a very small proportion can cause harm. *Staphylococcus aureus* is a common germ that is found on the skin and in the nostrils of about a third of healthy people. It can cause infections.

MRSA stands for meticillin (M) resistant (R) *Staphylococcus* (S) aureus (A). MRSA are varieties of *Staphylococcus aureus* that have developed resistance to meticillin (a type of penicillin) and some other antibiotics that are used to treat infections.

MRSA is not new. It was first found in the 1960’s following the widespread use of antibiotics. MRSA is found in many countries. Some people carry MRSA on their skin or in their nostrils. They are described as being colonised with MRSA. Some people carry MRSA for a few hours or days, while others carry it for weeks or months. People are unaware that they carry MRSA because it does not harm them and they have no symptoms, unlike people who are infected with MRSA.

MRSA can cause harm when it gets an opportunity to enter the body. It can cause simple local infections such as pimples and boils, or more serious problems such as wound infections, chest infections or blood stream infections.

MRSA and other germs cause problems in hospitals. This is because people who are ill are more vulnerable to infections. Complicated medical treatments including operations and intravenous lines (drips) provide opportunities for germs to enter the body.

**How do people get MRSA?**
MRSA is usually spread by touch. If a person gets MRSA on their hands, they can pass it to people and things that they touch. It may then be picked up and passed on to others.

**How can you tell if someone has MRSA?**
People who carry MRSA do not look or feel different from anyone else and they do not have any symptoms. Patients who have an infection caused by MRSA may have signs and symptoms of infection. They develop a high temperature, or a fever, or their wound becomes red and sore and discharges pus. Many other germs can cause these signs and symptoms. Laboratory tests are carried out to find out which germs are causing infection.

**What happens when a patient gets MRSA?**
MRSA can spread to other patients. Hospital staff need to take special precautions with patients who have MRSA in order to stop it spreading. Policies for treating patients who carry MRSA or who have an MRSA infection vary according to the local situation and the individual patients affected. You can ask your infection control team about local policies.

**The following simple hygiene measures can reduce the risk of spreading MRSA**

Everyone should clean their hands before and after touching patients, Hands can be cleaned with soap and water, or an alcohol gel, or hand rubs. Staff will wear gloves and aprons when they care for a patient who has MRSA.

A patient who has MRSA may be moved to a room on their own or into a separate area for people who have MRSA or other infections. It is very important that the doors to the single room or area remain closed at all times. This is to reduce the risk of MRSA spreading into the general environment.

**How is MRSA treated?**
People who get MRSA can be treated. If a patient carries MRSA, a nurse may take swabs to check which parts of the body have MRSA. Treatment can include drugs and antibiotics, which can help to reduce or remove MRSA from hair, skin and nostrils. A patient who has an MRSA infection is usually treated with an antibiotic given through an intravenous line (drip).

**Can MRSA harm family and friends?**
MRSA does not usually harm healthy people, including elderly people, pregnant women, children and babies. MRSA can affect people who have certain long-term health problems, particularly people who have chronic skin conditions or open wounds. Ask the infection control nurse for advice if someone who has a long-term health problem wants to visit a patient who has MRSA. Visitors can reduce the possibility of spreading MRSA to other people if they do not sit on the bed and if they clean their hands at the end of the visit. If a patient who has MRSA wants to visit another patient in the hospital, they should ask the infection control nurse for advice.

**Do patients who get MRSA have to stay longer in hospital?**
Patients who carry MRSA do not usually have to stay longer in hospital. The infection control team will decide whether or not they need further treatment. This sometimes depends on whether the patient is likely to need further or repeated hospital care. Patients who have an MRSA infection may have to stay in hospital until they have completed the course of antibiotics and their infection shows signs of clearing up. Alternatively, they may need to continue treatment when they go home. A patient who is going to a nursing home or residential home can be cared for safely using simple hygiene measures.

**How is MRSA monitored?**
Infection control teams monitor MRSA in their own hospitals. NHS hospitals in England send information about MRSA blood stream infections (the most serious MRSA infections) to the Health Protection Agency. The Department of Health publishes figures for individual NHS trusts and the Health Protection Agency publishes national and regional figures. Hospitals can compare their own figures with these national and regional figures to check their progress in reducing MRSA.
Appendix 13 – MRSA Screening and Decontamination for High Risk Patients

ITU/HDU

Irrespective of a patient’s MRSA status the following will be undertaken for all ITU/HDU patients.

- All patients to be screened for MRSA on admission to and discharge from ITU/HDU
- All patients to be screened for MRSA weekly during their stay in ITU/HDU, usually undertaken on a Monday
- All patients to be screened for MRSA on the day of transfer out of ITU/HDU to other areas/wards/departments, (but not necessary if patient is being transferred from ITU to HDU or visa versa)
- All patients in ITU/HDU to be washed daily with octenisan, as per policy/manufacturers instructions. Antimicrobial 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 antimicrobial body washes.

Medical Including A&E/Surgical & Orthopaedic Divisions

- All patients to be screened on admission
- High risk patients to commence skin decolonisation with octenisan as per manufacturers’ instructions. To continue this treatment until admission screen results are known to be MRSA –ve.
- Any patients who have a central device inserted will have a full MRSA screen prior to insertion if a planned procedure or following insertion as soon as possible if undertaken in an emergency. Commence skin decolonisation with octenisan. Continue this treatment until the line is removed.
- Patients known to be MRSA +ve currently or previously
  - Source isolation to be instigated on admission
  - Full MRSA screen obtained within 24 hours of admission
  - Topical treatment to commence on admission (octenisan)
    Antimicrobial 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 antimicrobial body washes.
  - Systemic treatment if clinically indicated following discussion with Microbiologist if required.
  - Three negative screens are required before these patients are considered to be MRSA negative
Appendix 14 – Decontamination Protocol for MRSA Positive Patients

1. SKIN

**Adults and children** - Wash patient daily with Octenisan washlotion for 5 days. Apply directly to the skin on a wet disposable cloth, and do not dilute in water. Rinse with water and dry thoroughly.

**Neonates** - Wash daily with Octenisan washlotion. Apply to the skin with a disposable cloth. Rinse with water and dry thoroughly. Premature babies – wash with Octenisan washlotion– apply directly to the skin without dilution. Rinse with water and dry thoroughly.

Antimicrobial 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 antimicrobial body washes.

2. HAIR - Wash hair with octenisan washlotion twice a week if the patient’s condition allows. If the patient’s condition does not allow, use an octenisan washcap.

3. LINEN – Change bed linen daily after antimicrobial bath/wash.

4. CLOTHES – Change all nightclothes daily (after washing).

5. **5 DAY ANTIMICROBIAL WASH PROTOCOL**
6. **NASAL CARRIAGE:**

   a) **Mupirocin sensitive strains of MRSA**

   2% Mupirocin in a paraffin base (Bactroban nasal cream) is applied to the anterior nares three times a day for five days.

   b) **Mupirocin resistant strains of MRSA**

   Naseptin Cream is applied to the anterior nares four times a day for five days.

7. **WOUNDS/LESIONS**

   - Topical ointment / creams are generally not appropriate for use on wounds. Application is required three times a day which can be detrimental to wound healing. Alternative products such as silver or iodine impregnated dressings may be appropriate. Advice will be sought from a Tissue Viability Nurse or ICN.

   Mupirocin ointment / creams:
   - Do not use on burns greater than 10% or other large areas.
   - 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.

8. **UMBILICUS (NEONATES)**

   4% aqueous chlorhexidine daily for five days

**FOLLOW UP**

   a) 48 hours after stopping treatment, a full screen is required
Appendix 15  
QUICK REFERENCE GUIDE FOR MATERNITY

1. Who should be screened
   - Elective caesarean sections
   - Emergency caesarean sections
   - Antenatal admissions to Hope ward
   - In-utero transfers from another hospital

2. Timing of screening
   - **Elective caesarean sections** – swabs should be taken when the date for the elective caesarean section is booked from the antenatal clinic which is usually about 2-3 weeks prior to the due date
   - **Emergency caesarean sections** – swabs should be taken prior to transfer to the operating theatre, if there is sufficient time to do so without jeopardising maternal or fetal well-being. If this is not possible then swabs (nasal swab only should be taken in the recovery area after the procedure.
   - **Antenatal admissions and in-utero transfers** – swabs should be taken as part of the routine admission procedure along with the maternal observations and within 24 hours of admission

3. Sites to screen
   - Nose (use one swab to sample both nostrils)
   - Groin or perineum

4. How to screen
   - Nasal swab
     - Use one swab for both nostrils
     - The swab must remain sterile until actual use
     - Moisten the swab using sterile saline or sterile water
     - Rotate moistened swab in the anterior nares 5 times in each nostril
     - The process should gently rub the mucous membranes so that squamous epithelial cells from the inside of the nose are obtained
     - After sampling place the swab directly into the transport medium
   - Groin or perineum swab
     - Use a separate swab for the groin/perineum
     - The same swab should be used for both sides of the groin
     - Moisten the swabs using sterile saline or sterile water
     - Rotate the swab in the area
     - After sampling place the swab directly into the transport medium

5. Handling of results

   **Inpatients** – Ward will be informed of positive result by Infection Control Nurse and answer any questions from staff and parents.
**Maternity Outpatients** – MRSA positive results will be faxed to Consultant’s secretary and the infection control nurses will also inform maternity OPD staff. It is the responsibility of maternity staff to contact the patient and to arrange for her to collect the decolonisation protocol and information leaflet if appropriate. The management plan will be dependent on the clinical details of the patient.

**Elective caesarean sections** – all MRSA positive patients must be given a single dose of Teicoplanin 400mg IV in addition to the regular antimicrobial prophylaxis given intravenously after delivery of the baby.

6. **Admission to the ward of all MRSA positive patients**
MRSA positive patients must be admitted to a side room
Barrier precautions (gloves and aprons) must be strictly observed
MRSA positive patients who have not undergone decolonisation treatment at home should commence treatment as soon as possible.
See section 5.5.2 for full details of ongoing care of MRSA positive patients

7. **Post Surgery**
- After an MRSA positive case, a minimum of 15 minutes should elapse before the next case is undertaken to allow a sufficient number of air changes within the theatre environment
- Patients can recover in the Recovery Area provided there is one to one nursing and gloves and aprons are worn for direct contact
- MRSA positive patients should be returned to a ward side room and continue to be nursed using barrier precautions
- When the patient is discharged or moved elsewhere a terminal clean of the side room or bed space must be arranged
- Patients known to be MRSA positive who develop a wound or perineal infection should be discussed with a microbiologist and have Teicoplanin added to routine empirical antibiotics.
Appendix 16 QUICK REFERENCE GUIDE FOR SCBU

1. Who should be screened
   - All admissions to SCBU

2. Timing of screening
   - As part of routine admission observations and within 24 hours of admission
   - All babies should be screened weekly

3. Sites to screen
   - Nose (use one swab to sample both nostrils)
   - Groin or perineum
   - Umbilicus

4. How to screen
   - All swabs should remain sterile until actual use.
   - Swabs should be moistened using sterile water or sterile saline.
   - After sampling lace the swab directly into the transport medium.

   Nasal swab
   - Use one swab for both nostrils.
   - Rotate moistened swab in the anterior nares 5 times in each nostril.
   - The process should gently rub the mucous membranes so that squamous epithelial cells from the inside of the nose are obtained.

   Groin or perineum swab
   - Use a separate swab for the groin/perineum.
   - The same swab should be used for both sides of the groin.
   - Rotate the moistened swab across the area.

   Umbilicus swab
   - Rotate the moistened swab across the area

5. Handling of results
   - A Microbiologist will telephone positive results to SCBU and will inform the Infection Prevention and Control Nurses.
   - The Infection Prevention and Control Nurse will discuss the management plan with the SCBU team.
   - The management plan will be dependent on the clinical condition and gestation of the baby.
   - If decision is made to decolonise Octenisan should be used as the antiseptic wash

6. Caring for MRSA positive babies
   - As there is no adequate isolation facilities in SCBU MRSA positive babies should be nursed in an incubator if possible.
   - Position and nursery should be decided after a risk assessment has been carried out to consider the potential harm to other babies.
   - Barrier precautions (gloves and aprons) must be strictly observed.
   - Good hand hygiene is imperative.
   - Cleaning of the cot space must be undertaken 3 times per day by SCBU staff.
Appendix 17  PANTON-VALENTINE LEUKOCIDIN (PVL) PRODUCING MRSA (PVL MRSA)

Background
PVL MRSA typically affects young healthy people, with no previous medical history, often producing spontaneous skin infections including cellulitis and abscesses which tend to recur. It is often community acquired and may spread in close community settings such as families and sports teams; however hospital spread has been reported. PVL MRSA spreads easily in the community and the PVL toxin predisposes to necrosis of skin and soft tissue. Unlike healthcare associated MRSA, currently PVL MRSA is sensitive to more antibiotics.

Panton-Valentine Leukocidin (PVL) is a toxin that is produced by *Staph. aureus* strains if they carry a gene containing the genetic code for this toxin. PVL is a potent toxin that can cause cell death in skin, lung tissue and white blood cells. PVL can occur in both Meticillin-sensitive Staph aureus (MSSA) and MRSA. Currently less than 2% of Staph aureus strains produce PVL. PVL is partly responsible for the increased ability to cause infections in some MRSA clones in the community and the increased severity of these infections.

PVL is associated with increased morbidity and mortality and has been strongly associated epidemiologically with highly virulent, easily transmissible strains of *Staph. aureus* including community-associated MRSA (CA-MRSA). Intense investigations are ongoing to increase understanding of other virulence factors in PVL Staph aureus. PVL is currently used as a marker for virulence and used as a target for screening for virulence in some strains of Staph aureus. Most PVL producing Staph aureus in the UK are MSSA, but a major problem has emerged with PVL producing CA-MRSA in USA where it has become endemic in some hospitals and caused several hospital outbreaks. In the UK, occasional fatalities due to PVL producing Staph aureus and outbreaks in both community and healthcare settings have occurred, attracting high profile media attention and prompting concern regarding transmissibility and virulence associated with these organisms. There are a handful of reports of transmission of PVL producing MRSA from healthcare workers to patients.

Clinical features of PVL-MRSA
S. aureus strains that are positive for PVL have an increased ability to cause spontaneous infection and recurrent disease as compared to toxin negative S. aureus strains. Most of these infections are mild-moderate superficial skin infection such as a boil or skin abscess. The skin infection that is typically caused by PVL S. aureus starts out as a small red bump that can quickly turn into a large pustule with central breakdown, or a deep, painful abscess with surrounding redness. The infected skin site may be confused with a spider or insect bite because the centre is often black and the boil is so painful. The skin tends to heal spontaneously leaving a
scar, but recurrent infection often develops after days or weeks in a different location on leg, arm, trunk, face or neck. People with recurrent infection due to PVL CA-MRSA often have a history of multiple visits to their GP, walk-in centre or A&E, and multiple courses with an ineffective antibiotic, before the bacterium is identified. Rarely, PVL positive S. aureus/MRSA causes severe and life-threatening infection in previously healthy adults and children such as necrotising pneumonia, necrotising fasciitis, bone/joint infection. Once such a severe infection has developed, the fatality rate is high. Fatalities in previously healthy adults due to PVL positive S. aureus infection including PVL CA-MRSA have occurred occasionally in recent years in the UK. Some fatalities in children have been reported in the USA. PVL MRSA (and MSSA) tends to commonly spread between members of household or close contacts.

**Risk Factors for PVL-MRSA (and MSSA) – These include:**
- Using contaminated items such as sharing towels, razors etc
- Close (skin to skin) contact such as occurs in contact sports e.g. wrestling, rugby
- Damaged skin integrity such as cuts and eczema.
- Overcrowding
- Poor hand hygiene
- High risk settings where transmission is most likely to occur include: Households, contact sports, military training camps, gyms and prisons. Healthcare transmission/outbreaks occur commonly in USA hospitals and have been reported in the UK.

**Treatment of PVL MRSA**
Discuss with microbiologist.

**Prevention and control of PVL MRSA (and MSSA)**
- The Procedures outlined for dealing with the usual MRSA should be followed when dealing with PVL MRSA and MSSA.
- All patients with PVL MRSA (and MSSA) should be isolated in a side room and gloves and aprons worn for direct patient care.
- During intubation and respiratory care, healthcare workers should wear gloves, apron, surgical mask and eye protection.
- **ALL** patients (including children) found to be colonised or infected with PVL MRSA (and MSSA) should be decolonised as per MRSA policy. This includes children as well.
- **ALL** cases of PVL MRSA (and MSSA) will be notified to the SMH PHE by the microbiologists
- Healthcare-associated PVL MRSA will be analysed using a root cause analysis. It may necessitate screening other patients and staff based on a risk assessment. Any other patient found to be colonised or infected with MRSA will be decolonised.
Staff infected or colonised with PVL MRSA (or MSSA):

- Health Care Workers (HCW) should cover all cuts and grazes.
- HCWs should report to Occupational Health, if they have infected skin or purulent eye lesions, for risk assessment.
- For all HCWs found to be colonised or infected with PVL-MRSA (or MSSA), a risk assessment should be undertaken by occupational health in liaison with the infection control doctor and nurse and the HCW’s manager.
- HCWs found to be colonised with PVL MRSA (or MSSA) should be decolonised. They should not work directly with patients until 48 hours have elapsed after starting the decolonisation protocol.
- HCWs with proven PVL MRSA (or MSSA) infection should not work directly with patients until the acute infection has resolved and at least 48 hours of a five day decolonisation protocol has been completed. The decolonisation protocol should be started after the acute infection has resolved.
- Enquiries regarding PVL MRSA/MSSA related disease in close contacts of the HCW should be made, so that families can be treated simultaneously.
- Follow up screens following decolonisation are as per the general MRSA policy. If undertaken, these should be three screens one week apart.
- The HCW should be advised that they should stop working directly with patients as soon as a possibly infected skin lesion develops.