

MRSA Policy: The prevention and control of MRSA

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EXECUTIVE SUMMARY

Meticillin-resistant *Staphylococcus aureus* (MRSA) is a strain of *Staphylococcus aureus* that has developed resistance to certain antibiotics. Preventing patients from acquiring MRSA in the first instance will reduce the risk of them developing MRSA infections which can be more difficult to treat.

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.

Screening all patients for MRSA either on admission for emergency patients or at pre-assessment for elective admissions (excluding some surgical procedures) is now mandatory. Patients who are identified to be colonised with MRSA will be offered decolonisation treatment which will reduce the numbers of MRSA bacteria on their skin. This can help to prevent the patient from developing an MRSA infection but also reduce the risk of spread to other patients.

This policy provides information on which patients to screen for MRSA, the procedures that should be followed if a patient or member of staff is colonised or infected with MRSA, including decolonisation treatment, and the infection control precautions that should be followed.

	Elective Admissions	Emergency Admission	Maternity	Paediatrics	SCBU
Who to screen	For all elective admissions listed in Section 5.2.1(i)	All emergency admissions over 16 years	Elective caesarean sections Emergency caesarean sections Antenatal admissions to Hope ward In utero transfers	Previously infected/colonised with MRSA Transfers from other facilities Presence of chronic open skin lesions or indwelling devices	All admissions to SCBU
Timing of screening	Within 8 weeks of admission	Within 24 hours of admission	Electives 2-3 weeks prior to delivery date All others within 24 hours of admission	Within 24 hours of admission	Within 24 hours of admission
Sites to screen	Nose, groin and wounds	Nose, groin, wounds, sites of indwelling devices, sputum, urine (catheter)	Nose and groin	Nose, groin, umbilicus, wounds, sites of indwelling devices	Nose, groin and umbilicus
Method	Rapid MRSA broth	Rapid MRSA broth	Normal swabs	Normal swabs	Normal swabs
Action if positive	Pre-op/OPD nurse to contact patient and GP to arrange decolonisation treatment	MRSA Care plan Decolonisation treatment Isolate Barrier nurse Inform Patient Give information leaflet	Electives: Maternity staff contact patient to arrange decolonisation treatment Admissions: as for emergency admissions	Decolonisation treatment (if appropriate) Isolate Barrier nurse Inform parent/carer Give information leaflet	Barrier nurse Inform parent/carer Give information leaflet

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1. INTRODUCTION

- 1.1. *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), post-surgical 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).
- 1.2. 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.
- 1.3. 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.
- 1.4. Over the past 25 years MRSA has become endemic in many acute hospitals in the UK. MRSA is primarily spread by the hands of healthcare workers but can also potentially be spread via contaminated equipment and the environment. Patients who carry MRSA are a source of spread to others and also carry the risk of developing a MRSA infection especially following an invasive procedure. Screening patients for MRSA will identify patients who are carriers, therefore appropriate precautions can be taken to reduce the risk of them developing an infection and reduce the risk of transmission to other patients. The risk of MRSA transmission can be reduced by reinforcing standard infection prevention and control practices, suppression of MRSA by decolonisation and isolation of patients. The risk of MRSA infection can be reduced by decolonisation, and, including anti-MRSA antibiotics in the perioperative antibiotic prophylaxis in patients colonised with MRSA. Including anti-MRSA antibiotic in the empirical treatment of septic patients colonised with MRSA reduces the risk of severe disease and MRSA bacteraemia.
- 1.5. It is important to note that when MRSA is isolated on the skin or nose, this does not necessarily mean that the person will become ill. In that respect, it is very important to understand the difference between MRSA colonisation and MRSA infection (see section 3 for definitions).
- 1.6. MRSA surveillance is one of the infection control measures that assists in controlling MRSA. As part of MRSA surveillance, since 2005, it has been mandatory for the Trust to report all MRSA bloodstream infections to the Department of Health (DoH) on a monthly basis. Since 2005, it has also been the Trust's Policy to screen all in-patients who have a high risk of MRSA colonisation and/or infection (See section 5.1 for MRSA risk assessment). From March 2009 it was made mandatory to screen all elective (planned) admissions before they come into hospital (Department of Health 2008) and since the end of December 2010, all relevant patients admitted as emergency admissions are screened

for MRSA colonisation as per DoH recommendation (universal adult emergency admission screening).

- 1.7. Detailed Post-infection Review is undertaken following each case of MRSA bloodstream infection. Lessons learnt are shared among relevant staff and help reduce infections.
- 1.8. This policy is based on the DoH guidance (2006, 2008, 2010) and on Guidelines produced by the Joint Working Party of the British Society of Antimicrobial Chemotherapy, the Hospital Infection Society and the Infection Control Nurses Association (2006). Draft MRSA Guidelines were published in 2013 but have not been ratified therefore their recommendations have not been taken into account here.
- 1.9. The MRSA policy should be read in conjunction with documents listed in Section 9: Associated documentation.

2. PURPOSE

The purpose of this policy is to help Croydon Health Services NHS Trust 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 Strategy for the control of MRSA.

3. DEFINITIONS

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

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.

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.

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 (Wilson 2006). 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.

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.

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

Emergency admissions: Patients being admitted to Croydon University 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.

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. (Wilson 2006).

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.

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

Pool Swabs: These are swabs collected from different sites (e.g. nose, groin/wound) and put together in one bottle such as MRSA broth bottle. This process increases the chances of finding MRSA.

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

Standard infection prevention and 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.

Surveillance

Monitoring of patient data to determine incidence and prevalence of infections and distribution in a facility.

4. ACCOUNTABILITIES AND RESPONSIBILITIES

4.1. Corporate Responsibility

- Croydon Health Services NHS Trust 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.
- The Trust board must ensure the organisation is compliant with the Health and Social Care Act 2008 and Health and Safety at Work Act (1974).
- The Trust Board will ensure that any new guidance related to MRSA is reviewed and any necessary actions taken as a result.
- The Board will receive infection control reports which will include matters relating to MRSA

as scheduled in the infection control assurance framework.

4.2. The Chief Executive

- Overall statutory responsibility for the prevention and control of infection including MRSA and ensure that appropriate management systems for infection prevention and control are in place.
- Delegate responsibility to the Director of Infection Prevention and Control (DIPC) who reports directly to the Board as per The Health Act 2006 and the Health and Social Care Act 2008.
- Embed MRSA prevention and control as an integral part of the Trust culture.
- Regard lapses in MRSA prevention and control practices a serious clinical issue.
- Support education for all staff as appropriate.

4.3. The Medical Director

- Adhere to and ensure his team follows this policy during clinical practice.
- Enhance awareness and implementation of this policy to all doctors.
- Ensure junior doctors include MRSA on death certificates where appropriate.

4.4. Director of Infection Prevention and Control (DIPC)

- Currently post is held by the Director of Nursing.
- Will report directly to the Trust Board.
- Ensure that the Trust Board receives regular reports on MRSA screening and infections.
- Report to the Chief Executive, Executive Management Team 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.

4.5 Directorate responsibility (Clinical Director, Associate Directors of Operation, Associate Directors of Nursing, Matrons and Service Managers, Allied Health Professional Leads)

- Ensure adherence to the MRSA policy in their area and takes appropriate action when non-compliance occurs.
- Incidents, trends and audits related to MRSA to be discussed at the Directorate quality board meetings and Clinical Governance afternoons as appropriate.
- Audit compliance with MRSA screening and ensure consistent high compliance with the policy.

4.6. Trust Medical staff

- All Trust medical staff must follow this policy and related guidance.
- Consultants should ensure that junior members in their team follow this policy in relation to the management of their patients and the general infection control precautions.
- All prescribers should take into account the patient's risk of MRSA when prescribing antibiotics for the treatment or prevention of infections.
- Participate in Post Infection Review (root cause analysis) of MRSA bacteraemias and investigations of hospital acquired MRSA cases as required.

4.7. Ward/Clinical area Manager

- Ensure that all staff adhere to this policy.
- Ensure that all relevant staff have received adequate training in the ordering of requests and taking swabs for MRSA screening.
- Ensure adequate MRSA broths and swabs are ordered from the laboratory on a regular basis.
- Initiate the MRSA care plan relevant to the patient and unit/ward.
- Ensure all patients, as required, are screened for MRSA at the right time, patients are informed of their results and those who are positive are given an MRSA information leaflet.
- Ensure MRSA screening audits are undertaken as per the infection control audit programme.
- Ensure timely decolonisation of appropriate patients.
- Liaise with the Infection Control Team, bed managers and site practitioners in regards to isolation of patients found to have MRSA.
- Ensure the ward has adequate MRSA information leaflets for patients, staff and visitors.
- Participate in Post Infection Review (root cause analysis) of MRSA bacteraemias and investigations of hospital acquired MRSA cases as required.

4.8. Infection Prevention and Control Team (IPCT)

- Regularly review and promote this policy
- Inform 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 CRS Millennium 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 bacteraemias to Public Health England as required by the Department of Health.
- Undertake post-infection reviews following MRSA bloodstream infections, in conjunction with clinical teams and public health teams where necessary.
- Produce a monthly report which includes MRSA bacteraemias and advise accordingly.
- Lead on the education and training of staff in the acute and community setting.
- Assist clinical staff in discussing MRSA with patients and relatives where required.
- 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.
- Inform General practitioners about new MRSA positive patients whose results become available after discharge.

4.9. Microbiology laboratory and Consultant Microbiologists

- Supply swabs and MRSA broths to the wards and other clinical areas.
- Test samples for MRSA and report results accordingly.
- Consultant microbiologists to discuss results with clinical teams and advise regarding treatment of infections and infection control.
- Work closely with the Infection Control Team.
- Consultant microbiologist will provide on call MRSA treatment and infection control advice service.

4.10. Occupational Health staff

- Coordinate and manage screening of staff (when indicated by the Infection Control Team)
- Coordinate management of staff found to be MRSA positive together with other relevant clinicians and the Infection Control Team.

5. PROCEDURE/COURSE OF ACTION REQUIRED

5.1 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. It is also important that staff understand the difference between colonised and infected patients to enable them to take a rational approach to the care of patients (See Section 3).

5.1.1. Categorising risk for acquisition of or for spreading MRSA

5.1.1.1. 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 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.

Units with patients at high risk of suffering serious disease if they developed clinical MRSA infections include the following:

- Intensive Care Unit (ICU) and High Dependency Unit (HDU)
- Special Care Baby Unit (SCBU)
- Orthopaedics
- Vascular

- Cardiothoracic
- Trauma

5.1.1.2. 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.

5.2 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. A Rapid MRSA Broth (RMB) method will be used for all patients at Croydon Health Services NHS Trust except Maternity, paediatrics and SCBU where normal swabs in normal transport media will be used (the swabs will be put in the RMB in the laboratory). 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 cohorting 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 [Surgical Prophylaxis Guidelines](#))

5.2.1. Patient Groups that MUST be screened

(i) ELECTIVE ADMISSIONS (excluding maternity and paediatrics)

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

- General medical purposes
- Haematology
- General surgery
- Orthopaedics
- Gynaecology
- Cardiac interventions

Day Surgery Unit (DSU) or Outpatient department (OPD) patients undergoing the following procedures:

- Destruction of haemorrhoids
- Excision of haemorrhoids
- Epigastric hernia repair
- Endoscopic operations to increase bladder capacity

- Denervation of spinal facet joint of vertebra
- Carpal Tunnel decompression
- Dupuytren's contracture division
- Total excision of trapezium
- Tendon sheath tumour removal
- Removal of foreign bodies
- Epidural injection
- Hickman line removal
- Renal Biopsy
- Life Blood Suite attendance for the first time
- All haematology patients attending Life Blood Suite after being discharged from hospital.

Some minor defined procedures and patient categories attending DSU and OPD **DO NOT** need to be screened: These are listed in **Appendix C**.

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 antiseptic skin wash (4% Chlorhexidine gluconate - Hibiscrub) 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.

(ii) EMERGENCY ADMISSIONS (excluding maternity and paediatrics)

The following patients admitted as an emergency admission should be screened for within 24 hours of admission:

- All patients aged >16 years with or without MRSA risk factors

(iii) MATERNITY ADMISSIONS

The following pregnant women should be screened for MRSA:

- Elective caesarean sections
- Emergency caesarean sections
- Antenatal admissions to Hope 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.

Elective admissions for a caesarian section should be screened when the date for the elective caesarian section is booked from the antenatal clinic (Appendix D). An information leaflet should be given to all maternity patients prior to being screened (Appendix E).

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 fetal well being. If this is not possible swabs (nasal swab only) should be taken in the recovery area following the procedure (Appendix D).

All other admissions to maternity that fulfil the criteria to be screened should be screened within 24 hours of admission.

(iv) 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)
- 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 F)

(v) 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
- 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
- Screen inpatients for MRSA at the time of any new episode of sepsis

5.2.2. Sites to Screen

Screen the following sites:

- Both nostrils (use one swab to sample both nostrils)
- Groin or perineum
- Skin lesions and wounds
- Invasive device sites, e.g. tracheostomy, PEG, 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

5.2.3. Technique of screening patients

Use the Rapid MRSA Broth (RMB) method for all patients **except** maternity and paediatrics (Appendix I). Maternity and Paediatrics, including SCBU, should use normal swabs in the normal transport media. The swabs will be put in the RMB in the laboratory.

(i) Screening technique using the rapid MRSA broth (RMB)

Decontaminate hands using alcohol hand rub or soap and water.

Use one bottle of rapid MRSA broth (RMB) for all screening swabs from each patient.

For Nasal Swab

- Use one swab for both nostrils
- The swab must remain sterile until actual use.
- Moisten swab using transport medium or sterile saline or sterile water
- Rotate moistened swab in each nostril 3-5 times, gently rubbing the mucous membranes. The process should gently rub the mucous membranes so that squamous epithelial cells from the inside of the nose are obtained.
- Swirl swab in RMB broth for 5 seconds, discard swab into a clinical waste bag.

Use a separate swab for other areas.

- Use one swab for both sides of groin.

- Other skin sites, wounds, stomas, follow the same procedures as above but use a separate swab to sample each site.

Swirl all the screening swabs from all sites from each patient in one MRSA broth bottle. This process is called 'pooling' - thus the term Pool Swabs. Close broth bottle tightly.

(ii) Screening technique using normal swabs

- Moisten the swab using sterile water or sterile saline
- Follow the same technique as described above.
- Place the swab into the transport medium.
- Use a separate swab for each site

5.2.4. Sending the broth/swabs to the laboratory

- Ensure the MRSA broth bottle/swab is correctly labeled.
- Send labelled sample to the microbiology lab ensuring the specimen has been requested on CRS Millennium.
- The vacuum transport system can be used to send the samples to the laboratory as the bottles are made of plastic material.
- The swabs for an MRSA screen can be collected at any time of the day.

5.3 Handling of MRSA screen positive results

All MRSA results will be electronically transferred from the microbiology laboratory system to the hospital interface where they can be viewed by the clinicians on the wards and clinics. All positive results will also be electronically transferred to the Infection Control Multi-Patient Task List on CRS Millennium. The Infection Control Nurses will ensure the infection control flag is on CRS Millennium and up to date. Patients found to be MRSA positive should be managed using the MRSA Care Plan in **Appendix J**.

5.3.1. Reporting MRSA screen positive results (nose and groin swabs) to clinicians and specialities

- (i) Elective admissions (Pre-op and Medical patients):** The Infection Control Nurses will ensure staff in Pre-op (Coulsdon 1) or DSU are aware of the result. 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 to request decolonisation treatment to be prescribed for 5 days before admission.
- (ii) Maternity out-patients:** MRSA Positive results will be faxed to the consultant's secretary and the Infection Control Nurses will also inform maternity 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
- (iii) SCBU patients:** Results will be telephoned to SCBU by the Microbiologist. The Infection Control Nurses 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 Control Nurse will visit the ward and inform staff and answer any questions from staff and patients.

- (v) **Screen Positive results available after patient has been discharged:** The DoH 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 Control Team in the form of a letter with advice to refer to the Community MRSA policy.

5.3.2. Reporting MRSA positive results from other sites

- (i) **Outpatients and discharged patients:** MRSA positive results will be faxed to the secretary of the patient's consultant by the consultant microbiologist. It is the responsibility of the patient's consultant to follow up the patient and treat accordingly (see section 5.4 on treatment). The patient's consultant may discuss the results with a consultant microbiologist where necessary.
- (ii) **In-patients:** A microbiologist will discuss newly diagnosed MRSA positive results from sites, other than pooled swabs, with the clinical teams.

5.4 Treatment of MRSA positive patients

ALL ADULT INPATIENTS FOUND TO BE MRSA POSITIVE SHOULD BE MANAGED USING THE MRSA CARE PLAN (APPENDIX J)

5.4.1. Treatment of MRSA carriers (Decolonisation) (See also section 5.4.3)

- (i) **All adult in-patients found to be MRSA positive for the first time will be prescribed topical decolonisation treatment.**
- (ii) The objectives of the skin decolonisation treatment are 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.
- (iii) 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.
- (iv) All patients undergoing MRSA decolonisation should be given the appropriate information leaflet (Appendix D, or Appendix F for SCBU)
- (v) 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 Control Team/microbiologist and paediatricians.

5.4.2. 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.

- (ii) Emergency admissions to ITU/HDU, vascular wards and/or with emergency orthopaedic trauma: Commence the 4% Chlorhexidine gluconate (e.g. Hibiscrub) 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 on mupirocin nasal cream. (Inpatient wards that currently commence antiseptic body washes on all patients are Fairfield 1, Fairfield 2, Purley 2 and Queens 3).
- (iii) Patients admitted to all other wards should wait for the MRSA screening results.

5.4.3. Topical treatment for MRSA decolonisation

This is a five day course which combines use of nasal Mupirocin plus antiseptic body & hair wash:

(i) Nasal mupirocin:

- Apply a small amount of Mupirocin 2% nasal cream (Bactroban) in a paraffin base with a cotton wool swab thoroughly 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 5 days. NB avoid in patients with peanut allergy.

(ii) Topical Antiseptic wash:

- Bathe daily for 5 days with 4% Chlorhexidine gluconate (e.g. Hibiscrub) antiseptic detergent to reduce the staphylococcal load on the skin.
- 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 4% Chlorhexidine gluconate (Hibiscrub) antiseptic detergent.
- Bed linen/clothing: when patient is in hospital, give the patient clean sheets, towels and pyjamas daily.
- If there are no supplies of 4% Chlorhexidine gluconate (Hibiscrub), Supplies will source an alternative such as Octenisan®
- The patient must be given their own un-opened bottle for the duration of their treatment that must be labelled with their name.
- **Neonates** – Octenisan® is the topical antiseptic wash of choice for neonates. This comes in the form of a body wash or wash mitts. See appendix K for instructions on how to use Octenisan in SCBU.
- **NOTE: Antiseptic detergents should be used with caution on patients with dermatitis. Dermatological advice on the appropriate treatment for these individual patients must be sought.**

*Do not prescribe decolonisation treatment if the patient has previously received topical treatment in the preceding 3 months unless discussed with Infection Control Team or Microbiologist.

5.4.4. Treatment of Clinical infection

- Systemic antibiotics should not be given unless a patient has evidence of infection or for peri-operative prophylaxis.
- 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.
- If the patient develops a wound infection postoperatively they should be treated empirically with IV Teicoplanin.
- Teicoplanin covers Streptococci and Staphylococci, therefore, there is no need to use benzylpenicillin and/or flucloxacillin if teicoplanin is used.
- Always seek advice of the consultant microbiologist and/or refer to the Trust Antimicrobial guidelines on the Intranet/pocket version/ward posters.

5.4.5. 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. See [Surgical Prophylaxis Guidelines](#)

5.5 Care of MRSA colonised or infected patients

5.5.1. Immediate care to be implemented

- 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)
- Isolation of patient:** The patient should be isolated in a single room (*Refer to Royal Marsden Manual Chapter 3*). It is particularly critical that patients with open skin lesions, skin disorders like psoriasis or indwelling devices are isolated. The door must be kept closed during procedures that generate aerosols e.g. chest physiotherapy, bed making.

If there are insufficient single rooms available then **MRSA positive patients should be cohorted together** in a bay on the ward [“cohorting” means that no patients **without** MRSA are in the same room or bay]. A nurse should be dedicated to caring for only MRSA positive patients. The decision to cohort must be made in liaison with the Infection Control Team.

If in side room:

- Display the “Isolation notice” on room door.
- Place gloves, aprons, observations folder, alcohol hand rub outside room.
- Ensure alcohol hand rub and gloves are also available inside the room.
- Place disposable BP cuff, detergent wipes (e.g. Tuffie5 wipes) and clinical waste bag inside room.

If in bay:

- Ensure alcohol hand rub is at end of bed.

- Ensure all staff are aware of the MRSA status of patient.
 - A yellow triangle should be displayed at the patient's bed space and on the Productive Ward board to indicate that barrier precautions should be followed
 - 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).
- (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.
- (v) **MRSA Decolonisation:** Ensure topical decolonisation regimen has been prescribed if appropriate, as described in section 5.4.
- (vi) **Perform all dressings** and ward-based clinical procedures in the patient's room or at their bedside except for procedures that need the patient to be moved to a suitable area.
- (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 the Royal Marsden Clinical Procedures Manual (Chapters 6, 18 and 19).

5.5.2. Ongoing care of MRSA positive patients

- (i) **Equipment:** Use dedicated equipment wherever possible. If it is not possible to dedicate equipment to an MRSA positive patient, clean with detergent wipes, a chlorine based disinfectant or 70% isopropyl alcohol hard surface wipe (if no visible soiling) 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
 - Ensuite bathroom/toilet (if applicable)

See Appendices for Quick Reference Guides for Maternity (Appendix D), SCBU (Appendix F) and Rupert Bear Ward (Appendix L)

5.6 MRSA positive patient movement/transfer

5.6.1. 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 detergent wipes or 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 detergent wipes or chlorine based disinfectant.

5.6.2. 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.
- For inter-hospital transfers, the Croydon Health Services NHS Trust Infection Control Team may also liaise with the receiving hospital Infection Control Team to provide supplementary information if required.
- 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.

See Appendix M for additional Guidance Specific for Community Settings

5.7 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 Control Team.

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

5.8 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 must inform the receiving home manager (See also section 5.6.2 above).

5.8.1. Nursing staff

- Arrange for Terminal Clean of the bed space/side room by the cleaning contractor:
 - Between 07.00hrs and 17.30hrs contact Initial Healthcare Office on Ext 4588 or 4608.
 - Between 17.30hrs and 20.00hrs bleep Initial Supervisor (bleep 526, 527, 528 or 605).
 - After 20.00hrs contact Portering Enquiries Office on Ext 4559.
- Strip linen and bag appropriately.
- Clean the pillows, mattress and all clinical equipment within the room, including commode with a detergent wipe or chlorine based disinfectant (maternity and paediatrics use neutral detergent).

5.8.2. 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.

Disposable Curtains: these should be changed on discharge **if the patient has been in the bay for more than one week** or if they are visibly soiled. Between 06.30hrs and 14.30hrs on weekdays contact the linen porters on Bleep 616/272. Outside of these hours contact Initial healthcare Domestic Supervisor.

5.9 Staff members and MRSA

See also section 5.10 and appendix H

5.9.1 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 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.
- The screening protocol outlined in sections 5.2.2 – 5.2.4 above will be followed.

5.9.2 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 (see section 5.1.1.)
- 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 regimen outlined in section 5.4.3.
- 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.

5.9.3. Staff found to be infected with MRSA

- The staff member should report the infection to Occupation Health (OH)
- OH should inform the Infection Control Team the staff member's name and work area
- The Infection 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.

5.9.4. 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 regimen outlined in section 5.4.3.
- 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
- Seven 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 Control Team.

5.10 Panton-Valentine Leukocidin (PVL) producing MRSA (PVL MRSA)

See Appendix N

6. TRAINING

- Staff that need to undertake screening will receive training from the Infection Control Team.

- Standard Infection Control Practices will be covered during all MAST Infection 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 Control Nurses in response to an increase in the incidence of MRSA within that setting.
- The Policy is available on the intranet.

6.1 Equality Impact Assessment

The Equality Impact Assessment for this policy is attached in Appendix A.

7. MONITORING COMPLIANCE

- Compliance with the policy will be audited as indicated in the table below.

Element to be monitored	Lead	Tool	Frequency	Reporting arrangements	Acting on recommendations and Lead(s)	Change in practice and lessons to be shared
MRSA Screening	Matrons	MRSA screening audit tool	Monthly	Results will be included in the monthly Infection Control scorecards	Matrons	Results to be discussed at individual Directorate Quality Boards
Antibiotic prophylaxis	Infection Control Clinical Lead	Retrospective review of operative notes of MRSA positive patients and antibiotics given peri-operatively	Annually	Results will be sent to the Surgery Clinical Lead	Surgery Clinical Lead	To be discussed at Clinical Governance
Clusters of hospital acquired MRSA in clinical areas	Infection Prevention and Control Team	Continuous surveillance of new MRSA cases	Continuous	Numbers of new hospital acquired MRSA cases will be included in the monthly Infection Control scorecards	Matrons and ward managers	Clusters to be discussed at individual Directorate Quality boards
Information included in discharge summary	Infection Control Clinical Lead	Review of discharge summaries of MRSA positive patients to find out if MRSA included on discharge summary	At least 6 monthly	Report will be sent to all Clinical Leads	Clinical Leads	To be discussed at Clinical Governance
Hand Hygiene Compliance	Matrons	Hand Hygiene Audit tool	Weekly for inpatient areas and monthly for outpatient areas	Weekly via email and on the monthly Infection Control Scorecards	Matrons and ward managers	Results to be discussed at individual Directorate Quality Boards

8. REFERENCES

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9. ASSOCIATED DOCUMENTATION

This policy should be read in conjunction with the following related Trust policies and guidelines:

- Infection Prevention and Control Policy
- Surgical Site Infection Prevention Guidelines
- Hand Hygiene Policy
- Decontamination of medical devices and equipment
- Wound dressing technique
- Guidelines for Antibiotic Prophylaxis in Surgery
- Empirical Antibiotic Guidelines for Management of Common Infections in Adult In-Patients
- Alert System for CRS Millenium (Flags) Policy
- Royal Marsden Clinical Procedures Manual Chapters 3, 6, 11, 18 and 19

10. VERSION HISTORY TABLE

Version	Date	Author	Ratified by	Comment/Reason for change
8	March 2014	Mary Twagira Sarah Watts Lorraine Young	Risk Assurance and Policy Group	Due for review Incorporated Maternity MRSA policy Added information leaflet for maternity and SCBU Added Octenisan instructions for SCBU
7	December 2010	Mary Twagira Sarah Watts	Policy Committee	Due for review Include emergency admission screening for all adults as per DoH guidance Included sections on community and PVL
6	March 2010	Mary Twagira Sarah Watts	Integrated governance and Clinical governance committee	Due for Review New Trust-wide Format New way of transporting MRSA broth Expand on areas to audit, management of staff members with MRSA Re-introduced section on risk assessment Added appendix for Rupert Bear patients Included a revised MRSA information leaflet Added appendix to include minor procedures exempt from MRSA screening
5	March 2009	Mary Twagira Sarah Watts	Infection Control Committee	New DoH guidance to extend screening to elective admission
4	August 2008	M Sahathevan	Infection Control Committee	Due for review Include DoH guidance Change from chlorhexidine to 4% Chlorhexidine gluconate (Hibiscrub) body wash
3	February 2006	M Sahathevan A Flores	Infection Control Committee	Due for review
2	January 2004	M Sahathevan Jane East	Infection Control Committee	Due for review

APPENDIX A – EQUALITY IMPACT ASSESSMENT

To be completed and attached to any procedural document when submitted to the appropriate committee for consideration and approval.

		Yes/No	Comments
1.	Does the policy/guidance affect one group less or more favourably than another on the basis of:		
	• Race	No	
	• Ethnic origins (including gypsies and travellers)	No	
	• Nationality	No	
	• Gender	No	
	• Culture	No	
	• Religion or belief	No	
	• Sexual orientation including lesbian, gay and bisexual people	No	
	• Age	Yes	Not all paediatric admissions need screening (DH guidance)
	• Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
2.	Is there any evidence that some groups are affected differently?	Yes	Pregnant women admitted for normal labour with no risk factors are not screened as the risk of MRSA is very low (DH guidance)
3.	If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable?	Yes	See comment above
4.	Is the impact of the policy/guidance likely to be negative?	No	
5.	If so can the impact be avoided?		
6.	What alternative are there to achieving the policy/guidance without the impact?		
7.	Can we reduce the impact by taking different action?		

APPENDIX B – CONSULTATION TEMPLATE

1.	Procedural Document's Name:	MRSA Policy: The prevention and control of MRSA version 8
2.	Procedural Document Author:	Lorraine Young, Infection Control Nurse
3.	Group/Committee Consulted	Date
	Infection Control Committee	24 th January 2014
	Policy Committee	14 th March 2014
4	Name and Title of Key Individuals Consulted	Date
	Beverly Reyes-Roberts, Clinical Midwifery Manager	7 th February 2014
	Mary Fosbrook, Midwifery Sister	7 th February 2014
5	Comments received Emphasise care of invasive devices – sentence added to 5.5.1 point vii on page 18	

APPENDIX C – OUT PATIENT AND DAY SURGERY UNIT EXEMPTION FROM MRSA SCREENING LIST

Agreed by the PCT, Trust, DIPC, Clinical Directors and the Trust Infection Control Doctor (Nov/Dec 2009)

Patients undergoing the following procedures (in outpatients/DSU) will not be routinely screened for MRSA pre-treatment

- Day case Ophthalmology
- Day case dental
- Day case endoscopy
- Minor dermatology procedures e.g. warts or other liquid nitrogen applications
- Children/paediatrics unless already in a high risk group
- Maternity/obstetrics except for elective caesareans and any high risk cases i.e. risk of complications top mother and baby
- Others that will not be screened for MRSA are included below:

DAY CASE ENDOSCOPIC PROCEDURES

- Bronchoscopy
- Oesophago-gastro-duodenoscopy (OGD)
- Endoscopic retrograde cholangio-pancreatography (ERCP)
- Cystoscopy
- Sigmoidoscopy
- Colonoscopy

GYNAECOLOGY

- Cervical biopsy/excision
- Introduction/replacement of intrauterine contraceptive device
- Replacement/removal of intrauterine contraceptive device
- Oocyte recovery
- Insert hormone implant
- Operation on Bartholin's gland
- Evacuation of contents of uterus
- Diagnostic endoscopic examination of uterus
- Endoscopic bilateral occlusion of fallopian tubes
- Curretage of Uterus

GENERAL SURGERY, ORTHOPAEDICS & PLASTIC SURGERY (done under local anaesthesia)

- Excision (minor) of ganglion
- Biopsy
- Excision (minor) of skin lesion
- Excision (minor) of basal cell carcinoma
- Lumpectomy/lipoma removal
- Excision of pilonodal sinus
- Manipulation of the rectum
- Manipulation of the spine (if no wound)
- Aspiration of hydrocele
- In growing toe nail revision
- Exploration of other skin of other site
- Extirpation of lesion of eyelid

- Extirpation of lesion of lip
- Extirpation of other part of the mouth
- Exploration of hand wounds

PLASTIC SURGERY (under local anaesthesia)

- Revision of scar tissue
- Botox injection
- Neurostimulation of peripheral nerve
- Repair of Ear lobe
- Microplastique/Uroplastique injection

UROLOGY

- Endoscopic dilatation of ureter
- Vasectomy
- Therapeutic endoscopic operations on urethra
- Diagnostic endoscopic examination of bladder
- Endoscopic removal of lesion of bladder

PAIN MANAGEMENT

- Guenethidine block
- Radiofrequency controlled thermal destruction of sympathetic nerve
- Cryotherapy to sympathetic nerve
- Destruction of peripheral nerve

DENTAL SURGERY

- Surgical removal of tooth
- Simple tooth extraction
- Orthodontic operations
- Excision of dental lesion of jaw

MEDICAL OUT PATIENTS

- Cardioversion
- Renal ultrasound
- Management of blood pressure attendance
- Ascitic draining

HAEMATOLOGY OUTPATIENTS – LIFE BLOOD SUITE.

All patients are screened for MRSA on first attendance and only again if they have been inpatients or after IV line removal. Otherwise, no further screening will be done when patients attend for the following reasons:

- Venesection
- Administration of blood/platelets/other blood products
- Chemotherapy (haem and non-haem)
- Other IV therapy
- Lumbar puncture
- Vaccinations
- Suture removal
- Ward attendees for blood tests
- Bone marrow biopsy/aspiration
- Blood withdrawal

OTHERS

- Introduction of substances in the subcutaneous tissue
- Blood transfusion
- Drainage of middle ear
- Continuous infusion of therapeutic substance (immunology drugs, metabolic drugs, cancer drugs, musculoskeletal drugs)

APPENDIX D – 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 E – MRSA INFORMATION SHEET FOR MATERNITY PATIENTS

Why are we screening you for MRSA?

What is MRSA?

- MRSA stands for Meticillin Resistant Staphylococcus Aureus

What does this mean?

- Staphylococcus aureus (sometimes called 'Staph aureus') are bacteria found on the skin or in the nose of healthy people.
- Occasionally it may cause infection. Pimples and boils are examples of minor infections caused by staph aureus. These infections can be easily treated with antibiotics such as flucloxacillin
- However Staph aureus bacteria can sometimes cause more serious infections such as surgical wound infections or pneumonia.
- Over the last 50 years it has become more difficult to treat these infections because the bacteria have become resistant to various antibiotics including penicillin.
- These resistant forms of Staph. aureus. bacteria are known as MRSA. MRSA is widespread throughout hospitals in the United Kingdom and is found in many other countries too.

Is MRSA always a problem?

- No, not always. Staph aureus bacteria and MRSA can be found on the skin and in the nose of some people without causing illness. This is called colonisation and individuals are called 'carriers'.
- Approximately 25-30% of the general population are carriers of Staph aureus and they are healthy and unaffected by it.
- Infection occurs when there is tissue damage (for example following an operation) and the Staph aureus bacteria or MRSA cause disease. These infections generally require treatment with special antibiotics.

Who gets MRSA?

- MRSA occurs more often among patients and staff in hospitals and health care facilities. Staff or patients can be carriers; it can happen at any time and come and go.
- MRSA infections usually develop in hospitalised patients who are elderly, very sick, have an open wound (such as an operation scar or bedsores).
- MRSA infections in maternity units are very uncommon because the majority of maternity patients are young and fit.

How does it spread?

- The infection is spread mainly through direct physical contact, for example touching objects (towels, sheets, wound dressings) that have been contaminated by the skin of an

infected or colonised patient. Unwashed hands are the main source of infection. As nurses and doctors have a lot of hand contact with patients MRSA can be carried on their hands from patient to patient.

- Airborne contact (through coughing and sneezing) is only thought to be responsible for a small percentage of MRSA cross-infections

Can it spread to others?

- Friends and family are very unlikely to get MRSA especially if they wash their hands after contact with a patient known to be a carrier. Healthy people including babies, children and pregnant women are at no extra risk of getting infected.

Which pregnant women do we screen for MRSA?

- We do not screen all pregnant women but we try to screen the following groups in the maternity unit:
 - Women who are planning to give birth by planned caesarean section
 - Women who give birth by emergency caesarean section
 - Women who are particularly at risk of having a baby who may need care in the neonatal unit

Why are we screening you for MRSA?

- The reason we want to screen you for MRSA is to try and reduce the risk of you developing a wound infection or an infection in the bloodstream if you happen to be an MRSA carrier AND you have a wound around the time of your delivery, such as a caesarean section wound or an episiotomy or tear of the perineum.
- The chances of your baby picking up an MRSA infection from you if you are a carrier is extremely low indeed.
- The reason why we particularly want to identify mothers with MRSA who have babies in the neonatal intensive care unit is to reduce the potential spread of MRSA colonisation from baby to baby when they are possibly small and needing extra care.

What will you do if you find I am a carrier of MRSA?

- If we identify that you are an MRSA carrier we will recommend some treatment to suppress the MRSA if you are due to have a caesarean section or, if you have delivered, your baby is in the neonatal intensive care unit.

Is my baby at risk of becoming seriously ill if I am a carrier?

- No. It is very unlikely that your baby will pick up the infection from you. It is really only very small, premature and sick babies or those who themselves have an operation who are more vulnerable.

Can my baby catch MRSA from me in the womb before he or she is born?

- No

APPENDIX F – 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 MRSA negative 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 Control Nurses.
- The Infection 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
- Give parents information leaflet.

6. Caring for MRSA positive babies

- As there is no 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.
- Step up cleaning of the whole nursery should be arranged by contacting ext 4588 or 4608.

APPENDIX G – MRSA INFORMATION LEAFLET FOR SCBU

MRSA Information leaflet for Families

This leaflet has been specially designed for parents and relatives of babies on the Special Care Baby Unit (SCBU). It explains what MRSA is, how it affects your baby, how it spreads and what we can do to prevent spread.

What is MRSA?

MRSA stands for Methicillin resistant Staphylococcus aureus (pronounced stafilococcus orius). Staphylococcus aureus, often shortened to Staph. aureus is a common germ (bacterium) which is found on the skin of many people. This is quite normal and does not necessarily mean that the person affected will become ill.

When Staph. aureus infections do occur, they usually affect the skin, causing boils and can infect cuts, grazes and wounds.

MRSA is a type of Staph. aureus that has become resistant to the antibiotic Methicillin and some other antibiotics.

Most people with MRSA carry it without harm to themselves or their family. This is known as colonisation. As with Staph. aureus MRSA can sometimes cause active infection.

How is MRSA detected?

MRSA is usually detected when swabs are taken by nurses from a patient's nose and groin. This is called an MRSA screen. In the SCBU all babies are screened on admission or transfer to the unit and then on a weekly basis.

How is MRSA spread?

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. MRSA can be found on people both in hospital and in the general community.

Is my baby at risk of MRSA?

Less than 1% of babies admitted to the SCBU will become colonised with MRSA. Babies are vulnerable to infections. The premature or sick baby's natural defences are weaker, so they are at greater risk of acquiring infections including MRSA. Strict hand washing and the use of disinfectant hand rubs, prior to handling your baby is the most effective way of preventing MRSA. Before hand washing, roll up your sleeves to the elbow and remove all jewellery. Keep your sleeves rolled up until you have left the nursery. You may find it more convenient to wear short sleeves when visiting.

Parents and visitors to the SCBU

Like staff all visitors should wash and dry their hands or apply alcohol gel, before and after they touch your baby.

Hand rub is available at the entrance and should be used on entering and leaving the SCBU reducing the risk of infection being brought into the unit and also maintaining cleanliness when you leave.

How do we look after your baby if they have MRSA?

If your baby is colonised with MRSA, staff caring for him/her may use extra precautions such as gloves and aprons and you may be asked to wear these.

How do we treat MRSA?

Most babies are only colonised with MRSA and this does not generally cause infection. There are treatments available to try to reduce the amount of MRSA on the baby's skin, known as decolonisation treatment. Sometimes babies in the SCBU are too small to be treated and due to the interventions they are already receiving such as ventilation, oxygen, or nasogastric tube feeds it would not be appropriate. For this reason the decision to use decolonisation treatment is made following an assessment of each individual baby. Following the decolonisation treatment nurses and doctors will continue to follow precautions, such as wearing gloves and aprons, as the treatment is not 100% effective but the amount of MRSA present will be significantly reduced.

What if my baby has an MRSA infection?

There are antibiotics available to treat an MRSA infection. Your doctor or nurse will explain this to you.

Going home with MRSA

Your baby's discharge from the SCBU will not be delayed because they have MRSA on their body. MRSA is not a danger to healthy family, friends or the general public, so there are no special precautions. Good hand hygiene and washing and keeping your house clean in the usual way are all that is needed.

Washing clothes

Wash your baby's clothes and bed linen at normal temperatures.

Risk to parents and siblings

Strict hand washing is the most important means of preventing the spread of MRSA. Healthy adults who are colonized are at no higher risk of developing an infection.

The MRSA Policy

The Infection Control Team monitor MRSA closely on the SCBU. They provide advice to staff on how to prevent its spread. It is very important that we do everything to stop MRSA spreading. Babies are tested for MRSA when they are admitted or come from another hospital and weekly thereafter.

Further questions?

We hope that you have found this information useful. If you have any further questions please do not hesitate to ask any of the medical or nursing team who will be happy to help.

Further information is available via:

1. At the Health Protection Agency (Part of Public Health England) website:
<http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/StaphylococcusAureus/GeneralInformation/staphFrequentlyAskedQuestions/>
2. The Centres for Disease Control, Atlanta, Georgia, have information about MRSA for patients on their website: www.cdc.gov/ncidod/hip/aresist/mrsafag.htm

Based on the information produced by the South West London Perinatal Network User Group

APPENDIX H – USE OF OCTENISAN® IN SCBU

This should only be commenced if it has been prescribed following discussion between the Infection Control Team/Microbiologist and Paediatrician.

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

Octenisan should be used once a day for 5 consecutive days.

Before you start always wash your hands and ensure the area is warm and dry.

Procedure for how to use octenisan® Antimicrobial Body Wash on a baby.

- 1: Prepare the bath. Make sure the bath water is at the appropriate temperature.
- 2: Place the baby in the bath and wet the skin all over.
- 3: Take the baby out of the water and place him/her on a clean warm towel.
- 4: Apply the Octenisan® Antimicrobial Body Wash to the baby by hand, pay particular attention to creases e.g. armpits, bellybutton, groin and nappy area. Avoid contact with the face.
- 5: wrap the baby loosely in the clean warm towel for 1 minute to allow the octenisan® to work.
- 6: Recheck that the bath water is a suitable temperature for the baby, then put the baby back in the bath to rinse off the octenisan®.
- 7: At the end of the bath dry and dress the baby in clean clothes without delay.

Procedure for how to use octenisan® Antimicrobial wash mitts on a baby:

- 1: Use 2 mitts per wash. A packet of 10 wash mitts will last for 5 days.
- 2: Place hand in mitt and wipe over clean skin of baby.
- 3: Start with face (avoiding eye area), head and neck, and finish with groin and bottom.
- 4: Leave on the skin for at least 30 seconds. Rinsing afterwards with water is **not** necessary.
- 5: Dress baby in clean clothes without delay.

N.B. Octenisan should not be mixed with other soaps, ointments, oils, enzymes etc.

APPENDIX I – PROTOCOL FOR MRSA SCREENING USING RAPID MRSA BROTH (RMB)

Please note this procedure is for screening swab samples only eg. nose, groin, skin sites, wounds.

If wound swabs also need full M,C & S for clinical reasons send a separate swab in the standard transport medium in the usual way.

Urine samples – send only if indwelling catheter or nephrostomy. Sample must be sent in the red top urine specimen container.

Samples can be sent at any time of the day and night and if out of hours will be placed in the incubator in Microbiology by an on-call technician.

PROTOCOL

- 1. Decontaminate hands by washing or using alcohol hand rub.**
- 2. Use one bottle of RMB broth for all swabs taken.**
- 3. Moisten swab with transport medium in swab kit or sterile saline or sterile water. Swab patient's nose (one swab to both nostrils) and swirl swab in RMB broth for at least 5 seconds. Discard swab into yellow clinical waste bag.**
- 4. Follow above procedure for the groin swabs (using same swab for both sides of the groin)**
- 5. For other skin sites eg. IV sites, wounds, stomas, follow the same procedure as above but use a separate swab to sample each site.**
- 6. Complete Microbiology Request Form and label Rapid MRSA Broth (RMB) with Patient details. If booking tests on Order Comms system select MRSA screen option under test.**
- 7. Forward broth to Microbiology with the completed request form using the vacuum transport system as the bottles are now plastic**

Storage of Broth on the wards

RAPID MRSA BROTH awaiting use – store in refrigerator

APPENDIX J – MRSA ADULT CARE PLAN – ACUTE SETTING

Name:	Hospital No:
Ward:	Date:

Problem:	MRSA
Date of sample:	
Sites:	

Date	Intervention	Sign/print
	1. Display yellow triangle symbol on productive ward board and at bed space (if in a bay)	
	2. Ensure all staff are aware of the patient's MRSA status	
	3. Explain result to patient and give information leaflet	
	4. Isolate in side room if available otherwise barrier nurse in bed space. It is vital that MRSA positive patients with open skin lesions, skin disorders like psoriasis, MRSA in sputum or indwelling devices are isolated in a side room.	
	5. Ensure detergent wipes are available in the side room or bay	
	6. Provide patient with individual disposable blood pressure cuff	
	7. Use gloves and aprons for all contact with the patient and their immediate surroundings	
	8. Remove gloves and apron in the side room or bay and decontaminate hands	
	9. Ensure effective hand hygiene technique by all staff and ensure hand gel is available at the end of each bed	
	10. Commence decolonisation treatment (Hibiscrub washes daily for 5 days (wash hair twice during 5 days) and nasal Bactroban ointment TDS for 5 days) as per Trust MRSA decolonisation policy	
	11. Provide education to patient on how to apply the decolonisation treatment	
	12. Visitors should not routinely wear gloves and aprons, unless they are going to help in carrying out significant hands on care such as bed bathing	
	13. Continue barrier precautions until discharge	
	14. On transfer or discharge please inform receiving ward/hospital/care agency of MRSA status	
Goal	<ul style="list-style-type: none"> • Reducing the risk of/treating MRSA infection • Cross infection has been prevented 	
Date Care plan completed:		

APPENDIX K – INFORMATION CONTAINED IN THE TRUST MRSA INFORMATION LEAFLET

This leaflet is for:

- Patients who are being tested for MRSA before they come into hospital for an operation or procedure.
- Patients who are found to be MRSA positive whilst they are in hospital.
- For visitors and family of patients with MRSA

What is MRSA?

MRSA stands for Methicillin or Meticillin (M) Resistant (R) Staphylococcus (S) aureus (A) (pronounced stafilococcus orius). This is often shortened to Staph. aureus. Staph. aureus is a common germ (bacterium) which is found on the skin of many people. This is quite normal and does not necessarily mean that the person affected becomes ill.

When Staph. aureus infections do occur, they usually affect the skin, causing boils and can infect cuts and grazes and wounds.

MRSA is a type of Staph. aureus that has become resistant to the antibiotic Meticillin and some other antibiotics.

How do we detect MRSA?

MRSA is usually detected when swabs are taken by nurses or doctors from a patient's nose and groin and sometimes from the wound. This is called an MRSA Screen. MRSA can also be detected in swabs from wounds, urine and also grown from cultures of blood taken from an infected patient.

MRSA Screening:

Although the number of people with MRSA outside hospital is low, to protect patients coming into hospital from developing an MRSA infection and to protect other patients, we screen patients for MRSA. The groups of patients currently screened include:

- Those having an operation (some day case procedures are excluded)
- All adults admitted as an emergency
- Anyone transferred from another hospital or institution
- Those on intensive care units and special care baby units

Swabs will be taken either at a clinic before you come into hospital or when you are admitted to hospital if you come in as an emergency.

By knowing if a person is MRSA positive, we can treat them appropriately and take actions that will protect them and also reduce the risk of MRSA spreading to other patients.

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. MRSA can be found on people both in hospital and in the general community.

What happens if I am found to be MRSA positive?

You may receive treatment, the type of which depends on whether you are colonised or infected with MRSA. It is more likely that a person is only colonised.

Colonisation means that the MRSA is carried in the nose, on the skin and possibly in wounds but is causing no harm and producing no symptoms.

If you are found to be colonised with MRSA, your doctor may prescribe a five day skin treatment consisting of an antiseptic skin cleanser to wash with and an antibiotic cream to put inside your nose. This skin treatment is described overleaf.

If you have a temperature and/or redness of a wound, this may indicate an infection. The cause of these symptoms will be investigated and if you are found to have an infection due to MRSA, the doctors will prescribe you with antibiotics.

Why is MRSA a cause for concern?

MRSA causes problems when you develop an infection, especially when someone is already ill. MRSA is resistant to common antibiotics, which makes it more difficult to treat.

How else might this affect my care?

Whether a patient is colonised or infected with MRSA, all staff attending to them will wear gloves and an apron. You may also be moved into a side-room. This is to help prevent the spread of MRSA to other patients on the ward.

Patients with MRSA are strongly advised to follow the course of skin treatment carefully and avoid touching any wounds, drips or medical devices attached to them.

Visitors should clean their hands before and after they visit you.

They may be asked to wear gloves or aprons.

Do I need to take any special precautions once I am at home?

Once you are back at home, normal hygiene is sufficient. This is because once out of the hospital environment the MRSA on the skin is quite likely to reduce. MRSA is unlikely to harm healthy people outside hospital including babies and pregnant women.

Will I have to stay in hospital longer if I have MRSA?

Patients who carry MRSA do not have to stay in hospital longer provided that the doctor is satisfied with your general progress. Patients with 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.

What about my family and friends?

While MRSA can be passed from person to person it is not a real problem in the home or for work colleagues who are healthy and not needing hospital treatment. Good personal hygiene precautions are advised.

MRSA Skin treatment; What to do and when to do it:

You will be given a bottle of an antiseptic skin cleanser called Octenisan® or Hibiscrub® and a small tube of Bactroban® nasal ointment. Bactroban contains the antibiotic, Mupirocin.

For five days you must:

- 1.** Use the Octenisan or Hibiscrub skin cleanser as a shower gel every day. Wet the skin and then apply a small amount on a flannel and thoroughly clean your whole body. Pay particular attention to hair, groin, armpits and nostrils. You should avoid getting the cleanser in your eyes.
- 2.** Apply the Bactroban ointment to the insides of your nostrils three times a day. Using a clean finger gently press both nostrils together for a few seconds to thoroughly spread the ointment over the insides of both nostrils.
- 3.** Wash your hair with Octenisan® or Hibiscrub® twice during the five day treatment period. This should be put straight onto wet hair, like shampoo and not diluted. Leave it on for at least three minutes.

Hair extensions will also have to be washed. Beading should be removed if possible. Head scarves will have to be changed and laundered. Wigs should not be worn during treatment unless they can be laundered.

Bed linen, towels and clothing:

If possible, change bed sheets, pillowcases and towels daily.

If possible, change all your clothing, including pyjamas or nightdresses daily. Wash these items in a washing machine on a hot wash that is compatible with the fabrics. Tumble drying or ironing will also kill MRSA.

Are there any side effects of the treatment?

The skin treatment has few side effects and these are mild. If you develop a rash stop the treatment and ask your clinic/ward nurse or doctor for advice. The treatment products are unlikely to cause any problem with eczema. However, you may need to use a different treatment if the eczema becomes sore.

What happens if I do not follow the skin treatment?

Your surgeon may not wish to operate if you do not take the skin treatment before hand. For MRSA positive patients in hospital, it is more likely that you could get MRSA in wound sites which could cause an infection.

Who do I contact with queries or concerns?

In the first instance please speak to a member of staff in your ward or clinic. You can also contact the Infection Control Team on:

Tel: 0208 401 3000 Ext 3389 or 5941

The Department of Health has published 'A simple guide to MRSA' which is available at **www.dh.gov.uk**.

APPENDIX L – QUICK REFERENCE GUIDE FOR RUPERT BEAR WARD (RBW)

1. Who should be screened

All admissions that fall within the following categories must be screened within 24 hours of admission:

- Patients known to be previously infected or colonised with MRSA
- Transfers from other care facilities
- Patients with chronic open skin lesions
- Patients with long term indwelling devices (e.g. PEG, suprapubic catheters, urinary catheters, long term intravenous lines, tracheostomies)

2. Sites to screen

- Nose (use one swab to sample both nostrils)
- Groin or perineum
- Umbilicus (if appropriate)

3. How to screen

- All swabs should remain sterile until actual use
- Swabs should be moistened using sterile water or sterile saline
- After sampling place 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

4. Handling of results

- The Infection Control Nurse will discuss the management plan with the paediatricians
- The management plan will be dependent on the clinical condition and age of the baby
- Give parents information leaflet

5. Caring for MRSA positive babies

- MRSA positive babies/children must be isolated in a side room
- If this is not possible, the babies/children must be cohorted 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
- Dedicate equipment as far as possible
- Following discharge arrange for a terminal clean of the side room/ bed space by contacting ext 4588 or 4608

APPENDIX M – ADDITIONAL GUIDANCE SPECIFIC TO MRSA IN COMMUNITY SETTINGS

1.0 Introduction

Controlling the spread of MRSA outside a hospital environment has received little less attention. Recent trends towards early discharge, day surgery, minor surgery in community settings, the provision of parenteral therapy at home, the continuous movement of patients and the emergence of community-associated MRSA mean that infection such as MRSA is becoming increasingly common in the community. Other contributory factors are lowered resistance to infection for a variety of reasons and antibiotics sometimes used inappropriately.

2.0 Control of MRSA in the community setting

Colonisation with MRSA may be long term especially in patients with chronic wounds and/or urinary catheters. For a healthy person, MRSA colonisation is asymptomatic and does not present a risk. MRSA colonisation does not present a risk to other healthy individuals, and carriers should therefore continue to live a normal life without restriction.

2.1 MRSA positive individuals in the community requiring nursing or therapy services

- Follow good hand hygiene practice and standard infection control precautions at all times, regardless of their diagnosis. *See Royal Marsden Manual Chapter 3.*
- Open wounds will often be colonised with micro-organisms including MRSA. Many of these wounds will continue to heal despite the colonisation and no specific treatment is required other than good wound management if there are no clinical signs of infection. Isolation of MRSA does not therefore always mean infection.
- It is only when a wound is showing signs of clinical infection that systemic treatment should be considered using antibiotics.
- Routine swabbing to determine if MRSA is present in a wound is not advocated. Wound swabbing should only be carried out when clinical signs of infection are present.
- Patients/clients with clinical infection caused by MRSA should always be treated promptly. If they are receiving systemic antibiotics but the wound remains clinically infected following the completed course of antibiotics, a wound swab should be taken 48hrs after treatment is completed. Please state on the pathology request form that this is a post-treatment swab and state the treatment given.
- In the past, individuals in the community who were colonised with MRSA did not generally require decolonisation unless it is known that they will be admitted to hospital in the foreseeable future. However the Department of Health now recommends that all patients who test positive for MRSA in the community should be offered topical decolonisation treatment. *See Section 5.4.3 Topical treatment for MRSA decolonisation.*
- Whenever practical, if patients are MRSA positive then they should be cared for at the end of the healthcare workers case load.

2.2 Precautions for residents with MRSA in shared living environments e.g. care homes

- Many individuals live in care homes and this should pose no problem to their ongoing care or that of the other residents as long as staff practice good hand hygiene and follow standard infection control precautions at all times. These precautions should be applied to all clients at all times irrespective of diagnosis and will protect other patients/clients. *See Royal Marsden Manual Chapter 3.*

- In a care setting in the community, patient/residents who are MRSA positive should ideally not share a room with other patients if those patients have open wounds or catheters. A documented risk assessment should be conducted. It is not always necessary to keep patients in their own rooms if they have MRSA.
- On discharge/decease of resident from the care home a thorough clean must be carried out of the resident's room. This must include floors, bed frame, mattress, lockers, bed table, chair and all equipment and horizontal surfaces. Curtains must be cleaned and blinds if present. All equipment used should be disposable or re-useable equipment carefully cleaned.
- There is no need to screen residents in care homes for MRSA.

2.3 Transfer of patients between acute setting and community

See section 5.6.2 Transfer of MRSA colonised or infected patients between care sectors

- When patients are discharged from hospital back into the community (including care homes) they may still be undergoing treatment /decolonisation for MRSA. This should be continued as per discharge instructions/transfer letter. *See Section 5.4.3 Topical treatment for MRSA decolonisation.*
- Communication is also essential when a patient who has known to be previously MRSA positive is to be admitted/readmitted to an acute setting. The MRSA positive status should be included on the referral form.
- If the post discharge decolonisation is unsuccessful i.e. the patient has been re screened, the patient's GP may wish to consider one further course of decolonisation treatment.

References

Department of Health 2007. "Essential Steps to safe, clean care. Managing MRSA In a non acute setting: a summary of best practice"

APPENDIX N – 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 sideroom 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 South West London Health Protection Team (SWL HPT) 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 regimen.
- 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 regimen has been completed. The decolonisation regimen 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, if required.
- Occupational Health and the Infection Control Team should liaise closely with SWL HPT.
- 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.