

METICILLIN-RESISTANT *STAPHYLOCOCCUS AUREUS* (MRSA) SCREENING and CONTROL

Summary

This document has been formulated in order to comply with the guidelines “**MRSA Screening Operational Guidance 3**”(DH 2010), “**Guidelines for the control of Meticillin-resistant Staphylococcus aureus infection in hospitals**”, “**Guidelines for the Laboratory Diagnosis & Susceptibility Testing of MRSA**” (2005) and “**Guidelines for the prophylaxis & Treatment of MRSA infections in the UK**” (2008).

The Trust will ensure effective arrangements are in place for the recognition, containment and management of MRSA.

This document has been formulated to comply with the requirements of the Health Act 2009 [updated from the Health Act 2006 – “Code of Practice and Control of Health Care Associated infections” (Department of Health 2006)].

This act states that all healthcare facilities must have certain core policies in place. These core policies must include details for prompt diagnosis, isolation and cohort nursing of infected patients, infection control procedures, environmental decontamination and antibiotic prescribing including one for Meticillin-resistant *Staphylococcus aureus* (MRSA).

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1. INTRODUCTION

Since the introduction of flucloxacillin in the late 1960s the problem of MRSA has been recognised. However, since the early 1980s it has been recognised as a considerable problem in hospitals, and it has been recommended that hospitals develop strategies to limit its spread among patients and staff.

1.1 The Organism

Staphylococcus aureus (*S. aureus*) is a Gram-positive cocci, which is a common cause of infection in man.

It is a hardy organism that can survive on inanimate surfaces for a long time.

Staphylococcus aureus can be present on the body without causing infection (colonisation). It can colonise the anterior nasal vestibule and skin of normal healthy people. Other colonisation sites can include the nasopharynx, vagina, perineum and rectum.

- a) There are three types *S. aureus* carriage in the healthy adult population: 20% are persistent carriers, 60% are intermittent carriers and 20% non-carrier and about 30% of the population is colonised at any one time. Certain groups will have higher levels of colonisation; these include:
 - i. Health care workers (HCW)
 - ii. Insulin-dependent diabetics
 - iii. Patients receiving chronic haemodialysis
 - iv. Intravenous drug abusers

- b) From sites of colonisation, *S. aureus* can enter breaks in skin or mucosa and cause infection. These can include:
 - i. Localised:
 - furuncles
 - impetigo
 - cellulitis
 - wound infections
 - ii. Disseminated:
 - septicaemia
 - endocarditis
 - osteomyelitis
 - iii. Toxin-related:
 - toxic shock syndrome
 - scalded skin syndrome
 - food poisoning

Point-prevalence studies performed in 2001 & 2005 found the percentage of in-patients and out-patients at the Royal Marsden NHS Foundation Trust carrying MRSA to be 6.2% and 2.3% respectively.

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1.2 Definition of Meticillin-Resistant *Staphylococcus aureus* (MRSA)

- a) MRSA manifest an abnormal penicillin-binding protein which means **all** beta-lactams antibiotics will be inactive against MRSA, these include:
 - i. Penicillins - penicillin, flucloxacillin, amoxicillin, co-amoxiclav, piperacillin-tazobactam
 - ii. Cephalosporins - cefuroxime, ceftazidime
 - iii. Carbapenems – meropenem, ertapenem
- b) Since the 1980s, there has been the emergence of strains of MRSA which are multi-resistant (e.g. trimethoprim, ciprofloxacin, gentamicin, macrolides) and can be readily spread between patients known as **epidemic Meticillin-resistant *Staphylococcus aureus* (EMRSA)**.
- c) MRSA is not thought to be more virulent than Meticillin-sensitive *S. aureus* (MSSA), however there is evidence that certain strains show propensity for colonisation / infection of certain tissues (tropism) e.g. EMRSA-16 for the nasopharynx and respiratory tract.
- d) Community Associated Pantone-valentine Leukocidin (PVL)

MRSA infections can be caused by strains of *S. aureus* which carry a toxin (PVL) that destroys white blood cells. The toxin is carried by less than 2% of *S. aureus* and can be carried by both those that are Meticillin sensitive *S. aureus* (MSSA) and those that are Meticillin resistant *S. aureus* (MRSA). To date the majority of PVL-related infections in the UK have been caused by MSSA.

Infections caused by PVL-positive strains of *S.aureus* normally cause pus-producing skin infections (e.g. abscesses or boils) and occasionally cellulitis or tissue necrosis. However they can cause more severe invasive infections such as septic arthritis, bacteraemia (blood poisoning) or community-acquired necrotising pneumonia.

1.3 Routes of Spread

The main route of spread is generally via the hands of health care workers (HCW). This can be from direct contact with colonised or infected patients, contamination from the nasal carriage by HCW or from the environment. Organisms can quickly contaminate the bedclothes and clothing of patients, particularly from skin scales. They can be easily disseminated during movement or ward activities. Droplet spray from the nose or mouth may result in widespread distribution in the environment.

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2. RESPONSIBILITIES

- 2.1 Managers** are responsible for ensuring that staff are aware of procedures in these documents to reduce exposure to MRSA to their staff and patients under their care.
- 2.2 Health Care Workers** are responsible for following correct procedures as detailed in this policy.
- 2.3 Infection Prevention and Control Team (IPCT)** is responsible for providing appropriate advice to health care workers concerning management of proven or suspected MRSA cases.
- 2.4 Occupational Health Department** is responsible for the management of health care workers colonised with MRSA.
- 2.5 The Microbiology Department** is responsible for:

In all new cases of MRSA:

- a) Isolates from clinical specimens (e.g. wound swabs or sputum samples) will have complete antibiotic sensitivity testing, including vancomycin and mupirocin.
- b) Isolates will be put on the hospital computer high-risk program as MRSA positive.
- c) Isolates from patients known to be colonised with MRSA will have repeat mupirocin testing, if they have failed to be cleared by topical mupirocin.
- d) Inform the Infection Prevention and Control team of all new cases of MRSA.

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3. SCREENING PATIENTS FOR MRSA

The patients at the Royal Marsden NHS Foundation Trust all have cancer and are therefore vulnerable to infections. The Trust is committed to the highest standards of prevention and control of infection and screening is an essential part of this strategy. All healthcare workers who have direct patient contact are involved in the prevention and control of infection and need to be aware of and comply with the screening policy as set out below. The policy is supported by national guidance: Screening for MRSA colonisation – a strategy for NHS Trusts: a summary of best practice (2010) and MRSA Screening – Operational Guidance 1 and 2.

The following section details: the screening and decolonisation strategy; staff training; staff compliance with the policy; and communication to patients and their families.

3.1 Initial Screen

The mandatory MRSA screening care plan is to be completed for all in-patients and out-patients.

Patients requiring a MRSA screen consisting of nasal swab and swabs of any breaks in skin, including wounds, vascular access device (VAD) and drain exit sites, and catheter urine and catheterised urethral include:

1. All new patients to the Trust – in-patient or out-patient. This includes all patients who have received out-patient care at another hospital.
2. All patients who have an elective admission to the Trust – medical, surgical or day surgery.
 - a. When possible, patients awaiting elective admission who satisfy local requirements for screening should be screened before admission, by their general practitioners or in pre-admission clinics.
 - b. If they are a new patient who has initially been screened but this was more than a month before admission, they need to be screened again.
 - c. Additional, appropriate swabs may be needed for those about to undergo surgery, e.g. axillae swabs for those undergoing breast surgery, groin swabs for those undergoing pelvic or lower abdominal surgery.
3. All patients who are an emergency admission, including those who have not been screened by the Trust in the last month.
4. Weekly swabs and discharge swabs for patients in the Intensive Care Unit.
5. All patients who developed a nosocomial wound infection even if post-discharge.

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3.2 Full Screen

Patients who should have full screen for MRSA include:

1. All patients who have undergone MRSA decontamination.
2. Patients transferred from overseas, other hospitals, nursing and residential homes for admission, acute or elective.
3. Newly admitted patients who are known to have had MRSA in the past either at the Royal Marsden or elsewhere.

This consists of:

- Nasal, throat, axilla and groin swabs
- Swabs from any breaks in skin, including wound, VAD and drain exit sites
- Catheter urine and catheterised urethral swab

3.3 Procedure for all screening swabs

Sterile swabs should be used which can be moistened with sterile saline when swabbing dry areas of unbroken skin. MRSA swabs should be properly labelled and sent with the specific MRSA screening forms to the Microbiology Department giving:

- Reason for screen - new patient, past MRSA, pre-surgery, inter-hospital transfer, emergency/elective admission, etc.
- Date of admission/elective surgery (if appropriate)
- Samples taken

Please see Appendix 1 to view form.

3.4 Staff Training on swabbing and decolonisation

All healthcare workers who work with patients clinically attend mandatory clinical training annually. The Infection Prevention and Control Team (IPCT) provide focused infection prevention and control training. This training includes all screening for MRSA and is directed at all nurses, doctors in training and consultants and all health care assistants. Attendance at this mandatory training is collated by the Learning and Development department and held centrally on a dedicated IT system.

All nurses, doctors and other front line health care workers in their induction mandatory training are provided with training on infection prevention and control including MRSA swabbing and where relevant decolonisation. Local induction to clinical areas also includes a practical introduction to the Trust website and location of key policies and location of screening equipment.

3.5 Audit of compliance with the screening policy

All wards and departments are audited for their compliance with the screening policy. Staff are visited on a spot inspection basis quarterly and asked questions about screening. The Data Quality Team also prospectively collects screening data across the Trust and break down admission and tests performed. This data is then used by the IPCT across the Trust to show local clinical managers such as Matrons, Ward Sisters/Charge Nurses regarding

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their department's compliance rates. The Trust Board will also review compliance with the screening rates along with other important healthcare associated infection (HCAI) prevention and control metrics.

3.6 Communication with Families and Patients

The IPCT have written a Patient Information Leaflet on MRSA screening which is given to all patients who are admitted electively or as an emergency. There are also supplies of the leaflets displayed publicly on all the wards/units and the Patient Advisory Liaison Service (PALS) office for both patients and families to read. Any patient who has a positive test will have the result explained in a caring and effective manner, in privacy. A careful explanation will be given of the necessary precautions, isolation and treatment. The appropriate Patient Information Leaflet will be provided and the IPCT or Ward/Unit nurse will offer to repeat any of the information once the patient has had time to think about any questions. It is important that this information provision and following isolation and treatment is performed in a caring and sensitive manner with careful regard for privacy and dignity.

3.7 Isolation Facilities

The Trust has an appropriate percentage of isolation rooms available but it is essential that the Clinical bed management teams at each sites (017 and 022 bleep holders) are always aware of isolation rooms being used or vacated. The electronic bed board therefore needs to be regularly updated so that isolation bed availability is managed in a timely and effective way.

3.8 Capacity staffing in Microbiology and resilience of supplies

Increased screening does put pressure on the microbiology department. The Head of Pathology services reviews the service regularly and reports any concerns through the divisional team and the Integrated Governance and Risk Management Committee. If there are any concerns with capacity not being able to satisfy demand the problem will be escalated through the division straight to the Director of Infection Prevention and Control (DIPC) who is a board member and resources will be made available. In the same way if there is any problem with the NHS supply chain of screening equipment the necessary escalation policy and the business continuity plan will be followed.

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4. DECOLONISATION OF PATIENT WITH MRSA

This is performed to reduce the bacterial load of MRSA and therefore reduce the risk of spread and infection for patients about to undergo surgery or medical treatment.

For a period of 5 days, the patient should receive:

- a. Application of mupirocin nasal ointment 2% to the inner surface of each nostril (anterior nares) three times daily for 5 days. The patient should be able to taste mupirocin at the back of the throat after application.
- b. Daily bath / showers with 4% chlorhexidine gluconate solution (e.g. Hydrex,[®] Hibiscrub[®]). The skin should be moistened and the 4% chlorhexidine solution (applied neat) thoroughly to all areas before rinsing in the bath or shower. Special attention should be paid to known carriage sites such as the axilla, groin and perineal area. The 4% chlorhexidine solution should also be used for all other washing procedures and for bed bathing. The hair should be washed with 4% chlorhexidine solution twice in five days then washed with normal shampoo. In-patients should be provided with clean clothing, bedding and towels daily during decontamination and for 1 day after completion of course. Out-patients should be encouraged to use clean clothing and towels at the beginning and ending of decontamination.
- c. In cases where nasopharyngeal colonisation is proved, patients should gargle with 0.2% chlorhexidine gluconate mouthwash (e.g. Corsodyl[®]) or Octenidol[®] mouthwash twice a day. In the case of dental prostheses, soak daily in 0.2% chlorhexidine gluconate mouthwash.

For patients to undergo/undergoing radiotherapy or patients with poor skin, for a period of 5 days the patient should receive:

- a. Application of mupirocin nasal ointment 2% base to the inner surface of each nostril (anterior nares) three times daily for 5 days. The patient should be able to taste mupirocin at the back of the throat after application.
- b. Daily bath / showers with Octenisan[®] wash lotion - The skin should be moistened and the Octenisan[®] (applied neat) thoroughly to all areas before rinsing in the bath or shower. Special attention should be paid to known carriage sites such as the axilla, groin and perineal area. The Octenisan[®] should also be used for all other washing procedures and for bed bathing. The hair should be washed with Octenisan[®] twice in five days then washed with normal shampoo. After satisfactory completion of a course of treatment, clean clothing, bedding and towels should be provided.
- c. In cases where nasopharyngeal colonisation is proved, patients should gargle with 0.2% chlorhexidine gluconate mouthwash (Corsodyl[®]) twice a day. In the case of dental prostheses, soak daily in 0.2% chlorhexidine gluconate mouthwash (Corsodyl[®]).
- d. In-patients should be provided clean clothing, bedding and towels daily during decontamination and for 1 day after completion of course. Out-patients should be encouraged to use clean clothing and towels at the beginning and ending of decontamination.

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Re-screening

The patient should have a full screen 7 days after the end of the decontamination protocol to check its effectiveness. If MRSA is still detected, decontamination should be repeated, particularly if the patient is to undergo imminent surgery or medical treatment/procedure.

For a period of 5 days, the patient should receive:

- a. Application of Prontoderm® Gel light to the inner surface of each nostril (anterior nares) three times daily for 5 days.
- b. Daily bath / showers followed by whole body application of Prontoderm® foam or solution.
- c. In cases where nasopharyngeal colonisation is proved, patients should gargle with ProntOral® twice a day. In the case of dental prostheses, soak daily in ProntOral®.

The Prontoderm® products should also be used in cases of mupirocin-resistant MRSA colonisation.

5. DECOLONISATION FOR NON-MRSA PATIENTS (Meticillin sensitive *Staphylococcus aureus* MSSA)

Given that MSSA can cause as significant infection as MRSA and that no screening method is 100% sensitive, the IPCT recommend:

1. All patients undergoing surgery (elective or emergency) found to be colonised with MSSA by screening swabs, should undergo decontamination as for a MRSA colonised patient.
2. The Transitional Care Unit and outpatients department are responsible for ensuring patients receive appropriate decontamination therapy.

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6. PROCEDURES FOR THE MANAGEMENT OF MRSA FOR PATIENTS

6.1 Management of Newly-Identified Patient Colonised / Infected with MRSA

6.1.1 In-patients

- a) The Infection Prevention and Control Team (IPCT) will contact the clinical team and Sister/Charge Nurse on the relevant ward to inform them of the MRSA result. In most cases the clinicians will be informed by the Infection Prevention and Control Doctor (IPCD) and the nursing staff by the Infection Prevention and Control Nurse (IPCN).
- b) The patient must be isolated in a single room and barrier nursed with **contact precautions** for the remainder of their in-patient stay. If this cannot be done, the IPCT must be informed so that other arrangements can be made.
- c) Patient should be started on decontamination protocol for MRSA.
- d) The bed space previously occupied by the colonised / infected patient must be terminally cleaned by the Domestic Department and curtains changed.
- e) Antibiotic treatment for infection with MRSA should be discussed with the IPCT / Consultant Microbiologist / Antimicrobial pharmacist if patient thought to be infected.
- f) The Microbiology Department will enter the patient's details on the hospital computer high-risk program and ward/department will tag the inside of the patient's notes with a MRSA sticker and give the patient an MRSA information leaflet.

Contact Precautions

A. Patient Placement

1. Place the patient in a single room with an en-suite bathroom.
2. Place yellow barrier nursing sign inside and outside door.
3. If no dispenser nearby, place trolley containing plastic aprons and gloves outside room.
4. Own toilet facilities preferable, if not, shower or bath to be taken after all the other patients bath/shower and bathroom to be cleaned carefully afterwards.
5. Only a minimum of staff to enter the room - ideally the nurse managing the patient should not care for other particularly susceptible patients. Health Care Workers (HCW) who should not enter the room include:
 - a) Nursing staff from other wards
 - b) HCW with skin lesions, e.g. dermatitis

B. Gloves, hand washing and disposable aprons

1. For clinical contact with the patient, wear gloves and disposable apron when entering the room.
2. During the course of providing care for a patient, change gloves after having contact with infective material that may contain high concentrations of microorganisms (faecal material and wound drainage).

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3. Remove gloves and apron before leaving the patient's room and decontaminate hands immediately by washing hands or using alcoholic hand gel.
4. After glove removal and hand decontamination ensure that hands and clothing do not touch potentially contaminated environmental surfaces or items in the patient's room to avoid transfer of microorganisms to other patients or environments.
5. Use alcoholic hand gel outside room.

C. Patient Transport

1. Limit the movement and transport of the patient from the room to essential purposes only.
2. If the patient is transported out of an isolation room, ensure that precautions are maintained to minimise the risk of transmission of microorganisms to other patients and contamination of environmental surfaces or equipment.

D. Patient-Care Equipment

When possible, dedicate the use of non-critical patient-care equipment to a single patient (or cohort of patients infected or colonised with the pathogen requiring precautions) to avoid sharing between patients.

If use of common equipment or items is unavoidable, then adequately clean and disinfect them before use for another patient.

E. Environmental Control

1. There should be adequate procedures for the routine care, cleaning, and disinfection of environmental surfaces, beds, bedrails, bedside equipment, and other frequently touched surfaces, and ensure that these procedures are being followed.
2. Good daily cleaning of room with yellow colour coded equipment kept solely for that area.
3. On discharge, the room should be terminally cleaned (see cleaning of environment policy).
 - a) Room stripped of all consumable equipment.
 - b) Curtains removed and sent to laundry or disposable removed.
 - c) Room and furniture cleaned with hot Actichlor Plus solution at 1000ppm.
 - d) Orange clinical waste bag should be kept in the room and securely sealed before removal.
 - e) Curtains replaced, room checked by nurse in charge before next patient admitted.

F. Linen placed into red infected alginate and polythene bags (see Laundry Policy).

1. Handle, transport, and process used linen soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures and contamination of clothing and that avoids transfer of microorganisms to other patients and environments.
2. Linen should not be vigorously shaken when bed-making.
3. Linen should be placed in red polythene bag, sealed, and then placed in a red polythene bag outside room, take linen skip to outside of room.

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G. Visitors

1. It should be stressed to visitors that precautions apply to them.
2. Visitors only to enter the room after permission and instruction from the nursing staff - they are to observe strict hand hygiene.
3. Close contact to be discouraged.
4. Babies and young children to be discouraged from entering the room.
5. Any visitor worried about their own MRSA status should discuss this with their own GP.

6.1.2 Out-patient

- a) IPCT will contact the clinical team and Sister/Charge Nurse of the department to inform them of the MRSA result. IPCT will also contact the clinical team and Nurse Manager on the relevant ward to inform them of the MRSA result if the patient is to be admitted.
- b) Antibiotic treatment for infection with MRSA should be discussed with the IPCT / Consultant Microbiologist or Antimicrobial pharmacist if the patient is thought to have an infection.
- c) Patient should be started on decontamination protocol for MRSA.
- d) The Microbiology Department will enter patient's details on the hospital computer high-risk program and ward/department will tag the inside of the patient's notes with a MRSA sticker.
- e) If the patient is to return to the out-patient department the procedures outlined below for "intra-hospital transfers" should be followed (see also Transfer Policy).

6.2 Intra-hospital transfers of MRSA-infected patients (including Out-Patient Departments)

- a) MRSA infection or colonisation should not be a barrier to good clinical care. Consequently, intra-hospital transfers for good clinical reasons should not be prevented. However, unnecessary movement should be avoided.
- b) When appointments are made for patients, (particularly for out-patient clinics and operating theatres) the computer high-risk program will remind members of staff to make the appointment at the end of the clinic or operating list.
- c) For patients with confirmed MRSA, movements/transfers should be kept to a minimum and be carefully supervised. The receiving department should be made aware of the diagnosis so appropriate preparation can be made. These include:
 - I] Appointments should be made when the department is quiet, i.e. last appointment of the day. Patients should be segregated if possible.
 - II] Porters should be given plastic gloves and aprons and be informed of barrier nursing techniques.

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- III] Chair or trolley to be carefully cleaned and linen changed.
- IV] Colonised skin lesions and wounds to be covered with an occlusive dressing.
- V] Theatre - patient should be placed at the end of the operating list.
- VI] Patients should have a screen swab(s) if an emergency admission to Intensive Care Unit, weekly screening swabs while resident in the Intensive Care Unit and screening swab(s) on discharge.

6.3 Inter-hospital Transfers

It is the responsibility of the clinician admitting the patient to enquire of the MRSA status of the patient and any recent, significant contact with MRSA. On admission: (see also Transfer policy).

- If patient has come as an in-patient from another Trust or hospital in another country (this includes patient undergoing regular dialysis at a renal unit), they should be admitted to a single room if possible and managed with contact precautions till they have been shown to be MRSA negative.
- All patients to have a full screen for MRSA.
- If a patient needs to be transferred to another ward or department and the MRSA screening specimens are not yet available, the receiving department must be made aware of the potential diagnosis.
- Patients known to be presently colonised / infected with MRSA must be isolated in a single room with contact precautions.

6.4 Patients with a past history of MRSA Colonisation / Infection

- a. Ideally these patients should be admitted to a single room if they are to be in-patients and treated with contact precautions if in- or out-patients. Procedures for MRSA infected out-patients and those due for theatres should be adopted when appropriate.
- b. All such patients should have a full MRSA screen.
 - i. Patients with a history of MRSA colonisation / infection who have had three negative full screens (the last one been within at least 3 months after the last positive result) can be exempt from MRSA precautions.
 - ii. All patients with 3 negative screens are removed from the high risk programme by the IPCT after 2 years and a flag of 9 for "Previous Infection" will be added to the Electronic Patient Record (EPR).

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6.5 Discharges

- a) It is the responsibility of the clinician caring for the patient to inform the general practitioner, doctors from other hospitals or health-care agencies involved in the patient's care, of the MRSA status of the discharged patient.

Infection Prevention and Control discharge sheet to be completed.

- b) NOTE: MRSA is not a contraindication to admission to a home or a reason to exclude an affected patient from the life of a home (Guidelines on the control of infection in residential and nursing homes, DH 2006).
- c) IPCT should be involved in co-ordinating patient care if the patient requires further MRSA management after discharge.
- d) The Community Infection Control Nurses should be involved in any problems involving the discharge of MRSA patients, and they should be able to facilitate a satisfactory solution.
- e) Ambulance service should be notified of MRSA status of the patient by clinical team responsible. Ambulance staff should wear plastic aprons and gloves and wash their hands with 4% chlorhexidine gluconate solution or use alcohol hand rub after patient contact.

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7. TREATMENT OF PATIENTS INFECTED WITH MRSA

The majority of patients who have acquired MRSA are colonised rather than infected, however occasionally infection does occur with the same morbidity and mortality as MSSA.

To clarify if a particular patient requires systemic antimicrobial therapy for MRSA, the clinician must determine if an isolate from a given site indicates infection or colonisation. This may be difficult on certain occasions e.g. isolates from sputum or pressure sores.

1. If a threshold of 10% resistance in staphylococci is exceeded isoxazolyl penicillins and cephalosporins are not used for empirical treatment of *Staphylococci*.
2. Step down therapy to flucloxacillin from glycopeptides and linezolid should be used wherever possible once antibiotic susceptibilities of *S. aureus* are known.
3. **Soft tissue and skin infections:**
 - a) Tetracyclines should be more widely used in adults for treatment for soft tissue infections unless infections are so severe as to carry a high risk of bacteraemia or endocarditis.
 - b) Intravenous glycopeptides or linezolid are used in severe intravenous site infection and other oral agents in mild infections.
 - c) Vancomycin, daptomycin or linezolid be considered for use where the risk of bacteraemia or endocarditis is high.
 - d) In infections that have failed therapy with single active agents, use of rifampicin together with glycopeptides should be considered but only where these antibiotics remain active *in vitro*. Formal clinical trials of the use of these combinations are needed.
 - e) Clindamycin be considered for use in treatment of MRSA susceptible to erythromycin because emergence of clindamycin resistance requires two mutations and its bioavailability is better.
4. In **urinary infection**, tetracyclines be considered as first line agents for the treatment of urinary infections caused by susceptible MRSA, with trimethoprim or nitrofurantoin as alternatives.
5. In **bone and joint infections:**
 - a) Glycopeptides be used for parenteral treatment particularly of multi-resistant MRSA.
 - b) In infections that have failed therapy with single active agents, use of rifampicin together with glycopeptides should be considered but only where these antibiotics remain active *in vitro*. Clindamycin may be considered for treatment of infection with erythromycin susceptible variants and can be used orally.
6. In **bacteraemia**, a minimum duration of 14 days' treatment with vancomycin, daptomycin or linezolid for uncomplicated bacteraemia. Longer treatment will be required in patients with, or at higher risk of, endocarditis and echocardiographic assessment is important.

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7. In respiratory infections:

- a) Infections in bronchiectasis should be treated with non-glycopeptide agents according to *in vitro* susceptibilities as suggested for cellulitis.
- b) Particular care is taken to improve the certainty of diagnosis of lower respiratory tract infection as distinct from colonisation.
- c) The use of either glycopeptides or linezolid for pneumonic infections where MRSA is the aetiological agent.

8. **In eye infections**, Gentamicin or chloramphenicol may be used for superficial eye infections.

9. In surgical site prophylaxis:

- a. Patients who require surgery and have a history of MRSA colonisation or infection without documented decontamination eradication should receive glycopeptide prophylaxis alone or in combination with other antibiotics active against other potential pathogens.
- b. Patients who are known to be colonised/infected with MRSA and are undergoing surgery involving the insertion of lines or prostheses (e.g. breast implants) should be given teicoplanin or vancomycin prophylaxis, as stated in the Hospital Antibiotic Guidelines.
- c. The use of glycopeptides may also be considered if there is an appreciable risk that patients' MRSA carriage may have recurred or they come from facilities with a high prevalence of MRSA.

Antibiotic Usage

Exposure to broad spectrum antibiotics, particularly third generation cephalosporins and fluoroquinolones, is an independent risk factor for MRSA colonisation and infection in numerous studies. Therefore there are a number of recommendations related to antibiotic usage:

- 1. Avoidance of inappropriate or excessive antibiotic therapy and prophylaxis, in all healthcare settings.
- 2. Ensuring that antibiotics are given at the correct dosage and for an appropriate duration.
- 3. Limiting the use of glycopeptide antibiotics to situations where their use has been shown to be appropriate. If possible, prolonged courses of glycopeptide therapy should be avoided.
- 4. Reducing the use of broad-spectrum antibiotics, particularly third generation cephalosporins and fluoroquinolones to what is clinically appropriate.
- 5. Since the presence of the abnormal protein which produces beta-lactam resistance can be increased by the use of beta-lactam antibiotics (inducibility), these antibiotics should be avoided if at all possible in patients colonised / infected with MRSA - flucloxacillin should not be given to a patient known to be currently colonised / infected with MRSA.

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8. MANAGEMENT OF HEALTH CARE WORKERS IN CONTACT WITH MRSA

1. In general, HCWs are not at risk from MRSA - however they may become colonised with MRSA and therefore transmit MRSA from patient to patient.
2. Staff who have initial screens (nasal swabs and swabs from exposed areas of broken skin) should include:
 - a) All newly appointed HCWs at the Trust who will have patient contact.
 - b) In the case where there has been a cluster of MRSA cases among patients and MRSA cross-infection is suspected. In this case, not only will there be routine screening of appropriate staff, but also active case-finding by the IPCT, i.e. questioning of staff concerning potentially infected skin lesions (Please see section 9 - *"Management of an outbreak of MRSA"*).
 - c) Staff who are having and returning from surgical operations/procedures or hospital stay (including maternity).
3. All swab results will be sent to the Occupational Health Department (OHD) and filed in individual health records.
4. Any HCWs with positive results from initial screen are required to report to OHD for management of MRSA. This will include:
 - a) Decontamination protocol as for patients colonised / infected with MRSA for a period of 5 days.
 - b) HCWs will be required to be away from patient contact for the first 48 hours of the decontamination and then return to normal work. IPCT as well as OHD will advise the nursing administration and clinical directorates on appropriate deployment of affected staff and also in cases of staff who remain colonised after decontamination.
 - c) Seven days after the end of decontamination, the HCW should have 3 full screening sets taken 1 week, 2 weeks and 3 months after initial decontamination.
 - d) If any of these are positive, the decontamination procedure should be repeated, till the HCW has been free of MRSA for 3 months.
5. In certain situations, the IPCT and OHD may decide that the HCW should not return to work till the results of post-decontamination swabs are known. IPCT as well as OHD will advise the nursing administration and clinical directorates on appropriate deployment of affected staff.

8.1 MRSA in Pregnancy

- a) Colonisation with MRSA may cause problems for women if they require surgery at the time of birth.
- b) It is **not** necessary to exclude pregnant women from contact with patients who are MRSA positive.
- c) Apart from routine screening swabs as outlined above, nose swabs should be taken 4 weeks prior to maternity leave and last working day and staff returning from maternity leave.

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9. MANAGEMENT OF AN OUTBREAK OF MRSA

Definition: two or more new cases of patients colonised / infected with MRSA identified within 7 days of each other, who are thought to have acquired MRSA on a particular ward or clinical unit.

1. The procedure for managing a suspected outbreak will be the similar as that outlined in the Outbreak Action Plan for the Trust.
2. Initially, the IPCT will assess the situation and determine if there is indeed an outbreak.
3. If an outbreak is confirmed the IPCD will:
 - a) make sure that full MRSA screens have been taken from all patients who are colonised / infected with MRSA in the affected unit / ward
 - b) Organise the taking of initial screening swabs of all patients and HCWs who are or work in the affected unit or ward
 - c) Inform the DIPC
4. If there is a **large** outbreak, the DIPC will immediately call an Outbreak Control Group (OCG) to plan a strategy for the management of outbreak. This will consist of:
 - a) The Director of Infection Prevention and Control
 - b) The Infection Prevention and Control Team
 - c) The Consultant in Communicable Disease Control
 - d) The Clinical Director of Directorate affected
 - e) The Facilities Manager
 - f) The Occupational Medicine Consultant / Nurse
 - g) Ward/Nursing Manager of affected Unit /ward
 - h) The Antimicrobial pharmacist or suitable Pharmacy representative
5. Decisions that may need to be taken by the OCG include:
 - a) The need to close the ward to admissions and transfers
 - b) Changes to antibiotic and clinical policies
 - c) Nursing of affected and non-affected patients, e.g. cohort nursing
 - d) Timetable for cleaning and re-opening of ward
 - e) Investigation of the epidemiology of the outbreak e.g. MRSA typing, environmental screening etc.
 - f) Decision of management of affected HCWs and deployment of staff.

If there is a **small** outbreak, an incident control group consisting of the PCT will manage the outbreak and will keep the above mentioned possible members of OCG informed. Root cause analysis tool to be completed for all outbreaks.

10. REPORTING OF MRSA OUTBREAK/BACTERAEMIAS

- a. An outbreak of MRSA will be reported according to the Trust's accident/incident reporting policy and if major will be reported as a serious untoward incident (SUI).
- b. MRSA bacteraemis will be reported according to the Trust's accident/incident reporting policy as a red incident.

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11. MRSA BACTERAEMIA

All MRSA bacteraemias will be reported on line to Health Protection Agency.

12. MONITORING OF COMPLIANCE WITH POLICY

The Infection Prevention and Control Team will monitor compliance with this policy using the agreed audit tools.

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Appendix 1 – MRSA FORM

THE ROYAL MARSDEN NHS FOUNDATION TRUST
 MICROBIOLOGY DEPARTMENT Laboratory Ext: 3205 Consultant Ext: 3203/1055

MICROBIOLOGY MRSA SCREENING FORM			
Hospital No.	Surname:	First Name:	
D.O.B/...../.....	Gender <input type="checkbox"/> M <input type="checkbox"/> F	Ward:	Specimen Date / Time:/...../...../.....
Consultant:		Signed:	Extension No.:
<p style="text-align: center;">SPECIMEN</p> <input type="checkbox"/> Nose <input type="checkbox"/> Throat <input type="checkbox"/> Axilla <input type="checkbox"/> Groin <input type="checkbox"/> Wound <input type="checkbox"/> Other		<p style="text-align: center;">CLINICAL DETAILS</p> <input type="checkbox"/> New patient <input type="checkbox"/> New Admission <input type="checkbox"/> Elective <input type="checkbox"/> Emergency <input type="checkbox"/> Pre-Surgery Date of Surgery:/...../..... <input type="checkbox"/> Previous positive <input type="checkbox"/> Post Decontamination Screening <input type="checkbox"/> Inter/Intra-hospital transfer <input type="checkbox"/> Intensive Care Unit admissions / discharge <input type="checkbox"/> Hospital-Acquired Wound Infection <input type="checkbox"/> Staff	

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APPENDIX 2

DECONTAMINATION PROTOCOLS

1. Decontamination guideline for an initial Positive MRSA Screen

Prescribe:

MUPIROCIN NASAL to nostrils TDS

CHLORHEXIDINE GLUCONATE 4% solution as body wash in bath or shower daily

CHLORHEXIDINE GLUCONATE 0.2% throat gargles BD if throat swab positive

CONTINUE FOR FIVE DAYS

See Appendix 3 and 4

2. Decontamination guideline for persistent positive MRSA screen despite completing decontamination protocol stated above

And for Mupirocin resistant MRSA

Prescribe:

PRONTODERM® GEL LIGHT to nose TDS

PRONTODERM® FOAM/SOLUTION to skin following usual bath or shower daily

Add in PRONTORAL® gargle BD if throat swab positive

CONTINUE FOR FIVE DAYS

See Appendix 7 and 8

3. Decontamination guideline for Positive MRSA screen for patients about to undergo or are undergoing radiotherapy

And for patients with damaged / broken skin

MUPIROCIN NASAL to nostrils TDS

OCTENISAN® WASH LOTION - bath or shower daily

CHLORHEXIDINE GLUCONATE 0.2% throat gargles BD if throat swab positive

CONTINUE FOR FIVE DAYS

See Appendix 5 and 6

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Appendix 3 – Patient Information: MRSA – how to use your medications Mupirocin nose cream and Chlorhexidine 4% wash

Your doctor or nurse has told you that you have a colonisation of MRSA. This means that you are carrying MRSA on your skin and/or in your nose but not infected. A course of treatment with nasal and skin disinfection over five days will help eliminate it. This fact sheet explains how to apply the medications correctly, in order to achieve the best results.

Each day for 5 days	Mupirocin nasal ointment (Bactroban nasal®)	Place ointment on end of a new cotton bud and apply high up in each nostril. You should be able to taste the ointment at the back of the throat. Throw used cotton bud away Apply ointment 3 times a day.
Each day for 5 days	Chlorhexidine gluconate 4% wash for bath / shower	Place Chlorhexidine wash onto a disposable cloth (for example, a J. cloth) and apply neat directly to wet skin. Make sure you cover all areas of the body paying particular attention to the underarms and groin area. Rinse off well in the bath or shower. You will need to use a clean towel each time and put on clean clothes after your shower.
Additionally On Day 1 and Day 4	Chlorhexidine gluconate 4% wash for hair	Wash your hair using the same Chlorhexidine wash as you use for your body. Rinse and then wash your hair a second time using your normal shampoo and conditioner products.

Checklist:				
Day 1 (8am,12pm,6pm)	Day 2 (8am,12pm,6pm)	Day 3 (8am,12pm,6pm)	Day 4 (8am,12pm,6pm)	Day 5 (8am,12pm,6pm)
Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>
Hair: <input type="checkbox"/>			Hair: <input type="checkbox"/>	

Contact details:

Please contact us if you have any questions or concerns.

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Appendix 4 – Patient Information: MRSA – how to use your medications Mupirocin nose cream/chlorhexidine wash and throat gargle

Your doctor or nurse has told you that you have a colonisation of MRSA. This means that you are carrying MRSA on your skin and/or in your nose and throat but not infected. A course of treatment with nasal and skin disinfection over five days will help eliminate it. This fact sheet explains how to apply the medications correctly, in order to achieve the best results.

Each day for 5 days	Mupirocin nasal ointment (Bactroban nasal®)	Place ointment on end of a new cotton bud and apply high up in each nostril. You should be able to taste the ointment at the back of the throat. Throw used cotton bud away Apply ointment 3 times a day.
Each day for 5 days	Chlorhexidine gluconate 4% wash for bath / shower	Place Chlorhexidine gluconate 4% wash onto a disposable cloth (for example, a J. cloth) and apply neat directly to wet skin. Make sure you cover all areas of the body paying particular attention to the underarms and groin area. Rinse off well in the bath or shower. You will need to use a clean towel each time and put on clean clothes after your shower.
Additionally On Day 1 and Day 4	Chlorhexidine gluconate 4% wash for hair	Wash your hair using the same Chlorhexidine gluconate 4% wash as you use for your body. Rinse and then wash your hair a second time using your normal shampoo and conditioner products.
Each day for 5 days	Chlorhexidine gluconate 0.2% mouthwash (Corsodyl®)	Gargle with Chlorhexidine gluconate 0.2% mouthwash following the dilution instructions on the bottle Gargle twice a day

Checklist:				
Day 1 (8am,12pm,6pm)	Day 2 (8am,12pm,6pm)	Day 3 (8am,12pm,6pm)	Day 4 (8am,12pm,6pm)	Day 5 (8am,12pm,6pm)
Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>
Hair: <input type="checkbox"/>			Hair: <input type="checkbox"/>	
Throat: <input type="checkbox"/> <input type="checkbox"/>	Throat: <input type="checkbox"/> <input type="checkbox"/>	Throat: <input type="checkbox"/> <input type="checkbox"/>	Throat: <input type="checkbox"/> <input type="checkbox"/>	Throat: <input type="checkbox"/> <input type="checkbox"/>

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Appendix 5 – Patient Information: MRSA – how to use your medications Mupirocin nose cream Octenisan wash

Your doctor or nurse has told you that you have a colonisation of MRSA. This means that you are carrying MRSA on your skin and/or in your nose and throat but not infected. A course of treatment with nasal and skin disinfection over five days will help eliminate it. This fact sheet explains how to apply the medications correctly, in order to achieve the best results.

Each day for 5 days	Mupirocin nasal ointment (Bactroban®)	Place ointment on end of a new cotton bud and apply high up in each nostril. You should be able to taste the ointment at the back of the throat. Throw used cotton bud away Apply ointment 3 times a day.
Each day for 5 days	Octenisan® wash lotion for bath / shower	Place Octenisan® wash onto a disposable cloth (for example, a J. cloth) and apply neat directly to wet skin. Make sure you cover all areas of the body paying particular attention to the underarms and groin area. Leave for 3 minutes. Rinse off well in the bath or shower. You will need to use a clean towel each time and put on clean clothes after your shower.
Additionally On Day 1 and Day 4	Octenisan® wash lotion for hair	Use Octenisan® wash in the same way as other hair and washing preparations and leave for 3 minutes. Rinse and then wash your hair a second time using your normal shampoo and conditioner products.

Checklist:				
Day 1 (8am,12pm,6pm)	Day 2 (8am,12pm,6pm)	Day 3 (8am,12pm,6pm)	Day 4 (8am,12pm,6pm)	Day 5 (8am,12pm,6pm)
Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>
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Contact details:

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Appendix 6 – Patient Information: MRSA – how to use your medications Mupirocin nose cream/Octenisan® wash and throat gargle

Your doctor or nurse has told you that you have a colonisation of MRSA. This means that you are carrying MRSA on your skin and/or in your nose and throat but not infected. A course of treatment with nasal and skin disinfection over five days will help eliminate it. This fact sheet explains how to apply the medications correctly, in order to achieve the best results.

Each day for 5 days	Mupirocin nasal ointment (Bactroban® nasal)	Place ointment on end of a new cotton bud and apply high up in each nostril. You should be able to taste the ointment at the back of the throat. Throw used cotton bud away Apply ointment 3 times a day.
Each day for 5 days	Octenisan® wash lotion for bath / shower	Place Octenisan® wash lotion onto a disposable cloth (for example, a J. cloth) and apply neat directly to wet skin. Make sure you cover all areas of the body paying particular attention to the underarms and groin area. Rinse off well in the bath or shower. You will need to use a clean towel each time and put on clean clothes after your shower.
Additionally On Day 1 and Day 4	Octenisan® wash lotion for hair	Wash your hair using the same Octenisan® wash lotion as you use for your body. Rinse and then wash your hair a second time using your normal shampoo and conditioner products.
Each day for 5 days	Chlordhexidine gluconate 0.2% mouthwash (Corsodyl®)	Gargle with Chlordhexidine gluconate 0.2% mouthwash (Corsodyl®) following the dilution instructions on the bottle Gargle twice a day

Checklist:				
Day 1 (8am,12pm,6pm)	Day 2 (8am,12pm,6pm)	Day 3 (8am,12pm,6pm)	Day 4 (8am,12pm,6pm)	Day 5 (8am,12pm,6pm)
Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>
Hair: <input type="checkbox"/>			Hair: <input type="checkbox"/>	
Throat: <input type="checkbox"/> <input type="checkbox"/>	Throat: <input type="checkbox"/> <input type="checkbox"/>	Throat: <input type="checkbox"/> <input type="checkbox"/>	Throat: <input type="checkbox"/> <input type="checkbox"/>	Throat: <input type="checkbox"/> <input type="checkbox"/>
Checklist:				

Contact details:

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Appendix 7 – Patient Information: MRSA – how to use your medications Prontoderm gel light® and foam

Your doctor or nurse has told you that you have a colonisation of MRSA. This means that you are carrying MRSA on your skin and/or in your nose and throat but not infected. A course of treatment with nasal and skin disinfection over five days will help eliminate it. This fact sheet explains how to apply the medications correctly, in order to achieve the best results.

Each day for 5 days	Prontoderm® gel light	Use little finger or the end of a new cotton bud and apply a pea-sized amount of gel high up in each nostril. Pinch nostrils lightly together after application. Throw used cotton bud away Apply gel 3 times a day.
Each day for 5 days	Prontoderm® foam / solution for bath / shower	Bath or shower as normal. If using Prontoderm® foam, apply to skin after bath or shower, ensuring full coverage. Rub in until dry. If using Prontoderm® solution, soak fresh washcloth in Prontoderm® solution and use to wash
Additionally On Day 1 and Day 4	Prontoderm® foam for hair	Wash your hair using your normal shampoo. Towel dry your hair with a clean towel. Apply enough Prontoderm® foam to cover your scalp and comb through.

Checklist:				
Day 1 (8am,12pm,6pm)	Day 2 (8am,12pm,6pm)	Day 3 (8am,12pm,6pm)	Day 4 (8am,12pm,6pm)	Day 5 (8am,12pm,6pm)
Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>
Hair: <input type="checkbox"/>			Hair: <input type="checkbox"/>	

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Appendix 8 – Patient Information: MRSA – how to use your medications Prontoderm gel light®, foam and ProntOral® throat gargle

Your doctor or nurse has told you that you have a colonisation of MRSA. This means that you are carrying MRSA on your skin and/or in your nose and throat but not infected. A course of treatment with nasal and skin disinfection over five days will help eliminate it. This fact sheet explains how to apply the medications correctly, in order to achieve the best results.

Each day for 5 days	Prontoderm® gel light	Use little finger or the end of a new cotton bud and apply a pea-sized amount of gel high up in each nostril. Pinch nostrils lightly together after application. Throw used cotton bud away Apply gel 3 times a day.
Each day for 5 days	Prontoderm® foam /solution for bath / shower	Bath or shower as normal Apply Prontoderm® foam to skin after bath or shower, ensuring full coverage. Rub in until dry.
Additionally On Day 1 and Day 4	Prontoderm® foam / solution for hair	Bath or shower as normal. If using Prontoderm® foam, apply to skin after bath or shower, ensuring full coverage. Rub in until dry. If using Prontoderm® solution, soak fresh washcloth in Prontoderm® solution and use to wash
Each day for 5 days	ProntOral®	Use ProntOral® as a mouth wash following the instructions on the bottle for at least 60 seconds. Gargle 3 times a day

Checklist:				
Day 1 (8am,12pm,6pm)	Day 2 (8am,12pm,6pm)	Day 3 (8am,12pm,6pm)	Day 4 (8am,12pm,6pm)	Day 5 (8am,12pm,6pm)
Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Nose: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>	Body: <input type="checkbox"/>
Hair: <input type="checkbox"/>			Hair: <input type="checkbox"/>	
Throat: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Throat: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Throat: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Throat: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Throat: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

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Meticillin-Resistant Staphylococcus Aureus (Mrsa) Screening And Control	Royal Marsden NHS Foundation Trust Policy (42)
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LINKED DOCUMENTS

Laundry Policy
 Cleaning of Environment Policy
 Transfer of Patients Policy
 Waste Management Policy
 Outbreak Action Plan
 Protective Isolation and Prevention of Hospital Acquired Infection Policy
 Handwashing and Hand Decontamination Policy

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