Livewell Southwest

Meticillin-resistant *Staphylococcus Aureus* (MRSA) Management and Control

Version No 9:7

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Notice to staff using a paper copy of this guidance:

The policies and procedures page of LSW intranet holds the most recent version of this document and staff must ensure that they are using the most recent guidance.

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9	New document	December 2009	Director of Infection Prevention & Control	New document
9:1	Reviewed	Dec 2011	PRG	Review date extended, no other changes.
9:2	Reviewed	March 2012	Director of Infection Prevention & Control	Reviewed to reflect corporate organisational changes and presentation format.
9:3	Extended	June 2014	Acting Manager Infection Prevention & Control Team	Extended no changes
9:4	Extended	December 2014	Acting Manager Infection Prevention & Control Team	Extended no changes
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9.6	Minor amend	July 2015	Infection Prevention and Control Manager	Minor amendment
9.7	Minor amend	March 2017	Infection Prevention and Control Manager	Minor amendment (typos)

Meticillin-resistant *Staphylococcus Aureus* (MRSA) Management and Control

1 Summary

1.1 This document is divided into two parts:

1.1.1 The first details the basic requirements and responsibilities of members of staff. From this are cross-referenced policies and procedures that may be required in certain circumstances.

1.1.2 The second details procedures relevant to the management and control of Meticillin-resistant *Staphylococcus Aureus*, commonly referred to as “MRSA”.

1.2 The most effective means of preventing cross infection and colonisation with MRSA is patient isolation (if it is safe to do so and following careful risk assessment), combined with good hand hygiene, cleaning of equipment, environmental cleaning and clinical practice.

1.3 Admission screening should be performed preferably within six hours of admission

1.3.1 Admissions to all wards if the patient is transferred from another hospital or care setting

a) is admitted and known to have previously been colonised;

b) is a newly identified case of MRSA in order to determine the extent of colonisation;

c) has been colonised and received a round of eradication therapy;

d) colonised patients should be offered MRSA eradication treatment and followed up with further screening;

e) locally, virtually all strains of MRSA are resistant to quinolones (i.e. levofloxacin) and are usually resistant to erythromycin, and frequently clindamycin. The use of such agents will not only be ineffective for MRSA infections but may lead to the uncovering of unidentified colonisation and increase the risk of subsequent infection.

f) As of March 2014, the Department of Health have issued new screening guidance, A local risk assessment has been performed and Livewell Southwest will continue to screen patients admitted from other healthcare settings, care homes or who have previously had an MRSA infection or colonisation.

2 Purpose/ Procedures

This policy aims to ensure that patients colonised or infected with MRSA receive effective and appropriate care, and to minimise the risk of transmission of MRSA.

2.1 Prevention of spread of infection between patients

2.2 Standard Isolation Procedures
2.3 Contact Precautions
2.4 Cleaning

3 Definitions

3.1 MRSA - Meticillin-resistant *Staphylococcus Aureus*; please see Section 5 for more detailed information.

3.2 DIPC – Director of Infection Prevention and Control.

3.3 IPCT – Infection Prevention and Control Team.

3.4 IPMS – Integrated Patient Management System.

3.5 RCA – Root Cause Analysis.

3.6 Nosocomial - also known as a hospital-acquired infection or HAI, is an infection whose development is favoured by a hospital environment.

3.7 WHO – World Health Organisation.

3.8 Fomites – is an inanimate object or substance (i.e. clothing, furniture, or soap) that is capable of transmitting infectious organisms from one person to another.

3.9 ePEX – electronic patient explorer.

3.10 GP – General Practitioner.

3.11 od - once daily.

3.12 tds – Three times daily.

4 Duties & Responsibilities

4.1 The **Chief Executive** is ultimately responsible for infection prevention and control and the content of all Policies and their implementation. The Chief Executive delegates the day to day responsibility of implementation of the policies to the **Director of Infection Prevention and Control** (DIPC) and the Infection Prevention and Control Team (IPCT).

4.2 **Locality Managers** are responsible for identifying, producing and implementing Plymouth NHS Policies relevant to their area.

4.3 The **Deputy Locality Managers** will support and enable operational Clinical Leads and Managers to fulfil their responsibilities and ensure the effective implementation of this Policy within their speciality.

4.4 The Matron / Clinical Lead/ Professional Lead is responsible for:

4.4.1 Ensuring that the development of local procedures / documentation does not duplicate work and that implementation is achievable.

4.4.2 Ensuring that all members of staff, patients and visitors within their area adhere to good infection control procedures by emphasising the need to maintain good hand hygiene, and support initiatives to improve compliance with Hand Hygiene Policy, including monthly Hand Hygiene Audits on all their wards and six monthly Hand Hygiene Audits in Community Teams.

4.4.3 Ensuring staff attend mandatory Infection Prevention and Control training sessions.

4.4.4 Supporting the local Infection Control Link Practitioners in their area and allow them at least two hours of protected time per week to perform infection control-related duties.

4.4.5 Liaising closely with the IPCT with regards to the ongoing management of MRSA-colonised patients.

4.4.6 Assisting the IPCT and Staff Health & Wellbeing in their efforts to control MRSA.

4.4.7 Participating in Root Cause Analysis (RCA) of any MRSA, MRSA bacteraemia in their clinical area.

4.4.8 Reporting the findings of RCAs and ensure recommendations are implemented.

4.4.9 Attending outbreak meetings in their clinical area.

4.5 Ward / Unit / Service Managers / Team Leaders are responsible for:

4.5.1 Ensuring that good practice is embedded into their clinical areas.

4.5.2 Ensuring that all members of staff, patients and visitors adhere to good infection control procedures by emphasising the need to maintain good hand hygiene, and support initiatives to improve compliance with Hand Hygiene Policy, including monthly Hand Hygiene Audits in most inpatient areas and six monthly in Community Teams.

4.5.3 Ensuring staff check all admissions for Clinical Alerts on the patient's notes and electronic record (iPMS alert triangle) for evidence of previous MRSA colonisation. If these are present, a risk assessment for standard isolation precautions should be performed and a set of screening swabs taken.

4.5.4 Complying with this policy for all patients colonised or infected with MRSA. All such patients should receive a full MRSA screen and be risk assessed for standard isolation precautions. If the patient has pneumonia, a wound infection (especially if suppurating) or an exfoliating skin condition, they should be cared for in standard isolation.

4.5.5 Ensuring staff observe "Contact Precautions" when attending the patient or their immediate surroundings.

4.5.6 Informing relevant hospital staff of the colonisation status.

4.5.7 Ensuring the patient receives eradication or therapeutic treatments as prescribed or advised by the medical staff.

4.5.8 Liaising closely with the IPCT with regards to the ongoing management of MRSA-colonised patients.

4.5.9 Adhering to Admission, Transfer and Discharge protocols as outlined in the Policy for the Admission, Transfer and Discharge of the Infected Patient.

4.5.10 Screen patients ,including wounds and invasive devices, as directed by this Policy and IPCT.

4.5.11 Ensuring the patient has access to MRSA patient information leaflets, available from the Intranet.

4.5.12 Communicate the MRSA-colonisation status of individual patients on discharge to Community Nursing, Community Hospital Nursing or Nursing Home Team as appropriate.

4.5.13 Assisting the IPCT and Staff Health & Wellbeing in their efforts to control MRSA.

4.5.14 Performing Root Cause Analysis (RCA) of any MRSA in their clinical area The RCA for MRSA bacteraemia will be performed by the Infection Prevention and Control Team.

4.5.15 Reporting the findings of RCAs and action any recommendations made.

4.5.16 Attend outbreak meetings in their clinical area.

4.6 All staff – clinical or non-clinical:

4.6.1 All staff shall be familiar with the practices referred to in this document, including standard isolation procedures, in order to comply with this policy for all patients colonised or infected with MRSA.

4.6.2 This policy relies heavily on staff taking responsibility for infection control and accepting that they are the principle route of transmission. From this it follows that it is every staff member's responsibility and duty to adhere to a meticulous hand washing strategy, as described in the Hand Hygiene Policy; it cannot be emphasised too strongly that this is how the vast majority of nosocomial infections will be prevented.

4.6.3 Staff shall ensure they are up-to-date with the yearly Mandatory Training which includes Infection Prevention and Control. If more training would be helpful contact the IPCT.

4.6.4 Staff should avoid patient contact if they have skin lesions such as paronychia, eczema, or psoriasis unless the lesions are adequately covered. Further advice may be obtained from Staff Health & Wellbeing, the IPCT or the Department of Dermatology.

4.6.5 Staff responsible for the admission of patients shall check the Clinical Alerts on the patient's notes and electronic record (iPMS alert triangle) for evidence of previous MRSA colonisation. If these are present, a risk assessment for standard isolation precaution should be performed and a set of triple screening swabs taken. The patient's notes and electronic record (iPMS alert triangle is done at PHNT with an

alert marker).

4.6.6 Staff shall ensure screening swabs are taken promptly from patients when requested by the IPCT.

4.6.7 Staff shall assist the IPCT in identification of patients at high risk of disseminating MRSA and to isolate them appropriately.

4.6.8 Occasionally staff may be required to submit screens for MRSA carriage. Those identified as being colonised with MRSA will be referred to Staff Health & Wellbeing, and offered topical MRSA eradication therapy. Please refer to the "Management of Hospital Staff Colonised with MRSA" policy for more details.

4.6.9 If there is any doubt about infection control procedures staff should consult their line manager or a member of the IPCT.

4.7 The Infection Prevention and Control Team is responsible for:

4.7.1 Ensuring that latest guidance is available and included in training programmes / audits.

4.7.2 Communicate results of MRSA colonisation or infection to the ward staff. An information leaflet will be given to the patient, and the IPCT will also be available to discuss the result with relatives and visitors if requested.

4.7.3 Ensure staff are aware of and comply with this policy.

4.7.4 Audit and assess the effectiveness of this policy and infection control practices in general.

4.7.5 Undertake prospective, targeted surveillance and feedback the result to relevant stakeholders.

4.7.6 Assist ward staff in patient risk assessment for the use of standard isolation or contact precautions. Ensure an MRSA care plan is available.

4.7.7 Inform Staff Health & Wellbeing of colonised or infected staff and provide expert advice on their management as necessary. This will include an assessment of the risk a colonised staff member poses to others.

4.7.8 Request the Completion of a Root Cause Analysis by ward staff or completion of RCA by IPCT for MRSA Bacteraemia.

4.7.9 Post infection review of any MRSA Bacteraemia.

4.7.10 Ensure invasive devise bundle is completed.

4.8 Responsibilities of Doctor in Charge of Patient:

4.8.1 Medical staff responsible for the admission of patients should check the Clinical Alerts on the patient's notes and electronic record (iPMS alert triangle) for evidence of previous MRSA colonisation. If these are present, a risk assessment for standard isolation precautions should be performed, decolonisation treatment should be started and a set of screening swabs requested.

4.8.2 Assist the Ward Manager in assessing the risk the patient poses to others and isolate as appropriate.

4.8.3 Practice good infection control procedures as laid down in this and associated policies.

4.8.4 Inform the patient of the situation and provide information regarding its management as required.

4.8.5 Inform relevant hospital staff of the colonisation status.

4.8.6 Prescribe MRSA eradication treatment, after successful treatment of any MRSA infection.

4.8.7 Prior to transfer of a colonised/infected patient to another hospital, notify the receiving clinician at the receiving hospital.

4.8.8 On transfer back to primary care inform the patient's General Practitioner of the patient's colonisation status and advise on plans for further screening and eradication treatments.

4.9 Staff Health & Wellbeing are responsible for the management of members of staff who are colonised or infected with MRSA, which include:

4.9.1 Accepting referrals of employed staff or staff being considered for employment who are colonised or infected with MRSA.

4.9.2 Ensuring that screening and treatment programmes are carried out in accordance with appropriate protocols.

4.9.3 Obtaining consent for and perform staff screening which can be performed using a code to ensure confidentiality.

4.9.4 Providing expert advice to individual members of staff about the screening process (with input from ICPT).

4.9.5 Referring for a specialist Dermatology or Ear, Nose and Throat opinion as necessary.

4.9.6 Prescribing MRSA eradication therapy as outlined in this policy or as advised by the IPCT or Consultant in Medical Microbiology.

4.9.7 Contacting the General Practitioner of staff prescribed systemic eradication therapy. For your information the Occupational Health Physician will write to the GP.

4.9.8 Conducting follow-up screening staff.

4.9.9 Ensuring staff have access to Livewell Southwest MRSA patient information leaflets, available from the intranet.

4.9.10 Considering individual referrals to the staff counselling service.

4.10 Relatives , Visitors and Carers

4.10.1 Relatives and visitors should be encouraged to visit patients. Those who wish to discuss issues related to MRSA and isolation care should speak to the immediate ward / unit / service staff or, if preferred, referred to the local IPCT who will meet with them and/or provide appropriate written information.

4.10.2 Visitors are expected and encouraged to comply with good infection control practice and are encouraged to practice hand decontamination as outlined in the Hand Hygiene Policy.

4.10.3 For patients nursed under standard isolation, visitors must decontaminate their hands before and after contact with the patient, their immediate surroundings and on leaving the room.

4.10.4 The wearing of gloves and apron is not required unless relatives and visitors are assisting with the nursing of the patient or visiting other patients on the same day.

4.10.5 Patients and visitors may challenge staff about hand decontamination. They should be able to do this without concern that it will adversely affect their clinical management or relationships with staff.

5 Background

5.1 Meticillin-resistant *Staphylococcus Aureus* (medically referred to as *S. aureus*) is a bacterium that is resistant to antibiotics that would traditionally be used to treat *S. aureus* infections. This can make infections more difficult to treat due to a limited choice of antibiotics. Whilst MRSA is capable of causing serious and life-threatening infections, it is generally carried in the nose or the skin without causing any harm. Where MRSA is isolated without evidence of infection this is called colonisation. Patients will be identified as being colonised or infected with MRSA through screening swabs or routine microbiological investigation.

5.2 Epidemic strains of MRSA (EMRSA) have a propensity for transmission and have been particularly implicated in cross-infection. In the United Kingdom, EMRSA-15 and EMRSA-16 are the commonest strains. By far the most important route of transmission of MRSA from one patient to another is via the hands of healthcare workers. Other routes of transmission include via contaminated equipment, airborne (i.e. in dust containing skin scales) or droplets from a patient with MRSA respiratory tract infection.

5.3 The most effective means of preventing cross infection and colonisation with MRSA is patient isolation combined with good hand hygiene and clinical practice. Another key strategy in controlling MRSA is to screen patients, instigate contact precautions and prescribe eradication therapy. Screening is currently performed at Livewell Southwest under the following circumstances:

5.3.1 Patient is admitted and known to have previously been colonised (these are identifiable by a Clinical Alert on their clinical notes and on the Alert function of iPMS or SystmOne.

5.3.2 Patient is resident within the last six months in long-stay healthcare facilities including other hospitals and nursing homes. This includes direct admissions from other hospitals or nursing / residential homes.

5.3.3 Patient is a newly identified case of MRSA, in order to determine the extent of colonisation.

5.3.4 Patient has been colonised and received a round of eradication therapy.

5.4 Long-stay patients on Kingfisher, Skylark and Plym should be re-swabbed at day 50. Other areas who have long stay patients should contact the Infection Prevention and Control Team (IPCT) regarding their patients. A decision will be made on a case by case basis.

6 Key Principles

6.1 MRSA is usually transmitted on the hands of healthcare workers. Certain clinical conditions, such as pneumonia or exfoliating skin disease, increase the risk of extensive environmental contamination with subsequent increase in hand-borne transmission and the potential for airborne spread.

6.2 The key principles for the management of MRSA include:

6.2.1 **Responsibility** - infection control is everyone's responsibility and depends upon members of staff maintaining their own high standards and those of their fellow workers.

6.2.2 **Mode of transmission** - the predominant means of spread of MRSA is via the hands of Health Care Workers. Effective hand hygiene can reduce the spread of MRSA as well as other nosocomial pathogens, especially as part of an integrated infection control programme.

6.2.3 **Clinical hygiene** - a high standard of hand hygiene, aseptic technique and a regularly cleaned clinical environment area are important.

6.2.4 **Contact precautions** – to reduce the risk of staff transmitting MRSA **contact precautions** must be observed when caring for colonised / infected patients (i.e. disposable gloves and plastic aprons) whilst in contact with patients or their immediate surroundings.

6.2.5 **Patient isolation in patients** – patients at high risk of disseminating MRSA must be managed in standard isolation. Ideally, all MRSA colonised patients should be nursed in **Standard Isolation**, but where facilities are lacking, or following a risk assessment it would be unsafe to do so, other colonised patients may be nursed on the open ward with full **contact precautions**.

6.2.6 **Inpatients who should be isolated include**:

a) Patients with MRSA-infected wounds, especially if extensive and suppurating.
b) Patients with MRSA pneumonia.
c) MRSA-colonised patients with exfoliative skin disorders (i.e. eczema and psoriasis).

6.2.7 **Patient groups to be screened on admission and isolated if possible pending the result**:

a) Patients known to have been colonised in the past (these are identifiable by a Clinical Alert on their clinical notes and on the Alert function of iPMS).
b) Patients admitted from other hospitals and long term care facilities including nursing homes.
c) Following eradication treatment.

6.2.8 **Environmental cleaning in- patients areas:**

a) During admission, the patient environment should receive a twice-daily enhanced clean.
b) After transfer or discharge of an infected / colonised patient, the patient environment should be thoroughly cleaned. There should be a special emphasis on cleaning “patient-touch” surfaces.

6.2.9 **MRSA decontamination** - if a colonised patient is discharged the responsible hospital clinician must inform the primary care doctor promptly of the colonisation status and advise on further eradication therapy. It should be noted that treatment of infected patients will not necessarily eliminate carriage.

6.2.10 **Staff colonisation and infection:**

a) Permanently colonised staff have rarely been implicated in transmission. Screening may be required in specific circumstances as dictated by the Infection Prevention & Control Team (IPCT). Staff may also be found to be colonised with MRSA during routine microbiological investigation. Staff colonised with MRSA will be managed on a case-by-case basis and will initially be offered topical eradication therapy and managed by Staff Health and Wellbeing with advice from the IPCT. Staff should usually not return to work until **at least** 48 hours of total eradication therapy has been completed.

b) Staff with clinical MRSA infections will be treated with appropriate antibiotics and should not return to work until asymptomatic. Occupational Health and the IPCT will decide when the member of staff can return to work.

c) Staff with local skin infections, such as nail fold infections or impetigo, should not work in clinical areas, unless the lesions are adequately covered. Even if not infected with MRSA, such skin conditions are at risk of subsequent MRSA infection and further transmission.

7 Prevention

7.1 Prevention is based on rigorous hand hygiene before and after contact with patients and their potentially contaminated environments (please refer to Hand Hygiene Policy). Hands should be washed with soap and water at the start and end of clinical duties, when hands are visibly soiled or potentially contaminated and following the removal of gloves. Routine periodic hand decontamination with alcohol-based rub should be performed between every patient contact (in line with the WHO Five Moments for Hand Hygiene) or between each activity for the same patient, when hands are not visibly soiled. This approach will interrupt the transmission of all nosocomial pathogens not just MRSA.

7.2 Secondary modes of transmission include airborne and via fomites. The following procedures are intended to minimise transmission.

7.3 Standard Isolation Procedures

7.3.1 The **reasons for isolation** must be explained to the patient and their visitors. This is particularly important for children and their parents.

7.3.2 **Hand-washing** - all staff, visitors and carers must decontaminate their hands before and after contact with the patient, their immediate surroundings and on leaving the room.

7.3.3 **Gloves** - healthcare workers must wear disposable gloves when in contact with potentially colonised skin, secretions and surroundings. Gloves should be removed and disposed of prior to leaving the patient's room. Hands should be washed with soap and water following glove removal.

7.3.4 **Plastic apron** - a disposable plastic apron should be worn when clothing is likely to come into contact with colonised/infected patients or their surroundings. The apron should be removed and disposed of prior to leaving the patient's room.

7.3.5 **Linen** - linen should be treated as infected.

7.3.6 **Waste** - all waste, including household, should be treated as infected waste.

7.3.7 **Stethoscopes** - stethoscopes should be wiped with a detergent or disinfectant cloth after each patient use.

7.3.8 **Cleaning** - the patient environment, including all "patient-touch" surfaces - including bed frames - should be enhanced cleaned . The ward / unit / service manager or deputy must ensure that domestic staff are made aware of the cleaning regimen required. On discharge the room should be deep cleaned and the ward manager should assess the cleanliness of the fittings. All clinical equipment must be cleaned according to manufacturer's recommendations and in line with Livewell Southwest's Decontamination (Cleaning and Disinfection) Guidelines and Procedures.

7.3.9 **Death** - no special precautions are required when handling the deceased.

7.4 Contact Precautions

7.4.1 Contact precautions are to be used as an adjunct and not a replacement to good hand hygiene. Contact precautions reduce hand and clothing contamination and are intended for all staff having contact with colonised or infected patients and their immediate surroundings. Meticulous hand hygiene and contact precautions must be employed not only when in contact with patient but also their surroundings.

7.4.2 For contact with colonised skin, secretions or the surrounding environment:

a) Disposable gloves.
b) Disposable plastic apron.
c) Eye protection.
d) Respiratory protection may be required.

7.4.3 Procedures at particularly high risk include:

a) Dressing wounds.
b) Draining urinary catheter bags or surgical drains.
c) Manipulating vascular cannulae.
d) Manipulating tracheostomies.

7.4.4 After use, discard gloves apron and eye protection **and** perform hand washing with soap and water.

7.4.5 In general, other than observing good hand hygiene practice, visitors do **not** need to follow the same precautions unless they have certain conditions (i.e. open and suppurating wounds), or if they are assisting with the nursing care of a patient.

7.4.6 Staff working in the community are advised to visit infected / colonised patients at the end of their working day if at all possible.

7.5 Cleaning - all clinical equipment must be cleaned according to manufacturer's recommendations and in line with Livewell Southwest's Decontamination (Cleaning and Disinfection) Guidelines and Procedures.

8 Admissions, Discharges and Transfers

8.1 Admission - patients who have been resident within the last six months in long stay healthcare facilities, including other hospitals and nursing homes, or who are known to have been MRSA-colonised before, should be assumed to be colonised and the following steps taken (**note:** this does not apply to the acute mental health wards or rehabilitation wards for mental health - only swab if there is a clinical indication, i.e. previous history of MRSA, broken skin, urinary catheter, etc):

8.1.1 A full set of MRSA screening swabs should be taken within six hours of admission, regardless of screen results from other hospitals.

8.1.2 If at high risk of shedding MRSA (i.e. has pneumonia, exfoliative skin condition or suppurating wound infection) the patient should be admitted to standard isolation.

8.1.3 Other patients at risk of MRSA colonisation should be admitted to isolation if facilities exist. Such patients are at a lower risk of transmitting MRSA and prioritisation for isolation should reflect this.

8.2 Discharge of MRSA colonised patients:

8.2.1 Ward staff should ensure that on discharge all relevant staff are aware of the patient's MRSA status (i.e. General Practitioners, Community Nurses, Residential / Nursing Home staff) and should recommend follow-up treatment as appropriate (i.e. when and where to screen and what eradication therapy to use).

8.2.2 Reference to the patient's MRSA status should be made in the discharge notes / letter by the doctor in charge of the patient.

8.2.3 If discharged to a nursing / residential home, the home's senior nursing staff should be made aware of the MRSA status by the ward / unit / service manager. Rarely should this hamper the patient discharge.

8.3 Transfer to another hospital or long-term care facility:

8.3.1 It is generally not necessary to screen patients before inter-hospital transfer.

8.3.2 If the receiving hospital requests screening, contact the IPCT.

8.3.3 It is the responsibility of the ward / unit / service manager to inform the receiving ward's nursing and ambulance staff of the patient's MRSA status, and the medical staff to inform the receiving doctors or General Practitioner.

8.3.4 Surfaces that come into direct contact with the patient during transfer, such as stretchers, should be cleaned with detergent and water after use. Ambulance staff are not required to take specific precautions over and above normal contact precautions and good hand hygiene.

8.4 Transfer of colonised / infected patients within the hospital:

8.4.1 Transfer of patients colonised or infected with MRSA should be avoided if possible.

8.4.2 There should be clear communication between departments about the patient's MRSA status and transfer should only proceed when the receiving area are fully prepared.

8.4.3 Skin lesions should be covered with occlusive dressing. No other special precautions are required.

8.4.4 Infected / colonised patients may attend clinical service departments for necessary investigations or treatments.

8.4.5 Measures to reduce the risk of MRSA transmission should be taken. The colonised patient should be last on any list, avoid excessive waiting in the Department and surfaces exposed to the patient or their potentially contaminated secretions should be wiped after use down with a detergent wipe.

8.4.6 Clinical areas such as Physiotherapy, Occupational Therapy and Radiology should wipe down beds and equipment with detergent wipes.

9 Tests for Colonisation

9.1 **Sites** - the following sites should be sampled when colonisation is being investigated:

a) Nose.
b) Throat.
c) Perineum / groin.
d) Lesions or sites of abnormal skin including ulceration, eczema, pressure areas, and sites of insertion of intravascular cannulas, suprapubic catheters, tracheostomies, drains or Percutaneous Endoscopic Gastrostomies.
e) Sputum if a productive cough.
f) Urine if a urethral catheter in situ.
g) A vaginal swab should normally only be taken if there is a vaginal operative lesion or from a mother of a colonised neonate.

9.2 When to sample:

9.2.1 All patients should be swabbed if they have been transferred from another hospital or a care home within six hours of being admitted to the unit.

9.2.2 Other clients (i.e. mental health clients) need only be screened if there is a clinical reason (i.e. lesions or urinary catheter insitu).

9.2.3 Any patient not covered by the above and who:

i) is a newly identified case of MRSA in order to determine the extent of colonisation. If there is any doubt about sampling patients with a productive cough, urinary catheter in situ, exfoliating skin conditions, wounds or leg ulcers, please contact the IPCT.
ii) has been colonised and received a round of eradication therapy.

9.2.4 Swabs used to sample skin sites should first be moistened with sterile saline and then rubbed repeatedly over the sample site. All swabs should be placed in the supplied transport medium and sent to the microbiology laboratory.

9.2.5 Treatment should not be delayed pending assessment of the exact sites of carriage and topical eradication treatment will be prescribed without waiting for the results of a full MRSA screen.

9.2.6 A full set of post-eradication swabs should be taken 72 hours after completing the course (see Appendix A). If this screen is negative, then two further swabs should be taken at weekly intervals. Once three negative screens have been obtained, colonisation can be considered to have been cleared or reduced to a safe level. If any of these screens are positive, a further round of eradication therapy should normally be prescribed and the process repeated. If this fails to eradicate colonisation, further rounds of treatment are unlikely to be successful. However, further courses may be recommended by the microbiologist in certain circumstances.

9.7 Submission of specimens - specimens should be sent to the laboratory with a request form clearly marked “MRSA screen” and must be differentiated from clinical specimens as the two are processed differently. The request form must clearly state the site and if swabbing any lesions, the request form should state this.

9.8 When the decision is made that a rapid result would be clinically beneficial, patients should be screened using the Polymerase Chain (PCR) method. A nose swab should be performed using the red- topped swabs.
if swabs arrive in Microbiology by 13.00, a result should normally be available by the end of the same working day. All swabs processed by PCR are also routinely cultured.

10 Topical Treatment of Colonisation

10.1 Doctors will prescribe topical MRSA eradication therapy (Mupirocin and 4% chlorhexidin).

10.2 If the MRSA is reported as “Mupirocin-Resistant”, if the patient is allergic to

mupirocin or chlorhexidine, or if deviation from the recommendations below is considered, the management of the patient should be discussed with a Consultant in Medical Microbiology or the IPCT. Likewise, if a patient is identified as having persistent colonisation (i.e. throat), contact the IPCT or a Consultant Microbiologist for advice (see below).

Generic name	Propriety name	Usual dose	Notes
4% chlorhexidine	Hibiscrub	Daily for five days	Apply directly to skin as liquid soap on a wet sponge or flannel & lather well prior to rinsing
4% chlorhexidine	Hibiscrub	Shampoo on days one and five of treatment. Other bathing products may be used after chlorhexidine	Rinse hair with normal shampoo after applying chlorhexidine to scalp
Mupirocin	Bactroban nasal ointment	Apply three times a day for five days	Place a pea-sized amount of ointment on the squamous portion of each nostril and massage gently upwards.

10.3 A full set of post-eradication swabs should be taken 72 hours after completing the course (see Appendix A). If this screen is negative, then two further swabs should be taken at weekly intervals. Once three negative screens have been obtained, colonisation can be considered to have has been cleared or reduced to a safe level. If any of these screens are positive, a further round of eradication therapy should normally be prescribed and the process repeated. If this fails to eradicate colonisation, further rounds of treatment are unlikely to be successful. However, further courses may be recommended by the IPCT in certain circumstances.

10.4 As MRSA carriage may persist at a low level all previously colonised / infected patients should be considered as persistently colonised on readmission until proven otherwise.

10.5 Isolation precautions should only be discontinued on the advice of the IPCT. A patient is generally considered to be MRSA-negative after three consecutive negative screens. Patients previously known to be colonised who are readmitted to hospital are generally considered to be MRSA-negative after one negative screen after admission. Clinical Alerts on patient's notes or the electronic record (PiMS alert triangle) should only be added or removed by the IPCT and will be considered on an individual patient basis.

11 Systemic Treatment of Colonisation

11.1 Under certain circumstances, the use of systemic antibiotics may be considered necessary to eradicate carriage of MRSA. Situations may include:

11.1.1 Persistent colonisation of patients (i.e. throat carriage) associated with implication in ongoing transmission during an outbreak or recurrent invasive infections.

11.1.2 Persistent colonisation of staff (i.e. throat carriage) associated with implication in ongoing transmission during an outbreak or recurrent invasive infections.

11.1.3 The decision to prescribe systemic antibiotics to eradicate MRSA should be taken on a case-bay-case basis in consultation with the IPCT or a Consultant Microbiologist and advice on the appropriate regimen should always be sought from a Consultant Microbiologist. Systemic treatment should be given in conjunction with a topical eradication regimen.

12 Management of MRSA in the Community

12.1 The risk of serious MRSA infection in the community is small. Standard infection control procedures and common sense are still required. The majority of MRSA control measures are intended to prevent cross-infection of vulnerable hospitalised patients. In the community, basic hygiene alone is usually sufficient. The treatment for MRSA should be adhered to as directed by the GP or the discharge letter. If there is doubt then contact the IPCT.

12.2 **Nursing Procedures** - follow the Hand Hygiene Policy. Wear disposable gloves and use an alcohol rub when in contact with potentially colonised skin, secretions and their immediate surroundings. If contamination of clothes or uniform is likely a disposable apron should be worn during these procedures.

12.3 **Waste Disposal** - as per the Waste (Safe Handling and Disposal) Policy and Procedure.

12.4 **Risk of Spread** - the risk of serious infections or outcomes from MRSA is low in healthy people in the community. There is therefore no need to restrict normal social contact with colonised patients.

12.5 **Licensed Nursing and Residential Homes** should be able to look after any MRSA colonised patient with simple hygiene measures and, if appropriate, simple isolation procedures. If there is any doubt contact the IPCT at the Local Care Centre MGH.

13 Management of Hospital Staff Colonised with MRSA

13.1 A flow chart describing the management of MRSA-colonised staff is shown in Appendix B and information for staff is provided in Appendix C.

13.2 MRSA-colonised staff will usually be identified from clinical specimens or as part of an investigation of patients with hospital-acquired MRSA. The IPCT will normally be the first to be aware of staff colonised with MRSA and will refer to Staff Health & Wellbeing, who will assume responsibility for follow-up and treatment, with advice from the IPCT. Regular communication between Staff Health & Wellbeing and the IPCT is essential for the optimal management of each case of MRSA-colonised staff.

13.3 Screening of staff will normally be carried out as part of an investigation of patients with hospital-acquired MRSA. The decision to perform staff screening will normally be taken by the clinical team looking after the patient following advice from a Consultant Microbiologist or the IPCT. Screening will be limited to staff who have provided clinical care to the affected patient(s). A list of these staff will be drawn up

by the senior medical and nursing teams for the clinical area. Screening of staff and obtaining consent will be carried out under the supervision of Staff Health & Wellbeing in collaboration with the Matron or Ward Manager of the clinical area involved. There is generally no indication for pre-employment screening for MRSA.

13.4 Staff found to be carrying MRSA will be managed by Staff Health & Wellbeing. Staff Health & Wellbeing will assess whether referral for a specialist Dermatology or Ear, Nose and Throat opinion is necessary and will prescribe topical eradication therapy (see flow chart in Appendix B). If this is unsuccessful, a second course will be attempted. If both courses are unsuccessful, a risk assessment will be performed and systemic eradication therapy may be recommended.

Systemic eradication therapy will involve close liaison between Staff Health & Wellbeing, the IPCT and a Consultant Microbiologist. The GP will need to be contacted for staff prescribed systemic decolonisation. Under normal circumstances the prescription for systemic eradication therapy will be issued by Staff Health & Wellbeing. Systemic treatment should be given in conjunction with a topical eradication regimen. Consider referral to an appropriate counselling service or group.

13.5 Work restrictions - in general, staff will be required to remain off work for the first 48 hours of any course of decolonisation therapy. This will be treated as paid sick leave according to section 7 of the Sickness Absence Policy, entitled “Absence from duty required under Health and Safety, Control of Infection or other procedures”.

13.5.1 For staff with food handling responsibilities, in addition to the above applies it is crucial staff do not return to work until any septic lesions have healed.

13.6 If LSW requires an employee to refrain from attending duty for these reasons, the absence will be treated as paid sick leave and will not count towards an individual’s entitlement to occupational sick pay. Managers should liaise closely with the IPCT, Staff Health & Wellbeing or Workforce Development as appropriate.

13.7 Longer periods of absence may be considered necessary by Staff Health & Wellbeing and the IPCT under certain circumstance, such as an uncontrolled exfoliating skin condition (i.e. eczema or psoriasis), where there is clear epidemiological evidence of transmission associated with the member of staff.

13.8 Any colonised member of staff must be deemed fit for work by Staff Health & Wellbeing and IPCT prior to return to work and must pay particular attention to hand hygiene.

13.9 The management of persistently colonised members of staff will be decided on a case-by-case basis by the Matron, in conjunction with Staff Health & Wellbeing and the IPCT. If a definitive opinion on the management of individual staff member cannot be agreed, advice will be sought from the Medical Director and / or Director of Operations as appropriate.

14 Prudent Use of Antibiotics

14.1 Appropriate antibiotic will help to prevent the emergence and spread of antibiotic resistance. Excessive use of antibiotics promotes the spread of existing strains of

MRSA though reduction in colonisation resistance and by giving resistant strains a survival advantage in the hospital environment.

14.2 Antibiotic use will be based on local antibiotic guidelines (see **Plymouth Area Joint Formulary** and **Antimicrobial Guidelines** on the Intranet) Further advice can be obtained from a Consultant Microbiologist or the Antibiotic Pharmacist. In general:

14.2.1 Narrow spectrum antibiotics are preferred to the broad-spectrum groups.

14.2.2 Prophylactic antibiotics must only be used in defined situations where the benefit has been proven.

14.2.3 The choice of antibiotic(s) will normally be governed by local information about trends in antibiotic resistance or a known sensitivity of the organism, as detailed in the current Antimicrobial Guidelines on the Intranet.

14.2.4 The use of antibiotics will be regularly audited.

14.2.5 The Pharmacists will provide support for prudent antibiotic prescribing. This process will be led the Antibiotic Pharmacist. This will be based on an annual programme of work to promote prudent antimicrobial prescribing.

15 Training

15.1 The ward / unit / service manager is responsible for ensuring staff involved in the procedures outlined in this policy have received suitable education / training and can demonstrate competence when dealing with cases of MRSA.

16 Monitoring Compliance

16.1 The ward / unit / service manager is responsible for monitoring the implementation of these arrangements, supported by the IPCT when required.

16.2 The ward / unit / service manager is responsible for monitoring the implementation of these arrangements, supported by the IPCT when required.

16.3 The IPCT audit / compliance

a) Infection Prevention and Control Audits.
b) Compliance with local MRSA screening guidance.
c) Measurement of the appropriateness of decolonisation (correct agents/ dosages for the correct time) and follow up.

All policies are required to be electronically signed by the Lead Director. Proof of the electronic signature is stored in the policies database.

The Lead Director approves this document and any attached appendices. For operational policies this will be the Locality Manager.

The Executive signature is subject to the understanding that the policy owner has followed the organisation process for policy Ratification.

Signed: Director Infection Prevention & Control.

Date: 25 February 2015

Appendix A

Insert Patient ID label

Nursing Intervention Plan
MRSA

Signs/symptoms of clinical infection? Yes / No Colonised only? Yes / No

Place of infection / colonisation:

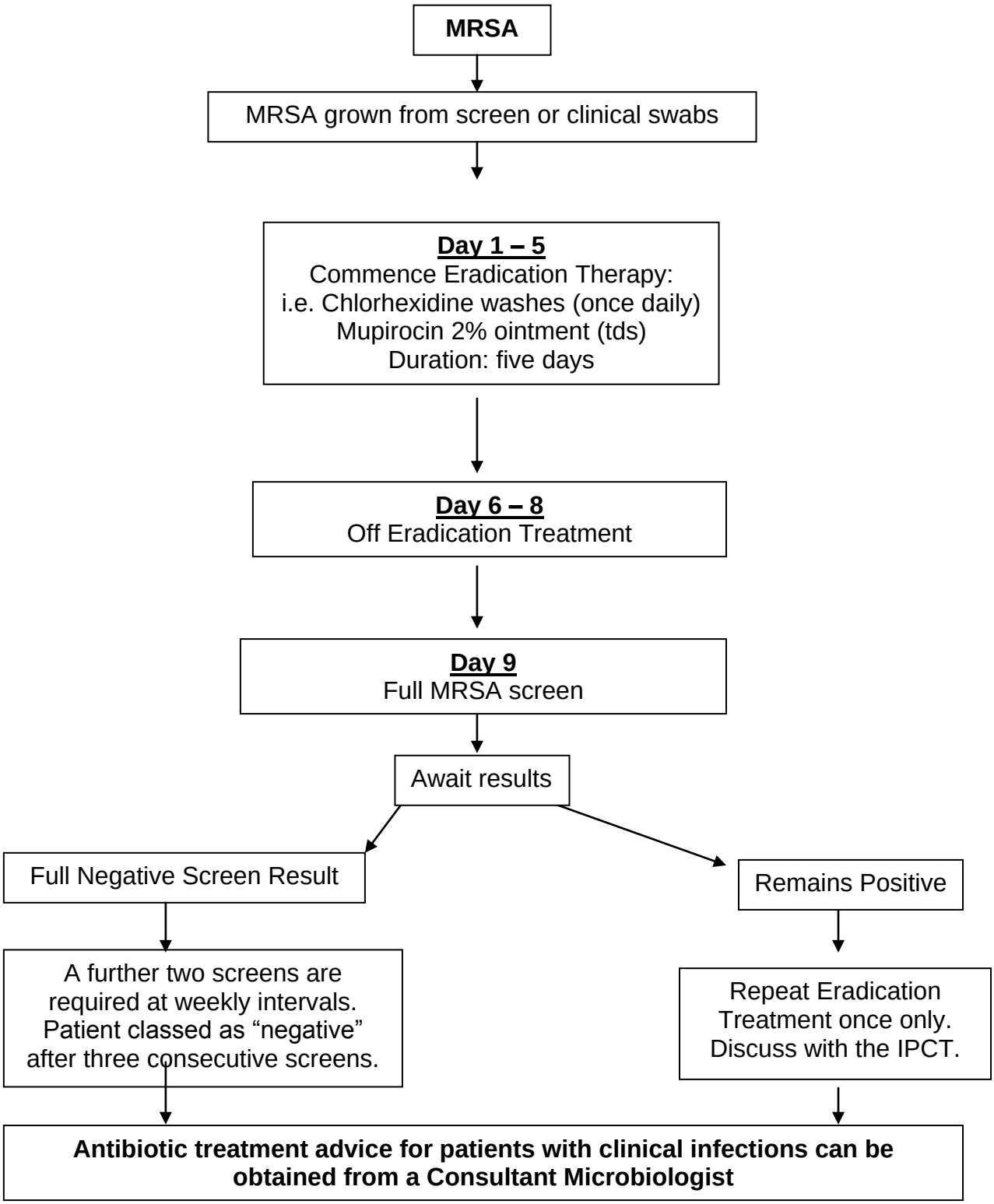
Goal:	Date goal set:	Name / signature / designation:
▪ Reduce risk of MRSA from **colonised** sites causing infection in susceptible sites (e.g. surgical wounds) ▪ Reduce risk of cross infection ▪ Maintain patient comfort		
Treatment: Staff must avoid patient contact if they have any skin lesions (e.g. eczema, Paronychia) unless approval obtained from Occupational Health	Date treatment checked:	Name / signature / designation:
1. Adhere to local policy for screening (on admission and prior to/following treatment). Remember to include open wound sites and sites of invasive procedure	▪	
2. Liaise with Infection Control Team for advice and follow current Infection Control MRSA Policy. Ensure 'Alert' stickers are placed a) on outside of main set of clinical records and b) on outside of current MDT records	▪	
3. Explain MRSA results to patient and relatives if patient consent gained and give information leaflet; ensure patient, staff and visitors maintain good hand washing	▪	
4. Isolate high-risk patients in accordance with Policy, or cohort in main ward if facilities are lacking and commence an environmental enhanced clean	▪	
5. Maintain contact precautions as per Infection Control Policy. Place appropriate sign on door of room. **If in open ward ensure strict standard infection control precautions are adhered to**	▪	
6. If a treatment is indicated this must be prescribed and administered. **Please complete below details:** **Start date: Completion date:**	▪	
7. Apply lotion prescribed directly to the skin as a liquid soap on a cloth and lather well prior to rinsing (daily for 5 days). Shampoo hair on days 1,3 and 5 with lotion as prescribed. Apply mupirocin/bactroban cream 3 times daily for 5 days. Place pea-sized amount in each nostril and massage gently upwards	▪	
8. Change bed linen daily after washing.		
9. Rescreen **72 hours** after completion of treatment and then at **7 day intervals until 3 negative results are obtained.** Maintain IPC precautions until this time	▪ ▪	
10. Inform relevant personnel of MRSA status as and when necessary (whilst an inpatient and on discharge/transfer)	▪	

Date	Site	Initial	Result	Treatment
On admission Date:	Carriage sites Wound sites			
72 hours **Post treatment** Date:	Carriage sites			
1st 7 day interval Date:	Carriage sites			
2nd 7 day interval Date:	Carriage sites			

Subsequent or further MRSA swabs/screening				

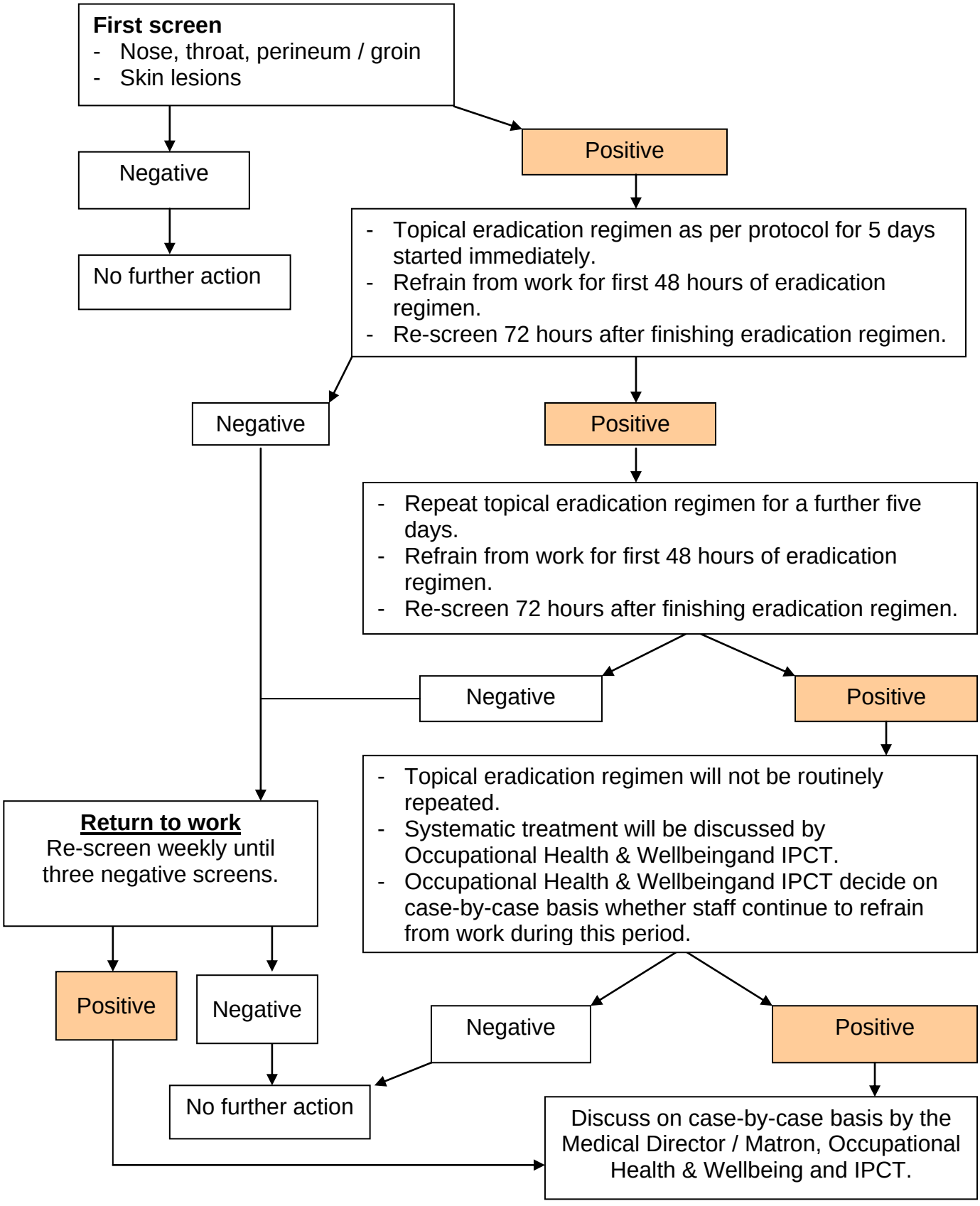
The patient / client signature should not be considered as an indication of capacity to consent. It is designed to demonstrate that the content of the care plan has been discussed and explained to the patient.	
Patient's signature ……...	Date: …….
Staff sign/print name/designation: ……. …….	Date: …….

Management of MRSA-Colonised Patients



Appendix B

Staff Screening



Appendix C

Information About Staff Screening

Staff MRSA carriage may be transient or resident. Transient carriage is often on the hands and should not result in transmission to a patient as long as there is good compliance with the organisation's Hand Hygiene and clinical practice policies. A proportion of staff will have resident MRSA carriage. Again, this should not result in transmission to a patient as long as there is good compliance with the organisation's Hand Hygiene and clinical practice policies. Examples of when transmission from staff to patients may occur include:

- failure of a MRSA-colonised member of staff to comply with the organisation's Hand Hygiene and clinical practice policies
- a MRSA-colonised member of staff has skin lesions which increase shedding to the environment (i.e. paronychia, eczema, or psoriasis).

Screening of staff will normally be carried out as part of an investigation of patients with hospital-acquired MRSA. Examples of cases of hospital-acquired MRSA include:

- patients who become colonised with MRSA during their admission and who have had no contact with other MRSA-colonised patients

- multiple patients who become colonised over a short period of time with a similar strain MRSA during their admission.

The decision to perform staff screening will normally be taken by the clinical team looking after the patient following advice from the Director of Infection Prevention and Control, a Consultant Microbiologist or the IPCT. Screening will be limited to staff who have provided clinical care to the affected patient(s). A list of these staff will be drawn up by the senior medical and nursing teams for the clinical area. Screening of staff will be carried out under the supervision of Staff Health & Wellbeing in collaboration with the Matron or Ward Manager of the clinical area involved.

Staff will be informed if they are found to be colonised with MRSA. They will be referred to Staff Health & Wellbeing who will assess them and prescribe topical eradication therapy. If this is unsuccessful, a second course will be attempted. If both courses are unsuccessful, a risk assessment will be performed and systemic eradication therapy will usually be recommended.

Using these regimens, MRSA will be eradicated from the vast majority of staff.

The medical management of persistently colonised members of staff will be decided on a case-by-case basis by Staff Health & Wellbeing and the IPCT. In the case of operational difficulties, these will be resolved by the Director of Infection Prevention and Control or Medical Director and Matron, with advice being sought from the Senior Management Team where arrangements cannot be agreed.

In general, the following will apply:

- persistently colonised staff who have not been implicated in patient transmission and do not have has skin lesions such as eczema, or psoriasis will be allowed back to work with strict instructions regarding compliance with the organisation's Hand Hygiene and clinical practice policies

- persistently colonised staff who have been implicated in patient transmission and / or have has skin lesions (such as eczema or psoriasis) will be reviewed on an individual basis. Appropriate recommendations regarding an individual's suitability for ongoing clinical practice will be made if it is considered that they pose an ongoing risk to patients.

Further advice on screening and individual case management can be obtained from the Director of Infection Prevention and Control, a Consultant in Staff Health & Wellbeing, Microbiology or the IPCT. Support for staff can be obtained from Workforce Development.

References

1) Coia JE, Duckworth GJ, Edwards DI *et al*. Guidelines for the control and prevention of meticillin-resistant *Staphylococcus aureus* (MRSA) in healthcare facilities by the Joint BSAC/HIS/ICNA Working Party on MRSA. Journal of Hospital Infection 2006; 39: Suppl. 1: S1-S70.
2) Gemmell CG, Edwards DI, Fraise AP, Gould FK, Ridgway GL, Warren RE. Joint Working Party of the BSAC, HIS and ICNA. Guidelines for the prophylaxis and treatment of meticillin-resistant *Staphylococcus aureus* (MRSA) infections in the UK. Journal of Antimicrobial Chemotherapy 2006; 57: 589-608.
3) Brown DF, Edwards DI, Hawkey PM *et al*. Joint Working Party of the BSAC, HIS and ICNA. Guidelines for the laboratory diagnosis and susceptibility testing of meticillin-resistant *Staphylococcus aureus* (MRSA). Journal of Antimicrobial Chemotherapy 2006; 56: 1000-1018.
4) Gould FK, Brindle R, Chadwick PR *et al*. Guidelines (2008) for the prophylaxis and treatment of meticillin-resistant *Staphylococcus aureus* (MRSA) infections in the United Kingdom. Journal of Antimicrobial Chemotherapy. Epub ahead of print. Available at http://www.ncbi.nlm.nih.gov/pubmed/19282331?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum
5) Pittet D *et al*. Effectiveness of a hospital-wide programme to improve compliance with hand hygiene. Lancet 2000; 1307-12.
6) HIS Working Party report. Guidelines on the control of meticillin-resistant Staphylococcus aureus in the community. Journal of Hospital Infection 1995; 31: 1-12.
7) Nathwani D, Morgan M, Masterton RG *et al*. Guidelines for UK practice for the diagnosis and management of methicillin-resistant *Staphylococcus aureus* (MRSA) infections presenting in the community. Journal of Antimicrobial Chemotherapy 2008; 61: 976-994.
8) Department of Health, November 2006. Screening for Meticillin-resistant *Staphylococcus aureus* (MRSA) colonisation: A strategy for NHS Trusts: a summary of best practice. Available at http://www.dh.gov.uk/assetRoot/04/14/08/48/04140848.pdf
9) Department of Health, January 2008. Code of Practice for the Prevention and Control of Healthcare Associated Infections. Available at http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4139336
10) Cunningham R, Jenks P, Northwood J, et al S. Effect on MRSA transmission of rapid PCR testing of patients admitted to critical care. Journal of Hospital Infection 2007; 65: 24-28.
11) Jog S, Cunningham R, Cooper S, Wallis M, Marchbank A, Vasco-Knight P, Jenks PJ. Impact of preoperative screening for MRSA by real-time PCR in patients undergoing cardiac surgery. Journal of Hospital Infection 2008; 69: 124-130.
12) Department of Health; Chief Executive Bulletin, 1-7 December 2006. Available at: http://www.dh.gov.uk/assetRoot/04/14/11/63/04141163.pdf
13) Department of Health, 2009. Health and Social Care Act 2008. Code of Practice for the NHS on the prevention and control of healthcare associated infections and related guidance. Available at http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_093762

14) Department of Health. Implementation of Modified admission MRSA screening guidance for NHS (2014) Department of Health expert advisory committee on Antimicrobial Resistance and Healthcare Associated Infection (ARHA).