

POLICY FOR SCREENING TO DETECT CARRIAGE OF METICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) AND METICILLIN-SENSITIVE STAPHYLOCOCCUS AUREUS (MSSA)

Purpose

The purpose of screening for MRSA and MSSA is to detect patients (both adults and children) who may be carrying these organisms in order to minimise the risk of the patient becoming infected and to minimise the risk of transmission to other vulnerable patients.

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1. Screening Definitions

There are different levels of screening needed dependent on the clinical situation. The definitions below outline the different screens.

A routine screen consists of a nose and perineal/groin swab. This is the minimum set required.

In addition swabs should be taken from any wounds, damaged skin and manipulated sites, sputum sample if productive, and urine sample if a urinary catheter is in situ.

A pre-operative screen is carried out for a patient due for surgery, placement of a central vascular access device (CVAD) or interventional radiology and should include nose, perineum/groin and axilla swabs.

Screening for a biopsy is desirable if it can be facilitated.

In addition samples should be taken from any wounds, damaged skin and manipulated sites such as urinary catheters or IV devices.

A full screen consists of nose, throat, axilla and perineal swabs along with wounds and manipulated sites, sputum sample if productive, and urine sample if a urinary catheter is in situ.

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A re-screen is a screen to assess current carriage of MRSA and/or assess if an eradication protocol has been effective. It should include all sites as per full screen above.

Three consecutive full sets of negative screening specimens are required before a patient is regarded as “cleared” of MRSA colonisation. These should be taken a minimum of 48 hours after treatment is finished, and preferably separated by a week or more.

Even though a patient may be cleared, there is still a possibility of them recolonising with MRSA, especially if admitted to hospital or given antibiotics.

Any patient who was previously positive for MRSA (even with 3 negative screens), should be isolated and re-screened on any new admission to hospital to check they remain negative. If one set is negative they can usually be de-isolated.

A contact screen is carried out where a patient has been in contact with someone carrying MRSA. It should consist of a nose and perineal swab. In addition swabs should be taken from any wounds and manipulated sites such as urinary catheters or IV devices.

2. Who should be screened?

Patient	Requirement (see definitions in section 1)
New patients who have lived overseas in the last year	Routine screen (except outpatients attending for a single visit where no further care is planned).
New haemato-oncology patients	Routine screen on their first visit.
All inpatient admissions and intra-hospital transfers	Routine screen taken within 24 hours (except where the patient has already had a pre-operative screen in the last 6 weeks)
All pre-operative surgical patients	Pre-operative screen (up to 6 weeks before their planned operation date). Pre-operative patients should be commenced on universal decolonisation and will not need a further screen on day of admission unless they have been in another hospital or on antibiotics since the original samples).
Patients undergoing insertion of central vascular access devices (CVAD)	Pre-operative screen. Where possible this should be completed at least one week prior to the procedure to allow time to action the results.
Critical Care Unit (CCU) admissions	Full screen within 24 hours of admission (unless they already had a screen within the previous week or are on universal decolonisation protocol).
CCU patients	Weekly full screen.
Haemato-oncology inpatients (adult and paediatric)	Weekly full screen.
Patients who are receiving systemic anti-cancer therapy (SACT)	Routine screen at the start of their first cycle and at the end of the last cycle.

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Long stay inpatients who have been in the Trust for longer than 28 days	Monthly routine screen.
Patients in the same bay as an MRSA positive patient 'contacts'	Contact screen after positive patient has been moved.
Patients who have finished an eradication protocol	Full re-screen to assess effectiveness a minimum of 48 hours after the protocol has stopped.
History of previous MRSA	Full screen on admission and be isolated pending results.

3. Screening sites

- Nose (use one swab to sample both sides)
- Perineum (or if not possible, groin one swab)
- Axilla (use one swab to sample both sites)
- Throat

In addition the following may be added as appropriate:

- Post-operative wounds (only at time of dressing change)
- Intra-vascular catheter sites (only at time of dressing change)
- Any break in the skin surface, including minor/recently healed wounds and drain sites
- Lesions of eczema and psoriasis
- Sputum from expectorating patients (this should also be sent for routine microscopy, culture and sensitivity testing).
- Tracheostomy site
- Urine from catheterised patients or from patients with urinary symptoms (this should be sent for routine microscopy, culture and sensitivity testing)
- PEG and jejunostomy insertion sites.

Please Note: Samples labelled for MRSA testing will only be tested for MRSA and *Staph aureus*. If infection is suspected the sample should be sent (or e-requested) for microscopy culture and sensitivity (MC&S) as well as MRSA.

4. Patients who refuse to have MRSA screen

Patients who do not consent or are unable to consent to MRSA screening may need to be considered as positive for MRSA and should be isolated in order to protect other patients. The patient should have the risks explained to them.

5. How are samples collected

The screening samples should be taken using a blue microbiology swab moistened with sterile normal saline or water or dipped into the transport medium of the swab.

See **Appendix 1** for details of how to take the samples.

Samples should be correctly labelled with relevant clinical information.

The laboratory will culture screening swabs for both MRSA and MSSA.

The results will usually be available in approximately 48 hours.

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6. Communication of Results

The microbiology laboratory will notify the Infection Prevention and Control Team (IPCT) if the patient is MRSA positive.

Any positive results for MRSA will be recorded and flagged on the EPR by the IPCT.

The IPCT will liaise with the clinical team to ensure that new or unusual MRSA results are communicated and actioned appropriately including IPCT recommendations for isolation and treatment as required.

Ward / Pre-operative assessment staff are responsible for checking the results of patients they have screened.

Ward / Pre-operative assessment unit staff are responsible for ensuring that patients are informed of the screening result including where requested if it is negative, in order to prevent undue anxiety. Where relevant they should ensure that decolonisation therapy is commenced.

If the patient is discharged prior to a new MRSA positive result being known, the IPCT will write to the patient's GP with a copy to the patient. The letter will advise decolonisation treatment where appropriate. A patient information leaflet will be sent to the patient.

The IPCT can be contacted for advice as needed on x 1085 or 1409.

7. Patient management

Patients found to be MRSA positive will be managed according to the '[MRSA Positive Patients - Policy for the Management of](#)'. This will include appropriate isolation and decolonisation.

8. Surgical Patients

All pre-operative surgical patients should have a pre-operative screen (up to 6 weeks before their planned operation date). They will not need a further screen on day of admission unless they have been in another hospital or on antibiotics since the original samples.

Pre-operative patients should be commenced on universal decolonisation. They should be given the products in outpatients at the time of decision for surgery or at their pre-assessment visit along with the leaflet 'Preventing wound and chest infections after your operation'.

Universal decolonisation consists of a daily antiseptic wash (Octenisan) starting 3 days before the planned procedure date, in order to reduce bio-burden of organisms on the skin. A mouthwash will also be offered on the day of surgery.

Where a patient has a telephone assessment or does not attend pre-operatively they should be encouraged to obtain the Octenisan locally, or at the very least have a thorough shower on the morning of their procedure.

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Screening results are made available on the EPR.

A daily list of patients who are found to be Staphylococcus aureus (MSSA) positive will be issued to pre-assessment staff four days after the samples are sent. It is the responsibility of the team staff requesting a sample to check the results of requested samples.

A recent (within previous 6 weeks) MRSA screen should be available on the day of surgery to confirm the current MRSA status.

If a patient is found to be MSSA positive and they are due for surgery, then the clinical team will amend the universal decolonisation protocol and give Chlorhexidine 4% body wash and Mupirocin nasal cream. Where possible this should be commenced 3 days before surgery. In addition surgical antibiotic prophylaxis will be given as directed by the consultant microbiologist.

Patients found to be MRSA positive will commence the 5 day MRSA decolonisation regime (Chlorhexidine 4% body wash and Mupirocin nasal cream) with the aim of clearance before surgery as per the policy for management of a patient with MRSA.

Where possible it is desirable to obtain three negatives screens prior to surgery, however this must be balanced with the clinical need for the procedure. Further advice is available from the Consultant Microbiologist or Infection Prevention and Control Nurses.

9. Patients having insertion of a Central Venous Access Device

Where possible, patients having insertion of a Central Venous Access Device (CVAD) should be screened for MRSA/MSSA at least a week prior to the procedure. If this is not possible, screens should be taken on the day of insertion prior to the start of the procedure (see flow chart below).

Where possible, all patients having a planned insertion of a Central Venous Access Device (CVAD) should receive universal decolonisation consisting of a daily antiseptic wash with Octenisan, starting 3 days before the procedure date, in order to reduce bio-burden of organisms on the skin.

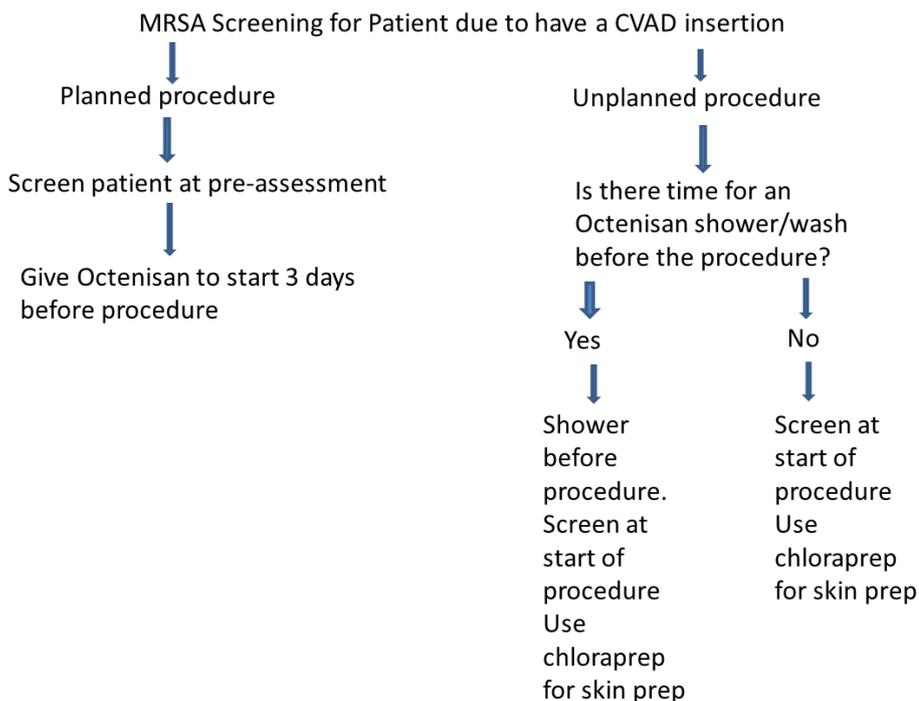
If a patient is found to be MRSA or MSSA positive and they are due for CVAD insertion, then the clinical team must ensure that they are given Chlorhexidine 4% body wash and Mupirocin nasal cream. Where possible this should be commenced 3 days before the procedure as per the 'MRSA Positive Patients - Policy for the Management of'.

If a positive result has not been actioned prior to the procedure the patient should have either a chlorhexidine shower or a bed bath with (the Pink) Chlorhexidine wash cloths.

Patients with skin conditions such as psoriasis are at higher risk for colonisation with unwanted pathogens. If possible they should be screened and offered the daily antiseptic wash and be encouraged to use a good moisturiser to reduce shedding of skin scales.

Skin preparation for insertion of peripheral or central vascular access devices should always be undertaken with 2% Chlorhexidine in 70% alcohol as the skin preparation of choice. If the patient is allergic to chlorhexidine then consider alcoholic povidone iodine.

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10. MRSA screening in the Community

Within the Community setting there is no requirement for routine MRSA screening unless clinically indicated i.e.:

- If infection is suspected
- If requested by an acute hospital prior to a planned admission
- To establish clearance following an MRSA eradication protocol

11. Staff Screening

In the event of an outbreak, staff with direct patient contact will be screened on the recommendation of the Infection Prevention and Control Team. Such screens will include nose, groin and any skin lesions, particularly those on the hands.

Screens will be coordinated by the Occupational Health Department and any staff found to be MRSA positive will be given appropriate treatment and follow up.

Staff returning to work after a period of illness, which has required hospitalisation, must be assessed by Occupational Health and considered for full MRSA screening.

12. Audit of compliance with the screening policy

The IPCT will audit a random selection of patients across the Trust on a monthly basis and report back to the ward. A quarterly data report on MRSA screening compliance will be submitted to the Hospital Infection Prevention and Control Committee.

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Appendix 1

How to take MRSA screens

Preparation

Only trained health care workers should take the swabs, and they must inform the patient or patient's legal guardian of the reason for doing the screening, and obtain verbal consent.

Equipment needed

Blue topped swabs which should remain unopened within their sterile package until required.

Sterile sodium chloride solution or sterile water to moisten the swab.

Microbiology request form, completed in full including all current antibiotics.

Before undertaking swabbing

Staff should decontaminate their hands.

Position the patient: usually in an upright position; small children may be held on lap, and infants should be lying down.

Moisten the tip of the swab (cotton wool) with either sterile sodium chloride solution or sterile water or alternatively dip the tip of the swab into the transport medium.

Taking a Nose Swab

Nasal swabs need only be introduced into the anterior (front) nares (nostrils).

With one swab, rotate approx 10 times around the inner surfaces of both nostrils, ensuring contact with all surfaces. There is no need to introduce the swab further into the nasal cavity as this may cause injury.

Taking a Throat Swab

Whilst rotating a swab move it gently back and forth across the tonsil area.

Speed is essential, because the patient may gag involuntarily. It can be helpful to instruct the patient to breathe deeply and say "ah" which serves to lift the uvula and aids in reducing the gag reflex.

Be careful not to contaminate the swab by touching the tongue, inside of the cheek, or lips (if this occurs a new sample must be collected).

Taking a Perineal Swab

Ask the patient to loosen their clothing.

Open and remove sterile tipped swab applicator from transport casing.

Taking care to avoid other contact with swab, rotate the swab against the perineal skin (the area between the anus and external genitalia) for 3-5 seconds. Carefully place used swab back into transport tube and secure.

Taking an Axilla Swab

Moisten a swab with sterile saline and swab both armpits, ensuring good contact with the skin surfaces.

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