**SOP Objective**

To provide Health Care Workers (HCWs) with details of the precautions necessary to minimise the risk of MRSA cross-infection.

This SOP applies to all staff employed by NHS Greater Glasgow & Clyde and locum staff on fixed term contracts and volunteer staff.

**KEY CHANGES FROM THE PREVIOUS VERSION OF THIS SOP**

**Document Control Summary**

<table>
<thead>
<tr>
<th>Approved by and date</th>
<th>Board Infection Control Committee on</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Publication</td>
<td></td>
</tr>
<tr>
<td>Developed by</td>
<td>Infection Control Policy Sub-Group</td>
</tr>
</tbody>
</table>
| Related Documents    | National Infection Prevention and Control Manual  
                        | SOP Hand Hygiene                      |
|                      | SOP Terminal Clean of Isolation Rooms |
|                      | SOP Twice Daily Clean of Isolation Rooms |
| Implications of Race Equality and other diversity duties for this document | This SOP must be implemented fairly and without prejudice whether on the grounds of race, gender, sexual orientation or religion. |
| Lead Manager         | Associate Nurse Director Infection Prevention and Control |
| Responsible Director | Board Infection Control Manager      |

The most up-to-date version of this SOP can be viewed at the following website: [www.nhsggc.org.uk/your-health/public-health/infection-prevention-and-control/](http://www.nhsggc.org.uk/your-health/public-health/infection-prevention-and-control/)
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The most up-to-date version of this SOP can be viewed at the following website: www.nhsggc.org.uk/your-health/public-health/infection-prevention-and-control/
1. Responsibilities

**Healthcare Workers (HCWs) must:**
- Follow this SOP.
- Inform a member of the Infection Prevention and Control Team (IPCT) if this SOP cannot be followed.
- Provide information on MRSA to patients and relatives as appropriate and document in patient records.
- Ensure that the clinical team with direct responsibility for the patient inform those who need to know of the patient’s MRSA status, e.g. other wards, departments, General Practitioners, District Nurses.
- Ensure that nursing staff commence an MRSA care checklist, which is regularly reviewed and updated.
- Undertake MRSA Clinical Risk Assessment (CRA) on admission/transfer of each patient, where appropriate.

**Managers/Senior Charge Nurse must:**
- Ensure that staff are aware of the contents of this SOP.
- Support HCWs and IPCTs in implementing this SOP.

**IPCTs must:**
- Keep this SOP up-to-date.
- Undertake MRSA CRA surveillance.
- Provide education opportunities on this SOP.
- Provide the NHSGGC clinical governance structure with routine surveillance data.

**Occupational Health Service (OHS) must:**
- Support and coordinate staff screening during an outbreak/investigation.
The most up-to-date version of this SOP can be viewed at the following website: www.nhsggc.org.uk/your-health/public-health/infection-prevention-and-control/

2. General Information on patients with MRSA

<table>
<thead>
<tr>
<th>Communicable Disease/ Alert Organism</th>
<th>Meticillin Resistant <em>Staphylococcus aureus</em> is a Gram-positive bacterium, resistant to a variety of antibiotics. It is particularly challenging because it can survive well (up to 6 months) in dry conditions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Condition(s)</td>
<td>Patients may be colonised without any signs of infection. MRSA can cause a wide range of infections, e.g. wound infections, soft tissue infections, insertion site infections, bloodstream infections, endocarditis and osteomyelitis.</td>
</tr>
<tr>
<td>Mode of Spread</td>
<td>Contact (direct and indirect). MRSA can colonise the superficial layers of the skin of the hands and thereafter be transferred from patient to patient. Good hand hygiene with liquid soap and water or alcohol hand gel can remove MRSA. Please refer to Hand Hygiene SOP. MRSA can be disseminated in the environment, often on skin scales, particularly during procedures such as bed-making and during wound dressings.</td>
</tr>
<tr>
<td>Incubation period</td>
<td>Variable.</td>
</tr>
<tr>
<td>Notifiable disease</td>
<td>No.</td>
</tr>
<tr>
<td>Period of communicability</td>
<td>As long as MRSA can be isolated from the patient’s specimens and until two consecutive negative screens have been obtained (see specimens required section on page 8).</td>
</tr>
<tr>
<td>Persons most at risk of acquisition</td>
<td>Patients who require frequent hospitalisation or those patients who have been admitted from care homes, institutions or another hospital etc. Patients with invasive devices, breaks in the skin, pressure sores, underlying diseases or recent antibiotic therapy.</td>
</tr>
<tr>
<td>Persons most at risk of infection</td>
<td>Patients who are colonised, have surgical wounds, pressure ulcers or invasive devices. Patients nursed in Intensive Care Units (ICU) have a higher risk of developing infection.</td>
</tr>
<tr>
<td>Persons who should be screened for possible MRSA carriage</td>
<td>Refer to Appendix 1, page 10</td>
</tr>
<tr>
<td>Persons who disperse large quantities of MRSA</td>
<td>MRSA positive patients who have large burns or widespread exfoliating skin conditions. Patients with upper respiratory tract infections who have nasal colonisation.</td>
</tr>
</tbody>
</table>
3. Transmission Based Precautions for Patients with MRSA

**Patient Placement**
A single room, preferably en-suite, should be made available for all patients colonised/infected with MRSA. If a single room is not available or in instances where a patient’s clinical condition may not support placement in a single room, the IPCT should be informed and a risk assessment undertaken jointly with ward staff and IPCT on where to safely nurse the patient. This must be documented in the patient notes and reviewed daily.

Doors in single rooms should be kept closed. If this is not possible, a risk assessment should be undertaken and documented in clinical notes.

Patient’s whose last positive screen for MRSA was 3 or more years ago do not require isolation but should be screened again.

**Care Checklist available**
Yes.

**Clearance Criteria**
Patients should not be removed from isolation/cohort until at least two full consecutive negative screens have been obtained. Screens should be taken at intervals of no less than 72 hours, beginning at least 48 hours after decolonisation therapy has been completed. (Please refer to the section on Specimens Required).

**Clinical / Healthcare Waste**
All non-sharps waste from patients with MRSA should be designated as clinical healthcare waste and placed in an orange bag. Please refer to the NHSGGC Waste Management Policy.

**Contact Screening**
Contact screening should only be carried out on the advice of the IPCT.

**Decolonisation**
If recommended by the IPCT the clinician should prescribe and follow the decolonisation regimen. Appendix 2, page13

**Discharge Planning**
The clinical team with overall responsibility for the patient must inform the General Practitioner and others in the community care team, of the patient’s MRSA status. This should not delay patient discharge

The most up-to-date version of this SOP can be viewed at the following website: www.nhsggc.org.uk/your-health/public-health/infection-prevention-and-control/
# Standard Operating Procedure (SOP)

**Meticillin Resistant Staphylococcus Aureus (MRSA)**

<table>
<thead>
<tr>
<th>Domestic Advice</th>
<th>Domestic staff must follow the SOP for Twice Daily Clean of Isolation Rooms. Cleans should be undertaken at least four hours apart, <a href="www.nhsggc.org.uk/your-health/public-health/infection-prevention-and-control/">NHSGGC Twice Daily Clean of Isolation Rooms SOP</a>.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equipment</strong></td>
<td>Where practical allocate individual equipment, e.g. own washbowl, commode, moving sling or slip-sheet. Decontaminate equipment as per the NHSGGC <a href="www.nhsggc.org.uk/your-health/public-health/infection-prevention-and-control/">SOP Cleaning of Near Patient Equipment</a>.</td>
</tr>
<tr>
<td><strong>Hand Hygiene</strong></td>
<td>Hand hygiene is the single most important measure to prevent cross-infection with MRSA. Hands must be decontaminated before and after each direct patient contact, after contact with the environment, after exposure to body fluids and before any aseptic tasks. Patients should be encouraged to carry out thorough hand hygiene.</td>
</tr>
<tr>
<td><strong>Linen</strong></td>
<td>Treat used linen as soiled/infected, i.e. place in an alginate bag then a clear bag tied and then into a laundry bag. (Brown polythene bag used in Mental Health areas) Please refer to <a href="www.nhsggc.org.uk/your-health/public-health/infection-prevention-and-control/">Section 1.7, chapter 1 of the National Infection prevention and control Manual</a>.</td>
</tr>
<tr>
<td><strong>Moving between wards, hospitals and departments (including theatres)</strong></td>
<td>Patient movement should be kept to a minimum. Prior to transfer, HCWs from the ward where the patient is located must inform the receiving ward, theatre or department of the patient’s MRSA status.</td>
</tr>
<tr>
<td><strong>Notice for Door (side room only)</strong></td>
<td>Place a designated IPCT approved notice on the door</td>
</tr>
<tr>
<td><strong>Patient Clothing (for home laundering)</strong></td>
<td>If relatives or carers wish to take personal clothing home, staff must place soiled clothing into a domestic alginate bag and ensure that a <a href="www.nhsggc.org.uk/your-health/public-health/infection-prevention-and-control/">Washing Clothes at Home Leaflet</a> is issued. <strong>NB</strong> It should be recorded in the nursing notes that both advice and the information leaflet has been issued.</td>
</tr>
<tr>
<td><strong>Patient Information</strong></td>
<td>The clinical team with overall responsibility for the patient must inform the patient and provide written information on MRSA to the patient and any persons caring for the patient, e.g. parent, guardian or next-of-kin, carer, as appropriate. The clinical team should document in the patient notes. See <a href="www.nhsggc.org.uk/your-health/public-health/infection-prevention-and-control/">NHSGGC MRSA Patient Information Leaflets</a>.</td>
</tr>
<tr>
<td><strong>Personal Protective Equipment (PPE)</strong></td>
<td>To prevent spread through direct contact PPE (disposable gloves and yellow apron) must be worn for all direct contact with the</td>
</tr>
</tbody>
</table>
patient or the patient’s environment/equipment.

**Procedure Restrictions**

There is no reason to place patients with MRSA at the end of operation/procedure lists. No restrictions are required in Out-Patient settings but strict adherence to SICPs is essential.

**Referral**

It is the responsibility of clinical staff within the area to inform GPs and other hospitals or care homes of a patient’s MRSA status when they are being discharged or transferred.

**Screening on Admission / Re-admission**

See Appendix 1, page 15.

**Specimens required (MRSA full Screen)**

- Both Nostrils
- Perineum *
- Skin lesions/ wounds.
- Catheter sites, e.g. Central Venous Catheters, Hickman Lines
- Catheter urine
- Sputum from patients with a productive cough.
- Umbilicus (neonates only)

* If patient refuses perineal screening they should be offered throat screening. Any modification to the standard screening should be recorded in the notes.

**NB this may need to be modified for specialist units, e.g. ENT.**

**Screening of Staff**

If screening is advised it will be undertaken by the OHS. Refer to Staff Screening Policy.

**Surgical/ Invasive procedures**

Patients who are colonised with MRSA - prior to any planned invasive procedure efforts should minimise the risk of infection by using topical and systemic decolonisation and prophylactic antimicrobial therapy as advised by the microbiologist.

**Terminal Cleaning of side room / bed area**

Follow NHSGGC SOP for Terminal Clean of Isolation Rooms.

**Transfer or transport by ambulance,**

Patients colonised or infected with MRSA are classified into two categories by the Scottish Ambulance Service:

**Category 1** – Most patients colonised with MRSA or who have...
### patient transport or pool cars

Infected wounds or skin lesions that are covered by an occlusive dressing may be transported with others and require no special precautions.

**Category 2** — Patients who are heavily colonised with MRSA and are considered to be heavy shedders, e.g. have severe psoriasis or eczema, large wounds or burns, should be transported by themselves. The ambulance service will implement appropriate precautions to this category. It is the responsibility of the ward or department to inform the ambulance service of patients who fall into Category 2 when transport is arranged.

### Visitors

Visitors are not required to wear aprons and gloves unless they are participating in patient care. They should be advised to decontaminate their hands on leaving the room / patient.
4. Evidence Base


*National Infection Prevention and Control Manual*

5. Useful Links


Health Protection Scotland [http://www.hps.scot.nhs.uk/](http://www.hps.scot.nhs.uk/)
Appendix 1 – National Screening Policy for MRSA

Introduction
The National MRSA Screening Programme includes a universal programme of Clinical Risk Assessment (CRA) as a first line screening test for all admissions >23 hours. The CRA identifies patients at high-risk of MRSA colonisation, who will be screened (nose and perineum).

For completion within 24 hours of admission:

Part A: CRA (Clinical Risk Assessment) for all admissions >23 hours

1. Has the patient ever had a previous positive MRSA result?
2. Has the patient been admitted from a care home/institutional setting or another hospital?
3. Does the patient have a wound/ulcer or invasive device which was present prior to admission?

If the patient answers ‘Yes’ move to Part B,

Part B: Full Screen – Swab Test includes:

• Both Nostrilsperineum *

Also:
• skin lesions/wounds
• invasive devices, e.g. Central Venous Catheters, catheter urine, if signs of infection are present
• sputum from patients with a productive cough

* If patient refuses perineal screening they should be offered throat screening. Any modification to the standard screening should be recorded in the notes.

Part A and B: High Impact Specialties:

All admissions (>23 hours) to the following specialties (in addition to having a CRA completed) should receive a nasal and perineal MRSA screen within 24 hours of admission:

• ICU/ITU/HDU (Intensive Care/Therapy/High Dependency Unit)
• Orthopaedics
• Renal/Nephrology
• Vascular
• Cardiothoracic Surgery
**Exclusions:** Patients admitted to the following specialties are **not required** to be screened under the National Programme. (This does not mean that these categories of patient should not be screened if there is a clinical need to do so):

- Day cases or patients with a length of stay <23 hours (unless previously positive in which case a full MRSA screen should be taken)
- Psychiatry
- Obstetrics
- Paediatrics
- Continuing Care

### Admission Screening Criteria:

<table>
<thead>
<tr>
<th>Type of admission</th>
<th>When should they be screened?</th>
<th>How should they be screened?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective patients to high impact specialties</td>
<td>At pre-assessment or out-patient clinic where possible and within 18 weeks of procedure, if not, then on admission to hospital (within 24 hours of admission, and certainly prior to the elective procedure)</td>
<td>CRA and then two body site swabbing (nasal and perineal) regardless of the answers given in the CRA</td>
</tr>
<tr>
<td>Elective patients to non-high impact specialties</td>
<td>CRA and if they answer yes to at least one question, two body site swabbing (nasal and perineal)</td>
<td></td>
</tr>
<tr>
<td>Emergency patients to high impact specialties</td>
<td>On admission to hospital, within 24 hours of admission. It is not recommended that screening is undertaken in Accident and Emergency.</td>
<td>CRA and then two body site swabbing (nasal and perineal) regardless of the answers given in the CRA</td>
</tr>
<tr>
<td>Emergency patients to non-high impact specialties</td>
<td>CRA and if they answer yes to at least one question, two body site swabbing (nasal and perineal)</td>
<td></td>
</tr>
</tbody>
</table>

### Transfer Screening Criteria:

<table>
<thead>
<tr>
<th>Type of transfer</th>
<th>When should they be screened?</th>
<th>How should they be screened?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer into a high impact specialty (from any source other than a high impact specialty)</td>
<td>Once they have been transferred into their new location (within 24 hours).</td>
<td>CRA and then two body site swabbing (nasal and perineal). <strong>Note:</strong> If the patient has previously been swabbed and the result is awaited from the lab, there is no requirement to again swab the patient.</td>
</tr>
<tr>
<td>Transfer from one hospital into another hospital (within the same Board, regardless of the specialty)</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Transfer from one Board to another Board</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Transfer from one high impact specialty to another high impact specialty in the same hospital</td>
<td>There is no requirement to undertake another screen.</td>
<td>N/A</td>
</tr>
<tr>
<td>Transfer from one non-high impact specialty to another non-high impact specialty</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 2 – Decolonisation Regimen

Nasal and Skin Decolonisation
Prior to commencing any treatment, results from the patient’s most recent MRSA screen must be available. If patients have exfoliative skin conditions any treatment must be discussed with the IPCT and the clinician in charge of the patient care.

<table>
<thead>
<tr>
<th>Nasal Decolonisation</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mupirocin Sensitive MRSA</strong></td>
<td>Mupirocin 2% in paraffin base should be applied to the inner surface of each nostril three times daily for five days. The patient should be able to taste the mupirocin at the back of their throat following application. Mupirocin should be used for five days, stopped for two then the patient should be re-screened. <strong>Mupirocin should only be used for two five-day courses and should not be used for prolonged courses or used repeatedly (&gt;2 times).</strong> <strong>Mupirocin Resistant MRSA</strong> Nasal Naseptin applied to the inner surface of each nostril four times daily for five days should replace Mupirocin. Naseptin should be avoided in patients with peanut allergy. Please discuss an alternative with a microbiologist.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skin Decolonisation</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chlorhexidine Gluconate 4%</strong></td>
<td><strong>Use:</strong> 25mls of neat liquid should be used for each shower/assisted wash, beginning with the face and working downwards, paying particular attention to the armpits (axilla) and groin area. Rinse and repeat washing with a further 25mls of liquid, this time include the hair. Rinse and dry thoroughly. Use in conjunction with nasal ointment as above. If any irritation occurs discontinue use and seek advice from the local infection control team. Alternative products are available for patients with fragile skin conditions ie. Neonates, radiotherapy patients. If</td>
</tr>
</tbody>
</table>

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required contact your local IPCT.