Ensure that a clinical risk assessment for meticillin resistant *Staphylococcus aureus* (MRSA) screening is undertaken

What is recommendation based on

Health Protection Scotland (HPS) carried out a large prospective cohort study of MRSA screening that included decolonisation of approximately 80,000 admissions to acute settings within three NHS boards. The findings of this report showed a significant reduction of MRSA colonisation prevalence which fell from 5.5% to 3.5% by the end of this study. This result is consistent with the findings of other studies which have also shown a reduction in MRSA infections when screening for colonisation followed by subsequent decolonisation has taken place.

The infections which result from MRSA are generally associated with higher morbidity and mortality than those due to meticillin sensitive *Staphylococcus aureus* (MSSA). Furthermore, MRSA has been shown to be one of the most common cause of surgical site infection (SSI) following all surgery and is thought to mainly originate from the patients themselves. The role of pre-screening to identify carriers followed by a decolonisation treatment when required, to reduce the burden of MRSA carried by the patient, is therefore an important factor in reducing the risk of SSI.

A National MRSA Screening Programme was established in Scotland in 2009, resulting from the findings within the MRSA Screening Pathfinder Programme report. The programme recommended a minimum screening practice be adopted across NHSScotland in the form of a three question clinical risk assessment (CRA) to be applied on admission or pre-admission. It also recommended all patients in five high impact specialties (renal, cardiothoracic, vascular, intensive care and orthopaedics) be screened as a matter of course using nasal and perineal
swabs, given that limitations exist in identifying all potential MRSA positive cases through CRA alone within specialties where MRSA infection would have a high impact on patients’ mortality.\(^{16}\)

This means that all patients who are admitted to an acute hospital and are expected to stay overnight will undergo CRA. If the answer to any of the three questions is yes then the patient will then be swabbed on two body sites, the nose and the perineum. In addition to the above category, all patients admitted to the following high-impact specialties will be two body-site swabbed regardless of their CRA response: intensive care, orthopaedics, renal medicine, vascular surgery, cardiothoracic surgery.

The CRA approach also offers the opportunity to apply a consistent risk-based approach to pre-emptive management of patients at high risk of colonisation and infection.

Decolonisation does not aim to eradicate MRSA completely rather it endeavours to reduce the burden of MRSA carried by the patient when they are likely to be at higher risk when undergoing an invasive procedure. The decision to undertake decolonisation should be subject to CRA, patient agreement and local policies. The recommendation results from all evidence considerations and after applying the framework for described in Appendix 2.

References:


**Recommendation for review**
Ensure that a clinical risk assessment for meticillin resistant *Staphylococcus aureus* (MRSA) screening is undertaken

<table>
<thead>
<tr>
<th>Grade of recommendation (based on review of evidence)</th>
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<td>Category 1B</td>
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**Health impact contribution (based on Healthcare Quality Strategy for NHSScotland)**
- **Safe:** This recommendation supports reducing the risk of harm to the patient resulting from surgery
- **Effective:** This step is a suitable and accepted method of supporting the reduction of risk of SSI resulting from MRSA which may be colonising the patient
- **Efficient:** This recommendation may reduce complications and therefore NHS costs associated with complications resulting from MRSA
- **Equitable:** This assessment promotes a standard of care for all patients that may result in avoidable personal and NHS costs resulting from elective surgery
- **Timely:** The recommendation should form part of the natural flow of perioperative patient care

**Person Centred:** This is a person centred recommendation aimed at reducing risk of SSI occurring in every patient and allows for communication with the patient

**Expert opinion/consultation and practical considerations**

<table>
<thead>
<tr>
<th>Measurement and feedback (Y/N/?)</th>
<th>Feasibility and sustainability (Y/N/?)</th>
<th>Applicability and reach (Y/N/?)</th>
<th>Training and informing (Y/N/?)</th>
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<tbody>
<tr>
<td>Potential for measurement through e.g. observation</td>
<td>Easily implemented within current culture and will improve the quality of care now</td>
<td>Potential for consistent delivery</td>
<td>Stealth integration into natural workflow/logical clarity of concept (also see Cause &amp; Effect Chart)</td>
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<tr>
<td>?</td>
<td>Y</td>
<td>Y</td>
<td>Unambiguous</td>
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Potential for congruency in design and meaning, with HCW, trainer and observer training and education

**Is this a key recommendation?** Yes