Data handling

All information held for the purposes of surveillance must be done so in accordance with the information privacy principles as set out in the Privacy Act 1988 and the principles in the Personal Information Protection Act (Tasmania) 2004.

Quality Improvement

For issues of governance and quality improvement, where results cause concern, healthcare management must be informed in line with organisational governance protocols.

Issues raised from surveillance are to be used within the organisation’s own quality improvement frameworks.

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Methicillin resistant
Staphylococcus aureus (MRSA)
Guidance for acquisition surveillance

References


SHEA/ IDSA Practice recommendations: Strategies to Prevent Methicillin-Resistant Staphylococcus aureus Transmission and Infection in Acute Care Hospitals: 2014 Update, Infection Control and Hospital Epidemiology, 2014: 35(9)
**Background**

*Staphylococcus aureus (S. aureus)* is a Gram positive bacterium that can colonise human skin and mucosa as well as causing a wide variety of infections ranging from superficial skin infections to severe life threatening infections such as pneumonia or septicaemia.

*S. aureus* is one of the most concerning pathogens causing healthcare associated infections. *S. aureus* resistant to the antibiotic methicillin are termed methicillin-resistant *S. aureus* (MRSA) and were first identified in the early 1960s. Since that time, MRSA has become endemic within healthcare facilities in many parts of the world.

This guideline outlines a laboratory-identified event surveillance program that can be undertaken to provide an acquisition rate of MRSA in a facility. This surveillance is useful in monitoring trends of transmission rates and assessing the impact of prevention programs.

It does not demonstrate the burden of disease as there is no distinction between colonisation and infection.

**Definitions**

**MRSA** – *S. aureus* resistant to methicillin. *S. aureus* resistant to flucloxacillin is used by the laboratory to determine MRSA and will be reported as an MRSA isolate.

**Hospital onset MRSA acquisition** – a patient’s first MRSA isolate from a specimen collected ≥48 hours after hospital admission or ≤48 hours after discharge where the length of stay of the patient is ≥ 48 hours.

This includes the first positive isolate after MRSA clearance criteria met.

**Patient days** - the total number of days for all patients who were admitted for an episode of care and who separated (eg discharged to home or death) during a specified time period. This includes patients admitted before the specified period but excludes those who did not separate until the following specified time period.

**Indicator**

**Hospital MRSA acquisition rate** – new hospital onset MRSA acquisitions (including reacquisitions for patients who have previously met the MRSA clearance criteria) a month per patient days.

**Inclusion criteria**

All inpatients that have a new MRSA isolate identified ≥48 hours after admission or ≤48 hours after discharge where the patient’s length of stay was ≥ 48 hours.

**Exclusion criteria**

- Patients admitted to hospital with a length of stay of <48 hours.
- Non inpatients – patients attending a hospital but not admitted.
- Patients identified as currently colonised or infected with MRSA.

**Calculation of hospital MRSA acquisition rate**

**Numerator** – new hospital onset MRSA acquisitions.

**Denominator** – patient days.

Hospital MRSA acquisition rate can be calculated for a specific time period as follows:

\[
\text{Hospital MRSA acquisition rate} = \frac{\text{Total new hospital onset MRSA acquisitions} \times 10000}{\text{Number of patient days}}
\]

**Reporting**

Report MRSA-acquisition data to relevant stakeholders, physicians, nurses, staff and other hospital leaders.

**Frequency of surveillance**

The MRSA acquisition surveillance program is recommended to be healthcare facility wide, ongoing and continuous but could be periodic depending on surveillance program priorities.