Tasmanian Infection Prevention and Control Unit

Staphylococcus aureus Sensitivity Surveillance Protocol
Version 1.0
(Approved 12 June 2008)
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FOREWORD

Health Care Associated Infections can have a significant impact on the functioning of a health service and more importantly, have an impact on patients and the quality of health care we provide for the population.

Within the health care system and related environment, we strive to prevent infections. The patient must be at the centre of what we do with the desired outcome of care being to minimise and reduce the risk of infection. The prevention and control of infection must be the responsibility of many disciplines, involve all members of the health care team, and not simply be the role of a professional trying to manage this solo.

The Department of Health & Human Services has taken a proactive step in the prevention and control of health care associated infections by establishing the Tasmanian Infection Prevention & Control Unit.

One of the functions of Unit is to co-ordinate and implement surveillance programs for health care associated infections in Tasmania. Surveillance of health care associated infections is crucial in understanding the current infection control issues in Tasmania and provides a means by which performance can be monitored. It also prepares Tasmania for any future changes in the epidemiology of health care associated infections.

Surveillance is just one of many aspects needed for the successful prevention and control of infections and I welcome, support and fully endorse the surveillance program outlined in this document.

Dr Roscoe Taylor
Director of Public Health
BACKGROUND

*Staphylococcus aureus* is a bacteria that is a common on human skin and mucosa. The Australian Group on Antimicrobial Resistance (AGAR) have been undertaking surveys of *Staphylococcus aureus* for a number of years.

Participation in the AGAR program has been voluntary. The TIPCU *S.aureus* surveillance program is based in the principles and methodology of the AGAR *S.aureus* survey.

The purpose of TIPCU's *S.aureus* sensitivity surveillance program is to:

- Understand the proportion of *S.aureus* isolates seen in Tasmanian hospitals and health care facilities which are resistant to meth/flucloxacillin (MRSA).
- Have a mechanism in place to identify trends in antibiotic resistance for *S.aureus* in Tasmania
- Obtain a better perspective of the geographic location and extent of MRSA within Tasmanian hospitals and health care facilities.

INDICATORS

MSSA = *S.aureus* which is sensitive to flucloxacillin

MRSA = *S.aureus* which is resistant to flucloxacillin

Indicators will be the percentage of clinical isolates of *S.aureus* which are resistant and sensitive to flucloxacillin.

INCLUSION CRITERIA

From a given point in time as determined by TIPCU, data on the first one hundred (100) clinically significant *S.aureus* isolates from hospital inpatients will be obtained.

- Hospital inpatients are defined as a patient who has had a specimen taken whilst in hospital and has been in hospital for more than 48 hours.

- Only one sample per patient with the isolate from the most significant site (as defined below) is to be included. The hierarchy defining the most clinically significant site is are follows:
  - Blood Culture > CSF > Other Sterile Site > Urinary > Respiratory > Swab

  Technical Note
  - Where a patient has an MRSA and MSSA isolate, MRSA is included, MSSA is excluded.
EXCLUSION CRITERIA

The following exclusions apply:

➢ No screening samples will be included, including MRSA screens.

FREQUENCY OF SURVEILLANCE

The frequency will be determined by the TIPCU but will occur a minimum of once per year.

PROCESS OF SURVEILLANCE

Participating hospitals will have given permission for TIPCU to obtain relevant information from their respective laboratories.

The TIPCU will obtain from laboratories a report detailing information required.

The process is summarised by the following diagram.

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S.aureus Data

Laboratory inform TIPCU
at TIPCU's request

TIPCU Undertakes Work

TIPCU performs data analysis and develops report
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DATA FIELDS

Data fields include

- Date of birth (*for identification, epidemiology & de-duplication*)
- UR / Hospital Number (*for hospital identification & de-duplication*)
- Sex (*epidemiology*)
- Collection date (*for de-duplication*)
- Hospital (*epidemiology*)
- Ward / Location
- Specimen type (*for exclusion criteria*)
- Laboratory number (*validation*)
- Antibiotic sensitivities
- Admission date (added by TIPCU, DHHS only)

DATA HANDLING

All information held by the TIPCU will be done so in accordance with the information privacy principles as set out in the Privacy Act (Cth) 1988 and the personal information protection principles as set out in the Personal Information Protection Act 2004.

Information submitted to TIPCU by laboratories

Information shared by laboratories (public & private) will be held in accordance with the Commonwealth information privacy principles as set out in the Privacy Act (Cth) 1988. Information sent by laboratory to TIPCU will be de-identified.

REPORTS

Reports will be developed in a de-identified manner, unless otherwise changed by the Secretary for Health (DHHS) (impacting only on public hospitals). It is vital that hospitals can compare rates in order to comply with quality improvement and clinical governance frameworks.

Key principles of reports/data presentation:

- Reports will be sent to the Chief Executive Officers (or nominated person) of the respective hospital and infection control teams.

- Reports may be available on the TIPCU internet site with the above principles applied.

- Results from this particular piece of surveillance may also be included in the TIPCU annual report in a de-identified manner.
QUALITY IMPROVEMENT

For issues of governance and quality improvement, where a participating organisation’s results cause concern, the Chief Executive Officer of that area will be informed in line with the TIPCU operational policy. Issues raised from surveillance are to be used within the participating organisation’s own quality improvement frameworks and participation in the program assumes this will occur.

The TIPCU Committee will also review and discuss results and reports pertaining to any work undertaken by the TIPCU in respect to the DHHS.

REFERENCES

APPENDIX A: LABORATORY INFORMATION REQUIRED

The following provides a summary of the information needed from laboratories in respect to this piece of surveillance.

INCLUSION CRITERIA

From a set point in time as determined by TIPCU, data on the first one hundred (100) clinically significant S.aureus isolates from hospital inpatients will be obtained.

- Only one sample per patient with the isolate from the most significant site (as defined below) included. The hierarchy defining the most clinically significant site is as follows:
  - Blood culture > CSF > Other Sterile Site > Wound / swab > Urinary > Respiratory

- Where a patient has an MRSA and MSSA isolate, MRSA is included, MSSA is excluded.

EXCLUSIONS

The following exclusions apply:

- No screening samples will be included, including MRSA screens.

DATA FIELDS REQUIRED

Data fields include:

- Date of birth (for identification, epidemiology & de-duplication)
- UR / Hospital Number (for hospital identification & de-duplication)
- Sex (epidemiology)
- Collection date (for de-duplication)
- Hospital (epidemiology)
- Ward / Location
- Specimen type (for exclusion criteria)
- Laboratory number (validation)
- Antibiotic sensitivities i.e MRSA or MSSA

HOW OFTEN

Twice a year (until 100 samples obtained)
- From July 1st
- From January 1st

FORMAT

- Excel via email to TIPCU (tipcu@dhhs.tas.gov.au)