TASMANIAN INFECTION PREVENTION AND CONTROL UNIT

# Multi-drug Resistant Organisms

## Surveillance Module for rural hospitals and non-acute settings.

Version 1

Department of Health and Human Services

Tasmania
Explore the possibilities

**Multi-drug resistant organism - surveillance module for rural hospitals and non-acute settings.**

Tasmanian Infection Prevention and Control Unit (TIPCU)

Department of Health and Human Services, Tasmania

Published 2013



**Editors**

- Anne Wells, TIPCU
- Fiona Wilson, TIPCU

**Suggested citation**:

Wells A., Wilson F. (2013). Multi-drug resistant organism – surveillance module for rural hospitals and non-acute settings. Hobart: Department of Health and Human Services.

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**Population Health**

**Department of Health and Human Services**

GPO Box 125 Hobart 7001

Ph: 6222 7779 Fax: 6233 0553

www.dhhs.tas.gov.au/tipcu

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# Multi-drug resistant organism surveillance

This document provides guidance on how to use the TIPCU multi-drug resistant organism surveillance (MRO) module.

Accompanying tools include:

- Multi-drug resistant organism event sheet.

## Background

Healthcare associated infections can be caused by a number of different microorganisms. Multi-drug resistant organisms (MRO) are usually bacteria that are resistant to multiple classes or types of antimicrobial drugs. Infections caused by multi-drug resistant organisms can lead to significant morbidity and mortality as well as increased cost to the healthcare system. Persons found to be colonised or infected with MRO's often require additional infection prevention and control measures to prevent the MRO from being transmitted to other patients.

## Aim

To monitor and measure the incidence of MRO's within rural hospitals and non-acute healthcare settings.

## Inclusion criteria

- Laboratory detection of the specific MRO.

## Exclusion criteria

- Any patient who has previously had the same species of MRO identified.

## Definitions

**Infection** - a positive MRO culture obtained from either a sterile site OR from a non-sterile site where specific antibiotic therapy was administered by a clinician.

**Colonisation** - a positive culture for a MRO associated with a non sterile site isolate where specific antibiotic therapy was NOT administered by a clinician.

**Hospital attendance** (for the purposes of the MRO surveillance protocol) – where the patient attended hospital and underwent a therapeutic intervention such as haemodialysis, peritoneal dialysis, chemotherapy for cancer treatment or a day surgical procedure AND where the patient was not admitted for an overnight inpatient stay. This category does not include patients who attended outpatient appointments.

**Healthcare associated** - the MRO isolate was identified ≥48 hours after admission OR was linked to a previous hospital admission/hospital attendance where the last discharge date is within 4 weeks of the MRO isolate.

**Community associated** - the MRO isolate was identified ≤48 hours after admission **AND** the event was not linked to a previous admission/hospital attendance where the last discharge date is within 4 weeks of the MRO isolate.

## Process for surveillance

The person chosen to undertake MRO Surveillance should be familiar with the MRO surveillance definitions.

When a MRO is isolated from a patient's clinical a\or screening specimen, complete a MRO event sheet using the MRO surveillance definitions to assist.

Each new laboratory identified MRO is reviewed by the designated infection control portfolio holder in the facility to determine if it is:

- Infection or colonisation.
- Healthcare associated or community associated.

One or more of the following MRO's must be included in the MRO surveillance at the facility.

- Methicillin-resistant *Staphylococcus aureus* (MRSA) – *Staphylococcus aureus* resistant to methicillin or oxacillin
- Vancomycin-resistant enterococci (VRE) – *E. faecium* or *E. faecalis* resistant to Vancomycin
- Multi resistant Gram negative organisms including:
    - Multi-resistant *Pseudomonas aeruginosa* - *P. aeruginosa* resistant to at least one antibiotic from 2 or more classes out of the following 3 groups:
        - beta-lactams (e.g. piperacillin, ticarcillin, ceftazidime, cefipime, imipenem)
        - aminoglycosides (gentamicin, tobramycin)
        - fluoroquinolones (ciprofloxacin, norfloxacin)
    - Extended-spectrum beta-lactamase producers (ESBL) – any Gram-negative organism in which ESBL have been identified
    - Carbapenem-resistant *Enterobacteriaceae*
        - Metallo beta-lactamase producers
        - Carbapenemase producers

## Reporting

Provide feedback from the MRO Surveillance program using the Surveillance Investigation and Reporting Sheet to the relevant clinical staff and report results and findings to the Facility Infection Control Committee and or THO Infection Control Committee.

# Event sheet - multi-drug resistant organism (MRO)

## Patient identification details:

PID:

Name:

Date of Birth:

## Admission details:

Date admitted:

Date of discharge:

Ward:

| **Organism data** | |
|---|---|
| Date of specimen: | Specimen Lab Number: |
| Name of organism: | |
| **Site of isolate – tick one box only** | |
| ☐ Sterile site<br>Name of site: | |
| ☐ Non-sterile site<br>Name of site: | |
| **Infection or colonisation – tick one box only** | |
| ☐ Infection - a positive culture for a MRO obtained from a sterile site OR from a non-sterile site where specific antibiotic therapy was administered by a clinician | |
| ☐ Colonisation - a positive culture for a MRO associated with a non sterile site isolate where specific antibiotic therapy was NOT administered by a clinician. | |
| **Place of acquisition – tick one box only** | |
| ☐ Healthcare associated - the MRO isolate was identified ≥48 hours after admission OR the MRO isolate was linked to a previous hospital admission or hospital attendance where the last discharge date is within 4 weeks of the MRO isolate. | |
| ☐ Community associated - the MRO isolate was identified ≤48 hours after admission **AND** it was not linked to a previous admission/hospital attendance where the last discharge date is within 4 weeks of the MRO isolate | |
| **PAS alert in place:** ☐ | |
| **Comments:** | |

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GPO Box 125, Hobart 7001