Antimicrobial use

Surveillance module for rural hospitals

### Antimicrobial use - surveillance module for rural hospitals

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# Antimicrobial use surveillance

This document provides guidance on how to use the TIPCU Antimicrobial Use Surveillance module which includes an antimicrobial use data collection tool – the Antimicrobial Event Sheet.

## Background

Surveillance data on antimicrobial use can provide data to assess usage patterns and can be important for supporting antimicrobial containment and education strategies.

This surveillance module uses a patient level antimicrobial data collection method, which gives accurate information about antimicrobial use within a facility. Data to be collected includes patient demographics, rationale for treatment, drug name, dosage, duration of therapy, microbiological testing and documentation.

The data from this quality improvement surveillance program should be used to give feedback of prescribing practices to medical practitioners, as well as informing targeted education programs.

Data should only be collected from the patient’s written medical record and medication chart.

## Aims

* To quantify antimicrobial use within Tasmanian rural hospitals over a defined audit period.
* To assess the appropriateness of antimicrobial usage within Tasmanian rural hospitals in accordance with Therapeutic Guidelines: Antibiotic Guidelines.

## Inclusion criteria

* All inpatients in acute beds in a Tasmanian rural hospital that are prescribed antimicrobial treatment.
* Surveillance is to occur consecutively for one calendar month inclusive each year.

## Exclusion criteria

* Patients in residential or long term care beds.

## Definitions

**Antimicrobial** - a substance that kills or inhibits the growth of microorganisms, including but not restricted to, bacteria, viruses and fungi**.**

* + **Antibiotic** – a substance that kills or inhibits the growth of bacteria.
  + **Antifungal** – a substance that kills or inhibits the growth of fungi.
  + **Antiviral** – a substance that kills or inhibits the growth of viruses

**Infection** – the deposition and multiplication of organisms in the body causing tissue injury and progressing to disease.

**Inpatient** – a person who is admitted to a healthcare facility for monitoring, diagnosis and/or treatment and stays in the facility for at least one night.

## Process for surveillance

The person chosen to undertake antimicrobial surveillance should be familiar with the surveillance definitions, inclusions and exclusion criteria and the data collection tool.

When an inpatient is prescribed an antimicrobial during the surveillance period, commence an Antimicrobial Event Sheet to record the indications for prescription and details about the antimicrobial/s prescribed.

All fields of the Antimicrobial Event Sheet should be completed:

* Hospital name.
* Patient identification number, date of birth and sex.
* The date of admission and discharge of the patient.
* The indication for every antimicrobial prescribed.
* The route of administration for every antimicrobial prescribed.
* Documentation of allergies and adverse drug reactions to antimicrobials.
* Details of microbiological specimens that may have been collected.
* Name and signature of person who completed the form.
* Name and signature of medical officer who prescribed the antimicrobial.

If the patient is already on an antimicrobial on the 1st September, irrespective of where it was prescribed, enter the details for this antimicrobial/s on the Antimicrobial Event Sheet.

After completion of the Antimicrobial Event Sheet, the sheet should be signed by the person who completed the form and ideally should be sighted and countersigned by the prescriber, where possible, to assist validation of the information on the form.

Submit all Antimicrobial Event Sheets generated during September to TIPCU at the end of the surveillance period.

* Include forms from patients who have been discharged, transferred to another healthcare facility or died during the surveillance period.
* Include forms for patients who have not completed the prescribed course of antimicrobial at the end of the surveillance period.

TIPCU will enter the data for each individual hospital into the National Antimicrobial Prescribing Survey.

## Reporting

TIPCU will generate individual hospital and a State-wide report with de-identified data within three months of the end of the surveillance period. These reports and the findings should be shared with the GP prescribers at the rural facilities.

Each site is expected to provide feedback from the Antimicrobial Use Surveillance program to the relevant clinical staff and report results and findings to the Facility Infection Control Committee and/or the THO Antimicrobial Stewardship Committee and/or THO Infection Control Committee.

## Further information and resources

* NHMRC (2010) Australian Guidelines for the Prevention and Control of Infection in Healthcare. Commonwealth of Australia. <<http://www.nhmrc.gov.au/node/30290>>
* Australian Commission for Safety and Quality in Healthcare <<http://www.safetyandquality.gov.au/>>
* National Antimicrobial Prescribing Survey (NAPS) <https://www.naps.org.au/Default.aspx>

## References

1. Kritosotakis E. I,. and Gikas A. Surveillance of antibiotic use in hospitals: methods, trends and targets. Clinical Microbiology and Infection 2006; 12(8); 701-704.
2. Duguid M, Cruickshank M, editors. *Antimicrobial Stewardship in Australian Hospitals*. Sydney: Australian Commission on Safety and Quality in Health Care, 2011.
3. Australian Commission on Safety and Quality in Health Care, 2011.Victorian Hospital Acquired Infection Surveillance System Coordinating Centre. Version 10 (2007). Type 2 Surveillance Manual. VICNISS.
4. Antibiotic Expert Group, editors. *Therapeutic Guidelines: Antibiotic (Version 14)*: Melbourne: Therapeutic Guidelines Limited, 2010.
5. Cruickshank M, Ferguson J, editors. *Reducing Harm to Patients from Health Care Associated Infection: The Role of Surveillance*. Sydney: Australian Commission on Safety and Quality in Health Care, 2008.

# TIPCU Antimicrobial Event Sheet

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Hospital Name:** | **Audit month and year:** | | | |
| **Patient identification number:** | **DOB: / /** | **Gender: M F O** | **Admission: / /** | **Discharge: / /** |

| **Start date** | **Finish date** | **Antimicrobial** | **Route** | **Dose** | **Frequency** | **Indication**  **Documented**  **Y/N** | **Documented or presumed indication**  If respiratory tract infection, specify syndrome  e.g. community associated pneumonia (mild, moderate or severe), aspiration pneumonia, infective exacerbation of COPD, bronchitis |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **/ /** | **/ /** |  |  |  |  |  |  |
| **/ /** | **/ /** |  |  |  |  |  |  |
| **/ /** | **/ /** |  |  |  |  |  |  |
| **/ /** | **/ /** |  |  |  |  |  |  |
| **/ /** | **/ /** |  |  |  |  |  |  |
| **/ /** | **/ /** |  |  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Allergies and adverse drug reactions to ANTIMICROBIALS** | nil known | **not** documented | **present** |
| If present, specify drug and nature of reaction: | | | |
|  | | | |

| **Microbiology not collected collected** | Date of Specimen | Site of Specimen | Result |
| --- | --- | --- | --- |
| **/ /** |  |  |
| **/ /** |  |  |

Name of person who completed the form ……………………………………………………….. Signature ……………………………………………………..

Name of prescriber ……………………………………………………….. Signature ……………………………………………………..

# Appendix 1 Definitions of terms on Antimicrobial Event Sheet

**Hospital name** – name of facility where patient is a sub acute inpatient

**Patient identification number** - use Tasmanian hospital identification number

**Start date** – date antimicrobial commenced

**Finish date** – date antimicrobial ceased. If not ceased at end of audit period, write in the date the antimicrobial is due to cease

**Antimicrobial** – name of the antimicrobial. Please use drug name rather than brand name.

**Route** – route of drug administration. Includes but is not limited to oral, topical, intravenous, intramuscular, eye installation, ear installation, per rectum, per vagina.

**Dose** –write dose in milligrams (mg) or if each dose is > 1000mg, write dose in grams (g).

**Frequency** – frequency includes, but is not limited to daily (d), twice per day (bd), three times per day (tds), four times per day (qid), 2 hourly, 4 hourly, 6 hourly, 8 hourly, 12 hourly, twice per week, once per month.

**Indication Y/N –** this relates to whether the indication for the antimicrobial has been documented or not (either on the medication chart or in the medical progress notes)

**Documented or presumed indication for antimicrobial therapy**

* **if the indication is identified** within the medication chart and/or the patients’ notes, document the indication in accordance with the following listed indications.
* **if the indication is not listed below**, then detail the specific indication identified.
* **if the indication is not clear**, then ‘no documented indication’ should be written in this section.

**Allergy documentation –** if there is no documentation about the presence of absence of drug allergies, tick the ‘not documented’ box. If there is documentation, then either tick the ‘nil known’ or ‘present’ box. If there are allergies or adverse drug reactions documented, please specify which drug and the nature of the reaction.

**Site of specimen** – the name of the body fluid/tissue or body site where the microbiology specimen was taken from. Includes but is not limited to wound (specify site and type of wound), urine, blood culture, skin, eye, ear, faeces.

**Results** – the name of the organisms/s identified by the laboratory. Please include antimicrobial sensitivities if known.

## Indication for antimicrobial therapy

| Location | Treatment |
| --- | --- |
| Respiratory tract | Pneumonia (onset in community); note if confirmation on chest X-ray |
| Pneumonia (onset in hospital); note if confirmation on chest X-ray |
| Aspiration pneumonia |
| Acute bronchitis |
| Acute exacerbation of chronic obstructive pulmonary disease |
| Skin and soft tissue | Cellulitis – specify site |
| Diabetic foot infection |
| Wound infection – specify site of wound |
| Mucocutaneous candidiasis – specify site e.g. oral, inguinal, vulvovaginal |
| Urinary tract | Cystitis |
| Pyelonephritis |
| Catheter-associated urinary tract infection |
| Prostatitis |
| Bone and joint | Osteomyelitis |
| Septic arthritis |
| Eye | Conjunctivitis |
| Genital | Epididymo-orchitis |
| Pelvic inflammatory disease |
| Intra-abdominal | Acute cholecystitis |
| Acute diverticulitis |
| **Prophylaxis** | |
| Medical prophylaxis | Prevention of endocarditis |
| Prevention for postsplenectomy or hyposplenic patients |
| Prevention of SBP in cirrhotic patients |
| Prevention of Pneumocystis carinii (jiroveci) pneumonia (PCP) |
| Prevention of urinary tract infections |
| Other - specify |
| Surgical prophylaxis | Prevention of infection in setting of procedure - specify |