

# SAMPLE ANTIMICROBIAL STEWARDSHIP POLICY

## FOR A LOCAL HEALTH DISTRICT OR NETWORK

### Purpose of this document

The development of a policy for Antimicrobial Stewardship (AMS) is a fundamental step towards empowering and consolidating an AMS Program. An effective AMS policy will not only communicate key concepts to relevant staff members, but also establishes AMS as a quality improvement priority and validates the authority of the AMS team.

This document has been prepared as a sample of an AMS policy that could be developed at a district or network level in NSW public health services. It is intended to serve as a guide only, and provides examples of suitable content, language, key sections and overall structure. **NSW local health districts and specialty health networks (LHDs/SHNs) are encouraged to add, change or remove sections of this document as necessary, in order to construct an AMS policy that is most representative of local needs and resources.**

### Profile of EXAMPLE LHD (XXLHD)

For the purposes of this sample document, EXAMPLE Local Health District is a hypothetical network of public health facilities ranging in size from 15 to 400 inpatient beds. These facilities include MAJOR Hospital, LARGE Hospital, SMALL Hospital, TINYTOWN Health Services and OUTREACH Multi-Purpose Services.

There are dedicated staff across the LHD for AMS activities, consisting of:

- 0.5 FTE Infectious Diseases Staff Specialist
- 0.25 FTE Medical Registrar
- 0.25 FTE Medical Microbiologist
- 1.0 FTE Antimicrobial Stewardship Pharmacist
- 0.4 FTE Clinical Nurse Consultant

Electronic AMS software is in place for the larger facilities in XXLHD, but is not used in the smaller sites.

### What to include in an AMS Policy Document

A strong AMS policy will focus on providing concise, 'need-to-know' information, while still offering sufficient context to understand the overarching concepts and rationale.

NSW LHDs/SHNs usually have a standard template for policy development. These templates may differ between health services, however the order and content of various sections is often similar. Standard policy headings may include:

- **Introduction:** What is the policy context and why is this policy important?
- **Policy Statement:** What exactly is this policy about?
- **Policy Scope:** Which parts of the district or network does this policy apply to?
- **Policy Content/Principles:** What are the specific policy directives? What does the policy audience (i.e. all staff within the policy scope) need to know with regards to general operations and practice?
- **Performance Measures:** How will compliance with the policy (or performance against policy standards) be monitored or evaluated?
- **Related Documents:** Which related resources, including other policies or guidelines, may be of use to the policy audience?
- **Definitions:** Clarification of key terminology used throughout the policy document.
- **References:** Acknowledgement of external ideas or contributions, using an approved and consistent referencing style.
- **Appendices:** More detailed information (such as individual restriction criteria, business rules for medication supply or out-of-hours procedures), unless already addressed in a separate policy or standard operating procedure.

# XXLHD Antimicrobial Stewardship Policy

## 1. Introduction

Antimicrobial stewardship (AMS) can be defined as an ongoing and systematic effort to optimise the use of antimicrobial medicines within a health service organisation<sup>1</sup>. In the Australian healthcare setting, AMS activities are developed and delivered through AMS programs instituted within or across one or more healthcare facilities. The key objectives of these programs include reducing inappropriate antimicrobial use, improving patient care outcomes and mitigating adverse consequences of antimicrobial use (such as antimicrobial resistance, preventable patient harm and unnecessary costs associated with pharmaceutical expenses and drug-resistant infections)<sup>2</sup>.

The EXAMPLE Local Health District (XXLHD) AMS program has developed this policy to detail the local AMS framework and establish key principles around antimicrobial prescribing and management at XXLHD healthcare facilities.

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## 2. Policy Statement

This policy establishes key directives for antimicrobial prescribing and management at XXLHD healthcare facilities, with particular reference to antimicrobial prescribing processes, management of antimicrobial formulary and restrictions, use of evidence-based therapy and access to expert clinical advice.

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## 3. Policy Scope

This policy applies to all public hospitals in the EXAMPLE Local Health District; MAJOR Hospital, LARGE Hospital, SMALL Hospital, TINYTOWN Health Services and OUTREACH Multi-Purpose Services.

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## 4. Policy Content

### 4.1 Governance of Antimicrobial Stewardship

#### 4.1.1 *The AMS Committee*

The XXLHD AMS Committee is a multidisciplinary group responsible for the development and ongoing evaluation of the AMS program. Core membership on this committee consists of representation from executive, medical, surgical, pharmacy, and nursing departments, and

must include at least one key representative from MAJOR Hospital, LARGE Hospital, SMALL Hospital and each of the TINYTOWN and OUTREACH facility 'clusters'. The AMS Committee also maintains links to the Drug & Therapeutics Committee, Infection Prevention and Control Committee and Medication Safety Committee, as well as the XXLHD Quality Council. The AMS Committee includes a consumer representative from the local community.

A list of AMS Committee members and a copy of the AMS Committee Terms of Reference is available on the XXLHD [AMS intranet page](#), or alternatively the Chair and Secretariat may be contacted via the Clinical Governance Unit.

## 4.1.2 The AMS Team

The XXLHD AMS team is a group of clinicians with daily duties dedicated to AMS activities. This team consists of an Infectious Diseases Specialist/Clinical Microbiologist, Medical Registrar, AMS Pharmacist and Infection Control Clinical Nurse Consultant. The AMS team is chiefly responsible for providing advice, education and feedback on antimicrobial prescribing, managing approval requests for restricted antimicrobials and monitoring antimicrobial usage as directed by the AMS program plan.

The AMS team may be contacted via pager #12345 or telephone 1234 5678 (MAJOR Hospital and LARGE Hospital) or by calling the MAJOR Hospital switchboard (SMALL Hospital, TINYTOWN Health Services and OUTREACH Multi-Purpose Services).

## 4.2 Principles of Antimicrobial Prescribing

### 4.2.1 Key Prescribing Principles

All prescribers at XXLHD hospitals are expected to prescribe antimicrobial therapy according to the following key principles:

- (i) **Therapeutic decisions regarding the prescription of antimicrobials will be based on best available evidence.**

Empirical antimicrobial therapy (the infective pathogen is not known) or prophylactic therapy (given to prevent acquisition or development of infection) is prescribed according to locally-endorsed guidelines or *Therapeutic Guidelines: Antibiotic*.

When the infective pathogen is known, antimicrobials are to be prescribed according to microbiology results and antimicrobial susceptibilities, where available.

- (ii) **Prescribed antimicrobials will be of the narrowest spectrum possible for achieving the intended effect**
- (iii) **Dosage, route and frequency of prescribed antimicrobials will be appropriate for the individual patient, as well as the site and type of infection**
- (iv) **The duration of antimicrobial therapy will be defined and/or regularly reviewed (based on evidence-based guidelines and clinical improvement)**
- (v) **Monotherapy is used in most indications, where clinically appropriate.**

## **4.2.2 Use of Evidence-Based Prescribing Guidelines**

### Locally Endorsed Guidelines

Locally-endorsed guidelines are guidelines that have been reviewed and approved by the XXLHD AMS Committee, in liaison with the XXLHD Drug and Therapeutics Committee. If a clinical unit wishes to use treatment guidelines that have not been endorsed by the XXLHD AMS Committee, these should be submitted for review by the head of the department/unit.

### Therapeutic Guidelines: Antibiotic

The current version of *Therapeutic Guidelines: Antibiotic* should be used in clinical scenarios for which a locally-endorsed antimicrobial prescribing guideline does not exist. These guidelines are an Australian resource developed by a multidisciplinary expert writing group, with recommendations based on best available evidence for empirical efficacy, harm minimisation and other important considerations such as antimicrobial resistance and individual patient factors.

### Prescribing outside locally-endorsed guidelines or *Therapeutic Guidelines: Antibiotic*

If patient is prescribed antimicrobial therapy that is not in concordance with either locally-endorsed guidelines or *Therapeutic Guidelines: Antibiotic*, the prescriber is expected to document their clinical reasoning in the patient's notes, chart or electronic medical record.

Where an indication or clinical scenario is not covered by either set of guidelines, a prescriber may choose antimicrobial therapy based on an appropriate, peer-reviewed source. Care should be taken to ensure the recommendations made are relevant to an Australian context in terms of both antimicrobial resistance patterns and availability of the selected antimicrobial agents. Alternatively, a prescriber may wish to seek expert advice via the AMS team or an Infectious Diseases/Clinical Microbiology consultation.

## **4.3 Access to Prescribing Resources and Support**

### **4.3.1 Access to Evidence-Based Prescribing Guidelines**

All clinical areas within XXLHD facilities have electronic access to antimicrobial prescribing guidelines via the [AMS intranet page](#).

*Therapeutic Guidelines: Antibiotic* can be accessed through *eTG complete* via the Clinical Information Access Portal (CIAP).

A hard copy of the current version of *Therapeutic Guidelines: Antibiotic* is also held on site within the MAJOR Hospital, LARGE Hospital and SMALL Hospital pharmacy departments.

## **4.3.2 Access to Antibiotic Advice**

Prescribers at all XXLHD facilities have access to expert advice on antimicrobial prescribing and the management of infectious diseases 24 hours a day, 7 days a week.

**During business hours (Mon-Fri, 8:30am-5pm), prescribers should contact the AMS team on pager #12345 or telephone 1234 5678.**

The AMS team is the first point of call for general advice regarding antimicrobial prescribing and approval of restricted antimicrobial agents. In more complex cases, the AMS team may recommend a consultation by an Infectious Diseases physician.

After hours, prescribers may contact the on-call medical officer for Infectious Diseases or Clinical Microbiology, via the MAJOR Hospital switchboard.

## **4.4 Local Restrictions on Antimicrobial Prescribing**

### **4.4.1 Formulary and Non-Formulary Antimicrobials**

A list of antimicrobial formulary items is available on the [AMS intranet page](#) and includes information for smaller XXLHD facilities regarding which antimicrobials are routinely (immediately) available on site.

Non-formulary antimicrobials are those not routinely stocked by XXLHD facilities. The use of a non-formulary product for an individual patient requires application to and approval by the Drug and Therapeutics Committee, however this process may be expedited for urgent antimicrobial therapy. Requests for non-formulary antimicrobials will usually require consultation by the Infectious Diseases team prior to approval, or as a condition of approval.

*Note:* Use of antimicrobials for non-infective indications is at the discretion of the Drug and Therapeutics Committee.

### **4.4.2 Antimicrobial Restrictions**

The implementation and maintenance of antimicrobial restrictions is a core AMS strategy at XXLHD. The AMS Committee determines the restriction status and access rules for each antimicrobial agent (or specific formulations) based on the following considerations:

- Best practice prescribing
- Patient safety risks associated with particular antimicrobials (including adverse effects, drug interactions, the need for therapeutic drug monitoring, risk of *Clostridium difficile* infection and risk of selecting for more resistant organisms)
- Complexity of relevant disease states and/or public health risks
- Potential for contributing to antimicrobial resistance in the healthcare environment
- Cost-effectiveness (as compared to alternative agents)
- Resources available to manage antimicrobial restrictions

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XXLHD uses a 'traffic light model' to group antimicrobial agents (or specific antimicrobial formulations) available on formulary into one of three levels, according to their relative degree of restriction.

## **UNRESTRICTED (Green)**

Antimicrobials in this category do not require an approval, but are to be used in accordance with locally endorsed guidelines or the *Therapeutic Guidelines: Antibiotic*. Although unrestricted antimicrobials are ordered and supplied as normal, prescriptions are still subject to monitoring and review by the AMS team.

## **RESTRICTED (Orange)**

Antimicrobials in this category are restricted, but a prescription may be automatically approved if prescribed for select indications or for a limited duration. If a prescription is not suitable for automatic approval, it must be reviewed by the AMS team.

## **HIGHLY RESTRICTED (Red)**

Antimicrobials in this category are highly restricted, meaning there are strict limitations on use. Prescription review or consultation is required with an Infectious Diseases physician and/or Clinical Microbiologist prior to use. These antimicrobial prescriptions will always be flagged for review by the AMS team.

For details of antimicrobial restrictions, rationales and approval criteria, see The XXLHD Antimicrobial Restriction List in APPENDIX A.

### **4.4.3 Use of electronic AMS software (eAQUA™)**

eAQUA™ (electronic Assistance for the Quality Use of Antimicrobials) is an electronic application used to support AMS within healthcare facilities. XXLHD has elected to implement the clinical decision support and restriction management components of this software in its larger facilities, in order to improve the appropriateness of antimicrobial prescribing and streamline the antimicrobial restriction and approval process.

#### For MAJOR Hospital and LARGE Hospital:

- Prescribers of RESTRICTED (orange) or HIGHLY RESTRICTED (red) antimicrobials must enter relevant details into eAQUA™ prior to prescription and/or discuss antimicrobial therapy with the AMS team, Infectious Diseases physician and/or Clinical Microbiologist.
- The prescriber must record an assigned approval number (either automatically generated by eAQUA™ or provided after review by the AMS team) next to the prescription on the National Inpatient Medication Chart.
- If approval for a prescription logged in eAQUA™ is denied, the AMS team will contact the prescriber directly to discuss alternative therapy.



For SMALL Hospital, TINYTOWN Health Services, OUTREACH Multi-Purpose Services:

- Prescriptions for RESTRICTED (orange) antimicrobials do not require entry into eAQUA™, but may be routinely reviewed or audited at the discretion of the AMS team or supplying pharmacy department.
- Prescriptions for HIGHLY RESTRICTED (red) antimicrobials require phone approval from the AMS team or on-call Infectious Diseases/Clinical Microbiology consultant prior to prescribing.

For more information on eAQUA™, including basic user guides and official business rules, see the [AMS intranet page](#). To organise training or one-on-one tutorials in eAQUA™, staff members may contact the local pharmacy department.

#### **4.4.4 Conflict Resolution**

##### Disagreements regarding restricted antimicrobials

Where a request for a restricted or highly restricted antimicrobial has been denied, the AMS team will attempt to work collaboratively with the relevant prescriber or medical team to come to a mutually agreeable therapeutic decision. If no agreement can be reached, the attending medical officer responsible for the patient may pursue prescribing the restricted or highly restricted antimicrobial in an individual patient case, only on the grounds of a perceived risk to patient safety. This means:

- (i) Without use of the restricted or highly restricted antimicrobial, the attending medical officer considers the patient to be at significant risk of harm, *and*
- (ii) The attending medical officer believes that use of the restricted or highly restricted antimicrobial will not put the patient at an equivalent or higher risk of harm, *and*
- (iii) The attending medical officer believes that alternative therapies will not have a superior risk-benefit profile in this patient.

***A decision to prescribe the requested restricted or highly restricted antimicrobial agent, despite contrary advice from the AMS team, must be communicated to the AMS team directly and documented in the patient's medical record.***

Cases where restricted or highly restricted antimicrobials are prescribed against the advice of the AMS team may be tabled and reviewed by the AMS Committee retrospectively, in order to address concerns and inform future initiatives such as prescriber education campaigns or quality of prescribing audits.

##### Supply of antimicrobials against the advice of the AMS team

Where restricted or highly restricted antimicrobials are prescribed against the advice of the AMS team, a pharmacist may supply the antimicrobial providing:

- (i) The attending medical officer is choosing to prescribe against the advice of the AMS team on the grounds of a perceived risk to patient safety (see above), *and*

- (ii) The attending medical officer (or his/her delegate) has documented their decision and reasoning in the patient's medical record, *and*
- (iii) The AMS team has been informed (or will be informed on the next business day), *and*
- (iv) The pharmacist does not have any patient safety concerns about use of the antimicrobial as prescribed (i.e. dose is safe, nil contraindications, nil clinically significant drug-drug interactions, route of administration is appropriate).

For highly restricted antimicrobials, the above conditions must be met and the pharmacist involved must also discuss supply with the Director of Pharmacy or Chief Pharmacist.

#### Prescriber Advocacy and Feedback on Restriction Policy

Feedback from prescribers regarding antimicrobial restriction policy is both expected and encouraged. XXLHD prescribers may choose to engage with their representative members of the AMS committee, or may alternatively direct their suggestions or concerns to the AMS Committee Chair or AMS team.

## 4.5 Other Antimicrobial Stewardship Initiatives

### **4.5.1 AMS Rounds**

The AMS team will carry out AMS rounds at MAJOR Hospital two days each week and at LARGE Hospital on one day each fortnight. The purpose of these rounds will be to review antimicrobial prescribing in targeted clinical areas (e.g. critical care, respiratory, haematology/oncology and surgical wards) or in patients that may have been identified via the eAQUA™ system or by referral. The AMS team is authorised to make point-of-care interventions (such as adjusting antimicrobial therapy based on allergy mismatch, microbiology results or organ dysfunction), and/or discuss their recommendations with treating teams.

### **4.5.2 Monitoring of Antimicrobial Usage and Resistance**

The XXLHD AMS program incorporates a range of data collection methodologies to monitor both the quantity and quality of antimicrobial usage and examine processes associated with antimicrobial prescribing and supply. These methods include (but are not limited to):

- Analysis of National Antimicrobial Utilisation Surveillance Program (NAUSP) reports for MAJOR Hospital and LARGE Hospital every 2 months;
- Analysis of third generation cephalosporin and quinolone antibiotic usage at SMALL Hospital every 3 months;
- Review of audits of compliance with antimicrobial prescribing guidelines at all facilities in XXLHD.

The AMS committee also works closely with the local pathology service to extract and evaluate data on local antimicrobial resistance rates and changes or trends that emerge over time. This includes:



- Review of multi-resistant organism (MRO) surveillance data every 3 months in liaison with a representative from the Infection Prevention and Control Committee;
- Review of cumulative hospital-level antibiograms for MAJOR Hospital and LARGE Hospital every 12 months.

### 4.5.3 Targeted Interventions

Special initiatives or projects may be developed by the XXLHD AMS Committee to target particular areas of practice. Examples of targeted interventions may include an 'IV to oral switch' project, an AMS awareness campaign aimed at nursing staff, or development of a series of antimicrobial prescribing tutorials for medical officers.

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## 5. Performance Measures

Assessment of organisational compliance with the XXLHD AMS Policy and evaluation of performance are outlined in the AMS program plan. Specific monitoring activities will be undertaken according to the needs and risk assessment performed for individual XXLHD facilities, and therefore may differ between sites. All XXLHD staff are expected to comply with approved assessment and evaluation activities (including audit and feedback) and may direct their concerns or queries to the AMS Committee.

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## 6. Related Documents

The AMS page on the XXLHD Intranet: <http://intranet.xxlhd.nsw.gov.au/ams/>

Australian Commission on Safety and Quality in Health Care. *Safety and Quality Improvement Guide Standard 3: Preventing and Controlling Healthcare Associated Infections* (October 2012). Sydney: ACSQHC, 2012. Available at <http://www.safetyandquality.gov.au/publications/safety-and-quality-improvement-guide-standard-3-preventing-and-controlling-healthcare-associated-infections-october-2012/>

Australian Commission on Safety and Quality in Health Care. *Antimicrobial Stewardship Clinical Care Standard*. Sydney: ACSQHC, 2014. Available at: <https://www.safetyandquality.gov.au/publications/antimicrobial-stewardship-clinical-care-standard/>

Related XXLHD Policies and Guidelines:

- XXLHD Infection Prevention and Control Policy [XXLHD PO 2013-22]
- Medication order and supply procedures for TINYTOWN Health Services and OUTREACH Multi-Purpose Services [TOH PR 2014-08]

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## 7. Definitions

Antimicrobial Stewardship (AMS)	An ongoing and systematic effort to optimise the use of antimicrobial medicines within a health service organisation.
AMS program plan	A rolling document that details AMS risk assessments, priorities, strategies and organised action as directed by the AMS Committee.
Antimicrobial formulary	The range of antimicrobial products available for use in a healthcare facility and configured to provide treatment options for the large majority of patient encounters.
eAQUA™	“Electronic Assistance for the Quality Use of Antimicrobials”. A [fictitious] computer application used to support AMS within healthcare facilities.
Locally-endorsed guidelines	Any guideline documents which provide advice or instruction on the management of a disease state, that has been reviewed and formally endorsed by the Drug and Therapeutics Committee and other relevant committees.

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## 8. References

1. MacDougall C, Polk R. Antimicrobial stewardship programs in health care systems. *Clinical Microbiology Review* 2005; 18(4):638-656
2. Duguid M, Cruickshank M (eds). 2010. Antimicrobial stewardship in Australian hospitals. Australian Commission on Safety and Quality in Healthcare: Sydney