



ACIPC Recommends

Infection control practitioners bring specific expertise and should be part of a multidisciplinary antimicrobial stewardship program that is supported by clinicians with professional expertise in antimicrobial use (infectious diseases physicians, pharmacists and microbiologists). This expertise may be provided onsite, or as part of a network or group arrangement.

Infection control practitioners can participate in AMS through:

- advising on appropriate governance structures for AMS.
- a patient-centric approach to managing risk.
- making current endorsed therapeutic guidelines on antimicrobial prescribing readily available.
- participating in multidisciplinary antimicrobial stewardship committees that include infectious diseases physicians, general practitioners, pharmacists, microbiologists, and nurses.
- educating healthcare workers on infection prevention and control strategies to minimise risk and transmission of antimicrobial resistance, including safe and appropriate antibiotic use.
- advising healthcare workers on appropriate specimen collection procedures, different types of microbes and infections, and local resistance patterns.
- undertaking surveillance of antimicrobial-resistant organisms, healthcare-associated infections, and in some circumstances, surveillance of antimicrobial usage and appropriateness.
- reporting and providing feedback to teams on surveillance data.

PS ID	Category	Responsible Body	Review Due	Effective Date
P1	Policy	Policy Committee		

1. Introduction

Antimicrobial resistance (AMR) is considered by the World Health Organization (WHO) to be one of the three most serious problems facing human health.¹ Infections with antimicrobial resistant organisms are complicated and expensive to treat and may lead to significant morbidity and mortality.¹ While antimicrobial resistance in Australia has not been quantified, in the United States, up to two million people annually contract infections due to antimicrobial resistant organisms and around 23,000 die as direct result and similar impacts are noted elsewhere.¹ Infection transmission and subsequent use of antimicrobials are key drivers of the development of AMR.¹ The literature demonstrates that up to half of antibiotics used in Australia are used inappropriately, which contributes to AMR.²

As resistance to antimicrobial drugs increases and the development of new antimicrobials has continued to slow, programs to optimise the use of antimicrobials to minimise AMR have become critical.³ Anti-microbial stewardship (AMS) programs have been developed to help patients receive the appropriate antimicrobial regime, to prevent antimicrobial overuse and abuse, and to minimise the development of resistance.^{3,4}

2. Definitions

‘**Antimicrobial resistance (AMR)** is the ability of a microorganism... to stop an antimicrobial... from working against it. As a result, standard medical treatments become ineffective and infections persist and may spread to others. Health care professionals are left with limited or in some instances, no available treatment options.’⁵

Antimicrobial stewardship (AMS) is an organised antimicrobial management program involving a systematic approach to optimising the use of antimicrobials in order to optimise patient outcomes and reduce adverse sequelae including antimicrobial resistance.^{2,4}

3. Literature Review

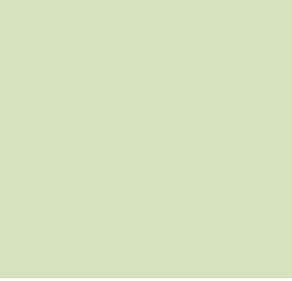
Antimicrobial stewardship programs have been shown to improve the appropriateness of antimicrobial use, to reduce antimicrobial resistance in certain organisms, to reduce antimicrobial usage and to reduce healthcare costs.² They have also been shown to improve clinical outcomes, patient safety and quality of care.² For example, a meta-analysis by Feazel et al. demonstrated that a bundle of AMS strategies could reduce *Clostridium difficile* incidence by 52%.⁵ Together with infection prevention and control, AMS is a key strategy in preventing the emergence of AMR and decreasing preventable HAI.^{3,4}

Criterion 3.14.1 of the Australian National Safety and Quality Health Service Standards published in September 2012 requires that an antimicrobial stewardship program is in place, as part of ‘developing, implementing and regularly reviewing the effectiveness of the antimicrobial stewardship system.’² Additionally, Objective 2 of the National Antimicrobial Resistance Strategy 2015-2019, is to ‘implement effective antimicrobial stewardship practices across human health and animal care settings to ensure the appropriate and judicious prescribing, dispensing and administering of antimicrobials.’⁶

The Australian Commission on Safety and Quality in Health Care has published guidance on developing, introducing and running an effective antimicrobial stewardship program.² A key aspect is support by a multidisciplinary team including where possible, an infectious diseases physician, a clinical pharmacist, an Infection Prevention and Control Practitioner (IPCP), an information technologist, a microbiologist, and hospital administrators.

The role of the ICP

The ICP can play a pivotal role in the development, implementation and evaluation of an AMS program and can support the aims of the program – to reduce the development of AMR organisms – through IP&C strategies designed to reduce microbial transmission and educate



health professionals, patients and visitors.¹ They are also well placed to detect patients infected with resistant organisms, interpret surveillance data for health professionals.⁷

4. ACIPC Recommends

ACIPC believes that antimicrobial resistance is a serious and significant problem. Reducing antimicrobial resistance through infection prevention and control and safe and appropriate use of antimicrobials is the responsibility of all healthcare workers.

Infection control practitioners possess specialist knowledge and expertise regarding the prevention and control of infections, including those that are resistant to antimicrobials. They are therefore well placed to:

- promote evidence-based infection prevention and control practices,
- lead infection surveillance and disseminate the results,
- educate health professionals on the importance of AMS, and make current endorsed therapeutic guidelines on antimicrobial prescribing readily available,⁸
- advise on and support the implementation of specific strategies to reduce infection transmission including the transmission of resistant organisms,
- contribute to development of policies, guidelines and clinical pathways related to antimicrobial resistance and usage, and
- advise on and participate in quality improvement and research in relation to AMS.

Therefore:

1. When supported by specialist expertise from infectious diseases physicians, microbiologists, and pharmacists, ICPs can also have a role in AMS program coordination and surveillance of antimicrobial usage.
2. Healthcare facilities adopt recommendations provided by the Australian Commission on Safety and Quality in Healthcare when developing, introducing and running an antimicrobial stewardship program.

5.0 References

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