

Response to antimicrobial resistance in primary care

November 2017



Contents

<i>Purpose of this document</i>	2
<i>Introduction</i>	3
<i>RACGP response to AMR in primary care</i>	4
<i>RACGP Position Statement on antimicrobial stewardship</i>	10
<i>References</i>	11

Purpose of this document

This document outlines the response of The Royal Australian College of General Practitioners (RACGP) to the issue of antimicrobial resistance (AMR) in Australia.

It proposes a number of activities to respond to AMR and complements the Strategic Objectives and Priority Areas for Action outlined in the Australian Government's *Implementation Plan*, a companion document to its *National Antimicrobial Resistance Strategy 2015-2019*.

The RACGP seeks support from Commonwealth and State Governments in the implementation of these activities.

Acknowledgements

The RACGP gratefully acknowledges the generous contribution of the members of the RACGP's Therapeutic subcommittee:

Professor Chris Del Mar (Chair)

Dr Evan Ackermann

Professor Danielle Mazza

Associate Professor Rashmi Sharma

Introduction

Antimicrobial resistance (AMR) is a global health problem. With microorganisms rapidly adapting to counteract the effects of antimicrobial agents, our defence against infection is under threat. In addition to the mortality and the morbidity directly associated with infective conditions, many technologically advanced medical treatments that rely on the use of antibiotic prophylaxis (such as chemotherapy, bone marrow transplants, joint replacement surgery, and interventional cardiology) may become too dangerous to offer.

System-wide efforts are now underway to combat AMR and sectors across the Australian community have been mobilised to act.

GPs and the primary care sector have a role to play in these efforts. In 2016, the Australian Commission on Safety and Quality in Health Care (ACSQHC) produced *Antimicrobial Use and Resistance in Australia (AURA)*,¹ its first report on the state of AMR and antibiotic use in Australia. That report states that in 2014, almost half (46 per cent) of Australians had at least one antimicrobial dispensed to them in the community.

However, available data tells us little about the complexity of antibiotic prescribing in community settings. There is a need to accurately monitor community prescribing data at both national and the local levels to support improvement activities.²

Since the release of its *National Antimicrobial Resistance Strategy 2015-2019*,³ the Australian Government has devised a series of 'Priority Areas for Action' (arranged under seven Objectives), detailed in a companion document *Implementation Plan: National Antimicrobial Resistance Strategy 2015-2019*.⁴

In 2017, the RACGP convened a sub-committee of the RACGP Expert Committee – Quality Care (REC-QC), chaired by Prof Chris Del Mar, to determine how best to respond to the threat of AMR in accordance with the Australian Government's *Strategy*. The sub-committee developed a list of proposed College activities that are outlined in this *RACGP Response to antimicrobial resistance in primary care*.

The strategies resulted from a comprehensive review of the literature, and were discussed at a national roundtable meeting hosted by the Centre for Research Excellence at Bond University in Queensland in April 2017. Key areas of focus include community education, clinical governance, GP education, infection control, outcomes measurement, and research. Proposed RACGP activities for responding to the problem of AMR within primary care are described below, with reference to the relevant Objectives and Priority Areas for Action outlined in the *Implementation Plan*.

RACGP response to AMR in primary care

Activities are organised under six areas:

1. Community education
2. Clinical governance
3. GP education
4. Infection control
5. Outcome monitoring
6. Research.

Area 1: Community education

Relevant areas of the Implementation Plan: Australia's First National AMR Strategy 2015-2019	
Objective 1: Increase awareness and understanding of AMR, its implications and actions to combat it through effective communication, education and training.	Priority Area for Action 1.1: Strengthen consumer awareness initiatives to improve understanding of AMR and the importance of using antibiotics appropriately.
	Priority Area for Action 1.2: Increase support for human and animal health professionals in reinforcing key messages with patients and clients.
	Priority Area for Action 1.3: Strengthen communication and education initiatives for health professionals and health care team members.
	Priority Area for Action 1.4: Develop a stakeholder engagement and communication plan to support whole-of-society awareness of, and participation in implementing the Strategy.

Key RACGP activities

- Publish a public **RACGP position statement on antimicrobial stewardship**;
- Work with other organisations (such as the National Prescribing Service, NPSMedicineWise, to develop and promote awareness of, and educational resources for, the need to reduce antibiotic use.

Messages which emphasise the need for community-wide action are necessary: a general practice response is only part of a community-wide 'One Health' approach.

The RACGP will publicly state its position on antibiotic use, providing clear direction and support to general practitioners in reducing antibiotic prescribing to reduce antimicrobial resistance. Nevertheless, it supports the primacy of patient safety. This means that interventions to reducing antibiotic use must be carefully balanced against morbidity and mortality from infectious disease.

Public demand for antibiotics is one driver of prescribing antibiotics. The RACGP undertakes to contribute to educating Australians on the harms antibiotic resistance consequent on antibiotic use, and will continue to work with other organisations on health promotion campaigns to reduce patient demand for antibiotics.

Area 2: Clinical governance

Relevant areas of the Implementation Plan: Australia's First National AMR Strategy 2015-2019	
Objective 7: Establish and support clear governance arrangements at the local, jurisdictional, national and international levels to ensure leadership, engagement and accountability for actions to combat AMR.	Priority Area for Action 7.4: Review regulation (legislated and other) relevant to antimicrobial resistance and antibiotic usage.

Key RACGP activities

- Advocating for the utilisation of Medicare funding as a resource to improve AMS strategies in general practice
- Advocating for regulatory support to reduce unnecessary antibiotic use in the community:
 - Removal of the over-the-counter pharmaceutical listing of topical antibiotics (eg chloramphenicol)
 - Encouraging clinical information system software vendors to remove automatic prescription repeats for antibiotics,
 - Date limits to prevent patients from taking an unnecessary second course and/or attempting to treat other unrelated ailments with a course of antibiotics not intended for the original purpose.
 - Authority prescriptions for some antibiotics for which there is a national imperative to reduce use

The RACGP is keen to collaborate with the Australian Government to devise interventions for addressing antibiotic resistance at the local and national level.

Recognising antimicrobial stewardship through Medicare

While antimicrobial stewardship programs have been suggested for general practice, the structure of these programs remain unclear. The RACGP supports evidence based interventions to support GPs in prescribing decisions, and monitoring systems to provide frontline GPs with meaningful information about their antibiotic use.

There is good evidence for several interventional strategies, however implementation by GPs remains a problem.

Exploring existing remuneration systems to support AMS strategies in general practice should be undertaken, including incentives, quality assurance mechanisms, audits, and behavioural interventions.

Remuneration through Medicare could support a longer consultation, necessary to facilitate a conversation with patients about antimicrobial resistance and antimicrobial alternatives – in addition to the benefits of increased patient health literacy. This would also allow GPs to record and provide details on reason for prescription and other details to facilitate advanced auditing of antibiotic use.

Tightening regulatory controls

Tightening controls around prescribing and dispensing has the potential to reduce overall antibiotic use in the community without impeding access to antibiotics for those patients who require this treatment. The RACGP would support:

- Re-examination of chloramphenicol's over-the-counter status. Dramatic increases in the sales of topical antibiotics such as chloramphenicol following down-scheduling⁵ suggest a need to reconsider this decision.
- Addressing the practice of issuing automatic prescription repeats of antibiotics within clinical information system software,⁶ and setting time limits to prevent patients from taking an unnecessary second course.

Antimicrobial use in Residential Aged Care Facilities (RACFs)

Targeting approaches to patients in RACF settings is very important strategy. The RACGP plans to update the Medical care of older persons in residential aged care facilities (Silver Book) to support safe decreased antibiotic prescribing for GPs working in this setting. However, effective interventions in this environment, which is very different to that in mainstream general practice, may require different interventions to be effective.

Area 3: GP education

Relevant areas of the Implementation Plan: Australia's First National AMR Strategy 2015-2019	
Objective 1: Increase awareness and understanding of AMR, its implications and actions to combat it through effective communication, education and training.	Priority Area for Action 1.2: Increase support for human and animal health professionals in reinforcing key messages with patients and clients.
	Priority Area for Action 1.3: Strengthen communication and education initiatives for health professionals and health care team members.
Objective 2: Implement effective antimicrobial stewardship practices across human health and animal care settings to ensure the appropriate and judicious prescribing, dispensing and administering of antimicrobials.	Priority Area for Action 2.1: Ensure that tailored, evidence-based antibiotic prescribing guidelines are available for all sectors.
	Priority Area for Action 2.3: Develop tailored, evidence-based resources to support the implementation of AMS programmes.

Key RACGP activities

- Providing educational resources for GPs on effective methods for the safe reduction of antibiotic prescribing in an online toolkit
- Collaborating with the NPS to deliver effective health messages for GPs and their patients
- Supporting the implementation of clinical guidelines on antibiotic prescribing by:
 - integrating them into GP clinical information system software
 - supporting GPs to access existing clinical guidelines on antibiotic prescribing (such as Therapeutic Guidelines Limited's *Therapeutic Guidelines: Antibiotic* and *Therapeutic Guidelines: Respiratory*)
- Addressing the topic of antibiotic prescribing/AMR in residential aged care facilities (RACFs) in the forthcoming *Medical care of older persons in residential aged care facilities (Silver book) 5th edition*.

The RACGP will host resources to support GPs' skills for reducing antibiotics safely, consistent with the National Antimicrobial Resistance Strategy. These resources consist of a range of separate evidence-based strategies:⁷

- **Audit and feedback**⁸, a quality improvement mechanism in which healthcare practitioners are given information that shows whether their prescribing behaviour is consistent with a set target.
- **Delayed prescribing**⁹, whereby a prescription is given to the patient on the proviso that it should only be used if symptoms do not resolve (or worsen) within a specified period.
- **'Nudge' behavioural techniques**¹⁰, in which the aim is to modify clinician behaviour by asking them to make a public commitment to judicious use of antibiotics in the form of a waiting-room poster.

- **Shared decision making**¹¹, in which the GP takes time to evaluate the patient's concerns and expectations and explain the advantages and disadvantages of an antibiotic prescription, in order to come to an agreement about whether to proceed with this treatment.
- **Patient decision aids**¹², which are information sheets specially tested with patients to support shared decision making.
- **Patient information sheets**¹³ on inappropriate antibiotic use and its harms.

Such resources could be provided online as a 'toolkit' for GPs on the RACGP website, with links to patient decision aids, posters, information sheets, and self-audit tools such as [the NPS MedicineWise Clinical e-Audit for management of specific respiratory infections](#).

Therapeutic Guidelines Limited's *Therapeutic Guidelines: Antibiotic* and *Therapeutic Guidelines: Respiratory* are a valuable resource that ideally should be made widely available to GPs. Subsidising the purchase of these tools by general practices is a potential avenue that could be explored by funding bodies. Where possible, decision support tools from these guidelines should be integrated into clinical information system support software to assist GPs to make prescribing decisions.

Area 4: Infection control

Relevant areas of the Implementation Plan: Australia's First National AMR Strategy 2015-2019

Objective 4: Improve infection prevention and control measures across human health and animal care settings to help prevent infections and the spread of AMR.

Priority Area for Action 4.1: Ensure the availability of evidence-based, best practice and nationally consistent standards for IPC across human health and animal care settings.

Key RACGP activities

- Developing a module for the 5th edition of the RACGP *Standards for general practices* to outline practice-based infection control policy
- Continued dissemination of the RACGP resource *Infection prevention and control standards for general practices and other office-based and community-based practices* (5th ed.)

The RACGP Infection Control Standards focus on instrument sterilisation, optimising infection control and environmental hygiene within general practice. Preventing the spread of respiratory infection through hand hygiene is an obvious first step to reducing antibiotic use and AMR. The RACGP continues to advise the profession on best practice for prevention and control of the spread of infection through the development of standards for general practices.

Area 5: Outcome monitoring

Relevant areas of the Implementation Plan: Australia's First National AMR Strategy 2015-2019	
Objective 3: Develop nationally coordinated One Health surveillance of AMR and antimicrobial usage.	Priority Area for Action 3.5: Improve human health surveillance.

Key RACGP activities

- Develop appropriate antibiotic usage indicators for use within general practice
- Work with government bodies to monitor national, state and PHN levels of:
 - antibiotic prescribing activity in primary care by health professional group
 - rates of community antibiotic microbiome (commensals) resistance in Australia
 - hospital admission, and Emergency Department, presentation rates for serious infections that might have been mitigated by antibiotic use in the community setting (eg community acquired pneumonia, quinsy, otitis media, and mastoiditis).

Before targets can be set for reduction in prescribing in the community, there is a need to accurately measure the extent of current prescribing and its impacts by GPs. Little is agreed as to what indicators should be used to monitor clinical progress in general practice.

While antibiotic use in Australian hospitals is monitored through the National Antimicrobial Utilisation Surveillance Program (AURA), there is no equivalent system in primary care. Community prescribing rates are estimated using composite data drawn from a variety of sources.¹⁴ General practice prescribing rates reported in AURA¹ may be adulterated by non-GP prescribing (ie, by nurse practitioners or hospital-based GPs).

Clean data is required on GP and non-GP prescribing rates, as well as rates of AMR in the community and the unintended consequences of a decline in community prescribing. The RACGP is in favour of efforts to collect this data at national, state, and regional levels. This would pave the way for the setting of benchmarks for reduction in prescribing.

Area 6: Research

Relevant areas of the Implementation Plan: Australia's First National AMR Strategy 2015-2019	
Objective 5: Agree on a national research agenda and promote investment in the discovery and development of new products and approaches to prevent, detect, and contain AMR.	Priority Areas for Action 5.1: Identify current gaps and agree national research and development priorities.
	Priority Area for Action 5.4: Explore opportunities to support the translation of promising research findings into new products, policies and approaches.
Objective 2: Implement effective antimicrobial stewardship practices across human health and animal care settings to ensure the appropriate and judicious prescribing, dispensing and administering of antimicrobials.	Priority Area for Action 2.1: Ensure that tailored, evidence-based antibiotic prescribing guidelines are available for all sectors.
	Priority Area for Action 2.3: Develop tailored, evidence-based resources to support the implementation of AMS programmes.
	Priority Area for Action 2.5: Strengthen existing measures to better support appropriate and judicious use.

Key RACGP activities

- Research questions
 - Strategies for safely reducing antibiotic use in general practice
 - The benefits of antibiotic treatment for common skin and soft tissue infections (such as wound infections, cellulitis, or infections following minor skin surgery) in primary care
 - Drivers of antibiotic prescribing in RACFs, to determine how to support GPs reduce safely reduce antibiotic use.

The RACGP is keen to see further research in the area of antibiotic use/AMR as it pertains to the primary care sector, particularly areas in which scientific enquiry has been limited to date.

While there is a growing body of evidence to support various strategies for addressing AMR in general practice,⁸ replication of findings would strengthen support for their widespread use. In particular, near patient testing and shared decision-making approaches have been implemented overseas with success, but more research is needed to test these in an Australian context.

Australian researchers are now turning to the development of AMS programs specific to primary care.¹⁵ This research is in its infancy and longitudinal studies are needed to examine the outcomes and cost-effectiveness of such programs. Patient safety is of integral importance in implementing an AMS program for general practice, and such a program would need to be tailored to address local issues, resources and expertise. Funding and support for implementation is essential.

The RACGP would like to see a commitment from governments for funding for research to this end. Initiatives such as the Medical Research Future Fund (MRFF) could be used for this purpose.

RACGP Position Statement on antimicrobial stewardship

Position

The RACGP supports a collaborative multi-sectorial approach to ensure appropriate antimicrobial use and efforts to reduce antimicrobial resistance (AMR) in Australia.

The RACGP supports the primacy of patient safety and endorses those interventions which prevent antimicrobial resistance whilst minimising harm, morbidity and mortality from infectious disease.

Antimicrobial stewardship (AMS) programs developed for hospitals cannot simply be implemented in general practice, which is less hierarchical than secondary care and characterised by special pressures and concerns. Tailored approaches will have to be developed to assist GPs.

Background

AMR is a significant global and Australian health issue. Global and local efforts are needed to conserve antibiotic effectiveness, and to contain and reduce AMR.

The RACGP agrees that comprehensive, coordinated and effective surveillance of AMR and antimicrobial use is a national priority. A unified and strategic approach to addressing the problem is necessary. The Australian Government's 'One Health' approach for addressing antimicrobial resistance across the human and animal health, food and agriculture sectors is supported.

The RACGP supports the primacy of patient safety and endorses those interventions which prevent AMR whilst minimising harm, morbidity and mortality from infectious disease. This will require selective interventions, with appropriate surveillance systems to monitor patient outcomes, antimicrobial use and AMR patterns.

The RACGP acknowledges regional variations that lead to different antimicrobial utilisation, and maintains that little is understood regarding the complexity and uncertainties surrounding antibiotic prescribing in community settings. There is an urgent need to gather community prescribing data, and to meaningfully analyse it to drive improvement activities.

The RACGP believes that community based strategies to reduce antimicrobial use provides an opportunity to reduce the spread of AMR. General practice has a major role to play in maintaining antibiotics effectiveness, in addition to educating the public on their appropriate use and emerging resistance. The RACGP is committed to helping GPs to deal with expectations, change management and implementing new initiatives to reduce antibiotic usage where safe to do so.

AMS programs in general practice may influence positive change across the health sector. However, such programs are currently underdeveloped in general practice, and will require a different approach from hospital-based antimicrobial initiatives. Specific resourcing is needed to develop AMS programs for primary care.

References

1. Australian Commission on Safety and Quality in Health Care (ACSQHC). AURA 2016: First Australian report on antimicrobial use and resistance in human health – summary report. Sydney: ACSQHC; 2016.
2. Thursky K. Milestones, challenges in antimicrobial stewardship. MJA InSight [Internet]. 2017; 2(23 January 2017). Available from: <http://www.doctorportal.com.au/mjainsight/2017/2/milestones-challenges-in-antimicrobial-stewardship/>.
3. Australian Government Department of Health. Responding to the threat of antimicrobial resistance: Australia's first National Antimicrobial Resistance Strategy 2015-2019. Canberra: Commonwealth of Australia; 2015.
4. Australian Government Department of Health. Implementation Plan: Australia's first National Antimicrobial Resistance Strategy 2015-2019. Canberra: Commonwealth of Australia; 2016.
5. Coxeter P, Looke D, Hoffmann T, Lowe J, Del Mar C. The antibiotic crisis: charting Australia's path towards least resistance. Australian and New Zealand Journal of Public Health. 2013;37(5):403-4.
6. Alkhatib L, Parsons R, Czarniak P, Sunderland VB. An evaluation of the reclassification of ophthalmic chloramphenicol for the management of acute bacterial conjunctivitis in community pharmacies in Western Australia. International Journal of Pharmacy Practice. 2015;23(2):111-20.
7. Del Mar CB, Scott AM, Glasziou PP, et al. Reducing antibiotic prescribing in Australian general practice: time for a national strategy. The Medical Journal of Australia. 2017;207(9):1.
8. Ivers N, Jamtvedt G, Flottorp S, et al. Audit and feedback: effects on professional practice and healthcare outcomes. The Cochrane Library. 2012.
9. Spurling GK, Del Mar CB, Dooley L, Foxlee R, Farley R. Delayed antibiotic prescriptions for respiratory infections. Cochrane Database Syst Rev. 2017;9:Cd004417.
10. Meeker D, Knight TK, Friedberg MW, et al. Nudging guideline-concordant antibiotic prescribing: A randomized clinical trial. JAMA Internal Medicine. 2014;174(3):425-31.
11. Hoffmann TC, Montori VM, Del Mar C. The connection between evidence-based medicine and shared decision making. JAMA. 2014;312(13):1295-6.
12. Stacey D, Légaré F, Lewis K, et al. Decision aids for people facing health treatment or screening decisions. Cochrane Database of Systematic Reviews. 2017(4).
13. Sustersic M, Gauchet A, Foote A, Bosson JL. How best to use and evaluate Patient Information Leaflets given during a consultation: A systematic review of literature reviews. Health Expectations. 2017;20(4):531-42.
14. McKenzie D, Rawlins M, Del Mar C. Antimicrobial stewardship: what's it all about? Aust Prescr. 2013;36:113-20.
15. Avent ML, Hansen MP, Gilks C, et al. General Practitioner Antimicrobial Stewardship Programme Study (GAPS): protocol for a cluster randomised controlled trial. BMC family practice. 2016;17(1):48.