



**7** Involving consumers in antimicrobial stewardship

# Antimicrobial Stewardship in Australian Health Care

2018

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This chapter is part of *Antimicrobial Stewardship in Australian Health Care 2018*, Australian Commission on Safety and Quality in Health Care, 2018.

The publication summarises current evidence about AMS strategies and interventions, and their implementation. Chapters 1–7 provide strategies for implementing and sustaining AMS, and Chapters 8–12 examine the roles of the different clinicians in AMS.

The publication will continue to evolve with additional chapters over time that address AMS in specific settings, such as primary care.

As new resources become available, they will be added as hyperlinks to the resources section in each chapter or to the appendices.

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## Acronyms and abbreviations

Abbreviation	Definition
AMR	antimicrobial resistance
AMS	antimicrobial stewardship
Commission	Australian Commission on Safety and Quality in Health Care
NSQHS	National Safety and Quality Health Service
RACGP	Royal Australian College of General Practitioners

## Key points

- Many consumers are aware that antimicrobial resistance (AMR) is a problem, but their understanding of the nature of the problem and the role that consumers can play in preventing AMR is limited.
- Consumers may overestimate the benefits and underestimate the risk of harm from the use of antimicrobials.
- Many consumers believe antimicrobials are effective against the common cold and other viral upper respiratory tract infections, and parents are twice as likely to request antimicrobials to treat their child's cold or cough than for themselves.
- Clinicians have a central role in supporting consumers to better understand appropriate antimicrobial use and AMR.
- Clinicians need to consider consumer concerns, preferences and expectations about antimicrobial use and AMR.
- Accessible tools and resources need to be available to support consumer awareness of antimicrobial use and AMR.
- Many prescribers think that consumers expect to receive a prescription for antimicrobials, when that may not be the case.
- When discussing antimicrobial use and AMR with consumers, it is important that the messages are clear, concise and consistent.
- Consumers need support and information to help them manage symptoms associated with infections and better understand when they should seek further medical attention.
- Providing consumers with information on treatment options, including evidence of effectiveness, and likely benefits and risks of harm can support consumer engagement and shared decision making.
- Consumer representation on antimicrobial stewardship committees is suggested to enable effective communication.

## 7.1 Introduction

Informing consumers about antimicrobial use and antimicrobial resistance (AMR), and involving consumers in decisions about appropriate antimicrobial use are important elements of antimicrobial stewardship (AMS). A consumer is someone who has used, or may potentially use, health services (in hospital and in primary care) or is a carer for a patient using health services. Consumers also include residents of aged care homes, and their carers and families.

Effective consumer partnerships contribute to efficient use of resources, improved safety and quality of care, improved patient outcomes and experience, and improved performance of health service organisations.

Action 1.1 of the [National Antimicrobial Resistance Strategy](#) specifies the need to 'strengthen consumer awareness initiatives to improve understanding of AMR and the importance of using antibiotics appropriately'. AMS messages should be reinforced

during all interactions between consumers and clinicians in all settings.

Quality statements 3, 4 and 5 of the [Antimicrobial Stewardship Clinical Care Standard](#) aim to ensure that consumers are informed about their possible clinical condition so that they can participate in decisions about their treatment. If an antimicrobial is prescribed or recommended by a clinician, it is important to ensure that an antimicrobial is warranted; the most appropriate antimicrobial is selected; consumers receive information about when and how to take the antimicrobial, for how long, and any potential side effects; and a review of the care plan is arranged.<sup>1</sup>

A healthcare consumer may also act as a consumer representative on an AMS committee, to provide a consumer perspective, contribute experiences, advocate for the interests of current and potential health service users, and take part in decision-making processes. Ensuring that consumers are partners in the planning, design, delivery and evaluation of healthcare systems and services is

the aim of the National Safety and Quality Health Service (NSQHS) Partnering with Consumers Standard. This is especially relevant when considered in conjunction with the Preventing and Controlling Healthcare-Associated Infection Standard, which requires safe and appropriate antimicrobial prescribing as a strategic goal of the clinical governance system.

This chapter aims to help clinicians and health service organisations understand the knowledge, attitudes and behaviours of consumers, and to equip them to engage effectively with consumers in efforts to promote AMS.

Issues that are especially relevant for certain settings – rural and remote hospitals, private hospitals and aged care – are tagged as R, P and AC, respectively, throughout the text.



## 7.2 Consumer awareness and expectations

Understanding the knowledge, attitudes and behaviours that influence consumer decision-making about antimicrobials is important to effectively engage with consumers. A range of factors influence consumers' decision-making, including their awareness and understanding of antimicrobial use and AMR, and their previous experience with antimicrobials.

### 7.2.1 Consumer understanding of when antimicrobials are needed

Many consumers mistakenly believe that antimicrobials are effective against the common cold and other viral infections. An Australian study undertaken by NPS MedicineWise revealed that only 37% of respondents knew that antibiotics are effective against bacteria and not viral infections.<sup>2</sup> Similar findings have been described overseas.<sup>3-5</sup> The NPS MedicineWise study also found that one in five Australians expect their doctor to prescribe antimicrobials for themselves or their child when they have a cough or cold.<sup>2</sup> Mothers with young children expected, and at times demanded, antibiotics for their children. This was especially the case if their child was sick for longer than they expected.<sup>2</sup>

Consumers visit their general practitioners when their symptoms are prolonged or severe enough to cause pain, or interfere with daily activities or sleep.<sup>3</sup> Certain symptoms (for example, green or yellow nasal discharge) are perceived by consumers as a compelling reason to take antimicrobials.<sup>4,6-9</sup> Consumers also report that it is not what you have (that is, a viral or bacterial infection) but how you feel that can influence antimicrobial-seeking behaviour.<sup>10</sup>

Consumers are also concerned about the possibility of the illness developing into a severe infection. For example, parents of children with otitis media were concerned about their child developing septicaemia or requiring hospitalisation, and the possibility of hearing loss.<sup>11</sup>

The desire of the consumer or parent to return to normal activity (such as work, school or day care) after an illness is another significant driver for antimicrobial requests.<sup>8</sup> Consumers tend to overestimate the effects of antimicrobials on upper respiratory tract infections, especially the effect on recovery time, duration of illness and prevention of serious complications.<sup>6</sup> Side effects and AMR are generally underestimated relative to the benefits.<sup>3,8</sup>

However, although general practitioners often perceive that consumers want an antimicrobial for acute respiratory tract infections<sup>12</sup>, research has shown that prescribers may overestimate consumer expectations for antimicrobials.<sup>13</sup> Some general practitioners also perceive that consumers will go to another practitioner if they are not prescribed an antimicrobial.<sup>13-15</sup> Therefore, it is important for clinicians not to pre-empt the consumer's actual expectations during a consultation, as it may be that those expectations are overestimated.

### 7.2.2 Consumer awareness and understanding of antimicrobial resistance

Consumers vary widely in their understanding of the cause, meaning and impact of AMR. The NPS MedicineWise study found that:

- 70% of more than 1,000 respondents reported having heard of the term 'antibiotic resistance'
- 84% agreed that bacteria can become resistant to antibiotics
- 74% were aware that taking antibiotics when you do not need them means they are less likely to work in the future.<sup>2</sup>

Some consumers believe that taking antimicrobials may cause them – not bacteria – to become resistant to antimicrobials.<sup>4,8,16</sup>

Many consumers do not understand how AMR can affect them personally. Consumers perceive resistance as a problem in hospitals, and few recognise resistant infections as a problem in the community. Most believe that there is little they can do to positively influence the situation.<sup>10,17,18</sup> There is little understanding that the misuse of antimicrobials affects the individual taking the antimicrobial, as well as promoting the development of resistant organisms that can be transmitted to others.<sup>19</sup> This is especially important in close living conditions, such as in the family home, aged care homes and hospitals.

### 7.2.3 Previous experience of antimicrobials

Consumers who have received antimicrobials in the past will often expect antimicrobials again for the same symptoms (for example, cough, sinus pain or sore throat).<sup>8,11,20,21</sup> The prescription of an antimicrobial can validate the illness for the consumer and suggest that something is being done about it.<sup>10</sup>

Conversely, when a consumer has been persuaded that antimicrobials are not required, this gives them confidence to avoid antimicrobials in the future for the same symptoms.<sup>8</sup>

## 7.3 Key messages and communication

Consumers should be provided with information about the risks and benefits of the most effective and appropriate treatment options for them. This includes information about specific antimicrobials (if appropriate) and the risks associated with AMR.

When discussing the use of antimicrobials and AMR with consumers, it is important that the messages are clear, simple and consistent. Information may need to be provided in different formats and styles, tailored to the needs and preferences of the consumer.

Programs for engaging with consumers should consider using key messages that are consistent with national programs, such as those implemented by NPS MedicineWise (Box 7.1). It is noted that

most consumers more readily understand the term ‘antibiotics’ rather than ‘antimicrobials’.

When explaining AMR to consumers, it should be recognised that the actual term means little to many.<sup>10</sup> Using language that focuses on the illness or bacteria – such as antimicrobial-resistant bacteria or illness – is more specific. Further, referring to actual bacteria (e.g. *E. coli* or ‘golden staph’) feels more ‘real’ to many consumers.<sup>10</sup> Discussion of the bacteria can also avoid the misunderstanding that it is the body becoming resistant, rather than the microbes.<sup>10</sup> Other messages that have demonstrated effectiveness are those about bacteria becoming stronger and medicines not working against these stronger organisms.<sup>10</sup>

Box 7.2 shows some tips for talking with consumers about AMR.

### 7.3.1 Reassurance

It is important for clinicians to consider that consumers often visit their general practitioner for advice about their health condition, and not necessarily to receive a prescription. For parents, this may mean ensuring that their child does not have a serious illness and having the opportunity to discuss their concerns about complications.<sup>3,6,9</sup> Providing easy-to-understand information to consumers about the expected duration of symptoms, and how to identify signs and symptoms of more serious illness, may help to manage their expectations about antimicrobials.

### 7.3.2 Health literacy

Health literacy is the way in which people understand and use information about health. If people cannot find, understand and use health-related information and services, it is difficult for them to make good decisions about their health. Almost 60% of Australians have low individual health literacy and may not be able to effectively exercise their choice or voice when making healthcare decisions.<sup>22</sup>

Clinicians and health service organisations have a responsibility to make it as easy as possible for consumers to obtain, understand, appraise and apply information, including about antimicrobials. This means providing information about AMR and antimicrobial use in clear and simple language in formats that meet the needs and preferences of a diverse range of consumers. For example, NPS MedicineWise has translated information

## Box 7.1: Key consumer messages

### Antibiotic-resistant bacteria are a personal threat to you and the wider community

- Many bacteria are now resistant to treatment with antibiotics.
- Infections caused by antibiotic-resistant bacteria can be difficult to treat and last for a long time.
- Antibiotics are losing their effectiveness at a faster rate than new antibiotics are being developed.
- It is the bacteria that become resistant, not the person.
- Antibiotic-resistant bacteria that cause infections can spread to family and friends.

### Antibiotics do not work for all infections

- Antibiotics do not treat colds and flu.
- Most coughs, earaches, sinus congestion and sore throats can get better without antibiotics.

### Using antibiotics when they are not needed or in the wrong way increases the resistance of bacteria to antibiotics

- Do not always expect an antibiotic. They do not work for all infections.
- If you are prescribed an antibiotic, take it for as long as you are advised to by your clinician.
- Antibiotics can have side effects, and some are serious.
- Never save antibiotics for another illness or share them with other people.
- Dispose of any remaining antibiotics by returning them to a pharmacy.

### Discuss with your clinician the best way to manage your or your child's illness

- You or your child may feel very unwell with an infection like a cold or the flu. But you can manage many symptoms without antibiotics.
- Ask your clinician for advice.
- You may need an antibiotic in some circumstances.

Source: Adapted from the NPS MedicineWise program information implemented in 2015–16. Current program information is available at: [www.nps.org.au/medical-info/clinical-topics/reducing-antibiotic-resistance](http://www.nps.org.au/medical-info/clinical-topics/reducing-antibiotic-resistance) and [www.nps.org.au/medical-info/consumer-info/antibiotic-resistance-the-facts](http://www.nps.org.au/medical-info/consumer-info/antibiotic-resistance-the-facts)

## Box 7.2: Tips for explaining antimicrobial resistance to consumers

- Explain that antibiotic resistance is when antibiotics no longer work against the (bacterial) infection that they previously worked against
- Ask what they understand about antimicrobial resistance and use [resources](#) to assist the discussion
- Use diagrams, [videos](#) and other graphics to explain how resistance works
- Use [consumer resources](#) from the Australian Commission on Safety and Quality in Health Care (including a [consumer summary of the Antimicrobial Use and Resistance in Australia 2016 report](#)) and [NPS MedicineWise](#).



about antimicrobials to support culturally and linguistically diverse communities (see [Resources](#)). Table 7.1 summarises some actions that support consumers' individual health literacy, which can be applied within AMS programs.<sup>23</sup>

### 7.3.3 Communication with consumers in different settings and circumstances

There are a number of specific settings and circumstances in which effective communication with consumers about antimicrobials is especially important.

#### Travellers

With increasing numbers of people travelling internationally, there is the possibility of greater contact with antimicrobial-resistant organisms that can be brought home and spread to others.<sup>24</sup> Infections caused by multidrug-resistant bacteria are increasing in healthcare settings in low- and middle-income countries.<sup>25</sup> Australian consumers may be

susceptible not only to resistant organisms emerging here but also to resistant organisms from other countries.

Travellers should be made aware that they should take routine steps to avoid infection, such as seeing their general practitioner to receive any recommended vaccines before travelling, practising good hand hygiene and safe sex, and being careful about what they eat and drink. The use of prophylactic antimicrobials (for example, for malaria prevention) should be discussed with the consumer, including benefits and harms. Clinicians should also ask consumers about any recent travel or medical procedures performed overseas.

#### Hospitals

Admission to hospital results in increased risk of harm from healthcare-associated infections. Patients are at risk of acquiring a resistant organism and transmitting resistant organisms to others. Consumers should have the opportunity to ask questions about their antimicrobials while in hospital and be able to obtain information about

**Table 7.1:** Actions that consumers, clinicians and health service organisations can take to improve health literacy

Role	Possible actions
Consumers	<ul style="list-style-type: none"> <li>• Discuss with clinicians any difficulties in understanding health information and services</li> <li>• Ask family, friends or support services (such as translating services) for help with communication difficulties</li> <li>• Ask for more information about any part of care that is unclear</li> <li>• Be open and honest with clinicians about medical history and medicines.</li> </ul>
Clinicians	<ul style="list-style-type: none"> <li>• Recognise the needs and preferences of individual patients and consumers, and tailor the communication style to the person's situation</li> <li>• Assume that most people will have difficulty understanding and applying complex health information and concepts</li> <li>• Use different interpersonal communication strategies to confirm that information has been delivered and received effectively</li> <li>• Encourage people to speak up if they have difficulty understanding the information provided</li> <li>• Use ways of communicating about treatment risks that are known to be effective.</li> </ul>
Health service organisations	<ul style="list-style-type: none"> <li>• Develop and implement health literacy policies and processes that aim to reduce the health literacy demands of information materials, the physical environment and local care pathways</li> <li>• Provide and support access to health literacy and interpersonal communication training for clinicians, including training in methods for communicating risk</li> <li>• Provide education programs for consumers aimed at developing health knowledge and skills.</li> </ul>

appropriate antimicrobial use, AMR and the antimicrobials they have been prescribed.

Fact sheets and other short resources can be helpful in informing consumers about what they can do to prevent infections (see [Resources](#)). The Australian Commission on Safety and Quality in Health Care (the Commission) has published [Top Tips for Safe Health Care](#), which supports consumers, their families and carers by providing information about medicines and care in hospital to assist when they are speaking with their doctor and other health professionals. Encouraging the involvement of parents, families and carers in the process of antimicrobial prescribing can better support the individual patient to ask questions and better understand the implications of their medicines.

### Consumers at transitions of care

At transitions of care – such as transfers between wards in hospital, or from hospital to the community – the consumer needs to have the information to support them to appropriately manage their medicines, including continuing and ceasing treatment, as directed by the clinical workforce. They should also be empowered to pass on information to other clinicians in the community, such as their general practitioner.

### Residents in aged care homes

Consumers in aged care homes include the residents and their families. As in other settings, consumers' understanding about AMR varies. Consumers often do not recognise that organisms become resistant and can transfer to another person, even if that person has never received the antimicrobial. It is important to educate consumers about the transfer of resistant organisms between people in aged care homes.

Aged care homes can raise awareness of AMR and appropriate antimicrobial use, and involve consumers in decision-making about their care, including the need for a regular medication review.

### End-of-life antimicrobial prescribing

The decision on whether to prescribe antimicrobials to patients at the end of life can be challenging (see Section 10.3.2 in Chapter 10: '[Role of prescribers in antimicrobial stewardship](#)'). The possible benefits versus harms of antimicrobial therapy, as well as the beliefs and expectations of the patient and their family, may be unclear. Similarly to other end-of-life treatment choices, the decision to prescribe an antimicrobial should be shared between the clinician, patient, carer and family, and should

be based on how the treatment will affect the patient's quality of life – especially in the final stages. Discussions and decision-making about antimicrobial use can be considered as part of advance care planning processes.

### Consumer engagement in system-wide AMS

Consumer engagement in system-wide AMS can be achieved through a range of activities, which might include surveying consumers about AMS experiences, working with consumer organisations to consult on and analyse AMS issues, undertaking focus groups or consumer interviews to explore strategies for improving antimicrobial use, and encouraging management and consumer representation on AMS committees.

In health service organisations, there is an opportunity to include consumers in decisions about antimicrobials by having consumer representation on the organisation's AMS committee. Involving consumers in the governance of the health service organisation through an AMS committee will help the health service to meet the aim of the NSQHS [Partnering with Consumers Standard](#), which is to ensure that consumers are partners in the planning, design, delivery and evaluation of healthcare systems and services.

## 7.4 Consumer resources and tools

Consumer resources and information should be available to meet consumer needs along the continuum of care. For the consumer, the desire for an antimicrobial is often decided before going to the doctor<sup>11</sup>; therefore, the timing of messages about AMR is important. This issue is also important in terms of the resources and time available to clinicians. If high-quality information is available before a consultation, it can help to frame the discussions between the clinician and the consumer during the consultation, and can be reinforced after the consultation.

### 7.4.1 Before the consultation

Consumer information should give the consumer greater confidence in knowing when to seek a clinician's advice, asking questions of their clinician, and trusting the answers and advice provided. To address the reasons that consumers request or expect a prescription for an antimicrobial,

further information is needed on symptoms and their seriousness, when to take a child to a doctor, the management of symptoms, and treatments other than antimicrobials.<sup>7</sup> Studies indicate that consumers generally seek information from multiple sources before making a decision.<sup>7</sup> These sources include social networks (family, friends and childcare workers), television, newspapers, websites, books and leaflets, as well as information from clinicians such as doctors and pharmacists.<sup>7,26</sup>

Resources such as posters and videos in waiting rooms on topics such as immunisation, hand hygiene and AMR can raise awareness and prepare consumers before a consultation. The [NPS MedicineWise website](#) and the [Better Health Channel](#) have a wide range of information available for consumers, and the [General Practitioner Antimicrobial Stewardship Programme Study](#) has also developed a range of resources for practitioners and consumers. The Commission's [Question Builder](#) helps consumers think about the questions they want to ask their doctor before an appointment.

Education on AMR can start in schools, including information about bacteria, antibacterials, hygiene (hand and respiratory) and vaccinations. Examples of school education programs are [e-Bug](#) in Europe and [Do Bugs Need Drugs?](#) in Canada.

## 7.4.2 During the consultation

During the consultation, the consumer and their clinician should discuss the treatment options available, and the consumer's expectations and beliefs before deciding whether antimicrobials are an appropriate treatment option. Information such as the likely duration and course of symptoms of the illness, the period of infectivity and which conditions require antimicrobials are important components of the discussion that can help the consumer understand when antimicrobials may or may not be beneficial.

### Shared decision making

Shared decision making can be an effective strategy for engaging with consumers and reducing the overuse of antimicrobials.<sup>27-29</sup> Most consumers would like to be more actively involved in making healthcare decisions. However, low levels of individual health literacy may affect their ability to effectively exercise choice when making such decisions.<sup>22</sup> Sharing decisions with consumers supports them to be partners in their care to the extent that they choose or are able to participate.

Shared decision making occurs when a clinician and a consumer jointly make a decision about health care after discussing the different options for care, the likely benefits and harms of each option, and the consumer's values, preferences and circumstances.<sup>30</sup> It can be helpful when there is more than one reasonable treatment option, when no option has a clear advantage, and when the consumer has different views from the clinician on the benefits and harms. It provides an opportunity for consumers to partner with clinicians to make more informed decisions.<sup>29</sup>

Using a communication model for shared decision making within a consultation guides a two-way information exchange. This may be implemented using a three-step model<sup>31</sup>:

1. Introduce choice
2. Describe options, often by integrating the use of consumer decision support
3. Help the consumer explore preferences and make decisions.

Questions that clinicians can use to guide shared decision making are listed in Box 7.3.

The Commission, in collaboration with the Royal Australian College of General Practitioners (RACGP), has produced an online module for clinicians on shared decision making and risk communication.<sup>32</sup> The module, *Helping Patients Make Informed Decisions: Communicating risks and benefits*, is available through the Commission's website.<sup>33</sup> Versions of the online module will be developed for specialist colleges.<sup>33</sup>

### Box 7.3: Five questions that clinicians can use with consumers to guide shared decision making

- What will happen if we watch and wait?
- What are your test or treatment options?
- What are the benefits and harms of each option?
- How do the benefits and harms weigh up for you?
- Do you have enough information to make a choice?

Source: Hoffmann et al.<sup>30</sup>

The process may include the use of decision aid tools, although the use of these alone does not equate to shared decision making.<sup>30</sup> Patient decision aids on antimicrobial use, including for sore throat, acute bronchitis and middle ear infection in children, have been developed for use in the Australian primary care setting.<sup>34</sup>

The Choosing Wisely Australia program is led by Australia's medical colleges and professional societies, and facilitated by NPS MedicineWise. The program encourages clinicians and consumers to have a conversation about what care is needed. The medical colleges and societies have developed recommendations, based on the best available evidence, about the tests, treatments and procedures that clinicians and consumers should question. A number of those recommendations refer to the appropriate use of antibiotics.

### **Tools and techniques for engaging the consumer**

A number of resources are available to assist prescribers in engaging consumers.

#### **Action plan: respiratory tract infections**

General practitioners can use an action plan to help consumers to self-manage coughs and colds, and avoid antimicrobials. The NPS MedicineWise action plan for respiratory tract infections (Figure 7.1) helps general practitioners to establish patients' beliefs, engage them in discussion about the benefits and harms of antibiotic therapy, and outline a symptomatic management plan.

#### **Online commentary**

Online commentary is a technique whereby clinicians describe their clinical findings to the patient as they perform the physical examination. The commentary can include simple observations during the examination while conveying to patients what the likely diagnosis and treatment plan will be. An example of this is rejecting the need for antibiotic treatment in favour of symptomatic, non-prescription medicines. A 'problem' commentary is strongly related to inappropriate prescribing compared with a 'no problem' commentary, and makes it more likely that parents will question the treatment plan.<sup>35,36</sup>

If clinicians offer specific, positively formulated treatment plans, it is more likely that parents will accept the advice and follow recommendations. Similarly, recommendations against a treatment are less likely to be problematic.<sup>37</sup>

### **7.4.3 After the consultation**

If the decision has been made to prescribe antimicrobials, the consumer should be given information about how to take the medicine and for how long, the expected benefits of taking the medicine, possible side effects of the medicine, and what to do if they are not getting better or are getting worse.

#### **Delayed antimicrobials strategies**

Strategies that delay the use of antimicrobials for upper respiratory tract infections can reduce antimicrobial use without adversely affecting clinical outcomes.<sup>38</sup> One such strategy is a delayed prescription. This involves offering consumers a prescription to be used at a later time if symptoms do not improve or get worse. Appropriate information should be given to the consumer so that they understand if and when antimicrobials should be started, or if it is appropriate to return to the clinician.<sup>38-40</sup> For example, What Every parent should know about coughs, colds, earaches and sore throats is a resource that provides information for parents about the management of respiratory tract infections in children, designed to be used in primary care consultations.

#### **Infection prevention and control in the home and elsewhere**

Preventing the spread of infections reduces the need for antimicrobials<sup>41</sup> and reduces the likelihood of resistance developing.<sup>25</sup> Infections can be prevented by immunisation, safe food preparation, hand hygiene, and using antimicrobials only when necessary and for the appropriate duration. Consumers should be informed about how they can avoid transmitting their infection to others – for example, handwashing can reduce the spread of respiratory viruses.<sup>42</sup>

### **7.4.4 Reaching and engaging consumers nationally**

In Australia, consumer education has been a key component of the approach taken by NPS MedicineWise since the first Common Colds Need Common Sense campaign was launched in 2000. This campaign was repeated annually during the winter months until 2009.

In 2012, NPS MedicineWise launched a five-year educational program for clinicians and consumers, which included a mass audience campaign to raise awareness of, and combat, AMR. The campaign

**Figure 7.1:** NPS MedicineWise action plan for respiratory tract infections

Name: \_\_\_\_\_ **ACTION PLAN**

## RESPIRATORY TRACT INFECTIONS

### Manage your symptoms

You have an infection of the ear, nose, throat, sinuses and/or chest, most likely caused by a virus. Antibiotics don't work against viral infections. Antibiotics won't make you feel better or recover faster.

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#### What is a respiratory tract infection?

A respiratory tract infection is an infection anywhere in the respiratory tract (ie, the nose, throat and lungs). Your respiratory tract infection is most likely caused by a virus; antibiotics kill bacteria, not viruses.

#### How can I treat a viral respiratory tract infection?

Most coughs, earaches, sinus congestion problems and sore throats get better without antibiotics. Colds rarely cause serious harm, but they can still make you feel unwell. The good news is that colds usually get better in 7 to 10 days, although a cough can last up to 3 weeks and there are things you can do to feel better.

#### Contact your doctor

Contact your doctor if you don't begin to feel better after a few days, your symptoms worsen, new symptoms develop or you get side effects.

A respiratory tract infection can make an ongoing medical condition — such as asthma or diabetes — worse. Contact your doctor if this happens.

#### Additional advice and actions

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

#### What can you do?

##### Rest

- Allow your immune system to fight off the virus.

##### Use home remedies

- Gargle warm salty water.
- Suck on an ice cube or lozenge as needed.
- Have a soothing drink (eg, honey & lemon).
- Apply moisturiser to soothe dry skin of the nose.
- Inhale steam from the shower. Don't inhale steam from a bowl of hot water because of the risk of burns.

##### Use symptom-relieving medicines

- Use a decongestant nasal spray or drops.\*
- Use saline nasal spray or drops.
- Take a decongestant tablet or mixture.\*
- Take a non-prescription pain reliever medicine.

\*Should not be given to children < 6 years of age & should only be given to children aged 6 to 11 years on the advice of a doctor, pharmacist or nurse practitioner.

##### Prevent the spread of infection


- Cover your mouth when sneezing or coughing.
- Clean your hands after blowing your nose.

#### For more information

Visit the NPS MedicineWise website:  
[www.nps.org.au/rtis](http://www.nps.org.au/rtis)

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was timed to coincide with the start of winter, and focused on misconceptions about colds and flu in the context of antimicrobial use. The primary target audience for the original campaign was mothers with children under 15 years old. The two key components for the strategy were making people aware of the problem and educating them about it, and empowering them to be part of social media activities. The campaign has contributed to improving consumer understanding that bacteria can become resistant to antimicrobials. By 2014, 74% of consumers understood that taking antimicrobials when they are not needed means that the antimicrobials are less likely to work in the future for themselves and others.<sup>2</sup>

### 7.4.5 Antibiotic Awareness Week

For some years, antibiotic awareness campaigns have been conducted in a number of countries each November, including the United States, Canada and some European countries. In Australia, Antibiotic Awareness Week has been observed nationally each November since 2012. Aligning the Australian campaign with international efforts demonstrates the global significance of AMR.

Antibiotic Awareness Week in Australia is jointly organised by the Commission and NPS MedicineWise, and is supported by several Australian Government departments, states and territories, and professional organisations. All health service organisations are encouraged to participate in Antibiotic Awareness Week.

The campaign targets both consumers and clinicians, as well as prescribers in animal health and agriculture, through collaboration between key government departments. Participating in activities during Antibiotic Awareness Week can help focus clinicians' awareness on local patterns of AMR and antimicrobial use, enable the promotion and uptake of local AMS strategies and resources, and highlight progress and opportunities for ongoing AMS activities.

Raising awareness and educating consumers about AMR aims to empower them to be part of the solution. Consumers can commit to changing behaviour by making a pledge on social media to use antibiotics appropriately (Box 7.4).

#### Box 7.4: The Antibiotic Resistance Fighter pledge

1. I will not ask for antibiotics for colds and the flu as they have no effect on viruses.
2. I understand that antibiotics will not help me recover faster from a viral infection.
3. I will only take antibiotics in the way they have been prescribed.
4. I understand that it is possible to pass on antibiotic-resistant bacteria to others.
5. I will make a greater effort to prevent the spread of germs by practising good hygiene.

# Resources

## General consumer information

- [NPS MedicineWise website](#)
- Australian Commission on Safety and Quality in Health Care: [AURA](#)
- [Better Health Channel](#)
- [General Practitioner Antimicrobial Stewardship Programme Study](#)

## School resources and programs

- Europe: [e-Bug](#)
- Canada: [Do Bugs Need Drugs?](#)

## Resources and information for primary health care

- [Helping Patients Make Informed Decisions: Communicating risks and benefits](#) (produced by the Commission in collaboration with the RACGP, Royal Australian and New Zealand College of Obstetricians and Gynaecologists, Australian and New Zealand College of Anaesthetists and Royal Australasian College of Surgeons, available on the Commission's website)
- Australian Commission on Safety and Quality in Health Care: [patient decision aids](#) on antibiotic use, including for sore throat, acute bronchitis and middle ear infections
- [Choosing Wisely Australia](#) program and [recommendations](#) about the tests, treatments and procedures that healthcare providers and consumers should question
- [Choosing Wisely Australia video for consumers](#) about antibiotics losing their power through misuse and overuse

- NPS MedicineWise
  - [action plan for symptom management for respiratory tract infections](#)
  - [Antibiotic resistance: the facts](#)
  - [Antibiotics, explained](#)
  - [Antibiotics, antibiotic resistance and childhood respiratory tract infections](#)
  - [Consumer pledge to help prevent antibiotic resistance](#)
  - [What Every Parent Should Know About Coughs, Colds, Earaches and Sore Throats](#)
  - [Translated information about antimicrobials for culturally and linguistically diverse communities](#)

## Resources and information for hospital inpatients

- NSW Clinical Excellence Commission: [information about antibiotic therapy for inpatients](#)
- NSW Clinical Excellence Commission and Sydney Children's Hospitals Network: [Making the Switch: Changing from intravenous to oral antibiotics](#) parent information leaflet
- The Royal Melbourne Hospital: patient safety campaign [What Matters to You – Matters to Us](#)

# References

1. Australian Commission on Safety and Quality in Health Care. Antimicrobial Stewardship Clinical Care Standard. Sydney: ACSQHC; 2014.
2. Gaarslev C, Yee M, Chan G, Fletcher-Lartey S, Khan R. A mixed methods study to understand patient expectations for antibiotics for an upper respiratory tract infection. *Antimicrob Resist Infect Control* 2016;5(1):39.
3. McNulty CAM, Nichols T, French DP, Joshi P, Butler CC. Expectations for consultations and antibiotics for respiratory tract infection in primary care: the RTI clinical iceberg. *Br J Gen Pract* 2013;63(612):429–36.
4. André M, Vernby A, Berg J, Lundborg CS. A survey of public knowledge and awareness related to antibiotic use and resistance in Sweden. *J Antimicrob Chemother* 2010;65.
5. McNulty CAM, Boyle P, Nichols T, Clappison P, Davey P. The public's attitudes to and compliance with antibiotics. *J Antimicrob Chemother* 2007;60(Suppl 1):63–8.
6. Rousounidis A, Papaevangelou V, Hadjipanayis A, Panagakou S, Theodoridou M, Syrogiannopoulos G, et al. Descriptive study on parents' knowledge, attitudes and practices on antibiotic use and misuse in children with upper respiratory tract infections in Cyprus. *Int J Environ Res Public Health* 2011;8(8):3246–62.
7. Ingram J, Cabral C, Hay AD, Lucas PJ, Horwood J, Target team. Parents' information needs, self-efficacy and influences on consulting for childhood respiratory tract infections: a qualitative study. *BMC Family Practice* 2013;14:106.
8. Davey P, Pagliari C, Hayes A. The patient's role in the spread and control of bacterial resistance to antibiotics. *Clin Microbiol Infect* 2002;8(Suppl 2):43–68.
9. Tahtinen PA, Boonacker CWB, Rovers MM, Schilder AGM, Huovinen P, Liuksila P-R, et al. Parental experiences and attitudes regarding the management of acute otitis media: a comparative questionnaire between Finland and the Netherlands. *Fam Pract* 2009;26(6):488–92.
10. Good Business. Exploring the consumer perspective on antimicrobial resistance. London: Wellcome Trust; 2015 [updated 2017 Sep 7; cited 2017 Sep 27].
11. Hansen MP, Howlett J, Del Mar C, Hoffmann TC. Parents' beliefs and knowledge about the management of acute otitis media: a qualitative study. *BMC Family Practice* 2015;16(1):82.
12. Hansen MP, Hoffmann TC, McCullough AR, van Driel ML, Del Mar CB. Antibiotic resistance: what are the opportunities for primary care in alleviating the crisis? *Front Pub Health* 2015;3:35.
13. Sung L, Arroll J, Arroll B, Goodyear-Smith F, Kerse N, Norris P. Antibiotic use for upper respiratory tract infections before and after a education campaign as reported by general practitioners in New Zealand. *N Z Med J* 2006;119(1233):U1956.
14. Stocks NP, Fahey T. The treatment of acute bronchitis by general practitioners in the UK: results of a cross sectional postal survey. *Aust Fam Physician* 2002;31(7):676–9.
15. Butler CC, Rollnick S, Pill R, Maggs-Rapport F, Stott N. Understanding the culture of prescribing: qualitative study of general practitioners' and patients' perceptions of antibiotics for sore throats. *BMJ* 1998;317(7159):637–42.
16. Brookes-Howell L, Elwyn G, Hood K, Wood F, Cooper L, Goossens H, et al. 'The body gets used to them': patients' interpretations of antibiotic resistance and the implications for containment strategies. *J Gen Intern Med* 2011;27(7):766–72.
17. Brooks L, Shaw A, Sharp D, Hay AD. Towards a better understanding of patients' perspectives of antibiotic resistance and MRSA: a qualitative study. *Fam Pract* 2008;25(5):341–8.
18. Hawkings NJ, Wood F, Butler CC. Public attitudes towards bacterial resistance: a qualitative study. *J Antimicrob Chemother* 2007;59(6):1155–60.
19. McCullough AR, Parekh S, Rathbone J, Del Mar CB, Hoffman TC. A systematic review of the public's knowledge and beliefs about antibiotic resistance. *J Antimicrob Chemother* 2015;71(1):27–33.
20. Moore M, Little P, Rumsby K, Kelly J, Watson L, Warner G, et al. Effect of antibiotic prescribing strategies and an information leaflet on longer-term reconsultation for acute lower respiratory tract infection. *Br J Gen Pract* 2009;59(567):728–34.
21. Linder JA, Singer DE. Desire for antibiotics and antibiotic prescribing for adults with upper respiratory tract infections. *J Gen Intern Med* 2003;18(10):795–801.



22. Australian Bureau of Statistics. Health literacy. Canberra: ABS; 2008. (Cat. No. 4102.0; Australian Social Trends, June 2009.)
23. Australian Commission on Safety and Quality in Health Care. Health literacy: taking action to improve safety and quality. Sydney: ACSQHC; 2014.
24. Holmes AH, Moore LSP, Sundsfjord A, Steinbakk M, Regmi S, Karkey A, et al. Understanding the mechanisms and drivers of antimicrobial resistance. *Lancet* 2016;387(10014):176–87.
25. Collignon P. Antibiotic resistance: are we all doomed? *Intern Med J* 2015;45(11):1109–15.
26. Panagakou SG, Spyridis N, Papaevangelou V, Theodoridou KM, Goutziana GP, Theodoridou MN, et al. Antibiotic use for upper respiratory tract infections in children: a cross-sectional survey of knowledge, attitudes, and practices (KAP) of parents in Greece. *BMC Pediatr* 2011;11:60.
27. Légaré F, Labrecque M, Cauchon M, Castel J, Turcotte S, Grimshaw J. Training family physicians in shared decision-making to reduce the overuse of antibiotics in acute respiratory infections: a cluster randomized trial. *Can Med Assoc J* 2012;184(13):E726–34.
28. Coxeter P, Del Mar C.B, McGregor L, Beller EM, Hoffmann TC. Interventions to facilitate shared decision making to address antibiotic use for acute respiratory infections in primary care. *Cochrane Database Syst Rev* 2015;12(11).
29. Stacey D, Legare F, Col NF, Bennett CL, Barry MJ, Eden KB, et al. Decision aids for people facing health treatment or screening decisions. *Cochrane Database Syst Rev* 2014;(4):CD001431.
30. Hoffmann TC, Légaré F, Simmons MB, McNamara K, McCaffery K, Trevena LJ, et al. Shared decision making: what do clinicians need to know and why should they bother? *Med J Aust* 2014;201(1):35–9.
31. Elwyn G, Frosch D, Thomson R, Joseph-Williams N, Lloyd A, Kinnersley P, et al. Shared decision making: a model for clinical practice. *J Gen Intern Med* 2012;27(10):1361–7.
32. Australian Commission on Safety and Quality in Health Care. Shared decision making and risk communication. Sydney: ACSQHC; 2017 [cited 2017 Sep 26].
33. Australian Commission on Safety and Quality in Health Care. Learning Seat. Helping patients make informed decisions: communicating risks and benefits. Sydney: ACSQHC; 2017 [cited 2018 Jan 10].
34. Australian Commission on Safety and Quality in Health Care. Antibiotic use patient decision aids. Sydney: ACSQHC; 2016 [cited 2017 Sep 26].
35. Heritage J, Elliott MN, Stivers T, Richardson A, Mangione-Smith R. Reducing inappropriate antibiotics prescribing: the role of online commentary on physical examination findings. *Patient Educ Couns* 2010;81(1):119–25.
36. Mangione-Smith R, Stivers T, Elliott M, McDonald L, Heritage J. Online commentary during the physical examination: a communication tool for avoiding inappropriate antibiotic prescribing? *Soc Sci Med* 2003;56:313–20.
37. Stivers T. Non-antibiotic treatment recommendations: delivery formats and implications for parent resistance. *Soc Sci Med* 2005;60(5):949–64.
38. Spurling GK, Del Mar CB, Dooley L, Foxlee R, Farley R. Delayed antibiotics for respiratory infections. *Cochrane Database Syst Rev* 2013;Apr 30(4):CD004417.
39. Little P, Moore M, Kelly J, Williamson I, Leydon G, McDermott L, et al. Delayed antibiotic prescribing strategies for respiratory tract infections in primary care: pragmatic, factorial, randomised controlled trial. *BMJ* 2014;348:g1606.
40. Worrall G, Kettle A, Graham W, Hutchinson J. Postdated versus usual delayed antibiotic prescriptions in primary care: reduction in antibiotic use for acute respiratory infections? *Can Fam Physician* 2010;56(10):1032–6.
41. Dar OA, Hasan R, Schlundt J, Harbarth S, Caleo G, Dar FK, et al. Exploring the evidence base for national and regional policy interventions to combat resistance. *Lancet* 2016;387(10015):582–95.
42. Jefferson T, Del Mar CB, Dooley L, Ferroni E, Al-Ansary LA, Bawazeer GA, et al. Physical interventions to interrupt or reduce the spread of respiratory viruses. *Cochrane Database Syst Rev* 2011;Jul 6(7):CD006207.

