

Options for implementation of antimicrobial stewardship (AMS) in different facilities

This document provides guidance for health service organisations to support the implementation of antimicrobial stewardship (AMS) programs in different contexts. The guidance should be considered in the context of local requirements and policies.

Program elements with relevant National Safety and Quality Health Service (NSQHS) Standards Actions	Health service organisation (e.g. Local Hospital Network/District or private hospital organisation)*	Principal Referral Hospital, Acute Group A Hospital, public or private (e.g. large urban hospital or tertiary facility)	Acute Group B Hospital, Acute Group C Hospital, public or private (e.g. rural/district hospital)	Acute Group D Hospital/multi-purpose service (MPS) (e.g. small hospital/MPS, hospital with less than 50 beds)	Same Day Hospital, public or private (e.g. day surgery/procedure unit or services)	Community Health service organisation [#]
Executive leadership	Network/district/management group executive sponsorship and support for AMS program.	Local executive sponsorship and support for AMS program.	Local executive sponsorship and support for AMS program.	Local executive sponsorship and support for AMS program.	Owner/management support for AMS program.	Local executive sponsorships and support for AMS program.

Program elements with relevant National Safety and Quality Health Service (NSQHS) Standards Actions	Health service organisation (e.g. Local Hospital Network/District or private hospital organisation)*	Principal Referral Hospital, Acute Group A Hospital, public or private (e.g. large urban hospital or tertiary facility)	Acute Group B Hospital, Acute Group C Hospital, public or private (e.g. rural/district hospital)	Acute Group D Hospital/multi-purpose service (MPS) (e.g. small hospital/MPS, hospital with less than 50 beds)	Same Day Hospital, public or private (e.g. day surgery/procedure unit or services)	Community Health service organisation [#]
Antimicrobial policy with defined components (action 3.18a)	Outlines scope of program; endorsed by network/district/management group executive. Roles and responsibilities are defined.	<p>Outlines scope of program; endorsed by senior executive/management group. Roles and responsibilities are defined.</p> <p>May be developed and implemented locally or as part of higher-level process</p>	<p>Local policy that outlines scope of program.</p> <p>Preferably determined by a network/district-wide approach to outline scope of program.</p>	<p>Local policy that outlines scope of program.</p> <p>Preferably determined by a network/district-wide approach to outline scope of program.</p>	<p>Local policy that outlines scope of program.</p> <p>Surgical prophylaxis policy specifically defined.</p> <p>Preferably determined/developed/initiated and overseen by broader organisational management.</p>	<p>Local policy that outlines scope of program, restriction policy and specifies that prescribers must follow current evidence-based Australian therapeutic guidelines.</p> <p>Elastomeric pump policy specifically defined.</p> <p>Preferably determined/developed/initiated and overseen by broader organisational management.</p> <p>Facility may be included in the network AMS policy.</p>

Program elements with relevant National Safety and Quality Health Service (NSQHS) Standards Actions	Health service organisation (e.g. Local Hospital Network/District or private hospital organisation)*	Principal Referral Hospital, Acute Group A Hospital, public or private (e.g. large urban hospital or tertiary facility)	Acute Group B Hospital, Acute Group C Hospital, public or private (e.g. rural/district hospital)	Acute Group D Hospital/multi-purpose service (MPS) (e.g. small hospital/MPS, hospital with less than 50 beds)	Same Day Hospital, public or private (e.g. day surgery/procedure unit or services)	Community Health service organisation [#]
Governance arrangements, structure and lines of communication (action 3.19d)	Director of AMS program (e.g., ID/Microbiology physician or specialist pharmacist) who would chair a district AMS committee comprising of: <ul style="list-style-type: none"> • Executive • Clinical Governance • Pharmacy • Infectious diseases • Medical microbiologist • Infection control • Clinicians from key departments i.e. intensive care • Consumer representative • Representative from each facility involved 	Director of AMS program would chair a local AMS committee/working group comprising of: <ul style="list-style-type: none"> • Executive • Clinical Governance • Pharmacy • Infectious diseases • Medical microbiologist • Infection control • Consumer representative • Representative from each facility involved May link to network AMS committee.	Clinician with AMS responsibility from: <ul style="list-style-type: none"> • Pharmacy • Infectious diseases • Medical microbiologist • Infection control • Nursing May link to network AMS committee, drug and therapeutics or medication safety group.	Facility manager May coordinate input from local or network clinician from: <ul style="list-style-type: none"> • Pharmacy • Infectious diseases • Medical microbiologist May link to network AMS committee, drug and therapeutics or medication safety group.	Facility manager May coordinate input from local or network clinician from: <ul style="list-style-type: none"> • Pharmacy • Infectious diseases • Medical microbiologist 	Facility manager May coordinate input from local or network clinician from: <ul style="list-style-type: none"> • Pharmacy • Infectious diseases • Medical microbiologist May link to network AMS committee or sector drug and therapeutics / medication safety group.
	Links to committees responsible for drugs and therapeutics and infection prevention and control.					
	Private facilities consider management group and/or Medical Advisory Committee.					

Program elements with relevant National Safety and Quality Health Service (NSQHS) Standards Actions	Health service organisation (e.g. Local Hospital Network/District or private hospital organisation)*	Principal Referral Hospital, Acute Group A Hospital, public or private (e.g. large urban hospital or tertiary facility)	Acute Group B Hospital, Acute Group C Hospital, public or private (e.g. rural/district hospital)	Acute Group D Hospital/multi-purpose service (MPS) (e.g. small hospital/MPS, hospital with less than 50 beds)	Same Day Hospital, public or private (e.g. day surgery/procedure unit or services)	Community Health service organisation [#]
AMS forms part of the service's quality improvement and patient safety plan.						
AMS team	Not Applicable.	<p>Multidisciplinary team with dedicated time for AMS from:</p> <ul style="list-style-type: none"> ● Pharmacy ● Infectious diseases ● Medical microbiologist ● Infection control ● Nursing <p>Any of the above may be appointed as Director of AMS program.</p>	<p>Multidisciplinary team with dedicated time for AMS from:</p> <ul style="list-style-type: none"> ● Pharmacy ● Infectious diseases ● Medical microbiologist ● Infection control ● Nursing <p>The team may be on site or available externally as a formalised arrangement.</p>	<p>Multidisciplinary team with dedicated time for AMS from:</p> <ul style="list-style-type: none"> ● Facility manager ● Pharmacy ● Nursing <p>External support may be available from</p> <ul style="list-style-type: none"> ● Infectious diseases ● Medical microbiologist ● Infection control <p>The team may be on site or available externally as a formalised arrangement.</p>	<p>Multidisciplinary team with dedicated time for AMS from:</p> <ul style="list-style-type: none"> ● Facility manager ● Pharmacy ● Nursing <p>External support may be available from</p> <ul style="list-style-type: none"> ● Infectious diseases ● Medical microbiologist ● Infection control <p>The team may be on site or available externally as a formalised arrangement.</p>	<p>Multidisciplinary team with dedicated time for AMS from:</p> <ul style="list-style-type: none"> ● Facility manager ● Pharmacy ● Nursing <p>External support may be available from</p> <ul style="list-style-type: none"> ● Infectious diseases ● Medical microbiologist ● Infection control <p>The team may be on site or available externally as a formalised arrangement.</p>

Program elements with relevant National Safety and Quality Health Service (NSQHS) Standards Actions	Health service organisation (e.g. Local Hospital Network/District or private hospital organisation)*	Principal Referral Hospital, Acute Group A Hospital, public or private (e.g. large urban hospital or tertiary facility)	Acute Group B Hospital, Acute Group C Hospital, public or private (e.g. rural/district hospital)	Acute Group D Hospital/multi-purpose service (MPS) (e.g. small hospital/MPS, hospital with less than 50 beds)	Same Day Hospital, public or private (e.g. day surgery/procedure unit or services)	Community Health service organisation [#]
<p>Clinical workforce prescribing antimicrobials have access to endorsed Therapeutic Guidelines and resources (action 3.18b)</p>	<p>Ensure prescribing clinicians have recommended guidelines readily accessible for use.</p>					
<p>Monitoring of antimicrobial usage (volume and appropriateness) and resistance (action 3.19a and 3.19b)</p>	<p>Monitoring may be aggregated in a network/district report.</p>	<p>Monitoring may include:</p> <ul style="list-style-type: none"> Point prevalence survey methodology Usage analysis and contribution of data to state-wide or national usage program Microbiology Service –resistance measurement Cost of antimicrobials. 	<p>Monitoring may include:</p> <ul style="list-style-type: none"> Point prevalence survey methodology Usage analysis and contribution of data to state-wide or national usage program Cost of antimicrobials. 	<p>Monitoring may include:</p> <ul style="list-style-type: none"> Point prevalence survey conducted over longer period to enable a valid sample – e.g. 1 month Limited antimicrobial usage analysis – e.g. 3rd and 4th generation cephalosporins and fluoroquinolones, gentamicin. 	<p>Monitoring may include:</p> <ul style="list-style-type: none"> Audit surgical antibiotic prophylaxis. 	<p>Monitoring may include:</p> <ul style="list-style-type: none"> Audit number of antimicrobials used per patient Audit hospital in the home (HITH) antibiotic elastomeric pumps.

Program elements with relevant National Safety and Quality Health Service (NSQHS) Standards Actions	Health service organisation (e.g. Local Hospital Network/District or private hospital organisation)*	Principal Referral Hospital, Acute Group A Hospital, public or private (e.g. large urban hospital or tertiary facility)	Acute Group B Hospital, Acute Group C Hospital, public or private (e.g. rural/district hospital)	Acute Group D Hospital/multi-purpose service (MPS) (e.g. small hospital/MPS, hospital with less than 50 beds)	Same Day Hospital, public or private (e.g. day surgery/procedure unit or services)	Community Health service organisation [#]
<p>Action to improve the effectiveness of antimicrobial stewardship (action 3.19c)</p>	<p>In addition to monitoring usage and resistance measures actions may include:</p> <ul style="list-style-type: none"> • AMS ward rounds <ol style="list-style-type: none"> i. Clinical liaison in selected units / services ii. Feedback of audit results to prescribers • Targeted quality improvement audits • Regular review of data and development of action plan to improve • Prescriber education and feedback (see below) • Consumer engagement (see below). 					
<p>Antimicrobial formulary, imprest controls and systems to manage restricted antimicrobials (action 3.18c)</p>	<p>May have network/district wide formulary.</p>	<p>Formulary in place with Electronic management systems.</p>	<p>Formulary in place. May have electronic management systems.</p>	<p>Formulary in place.</p>	<p>Formulary in place.</p>	<p>Formulary in place.</p>
<p>Infectious diseases physician consultation</p>	<p>Appoint and support either an infectious diseases physician or medical microbiologist or specialist AMS/ID pharmacist in a capacity to oversee AMS program.</p>	<p>Onsite recommended or externally through formalised arrangements.</p>	<p>Available externally through formalised arrangements. Options for service include onsite visits, telehealth linkage or Skype® (unless onsite service available).</p>	<p>Available externally through formalised arrangements. Options for service include onsite visits, telehealth linkage or Skype® (unless onsite service available)</p>	<p>May not be available or appropriate for context.</p>	<p>Available externally through formalised arrangements. Options for service include onsite visits, telehealth linkage or Skype® (unless onsite service available)</p>

Program elements with relevant National Safety and Quality Health Service (NSQHS) Standards Actions	Health service organisation (e.g. Local Hospital Network/District or private hospital organisation)*	Principal Referral Hospital, Acute Group A Hospital, public or private (e.g. large urban hospital or tertiary facility)	Acute Group B Hospital, Acute Group C Hospital, public or private (e.g. rural/district hospital)	Acute Group D Hospital/multi-purpose service (MPS) (e.g. small hospital/MPS, hospital with less than 50 beds)	Same Day Hospital, public or private (e.g. day surgery/procedure unit or services)	Community Health service organisation [#]
<p>Medical microbiologist consultation and provision of medical microbiology services that support AMS</p>		<p>Available via agreed pathology service.</p> <p>Periodically provide cumulative antibiotic susceptibility measurement (antibiogram) and interpretation.</p>	<p>Available via agreed pathology service.</p> <p>Periodically provide cumulative antibiotic susceptibility measurement (antibiogram) and interpretation.</p> <p>Options for consultation and support include telehealth, Skype[®].</p>	<p>Available via agreed pathology service.</p> <p>Options for consultation and support include telehealth, Skype[®].</p>	<p>Available via agreed pathology service.</p> <p>Options for consultation and support include telehealth, Skype[®].</p>	<p>Available via agreed pathology service.</p> <p>Options for consultation and support include telehealth, Skype[®].</p>
<p>Prescriber education and feedback (action 3.16.d)</p>	<p>Processes in place for regular education relevant to role and responsibility about antimicrobials, guidelines, and antimicrobial stewardship:</p> <ul style="list-style-type: none"> • Medical officers – including junior medical officers (i.e. intern orientation), registrars and specialists • General practitioners, visiting medical officers (VMOs) and staff specialists • Infection and prevention control nursing staff • Nurses in all facilities responsible for administration of antimicrobials • Rural nurses who take a role in imprest and pharmacy management • Pharmacists • Medical, nursing and pharmacy interns or graduates • General practitioner registrars or medical council representatives <p>Education can be provided in a variety of formats such as presentation at grand rounds or workshops. It may include the requirement for all new prescribers to complete the prescribing modules prepared by NPS MedicineWise and the Australian Commission on Safety and Quality in Health Care (available from https://learn.nps.org.au/).</p>					

Program elements with relevant National Safety and Quality Health Service (NSQHS) Standards Actions	Health service organisation (e.g. Local Hospital Network/District or private hospital organisation)*	Principal Referral Hospital, Acute Group A Hospital, public or private (e.g. large urban hospital or tertiary facility)	Acute Group B Hospital, Acute Group C Hospital, public or private (e.g. rural/district hospital)	Acute Group D Hospital/multi-purpose service (MPS) (e.g. small hospital/MPS, hospital with less than 50 beds)	Same Day Hospital, public or private (e.g. day surgery/procedure unit or services)	Community Health service organisation#
Consumer and patient education	Materials available to educate patients on antimicrobial resistance and use of antimicrobials. Activities may include dedicated events during Antibiotic Awareness Week. Organisations that produce AMS education material include: The Commission, NPS, state-based commission (e.g., CEC), WHO, CDC, NICE. Locally endorsed material may also be produced					

This table has been updated to reflect the 2021 NSQHS [Preventing and Controlling Infections Standard](#)

See resources for further information

- [Antimicrobial Stewardship in Australian Health Care 2018](#) (the AMS Book)
- [Antimicrobial Stewardship Clinical Care Standard](#)
- [NSQHS Standards Assessor Orientation Course](#)
- [Indicators to support Antimicrobials Stewardship programs](#)

* It is recognised that organisational structures may vary. For example, in some instances a hospital may be the peak governance body, rather than part of a local hospital network.

The [National Safety and Quality Primary and Community Healthcare Standards](#) may be applicable to community health service organisations. A specific resource is being developed to provide guidance to support the implementation of antimicrobial stewardship (AMS) programs to meet the requirements of these standards.

For further enquires contact AMS@safetyandquality.gov.au

