



SAMOA'S NATIONAL ACTION PLAN ON ANTIMICROBIAL RESISTANCE 2023 - 2028

MINISTRY OF HEALTH

MESSAGE FROM HON. MINISTER OF HEALTH



I am pleased to present Samoa's first ever National Action Plan on Antimicrobial Resistance 2023-2028.

Antimicrobial medicines are important resources that are used on a daily basis to treat infections. However, resistance to antimicrobial medicines has become a significant health priority globally. The increasing level of Samoa's population resistant to antimicrobial medicines was identified during the country situational analysis on antimicrobial resistance conducted in February 2016.

As the threat of antimicrobial resistance increases, there is a need to consider this at global, regional and national levels and acknowledge this as an imminent public health issue, calling for efforts at all levels to slow its development.

This National Action Plan on Antimicrobial Resistance represents the collective, expert views of stakeholders across the health and animal sectors on how best to combat antimicrobial resistance in Samoa. This Action Plan will also support global and regional efforts recognizing that no single country can manage the threat of antimicrobial resistance alone.

In addition, this Action Plan calls on all key stakeholders to support a collaborative effort to change those practices that have contributed to the development of resistance and implement new initiatives to minimize inappropriate use of antibiotics. It builds on the successful work that is already being done by integrating new and existing programmes into a cohesive national response.

The implementation of activities will take a staged approach over the life of the National Action Plan. It will involve many stakeholders and require a high level of cross sectoral cooperation at the local and national levels, as well as internationally. It is our hope that the broad range of professional bodies in both human and animal health as well as institutions that have helped develop this Action Plan will heed its call to action and actively look for opportunities to develop new, and strengthen existing partnerships to support the achievement of this Action Plan's activities and indicators.

I am confident this National Action Plan on Antimicrobial Resistance in Samoa for years 2023-2028 will help deliver an effective and sustainable response to antimicrobial resistance in Samoa. I encourage all stakeholders to work together to minimize antimicrobial resistance and ensure the continued widespread availability of effective antimicrobials that supports the delivery of effective, efficient, safe and quality healthcare services for Samoan people.

Ma le fa'aaloalo lava.



Hon. Valasi Luapitofanua To'ogamaga Selesele
MINISTER OF HEALTH

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The Ministry of Health as leading agency for Samoa's health sector would like to acknowledge with sincere gratitude and much appreciation the contributions made by our sector partners and stakeholders from both the public and private health sectors in the development of this Action Plan. These include:

1. National Health Service
2. Ministry of Agriculture and Fisheries
3. Scientific Research Organization of Samoa
4. Samoa Family Health Association
5. Food and Agriculture Organization of the United Nations
6. World Health Organization
7. Oceania University of Medicine
8. Samoa General Practitioners Association
9. Private Pharmacy (Niu Pharmacy)
10. National University of Samoa

We also thank the participants of various workshops conducted to develop this plan.

Last but not least, special thanks to the World Health Organization for their continuous assistance both financially and technically which highly contributed to the finalization of this plan.

ACRONYMS

AAW	Antimicrobial Awareness Week
AMR	Antimicrobial Resistance
AMS	Antimicrobial Stewardship
APS	Animal Protection Society
AST	Antimicrobial Susceptibility Testing
CDCC	Communicable Disease Control Committee
CME	Continuous Medical Education
DTC	Drug and Therapeutic Committee
EQA	External Quality Assurance
EUCAST	European Committee on Antimicrobial Resistance Surveillance Network
FAO	Food and Agriculture Organisation of the United Nations
GOS	Government of Samoa
ICC	Infection Control Committee
ICO	Infection Control Officer
IEC	Information Education Communication
ILP	Institutional Linkage Programme
IPC	Infection Prevention and Control
IQA	Internal Quality Assurance
LIMS	Laboratory Information Management System
MCIL	Ministry of Commerce Industry and Labour
MNRE	Ministry of Natural Resources
MOH	Ministry of Health
MRO	Multidrug Resistant Organisms
MRL	Maximum Residue Limits
MTIIH	Malietoa Tanumafili II Hospital
MWCSD	Ministry of Women Community and Social Development
NFVG	National Farm Vaccination Guidelines
NGO	Non-Governmental Organization
NKFS	National Kidney Foundation of Samoa
NUS	National University of Samoa
OUM	Oceania University of Medicine
PPE	Personal Protective Equipment
PPTC	Pacific Pathology Training Centre
QA	Quality Assurance
SFHA	Samoa Family Health Association
SOP	Standard Operating Procedure
SROS	Scientific Research Organization of Samoa
TOR	Terms of Reference
TTMH	Tupua Tamasese Mea'ole Hospital
UNDP	United Nations Development Programme
WHO	World Health Organisation
ESBL	Extended-Spectrum β -Lactamase

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Background

Introduction:

Antimicrobial resistance (AMR) is one of the biggest challenges facing global public health today, with incidence of resistance in each bacterial species varying greatly between and within countries. It is becoming increasingly difficult, and in some cases, impossible to treat infections caused by antibiotic-resistant bacteria. The levels of antibiotic resistance and the overall impact in Pacific people are unknown, and only a handful of published reports regarding emergence and prevalence of antimicrobial resistance are available.

Situational Analysis:

The full burden of antimicrobial resistance in Samoa is under-appreciated. A country situational analysis on AMR conducted in February 2016 together with updated laboratory data and research findings all highlight the increasing incidence of multidrug resistant organisms in Samoa. Laboratory data show considerable decreases in susceptibility in all clinically significant pathogens identified to the most commonly prescribed classes of antimicrobials. Susceptibility to ciprofloxacin, gentamicin, and to third generation cephalosporin decreased in all major pathogens tested. Furthermore, the popular superbug Methicillin Resistant *Staphylococcus aureus* (MRSA) continues to be isolated from all wards within the Tupua Tamasese Mea'ole Hospital and also from patients in the community. Monitoring the antimicrobial susceptibility of these pathogens is the best way to inform empiric treatment regimens and to target infection prevention and control practises. Considering that the health system in Samoa is already overwhelmed with the burden of non-communicable diseases, political support at the national level is essential to address the issues preventing the effective identification, reporting and monitoring of antimicrobial resistance in Samoa.

There is little known about the levels of AMR in livestock and the environment, but it may be a contributing factor to the overall levels of AMR in Samoa.

The Global Action Plan on Antimicrobial Resistance endorsed at the World Health Assembly in May 2015 urges all Member States to develop National Action Plans on AMR by May 2017. Samoa has made Antimicrobial Resistance a priority agenda for the Health Sector with the establishment of an AMR Committee as well as the development of National Antibiotic Guidelines. In 2015, Samoa celebrated the first Antibiotic Awareness Week with the slogan "Fa'aāoga with Love" involving many public figures from church communities and parliament. Awareness of AMR and the responsible use is increasing; however there is still a lot of work to be done. Samoa also re-affirmed its commitment to combating AMR through comprehensive nationwide awareness campaigns and the development of required documents to assist in advancing AMR agenda items, one of these documents is the National Action Plan on AMR. More recently, the Samoa Medical Association acknowledged and discussed the importance of AMR in their Annual Scientific Meeting with the theme "Combat Antimicrobial Resistance".

Addressing this global threat will require a multi-sectoral approach at the global, regional and national levels. The inclusion of all national stakeholders in the discussion and the finalisation of Samoa's National Action Plan on AMR is very important. This plan builds upon

a 2016 draft, and it is hoped that the endorsement of this revised and updated document will provide the much-needed momentum for implementing many of the AMR-related activities that have been postponed due to the Measles outbreak in 2019 and the subsequent COVID-19 pandemic. Guided by Framework for accelerating action to fight antimicrobial resistance in the Western Pacific Region which is endorsed by the Member States in the Western Pacific Region in 2019, we are optimistic that the identification of committed stakeholders locally and international partners like the World Health Organization (WHO) and its Collaborating Centres such as the PPTC and the University of Melbourne, Doherty Institute (COMBAT-AMR project), will provide the appropriate support for the successful implementation of this plan.

The National Action Plan on Antimicrobial Resistance 2023-2028 outlines important actions to increase awareness, strengthen surveillance, research and infection prevention and control, and optimize the use of antimicrobials to ensure that we continue to have effective treatment options for our future generations

GOVERNANCE FRAMEWORK

The implementation of the Samoa's National Action Plan on Antimicrobial Resistance for 2023-2028 will be the responsibility of the stand-alone National AMR Committee with the key driver being the Ministry of Health.

The National AMR committee will report directly to the Director General of Health; co-chairs will be the Deputy Director General of Public Health and the Deputy Director General of Hospital and Clinical Services.

National Antimicrobial Resistance Committee

Terms of Reference:

The TOR of the AMR committee is recommended to include:

- Purpose: Adapt a ONE health approach to ensure all relevant sectors and stakeholders are engaged and contributing to the implementation of activities as outlined in the National Action Plan on AMR.
- Report to: Communicable Disease Control Committee
- Report frequency: quarterly and Annual Report
- Meet quarterly
- Finalize and ensure the official launch of the Nation Action Plan
- Monitoring and evaluation of outcomes
- Review and update the National Operational Plan every 5 years

National AMR Committee Members

Members of the National Committee on antimicrobial resistance are recommended to include members from the following:

- Ministry of Health (MOH) (chair to be rotated)
- Ministry of Natural Resources and Environment (MNRE)
- Ministry of Agriculture and Fisheries (MAF)
- Ministry of Women Community and Social Development (MWCSO)

- Ministry of Foreign Affairs and Trade (MFAT)
- Ministry of Commerce Industry and Labour (MCIL)
- Ministry of Education Sports and Culture (MESC)
- Scientific Organization of Samoa (SROS)
- National University of Samoa (NUS)
- Oceania University of Medicine (OUM)
- General Practitioners
- Private Pharmacies
- Animal Protection Society (APS)
- Samoa Family Health Association (SFHA)
- Samoa National Kidney Foundation (SNKF)
- Samoa Medical Association (SMA)
- Samoa Nurses Association (SNA)
- World Health Organization (WHO)
- Food and Agriculture Organization (FAO)
- Samoa Fire and Emergency Services Authority (FESA)

Budget:

The management of the overall budget and implementation of the Samoa's National AMR Action Plan will be the responsibility of the Ministry of Health, with assistance from the Ministry of Agriculture, Scientific Research Organisation of Samoa and the Ministry of Natural Resources and Environment. Access to external funding for the plan's activities will be led and coordinated by the Ministry of Health.

NATIONAL ACTION PLAN STRATEGIC AGENDA

The National AMR Committee works will be guided by the Vision, Goal and **four** Strategic Objectives of this plan.

VISION

“Samoa is well protected against the emerging threats of ongoing antimicrobial resistance”

MISSION

“To reduce and prevent development of resistance to available antimicrobials in Samoa”

GOAL

“To ensure for as long as possible, continuity of the ability to treat and prevent infectious diseases with effective and safe medicines that are quality-assured, used in a responsible way and accessible to all who need them”

STRATEGIC OBJECTIVES

STRATEGIC OBJECTIVE 1

To develop and implement a costed multi-sectoral national action plan and increase awareness on AMR across all sectors

STRATEGIC OBJECTIVE 2

To strengthen Antimicrobial Resistance surveillance and research

STRATEGIC OBJECTIVE 3

To strengthen infection prevention and control

STRATEGIC OBJECTIVE 4

To optimize the use of antimicrobials

NATIONAL AMR ACTION PLAN VISION, MISSION, GOAL & KEY OBJECTIVES

OPERATIONAL PLAN

ACTIVITY	INDICATOR	IMPLEMENTER	TIMELINE
Objective 1: To develop, implement and increase awareness of the national action plan for AMR across all relevant sectors within Samoa			
<i>Goal 1.1: To develop evidence-based awareness campaign for general public, consumers, prescribers and all stakeholders on AMR</i>			
Conduct Knowledge, attitude and perception/behavioural (KAP) surveys that is inclusive of consumers, prescribers and health professionals at targeted mass events or using targeted groups to ensure target messaging on IEC materials <ul style="list-style-type: none"> • <i>Ensure the design for the survey is fit for purpose, look at the questions asked in the survey</i> • <i>Use clinics, private pharmacies, health facilities</i> 	→ KAP survey conducted and completed → KAP survey report finalized, published and disseminated. → Perception survey report finalized, published and disseminated to clinics, private pharmacies and all health facilities.	AMR Committee	June 2023/2024
Regular AMR multi-media campaigns, use the results and findings from the KAP surveys in order to better inform messaging to the public	→ Increase in numbers of population accessing AMR multi-media campaigns	All AMR Stakeholders	Ongoing
<i>Goal 1.2: To strengthen education and awareness on antimicrobial resistance and responsible use of antimicrobials</i>			
Annual celebrations and commemoration of the World Antimicrobial awareness Week 18-24 November <ul style="list-style-type: none"> • <i>Ensure any awareness conducted is inclusive of animal and environmental health</i> • <i>Review slogan Fa'aāoga with Love</i> • <i>Look at taking the awareness sessions to the communities and consider the roles of NGOs, MWCSO</i> 	→ AAW activity plan developed and implemented → AAW IEC materials developed and disseminated → Incorporate the "Stewards for the Future" theme to align with regional strategy.	AAW Focus Group	July – Nov 2023-25
Integrate AMR programs in Health Career Day	→ AMR issues are addressed during NUS/MESC health career day.	MOH	Annually
Incorporation of AMR component into medical curriculum at NUS and OUM	→ Mapping of AMR components conducted and implemented	NUS/OUM	2022
Incorporate AMR components into continued health professional development programs for nurses, pharmacists, dentists, medical officers, medical laboratory scientists / technicians, veterinarians, paravets and	→ AMR is included in continuing education for all healthcare professionals, allied health professionals and veterinarians.	MOH/ NKFS/MAF/MESC	Ongoing

ACTIVITY	INDICATOR	IMPLEMENTER	TIMELINE
paramedics.			
Integrate AMR awareness programs into farmers' capacity building programs	→ Specific AMR plan and IEC materials for Farmers are developed and translated.	MAF/APS	October 2023/2024
Strengthen the role of the Sepsis committee and provide support for the expansion of the sepsis bundle training	→ Sepsis bundle training carried out	MOH	June 2024
Conduct training to improve appropriate antibiotic prescription in animals	→ Increased Awareness on correct and appropriate antibiotic dosage for animal consumption (Stop prescription of antibiotics by human pharmacists and intended for dog/cat use)	MOH/MAF/APS	June 2024
Include AMR into the agenda for MWCSO monthly sessions for Sui o Nu'u and Sui Tama'ita'i o Nu'u <ul style="list-style-type: none"> Consider the Aiga ma Nu'u Manuia program through MWCSO as a mechanism for promoting WASH in villages and families 	→ AMR issues are addressed at the community level.	HPED MOH / MWCSO	Twice a year
Integrate AMR awareness into Community Outreach Programs conducted by Samoa Family Health Association (SFHA), Samoa Cancer Society and other relevant NGOs. <ul style="list-style-type: none"> Enable the partners by developing a basic awareness and communication tool for AMR they can use 	→ AMR awareness is integrated in community health programs.	AMR Committee	At least once a year
Goal 1.3: Strengthen information sharing across all relevant sectors on AMR			
Biennium AMR Symposium	→ Participation of all key partners in the Biennium AMR Symposium	AMR Committee	2023
Sharing of AMR information through ministerial websites and social media pages (MOH, MAF, OUM, NUS, and SROS etc.) <i>As an example, creating an AMR link within the MOH website and restart AMR Facebook page</i>	→ AMR information are available and accessible on key sector partner's websites and social media pages	AMR Committee	Ongoing
Goal 1.4: Strengthen National AMR Committee as a mechanism to coordinate the AMR activities in Samoa.			
Revise the representation of the national AMR committee to include members from all relevant stakeholders	→ AMR Committee ToRs are revised to reflect inclusion of committee members from all relevant stakeholders.	AMR Committee	November 2022
AMR Committee quarterly meetings	→ Meeting minutes reflect quarterly meetings	AMR Committee	Quarterly
AMR committee to report to CDCC quarterly	→ AMR-related issues conveyed to the national level authority	AMR Committee	Quarterly

ACTIVITY	INDICATOR	IMPLEMENTER	TIMELINE
Objective 2: Strengthening AMR Surveillance and Research			
<i>Goal 2.1: To strengthen laboratory capacity for AMR surveillance and research</i>			
Conduct staff training needs assessment for Microbiology	→ Training needs of staff are assessed and addressed for Microbiology staff → Minimum staff of 6 staff in Microbiology staff and a post-grad in microbiology	MOH (Clinical Laboratory)	Ongoing
Develop capacity for MTII and TTMH laboratories in performing AMR-related tests and reporting of MROs.	→ Improved laboratory capacity to accurately identify and report multidrug resistant organisms of interest	MOH (Clinical Laboratory)	Ongoing
Identify changes in trends of circulating MROs	→ Tally of MROs isolated each month reported to detect any major increases in frequency that may be indicative of potential outbreaks → Provide feedback to clinicians about the trends of MROs in Samoa	MOH (Clinical Laboratory)	Ongoing
Advertise and fill in position for Laboratory Data officer	→ Data officer position filled in	MOH (Clinical Laboratory)	November 2023
Incorporate AMR Surveillance tasks within the “Laboratory Data Officer” TORs	→ Data Officer to collate, analyse and disseminate AMR data/reports including data from MTII	MOH/AMR committee	2022
Training to improve capacity in generating reports for AMR using Excel, Access, WHONET for all relevant personnel	→ Hire TA to assist with training → All relevant personnel able to generate reports correctly and in a timely manner	WHO TA	Ongoing
Provide training to remind health professionals of the importance of completing the minimum identifiers for patients on laboratory forms. Include in new recruits orientation	→ More than 90% of forms completed, i.e. include NHN and DOB → Conduct audits to monitor compliance of form-filling behaviours	MOH/AMR committee, HOU, Laboratory	Quarterly
	→ At least two audits per year conducted to monitor form-filling habits	MOH/AMR committee	Twice a year
Provide training for doctors on documenting deaths attributed to AMR.	→ Doctors are made aware on proper documentation of deaths attributed to AMR	SMA/MOH/DDG Clinical	Annually
Doctors must send samples to laboratory for testing with correct and accurate information on laboratory request forms.	→ At least 1 presentation conducted for doctors during CME on laboratory services every year. → Edit request forms to include tick box for “pre-antibiotic or “post antibiotic” sample	GPs/MOH	Ongoing
Conduct research on causes of deaths attributed to AMR in Samoa	→ AMR related deaths are documented in hospital records as cause of death. → AMR related mortality and morbidity are reported to CDCC and ICC on a monthly basis. → Changes in trends of priority pathogens isolated from TTMH in patients with – diabetes, cancer, etc.	MOH Clinical Services/AMR Committee/MOH Clinical Laboratory/QAIPC	Ongoing
<i>Goal 2.2: Review and finalize the microbiology SOPs that include AST across all relevant stakeholders</i>			
Revise and update Clinical laboratory SOPs for AMR surveillance, including	→ Updated SOPs used to guide testing and reporting of MROs isolated from	MOH Clinical Laboratory	Annually

ACTIVITY	INDICATOR	IMPLEMENTER	TIMELINE
performing AST, reporting of MROs in humans	humans		
Revise and update SOPs for AMR surveillance, including performing AST, reporting of MROs in animals	→ Updated SOPs used to guide testing and reporting of MROs isolated from animals	MAF /SROS	Annually
Build capacity for culture and sensitivity testing for suspected MRO infections in animals	→ Improved capacity for performing AST and reporting of MROs isolated from animals	MAF	Ongoing
Goal 2.3: Ensure weekly internal quality assurance program and PPTC External Quality Assurance program are worthwhile.			
Conduct weekly IQA to ensure reliability of results reported	→ Weekly IQA programmes conducted and documented	Microbiology staff/QA Officer	Ongoing
TTMH and MTIIH laboratories to participate in External Quality Assurance programs	→ TTMH and MTIIH laboratories' participation in EQA programmes documented	MOH Clinical Lab/ PPTC	Quarterly
Goal 2.4: Standardize national definition of MROs			
Develop AMR handbook outlining definitions for all AMR related terminologies, including pathogens of interest in both animal and humans. Book will also include reporting of notifiable MROs, and relevant policies and Acts that guide the AMR committee	→ AMR handbooks are developed, printed and disseminated across relevant sector partners and stakeholders. → At least one presentation to the doctors' weekly CME meetings on utilizing the book	AMR Committee (clinical lab/consultant pathologist)	December 2023
Goal 2.5: Encourage communication across AMR surveillance system human, animal and environment sectors.			
Ensure reporting of MROs to the IPC and to the MOH National Surveillance team.	→ Standardize reporting forms for MROs → MROs reports are updated and disseminated on a weekly basis.	QAIPC Laboratory/Data Officer	Ongoing
Establish integrated national AMR surveillance system across human, animal and environment sectors.	→ AMR national surveillance data from relevant laboratories are integrated in one report on quarterly basis.	All relevant laboratories	Annually
Develop Annual AMR Surveillance Report	→ Annual AMR surveillance report are developed and disseminated across relevant stakeholders prior to annual AAW	SROS, MNRE, MAF, MOH, FAO, WHO	Ongoing, every November
Establish a mechanism for AMR risk analysis and surveillance in livestock and food.	→ Risk analysis and scoping study for most feasible mechanism for AMR surveillance in animals and imported animal feed are conducted and reported to the AMR Committee on regular basis. → Risk analysis and scoping study for most feasible mechanism for AMR surveillance in imported and locally produced risk foods such as meats, milk, eggs, and fish from aquaculture are conducted and reported to the AMR committee on regular basis.	MAF, MCIL, MOH	Annually
Monitor and identify all AMR-related or linked projects (COMBAT-AMR,	→ All related AMR projects and activities harmonized and working collectively	MOH/AMR committee/HRC-	Ongoing

ACTIVITY	INDICATOR	IMPLEMENTER	TIMELINE
Research projects, university projects, etc.) to avoid duplication of outputs		MOH	
Objective 3: Strengthen infection prevention and control			
<i>Goal 3.1: Improve hygiene and sanitation practices in the community and healthcare settings</i>			
Reactivate the Komiti tumāmā concept in villages to assist with ensuring good sanitation practises and infection and prevention resources are well utilized.	→ Regular monitoring of good sanitation practises in all villages.	MOH/MWSCD/NG Os (e.g. ADRA)	Ongoing
Increase awareness in improving hygiene and sanitation practises during the annual national hand hygiene day commemoration	→ Proactive multi-media hand hygiene education and awareness campaign are disseminated publicly during national hand hygiene day.	MOH/MNRE/MESC	Annually (May 5)
Reactivate hand washing campaigns	→ More compliance with correct hand hygiene.	MESC/MOH/ADRA	
Conduct cross sectional hygiene compliance education programs in hospitals, schools, for food handlers, tattooists, slaughterhouses and hospitality workers,	→ % of the public who have knowledge and aware of hand hygiene importance. → Food-handlers template for spot-checks	All stakeholders	Ongoing
Review and ensure that the Regulation for the Food Act reflect Maximum Residue Limits (MRL) in at-risk foods and establish penalties for violation.	→ Food regulation is reviewed and adhered to.	MOH/MCIL	Every 3 years
Strengthen public health laboratory capacity to conduct water testing	→ Ongoing water testing to identify acceptable MRLs	MOH/SROS/SWA	As required
Conduct ongoing food testing-bacterial contamination of food and potential lack of adherence to antimicrobial withdrawal limits/MRLs	→ Quality assurance and Improved food safety	MOH/SROS/SWA	Ongoing
<i>Goal 3.2: Strengthen infection prevention and control programs in healthcare-settings</i>			
Review MOH Infection Control Manual (2022)	→ MOH Infection Control Manual is reviewed and submitted to Clinical Governance Committee for endorsement. → MOH Infection Control Manual is published and disseminated across the relevant stakeholders/partners.	MOH/QAIPC	Annually
IPC team proactive response to identification of MROs in hospital wards	→ IPC team is notified when an MRO is identified → Laboratory staff notifies ICO and clinical staff when an MRO is identified	QAIPC/Clinical and Lab Staff	Ongoing
Conduct awareness session for all MOH staff on National Infection Control Manual.	→ No. of MOH staff made aware and involved in the implementation of the National Infection Control Manual	MOH/QAIPC	Ongoing
Conduct infection control trainings for hospital workers.	→ No. of hospital workers who participate and understand Infection Control.	MOH/QAIPC	Ongoing

ACTIVITY	INDICATOR	IMPLEMENTER	TIMELINE
	→ Training for cleaners about cleaning up isolation rooms after MRO patient discharge		
Conduct infection control audits for to monitor IPC practises in healthcare facilities	→ No. of health facilities audited for infection control and fully complied with the National Infection Control Manual.	MOH/QAIPC	Ongoing
Goal 3.3: Improve Healthcare Waste Management			
Conduct refresher trainings on waste segregation and waste management protocols for MOH and MAF and APS staff for human and animal healthcare waste components respectively.	→ No. of refresher trainings provided on waste segregation and waste management for MOH and MAF staff. → Waste labelled and discarded accordingly (sharp box sent to incinerator) → % of refresher trainings participants who understand healthcare waste management.	MOH/MAF/MNRE/APS	Annually
Develop healthcare waste management IEC materials to illustrate waste management protocols for public awareness.	→ Healthcare waste management IEC materials are developed and disseminated across the relevant stakeholders.	MOH/MNRE	November 2024
Establish a mechanism for safe disposal of expired antibiotics for hospital and private pharmacies and from Animal Health division	→ Best practices for safe disposal of antibiotics are adhered to.	MOH/MAF/MNRE/Pharmaceutical warehouse	July 2024
Establish mechanism for disposal of expired reagents	→ Expired reagents are discarded appropriately.	MOH/MAF/MNRE/Pharmaceutical warehouse	July 2024
Undertake assessment on infectious and hazardous waste disposal in veterinary sector.	→ Evidence-based assessment report is developed and disseminated to inform policy decisions	MNRE/MAF/APS	July 2024
Goal 3.4: Ensure availability and appropriate use of consumables and Personal Protective Equipment (PPE)			
Ensure continued access to alcohol hand-rub and revert to locally made solutions during stock-outs.	→ No more than 1 stock-out of alcohol hand rub reported a year.	MOH/MAF	Ongoing
Ensure continued access to PPEs (face masks, disposable gloves, disposable gowns)	→ No more than 1 stock-out of PPEs reported a year	MOH	Ongoing
Conduct an audit within the hospital on the appropriate use of PPEs	→ No of healthcare workers using PPEs appropriately and where required	ICO officer/MOH	Quarterly
Goal 3.5: Promote Vaccination programs in commercial farms (Good Farm Practices – GFP)			
Promote vaccination programmes in commercial farms	→ National Farm Vaccination Guideline (NFVG) for cattle, pig, sheep and poultry species in commercial sector is developed. → No of companion animals vaccinated → No. of NFVGs disseminated → No. of commercial farms adopting/implementing NFVGs.	MAF	Ongoing
Promote vaccination in companion animals to decrease preventable diseases			

ACTIVITY	INDICATOR	IMPLEMENTER	TIMELINE
Objective 4: Optimize use of antimicrobials			
<i>Goal 4.1: Promote the rational use of antimicrobials in human health through the implementation of the National Medicines Policy 2022 in relation to AMR containment.</i>			
Ensure biennial updating and distribution of Essential Medicines List (EML) to relevant stakeholders	→ Essential Medicines List is updated; soft and hard copies are disseminated across the relevant stakeholders.	MOH Pharmacy	Every two years
Regular update of stock levels including out of stock items and price list to relevant stakeholders.	→ Essential Medicines List and out of stock items are disseminated across the relevant stakeholders. → Updated price list is provided upon request.	MOH Pharmacy	Ongoing
Ensure all doctors and pharmacists both in public and private health sectors have access to the updated National Antibiotic Guidelines.	→ No. of doctors and pharmacists both in public and private health sectors accessing, utilizing, and adhering to the updated National Antibiotic Guidelines. → Conduct audits to monitor use and adherence to the guidelines → Conduct customized training to address issues identified in the audits.	MOH/GPs Pharmacy/QAICPS	TBC
Conduct regular training for the prescribers (doctors and dentists) on the use of antibiotic guidelines.	→ Conduct training for the prescribers on the use of the antibiotic after updates. → Incorporate into the induction program for interns → Annual Practicing Certificate to include completion of a standardised online training for antibiotic prescribing (approved by the Medical/Dental Council).	MOH	Annually
<i>Goal 4.2: Strengthen the capacity of healthcare professional to educate consumers on rational use of antimicrobials</i>			
Recruit an additional pharmacist and pharmacy technicians and/or assistants to strengthen capacity to educate consumers on AMR appropriate use.	→ At least 1 pharmacist and 2 pharmacy technicians and/or assistants are recruited at MOH Pharmacy	MOH	November 2024
Develop a brochure with key messages of antibiotic guidelines and distributed amongst all health facilities.	→ Antibiotic guidelines key messages are accessible by the public at all health facilities. → Use of visual advertisements on the importance of AMR at waiting areas in the different sections of the hospital. → TV monitors in different waiting areas within the hospital to display key messages on a daily basis. → Important information regarding the use of antibiotics is added as an additional label to the antibiotic prescribed when it is dispensed.	MOH	November 2024
Develop bi-lingual (Samoan & English) self-care cards on the appropriate use of antibiotics.	→ Messages on appropriate use of antibiotics are printed on Self-care cards and distributed with each	MOH	November 2024

ACTIVITY	INDICATOR	IMPLEMENTER	TIMELINE
	antibiotic prescription.		
Goal 4.3: Promote the rational use of antimicrobials for animal health			
Conduct training on rational use of antimicrobials in the animal sectors targeting famers and animal health staff.	→ At least 3 trainings conducted with Farmer's association, Vets, paravets and SROS	MAF and APS	Annually
Improve awareness of rational use of antibiotic in companion animals/horses	→ Appropriate use and correct dosages prescribed by qualified veterinary professionals	MAF and APS	Annually
Goal 4.4: Strengthen procurement and supply of quality antimicrobials			
Undergo discussions with Ministry of Finance in terms of amending the tendering process of medicines to consider procurement of antibiotics registered in countries with stringent registration systems and reputable registration authorities.	→ Tendering process is consulted and updated to ensure procurement of quality antimicrobials.	MOH/MOF	July 2024
Goal 4.5: Develop antimicrobial stewardship programs in hospitals			
Establish AMS programme under the DTC linked to ICC; include as main agendas in committees.	→ ICC meetings are conducted on monthly basis → DTC meetings are conducted on bi-monthly basis. → Roles of DTC & ICC committees in driving antibiotic stewardship programmes in hospitals are strengthened and linked through strong partnership.	MOH	Ongoing
Revise a legal framework/policy to ensure inclusion of a legal provision for Nurse Practitioners/Senior Nurse Specialists to prescribe a pre-defined list of antibiotics.	→ Nurse Practitioner/Senior Nurse Specialists are allowed to prescribe pre-defined list of antibiotics	MOH	June 2024
Conduct education training on AMS components for multiple sectors	→ Quarterly trainings conducted.	All health stakeholders	November 2023
External auditing of AMS programmes in hospitals.	→ At least one external auditing conducted on AMS programs in hospitals.	MOH / QA	November 2023
Conduct regular prescription audits at pharmacies and dissemination of audit results to relevant health professionals.	→ At least 4 prescription audits conducted within a year. → Level of pharmacies compliance with the updated National Antibiotic Guideline.	MOH/QAIPC	Quarterly
Review and update antibiogram every year and distribute to relevant professionals.	→ Antibiogram is updated and distributed to doctors, nurses, pharmacists and others.	AMR COMMITTEE	Every three years
Review and update antibiotic guideline every 2 years.	→ National Antibiotic Guideline is updated, printed and disseminated to	MOH	Every two years

ACTIVITY	INDICATOR	IMPLEMENTER	TIMELINE
	all prescribers		
Develop guidelines on the use of antibiotics in animals based on international best practices.	<ul style="list-style-type: none"> → Use of antibiotics in animals guideline is developed and in line with the internal best practices. → Restricted prescribing of medications for animal use to qualified veterinary professionals → Line-list of banned drugs in food-producing animals (e.g. metronidazole) 	MAF/APS	Every three years
Continual auditing of antibiotic scripts to ensure exclusive use of prescriptions for dispensing of antibiotics.	→ At least two audits conducted per year	MOH/Private/ QAIPC and Pharmacies	Six monthly

IMPLEMENTATION

Costing and M&E Framework

The National AMR Committee will develop a Costing and M&E framework to assist in submitting for annual budgetary requirements linked to harmonize results-based M&E Framework.

Monitoring and Evaluation

This National AMR Action Plan for Samoa will be reviewed every two years or more frequently when required.