



National Multisectoral Plan on Antimicrobial Resistance for the Republic of Marshall Island

2019-2023



Foreword

The development of the National Action Plan on Antimicrobial Resistance is a milestone achievement being just the third such plan completed in the Pacific Region.

The global threat of antimicrobial resistance, especially during this time of accelerating climate change, is important for our community here in the Marshall Islands where resistance to antimicrobials has been experienced albeit infrequently. Although we do not yet have high rates of resistance, the ever increasing rates of NCDs in our community have created seriously compromised immune systems in our people. Because of this situation we need to be proactive and vigilant towards increasing awareness of antimicrobial resistance amongst our people and our communities.

The challenge in preventing the increased threat that we face in the Marshall Islands needs full commitment from professionals across all sectors where antimicrobials are used. The objectives of this AMR plan to raise public awareness and the activities identified require a well-coordinated and carefully conceived approach for its successful implementation.

The antimicrobial resistance monitoring and surveillance is a necessary and critical component of this plan and will need cooperation between all of our relevant sectors and partners in order for us to consider and act on the results in a timely manner.

I believe that the more we raise awareness with regard to the threat of antimicrobial resistance the better we will be able to effectively protect our citizens in the future.



-Jack Niedenthal,

Secretary of Health and Human Services for the Republic of the Marshall Islands

Acknowledgement

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Acronyms

AMR	Antimicrobial Resistance
AST	Antibiotic susceptibility testing
CMI	College of the Marshall Islands
CSA	Country situational analysis
EQA	External quality assessment
IEC	Information, Education, and Communication
IPC	Infection prevention and control
MDRO	Multidrug-resistant organism
MIEPA	Marshall Islands Environmental Protection Agency
MICNGOS	Marshall Islands Council of Non-governmental organizations
MOEST	Ministry of Education, Sports & Training
MOFBPS	Ministry of Finance, Banking & Postal Services
MOHHS	Ministry of Health & Human Services
MNRC	Ministry of Natural Resources & Commerce
M&E	Monitoring and evaluation
MRD	Ministry of Resource & Development
PPE	Personal protective equipment
PTC	Pharmacy & Therapeutic Committee
QMS	Quality management system
RMI	Republic of Marshall Islands
TOR	Terms of Reference
TWG	Technical Working Group
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

1.0 Introduction

In 2014, the World Health Organisation (WHO) declared antimicrobial resistance as a global health threat that requires urgent collaborative action. High rates of resistance to hospital and community-acquired infections have been reported globally, with some of the highest rates reported in the Western Pacific Region.

The Ministry of Health & Human Services of the Republic of Marshall Islands has identified antimicrobial resistance as one of the priority agenda items following commitments made at the world WHO Regional Committee for the Western Pacific in 2014 and subsequent re-commitment at the World Health Assembly in 2015 and United Nations General Assembly in 2016.

The National Action Plan on Antimicrobial Resistance is supported by the priority actions listed in the Action Agenda for Antimicrobial Resistance in the Western Pacific Region¹, which was endorsed by the 65th session of the Regional Committee for the Western Pacific Region in 2014. In addition, on May 2015 the Global Action Plan on Antimicrobial Resistance² was also endorsed at the 68th session of the World Health Assembly, where all Member States committed to developing national plans on antimicrobial resistance within the two years following endorsement.

This plan was developed based on the country context and two rounds of multi-stakeholder consultation meetings. It focuses on 4 main principles of the global action plan; 1) whole-of-society engagement, 2) prevention first, 3) access to effective treatment, and 4) sustainability.

¹ WHO (2015), Action agenda for antimicrobial resistance in the Western Pacific Region, Available at: <https://iris.wpro.who.int/handle/10665.1/10898>

² WHO (2015), Global Action Plan on Antimicrobial Resistance, Available at: <https://www.who.int/antimicrobial-resistance/global-action-plan/en/>

2.0 Summary of brief Situational Analysis on Antimicrobial Resistance in RMI

The Republic of Marshall Islands (RMI) is comprised of 29 atolls and five major islands with an estimated population of 54,200 in 2013. The Marshall Islands have two hospitals (one in Majuro and one in Ebeye) and 56 health-care centres in the outer atolls and islands. Both of the main hospitals provide primary, secondary and limited tertiary care.³

Diabetes and cancers are the leading causes of death in RMI with high mortality and morbidity for both noncommunicable and communicable diseases. TB is also a leading cause of death and the RMI has reported cases of multidrug resistant TB. The Ministry of Health & Human Services responses to these disease burdens and health emergencies remains a challenge, hence calling for multi-sectoral approach. In addition to these problems, there have been laboratory reports released by the national hospitals on multidrug-resistance organisms (MDROs).⁴

In the RMI, it is known that antimicrobials are used in both human and animal health. However, the quantity of antimicrobials consumed by each department and the impact of AMR in RMI has not been fully established. The country self-assessment completed in 2017 and 2019 revealed the followings:

- i. Governance and coordination of AMR in RMI
 - There are no formal multi-sectoral governance or coordination mechanisms on AMR in the country with no AMR plans under development that also link to other disease programs such as HIV, tuberculosis, malaria or neglected tropical diseases.
 - Only human health is actively involved in developing and implementing the AMR National Action Plan with little engagement from other sectors.
 - The Food safety and WASH programs need to be strengthened.
 - The RMI has laws or regulations on the prescription and sale of antimicrobials for human use but not on animal use, which needs to be updated according to the current context and regulatory environment.
- ii. Awareness and Understanding of AMR
 - Some activities are in place in parts of the country to raise awareness about risks of AMR and actions that can be taken to address it with the active involvement of MOH.
 - Trainings are not available for human health workers and other key stakeholders e.g. farmers and farm workers, extension workers, food and feed processors and retailers, environmental specialists, related to AMR.
- iii. Surveillance and Laboratory Capacity

³ WHO (2017), Pacific Island Countries and Area – WHO Cooperation Strategy 2018-2022

⁴ Ibid

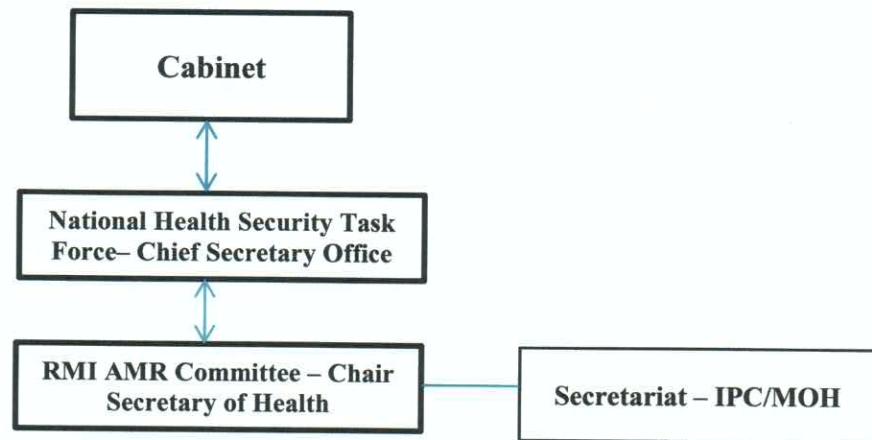
- The national monitoring system does not exist for consumption and rational use of antimicrobials in human health, animals and pesticide use in plant production
 - There is a lack of resources and capacity to establish and support national surveillance systems for AMR in human, animal and other sectors
 - AMR data is collated locally for common bacteria, but the data collection does not use a standardized approach and lacks national coordination and/or quality management, with information not shared widely to assist in decision making.
 - Laboratory standard protocols need to be developed and reviewed periodically using the global standards.
 - Laboratory support for animal health and food is not available in country.
- iv. Infection Prevention and Control (IPC)
- A national IPC programme is in place but national IPC policy needs to be updated and strengthened. Only the national hospitals are implementing the IPC policy, however gaps still exist that require close monitoring and ongoing auditing.
 - The IPC and laboratory needs to improve on data sharing and needs to collaborate on the surveillance of MDRO's.
- v. Optimize the use of antimicrobial medicines
- An antimicrobial guideline is in place and has been implemented in the national hospitals, however prescriber's practices and adherence need to be monitored and audited periodically. There is no Clinical Pharmacist in the RMI.
 - Regulation needs to be updated to ensure the quality, safety and efficacy of antimicrobial products and their distribution, sale or use in both human and animal health.

This country's self-assessment confirms the priority areas that need to be strengthened and improved to minimize the impact of AMR in RMI. These baseline findings will inform the development of National Multisectoral Plan on AMR in the Republic of Marshall Island.

3.0 Governance of Antimicrobial Resistance in RMI

- i. Cabinet – high level political commitment and endorse AMR plan.
- ii. National Disaster Committee (Chief Secretary's Office) – to provide briefing to Cabinet and update on progress of AMR National Action Plan (NAP) implementation in RMI with further recommendations for Cabinet consideration and endorsement.
- iii. Secretary of Health & Human Services – is the Chair of the AMR committee and shall provide reports/feedback/submissions to the National Disaster Committee.
- iv. RMI AMR Committee (newly formed) – directs and guides RMI response (planning) to AMR related activities and coordinates external assistance and funding to support the implementation of AMR activities in RMI.

Proposed AMR Governance Structure



RMI National AMR Committee (newly formed)

Suggested Members:

- Chairman/Secretary: Ministry of Health & Human Services
- Vice Chairman: Secretary of Natural Resources & Commerce
- Public School System (Education)
- College of the Marshall Islands
- Ministry of Finance, Banking & Postal Services/Customs
- Private Sector Doctor
- MICNGOs (observers)
- TB Staff Doctor
- 177 Health Plan Doctor

Term of Reference:

- Purpose: To implement the AMR action plan in RMI
- Meet on quarterly basis (and other times on an ad hoc basis)
- Report to the Minister of Health & Human Services in the RMI
- Supported by the RMI AMR technical working group
- Mobilize resources and prioritize allocation of funds
- Monitoring and evaluation of outcomes
- Review and update the National Action Plan and Operational Plan every 2 years

4.0 Goal

To reduce the negative impact of antimicrobial resistance on health systems in the Republic of Marshall Islands

4.1 Strategic Objectives

1. Establish and ensure governance, sustainable investment and actions to combat antimicrobial resistance

- Establish AMR governance structure for finalizing and implementing the National Action Plan
- Ensure political commitment on the implementation of the National Action Plan
- Enforcement of appropriate legislations in all sectors
- Ensure sustainable investment in combating AMR

2. Improving awareness and understanding of antimicrobial resistance across all institutions and sectors

- Promote information sharing on the situation of AMR and use of antimicrobials across institutions and sectors
- Raise awareness on AMR to health-care workers and veterinarians

3. Strengthen surveillance, diagnostic capacity and research on antimicrobial resistance

- Develop a national AMR surveillance system with a reference laboratory
- Strengthen food safety capacity to combat AMR
- Strengthen research and information sharing on AMR

4. Reducing incidence of antimicrobial resistance through effective infection prevention and control measures, food safety and hygiene

- Establish a national infection prevention and control program
- Strengthen the Water, Sanitation and Hygiene (WASH) program to promote safe water and hygiene practices
- Promote good infection control and biosecurity practices in animal husbandry
- Strengthen Good Hygienic Practices (GHP) and Hazard Analysis and Critical Control Point (HACCP) in food handling and processing
- Strengthen vaccination program in human and animal sectors

5. Optimize the use of antimicrobial medicines in human and animal health

- Strengthen regulations to promote the responsible use of antimicrobials
- Strengthen national guidelines and programs to control the use of antimicrobials
- Strengthen procurement and the supply of antimicrobials

5.0 RMI National AMR Operational plan (Years: 2019-2023)

SUB-ACTIVITY	TIMELINE	IMPLEMENTER	INDICATOR
1. Establish and ensure governance, sustainable investment and actions to combat antimicrobial resistance			
1.1 Establish AMR governance structure for finalizing and implementing the national action plan			
1.1.1 Formalize the establishment of a National and State AMR committee			
Establish the AMR committee in RMI	Mar 2020	MOH	AMR committee formalized and endorsed by cabinet
Identify reporting structure and communication channel for the AMR committee in RMI	Mar 2020	MOH	AMR committee structure established
Develop a clear terms of reference for the AMR committee	Mar 2020	MOH	ToR developed
1.1.2 Develop a National Action and Operational Plan for AMR			
Develop the draft national action and operational plan for RMI	Mar 2020	MOH	National operational plan endorsed by cabinet
Establish technical working group (TWG) to assist in implementing the AMR plan	Mar 2020	MOH	TWG established
1.1.3 Develop a budget for implementation of the action plan and identify funding sources			
Consultation with key stakeholders for costing the AMR activities outlined in the AMR plan	Jun 2020	National AMR committee	Costing completed
Formal submission of costed plan to the cabinet for endorsement	Jul 2020	National AMR committee	Costed plan endorsed by cabinet
Conduct consultation meeting with key partners for the identification of funding sources	Jul 2020	National AMR committee	Funding sources identified
1.1.4 Regular monitoring and evaluation of the implementation of the national action plan			
Hold a quarterly meeting to discuss implementation of the national action plan	Quarterly	National AMR committee	Meeting minutes disseminated
Annual meeting for M&E of AMR action plan implementation and making amendments to the plan	Yearly	National AMR committee	Annual review conducted
Conduct costing impact assessment on AMR	Dec 2023	National AMR committee	Assessment completed and report submitted

SUB-ACTIVITY	TIMELINE	IMPLEMENTER	INDICATOR
1.2 Ensure political commitment on the implementation of the national action plan			
1.2.1 Establish a high level commitment between national and state level			
Develop a AMR memorandum of understanding between key sectors	Mar 2020	National AMR committee	MoU signed by different sectors
1.3 Enforcement of appropriate legislations in all sectors			
1.3.1 Strengthen legislation of AMR in both human and animal sector			
Review/amend existing legislation(s) and ensure it incorporate clauses related to AMR in both human and animal health	Ongoing	MOH MRD	Legislation revised and endorsed
Develop new legislation on AMR , where applicable	Ongoing	National AMR committee MOH MRD	New legislation passed and endorsed
1.4 Ensure sustainable investment in combating AMR			
1.4.1 Create an enabling environment for access to effective antimicrobials (e.g. infrastructure, roads, supply chain)			
Strengthen policy and legislation to support the availability and accessibility of antimicrobials to both human and animal health	Ongoing	National AMR committee	Policy and legislation updated
Dedicated budget for AMR	Ongoing	National AMR committee	Submission passed by cabinet
1.4.2 Invest in appropriate human resources and infrastructure to ensure sustainable implementation of the national action plan			
Ensure one dedicated staff for AMR secretariat and identify AMR champions in each sector	June 2020	National AMR committee	AMR secretariat and champions identified and endorsed
Assess all facilities to ensure its adequate to prevent, control and respond to AMR	Dec 2020	National AMR committee	100% of facilities assessed
Develop human resource and training plan for staff to sustain the implementation of AMR plan	Dec 2020	National AMR committee	Human resource and training plan developed and endorsed
2. Improve awareness and understanding of antimicrobial resistance across all institutions and sectors			
2.1 Promote information sharing on the situation of AMR and use of antimicrobials across institutions and sectors			
2.1.1 Develop awareness raising materials and conduct awareness activities			
Strengthen the development of IEC materials on AMR for the general public and policy makers	Ongoing	National AMR committee All key stakeholders	IEC materials printed
Conduct regular AMR advocacy and awareness using all means of communication/ mass media	Quarterly	National AMR committee All key stakeholders	4 awareness raising communication conducted annually

SUB-ACTIVITY	TIMELINE	IMPLEMENTER	INDICATOR
Hold annual awareness campaign to celebrate World Antibiotic Awareness Week	Annually	National AMR committee All key stakeholders	Awareness week campaigns conducted annually
Conduct regular awareness raising for farmers, importers, exporters, food processors, and animal production officers	6 monthly	National AMR committee All key stakeholders	2 awareness raising communication conducted annually
Engage & train community leaders, NGO's, civil societies, churches, sports groups to raise awareness on AMR (ex Youth to Youth Convention)	Annually	National AMR committee All key stakeholders	2 training session conducted
2.1.2 Promote effective sanitation and hand hygiene in the community setting			
Participate in the world hand hygiene day	Annually	National AMR committee	Hand hygiene day celebrated
Update promotional materials to raise awareness of hand hygiene and effective sanitation in the community	On-going	National AMR committee	IEC materials printed and disseminated
2.1.3 Develop an educational programme for schools (all levels) on AMR and rational use with key targeted messages			
Revise the education curriculum to capture AMR, basic sanitation and hand hygiene awareness raising in all schools	Dec 2020	National AMR committee MOE	Curriculum revised and integrated
2.2 Raise awareness on AMR to health-care workers and veterinarians			
2.2.1 Include AMR as core component of professional education, training for health-care professionals and veterinarians			
Include AMR as core component of professional education in health, agricultural and fisheries sector	On-going	National AMR committee MOH MRD	AMR included in the course modules for health and agriculture
Enrolling health-care workers and veterinarians/livestock officers on any AMR online course offered on POLHN or from other institutions	On-going	National AMR committee MOH MRD	Participants completed online course and receive certificates
Conduct AMR perception survey of health-care workers and veterinarians/livestock officers	Dec 2020	National AMR committee MOH MRD	Perception survey completed and report submitted
3. Strengthen surveillance, diagnostic capacity and research on antimicrobial resistance			
3.1 Develop a national AMR surveillance system with a reference laboratory			
3.1.1 Strengthen laboratory staff capacity for training on microbiology and quality antimicrobial susceptibility testing			
Strengthen capacity of laboratory staff in microbiology testing and analysis of antibioticgram	Dec 2019	National AMR committee MOH	All laboratory staff trained
Continuous participation in external quality assessment on AMR	On-going	National AMR committee MOH	National laboratory fully enrolled on EQA

SUB-ACTIVITY	TIMELINE	IMPLEMENTER	INDICATOR
3.1.2 Strengthen laboratory capacity and infrastructure for AMR surveillance			
Identification of a reference laboratory for AMR in human and animal health for further genotyping	Dec 2020	National AMR committee MOH	National reference laboratory identified
Review regularly standard operating procedures for antibiotic susceptibility testing and quality management system in all laboratories	Annually	National AMR committee MOH	SOP's updated and endorsed
Implement QMS and EQA programmes in all laboratories that conduct antibiotic susceptibility testing	On-going	National AMR committee MOH	EQA & QMS conducted annually
Enrol national laboratory for accreditation	Dec 2023	National AMR committee MOH	Identified laboratory accredited
Develop database for AMR reporting and analysis	Dec 2020	National AMR committee MOH	AMR Database developed
Establish and improve the electronic laboratory information system for AMR reporting and surveillance in all laboratories	Dec 2021	National AMR committee MOH	Electronic system fully operational in all laboratories
Ensure consistent availability of laboratory consumables and reagents	On-going	National AMR committee MOH	100% availability of supplies
3.2 Strengthen food safety capacity to combat AMR			
3.2.1 Promote random and regular testing on meat and other food products for AMR pathogens and antibiotic residues			
Undertake random sample collection and testing for AMR pathogens and antibiotic residues in food and meat	Ongoing	National AMR committee MRD	2 samples randomly selected and tested per year
3.3 Strengthen research and information sharing on AMR			
3.3.1 Promote collaborative research projects on AMR in human and animal health and the environment			
Include AMR sessions in an annual gatherings or meetings or conference	Ongoing	National AMR committee	AMR part of annual conference agenda/session
Conduct antimicrobial consumption survey	Dec 2021	National AMR committee	AMC survey completed and report submitted
Build relationship with other research institutions and collaborating centre for AMR	On-going	National AMR committee	MoU in place
3.3.2 Conduct bacteria susceptibility survey/profile			
Develop a detail antibiogram for RMI	Jun 2020	National AMR committee MOH	Antibiogram data for all states available

SUB-ACTIVITY	TIMELINE	IMPLEMENTER	INDICATOR
3.3.3 Ensure sharing of AMR surveillance and use data			
Regular sharing of AMR surveillance and antimicrobial consumption to key stakeholders, including regional and international	On-going	National AMR committee MOH	AMR data available for sharing
Strengthen mechanism for reporting AMR in RMI			
4. Reducing incidence of antimicrobial resistance through effective infection prevention and control measures, food safety and hygiene			
4.1 Establish a national infection prevention and control programme			
4.1.1 Endorse the national infection control policy			
Establish/strengthen a national infection control committee	Mar 2020	National AMR committee	IC committees established
Develop and review the national infection prevention and control policy	Mar 2020	National Infection Prevention and Control Committee	National IC policy endorsed
Print and disseminate the national infection prevention and control policy to key stakeholders	Mar 2020	National Infection Prevention and Control Committee	100 copies printed for distribution
Conduct training on infection prevention and control policy and guidelines targeting patients, health care workers and health administrators	Annually	National Infection Prevention and Control Committee	2 trainings per year
4.1.2 Disposal of expired drugs and non-registered drugs and medical waste			
Assess medical waste disposal system including disposal of antimicrobials in RMI	Dec 2020	National Infection Prevention and Control Committee MOH	Assessment report submitted
Develop guidelines on disposal of unused antibiotics (including veterinary medicines)	Dec 2020	National Infection Prevention and Control Committee MOH	Guidelines endorsed
Assess and strengthen incineration of medical waste in national hospitals	Dec 2020	National Infection Prevention and Control Committee MOH	Hospital incinerator fully functioning
4.2 Implement the Water, Sanitation and Hygiene (WASH) program to promote safe water and hygiene practices			
4.2.1 Develop the WASH program in communities and schools			
Conduct consultation to communities and school on WASH program in RMI	Jun 2020	National AMR committee MOH MOE MRD	WASH program endorsed by communities and schools
Develop a WASH program and guidelines for communities and schools in RMI	Jun 2020	National AMR committee MOH	WASH program and guidelines endorsed

SUB-ACTIVITY	TIMELINE	IMPLEMENTER	INDICATOR
Implement WASH program in communities and schools	Aug 2020	National AMR committee MOH MOE MRD	WASH program implemented
Conduct awareness training on WASH program in communities and schools	Ongoing	National AMR committee MOH MOE MRD	2 trainings per year
4.3 Promote good infection control and biosecurity practices in animal husbandry			
4.3.1 Strengthen infection prevention and control in animal husbandry			
Develop infection prevention and control policy specific for animal farms and clinics	Dec 2020	National AMR committee MRD	IPC policy endorsed
Conduct training on infection prevention and control policy to farmers and veterinarians	Ongoing	National AMR committee MRD	2 trainings per year
Print and distribute infection prevention and control policy to all key stakeholders	Dec 2020	National AMR committee MRD	100 copies printed for distribution
Promote use of personal protective equipment (PPE) in hospitals & animal health	Ongoing	National AMR committee MOH MRD	100% availability of PPE supplies
4.4 Implement Good Hygienic Practices (GHP) and Hazard Analysis and Critical Control Point (HACCP) in food handling and processing			
4.4.1 Establish GHP and HACCP program			
Conduct consultation to communities on GHP and HACCP program	Ongoing	National AMR committee MOH MRD	1 consultation meeting conducted
Develop a GHP and HACCP program and guidelines for RMI	Ongoing	National AMR committee MOH MRD	GHP & HACCP program and guidelines endorsed
Implement GHP and HACCP program	Ongoing	National AMR committee MOH MRD	GHP & HACCP program implemented

SUB-ACTIVITY	TIMELINE	IMPLEMENTER	INDICATOR
Conduct awareness training on GHP and HACCP program in communities	Ongoing	National AMR committee MOH MRD	2 trainings per year
4.5 Strengthen vaccination program in human and animal sectors			
4.5.1 Implement vaccination program in both human and animal sectors			
Continue conducting awareness on vaccination program	Ongoing	National AMR committee MOH	2 awareness per year
5. Optimize the use of antimicrobial medicines in human and animal health			
5.1 Strengthen regulations to promote responsible use of antimicrobials			
5.1.1 Enforce the use of prescription on antimicrobials in the human and animal sector			
Develop/Review existing medicine legislation to cover the prescribing and use of antimicrobials in both human and animal health	Dec 2020	National AMR committee MOH	Legislation updated and endorsed
Conduct awareness on medicine legislation to veterinarians, medical doctors and other key health workers in RMI	Dec 2020	National AMR committee MOH	Awareness conducted
Print and disseminate the updated medicine legislation to key stakeholders	Dec 2020	National AMR committee MOH	Legislation printed and distributed
Conduct inspection on pharmacy, medical clinic and animal clinic on the counter sales of antimicrobials	Annually	National AMR committee MOH	Inspection conducted and report submitted
5.2 Establish and develop national guidelines and programs to control the use of antimicrobials			
5.2.1 Develop and finalized antibiotic guidelines based on country antibiotic for human and animal use			
Review a national antibiotic guidelines for human use	Ongoing – every 2 years	National AMR committee MOH	Guidelines published
Develop a national antibiotic guideline for animal use	Dec 2020	National AMR committee MRD	Guidelines published
Develop and updating of essential medicine list for both human and animal use using AWaRe classification	Ongoing – every 2 years	National AMR committee MOH MRD	EML updated & published
Conduct training on antibiotic guideline and rational prescribing to veterinarians, medical doctors and other key health workers in all states	Annually	National AMR committee MOH MRD	1 training per year
5.2.2 Support the role of Medicines Therapeutic Committee in hospital			
Review the ToR of MTC to ensure that it cover AMR	Jun 2020	National AMR committee MOH	ToR updated and endorsed

SUB-ACTIVITY		TIMELINE	IMPLEMENTER	INDICATOR
Conduct training workshops for MTCs members on their role on AMR		Aug 2020	National AMR committee MOH	1 training completed
Develop the national medicine policy to ensure the rational use of medicines including antimicrobials		Dec 2020	National AMR committee MOH	Medicine policy endorsed
5.2.3 Strengthen border control for detection of imported antimicrobials				
Ensure that medicine legislation will cover the declaration of all antimicrobials that enters the country including the ban on the use of antibiotics on animal feed as growth promoters	Dec 2020	National AMR committee MOH Customs	Boarder control legislation updated and endorsed	
5.2.4 Strengthen Antimicrobial Stewardship Program & Pharmacovigilance				
Develop and implement basic antimicrobial stewardship (AMS) program in hospital	Dec 2020	National AMR committee MOH	AMS program developed and implemented	
Develop the system on pharmacovigilance of antimicrobials including other essential medicines	Dec 2021	National AMR committee MOH	Database and guideline on pharmacovigilance system developed	
5.3 Strengthen procurement and supply of antimicrobials				
5.3.1 Strengthen prequalification of antimicrobials to ensure quality assured antimicrobials				
Develop process of market authorization (MA) and registration including prequalification of antimicrobials	Dec 2021	National AMR committee MOH	Prequalification policy and guideline updated and endorsed	
Conduct training on product assessment and physical verifications to pharmacy inspectors, customs, para-vet in RMI	Dec 2021	National AMR committee MOH	2 trainings conducted	
Build relationship with other stringent regulatory authority and using any sub regional platform to access information on quality of antimicrobials	Ongoing	National AMR committee MOH	MoU in place	
5.3.2 Ensure the availability and accessibility of quality antimicrobials				
Conduct in depth assessment of the medicine supply system in RMI	Jun 2020	National AMR committee MOH	Assessment report completed	
Develop a procurement and supply strategies of antimicrobials in RMI	Jun 2020	National AMR committee MOH	Procurement plan developed	
Review the procurement and donation policies of medicines	Jun 2020	National AMR committee MOH	Procurement and donation policies updated and endorsed	