First National Multisectoral Steering Committee Meeting Combating AMR Myanmar

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Ministry of Health and Sports
Myanmar

Outlines

- 1. Global AMR
- 2. National situation of AMR
- 3.Tract to implement Myanmar NAP AMR
- 4.Technical working Groups (5), activities
- 5. Strategic plan
- 6. M&E
- 7. Challenges
- 8. Way forward

Global AMR & global concern

AMR in health and development

UHC

‘One Health’

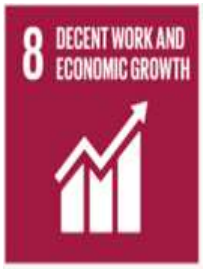
SDGs

Multidimensional Impact of AMR- SDGs

AMR strikes hardest on the poor – treatment of resistant infections is more expensive

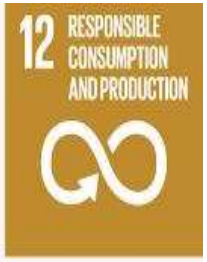
Antibiotic residues from hospitals, pharmaceutical companies and agriculture contaminates water

Untreatable infections in animals threatens sustainable food production for our growing population



Cost of AMR is predicted to be US$100 trillion by 2050

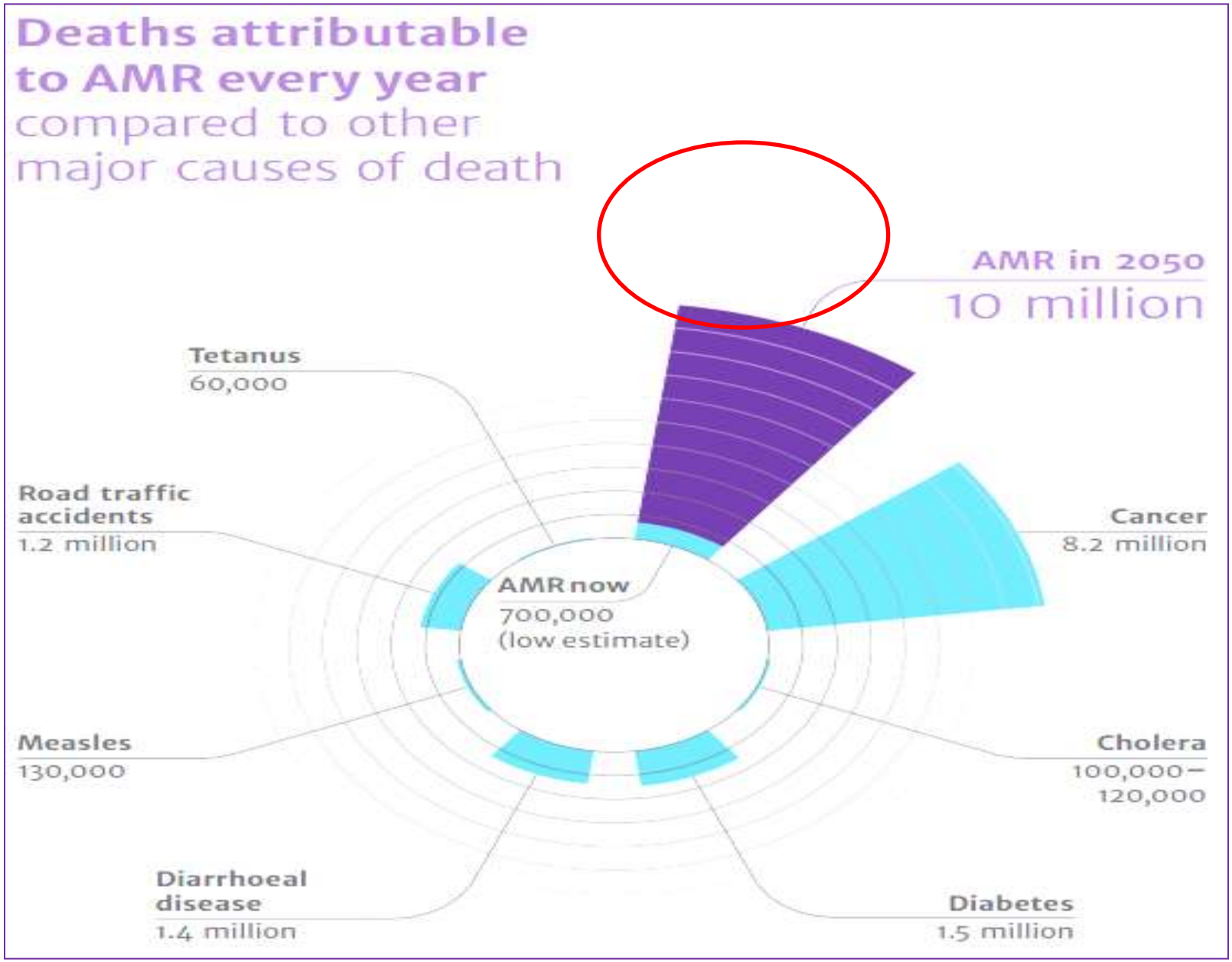
Antimicrobials are fundamental components of all health systems



Balance access, innovation and conservation of antimicrobials to contain AMR

All of which require multi-stakeholder partnerships

Review on Antimicrobial Resistance



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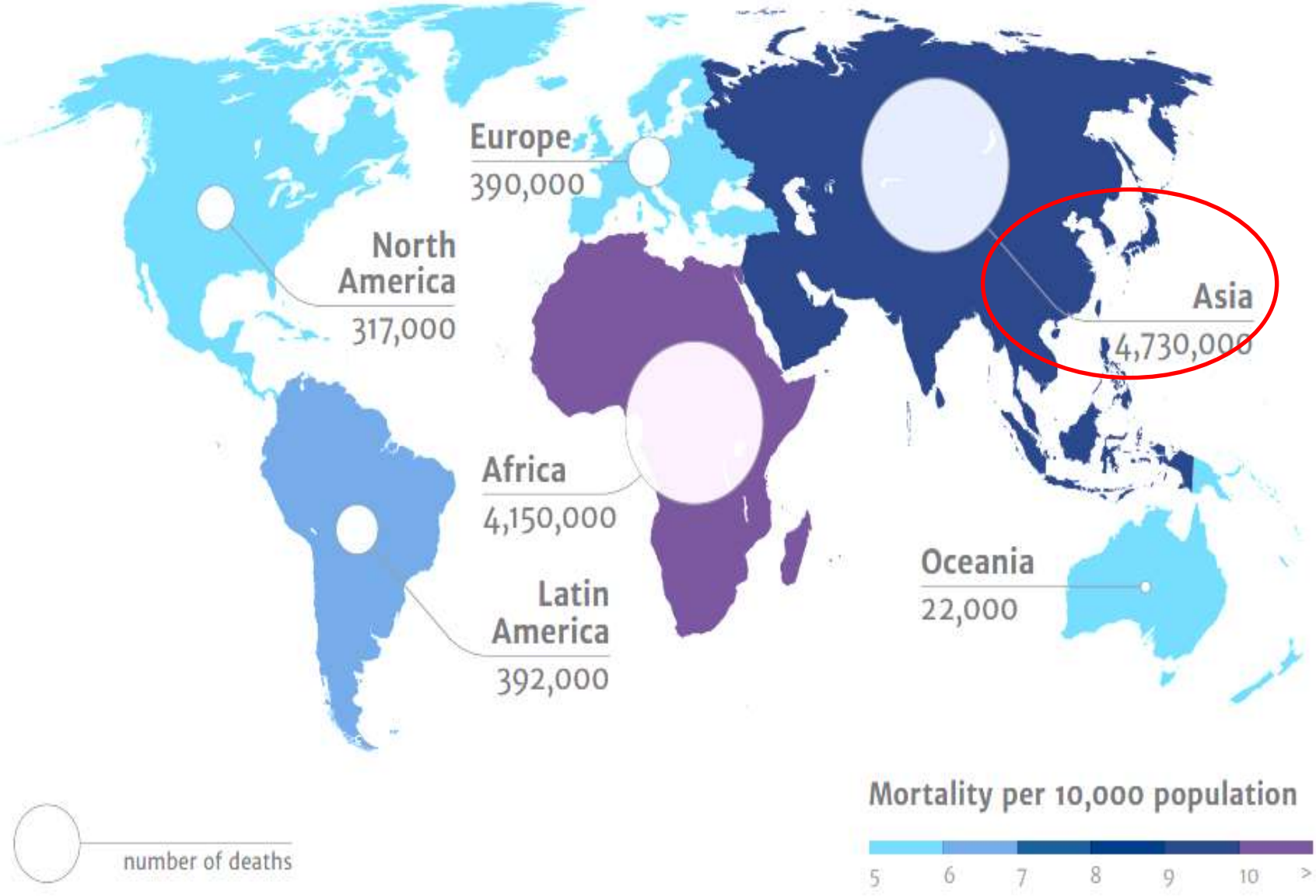


Common factors driving resistance – human health

Health system factors

- Overuse and misuse of antimicrobials
- Poor quality antimicrobial products
- Weak infection control
- Poor access and stock outs

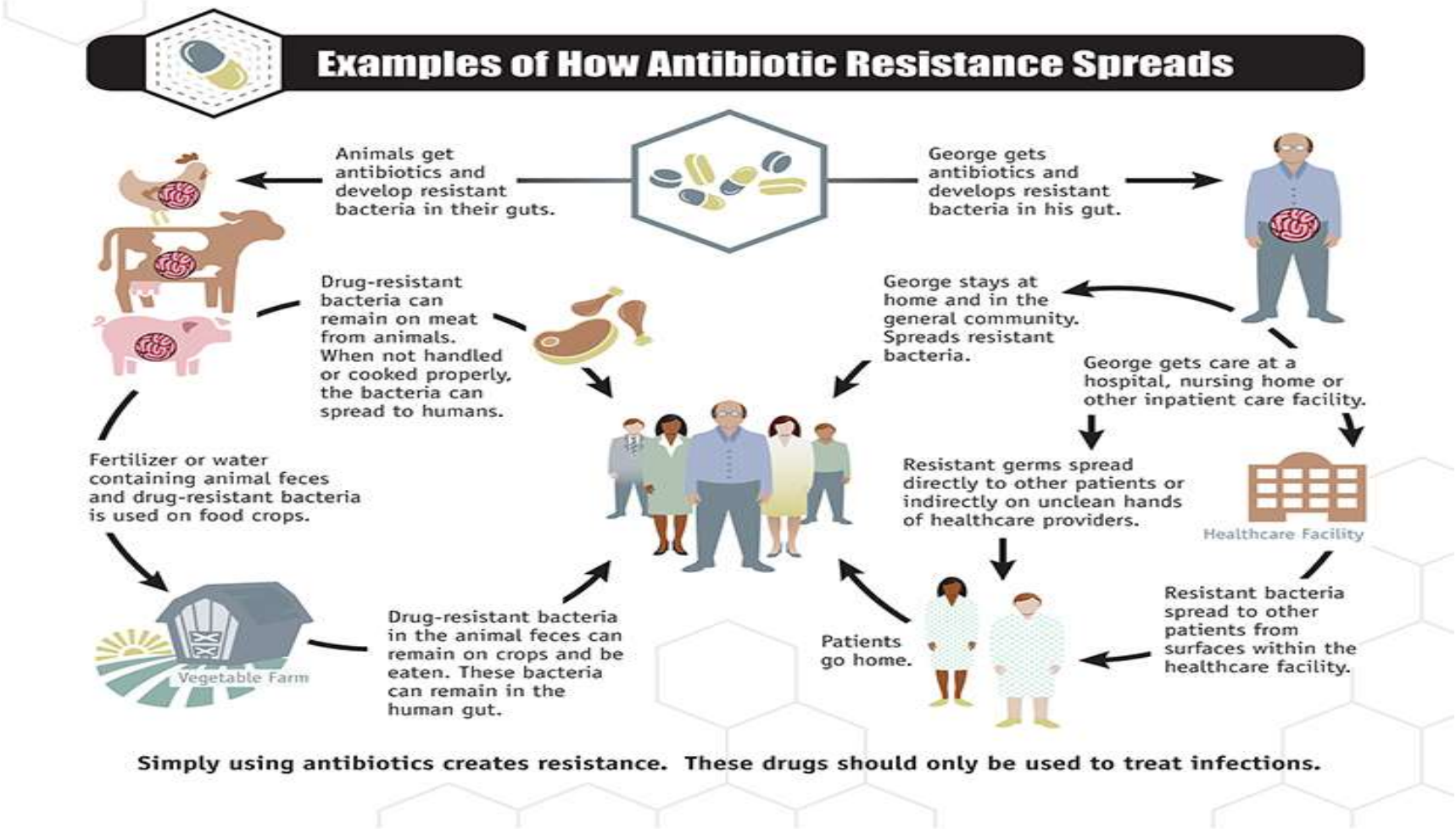
Behavioural factors

- Patients: poor adherence, self-medication, cultural beliefs
- Provider: weak support to clinical practice, financial incentives

Common factors driving resistance – Animal health

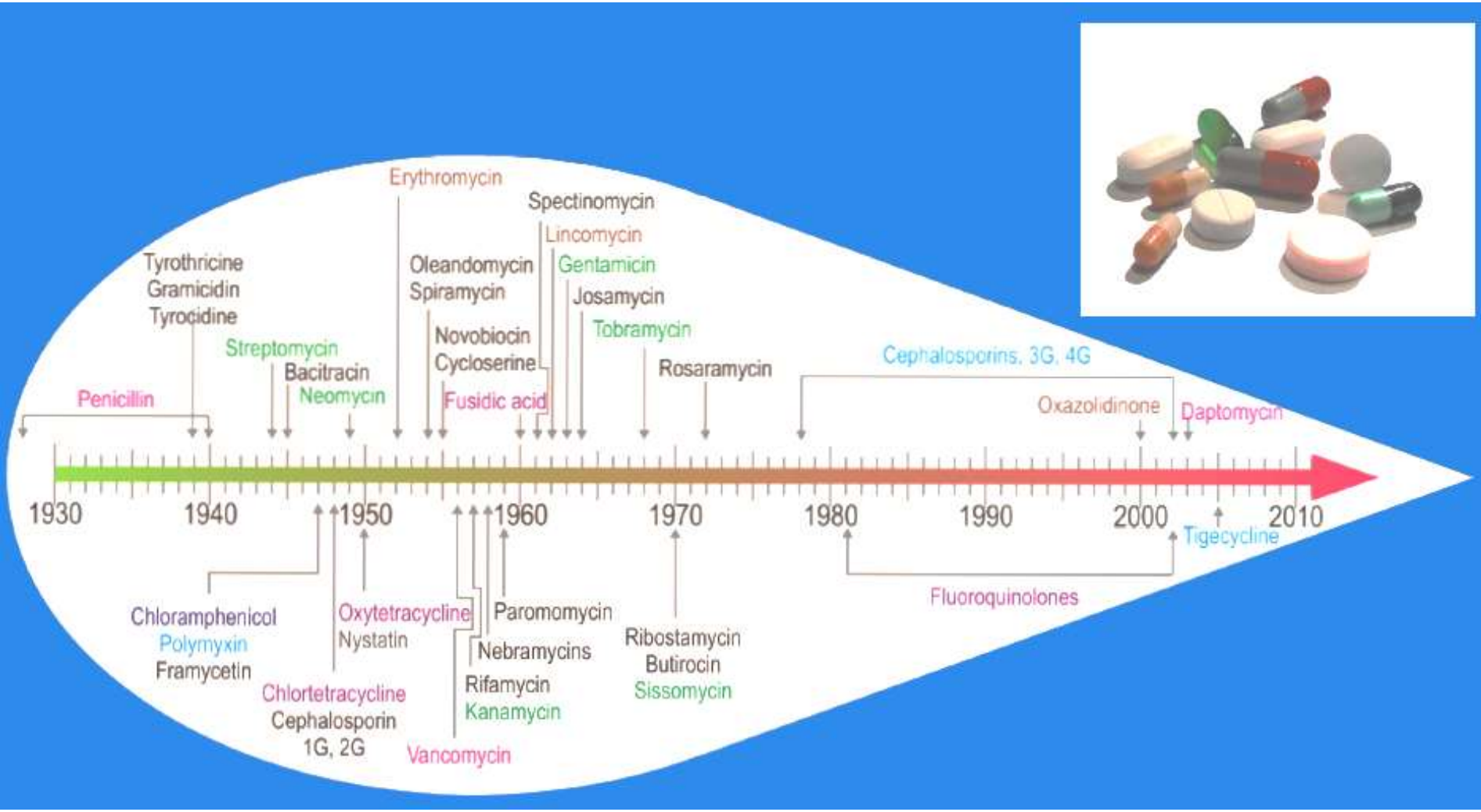
- Classes of antibiotics used in humans and animals are mostly the same
- Food-producing animals are reservoirs of pathogens
- Large volumes of antimicrobials consumed for non-therapeutic use

How antibiotic resistance spread

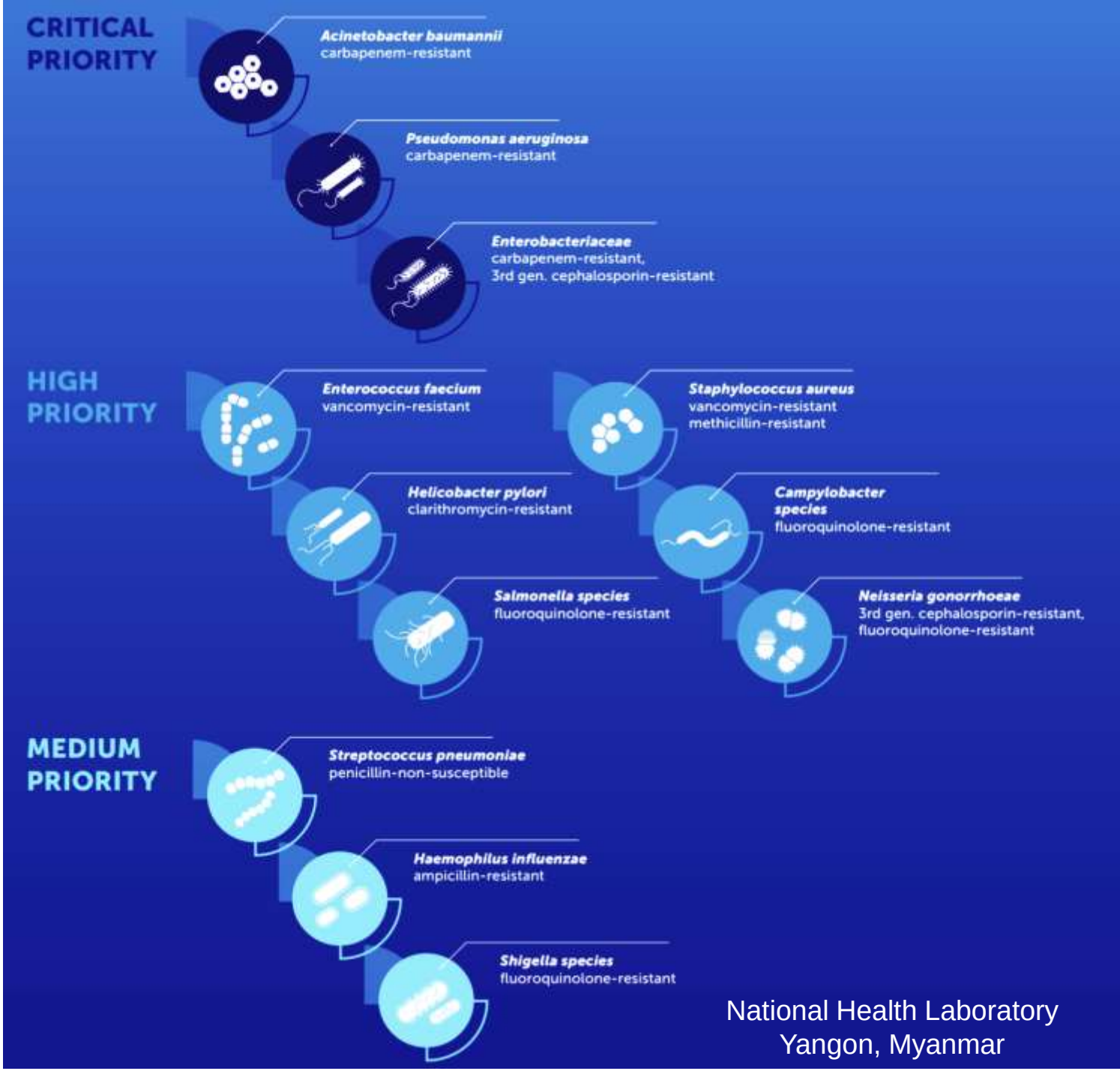


Source: www.cdc.gov/drugressistance

Antibiotics: R and D over the years



Priority pathogens for which R and D is needed



Background

- Antimicrobial resistance (AMR) has emerged as one of the biggest public health threats
- AMR as a trans border issue, needs global affirmation for containment

May 2014: **WHA Resolution WHA67.25** outlined the need to develop a Global Action Plan on AMR

GAP AMR adopted at the May 2015 **World Health Assembly**

May 2015: **World Assembly of OIE** adopted resolution to follow guidance of GAP to develop plan on use of antimicrobials in animals in close collaboration with PH officials

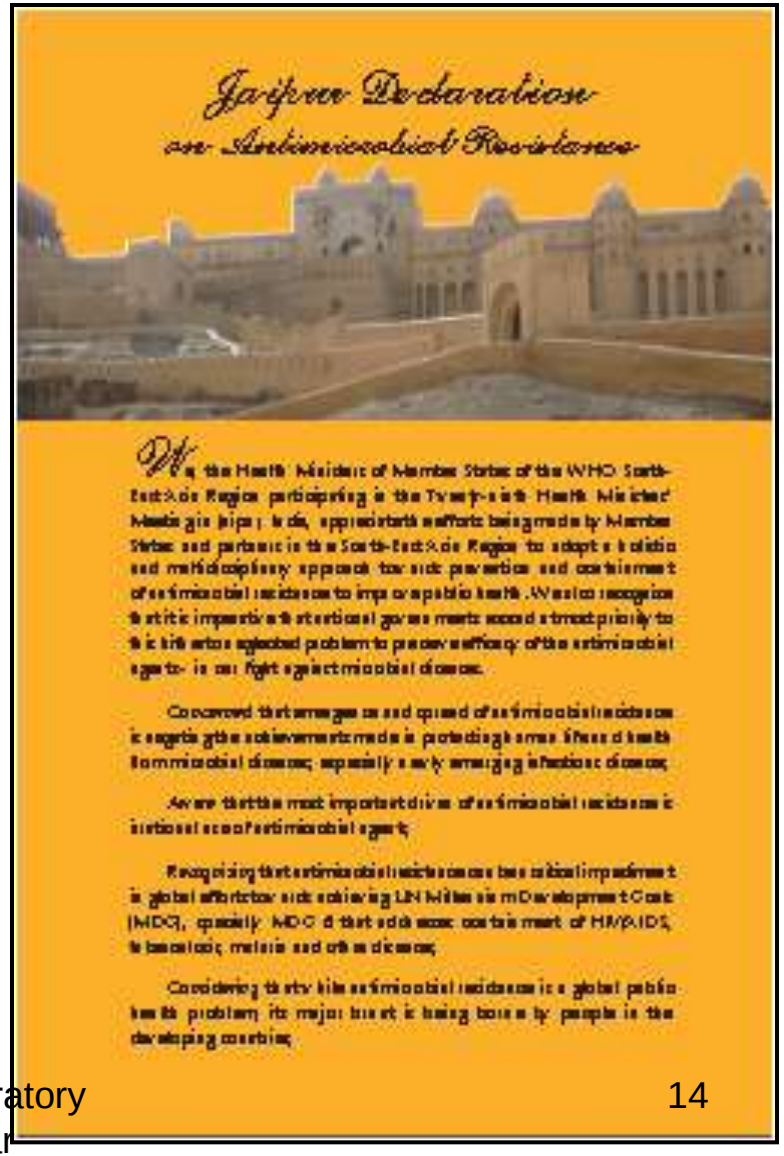
June 2015: **39th Conference of FAO** resolved to plan and coordinate for containment of AMR in food, agriculture and environment….with related plans for human health

Global commitment reiterated at **September 2016 UNGA meeting**

MS agreed to submit by May 2017 to the World Health Assembly, a customised NAP-AMR, related to the existing situation, capacity and targets related to the national burden of AMR

AMR Background in SEAR

- Prevention and containment of antimicrobial resistance (RC resolution - SEA/RC63/R4 - 2010)
- **Jaipur Declaration** on AMR 2011
- **RD's Flagship** programme 2014-2019 (*Building national capacity for prevention and combating AMR*)


Jaipur Declaration
on Antimicrobial Resistance

We, the Health Ministers of Member States of the WHO South-East Asia Region participating in the Twenty-sixth Health Ministers' Meeting in Jaipur, India, appreciate the efforts being made by Member States and partners in the South-East Asia Region to adopt a holistic and multidisciplinary approach for the prevention and containment of antimicrobial resistance to improve public health. We also recognize that it is important that national governments accord utmost priority to this silent yet global problem to preserve efficacy of the antimicrobial agents in our fight against microbial diseases.

Concerned that emergence and spread of antimicrobial resistance is negating the achievements made in protecting human lives and health from microbial diseases, especially newly emerging infectious diseases;

Aware that the most important drivers of antimicrobial resistance is irrational use of antimicrobial agents;

Recognizing that antimicrobial resistance has critical impediment in global efforts for the achieving UN Millennium Development Goals (MDG), especially MDG 6 that addresses containment of HIV/AIDS, tuberculosis, malaria and other diseases;

Considering that the antimicrobial resistance is a global public health problem, its major threat is being borne by people in the developing countries;

Building National Systems

- GLASS supports the development of three essential core components for national AMR surveillance:

  - National Coordination Centre (NCC)

  - National Reference Laboratory (NRL)

  - Sentinel surveillance sites where both diagnostic results and epidemiological data are collected

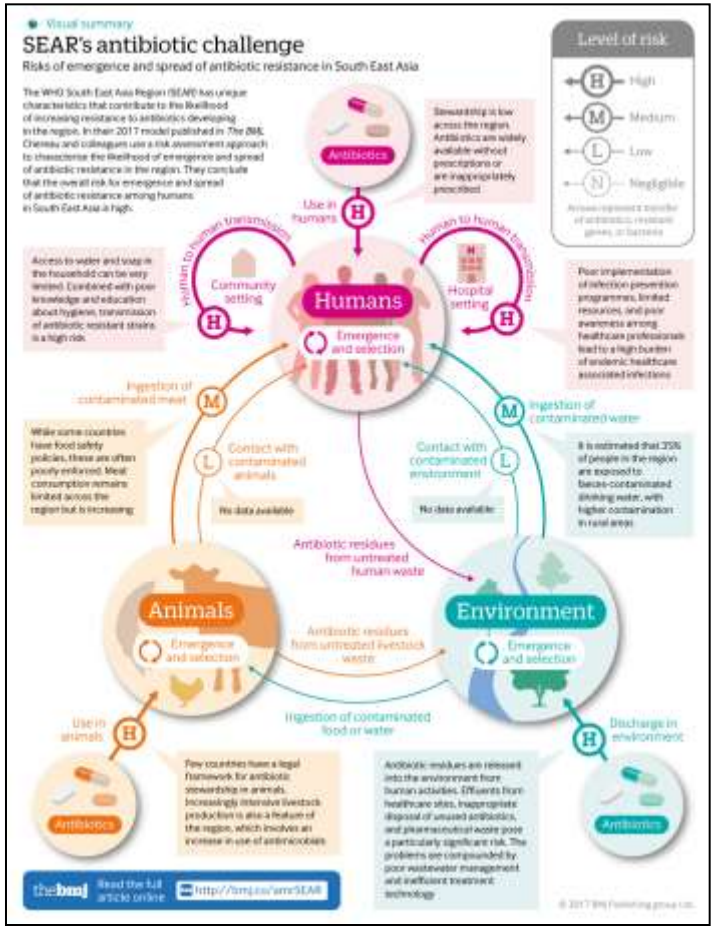
Regional / Global Overview

WHO region	No. of Member States	Total no. of Member States in region	Percentage
African Region	8	47	17
Region of the Americas	26	35	74
Eastern Mediterranean Region	13	21	62
European Region	49	53	92
South-East Asia Region	11	11	100
Western Pacific Region	26	27	96

apps.who.int/iris/bitstream/10665/163468/1/9789241564946_eng.pdf

AMR in SEAR: Challenges

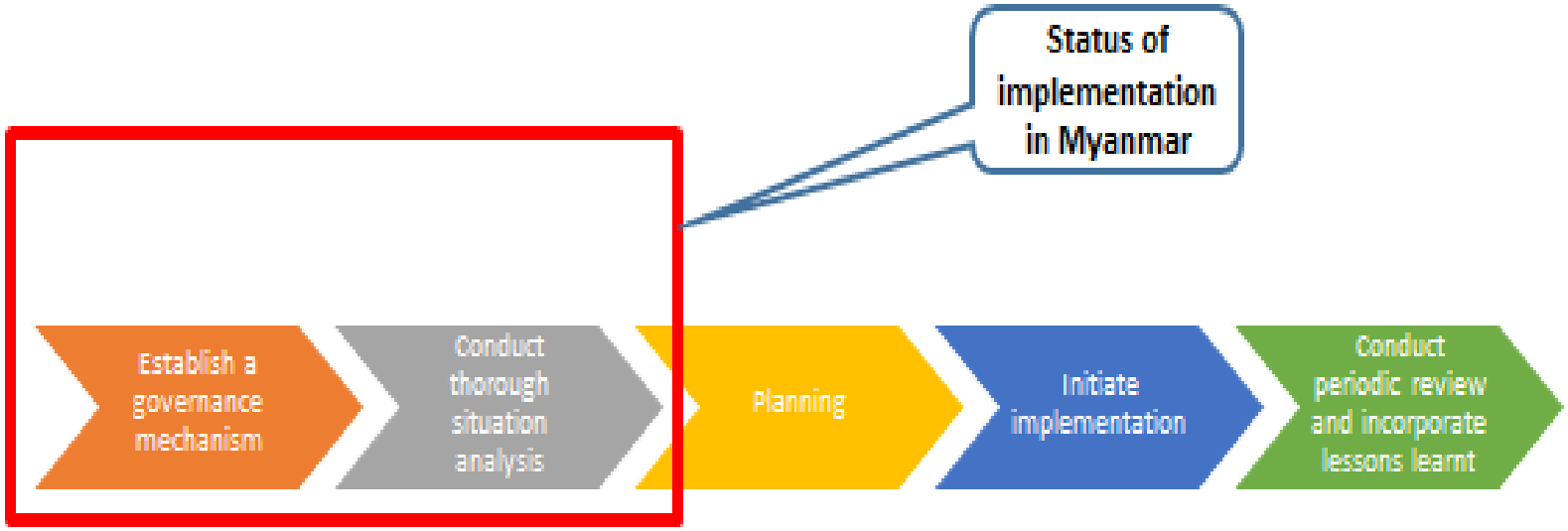
- Various **challenges** including
  - **high burden** of infectious diseases
  - **unregulated** sale of antibiotics
  - widespread antibiotic use in **animal farming**
  - **low awareness** among professionals and public
  - **improper** food chain system and food handling
  - **inadequate** Public Health infrastructure & sanitation and hygiene
  - need of **strong** political commitment and law enforcement



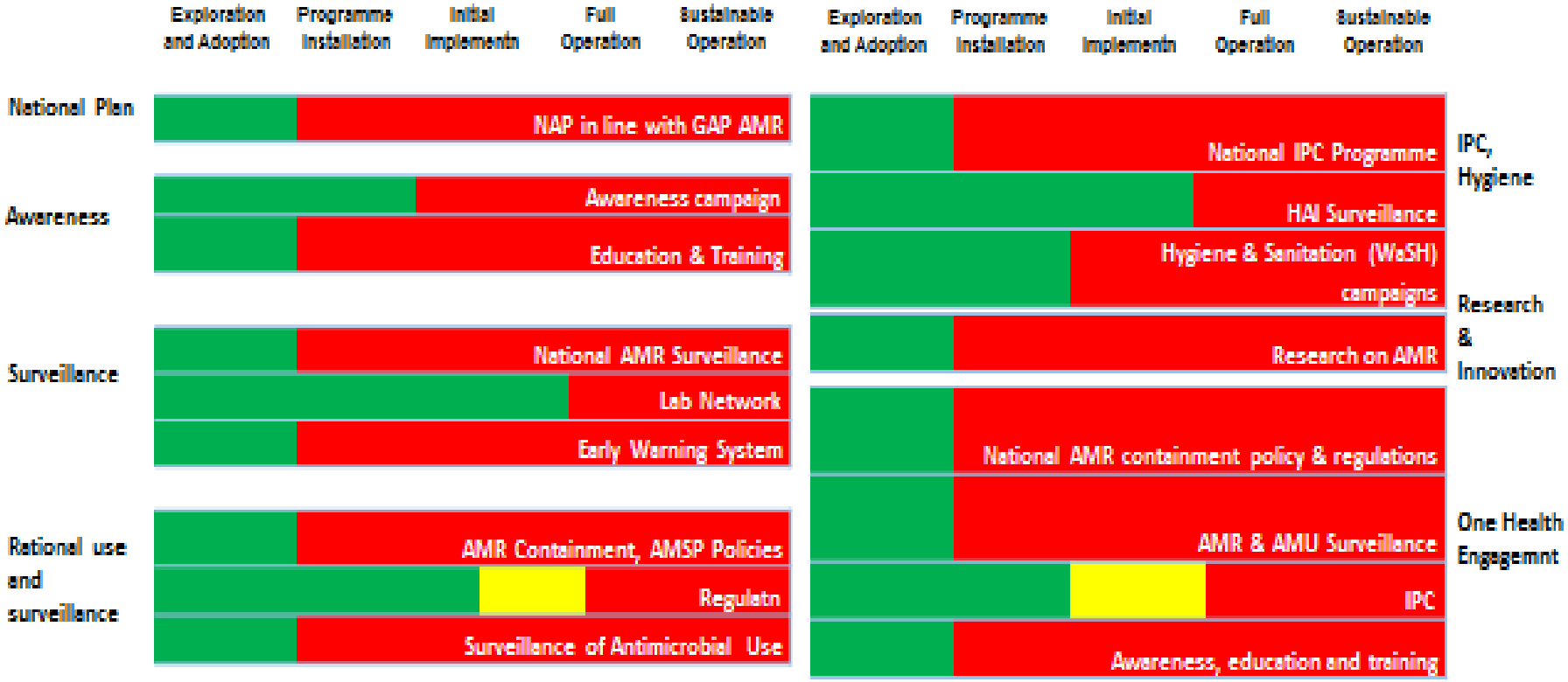
Myanmar National AMR situation

analysis by WHO 2016

Steps in development and implementation of NAP – status in Myanmar

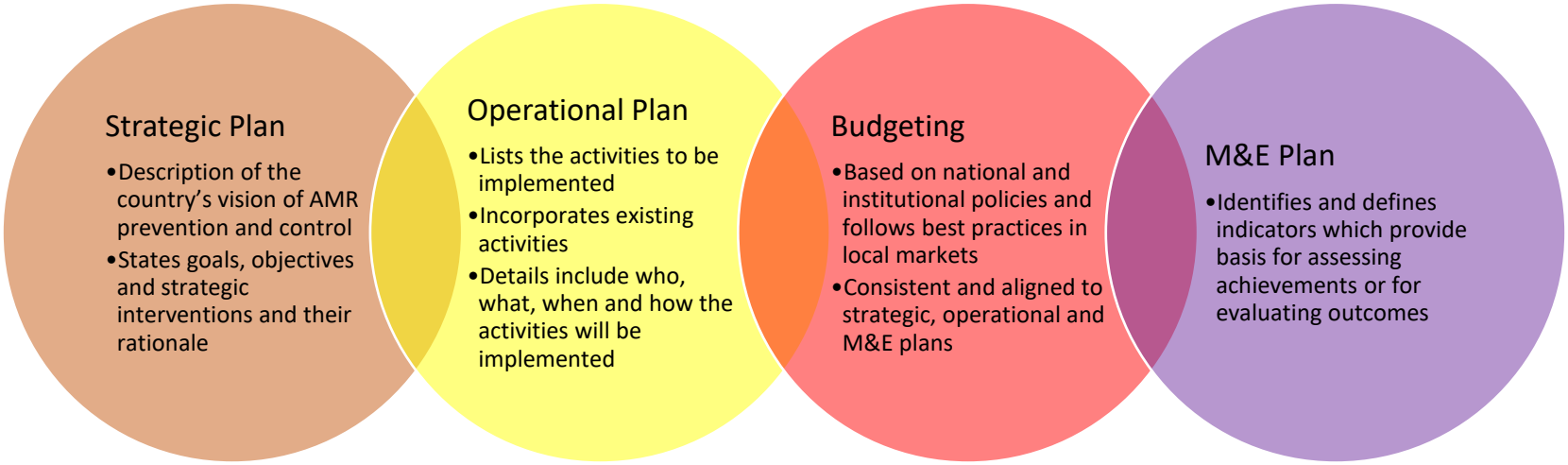


Situation of AMR containment program by phases of implementation, Myanmar (2016) by WHO



AMR containment program is at phase of exploration and adoption in different focus areas with initial implementation in awareness and hygiene/sanitation and laboratory surveillance; drug regulation is in process of achieving full operation

Components of a Myanmar National Action Plan



Guidelines available for development of Myanmar NAP

Proposed Structure of National Action Plan by Strategic Objective

Strategic objective 3: HYGIENE, INFECTION PREVENTION AND CONTROL

Objective 3.2: Decrease Hospital Acquired Infection (HAI) and associated AMR through facility based HAI surveillance programme (Human Health)

Strategic intervention 3.2 Implement a healthcare facility-based HAI surveillance system along with related AMR surveillance (human health).

KEY ACTIVITIES

2017-18	1. The TWG (IPC) will commission a multi-sectoral task force that will, as part of Hospital IPC Guidelines, develop guidelines for HAI surveillance (objectives, standardised case definitions, methods of detecting infections/procedures/exposures and exposed populations, process for analysis of data, evaluation of data quality, reporting/communication lines at local level and from local to national facilities, quality assured microbiology capacity, training programme, financial outlays).
2019-22	2. ASCC will implement on pilot scale a HAI surveillance in select public and private healthcare facilities. HAI surveillance data will be reported centrally from these public and private healthcare facilities.
2022	3. ASCC will carry out a formal assessment of HAI surveillance pilot. Data from HAI surveillance network will be integrated into National AMR surveillance network as outlines in 2.1 (7). Integrated analysis of surveillance data will form the basis for monitoring and response frameworks, including the identification of priority triggers (priority pathogens or pathogen-drug resistance combination) that will be established by ASCC. HAI surveillance will be implemented on a national wide scale covering central, regional, referral, township, district and rural hospitals in public and sentinel private hospitals/chains of hospitals

Responsible Agency

AMR Surveillance Coordination Centre, National Health Laboratory

Partners and Stakeholders

DG Medical Services, National Private Hospitals' Association, MMA, WHO

Key Indicators

- National HAI surveillance standards and guidelines
- Number of HAI surveillance sites
- Performance reports of national HAI surveillance programme

Stakeholder meeting on NAP AMR, 27 February 2017

- Review the existing proposals on governance mechanisms and propose a single comprehensive yet implementable multi-sectoral governance mechanism in line with WHO NAP guidelines

- Review strategic interventions, objectives, in light of the situation analysis and any subsequent in country developments related to AMR Control

- Recommend next steps for finalization of NAP AMR for Myanmar

SWOT Analysis on Myanmar AMR situation

	+	-
Internal Factors	**Strengths**	**Weaknesses**
	▪ A global action plan endorsed by all Member States ▪ Strong political commitment from ministries of Agriculture, Health and department of environment ▪ Adopted international accords on use of antimicrobials	▪ Segmented surveillance systems for data of isolate resistance ▪ Insufficient public awareness of antimicrobial resistance ▪ Insufficient resources for implementation
External Factors	**Opportunities**	**Threats**
	▪ Enhanced coordination across sectors ▪ Development of a coordinated global surveillance system ▪ Increased interest and funding from international sources	▪ Resource mobilization may not meet needs for full implementation ▪ Emergence of resistant strains accelerate faster than response

Prioritization is Key!

- Most critical
- Most impactful
- Most achievable
  (cost/infrastructure/least obstacles)

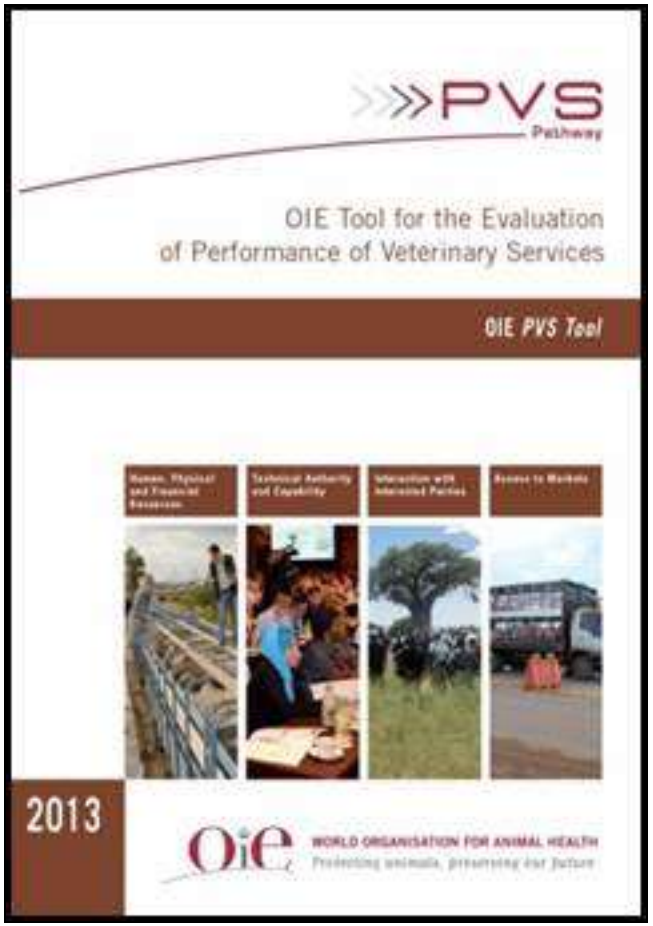
- Spread / share the work: Each TWG have their own work plans (short – medium – long)

Myanmar AMR/AMU situation in the animal sector

- Feed and Veterinary Medicinal products for animals for regulated under Animal health and Development law (93)

- Myanmar could not undertake routine surveillance of AMR in animals

PVS Pathway Activities in Myanmar



- PVS Evaluation Mission
  October 2009
- PVS Gap Analysis
  December 2010
- PVS Follow-up Mission
  January 2015
- PVS Laboratory Mission
  March-April 2016
- VLSP Veterinary Legislation Identification Mission
  March 2018

National Livestock AMU/AMR Control Plan

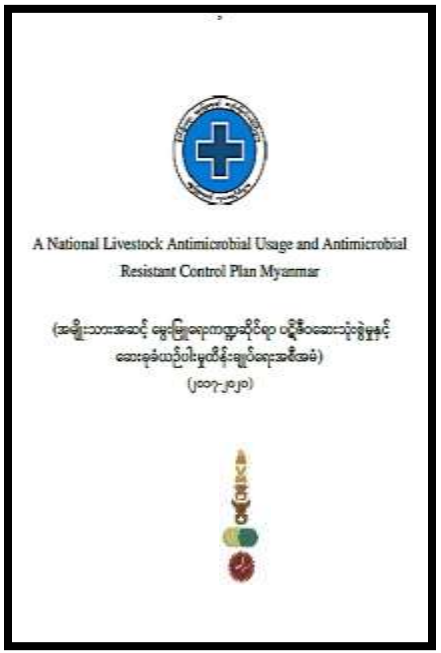
1. **IMPROVE awareness and understanding** of AMR through effective communication, education and training;

2. **STRENGTHEN knowledge and evidence** base through surveillance and research;

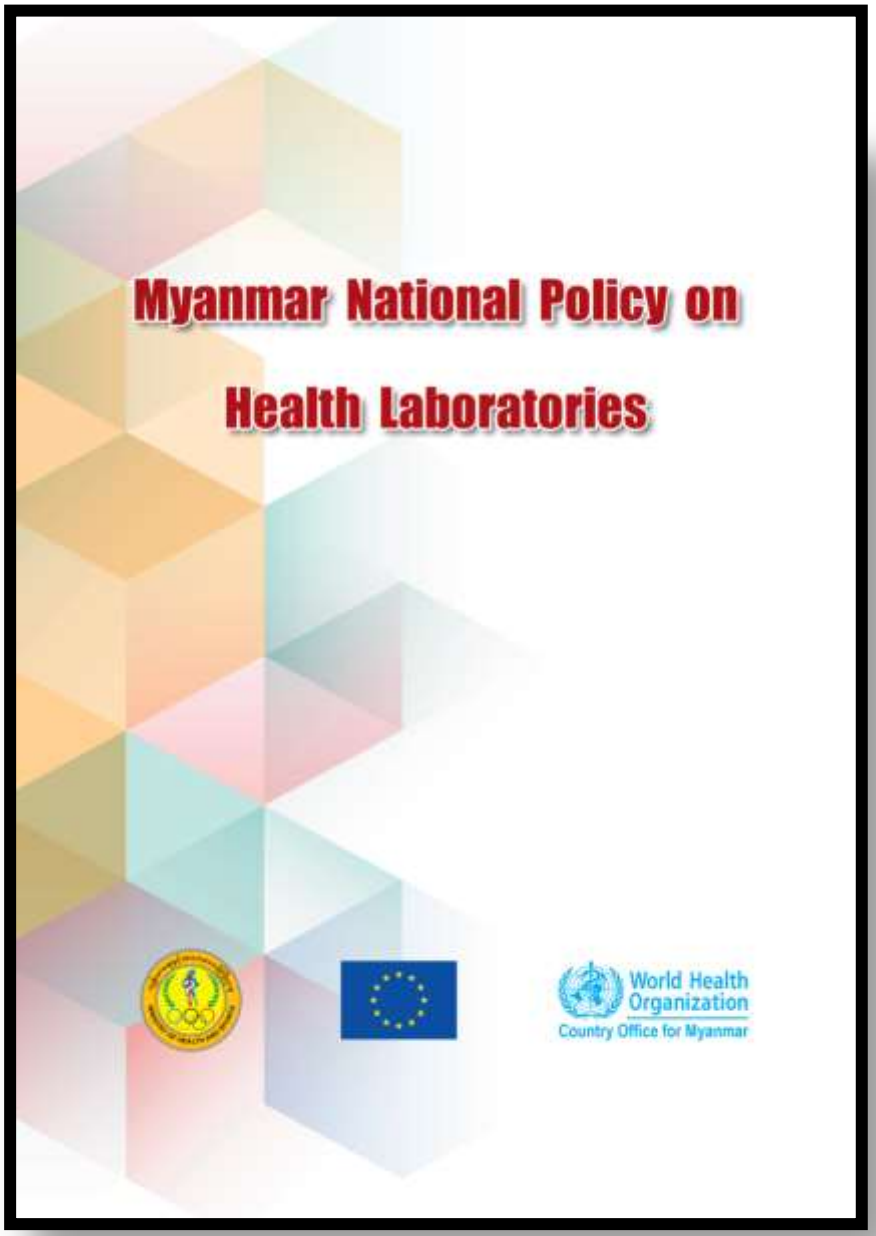
3. **REDUCE the incidence of infection** through GAHP (effective sanitation, hygiene and infection prevention measures)

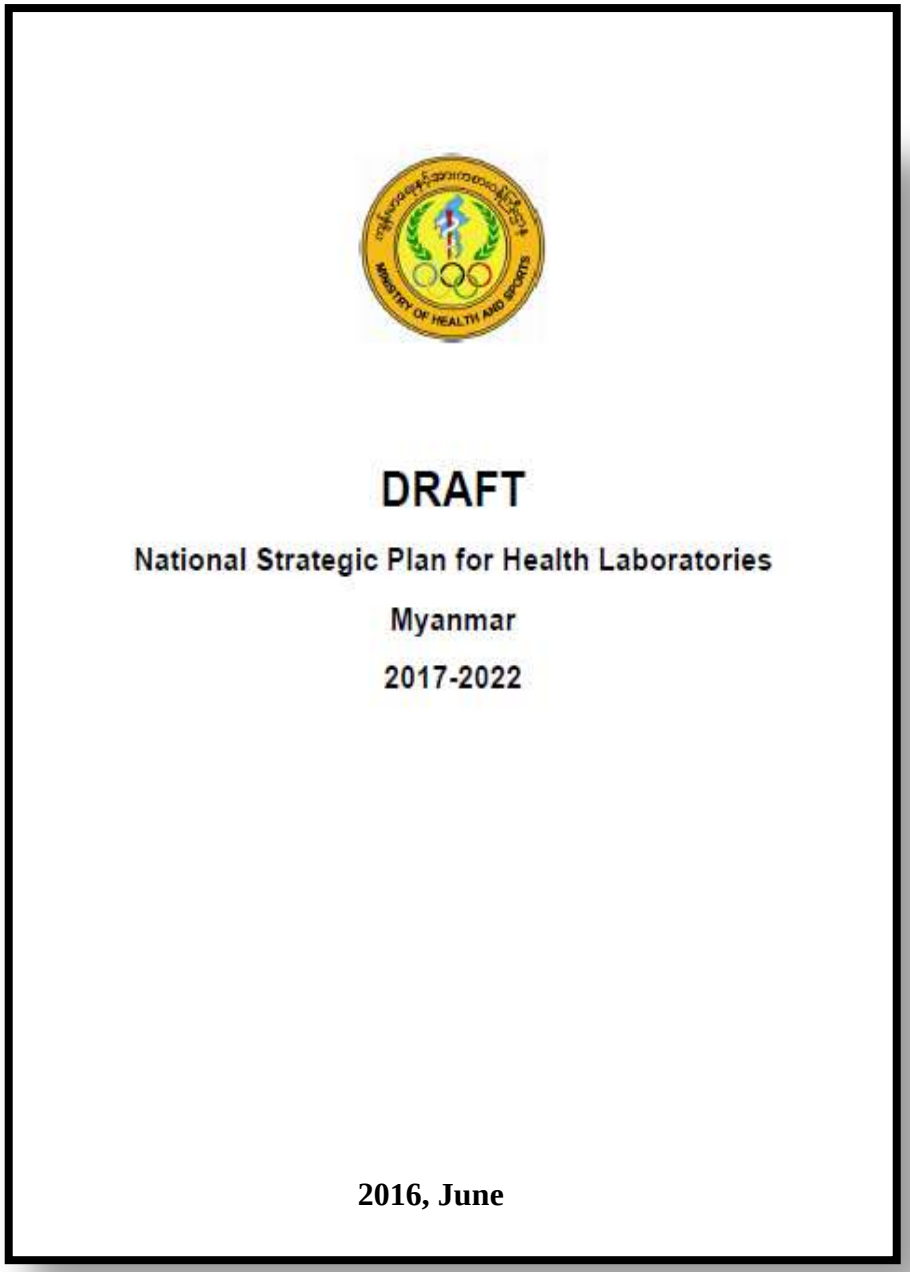
4. **OPTIMIZE the use of antimicrobial medicines** in animal health;

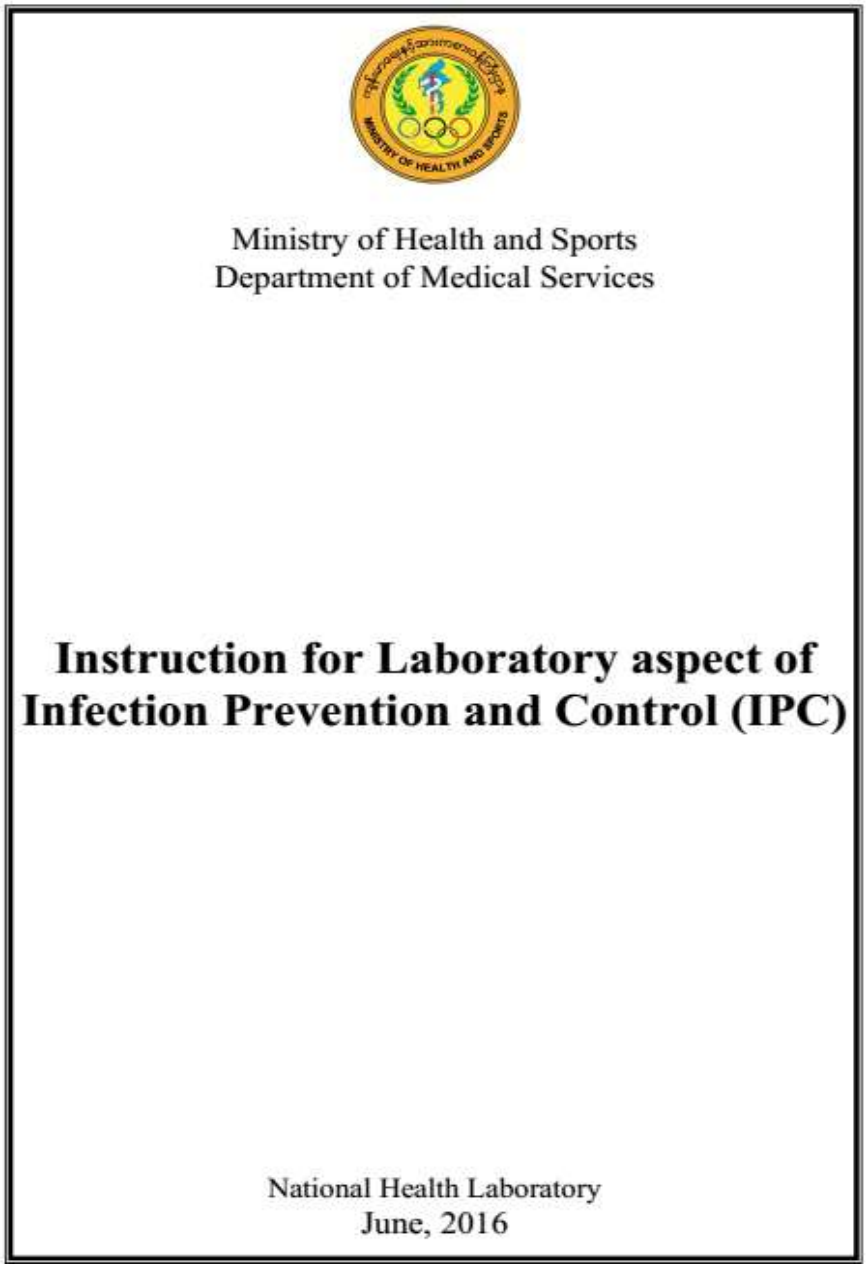
5. **DEVELOP sustainable way of reducing antibiotics and look for alternatives** (new medicines, diagnostic tools, vaccines, and other interventions.)

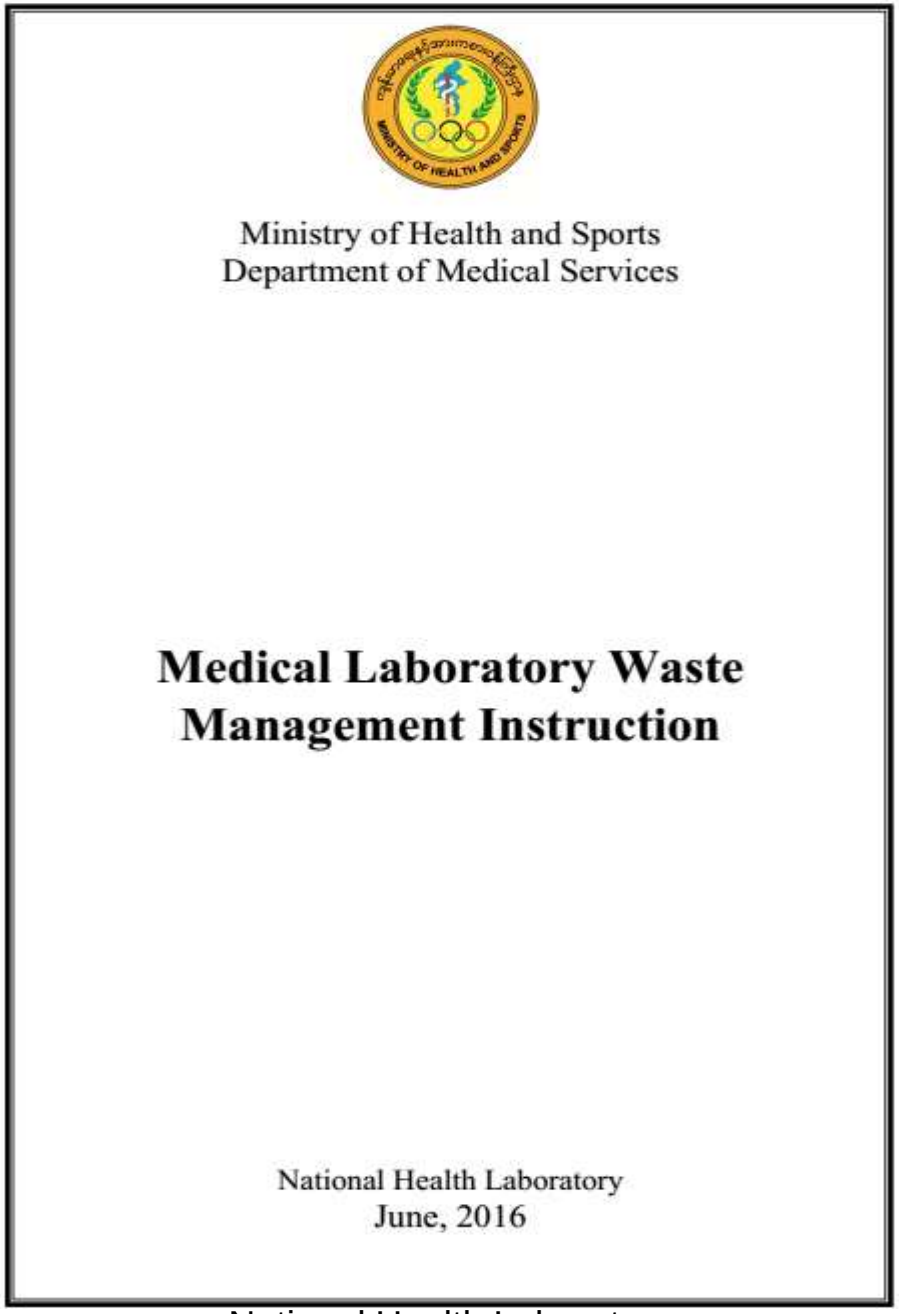

A National Livestock Antimicrobial Usage and Antimicrobial Resistant Control Plan Myanmar

Background documents to support Myanmar NAP AMR development


Myanmar National Policy on
Health Laboratories
World Health Organization
Country Office for Myanmar

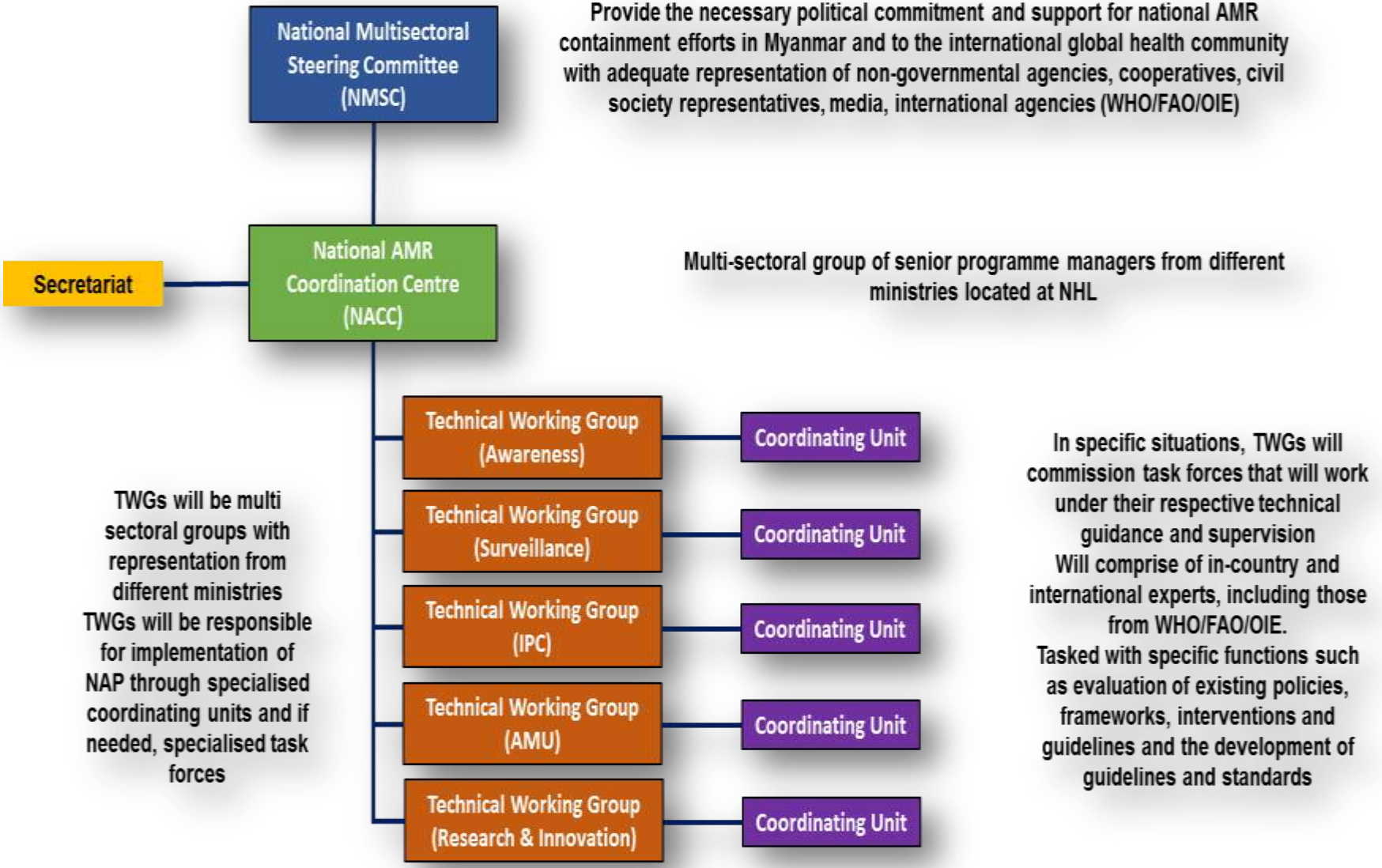

DRAFT
National Strategic Plan for Health Laboratories
Myanmar
2017-2022
2016, June


Ministry of Health and Sports
Department of Medical Services
Instruction for Laboratory aspect of
Infection Prevention and Control (IPC)
National Health Laboratory
June, 2016


Ministry of Health and Sports
Department of Medical Services
Medical Laboratory Waste
Management Instruction
National Health Laboratory
June, 2016

- **Myanmar NAP governance**
- **MNSC**
- **NCC**
- **TAG**
- **Strategic plan , strategic activities**
- **TAG**

NAP Governance: Myanmar



National Multisectoral Steering Committee(NMSC) Combating AMR Myanmar

Endorsed .. 2018 January

- Chairman.. Union Minister of Health and Sports
- 19 members in multisectoral and one-health aprroach
- DDG (Labs) .. Secretary

National AMR Coordinating Centre (NACC/NCC)

- Strategic vision to AMR control efforts
- Platform for programme planning and implementation through a supporting structure comprising of technical working groups for individual strategic objectives

National AMR Coordinating Centre (NACC/NCC) Cont:

- Multi-sectoral group of senior programme managers from different ministries with adequate representation of non-governmental agencies, cooperatives, civil society representatives, media, international agencies (WHO/FAO/OIE)

National AMR Coordinating Centre (NACC/NCC) Cont:

- Integration of AMR containment efforts into the existing health system, clinicians , FDA , DMR and NHL , public health and disease-specific programmes, animal health and production food sector and other environmental initiatives

National AMR Coordinating Centre (NACC/ NCC) Cont:

- Chaired by **National Focal Point**

  Deputy Director General (Labs)

- Located in NHL, Yangon

- Meet every month

National AMR Coordinating Centre (NACC/ NCC) Cont:

Members :

- Ministry of Health and Sports(Med. Care, NHL,FDA)
- Ministry of Agriculture,Livestock and Irrigation (LVBDLab, Agri. Lab) , Education ,Commerce, Home Affairs ,Defence
- MPharmA, MMA,MPHA,

Roles and responsibilities of NACC/NCC:

- Planning, implementation and monitoring & evaluation of different strategic interventions and activities of NAP AMR
- Monitoring and evaluation on implementation different strategic interventions and activities of NAP AMR
- Reporting implementation status to NMSC, national agencies and international partners

Roles and responsibilities of NACC/NAC: Cont:

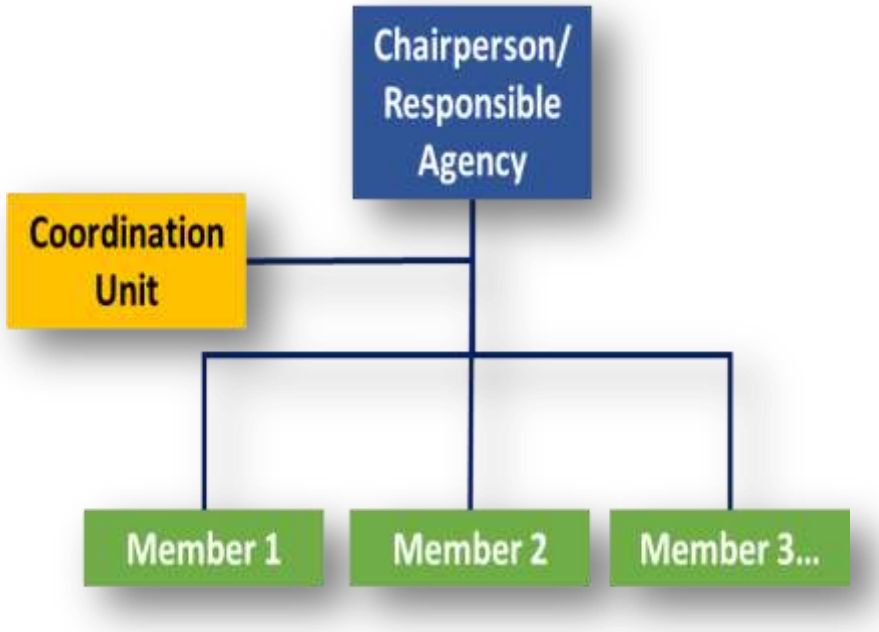
- Technical working groups and commission the task forces
- Facilitating collaborations with internal and external agencies and organizations
- Advocacy for prevention and containment of AMR

National Focal Point of AMR

- Coordinating AMR activities and tasks in the health, animal, aquaculture, food production and environment sectors
- Lead and coordinate drafting of a national action plan for containment of AMR
- Facilitation and implementation, M&E of the plan through the NACC/NCC

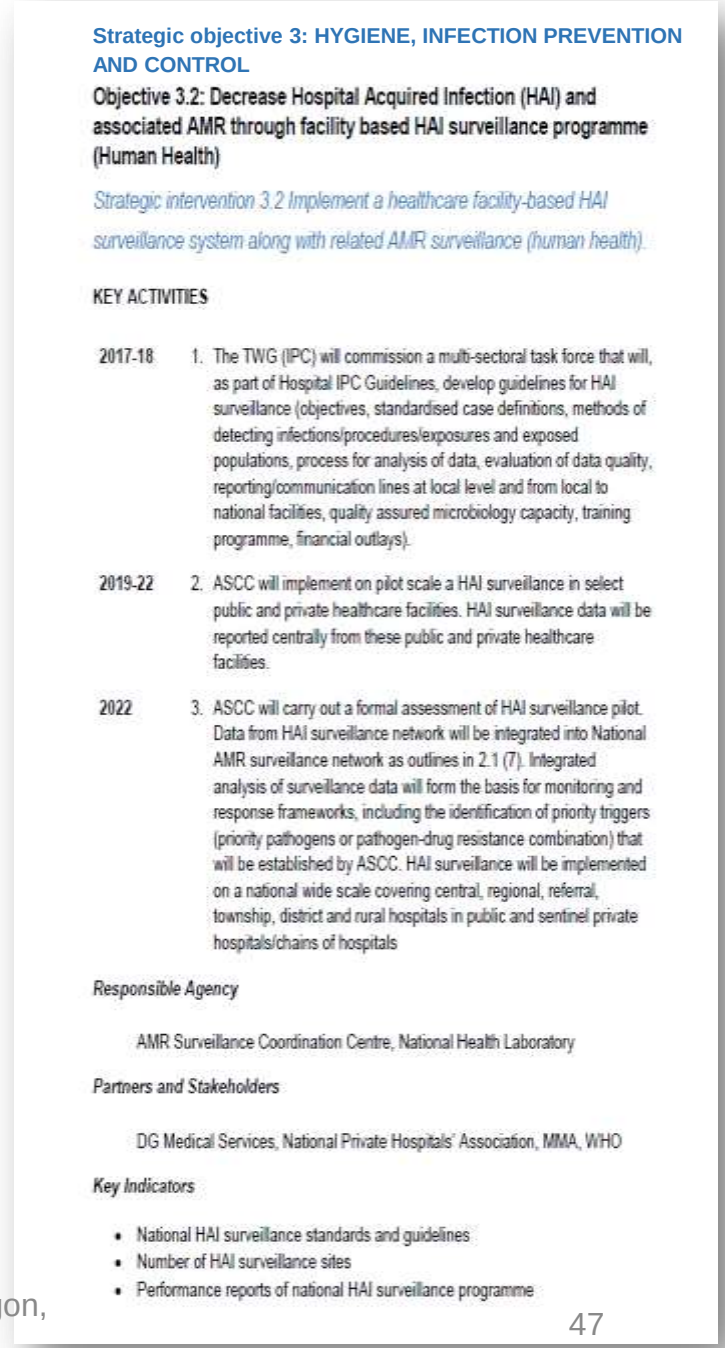
Technical Working Groups: General Terms of references and Structure

- Technical working group (TWG) will be multi-sectoral in composition and will report to the NACC. In their respective strategic objective, the TWG will:
  - Provide strategic direction by identifying intervention and key activities
  - Conduct situational analyses
  - Draft detailed sub activity level NAP
  - Plan and budget for different activities
  - Monitor and evaluate implementation of strategic interventions and corresponding key activities
  - Provide technical input
  - Commission specialised task forces, if necessary



Strategic Plan Structure

- Structured around the five strategic objectives of GAP AMR
- 12 Specific Objectives
- 12 Key Strategic Interventions
- Each intervention described in terms of a defined set of key activities to be carried out successfully to execute the strategic intervention
- Key Monitoring & Evaluation indicators listed for activities under each of the strategic interventions
- Detailed description of each activity to allow subsequent operational planning
- Detailed planning along with budget allocation for respective sub-activities to be done in due course by national stakeholders



Strategic objective 3: HYGIENE, INFECTION PREVENTION AND CONTROL

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Key Indicators

- National HAI surveillance standards and guidelines
- Number of HAI surveillance sites
- Performance reports of national HAI surveillance programme

Strategic objectives in line with GAP AMR

- SO1: Improve awareness of AMR
- SO2: Strengthen knowledge through surveillance and research
- SO3: Infection prevention control measures, including WaSH
- SO4: Optimise use of AMAs in animal and human health
- SO5: Economic case for sustainable investment

SO1: Improve awareness and understanding of antimicrobial resistance through effective communication, education and training

Objective 1.1: To establish an evidence-based public communications programme on a national scale for improving awareness of AMR amongst the general public and professionals	**Strategic intervention 1.1 Establish an evidence-based public communications programme targeting audiences in policy making, human and animal health practice, the general public and professional on prudent use of antimicrobials**
Objective 1.2: Improve knowledge of AMR and related topics in professionals through professional education and training deployed at the national scale	**Strategic intervention 1.2 Include AMR and related topics such as Infection Prevention Control a core component of professional education, training, certification and Development for health care providers and veterinarians**

SO1: Improve awareness and understanding of antimicrobial resistance through effective communication, education and training

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SO1: Improve awareness and understanding of antimicrobial resistance through effective communication, education and training

Objective 1.2: Improve knowledge of AMR and related topics in professionals through professional education and training deployed at the national scale	**Strategic intervention 1.2 Include AMR and related topics such as Infection Prevention Control a core component of professional education, training, certification and Development for health care providers and veterinarians**	**<u>Responsible agency</u>:** **Same**	**Key indicators**: Awareness levels by professional groups; Number of revised curricula for target professional groups; Audit reports of professional courses
		<u>Partners & stakeholders</u>: **Same**	

SO2: Strengthen the knowledge and evidence base through surveillance and research

Objective 2.1: Set up a national surveillance system for antimicrobial resistance under the leadership of a National Coordinating Centre	**Strategic intervention 2.1 Establish a national coordination structure for surveillance of AMR**
Objective 2.2: Build laboratory capacity under the leadership of a National Referral Laboratory (NRL) to produce high-quality microbiological data for patient and food-safety management and support surveillance activities	**Strategic intervention 2.2 Establish a quality assured national laboratory surveillance network (for AMR surveillance and action)**
Objective 2.3: Develop a multi-centric surveillance system on the national scale to provide early warning of emerging resistance and monitoring of secular trends at national and sub-national levels	**Strategic intervention 2.3 Establish a systematic, standardized process to collect, assess and share data, maps and trends on AMR hazards; develop communication and dissemination systems to ensure coordination and information exchange; and initiate responses to warning triggers**

SO2: Strengthen the knowledge and evidence base through surveillance and research

Objective 2.1: Set up a national surveillance system for antimicrobial resistance under the leadership of a National Coordinating Centre

Strategic intervention 2.1 Establish a national coordination structure for surveillance of AMR

Responsible agency:

Deputy Director General (Labs), DoMS, MoHS

Key indicators: Presence of ASCU with FP; AMR surveillance standards & guidelines incorporating GLASS standards & other intergovernmental standards; List of priority pathogens, specimens, pathogen-antimicrobial combinations; No. of AMR surveillance sites fulfilling requirements of programme; Data reports from surveillance sites; Timeliness & completeness of surveillance reports; Assessment reports of National AMR surveillance programme

Partners & Stakeholders:

MoHS (DoPH (CEU), DoMS (NHL, Medical Superintendents of Central, Teaching and States/Regional Hospitals), DHRH, DMR, FDA, DoSPE, State and Regional Health Directors), MoALI (Veterinary Diagnostic Lab, Veterinary Assay Lab and Directorate of Epidemiology of MoALI), MoD, MPHA (Medical Superintendents of Private Hospitals), WHO, FAO, OIE

SO2: Strengthen the knowledge and evidence base through surveillance and research

Objective 2.2: Build laboratory capacity under the leadership of a National Referral Laboratory (NRL) to produce high-quality microbiological data for patient and food-safety management and support surveillance activities

Partners & Stakeholders:

Same

Strategic intervention 2.2 Establish a quality assured national laboratory surveillance network (for AMR surveillance and action)

Responsible agency:

Same

Key indicators: NRL with expertise in methods for confirming and characterizing specific pathogens, organizing QA & participates in EQAS;

No. of quality assured labs supporting AMR surveillance sites;

AMR surveillance standards & guidelines incorporating GLASS standards & other intergovernmental standards;

Surveillance staff, clinical staff, lab personnel trained in AMR surveillance & lab techniques according to GLASS standards;

National AMR EQAS;

Performance reports of national lab network

SO2: Strengthen the knowledge and evidence base through surveillance and research

Objective 2.3: Develop a multi-centric surveillance system on the national scale to provide early warning of emerging resistance and monitoring of secular trends at national and sub-national levels	**Strategic intervention 2.3 Establish a systematic, standardized process to collect, assess and share data, maps and trends on AMR hazards; develop communication and dissemination systems to ensure coordination and information exchange; and initiate responses to warning triggers**	**<u>Responsible agency</u>:** **Same** **<u>Partners & Stakeholders:</u>** **Same**	**Key indicators**: Protocols for interagency communication; AMR risk assessment policy and guidelines; List of priority AMR risk triggers; Baseline estimates of trends and thresholds for alerts and action systems; Multi-sectoral RRTs; Central database of AMR pathogens and their risk information; Timeliness and completeness of surveillance reports; Assessment reports of AMR risk Early Warning System

SO3: Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures

Objective 3.1: To establish a national infection prevention and control programme through full implementation and compliance with the IPC guidelines within healthcare settings, animal husbandry systems and fisheries and the food chain	**Strategic intervention 3.1 Create a formal organizational structure to ensure proper development and use of infection prevention and control policies and strategies in health care settings, animal rearing facilities and in fisheries**
Objective 3.2: Decrease Hospital Acquired Infection (HAI) and associated AMR through facility based HAI surveillance programme (Human Health)	**Strategic intervention 3.2 Implement a healthcare facility-based HAI surveillance system along with related AMR surveillance (human health)**
Objective 3.3: To limit the development and spread of AMR outside health settings through sanitation campaign and training on a national scale and monitoring and evaluation of these campaigns	**Strategic intervention 3.3 Promote sanitation and hygiene by social mobilisation and behavioural change activities**

SO3: Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures

Objective 3.1: To establish a national infection prevention and control programme through full implementation and compliance with the IPC guidelines within healthcare settings, animal husbandry systems and fisheries and the food chain

Strategic intervention 3.1 Create a formal organizational structure to ensure proper development and use of infection prevention and control policies and strategies in health care settings, animal rearing facilities and in fisheries

Responsible agency:

DG YGH, DoMS, MoHS

Partners & Stakeholders:

MoHS (DoPH, DoMS (NHL, Medical Superintendents of Central, Teaching and States/Regional Hospitals), DHRH, DMR, State and Regional Health Directors), MoALI, MoD, MoE, MoHA, MoI, Ministry of Industry, MMA, MAMS, TAG for clinical domain, MDA, MPA, MHAA, MNA, MPHA, MLF, City Development Committees (NCDC, YCDC, MCDC), WHO, FAO, OIE, ADB, NGOs & INGOs, CSOs

Key indicators:

Evidence based IPC guidelines

Healthcare workers and staff trained in IPC procedures and guidelines

Number of institutions with IPC programme

Revision of curricula of target professional groups

Number of institutions with audit reports

Performance reports of national IPC programme

SO3: Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures

Objective 3.2: Decrease Hospital Acquired Infection (HAI) and associated AMR through facility based HAI surveillance programme (Human Health)	**Strategic intervention 3.2 Implement a healthcare facility-based HAI surveillance system along with related AMR surveillance (human health)**	**<u>Responsible agency</u>:** **Same**	**Key indicators**: National HAI surveillance standards and guidelines; Number of HAI surveillance sites;
		<u>Partners & Stakeholders:</u> **Same**	Performance reports of national HAI surveillance programme

SO3: Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures

Objective 3.3: To limit the development and spread of AMR outside health settings through sanitation campaign and training on a national scale and monitoring and evaluation of these campaigns	**Strategic intervention 3.3 Promote sanitation and hygiene by social mobilisation and behavioural change activities**	**<u>Responsible agency:</u>** **Same** **<u>Partners & Stakeholders:</u>** **Same**	**Key indicators:** Campaign for sanitation and hygiene; Number of revised curricula for target groups with sanitation and hygiene and safe food handling in the core curriculum; Vaccination coverage rates

SO4: Optimize the use of antimicrobial medicines in human and animal health

Objective 4.1: Establish a national AMR containment policy, Antimicrobial Stewardship Programmes (AMSP) and Standard Treatment Guidelines (STG) at the national scale for prudent use of antimicrobials	**Strategic intervention 4.1 Create a national AMR containment policy for control of use of antimicrobials in humans and animals, and establish a comprehensive evidence-based formal antimicrobial stewardship programmes at the national level**
Objective 4.2: Regulation of post-marketing quality of drugs under the leadership of an NRA/DRA to ensure access to quality antibiotics	**Strategic intervention 4.2 Strengthening of a competent National Regulatory Agency (NRA) or Drug Regulatory Agency (DRA) which can enforce quality standards of antimicrobial drugs (veterinary, human, and aquaculture)**
Objective 4.3: Establish mechanisms to monitor antimicrobial usage on a national scale to inform interventions to reduce overuse and promote prudent use of antimicrobial substances	**Strategic intervention 4.3 Monitoring antimicrobial use (AMU) and sales in humans, animals and fisheries; monitor trends of residues of antimicrobials in food chains to inform interventions to promote prudent use of antimicrobials**

SO4: Optimize the use of antimicrobial medicines in human and animal health

Objective 4.1: Establish a national AMR containment policy, Antimicrobial Stewardship Programmes (AMSP) and Standard Treatment Guidelines (STG) at the national scale for prudent use of antimicrobials	**Strategic intervention 4.1 Create a national AMR containment policy for control of use of antimicrobials in humans and animals, and establish a comprehensive evidence-based formal antimicrobial stewardship programmes at the national level**	**Responsible agency:** **DG FDA (MoHS), DG (MoALI), DyDG (Medical Care)** **Partners & Stakeholders:** **MoHS (DoPH, FDA, State and Regional Health Directors,), MoALI (Veterinary Assay Lab), MoC, MoD, MoHA, MMA, MAMS,TAG for clinical domain, MDA, MPHA, MLF, UMFCCI, WHO, FAO, OIE**	**Key indicators:** Evidence based national standard treatment guidelines; National Essential medicines list; Regulatory framework for control of human use of AMAs; Comprehensive, evidence based National AMSP guidelines for health care and community settings addressing the core areas; Performance reports of National AMSP

SO4: Optimize the use of antimicrobial medicines in human and animal health

Objective 4.2: Regulation of post-marketing quality of drugs under the leadership of an NRA/DRA to ensure access to quality antibiotics	**Strategic intervention 4.2 Strengthening of a competent National Regulatory Agency (NRA) or Drug Regulatory Agency (DRA) which can enforce quality standards of antimicrobial drugs (veterinary, human, and aquaculture)**	**<u>Responsible agency</u>:** **Same** **<u>Partners & Stakeholders:</u>** **Same**	**Key indicators**: Regulations for rational use of antimicrobials; National DRAs with appropriate mandate, TORs, membership and leadership; National Drug Policy; Regulations for import, export, local production, distribution and use of finished AMAs and APIs and OTC sales; Guidelines for drug quality management system (manufacturing, registration, supply, storage, transport, inspection and legal provisions for penal sanctions for non-compliance) Number of drug quality monitoring sites; Estimates of OTC sale of AMAs and APIs

SO4: Optimize the use of antimicrobial medicines in human and animal health

Objective 4.3: Establish mechanisms to monitor antimicrobial usage on a national scale to inform interventions to reduce overuse and promote prudent use of antimicrobial substances	**Strategic intervention 4.3 Monitoring antimicrobial use (AMU) and sales in humans, animals and fisheries; monitor trends of residues of antimicrobials in food chains to inform interventions to promote prudent use of antimicrobials**	**Responsible agency**: **Same**	**Key indicators**: AMU surveillance and monitoring system; Sales data for AMAs at the national level;
		Partners & Stakeholders: **Same**	Actionable recommendations on modifying AMU to contain AMR

SO5: Develop the economic case for sustainable investment that takes account of the needs of all countries, and increase investment in new medicines, diagnostic tools, vaccines and other interventions

Objective 5.1: To promote sustainable investment in new medicines, diagnostic tools, vaccines and other interventions by developing a strategic research agenda and national research policy

Strategic intervention 5.1 Generate cost effectiveness and benefit evidence for reducing AMU & AMR; develop a national strategic research agenda

SO5: Develop the economic case for sustainable investment that takes account of the needs of all countries, and increase investment in new medicines, diagnostic tools, vaccines and other interventions

Objective 5.1:
To promote sustainable investment in new medicines, diagnostic tools, vaccines and other interventions by developing a strategic research agenda and national research policy

Strategic intervention 5.1
Generate cost effectiveness and benefit evidence for reducing AMU & AMR; develop a national strategic research agenda

Responsible agency:

Dept.: DG DMR (MoHS)

Partners & Stakeholders:

MoHS (DoPH, DoMS (NHL), DHRH {UM(1),UM(2),UMM, UMMG, UMTGI, UDM, UPH, UCH}, DMR, FDA), MoALI (Research and Development Unit, University of Veterinary Science), MoD (DSMA), MoI, TAG for clinical domain,

WHO, FAO, OIE, CSOs

Key indicators:

Research network and collaborations;

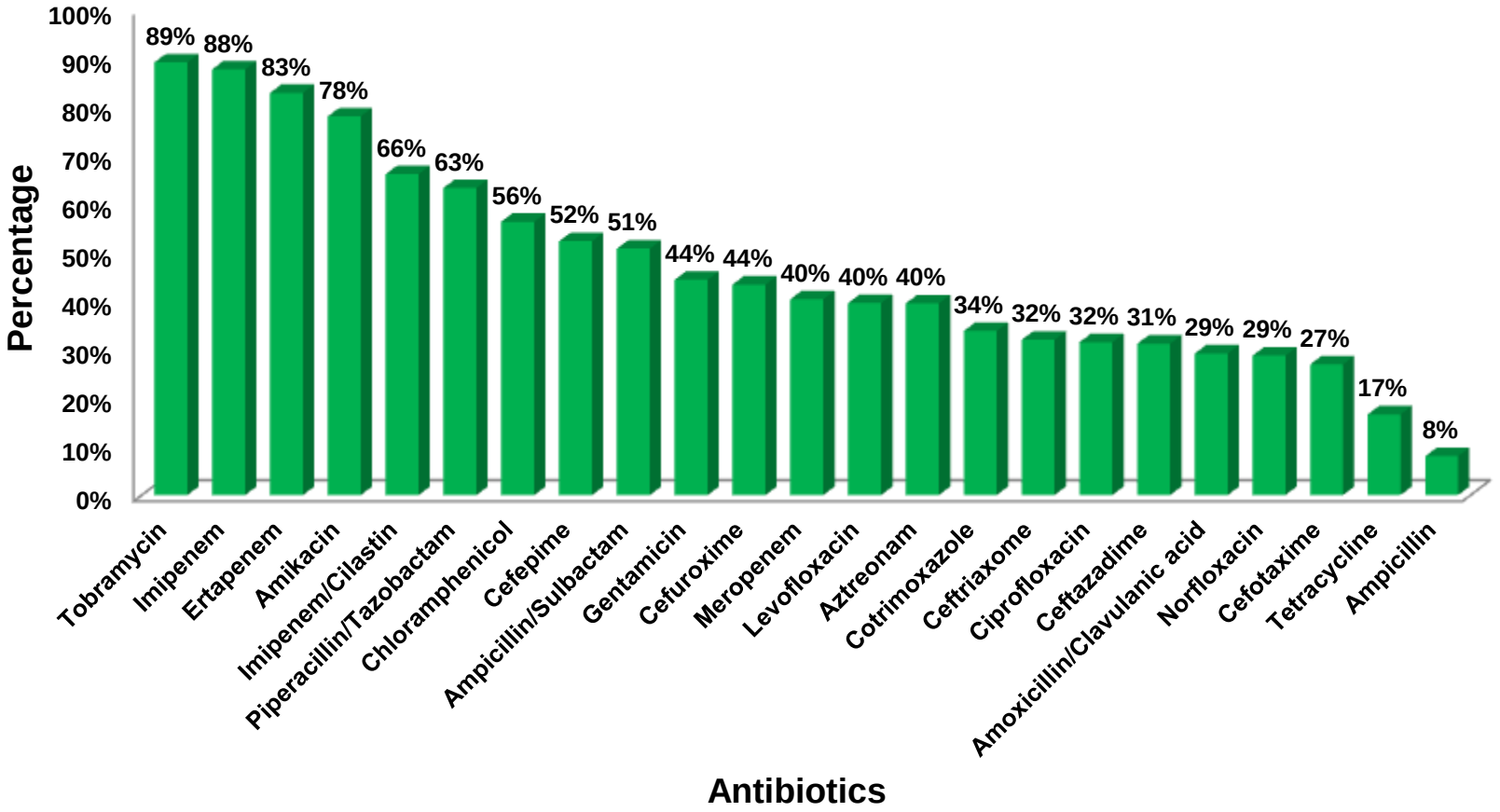
Multi-stakeholder research initiative National Research Policy on AMAs and AMR Research;

Strategic research agenda, with prioritised research areas, and resource needs in the field of AMAs and AMR;

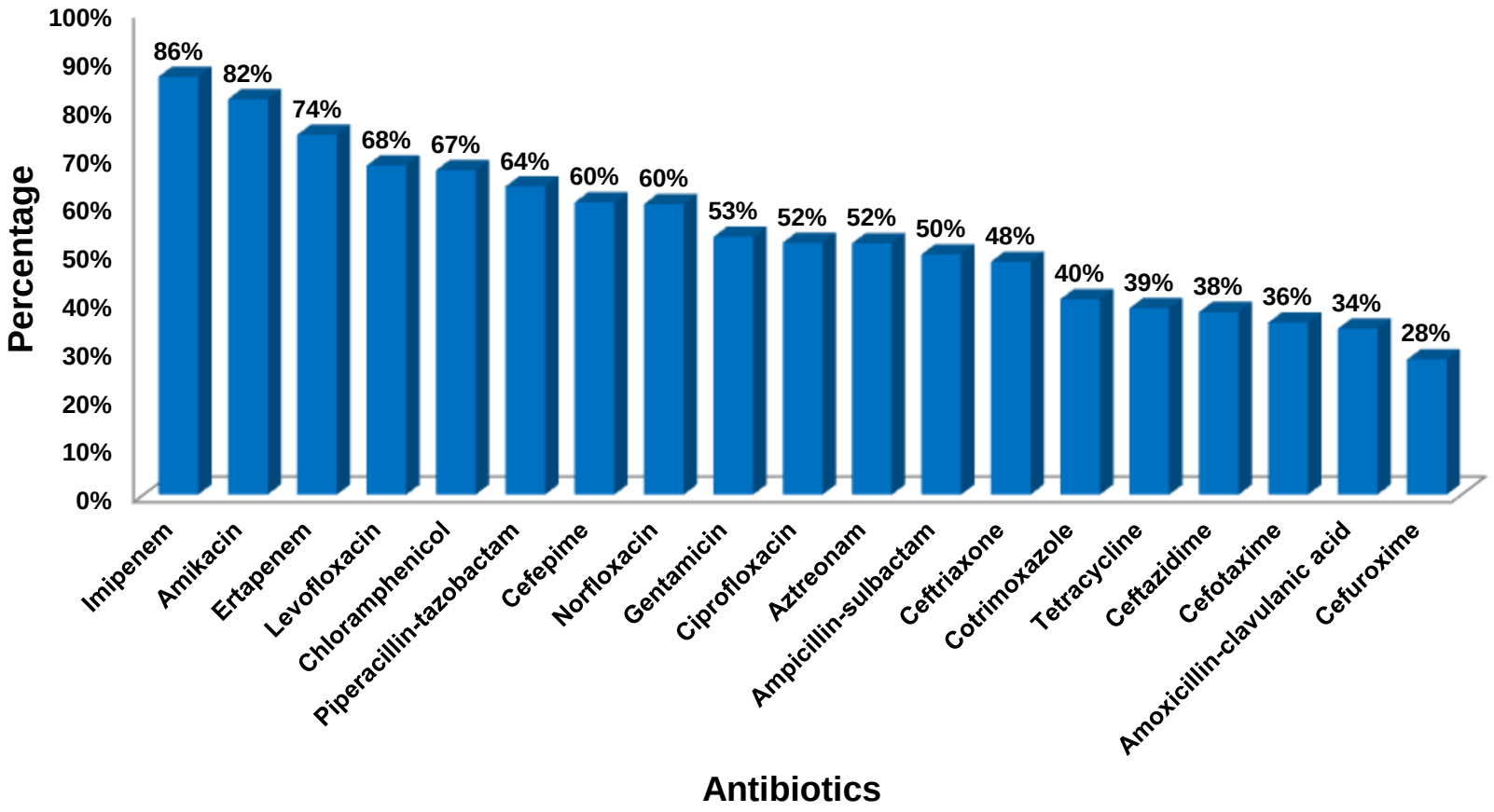
Peer reviewed publications, policy briefs, policy decisions

Myanmar Laboratory Surveillance of High Priority Pathogens Human & Animal By NRL / NHL

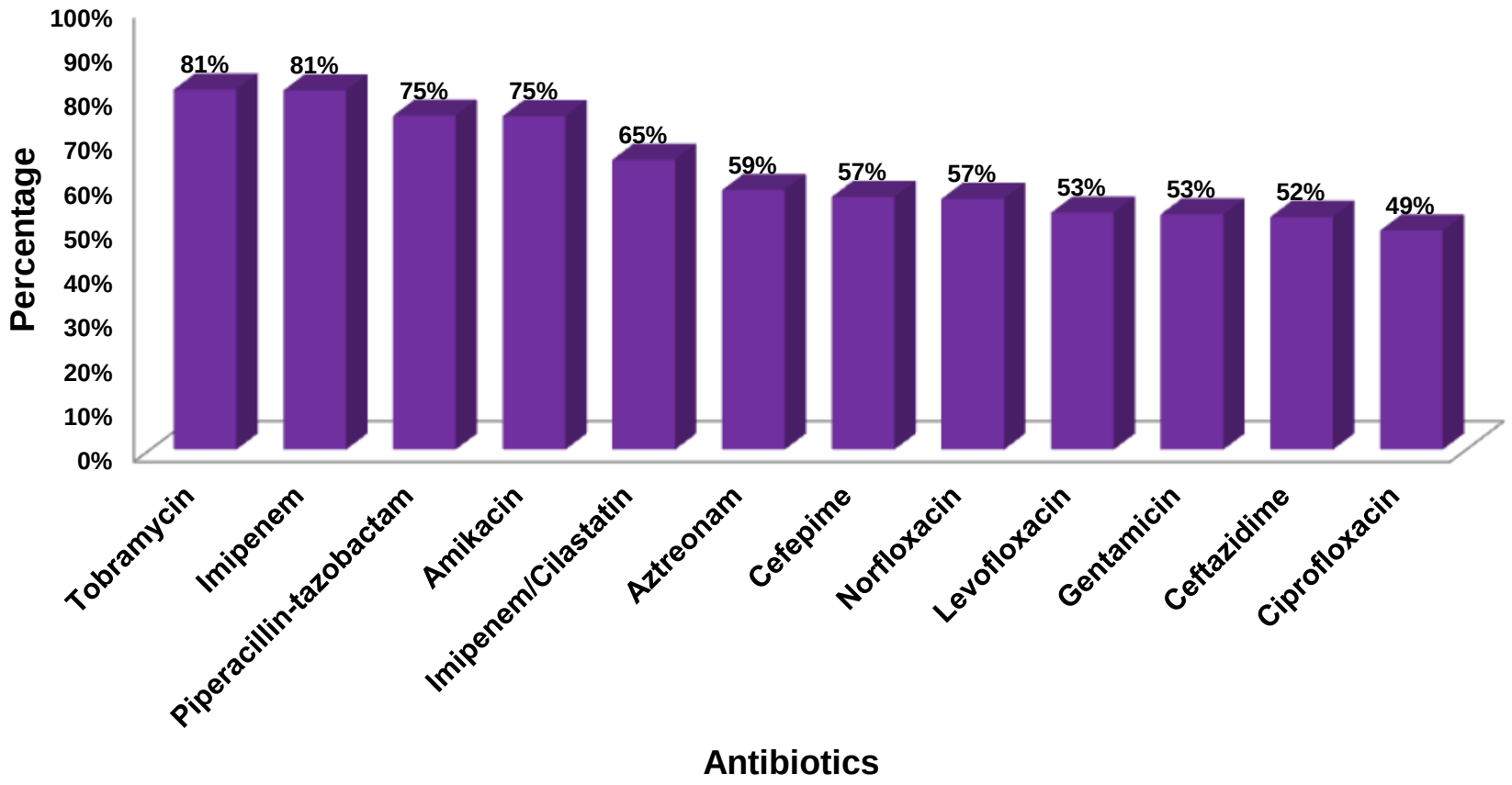
Antibiotic susceptibility patterns of *Escherichia coli* in Myanmar (2016)



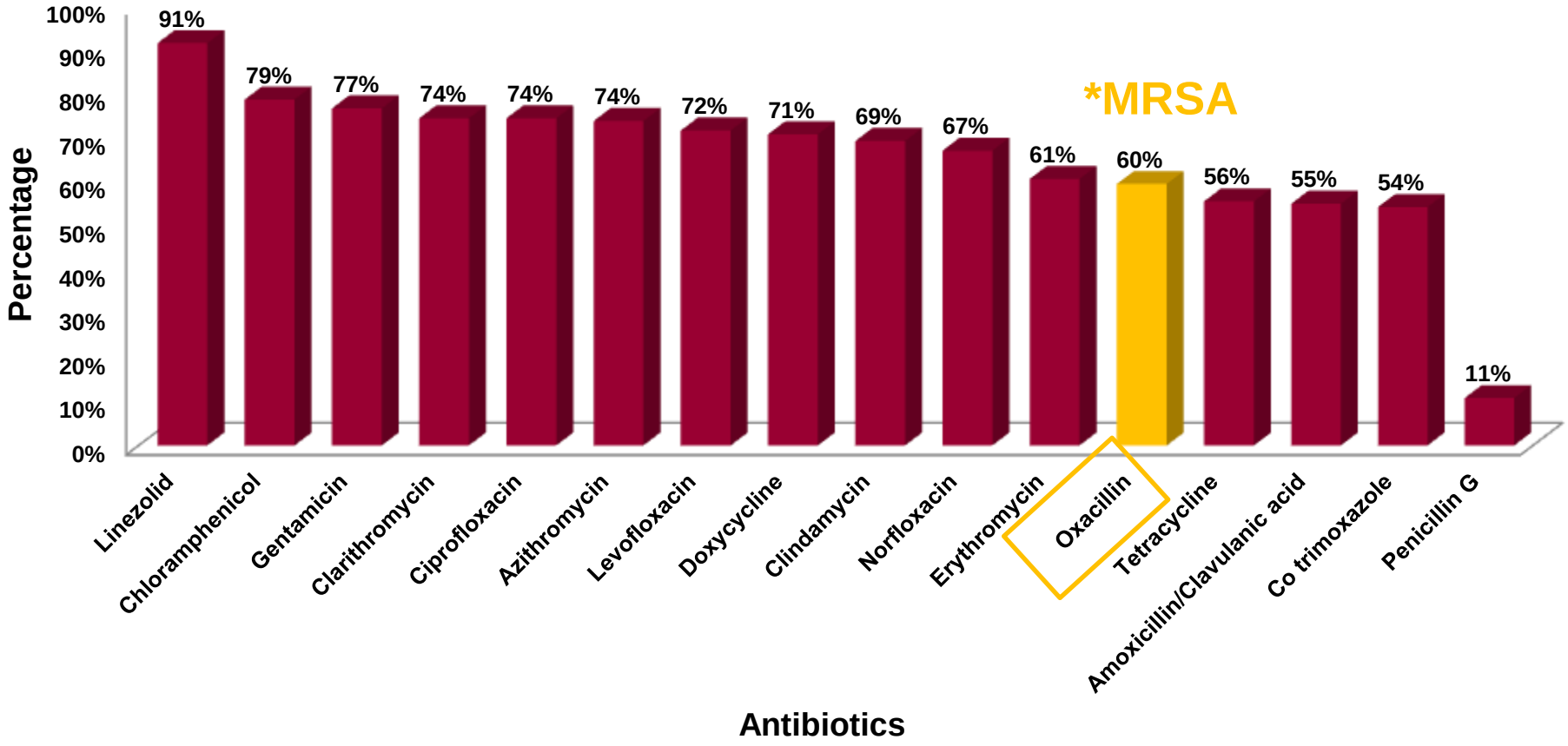
Antibiotic susceptibility patterns of *Klebsiella* species in Myanmar (2016)



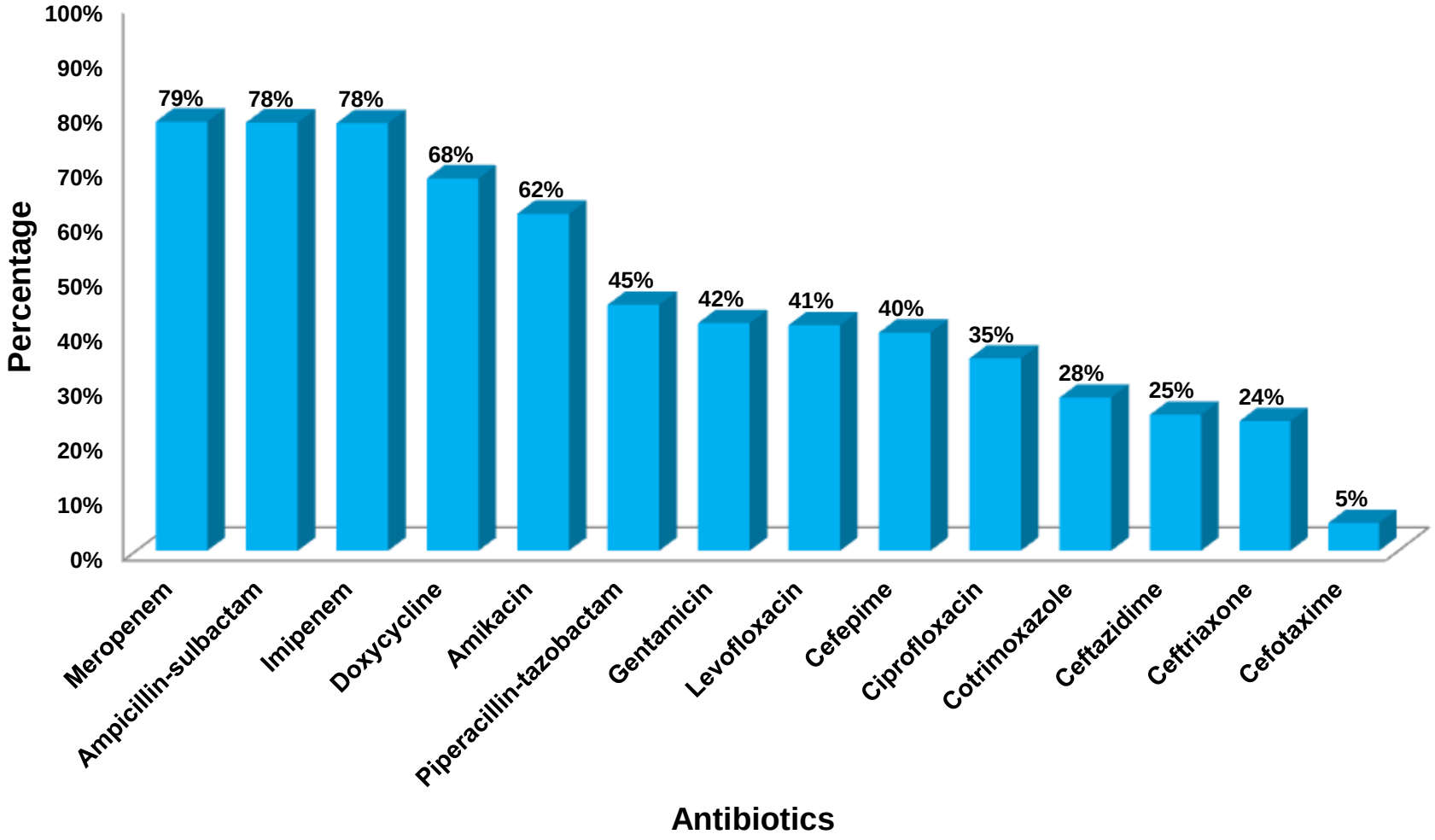
Antibiotic susceptibility patterns of *Pseudomonas aeruginosa* in Myanmar (2016)



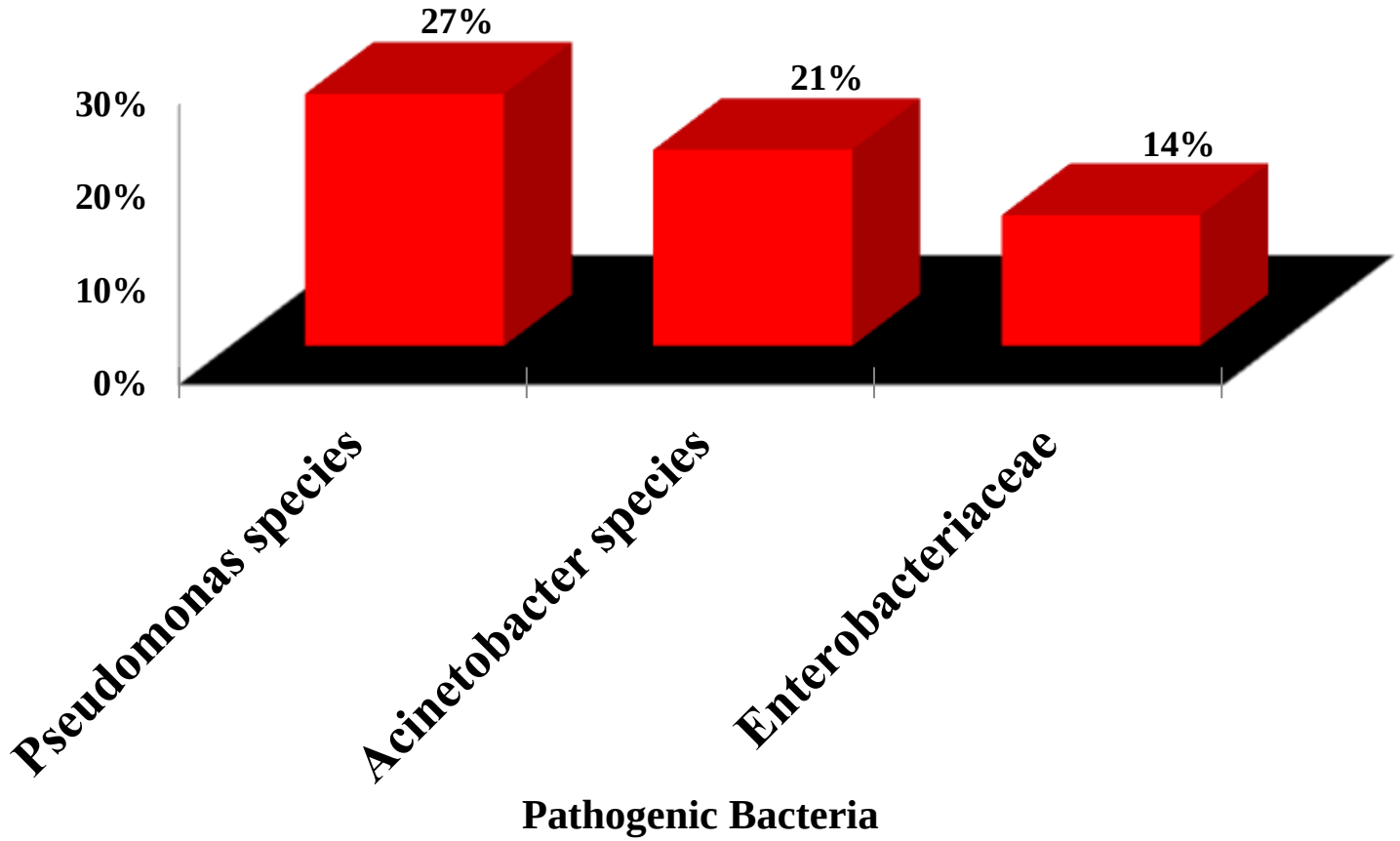
Antibiotic susceptibility patterns of *Staphylococcus* species in Myanmar (2016)



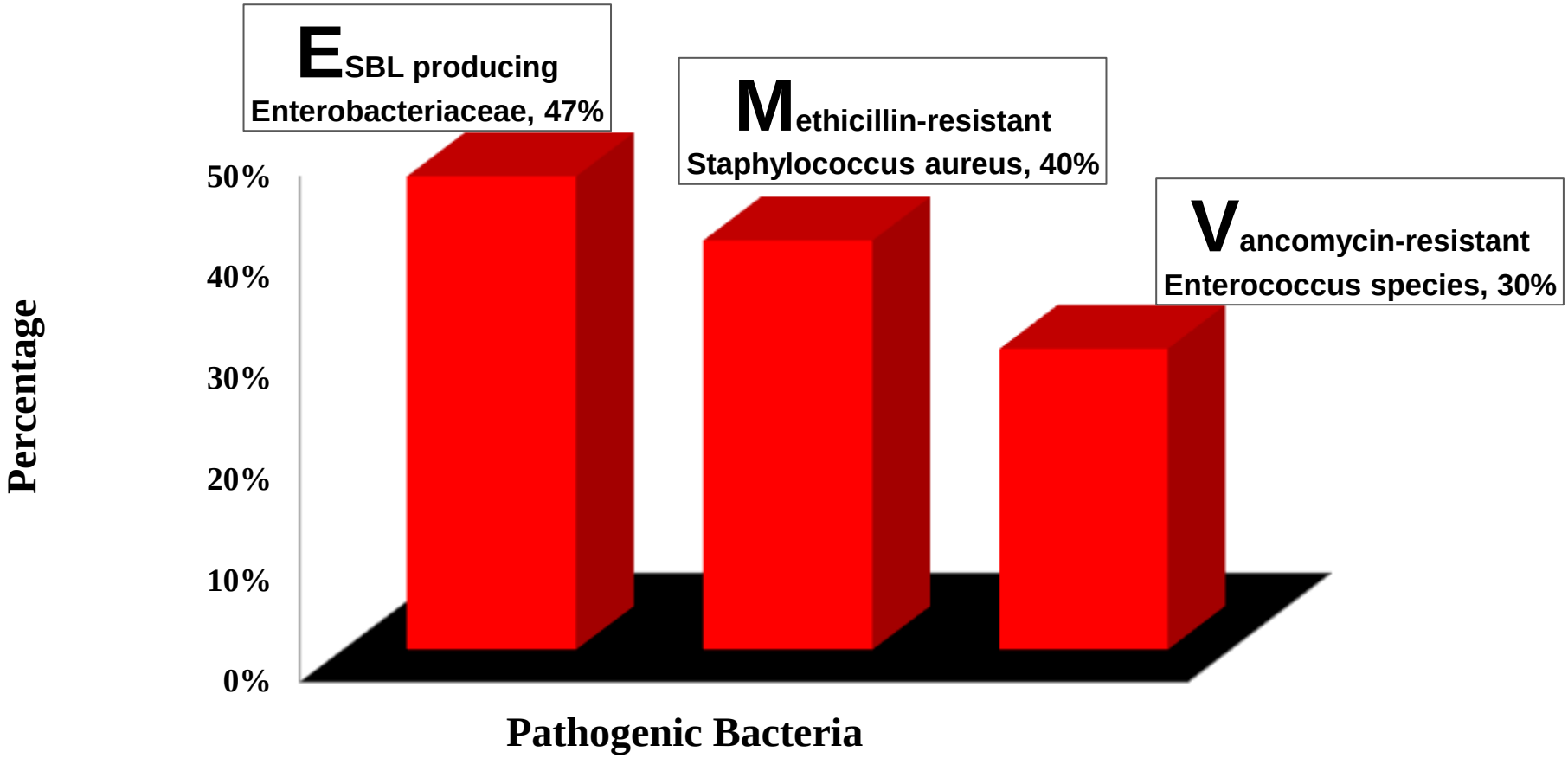
Antibiotic susceptibility patterns of *Acinetobacter* species in Myanmar (2016)



WHO Critical Priority Pathogens in Myanmar (Carbapenem-resistant Bacteria) (2016)



WHO High Priority Pathogens in Myanmar (ESBL producing Enterobacteriaceae, VRE and MRSA)(2016)



Multidrug-resistant tuberculosis (MDR-TB) high-burden countries

The first 15 most affected countries are in the **WHO European Region**

	MDR-TB prevalence among New (%)	Re-treated (%)
Azerbaijan	22.3	55.8
Republic of Moldova	19.4	50.8
Tajikistan	16.5	61.6
Ukraine	16.0	44.3
Russian Fed.	15.8	42.4
Estonia	15.4	42.7
Kazakhstan	14.2	56.4
Uzbekistan	14.2	49.8
Kyrgyzstan	12.5	42.1
Belarus	12.5	42.1
Bulgaria	12.5	42.1
Latvia	12.1	31.9
Armenia	9.4	43.2
Lithuania	9.0	47.5
Georgia	6.8	27.4

WHO European Region represents 19% of the MDR-TB global burden

	MDR-TB prevalence among New (%)	Re-treated (%)
China	5.7	25.6
Myanmar	4.2	10
Philippine	4	20.9
Pakistan	2.9	35.4
Viet Nam	2.7	19.3
India	2.3	17.2
Bangladesh	2.2	14.7
Indonesia	2	14.7
Congo, Dem. R.	1.8	7.7
Nigeria	1.8	7.7
South Africa	1.8	6.7
Ethiopia	1.6	11.8

Animal sector's role in the National action plan and status of implementation

- **SO-1 Awareness and Education**
  - World Antibiotic awareness Week activities
  - Policy makers
  - Veterinarians
  - Farmers
  - Consumers

Animal sector's role in the National action plan and status of implementation

- SO-2 Surveillance and research
  - Evidence based surveillance research

Prevelance and diversity of zoonotic bacteria and AMR in Pig supplu chain (ZELS) 2015-2020

- **FOCUS: AMR, zoonoses in Pig Supply chain**
  - *Salmonella*
  - *Streptococcus suis*
  - *E.coli*


Farm

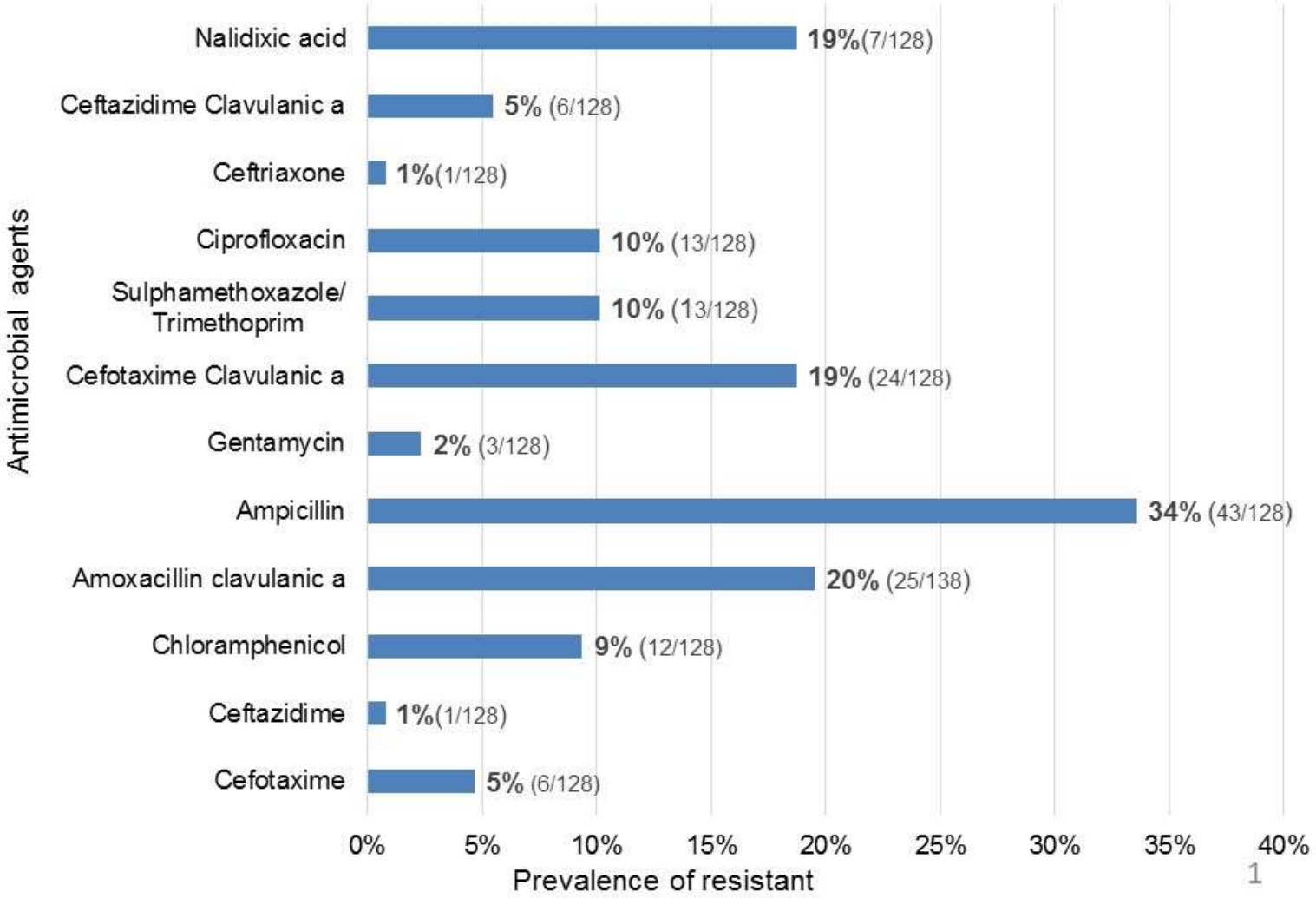

Abattoir


Retail shop

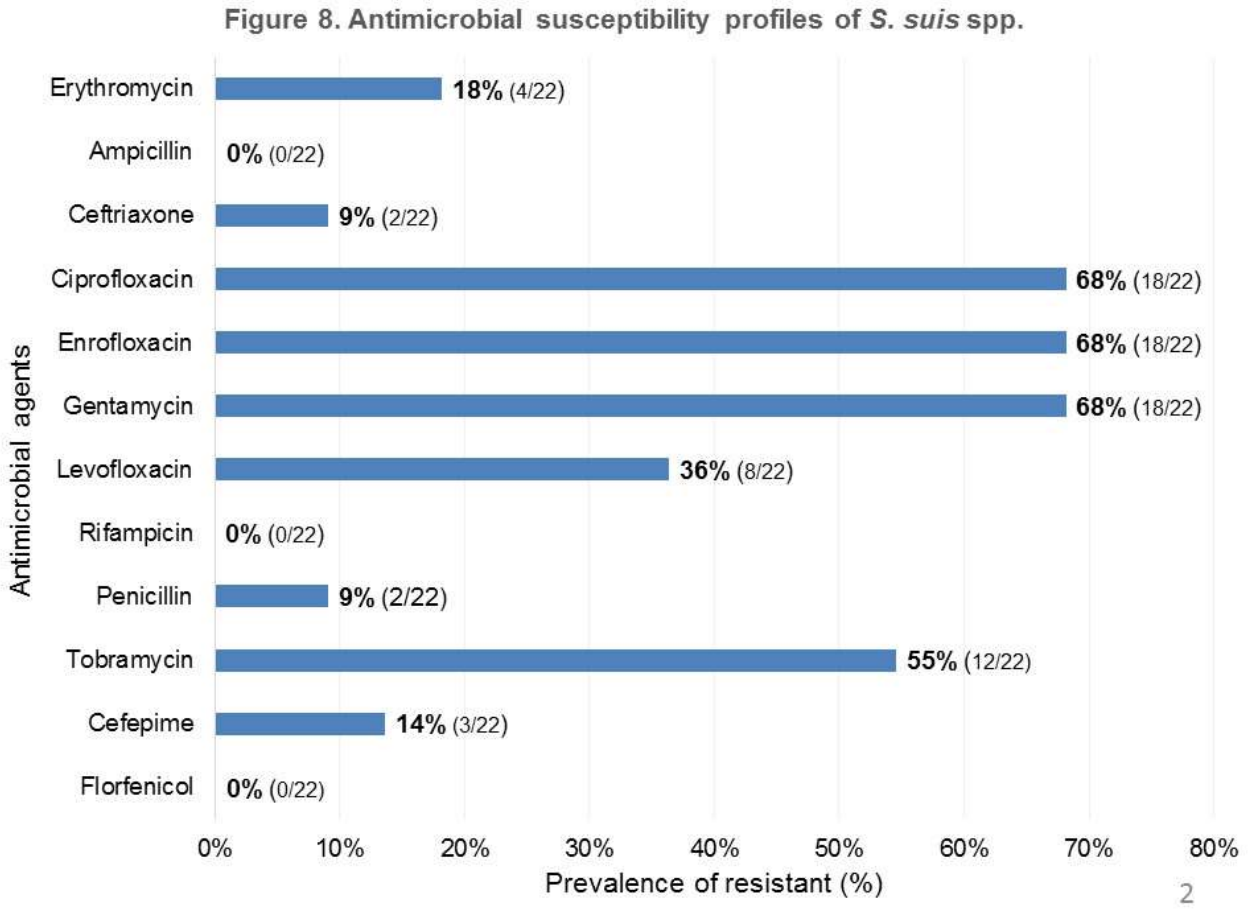

Supermarket

Resistance profile of Salmonella isolates from (pig)

Figure 7. Antimicrobial susceptibility profiles of *Salmonella* spp.

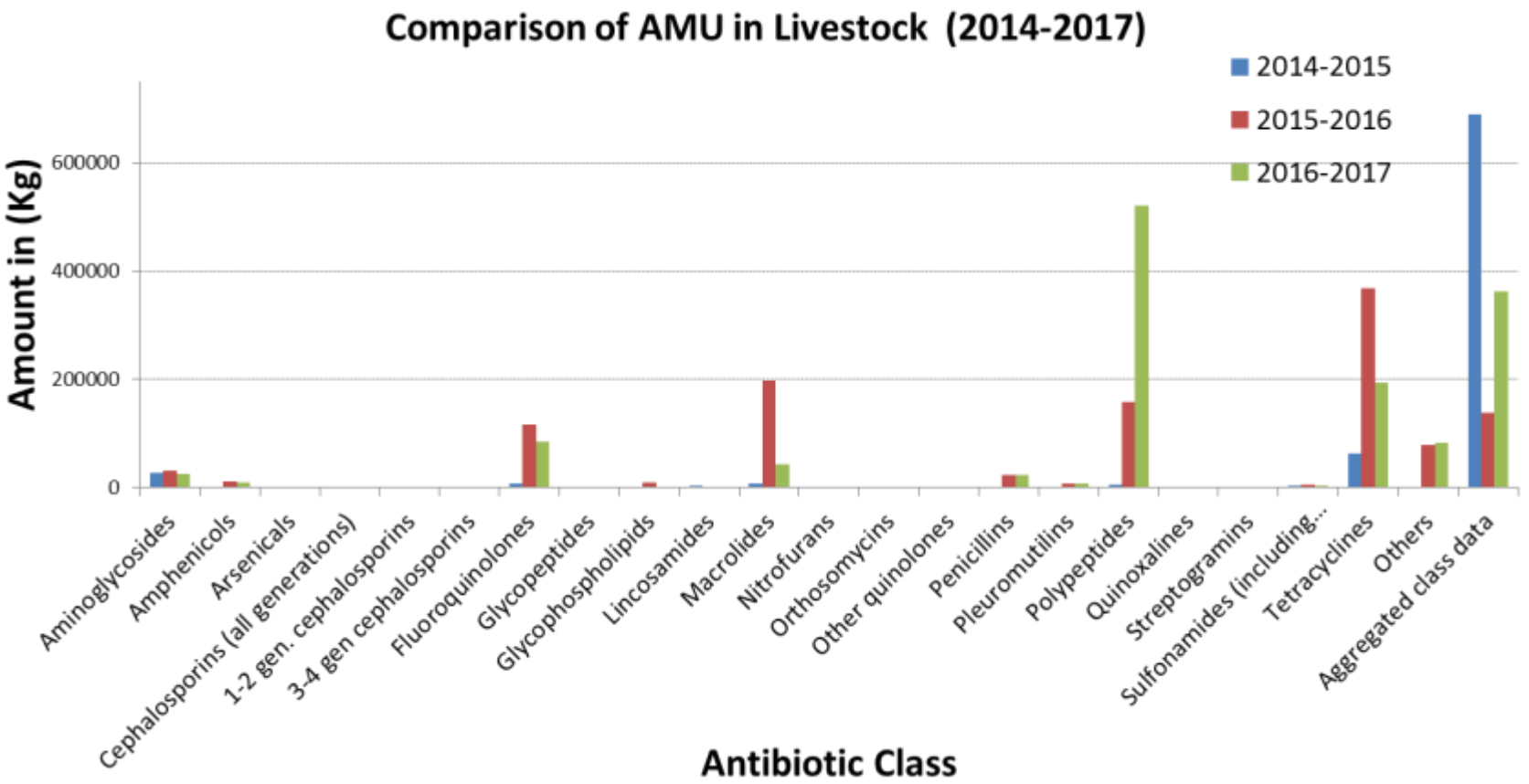


Profile of antimicrobial resistant ***Strep susi from Pig***



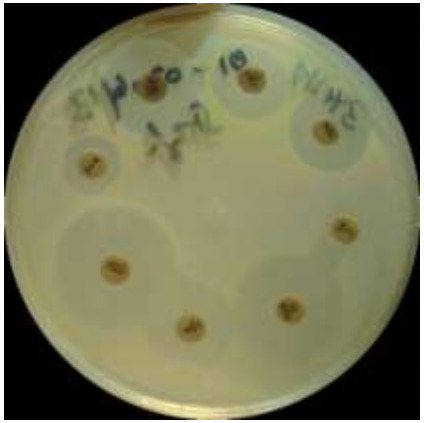
Animal sector's role in the National action plan and status of implementation

- SO-2 Surveillance and research
  - Surveillance of AMU in Livestock



Animal sector's role in the National action plan and status of implementation

- SO-2 Surveillance and research
  - Standard for laboratory testing
  - Harmonization of Laboratory test on AMR ?



Animal sector's role in the National action plan and status of implementation

- SO-3 Infection and Prevention measure
  - Encourage use of standard
  - Farm level Good Animal Husbandry Practices (GAHP) at farm level
  - Slaughter house (HACCP, Good Hygienic Practice)

animal sector's role in the National action plan and status of implementation

- SO-4 Optimise use of AMUs in animal
  - Stronger control of VMP by developing new legislation in Feed and VMPs
    - Registration, licensing, Import, produce, distribute, sale and use
  - Standard for stewardship in animal health (No)
  - Guideline for Antimicrobial use in animal (No)
  - prioritizing the use of different antimicrobial agents in line with OIE recommendations
  - Continue AMU surveillance (Yes)

animal sector's role in the National action plan and status of implementation

- SO-5 Economic cases
  - Alternative treatment to antibiotics

Cross-cutting approach

WHO resources in antimicrobial resistance

- Health system strengthening
- Infection control
- Improving the use of antibiotics
- Patient safety
- Food safety and zoonoses
- Stop TB
- HIV/AIDS
- Malaria

ပဋိဇီဝဆေး ယဉ်ပါးခြင်း

HANDLE ANTIBIOTICS WITH CARE

ANTIBIOTIC RESISTANCE

WHAT YOU CAN DO		မြည်သူလူထုသိရှိလိုက်နာရန်အချက်များ
WHAT POLICY MARKERS CAN DO		မူဝါဒချမှတ်သူများလိုက်နာဆောင်ရွက်ရမည့်အချက်များ
WHAT CAN HEALTH WORKERS DO?		ကျန်းမာရေးဝန်ထမ်းများလိုက်နာဆောင်ရွက်ရမည့်အချက်များ
WHAT CAN HOSPITAL & CLINIC MANAGERS DO?		ဆေးရုံနှင့်ဆေးခန်းစီမံခန့်ခွဲသူများလိုက်နာဆောင်ရွက်ရမည့်အချက်များ
WHAT DOCTORS DO?		ဆရာဝန်များလိုက်နာဆောင်ရွက်သင့်သည့်အချက်များ
WHAT DENTISTS DO?		သွားဆရာဝန်များလိုက်နာဆောင်ရွက်သင့်သည့်အချက်များ
WHAT CAN NURSES DO?		သူနာပြုများလိုက်နာဆောင်ရွက်ရမည့်အချက်များ
WHAT CAN MIDWIVES DO?		သားဖွားဆရာမများလိုက်နာဆောင်ရွက်သင့်သည့်အချက်များ
WHAT CAN PHARMACISTS DO?		ဆေးဝါးကျွမ်းကျင်သူများ/ဆေးဝါးရောင်းချသူများလိုက်နာဆောင်ရွက်သင့်သည့်အချက်များ

National Health Laboratory
Yangon, Myanmar

World Health Organization
Myanmar

Activities of World Antibiotic Awareness Week
23.11.2017

Activities of World Antibiotic Awareness Week
Nay Pyi Taw
23.11.2017

Activities of World Antibiotic Awareness Week
23.11.2017

Symposium on Strengthening of Hospital Infection Control Practice in Myanmar (3.3.2017)

Current activities (Symposium on Antimicrobial Resistance awareness at 46th Myanmar Research Congress)

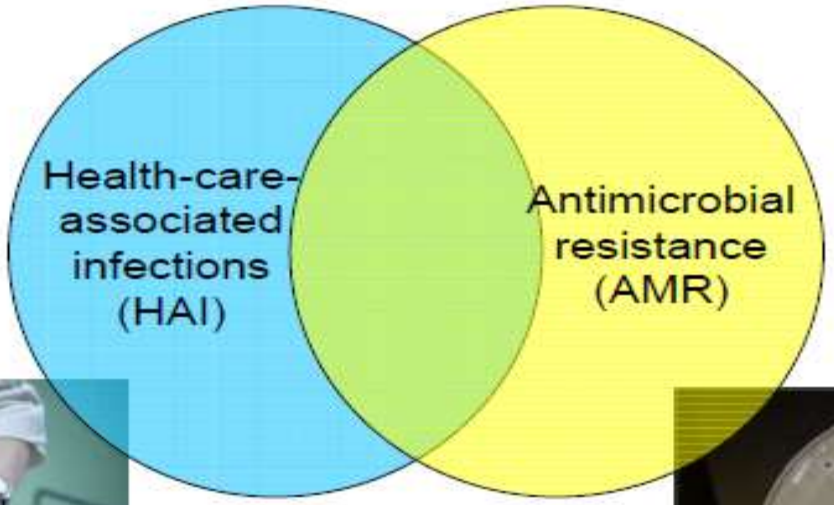
Laboratory perspective of combating AMR (64th Myanmar Medical Conference) (20.1.2018)

Health Care Associated Infection

Prevention and Control

Overlapping areas

that must be addressed together



Usually associated with a weak health care system

HIC ,Strengthening Symposium February 2018

HIC ,Strengthening Symposium February 2018

Joint External Evaluation Process

1. Stakeholders Meeting for JEE (6-2-2017)
2. Training on Internal Assessment Teams (21-2-2017) to (22-2-2017)
3. Internal Assessment Teams Visit (15-3-2017) to (22-3-201&)
4. Internal Assessment Teams Debriefing (6-4-2017)
5. Report to WHO (10-4-2017)
6. External Team Visit (3-5-2017) to (9-5-2017)
7. 5 years Strategic Plan for JEE (11-9-2017) to (15-9-2017)

JEE: Antimicrobial resistance , Myanmar

P.3.1 Antimicrobial resistance detection	3
P.3.2 Surveillance of infections caused by antimicrobial-resistant pathogens	3
P.3.3 Health care-associated infection (HCAI) prevention and control programmes	1
P.3.4 Antimicrobial stewardship activities	1

SWOT Analysis on Myanmar AMR situation

	+	-
Internal Factors / External Factors	**Strengths**	**Weaknesses**
	▪ A global action plan endorsed by all Member States ▪ Strong political commitment from ministries of Agriculture, Health and department of environment ▪ Adopted international accords on use of antimicrobials	▪ Segmented surveillance systems for data of isolate resistance ▪ Insufficient public awareness of antimicrobial resistance ▪ Insufficient resources for implementation
	Opportunities	**Threats**
	▪ Enhanced coordination across sectors ▪ Development of a coordinated global surveillance system ▪ Increased interest and funding from international sources	▪ Resource mobilization may not meet needs for full implementation ▪ Emergence of resistant strains accelerate faster than response

Challenges in NAP implementation

Elements needed:

- A strong regulatory framework covering people and products
- Political support and leadership
- Sound governance and clear lines of authority
- Up to date locally 'owned' setting specific treatment guidelines
- Recognised well functioning medicines and therapeutic committee
- No links with financial incentives

Challenges in NAP implementation

- Comprehensive records of all prescribing- and dispensing-related issues, laboratory activities, laboratory results
- Well functioning and regularly audited microbiology and infection prevention and control units.
- Continuing education for health professionals and community members
- Continuing cyclical audits, interventions, evaluations and feedback

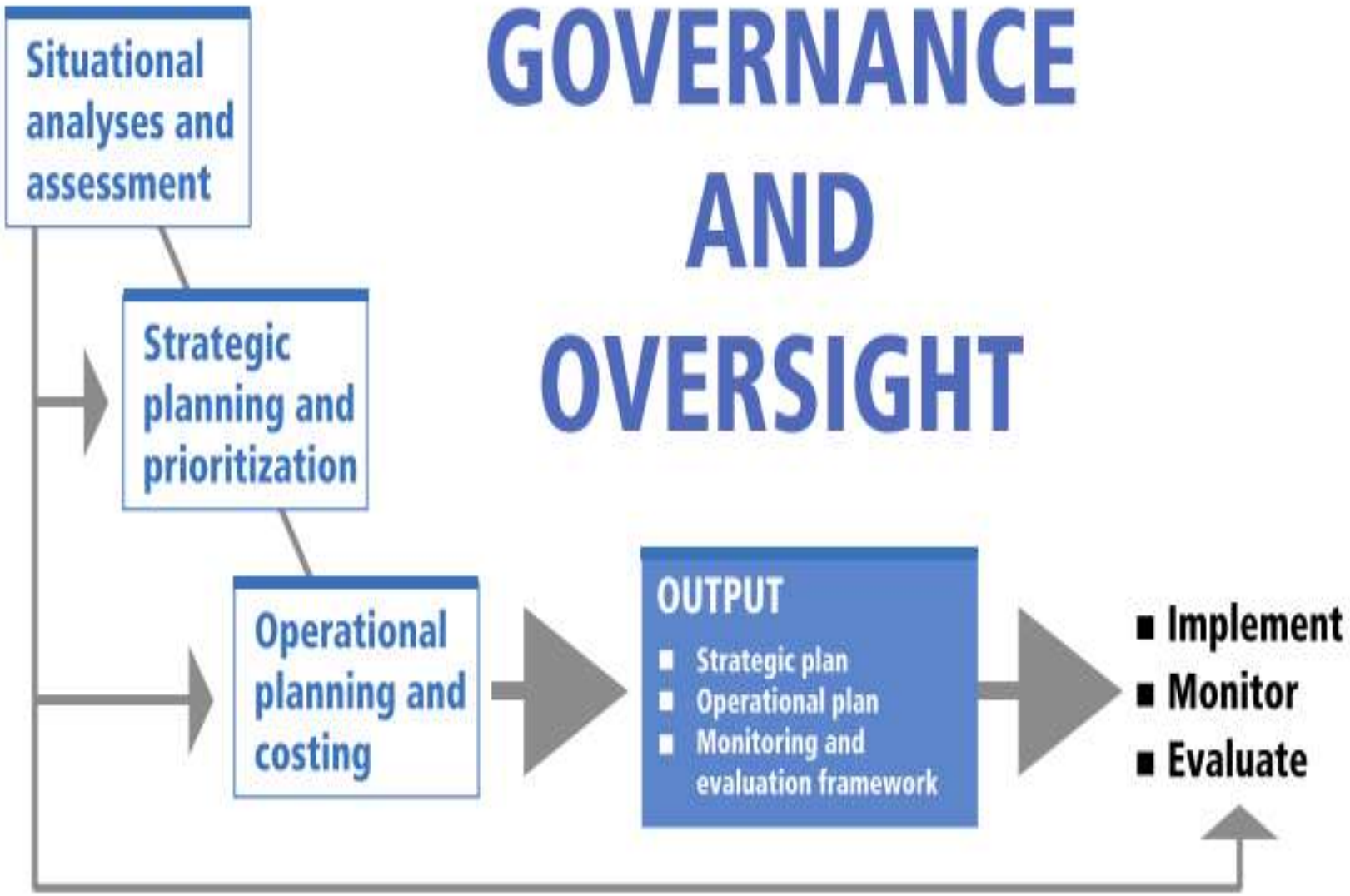
As part of a total One Health AMR plan and AMS activities

Appropriate antimicrobial use depends on…..

- Political will - Number 1.
- A regulatory framework for health professionals and their practices
- Good leadership and governance
- Up to date setting specific ‘owned’ treatment guidelines
- Adherence to clear principles of good AB prescribing
- Consumer understanding
- Good record in all keeping areas and surveillance
- Good laboratory diagnostic and sensitivity capacity
- Meticulous infection prevention and control
- Regular ongoing, cyclic monitoring, evaluation and intervention
- Ongoing health professionals’ education
- Access to good quality affordable products

Way Forward by Livestock sector

- National Surveillance and monitoring on AMR/AMU
- Strengthening and Harmonization of AMR laboratory capacity (QA/QC)
- Promotion of GAHP to reduce AMU/AMR
- Drafting new Animal feed and Veterinary Medicinal Products Law to stronger control
- Ban antibiotic as growth promoter or phase out non therapeutic use of antibiotics in food animals
- National Residue Monitoring Plan


GOVERNANCE AND OVERSIGHT
Situational analyses and assessment
Strategic planning and prioritization
Operational planning and costing
OUTPUT
Strategic plan
Operational plan
Monitoring and evaluation framework
Implement
Monitor
Evaluate

Conclusions

- There are sources of help and resources:

  Government /WHO / FAO
- A national multi-sectoral AMR plan built on a situation analysis can provide the impetus to try to achieve better use of AMs.
- Strong commitment to developing and supporting strategies to control AMR as of NAP 5 years plan
- A detailed plan of operations and activities based on setting specific needs should have political support for its implementation
- AMS should be implemented in all clinical settings and other relevant settings under the One Health banner
- All activities should be monitored and evaluated and adjusted as needed for re-planning and implementation.

Monitoring, Evaluation & Research to support the implementation of National Strategic Plan on AMR

Example : Royal Thai Government – WHO Country Cooperation Strategy 2017-2021

Prime Minister launched the mission

'Thailand marks the spot to stop AMR'

Royal Thai Government House (Nov 2017)

Deputy Prime Minister signed the declaration on ‘Call-to-Action on AMR, Thailand’

National Policy Committee on AMR (Chaired by Deputy PM)

1. **Sub-com on AMR strategy**
2. **Sub-com on AMR surveillance under One-Health Approach**
3. **Sub-com on reducing AMR impacts in hospitals**
4. **Sub-com on AMR prevention and control in agriculture and animals**
5. **Sub-com on awareness and behavioral change re AMR**

Tripartite: Ministry of Public Health, Ministry of Agriculture and Cooperatives & Ministry of Environment and Natural Resources

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