

ZAMBIA'S NATIONAL & INTEGRATED SURVEILLANCE STRATEGY

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Workshop on Integrated Surveillance Framework for
Antimicrobial Resistance

Focusing on Animals and Environment

March 4-6, 2019

Hotel Tai Pamedzi, Lusaka, Zambia

Introduction

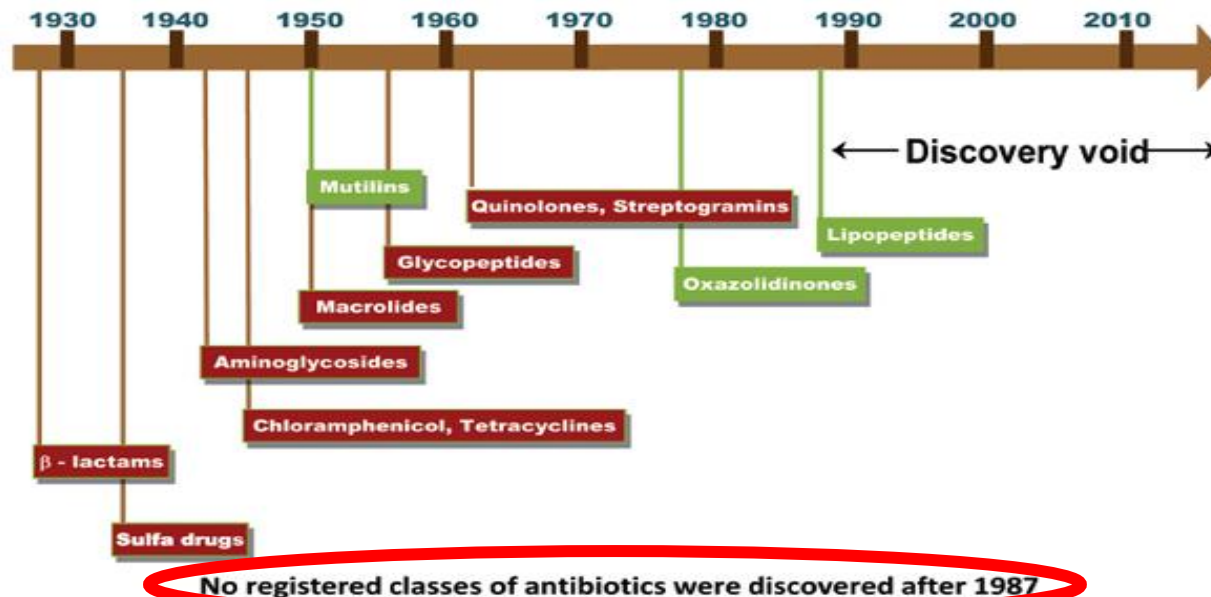
- ❖ In 1945 Alexander Fleming said; *“The time may come when penicillin can be bought by anyone in the shops. Then there is the danger that the ignorant man may easily under dose himself and by exposing his microbes to non-lethal quantities of the drug make the microbes resistant.”* That time is upon us!
- ❖ AMR has rapidly become a **global public health priority**
- ❖ The use of antimicrobials in both humans and animals is associated with the emergence of AMR in microorganisms Worldwide.
- ❖ This has been highlighted by several studies in

Why should we be concerned about AMR

Almost every type of microbe has become less responsive to antimicrobial treatment when it is really needed.

❖ E.g

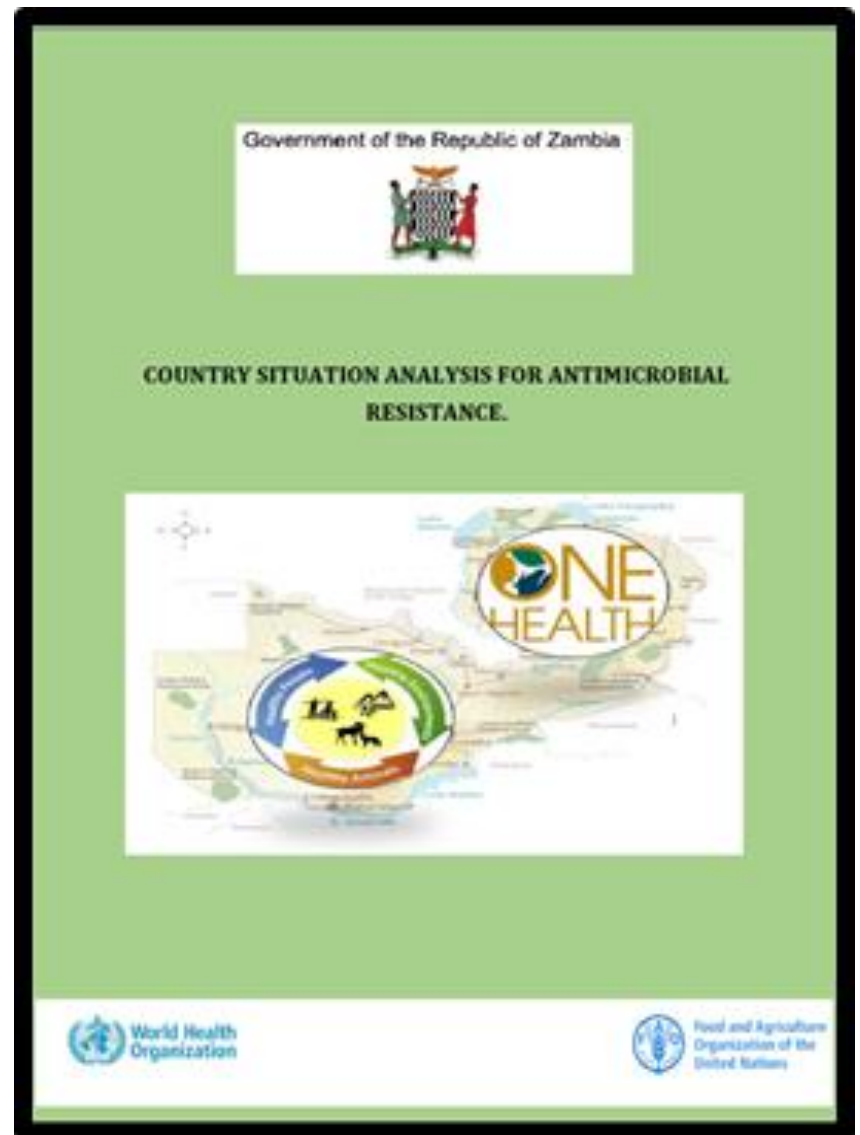
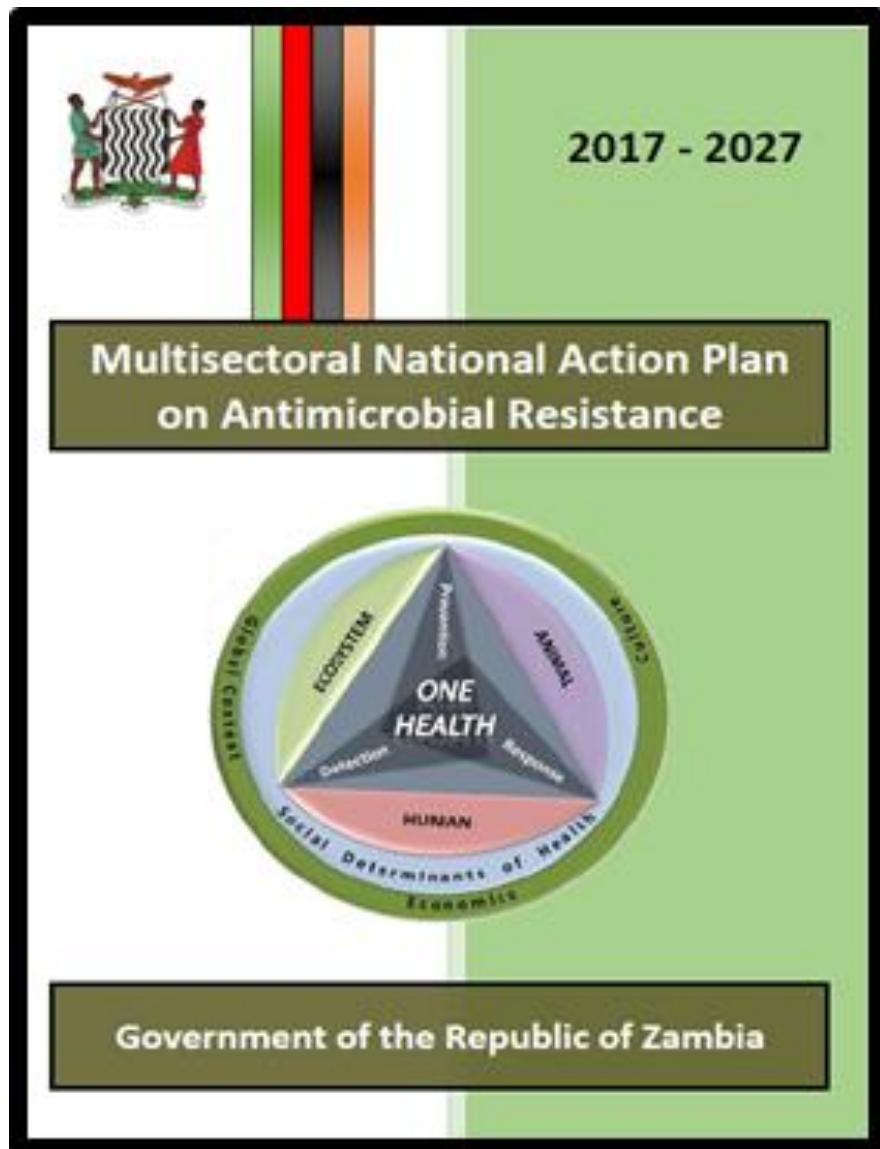
- ▶ Resistance in HIV and Malaria
- ▶ MDR/XMDR Bacteria
- ▶ MDR TB
- ▶ Colibaccilosis in poultry
- ▶ MRSA
- ▶ ESBL – producing *Klebsiella pneumoniae*



What is being done ?

- ❖ Zambia has keenly followed events related to AMR
 - ✓ WHO, FAO, & OIE tripartite agreement of 2013 adopted by member states
 - ✓ 2015 WHA agreed that National Action Plans (NAPs) on AMR be developed by May 2017
 - ✓ Declaration for collaborative global response to AMR threat made at 71st UN General Assembly (Sept. 2016)
- ❖ Zambia, through H.E. the president Mr. Edgar Chagwa Lungu, affirmed commitment to join the fight against AMR
- ❖ Zambia adopted a “**One-health**” approach in the fight against AMR and has developed 10 year MS-NAP.

AMR Situation Analysis Report and AMR National Action Plans



MS-AMR NAP Co Signed by PS Health and PS Fisheries &

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FOREWORD

The World Health Organisation defines Antimicrobial Resistance (AMR) as the development of resistance in a microorganism – bacterium, virus, fungus, or parasite – to an antimicrobial agent to which it was previously sensitive. Resistance is the property or characteristic of the microbe and not the person, animal, and plants affected by the microbe.

Antibiotics are one of the most important therapeutic discoveries in human and animal medical history that revolutionised the way infections are treated. This has contributed in reducing morbidity and mortality caused by microorganisms. Antimicrobial resistance is therefore of concern, as previously treatable infections like pneumonia and diarrhoea can become serious health threats.

One of the five strategic objectives in the global action plan to combat AMR is creating awareness on AMR. Human use and abuse of antimicrobial has accelerated development of resistance in some microbes. Evidence based information is therefore required to facilitate behavioural changes on appropriate use of antimicrobials and safeguard human and animal health.

There is evidence of antimicrobial resistant microorganisms in human and animal health in Zambia and therefore to tackle this challenge the Zambian Government undertook a multi-sectoral approach to develop this National Action Plan (NAP) in line with the global AMR strategy.

It is our sincere hope that through this NAP, strategic interventions will be initiated towards the long-term goal of containing the AMR threat in Zambia, the African region, and the World at large.



Dr. Jabbin Mulwanda

Permanent Secretary – Health Services,
Ministry of Health,
CHAIRPERSON, AMR NMSC



Dr David Shamulenge
Permanent Secretary

Ministry of Fisheries and Livestock
CO-CHAIRPERSON, AMR NMS

NAP Submitted to 70th WHA by Hon. Minister of Health



Official Launch of MS-AMR NAP





The Zambia Multisector-AMR NAP

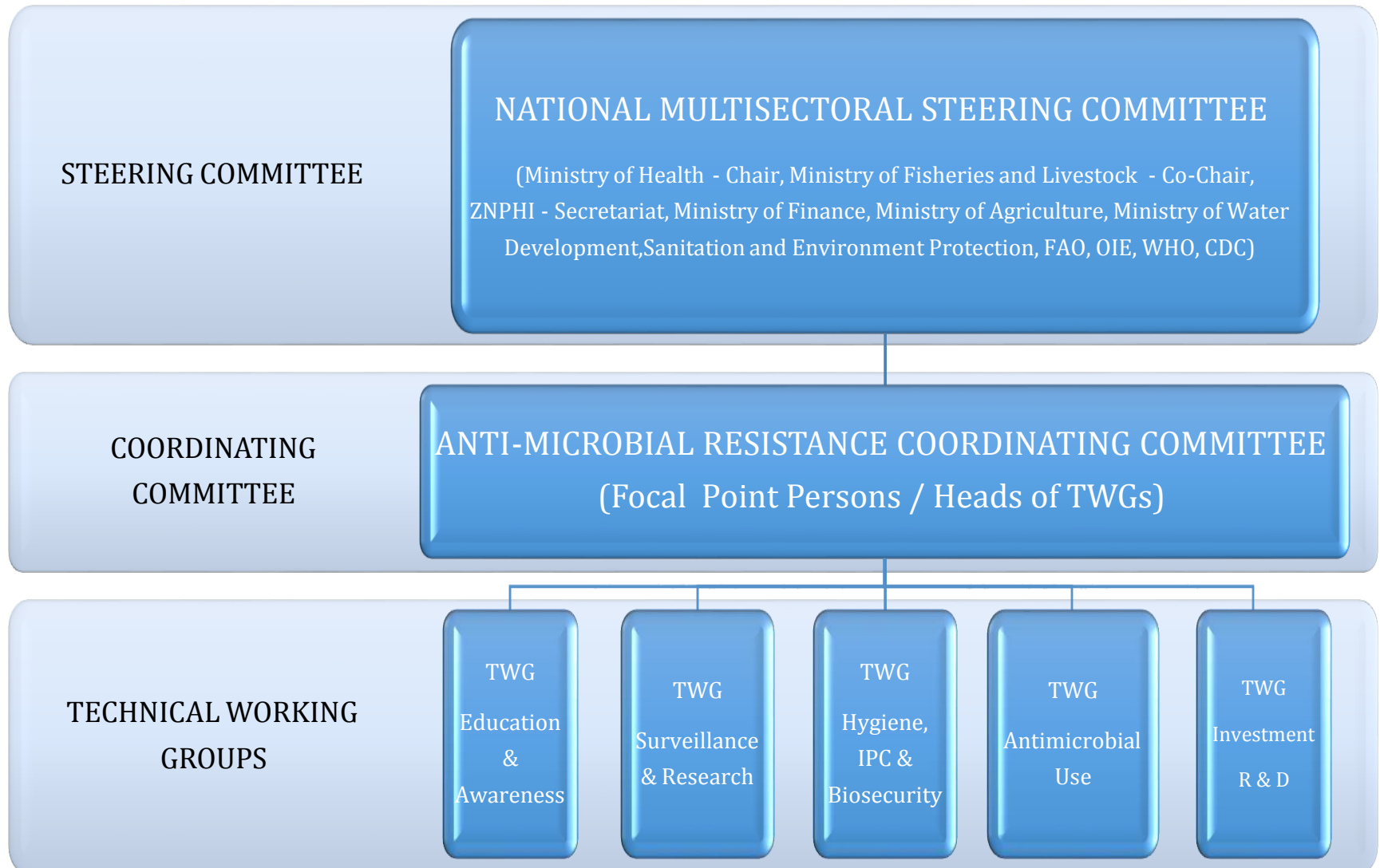
Main objective

❖ To provide a coherent framework for combating AMR using the “One Health” approach embracing human, animal, agriculture and environment sectors in Zambia from 2017 to 2027.

❖ Focus Areas are :

➤ Awareness and education, **Surveillance and research**, Regulation, Infection prevention, Sanitation and hygiene. Optimising drug use Investment in research

Governance structure

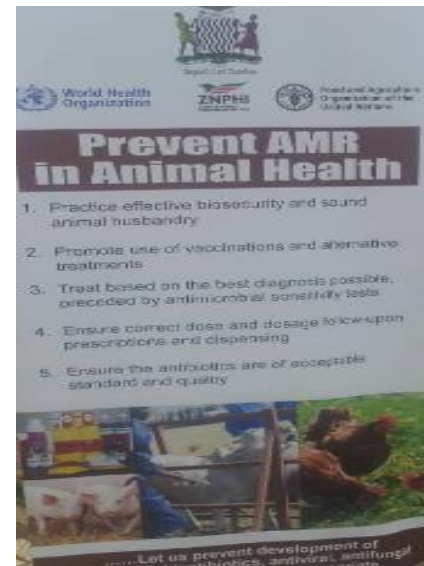
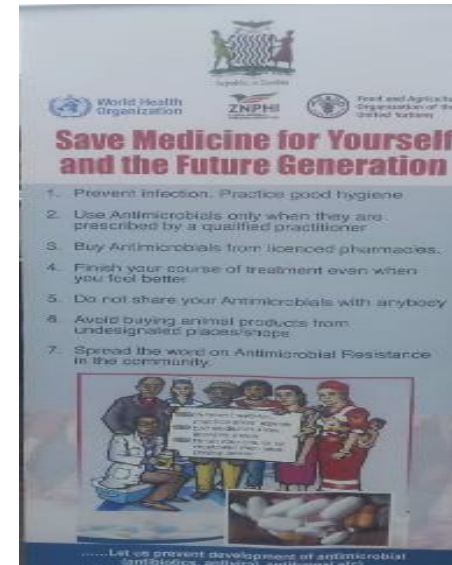
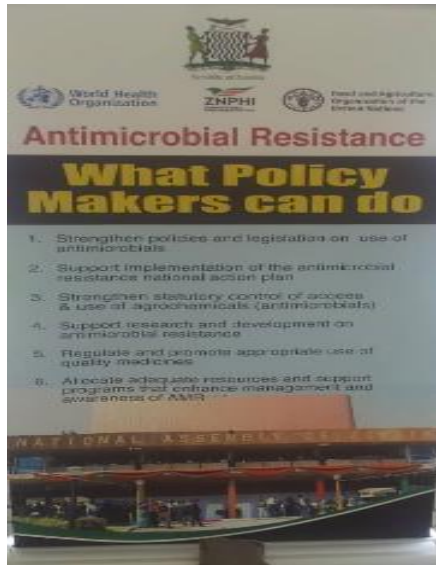


Status of NAP Implementation

Objective 1: To improve awareness and understanding of antimicrobial resistance through effective communication, education and training.

- ❖ Targeted awareness material developed (FF2 Supported)
- ❖ Orientation for Media personnel, Permanent Secretaries & Heads of Institutions on AMR
- ❖ Sensitisation of Agro-vet dealers on AMR and ZAMRA agro-vet (FF2 Supported)
- ❖ Assessing poultry value chain and production system to identify high risk behaviours and practises in relation to AMR/ Measure the impact of AMR awareness among the poultry farmers (FF2 Supported)
- ❖ Draft Internal communication strategy for awareness on AMR done
- ❖ Live TV interviews/discussions
- ❖ Commemoration of 2017 & 2018 World Antibiotic Awareness Week (WAAW)
 - ✓ Awareness Walk/campaign
 - ✓ Sensitisation of Poultry famers on prudent use of antibiotics in poultry.

Developed/adapted Targeted Awareness Materials



Orientation of PS's and Heads of Institution & Launch of FF2 Zambian Component



Media Orientation



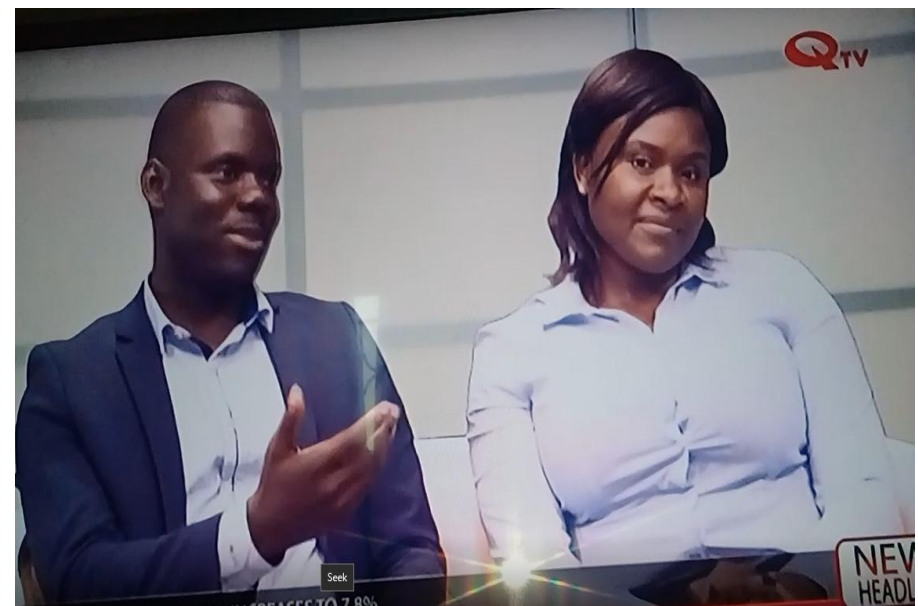
Agro-vet sensitisation



Agro-vet guidelines Dissemination meeting



Live TV Interviews/Discussions



Live TV Interviews/Discussions



Commemoration of 2017 WAAW



Commemoration of 2018 WAAW



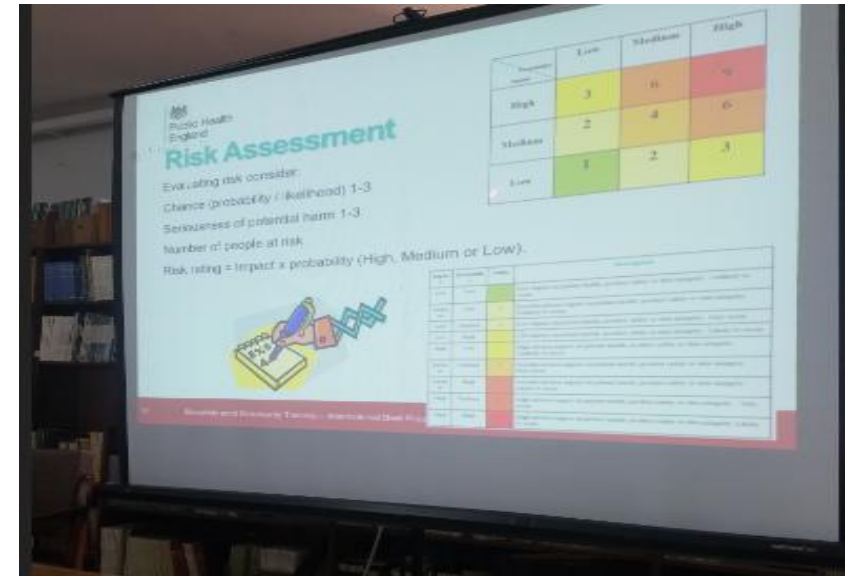
Status of NAP Implementation

Objective 3: To reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures

❖ Advocacy to strengthen IPC

❖ ToT Biosafety and biosecurity Training Done– Trained 16 trainers in biosafety and biosecurity

Biosafety and Biosecurity ToT



Status of NAP Implementation

Objective 4: To optimize the use of antimicrobial medicines in human and animal health

- ❖ Agro-vet guidelines developed and disseminated.
- ❖ Antimicrobial Stewardship (AMS) workshop done (Supported by ReAct Africa/EPN).
 - ✓ Policy, Framework & ToRs done
 - ✓ Identified 5 AMS pilot facilities at different levels of health care.
- ❖ Review of legislation –(FF2 Support/MoH)–Draft report
 - ✓ Medicines and Allied Substances Act No. 3 2013
 - ✓ Food safety & Quality Bill,
 - ✓ PHA,
 - ✓ The Animal Health Act No. 27 of 2010,
 - ✓ The Veterinary and Para-veterinary Professionals Act No.45 of 2010,
 - ✓ Environmental Management act #12 of 2011,
 - ✓ Plant pests and diseases Act–CAP 233 of the laws of Zambia of 1958

Antimicrobial Stewardship Workshop



Antimicrobial Stewardship Workshop



AMR SURVEILLANCE

Objective 2: To strengthen the knowledge and evidence base through surveillance and Research.

- ❖ GLASS enrolment
- ❖ AMR Surveillance–Routine and Programmatic (mostly bacterial pathogens).
- ❖ Lab assessment /ATLASS assessment mission
- ❖ Laboratory Training at KEMRI–13 trained from all sectors (FF2 /WHO Supported)
- ❖ Onsite microbiology
- ❖ QMS mentorship

ROUTINE AND PROGRAMMATIC

- ❖ Lab surveillance commenced with WHO AGISAR support
- ❖ WHO AFRO Paediatric Bacterial Meningitis (PBM) sentinel surveillance
- ❖ Cholera and Typhoid outbreaks (Country Level)
- ❖ Veterinary Drugs Residue Monitoring Plan (VDRM) is in place
- ❖ Draft Integrated AMR Surveillance Strategy done (FF2 /WHO Supported)

- ❖ Honey Residue Control Plan being implemented for honey exports to the EU.
 - ✓ Dihydrostreptomycin,
 - ✓ Tetracycline
 - ✓ Tyrosin
- ❖ Sales data on antimicrobial used in animals has been obtained from the major suppliers of veterinary medicines for 2015 ,2016 & 2017 and submitted to the OIE.
- ❖ ZAMRA-post marketing surveillance and pharmacovigilance
- ❖ Monitoring disposal of drugs-ZEMA

HUMAN RESOURCE CAPACITY BUILDING-TRAINING

- ❖ Laboratory Training at KEMRI-13 trained from all sectors (FF2 /WHO Supported), culture and AMR testing





ONSITE MICROBIOLOGY- MENTORSHIPS

- ❖ Build capacity in microbiology through hands-on on-the-job training.
- ❖ Built capacity to collect and share data, implement and strengthen the core components of a NLSS.
- ❖ 3 Labs currently being Mentored-
NTH, CMH & LTH

Onsite Microbiology Mentorship



QMS MENTORSHIP

- ❖ systematically guide the labs through ISO 15189 requirements. The ultimate goal is developing a public health lab system and obtain international accreditation.
- ❖ Unlike classroom-based QMS trainings, onsite mentorship allows for adaptation of solutions and quality activities to the local context.
- ❖ The mentors tailor mentorship package to the lab's organizational and resource
- ❖ 3 labs being mentored-KTH,CMH & Choma DH



Republic of Zambia
Ministry of Health

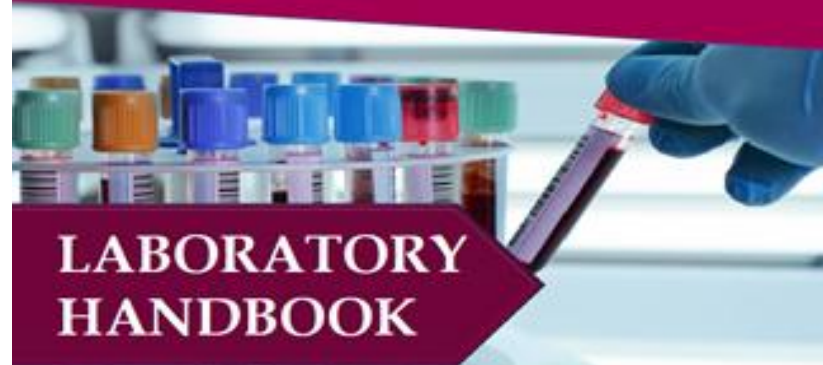
CHILONGA MISSION GENERAL HOSPITAL
MEDICAL LABORATORY

Quality Manual



Republic of Zambia

CHILONGA MISSION GENERAL HOSPITAL
MEDICAL LABORATORY



LABORATORY HANDBOOK

*Information for users on the effective
utilisation of our laboratory services*

Version 1 | August 2015

GLASS ENROLMENT

- ❖ Global Antimicrobial Resistance Surveillance System (GLASS) –WHO web based surveillance system
- ❖ Currently focuses on surveillance of resistance in common human bacterial pathogens.
- ❖ 1 lab currently enrolled into GLASS –submitted 2015, 2016 & 2017 data
- ❖ 3 Labs being mentored to be enrolled by end of 1Q 2019
- ❖ 3 more labs added to the mentorship program

NEXT STEPS IN AMR SURVEILLANCE

❖Flemming fund country grant(Targeting 7 HH Labs &5 AH Labs)

❖RFP published

❖Planned training for targeted GLASS sites(13th –17th May,2019).

✓GLASS priority pathogens & WHONET for data management

✓Introduce tricycle project– frequency of extended spectrum beta-lactamase (ESBL) producing E. coli

Integrated AMR Surveillance Strategy

- ❖ Focuses on AMR surveillance in AH,HH,PH and Environment.
- ❖ Comprehensive including Budget and M& E
- ❖ Leverage low hanging fruits
- ❖ To employ phases implementation

NIAMRSS-OBJECTIVES

- ❖ To measure the prevalence of AMR in human, animal, environmental and Agriculture sectors.
- ❖ To monitor trends and patterns of AMR pertaining to human, animal, environmental and Agriculture sectors.
- ❖ To monitor trends and patterns of AMU pertaining to human, animal, environmental and Agriculture sectors.
- ❖ To determine levels of veterinary drug residues in food products and how these can inform patterns of AMR in animals and humans

NIAMRSS-OBJECTIVES

- ❖ To determine the presence and levels of chemical, physical and biological residues in the environment which can lead to resistance with direct or indirect link to plant, human and animal health
- ❖ To determine antimicrobial pesticide maximum residue limits (MRLs) in Agricultural produce in target areas.
- ❖ To generate AMR surveillance specific information to raise awareness among strategic stakeholders
- ❖ To address the gaps pertaining to AMR surveillance in human, animal, environmental and Agriculture sectors

Establish partnerships on Supporting Implementation of Zambia's Multisectoral AMR National Action Plan

- ❖ Centre for Science and Environment (CSE) MoU signed on supporting AMR Surveillance and policies
- ❖ Action on Antibiotic Resistance Africa Node (ReAct Africa) – MoU in draft. Aimed at supporting Implementation of Antimicrobial Stewardship programs in Health facilities
- ❖ FIND AMR connectivity project – Draft MoU aimed at developing Integrated AMR data management system.

Challenges

- ❖ Inadequate enforcement of laws & regulations
- ❖ Limited microbiological capacity
- ❖ Limited access to funding
- ❖ One Health Approach

Opportunities/Strengths

- ❖ Strong political will
- ❖ One health approach
- ❖ Collaboration-PPPs

Partners

- ❖ WHO
- ❖ FAO
- ❖ OIE
- ❖ AFRICA CDC
- ❖ US CDC
- ❖ ReACT Africa
- ❖ CSE
- ❖ ZCHI
- ❖ PHAS
- ❖ CHAZ

CONCLUSION

“A journey of a thousand miles begins with 1 step;

This is Zambia’s first step in contributing to a world free from fear of untreatable infections !