Meeting Report

Joint Regional Meeting on Antimicrobial Stewardship and Antimicrobial Surveillance in Eastern and Southern Africa

Co-sponsored by the East Central and Southern Africa-Health Community and Africa Centres for Disease Control

August 7-11, 2023

Nairobi, Kenya

Venue: Emara Ole Sereni, Nairobi, Kenya

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Abbreviations and Acronyms

ACDC	Africa Centres for Disease Control and Prevention
AMR	Antimicrobial resistance
AMS	Antimicrobial Stewardship
AMU	Antimicrobial use
AMRCC	Antimicrobial Resistance Coordinating Committee
ASLM	African Society for Laboratory Medicine
ASM	American Society for Microbiology
ASP	Antimicrobial Stewardship Program
AU	African Union
AWaRe	Access, Watch, Reserve
CST	Culture and Sensitivity Testing
CwPAMS	Commonwealth Partnerships for Antimicrobial Stewardship
DDD	Defined Daily Dose
DTC	Drugs and Therapeutics Committee
ECSA-HC	East Central and Southern Africa -Health Community
EML	Essential Medicines List
EPN	Ecumenical Pharmaceutica Network
GLASS	Global Antimicrobial Resistance Surveillance System
FAO	Food and Agriculture Organization
HAI	Hospital Acquired Infections
HCWs	Health care workers
HIV	Human Immunodeficiency Virus
ICC	Infection Control Committee
IDDS	Infectious Disease Detection and Surveillance
IDSR	Integrated Disease Surveillance and Response
IPC	Infection Prevention and Control
IT	Information Technology
JEE	Joint External Evaluation
LAARC	Lab Assessment of Antibiotic Resistance Testing Capacity

MAAP	Mapping Antimicrobial Resistance and Antimicrobial Use Partnership
M&E	Monitoring and evaluation
MDROs	Multi-Drug Resistant Organisms
MTaPS	Medicines Technologies and Pharmaceutical Services
MTCs	Medicine and Therapeutic Committees
NAP	National Action Plan
NICD	National Institute for Communicable Diseases
PPS	Point Prevalence Surveys
QI	Quality Improvement
ReACT Africa	Action against Antimicrobial Resistance
SOP	Standard Operating Procedures
SPP	Strengthening Pandemic Preparedness
STAR	Strategic Tool for Assessing Risks
STG	Standard Treatment Guidelines
TB	Tuberculosis
ToR	Terms of Reference
TrACCS	Tripartite AMR country self-assessment survey
TWG	Technical Working Group
USAID	United States Agency for International Development
US-CDC	United States Centres for Disease Control
WAAW	World AMR Awareness Week
WASH	Water Sanitation and Hygiene
WHO	World Health Organization

1. Introduction

1.1. Background and context

Although Antimicrobials are traditionally used to treat infections and improve health outcomes, the misuse and overuse of antimicrobials in animals and humans has accelerated Antimicrobial Resistance (AMR), contributing to over 1,3 million deaths each year. It is projected that if the situation is not controlled, deaths due Antimicrobial Resistance (AMR) is likely to increase to 10 million by 2050[1].

Each day, new resistance mechanisms are emerging and spreading globally, threatening the ability of health systems to manage and treat common infectious diseases, resulting in prolonged illnesses and deaths. Without effective antimicrobials to prevent and treat infectious diseases or even support medical procedures, the achievement of Global health targets, such as the Sustainable Development Goals (SDGs) is blurred.

To address AMR in Africa, countries have developed and are implementing National Action Plans (NAPs) aligned with the Global Action Plan (GAP) in line with the WHO five global objectives of the Global Action Plan on AMR. The National Action plans aim to address the following: Improving awareness and understanding of antimicrobial resistance; Strengthening knowledge through surveillance and research; Reducing the incidence of infection; Optimising the use of antimicrobial agents and Developing investment cases for sustainability. However, there is still the need to establish region-specific approaches to implement National Antimicrobial Stewardship programs and deploy AMR surveillance systems.

To address the gaps in AMR stewardship and establishment of AMR surveillance systems, ECSA-HC and the Africa CDC have developed regional guidance documents including the regional guidance for Antimicrobial Stewardship and the Regional guidelines on the treatment of common infections. Further to the guidance documents, ECSA-HC and Africa CDC have undertaken multi-country studies on AMR Surveillance capacities and collaboratively implemented various regional projects supporting the implementation of the National Action Plans on AMR in Member States.

Countries are at different stages of implementation and with the need for a more coordinated effort, ECSA-HC and Africa CDC jointly convened this regional meeting on Antimicrobial Stewardship and AMR surveillance to review progress in implementation of these guidance documents. Broadly, the meeting aimed to devise on strategies and unify approaches to combating the growing threat of AMR.

1.2. Convening

The AMR in-person stakeholders meeting was convened by the ECSA-HC and Africa CDC from August 7-11, 2023 at Emara Ole Sereni in Nairobi, Kenya.

1.3. Participants

The meeting brought together 16 AU member state countries from Eastern and Southern Africa and officials from ECSA-HC, Africa CDC, WHO, USAID, US-CDC, and other key policymakers. A total of 102 people participated face-to-face, and 6 joined the meeting virtually. Participating countries were Comoros, Ethiopia, Kenya, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Somalia, South Africa, South Sudan, Tanzania, Uganda, Zambia and Zimbabwe. Out of these 14 countries had in person participants and 1 (Seychelles) participated virtually.

[1] Review on AMR. Tackling Drug Resistant infections globally: Final Report and recommendations. Cited at https://amr-review.org/sites/default/files/160518_Final%20paper_with%20cover.pdf

1.4. Objectives

Specifically, the following were the major objectives of the meeting:

1. Review current AMR Stewardship Regional Guidance document including AMS and AMR Surveillance assessment tools;
2. Share Best Practices in implementing Antimicrobial Stewardship Programs and deploying AMR Surveillance Systems ;
3. Identify Regional Priorities for AMS and AMR Surveillance and
4. Strengthen collaboration through establishing a regional AMR technical working group among the participating countries.

2. Key highlights of the Official Opening

Session 1: Introduction and Setting the stage

The meeting was well attended with representation from the 16 member states of the African Union in East and Southern Africa, where 14 joined face-to-face and 2 countries joined virtually. During the 1st morning session, Zimbabwe was the rapporteur, whilst Kenya chaired the session. The Ag. Dir. Directorate Health Standards Regulations and Quality Assurance , Ministry of Health Kenya presided over the opening session, welcomed all participants and requested participants to introduce themselves.

During the official opening, Ag. Head, Division of Patient and Health Workers Safety of the Kenya Ministry of Health (MOH) Dr.Irungu Kamau, welcomed MS of the 14 countries that attended the meeting physically and 2 countries that attended the meeting virtually. The Director General of the Africa Centres for Disease Control and Prevention (Africa CDC), Dr Jean Kaseya and Director General (DG) of the East, Central and Southern Africa Health Community (ECSA-HC) Professor Yoswa Dambisya welcomed participants to the antimicrobial and surveillance joint regional review meeting and provided their remarks.

Professor Dambisya stated that the meeting was part of the Africa Union Framework for AMR Control, 2020-2025 which describes strategies for Africa CDC to improve surveillance, delay emergence, limit transmission, and mitigate harm from AMR pathogens. This was followed by the DG of MOH of Kenya, Dr Patrick Amoth's remarks where he emphasised on data driven policy formulation in building medical interventions for AMR.

The official opening of the five day meeting was delivered by the Cabinet Secretary, Susan Nakhumicha. The Cabinet Secretary acknowledged that AMR is a global crisis, an urgent and multifaceted challenge that demands undivided attention. She indicated that AMR presented a severe threat to health systems in Kenya, regionally and globally.

Figure 1: Hon. Cabinet Secretary Nakhumicha S. Wafula at the Official Opening of the Regional Antimicrobial Stewardship meeting . (From the left: Ag. Director General for Health, Dr. PATRICK Amoth; Cabinet Secretary, Nakhumicha S. Wafula; Dr. Yewande Alimi, One Health Programme Coordinator, Africa Centres for Disease Control and Prevention, Director General East Central and Southern Africa-Health Community, Arusha, Tanzania

"***Over the past century, antibiotics and other antimicrobial agents have revolutionised Healthcare, saving countless lives from infectious diseases. Yet the misuse and overuse of these lifesaving drugs have triggered the rise of resistant strains of bacteria, rendering some treatments ineffective"*** she said.

Furthermore, she stated that Kenya was in the process of developing National Action Plan (NAP) 2.0 on AMR with medical interventions meant to reduce the occurrence of AMR.

Figure 2: Cabinet Secretary, Ministry of Health Kenya, Key note address during the official opening ceremony of the Regional AMS Meeting in Nairobi, Kenya

In her closing remarks, the Cabinet Secretary called for concerted efforts to rise to the challenge, adding that united efforts will determine the fate of millions of people who would otherwise be affected by the rising AMR.

3. Consideration of various agenda items

3.1. Background of the expected discussions

This session, led by Dr. Martin Matu, Director of Programmes, ECSA-HC addressed key aspects of the proposed structure of the meeting . The proposed agenda was shared with the participants for adoption.

Below are the highlights of the presentations: -

Session 2: Antimicrobial Stewardship: Global and Regional Initiatives

The following presentations were made during this session:

- Overview of Africa CDC's AMR Framework by Africa CDC
- Overview of ECSA -HC Strengthening Pandemic Preparedness by ECSA-HC
- Africa CDC's Surveillance and Laboratory Systems Strengthening by Africa CDC
- Overview of ECSA -HC AMR Regional Support by ECSA-HC
- ASLM Surveillance and Laboratory Systems Strengthening - MAAP by ASLM
- Partners perspective on for National and Facility level Support (USAID MTAPS; EPN; ReACT, CwPAMS) as a panel discussion

Overview of Africa CDCs AMR Framework – Dr Wande Alimi

Discussion:

MS wanted to know how Africa CDC developed the technical documents and whether countries were domesticating the documents. Africa CDC indicated that the organisation works on requests from MS and Technical Assistance (TA) from other countries. In addition, during the development of the framework, there was regional representation through technical working groups, and MS were requested to contribute and endorse through review or participation. Furthermore, countries were encouraged to domesticate the guidelines as per country requirements and Africa CDC could assist through funding and TA.

Overview of ESCA – HC Strengthening Pandemic Preparedness - Dr. Martin Matu

Discussion:

A representative from Uganda inquired on why Uganda was not part of the SPP project. ESCA-HC responded and indicated that when they applied for the programme most countries were invited but Uganda already had World Bank funding and leadership opted out. In addition, it was reported that some countries opted to apply individually.

MS inquired on the criteria for enrolment in the Digital Academy. It was reported that there was no restriction to enrolment, however there was an assessment where participants were expected to attain at least 70% pass mark. It was also reported that the program was based on key discussions and priorities for the countries such as the antimicrobial stewardship (AMS), biosecurity and biosafety. Furthermore, it was also stated that there was a fellowship program and more information could be provided on that.

MS wanted to know how the STAR Tool differed from other tools. It was reported that ESCA-HC works collaboratively with other organizations and the WHO STAR tool was widely standardised, hence easy to use.

ECSA-HC Regional Support for Implementation of NAPs and AMR – Dr. Evelyn Wesangula

Discussion:

MS inquired the methodology used in the development of the Regional AMS guidance document in 2016. ECSA-HC indicated that the process was informed by stakeholder engagement and through country representatives who participated in the review of the document. It was further clarified that the organizations WHO, Africa CDC and ECSA-HC worked with countries to identify gaps and support what is guided by country gaps and coordination is in place to reduce duplication of work in projects. Emphasis was that countries should lead the process of identifying gaps and guiding the partners as they converge in the country. Participants were also informed that the IPC legal framework was underway and would focus on infection Prevention and Control (IPC). The three components Surveillance, IPC and AMS were to be included in the framework. Also stated that there was a need to integrate integrated disease surveillance and response (IDSR) and AMR strategies .

African Society for Laboratory Medicine (ASLM) Surveillance and Laboratory System Strengthening MAAP – Dr Watipaso Kasambara

Discussions

It was emphasised that use of data by MS is critical and the AMRCC were encouraged to also provide feedback to countries on where the data was used. Training in data collection and use was expressed as an essential. Practice changes should be informed by data, thus data dissemination was critical.

Panel discussion

REACT Africa

The importance of building *post covid-19 pandemic* AMS, infection and prevention control (IPC) and avoiding duplication of efforts was emphasised with examples given from Kenya where ceftriaxone stewardship led to saving of funds. In Zambia, building the capacity at sub-national levels across the country was implemented, and extending to school pupils and civil society organisations.

Medicines Technologies and Pharmaceutical Services (USAID MTAPS)

Policymakers were encouraged to participate in joint workshops aimed at developing a harmonised curriculum on AMS, harmonising regulation of health products and principles of rational medicine use. Resource mobilisation on AMS, facilitation of conversation on best practises and monitoring of AMR/U projects was also emphasised.

Commonwealth Partnerships for Antimicrobial Stewardship (CwPAMS)

CwPAMs shared examples of successful partnerships between the United Kingdom (UK) and Ghana, Tanzania, Uganda and Zambia towards improving antimicrobial stewardship (AMS), including surveillance. It was reported that the project is being upscaled to include more Low and Medium Income Countries (LIMCs) in phase III. Achievements noted in Ghana through the PPS conducted included 15 to 20% reduction in antibiotic prescription in targeted facilities and in Tanzania Makerere an IPC program was successfully implemented. MS were encouraged to perform resource prioritisation, public private partnerships (PPP), have political buy- in, guide facilities to establish TWGs to improve facility based AMS activities.

Ecumenical Pharmaceutical Network (EPN)

EPN emphasized that MS should aim at establishment of one platform for information sharing, conduct regular webinar to share best practice, identify and appoint country AMS champions and have them mentor other

facilities and participate in in-country or regional collaboration of stewardship to achieve enhanced implementation of AMS.

Challenges in implementation of AMS were indicated as lack of harmonization in implementation of AMS (*harmonized training materials*), knowledge gap in policies and implementation of standards in facilities, financial resources to encourage stewardship programs and lack of harmonized data collection and analysis tools.

Session 3: Reviewing Implementation of AMS and AMR Surveillance Programs in the region

Overview of the new JEE tool- AMS&AMR Indicators

The Joint External Evaluation (JEE) is a voluntary and collaborative process that engages multiple sectors within a country to evaluate their readiness to address public health risks stemming from both natural occurrences and intentional actions. The implementation of JEE consists of the following steps:

1. Self-Evaluation: Countries conduct self-assessments of their capacities related to AMR response.
2. Review of Self-Evaluation Data: Collected data is reviewed to identify areas requiring further assessment.
3. In-Depth Site Visits and Meetings: On-site evaluations and meetings are conducted to gain deeper insights.
4. Draft Report and Review: A preliminary report is created and findings are reviewed.
5. Final JEE Publication: The World Health Organization (WHO) publishes the final JEE report.

JEE indicators for AMR and IPC

The JEE indicators for AMR include:

- Multisectoral coordination of AMR.
- Surveillance of AMR.
- Prevention of multidrug resistance.
- Optimal use of antimicrobial medicine in humans.
- Optimal use of antimicrobial medicine in animal health and agriculture.
- IPC programmes
- HCAI surveillance
- Safe environment in health facilities

Promoting Global Cooperation, the WHO JEE encourages international collaboration and information exchange, fostering a unified global approach against AMR. Countries can learn from each other's experiences and best practices, leading to accelerated progress and a harmonized response to tackle AMR effectively.

Critical Success Factors:

Successful JEE implementation requires several factors, including:

- Sustained political commitment.
- Allocation of resources.
- Strong leadership at all levels.
- Prioritisation of AMR as a significant public health concern.
- Adequate funding for research, surveillance, and awareness campaigns.

The JEE also serves as a mechanism to validate the results of the State Party Self-Assessment (SPAR), contributing to a more accurate assessment of a country's AMR response capabilities. To maintain up-to-date

readiness, the JEE process should be repeated every four to five years, ensuring countries' sustained efforts in enhancing their capacities to combat AMR.

The Joint External Evaluation (JEE) tool stands as a valuable resource in assessing countries' readiness and capacities to respond effectively to the challenges posed by Antimicrobial Stewardship and Antimicrobial Resistance. Through this process, countries can identify areas of improvement, enhance collaboration, and ensure a coordinated global effort in combating AMR.

Countries experiences on Domesticating and Implementing AMS Guidance Documents at National and Facility levels

COUNTRY	SUCCESSES	CHALLENGES	WAY FORWARD
Tanzania	Successful implementation of WHO JEE tool to assess Country IHR Core Capacities (2016, and 2023 – country self-assessment ongoing) Adoption of GAP on AMR & develop the first NAP in 2017 WHO NAP implementation Handbook used in the Review of NAP AMR (2023-2028) WHO Policy Guidelines on integrated AMS activities, in development of Tanzania AMS Policy Guidelines & Guiding document in implementation of AMS activities in HFs WHO NAP AMR Costing Tools, for costing NAP AMR 2023-2028 operational Plan The 2019 WHO AWaRe Classification List, in development of the First National AWaRe List (incorporated into the Tanzania STG/NEMLI., 2021)	Limited AMR and AMU data-sharing mechanisms within and between institutions and sectors Limited involvement of agriculture/crops, aquaculture and environment sectors Less engagement of private sectors Less engagement at sub-national level AMS and AMR activities are largely donor dependent The National AWaRe Classification List doesn't reflect the current AMR data calling for urgent need to review The Tanzania AMR surveillance framework does not have a unified system for MDRO prevention in HCFs; and genotypic AMR surveillance is not present	Develop Country AMR centralized data base (foster systems' interoperability) Extension of AMS and AMR implementation to sub- national levels Actively engagement of private sector Foster local funding mechanisms to ensure sustainability Review of the National AWaRe List using country AMR surveillance data (2020, 2021 & 2022); AMU and AMC data Review AMR Surveillance Framework to incorporate MDRO detection and prevention; establish genotypic AMR surveillance at the national reference laboratories
Namibia	Namibia has been registered as a GLASS reporting site in 2020 Revision of the Standard Treatment Guidelines and the Essential Medicines List Incorporation of the AWARE classification into the Namibia Essential Medicines List	Budgetary constraints on implementing global standards There is lack of both skills and human capacity to effectively carry out functions and affect commitment to any programmes The economic investments in AMR activities from the ministries have been minimal to none, leading to an absolute dependence on development partners The NAP was endorsed by the three ministers of the tripartite ministries, however, there is minimal political support.	Governance structure to be finalized and streamlined to coordinate all AMR activities Strengthen capacity of reference surveillance laboratories (both HH & AH) to detect, analyze and report AMR patterns in a routine basis Build capacity of Ref. Labs

COUNTRY	SUCCESSES	CHALLENGES	WAY FORWARD
			Increase number of Ref. Labs (include regional labs) Ensure data and resources sharing for effective collaboration Enhance collaboration between AMR stakeholders via ensuring joint planning, implementation and monitoring of AMR initiatives Annual AMR Stakeholder meetings to keep track of developments and plan the way forward
Seychelles	Establishment of AMR-TWG with TOR. Introduction of MIC in Critical care Units. Commemoration of WAAW in 2022 under ONE health approach at national level. Introduction of AMR as a core component of IPC training.	No governance structure in place for AMR. No dedicated budget to implement recommendations for NAP. Lack of trained human resources (no infectious disease or clinical microbiologist). Manual work performed in Laboratory-not automated. No AMS framework in place- Global and Regional AMR Surveillance and AMS Guidance Documents. No Quality management system (clinical laboratory working towards ISO certification). Not enrolled on GLASS – need a centralised repository for data collection, analysis, reporting and dissemination. MDRO being collected in only 6 priority units in the hospital (not captured in the community).	Update NAP and incorporate key recommendations from FAO. Implement the NAP under the ONE health approach. Establish a governance structure under ONE Health for AMR. Develop (adopt/ adapt) a national framework for AMS with Technical Assistance. Strengthen human resources capacity. Improve laboratory capacity to be automated and to perform phenotype and genotype testing. Enrol with GLASS to harmonize the AMU, AMC, and AMR human health surveillance systems. Inclusion of the private sector in AMS and AMR initiatives.
Mauritius	GLASS data – report with an antibiogram is available – above is for the year 2021 Comparative statistics with other countries are also accessible	Semi-electronic system only – still implementing Laboratory Information Management System for a few years Lack of data collectors – also true for veterinary sectors NOHARM is only for ICUs for now + outbreaks are identified 1 month later	Next data collection exercise for GLASS is about to start in coming weeks – currently done retrospectively NOHARM due to be expanded to non-ICU settings by the end of the year with the help of data collectors from WHO Currently writing NAP AMR 2.0

COUNTRY	SUCCESSES	CHALLENGES	WAY FORWARD
	Annual reports on AMR sent to MOHW based on NOHARM data Incidence and prevalence data about HPMDRO available	Need to improve quality of data for GLASS (cleaning of data difficult due to lack of unique identifiers, data collectors not familiar with antibiotic names, etc.) Minimal data on AMR from the private sector (& veterinary / environmental / food sectors) No designated National Reference Laboratory / CHL not ISO accredited (but it gets excellent results on EQAS) Food & environmental sectors cannot do antibiotic susceptibilities Lack of lab technicians (human / veterinary labs) No proper epidemiological unit in MOHW for data analysis No proper Data Management System to ensure prompt and accurate entry of data Minimal data on clinical outcomes of patients (partly because computers / tablets & internet are barely accessible in the hospitals) Lack of AMR Unit / Secretariat / National Coordinating Centre to centralize and coordinate the work – currently, in human health, only 2-3 persons are doing most of the work	LIMS under progress One Health AMR Committee is newly formed in 2023, has met and should be meeting again Eventually to include non-human sectors in NOHARM once capacity has been built
South Africa	NICD, in collaboration with other universities, institutions and laboratories, designed SACCESS (South African Collaborative COVID-19 Environmental Surveillance System) to perform wastewater-based surveillance for Sars-Cov-2. This network collects samples from 95 wastewater treatment plants (WWTP) from all provinces in South Africa. We are making use of this platform to perform surveillance of AMR from wastewater. The data generated had an impact on public health, government policy, EDL and other guidelines	**Implementation – Structures recovering from COVID-19 pandemic** **Brain drain** **Funding of the NAP** **Down-up only gets you so far: political will is necessary**	**National HAI Policy Document** Completed Guideline(s) / implementing plan National roll-out & monitoring

COUNTRY	SUCCESSES	CHALLENGES	WAY FORWARD
	GERMS is supporting surveillance strategic objective at NDoH, basically NICD/GERMS is only one provider with AMR data. **Dedicated & passionate people to push the process**		
Ethiopia	Antimicrobial resistance surveillance plan AMR score card customized from ASM assessment tool and LAARC Customized SOPs from ASM Use CLSI Mentorship guide IPC assessment tool to link AMR surveillance and IPC practice Microbiology laboratory quality management guide Isolate confirmatory protocol Developed antimalarial drug resistance molecular surveillance plan and mentorship guide Draft Zoonotic Public Health AMR surveillance implementation guide AMS Antimicrobial stewardship guide was developed by adopting the WHO guidelines (AMS guide for LMIC, AMS tool kit…) Developed a national essential medicine list categorized antibiotics based on AWaRe Developed AMR, AMS and rational medicine use training course module for health professionals	Lack of awareness on AMR threat by leadership, health care providers and community Weak microbiology laboratory infrastructure (challenge for expansion) Lack of quality essential antimicrobials and microbiology supplies and reagents Low volume of microbiological testing AMR surveillance data quality &use Lack of Automated machines for laboratory diagnostic No standard antibiotic panel to detect priority pathogens for AMR No standard definition of MDRO No integrated AMR surveillance reporting (human. animal & environment) AMS lack of dedicated staff for AMS in health facility Week integration of AMS, Diagnostic team and IPC Lack of funds to scale up AMS and AMR surveillance in the country Lack of national data on AMR prevalence Week regulatory enforcement to optimal use of antimicrobials Lack of accountability-IPC and AMS	Increase awareness of health care providers and community Improve microbiology lab infrastructure (space and equipment) Increase number of AMR surveillance participating sites Avail quality essential antimicrobial and microbiology supplies and reagents Improve volume of testing, data quality, reporting and use of microbiological data for clinical decision Define MDRO and standardize antibiotic panel Continuous mentorship, monitoring and Evaluation AMS Strengthen governance, alliance and partnership with stakeholders Strengthen monitoring and evaluation practice in AMR surveillance and AMS Develop standard reporting and information sharing mechanism Increase number of AMS implementing hospitals 30 by annual Provide continuous capacity building for health professionals, leaders and the community about AMR

COUNTRY	SUCCESSES	CHALLENGES	WAY FORWARD
	A standard treatment guideline (STG) for general hospitals and its implementation manual are developed Developed AMS training module		Develop regular joint monitoring and evaluation system Strengthen integration of AMS, Diagnostic team and IPC
Uganda		Supplies – erratic especially those for automated equipment & media Human resources – Personnel optimal training and interest in microbiology still few Limited number of testing facilities with adequate capacity Media preparation and quality – inadequate Limited number of personnel trained in stewardship	Strengthen Point Prevalence Surveys (2 per referral Hospital) Promote Prescription and Medicines Audit (4per referral hospital) Operationalize MTCs at all Hospitals (at least 6 meetings per hospital) Conduct Performance review meetings (3 meetings) Set up a national framework to support AMS implementation
Zambia	AMR Scorecard LAARC tool WHO AMS assessment tool WHO PPS Methodology	Minimal local funding for NAP implementation Limited microbiological capacity to generate local data to inform policy & practice Inadequate enforcement of laws & regulations	Capacity building in NAP costing, and NAP costing PPS in eight facilities Disseminate national AMS guidelines AMR policy Continue microbiology mentorship AMS Capacity building in eight facilities Documentation of lessons learnt – Publications
Rwanda	Guidelines for appropriate use of antimicrobials are available and antimicrobial stewardship programs are established in hospitals The “Access, Watch and Reserve” (AWaRe) classification of antibiotics is adopted in the national essential medicines list	Irrational prescription and dispensing of antibiotics Lack of bacteriology labs in private healthcare facilities Community based Health Insurance (CBHI) doesn’t cover the cost of culture and AST, and this leads to non-sustainability of AMR surveillance Lack of professional pharmacists in some hospitals Insufficient lab staff, knowledge on AMS, basic materials and equipment in vet satellite labs Few staff are trained on AMS	Enhance awareness and collaboration on AMR & AMS between pharmacists, clinicians and laboratory scientists Develop advocacy and awareness packages to increase AMR/AMS awareness among leadership, health and veterinary professionals, general public & partners Utilize data generated from surveillance systems to strengthen the supply chain by

COUNTRY	SUCCESSES	CHALLENGES	WAY FORWARD
	The National AMR surveillance operational plan incorporates the animal, agriculture and environment The animal, agriculture and environment stewardship guidelines are still to be developed Strong Multisectoral collaboration AMR National Action Plan Laboratory Capacity in 5 human labs and 1 animal lab Integrated AMR surveillance System International collaboration to exchange knowledge and best practices in AMR surveillance and management Multisectoral surveillance strategy/operational plan Essential medicine list disseminated every year Antimicrobial stewardship guidelines Capacity building on bacteriology testing (8 facilities trained on full bacteriology testing, 48 facilities trained on microscopy Countrywide awareness campaigns (WAAW) AMR surveillance and stewardship training materials Online antimicrobial stewardship course for healthcare providers	Lack of sustainable supply chain of bacteriology culture reagents **Some established bacteriology laboratories are non-operational (East African Public Health Laboratory Project**)	improving selection, forecasting, supply planning and budgeting on procurement of all health products and technologies to support AMR and AMS Advocate for recruitment of necessary staff to implement AMR surveillance and AMS within different facilities Training of the multisectoral team on the joint surveillance system and the joint surveillance operational plan Create a repository/ bank of AMR pathogens for research purposes Training of health care providers on the stewardship guidelines Training of health facilities on IPC AMR genomic surveillance Development of the biosafety and biosecurity strategic plan and curriculum Development of the animal health stewardship guidelines Strengthen bacteriology testing capacity in 13 selected human laboratories and 4 animal laboratories Involve the private sector in AMS and AMR initiatives

COUNTRY	SUCCESSES	CHALLENGES	WAY FORWARD
Kenya	Regional Guidance document for the development and implementation of Antimicrobial Stewardship Programs; Blueprint for development of National AMS Guidelines and subsequent implemented activities WHO GLASS; National AMR Surveillance Strategy. Adapted WHO priority pathogens list with inclusion of country priority interests. Submission of data on AMR Surveillance & AMC WHO EML; KEML 2019, KEML 2023 Review of Standard Treatment Guidelines MAAP Report on AMR Surveillance, AMC – Policy Action	Inadequate resources – financial, human Microbiology infrastructure - inadequate IT challenges – AMR Surveillance Supply chain constraints	Launch & Implementation of AMR NAP 2.0 Strengthen the National AMR Surveillance System Strengthen Laboratory capacity for AMR Surveillance Strengthen infection prevention and control measures Support implementation of strategies and guidelines to optimize the use antimicrobials Strengthening AMR governance Structures
South Sudan	Annual country submission of TrACSS is an opportunity to convene the national AMR multisectoral working group to jointly review and complete the questionnaire, monitor progress, and identify country priorities for action.	Political commitment: High-level political oversight is essential to raise national awareness about AMR, strengthen multisectoral coordination, expedite NAP implementation in all sectors, and allocate adequate financial resources for implementation of planned activities. Technical capacity: Addressing AMR will require building technical capacity in the country to support surveillance of AMR, laboratory diagnostics, monitoring antimicrobial use, training and education on AMR for healthcare workers, and implementing infection prevention and control measures in healthcare facilities, including WASH **Integration:** To ensure sustained action and additional resources, AMR relevant activities can be integrated into existing national health plans, Universal Health Care/ Primary Health Care strategies, NAPs for Health Security, UN Sustainable Development Cooperation Framework, national plans on HIV/TB/Malaria/sexually transmitted infections, and national food safety plans, etc. Continued annual TrACSS submission	Developing, implementing and enforcing regulations: Policies regarding the prescription, dispensing, sale and disposal of antimicrobials need to be strengthened, monitored and enforced appropriately. Strengthening prevention measures: Strengthening country capacity for implementing nationwide infection prevention and control (IPC), and water, sanitation and hygiene (WASH) measures in healthcare facilities as per national and WHO guidelines; strengthening routine immunization efforts Ensuring access to quality diagnostics: Strengthening laboratory diagnostic capacity to help contribute to the surveillance of

COUNTRY	SUCCESSES	CHALLENGES	WAY FORWARD
			resistance and promote the optimal use of antimicrobials Targeted AMR awareness and education: Supporting nationwide AMR awareness campaigns for key stakeholders, including the food production, plant health, and environmental health sectors; supporting additional training on AMR for all healthcare workers. Strengthening surveillance data monitoring and reporting: Strengthening capacity for surveillance of AMR and antimicrobial consumption/ use; supporting systems for data collection, reporting and data sharing across sectors. National AMR surveillance data on human health is needed to report on SDG indicators

Session 4: Reviewing Regional AMS Guidance documents

The regional review of antimicrobial stewardship guidance documents marked a significant milestone in the regions collective efforts to combat antimicrobial resistance (AMR) and enhance the prudent use of antibiotics through practical and sustainable antimicrobial stewardship programs. The event, attended by diverse stakeholders including healthcare professionals, policymakers, researchers, and administrators, provided a comprehensive overview of the progress made and the challenges faced in implementing effective antimicrobial stewardship programs across the region. The regional review of antimicrobial stewardship guidance documents showcased the region's commitment localizing global solutions by reflecting on progress, challenges, and innovations; the event served as a platform for knowledge exchange and inspiration by 15 countries drawn from Eastern and Southern Africa. The collective regional determination to optimize antibiotic use and safeguard the effectiveness of these vital medications underscores the importance of ongoing collaboration, education, and vigilant stewardship.

The following presentations were made to support the review process.

- Point Prevalence Surveys and antibiograms- Driving action with data by Dr. Loice Ombajo, Infectious Disease Specialist School of Medicine, University of Nairobi.

- ACDC Regional Treatment Guidelines for Common Infections by Dr. Yewande Alimy, One Health programme Coordinator Africa CDC

- Country Experiences Localizing Global and Regional Guidance by Zambia, Kenya, and Seychelles
- Review of the Regional AMS Guidance Document

The following were Key Highlights of the submissions by countries citing the need for

1. **Adaptation of global guidance to local contexts:** The review highlighted the importance of tailoring antimicrobial stewardship strategies to the unique healthcare landscape of our country settings and region. Some countries (Zambia, Kenya, Tanzania, Malawi, Mozambique, Rwanda shared their experiences in localizing guidelines to address country specific challenges and provide a standardized framework for implementation.
2. **Collaborative Efforts:** The event underscored the success achieved through interdisciplinary collaboration in implementing AMR Surveillance systems and Antimicrobial Stewardship programs.
3. **Data-Driven Insights:** The utilization of country and regional AMR surveillance data was a recurring theme. Presentations showcased how surveillance efforts have identified emerging resistance patterns, enabling timely interventions and refined prescribing practices.
4. **Education and Awareness:** Discussions emphasized the role of education and awareness programs in promoting responsible antibiotic use tailored for target audiences.
5. **Success Stories:** Countries shared their success stories from a National and facility level perspective demonstrating the positive impact of antimicrobial stewardship initiatives on policy and guideline development
6. **Policy Integration:** The alignment and harmonization of regional antimicrobial stewardship guidance with national and international policies was a critical point of discussion to enable practical and sustainable implementation. The discussions emphasized the need for policy and guidance harmonization to create a unified front against AMR and facilitate consistent stewardship practices.
7. **Challenges Addressed:** The session acknowledged challenges, including resource limitations, resistance to change, and the need for continuous monitoring and adaptation. Strategies were discussed to overcome these barriers and ensure the sustainability of stewardship efforts.

Review of the Regional AMS Guidance Document

This was necessitated by the need to have context specific approaches following the dissemination of the Global Action Plan on AMR and related strategies and guidance documents supporting implementation of National action plans. The focus of the review was to tailor global and regional guidance to local context; Foster practicality, consistency and harmonization in implementation; Galvanize resource Allocation; strengthen Interdisciplinary Collaboration; Data Collection and Surveillance; Augment Global Efforts; Long-Term Sustainability. Participants were divided into groups to review specific sections of the regional guidance document. The aim of the review was to ensure the effectiveness of antimicrobial stewardship programs in the region, to allow for the incorporation of the latest scientific evidence, best practices, and regional experiences into these guidelines. Participants were divided into groups to review the document and feedback was presented at plenary. (The proposals for inclusion into the reviewed guidance document are in annex XX)

Session 5: Reviewing Regional AMR Surveillance Systems

AMR Surveillance systems- Data Management Processes in Kenya

This topic was presented by Dr. David Mutonga, Kenya country team lead for USAID funded project Infectious Disease Detection and Surveillance (IDDS). He started his presentation giving an overview of the IDDS, a project that seeks to strengthen detection of diseases of public health importance, improve identification of AMR, and establish/strengthen real-time surveillance systems. The project is being implemented in Senegal, Liberia, Guinea, Cameroon, Burkina Faso, DRC, Zimbabwe, Mozambique, Tanzania, Kenya, Uganda, Ethiopia, India, Bangladesh, Burma, Thailand, Indonesia, Vietnam, Cambodia and Philippines. In Kenya specifically, the project supports AMR detection and surveillance across five sites: Bungoma, Malindi, Murang'a, Nyeri and Kitale County Hospital Laboratories. Key interventions include development of tools, training materials, guidelines and SOPs; support with equipment, reagents, consumables; training and mentorship; advocacy and sensitization; data analysis and use of quality management and data quality reviews/ improvement.

Kenya has 23 laboratories implementing AMR surveillance: 17 human health and 6 animal health. The national surveillance focuses on 8 priority bacterial pathogens: *Acinetobacter baumanii, Klebsiella pneumoniae, Escherichia coli, Pseudomonas aeruginosa, Staphylococcus aureus, Streptococcus pneumoniae, Salmonella* spp., and *Shigella* spp. in human health. The testing (conventional, automated and molecular), data collection and reporting is done by the surveillance sites to the central data warehouse using paper registers, Excel, WHONET. Data review, validation and analysis is done using Excel, WHONET, STATA and R. Report goes to GLASS, WAAW week (hard copies).

The Kenyan National AMR Surveillance Data Review 2022 indicates that from 26103 AMR surveillance records in human health, 53.8% (10,576) had no growth/no significant growths/normal flora. Those with growth, *Staphylococcus aureus* (pus was the relevant sample), *Escherichia coli* (urine) and Klebsiella spp. (pus, urine and blood) were the most isolated pathogens. *S.aureus* was 63%, resistant to cotrimoxazole, 82% resistant to penicillin G. *P. aeruginosa* had resistance levels of between 5-35% to all antibiotics under surveillance. *E. coli and Klebsiella* spp. isolates had high resistance to second and third generation cephalosporins (>70%) and were moderate to highly sensitive to meropenem (>86%), amikacin (>89%), and tigecycline (>93%). Acinetobacter species was 58% resistant to meropenem and had high resistance to third generation cephalosporins (>72%), gentamicin (57%), and piperacillin-tazobactam (77%)

Review of CDC Laboratory Assessment of Antibiotic Resistance Testing Capacity (LAARC) version 2.0

The overview of the CDC LAARC tool version 2 was presented by Susan Bollinger, a Microbiologist from the United States Centre for Disease Control and Prevention (CDC). This was an introduction to brief the participants on the version 2 (2020) of this tool in preparation for the group work dedicated to review it. The presenter reminded the participants that the LAARC version was built into an Epi-Info program and was released by US CDC in 2017/8. The presenter highlighted that the version 2 of the LAARC tool has a guidance document and questionnaire to orient the users on its use and both, the tool and guidance are available in four languages: English, Spanish, French and Portuguese. The objective of the tool is to help determine if

laboratories are ready to engage in antibiotic resistance surveillance and guide development of work plans to address gaps. The tool is very comprehensive and covers the following areas: introduction and assessor guide; general information, facility, LIS, data management, quality assurance, media quality control, identification quality control, antimicrobial susceptibility testing (AST) quality control, specimen, processing, identification, basic AST, AST expert rules, AST policy and safety. The tool was designed to analyse the data collected and generate it in tables and graphs to facilitate the interpretation. The summarised data can be found in a specific sheet of the tool followed by a sheet that highlights "the red flags". Red flags represent practices that may put patients or staff at risk and should be corrected immediately. At the end the tool has two sheets dedicated to conclusions of the assessment and pictures. Survey to gather information to identify and prioritise potential revisions of the tool is ongoing. September focus group discussions with survey respondents although the final result may take more time (1-2 years). It was noted that at least 5 countries represented in the meeting had used the LAARC tool to assess the AMR capacity in the human laboratories, however, as of February 2023 148 countries had been using the tool, most heavily in India, Costa Rica, Pakistan, Kenya, Brazil and Egypt.

Overview of the WHO AMS assessment checklist

Dr. Evelyn Wesangula, Senior AMR Control Specialist from ECSA-HC gave an overview of the WHO AMS assessment checklist to set pace for the revision of the tool in group work. She mentioned that the current version of the tool is an updated version adopted from Tanzanian which incorporates the scoring to measure the level of implementation of AMS. Moreover, the tool can be used in different time points from baseline to other visits to monitor the progress of implementation. The WHO AMS assessment checklist covers 8 areas: i) Presence of DTC, ICC or AMS team; ii) DTC Functionality; iii) Leadership Commitment; iv) Accountability and responsibility; v) AMS Actions; vi) Education and training; vii) Monitoring and surveillance; viii) Reporting feedback within the health-care facility.

The review of the WHO AMS assessment checklist was conducted in groups, to harness the collective expertise and diverse perspectives of experienced team members, leading to more robust, insightful, and well-rounded feedback.

The aim of the review was to collectively; evaluate relevance; assess the validity and reliability; bench mark and compare experiences in using the tool; identify strengths and limitations; ease of use; comprehensiveness; scalability; ability to drive improvement; build capacity for teams to better use the tool and enhance accountability.

Feedback from the review of the assessment tool

Session 6: Regional Priorities for AMS and AMR Surveillance

Antimicrobial Resistance Surveillance Regional Priorities

THEMES	ACTIONS
Strengthen AMR Surveillance strategy implementation	Increase number of AMR surveillance participating sites within countries
	Increase number of reference laboratories (include regional labs)
	Establish genotypic AMR surveillance at the national reference laboratories
	Strengthen bacteriology testing capacity in selected human and animal laboratories to detect, analyse and report AMR patterns in a routine basis
	Improve volume of testing, data quality, reporting and use of microbiological data for clinical decision
	Build capacity for media preparation and quality
	Improve microbiology lab infrastructure (space and equipment)
	Ensuring access to quality diagnostics
	Training of the multisectoral team on the joint surveillance system and the joint surveillance operational plan
Develop Country AMR centralized data base (enhance systems' interoperability)	Strengthening surveillance data monitoring and reporting: Strengthening capacity for surveillance of AMR and antimicrobial consumption/ use; supporting systems for data collection, reporting and data sharing across sectors. National AMR surveillance data on human health is needed to report on SDG indicators
	Review AMR Surveillance Framework to incorporate Multi Drug Resistance Organisms (MDRO) detection and prevention;
	Create a repository/ bank of AMR pathogens for research purposes
Sustainable funding	Foster local funding mechanisms to ensure sustainability of actions
Education and Awareness	Increase awareness of health care providers, stakeholders and community
	Annual AMR Stakeholder meetings to keep track of developments and plan the way forward
Biosafety and Biosecurity	Development of the biosafety and biosecurity strategic plan and curriculum
Monitoring and Evaluation	Strengthen monitoring and evaluation practice in AMR surveillance to guide continuous mentorship

Antimicrobial Stewardship Regional Priorities

THEME	ACTIONS
	Need to strengthen integration of AMS, Diagnostic stewardship and IPC

THEME	ACTIONS
Governance. coordination and collaboration)	Involve the private sector in AMS and AMR initiatives for scale up and sustainability
	Strengthen governance and coordination to enhance collaboration between AMR stakeholders ensuring joint planning, implementation and monitoring of AMR initiatives
	Capacity building in NAP costing
Data management	Develop standard reporting and information sharing mechanisms
	Ensure deployment data management systems and resource sharing for effective collaboration
Infection Prevention and Control	Strengthening prevention measures: Strengthening country capacity for implementing nationwide infection prevention and control (IPC), and water, sanitation and hygiene (WASH) measures in healthcare facilities as per national and WHO guidelines; strengthening routine immunization efforts
Framework, Guideline and SOP development	Define Governance structures at national and facility level for AMS programs including linkages to other programs
	Development of AMS-specific documents Policies, Guidance, Implementation plans at various levels, Standard Treatment Guidelines (i.e., outlining AMS interventions
	Development of animal health antimicrobial stewardship guidelines
Regulatory issues	Developing, implementing and enforcing regulations: Policies regarding the prescription, dispensing, sale and disposal of antimicrobials need to be strengthened, monitored and enforced appropriately.
	Scale up of AMS implementation to sub- national levels
Awareness, education and training	Advocacy and Increase awareness of health care providers, stakeholders and community
	Scale up training of health care providers on the antimicrobial stewardship and Infection Prevention and Control

THEME	ACTIONS
	Disseminate national AMS guidelines and other strategic documents developed
	Enhance Documentation of lessons learnt through Publications and defining joint research priorities
M&E	Strengthen monitoring and evaluation of AMS interventions
Funding/resource mobilisation	Advocate for local funding mechanisms to ensure sustainability.
	Enhance resource mobilization and provide technical assistance as needed

Session 7: Regional Collaboration and Coordination

Governance experiences from the member states-

Implementing National Action Plans (NAPs) on Antimicrobial Resistance (AMR) requires effective governance structures to ensure that the strategies outlined in these plans are executed efficiently. This session was moderated by Dr. Watipaso Kasambara and the panelists were drawn from Malawi, Kenya, South Sudan, Zimbabwe and Mozambique

Some of the governance experiences and considerations in implementing NAPs on AMR highlighted are:

- **Interagency Coordination:** One of the most critical and challenging aspects of governance in NAP implementation noted was the coordination among various government agencies, including health ministries, agriculture, and environment ministries. Countries shared their current governance structures used to establish National interagency committees or task forces to ensure collaboration and a comprehensive approach to AMR. Challenges in funding the functionality of coordinating mechanisms, sustaining action, ensuring all sectors are on board and moving in the same direction at the same pace were noted.
- **Political Commitment:** This was identified as a key element in ensuring successful multisectoral collaboration for NAP implementation which often depends on high-level political commitment. It was noted that countries that have made significant progress in implementing the NAPs have leaders who prioritized AMR, allocated necessary resources, and engaged in advocacy at the national, regional and international level.
- **Deliberate Multi-Stakeholder Engagement:** Countries reported that governance structures from the onset should involve various stakeholders in the leading sectors, academia, professionals, pharmaceutical companies, veterinarians, civil society organizations, and academic institutions. This inclusivity ensures that diverse perspectives are considered, and collective ownership of the NAP is established.

- **The need for domestic resource allocation:** The countries emphasized the need for adequate budget allocation and domestic resource mobilization are essential for sustained NAP implementation.
- **Monitoring and Evaluation capacity:** The countries presented the need to have robust governance including mechanisms for monitoring and evaluating NAP progress with clear Indicators, benchmarks, and reporting mechanisms to track the implementation of strategies and assess their feasibility and impact. A clear reporting mechanism should be developed to ensure accountability.
- **Legislation and Regulation**: Governance structures must address legal and regulatory aspects related to AMR. This includes the development of laws and regulations governing the use of antimicrobials in healthcare, agriculture, and veterinary practices. Ensuring compliance with these regulations is crucial.
- **Following through to Global and regional Commitments:** Engaging with international organizations and collaborating with neighbouring countries can enhance the effectiveness of NAPs.
- **Public Advocacy, Awareness and Education:** Governance structures should include strategies for public awareness and education using locally generated data.
- **Adaptability:** Governance and coordination structures should be adaptable and flexible to changing landscapes.
- **Transparency and Accountability:** Governance mechanisms should promote transparency and accountability at all levels across the multiple sectors. Transparency in reporting progress and challenges ensures that stakeholders can hold governments and implementers accountable for their commitments.

In summary, effective implementation of NAPs on AMR requires a robust governance framework that prioritizes coordination, political commitment, resource allocation, and multi-stakeholder engagement. It should also be adaptable to changing circumstances and foster transparency and accountability. These governance experiences from multiple perspectives serve as valuable lessons for countries aiming to combat the growing threat of antimicrobial resistance effectively.

ESTABLISHING THE REGIONAL AMR COMMUNITY OF PRACTICE- SESSION MODERATOR PROF. JEREMIAH SENI, TANZANIA

Dr. Evelyn gave an overview of the Community of Practice and mentioned that this will provide a platform for knowledge exchange and lesson learning with regards to the implementation of National Action Plans on AMR across the region. Information shared will reflect as to what is happening within countries and monitor regional resistance rates and impact of interventions. The Community of Practice will exist to:

- Bring together Antimicrobial Resistance Coordinating Committees or specific technical working groups with a common interest in a specific technical domain in antimicrobial resistance.
- Collaborate regularly to share information, improve their skills, and actively work on advancing the general knowledge in the prevention and control of AMR.
- Foster south to south exchange of knowledge and skills with people across the entire region.

- Offer access to a wide range of regional expertise to help with technical challenges and fuel continuous improvement and allows more meaningful contributions to the larger goals of the countries and the region

Action: Participants discussed modalities of creating the Communities of Practice and gave their views on how the Community of Practice will run for optimal benefits to the member states.
Proposals made

1. Technical working group- composition
2. Community working group which is open to all willing to participate.
3. The Community of Practice will be established from a One Health Approach
4. The need for further consultation on the best approach

- **Opportunities for funding and collaboration**

This was an open session where the different partners (USAID- MTaPS, USAID-IDDS, ASM, ASLM, ECSA and ACDC summarized the upcoming initiatives that countries could plug into.

- USAID- MTaPS- will continue supporting the implementation of Infection Prevention and Control and Antimicrobial Stewardship Initiatives
- USAID-IDDS- Supporting the implementation Laboratory Based AMR Surveillance in some countries and
- ASM- Introducing a new virtual capacity building initiative on Antimicrobial Stewardship- Teach AMS supporting 4 countries (Malawi, Ghana, Kenya, Uganda and Tanzania) in the first phase
- ASLM- Preparing for MAAP phase 2 supported by the Fleming Fund which will focus on strengthening the use of data generated through Surveillance System.
- ACDC- Several opportunities opening up from diverse stakeholders such as the Fleming Fund and funding from within ACDC
- ECSA-HC- Continued support from world bank supported projects such as the Strengthening Pandemic Preparedness and the upcoming Multi-Phased Approach project which will start out in 3 countries and expand to include more in the second year.

4. Key Messages

Following successful deliberations, it was noted that

1. Great progress has been made by the member states in implementing the National Action Plans on AMR
2. There is willingness to scale up interventions to a national level
3. Recognized that there are bottlenecks to implementation
4. Collaboration and coordination are a key ingredient for successful implementation of NAPs from a One Health Approach

Key take -aways

1. **Data-Driven Insights:** The utilization of country and regional AMR surveillance data was a recurring theme. Presentations showcased how surveillance efforts have identified emerging resistance patterns, enabled timely interventions and refined prescribing practices.
2. The benefits of **Collaborative Efforts:** The meeting underscored the success achieved through interdisciplinary and inter-country collaborations in deploying AMR Surveillance systems and Antimicrobial Stewardship programs.
3. **Adaptation of global guidance to local contexts:** The review highlighted the importance of tailoring strategies to the unique healthcare landscape of our country settings and region. Countries shared their experiences in localizing guidelines to address country specific challenges and provide a standardized framework for implementation.
4. **Education and Awareness:** Discussions emphasized the role of education and awareness programs in promoting responsible antibiotic use tailored for target audiences.
5. **Success Stories:** Countries shared their success stories from a National and facility level perspective demonstrating the **positive impact of antimicrobial stewardship** initiatives on policy and guideline development
6. **Policy Integration:** The alignment and harmonization of regional antimicrobial stewardship guidance with national and international policies was a critical point of discussion to enable practical and sustainable implementation. The discussions emphasized the need for policy and guidance harmonization **to create a unified front against AMR** and facilitate consistent stewardship practices.
7. **Challenges Addressed:** The session acknowledged challenges, including resource limitations, resistance to change, and the need for continuous monitoring and adaptation. Strategies were discussed to overcome these barriers and ensure the sustainability of stewardship efforts.

REGIONAL AND COUNTRY PRIORITIES IDENTIFIED

AMR Surveillance

Priority 1: Develop/Strengthen and accelerate Implementation AMR Surveillance Strategies

Priority 2 Expand AMR surveillance and AMS to additional sentinel sites, to sub-national levels, and regional and reference labs

Priority 3: Advocate/ mobilize local funding mechanisms to ensure sustainability for laboratory capacity and AMR surveillance

Priority 4: Strengthen systems for data collection, reporting, sharing, monitoring and evaluation. Foster systems interoperability including LIS and centralized national data base.

Priority 5: Support laboratory capacity building, diagnostic stewardship and continuous mentorship and quality management systems

Priority 6: Develop biosafety and biosecurity plans and

Priority 7: Establish AMR pathogen bank/ biorepository

Antimicrobial Stewardship

Priority 1: Strengthen governance including coordination and collaboration for AMS programs at policy level and at the health facilities

Priority 2: Expand the AMS programs and accelerate the development and implementation of SOPs for AMS

Priority 3: accelerate the develop/updating implementation and enforcing regulations

Priority 4: Ensure AMS data and resources sharing for effective collaboration Strengthening prevention measures

Priority 5: Undertake periodic point prevalence to inform s and implement AMS actions

5. Next steps and follow up actions

Below were the key next steps following the meeting : -

	INTERVENTION	ACTIVITIES	TIMELINE	RESPONSIBLE
1	Communities of Practice	Finalize the establishment of the Community of Practice	October 2024	ECSA-HC & ACDC
		Convene Periodic quarterly meetings	November	ECSA-HC & ACDC
2	Implementation of National Action Plans	Countries to accelerate NAP implementation and monitor progress with sharing updates during periodic meetings		Member States
3	Policy Briefs	Develop a Policy brief from the meeting for Advocacy and Awareness	November	ECSA-HC & ACDC
4	Resource Mobilization	Mobilize resources to support implementation of the priorities	Feedback in August 2024	Member States and Partners
5	Regional AMS Guidance Document	Finalize Regional AMS Guidance document	October 30th 2023	ECSA-HC & ACDC
		Disseminate the AMS Guidance document WAAW 2023 –ECSA-HC/Africa CDC	November 2023	ECSA-HC & ACDC
6	**WHO AMS Checklist**	WHO- AMS Assessment Checklist- Summarize recommendations and share with WHO	October 30th 2023	ECSA-HC &ACDC
		Digitize the tool for ease of use by countries	December 2023	ECSA-HC & WHO
7	**US CDC-LAARC Tool**	**US CDC -Laboratory Antimicrobial resistance Assessment Checklist - LAARC -**	To be confirmed	US-CDC

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6. Closing remarks

Closing remarks were made by the representative of Africa CDC, Dr. Yewande Alimy, reiterating their support to the implementation of the National Action Plans.

The Director General, ECSA-HC closed the meeting by rallying a call to Action for the participants to pledging and signing up to become antibiotic guardians. He emphasized the importance of the One Health Approach and reaffirmed ECSA-HC support to advancing the AMR agenda.

7. Conclusion

The Regional Consultative on Antimicrobial Stewardship and Antimicrobial resistance surveillance marked a significant achievement in our collaborative efforts against the growing threat of antimicrobial resistance (AMR) in the East and Southern Africa Region.

Over the course of this meeting , the power of collaboration, innovation, harmonization and shared knowledge in addressing AMR was realized.

The discussions illustrated how the exchange of diverse perspectives and experiences among healthcare professionals, policymakers, researchers, and industry experts has enriched our understanding and implementation of antimicrobial stewardship. The participants identified common regional priorities and challenges, laying the foundation for a coordinated and harmonized approach to tackling AMR in the region where countries share similar contexts.

The meeting also spurred a renewed commitment to action after critically evaluating the existing antimicrobial stewardship strategies and identified areas for improvement. Armed with the current scientific insights, best practices, and the collective wisdom of regional expertise and experience, the member states were well-equipped to enhance and update approaches, ensuring their continued relevance and effectiveness in safeguarding public health.

Networks forged during this meeting will extend far beyond the meeting , strengthened bonds within and across countries, committed to ongoing collaboration and mutual support in the shared mission to combat AMR. The networks and partnerships formed and nurtured during the meeting would be essential assets going forward.

The insights gained, the actionable recommendations formulated, and the commitment demonstrated during this regional consultative meeting provided us with a solid platform for progress going forward with the spirit of cooperation, responsibility, and excellence that defined the engagement. This report represents the regional collective dedication to safeguarding the effectiveness of antimicrobials and securing a healthier future for all.

Annex 1: Meeting Agenda

Day 1 (Monday, August 07, 2023)		
Session 1: Introduction and Setting the Stage *Chair: Kenya* *Rapporteur: Zimbabwe*		
Time	**Topic**	**Presenter/ Facilitator**
08:30 - 08:45hrs	Registration	ECSA HC/ACDC
08:45 – 09:00 hrs	Participants Introduction	
09:00 – 09:30hrs	Welcome	Ag. Dir. Directorate Health Standards Regulations & Quality Assurance -MOH-KENYA
	Remarks	Africa CDC
	Remarks	Director General - ECSA-HC
	Remarks	Ag. DG for Health-MOH- KENYA
	Official opening	Cabinet Secretary- MOH-KENYA
	Group photo	
Session 2: Antimicrobial Stewardship: Global and Regional Initiatives *Chair: Zambia* *Rapporteur: Zimbabwe*		
HEALTH BREAK		
10:00-10:15	Overview of Africa CDC's AMR Framework	Africa CDC
10:15-10:30	Overview of ECSA -HC Strengthening Pandemic Preparedness	ECSA-HC
10:30-10:45	Africa CDC's Surveillance and Laboratory Systems Strengthening	Africa CDC
10:45-11:00	Overview of ECSA -HC AMR Regional Support-	ECSA-HC
11:00-11:15	Overview of WHO Antimicrobial Stewardship Initiatives	WHO
11:15-11:30	ASLM Surveillance and Laboratory Systems Strengthening- MAAP	Dr. Watipaso Kasambara
11:30-12:00	Panel Discussion- Regional Partners- National and Facility level Support	(USAID MTAPS; EPN; ReACT, CwPAMS)
Session 3: Reviewing Implementation of AMS and AMR Surveillance Programs in the region: Country progress *Chair:* **Namibia** **Rapporteur: Mauritius**		
12:00-12:15	Overview of the new JEE tool- AMS&AMR Indicators	WHO/ECSA HC

12:15-12:30	Republic of Tanzania	
12:30-12:45	Namibia	
12:45-13:00	Union of the Comoros	
13:00-14:00	**Lunch Break**	**ALL**
14:00-14:15	Republic of Seychelles	
14:15-14:30	Republic of South Africa	
14:30-14:45	Republic of Mauritius	
14:45-15:00	Republic of Ethiopia	
15:00-15:15	Republic of Uganda	
15:15-16:00	Plenary	
Day 2 (Tuesday, August 08, 2023)		
Time	**Topic**	**Presenter/ Facilitator**
Session 4: Reviewing Regional AMS Guidance documents *Chair: Uganda and Somalia* *Rapporteur: Mozambique*		
09:00-09:30	Point Prevalence Surveys and antibiograms- Driving action with data	Dr. Loice Ombajo
09:20-09:40	Overview -ACDC Regional Treatment Guidelines for Common Infections	Africa CDC
09:40-10:00	Overview of the Regional AMS Guidance Document and Assessment Tools	ECSA-HC
10:00-10:30	**HEALTH BREAK**	
	Country Experiences Localizing Global and Regional Guidance	
10:30-10:45	Republic of Rwanda	
10:45-11:00	Republic of Zambia	
11:00-11:45	Republic of Kenya	
11:45-12:00	Plenary	
12:00-13:00	Review of the Regional AMS Guidance Document	
13:00-14:00	**Lunch Break**	**ALL**
14:00 – 16:00hrs	Review of the Regional AMS Guidance Document	ECSA-HC/ Africa CDC
16:00 – 17:30hrs	Plenary	ECSA-HC/ Africa CDC
Day 3 (Wednesday, August 09, 2023)		
Session 5: Reviewing Regional AMR Surveillance Systems **Chair: South Africa and Ethiopia** **Rapporteur: Comoros**		
09:00 – 09:15hrs	AMR Surveillance systems- Data Management- Challenges and Opportunities	USAID IDDS

	for Harmonization		
09:15-09:30	Overview of the CDC-LAARC Tool		**US -CDC**
09:30-09:45	Overview of the WHO AMS assessment checklist		**WHO/ ECSA HC**
09:45:10:00	Reviewing AMR Laboratory Assessment tools CDC LAARC Tool (In view of other existing tools- ASLM, ECSA-EAPHLN)	Reviewing the AMS WHO AMS Assessment Checklist	US CDC/ WHO/ECSA HC/ ASLM
10:00-10:30	Health Break		ALL
	Reviewing AMR Laboratory Assessment tools CDC LAARC Tool (In view of other existing tools- ASLM, ECSA-EAPHLN)	Reviewing the AMS WHO AMS Assessment Checklist	US CDC/ WHO/ECSA HC/ ASLM
13:00-14:00	**Lunch Break**		
14:00-15:00	Reviewing AMR Laboratory Assessment tools CDC LAARC Tool	Reviewing the AMS WHO AMS Assessment Checklist	US CDC/ WHO/ECSA HC/ ASLM
15:00-17:00	Plenary on Reviewed tools		
Day 4 (Thursday, August 10, 2023)			
Time	**Topic**		**Presenter/ Facilitator**
Session 6: Regional Priorities for AMS and AMR Surveillance *Chair: Malawi & Kenya* *Rapporteur: South Sudan*			
09:00-09:15	**Regional Priorities for AMS and AMR Surveillance**		
09:15-13:00	**Regional Priorities for AMS and AMR Surveillance -Group discussions AMS/AMR**		
13:00-14:00 hrs	Health Break		ALL
14:00-15:30	**Regional Priorities for AMS and AMR Surveillance-Group discussions AMS/AMR**		
15:30-16:30	Plenary- **Regional Priorities for AMS and AMR Surveillance**		MS
	Closure		
Day 5 (Friday August 11, 2023)			
Time	**Topic**		**Presenter/ Facilitator**
Session 7: Regional Collaboration and Coordination *Chair: Tanzania*			

Rapporteur: Djibouti		
09:00 – 09:15hrs	Governance, Coordination and Collaboration	**ECSA-HC**
09:15-09:45	Experiences on Governance, Coordination and Collaboration -Round Table	Zimbabwe, South Sudan, Mozambique, Somalia
09:45-10:00	Plenary	
10:00-10:30	**Health Break**	
10:30-10:45	Establishing the Regional AMR Community of Practice	ECSA-HC
10:30-11:30	Establishing the Regional AMR Community of Practice- Adoption of ToRs	Prof. Seni
11:30-12:00	Opportunities for funding and collaboration	Africa CDC/ECSA HC/Fleming Fund
12:00-12:30	Next Steps	Africa CDC/ECSA- HC
12:30-13:00	Closure	MOH Kenya
13:00-14:00 hrs	Lunch Break & Departure	

Annex 2: List of participants

	NAME	ORGANIZATION	COUNTRY	EMAIL
1	Dr. Ruth Lancaster	SA Department of Health	South Africa	ruth.lancaster@health.gov.za
2	Mr. Edessa Diriba	MOH Ethiopia	Ethiopia	edessadiriba@moh.gov.et
3	Mr. Abe Gordon Abias	MOH South Sudan	South Sudan	lojuanabe@gmail.com
4	Prof. Jeremiah Seni	Catholic University of HS&AS & Bugando Medical Center	Tanzania	senijj80@gmail.com
5	Dr.Djibril Mbarushimana	University Teaching Hosp. of Butare Rwanda	Rwanda	djidji01@gmail.com
6	Dr. Pniboner Nuckchady	Mwaru Mwatich	Mauritius	lwnvikiberly@gmail.com
7	Dr.Dancan Chandi	MOH/ZNPHI	Zambia	dancunchando@gmail.com
8	Dr.Kaunda Yamba	ZNPHI	Zambia	kaundayamba@gmail.com
9	Dr. Ndinda Kusu	MSH-USAID-MTaPS	Kenya	nkusu@mtapsprogram.org
10	Dr.Joseph Mukoko	MSH- USAID-MTaPS	Kenya	jmukoko@msh.org

	NAME	ORGANIZATION	COUNTRY	EMAIL
11	Dr. Irungu Kamau	MOH	Kenya	Irungu.kamau@health.go.ke
12	Dr.Monica Agun Awit	MOH.SS	South Sudan	monicaawet86@gmail.com
13	Dr. Ronald Chitatanga	Malawi	Malawi	ronaldchitatanga@gmail.com
14	Edward Muigai Mbuthia	MOH	Kenya	edwardmbuthia@gmail.com
15	Manise Pierre	ASM	USA	manise.pierr@gmail.com
16	Dr.Emmanuel Mgembe	MOH	Tanzania	edwardmbuthia40@gmail.com
17	Dr.Edwin Shumba	ASLM	Ethiopia	eshumba@aslm.org
18	Dr.Marilia Namburele	INS Mozambique	Mozambique	marilia.namburete@ins.gov.mz
19	Mr.Wilson Kungu	MOH	Kenya	wkungu62@gmail.com
20	Dr.Tuyakula Johannes	MOH SS - NMPC	Namibia	Tuyakula.Johannes@mhss.gov.na
21	Dr. Innocencio Mate	INS	Mozambique	inocencio.mate@ins.gov.mz
22	Dr.Tracie Muraya	ReAct Africa	Kenya	tracie.muraya@reactafrica.org
23	Dr.Judy Asin	EPN	Kenya	jasin@epnetwork.org
24	Dr.Susan Bollinger	CDC USA	USA	sbollinger@cdc.gov
25	Dr.Sharon Odeo	EPN	Kenya	sodeo@epnetwork.org
26	Dr. Blessmore Vimbai	MOH CC	Zimbabwe	bvchaibva@gmail.com
27	Dr. Mohamed MIGANE	INSPD	Djibouti	miganov76@gmail.com
28	Linus Ndegwa	US CDC-Kenya	Kenya	Ikf7@cdc.gov
29	Dr.David Mutonga	USAID IDDS	Kenya	david.mutonya@icf.com
30	Dr.Isabella Mukagatare Muka	Biomedical Center Rwanda	Rwanda	isamukagatare2@yahoo.f r
31	Joseph Maska	MOH	Kenya	Joseph.maska@health.go.ke
32	Diana Ngila	MOH	Kenya	Diana.ngila@gmail.com
33	Mutakazi Abdul	Newbridge (Translation)	Kenya	abdul@newbridgeconnect.com
34	Collins Musaria	MOH	Kenya	collinsmusasis@gmail.com
35	Nelson Omondi	MOH	Kenya	omondinelson99@gmail.com
36	Daniel Letuya	MOH	Kenya	dalepaole@gmail.com
37	Kinuthia Bumbi	FIND	Kenya	kinuthiabumbi@find.org

	NAME	ORGANIZATION	COUNTRY	EMAIL
38	George Kebaso	People Daily	Kenya	georgekebaso@gmail.com
39	Dr.Emmanuel Tanui	MOH	Kenya	tanuikip@yahoo.com
40	Dr.Martin Matu	ECSA-HC	Tanzania	mmatu@ecsahc.org
41	Dr.Kajumbula Henry	Makerere University	Uganda	henrykajumbula427@gmail.com
42	Dr.Wande Alimi	Africa CDC	Ethiopia	alimiy@africacdc.org
43	Dr.George Owiso	I-TECH – UW	Kenya	Gowiso@uw.edu
44	Dr.Fowzia Mohamed	Africa CDC	Kenya	sheikhf@africacdc.org
45	Dr. Leandre Ishema	Rwanda Biomedical Centre	Rwanda	leadie.ishama@cdc.gov.iw
46	Prof. Yoswa Dambisya	ECSA-CH	Tanzania	
47	Dr. Daniel Waruingi	SAS Africa	Kenya	danielwaruingi@studenlsagonssuperbags.org
48	Dr. Sok Appadu	Mauritius	Mauritius	cosoobaraj@gmail.com
49	Susan Githii	MOH – Kenya	Kenya	Susan.githii@yahoo.com
50	Dr. Watipaso Kasambura	ASLM	Ethiopia	wkasambura@aslm.org
51	Joyce Njongoro	MoH	Kenya	joycenjongoro@gmail.com
52	Dr.Ivy Chilungul	MOH- Malawi	Malawi	mschulylo@gmail.com
53	Mitchelle Kasudi	ILRI	Kenya	m.r.kasudi@cgiar.org
54	Felister Kiberenge	MOH	Kenya	felikib@yahoo.com
55	Dr.Zivang' Makori	MCAF	Zimbabwe	zwakori@mcaf.co.zw
56	Dr.Yousouf Abdo Ali	INSPD	Djibouti	youssouf571@gmail.com
57	Dr.Nkatha Gitonga	MSH	Kenya	ngitonga@msh.org
58	Dr.Edouard Ntwagabira	RBC Rwanda	Rwanda	Edward.wtgwabine@gmail.com
59	Dr. Khalida Atam	ECSA-HC	Tanzania	Kce.atam@ecsahc.org
60	Dr.Emiliana N Francis	MoH- TZ	Tanzania	emmyfra@yahoo.com
61	Aden Siyat	PVT	Kenya	Canopusx23@gmail.com
62	Lucy Khisa	MOH	Kenya	Khisa935@gmail.com
63	Sylvestor Nakel	MOH	Kenya	Snakeel79@gmail.com

	NAME	ORGANIZATION	COUNTRY	EMAIL
64	Dr.Carolyn Hertzig	US CDC	USA	NQW6@cdc.gov
65	Dr.Chileshe Lukwesa Musyani	MOH-Zambia	Zambia	clmusyani@yahoo.com
66	Dr.Chizimu Joseph	ZNPHI	Zambia	chizimuyusep@yahoo.com
67	Dr.Morris Buliva	FF/ILRI	Kenya	m.boliva@cgias.org
68	Dr. Eric Muringu	CPA	Kenya	eEmuringu158@gmail.com
69	Dr. Musa Sekamatte	MOH/NOHP	Uganda	musasekamatte@gmail.com
70	Dr. Harry L. Milala	MOH-AMRCC	Malawi	harrylawrenceoscarn@gmail.com
71	Gilbert Manirakiza	Newbridge (Translation)	Kenya	gilbert@newbridgeafrica.com
72	Esso Samah TIDTOW	Newbridge(Translation)	Kenya	etidjow@gmail.com
73	Jennifer Njuhigu	MOH	Kenya	jnjuhigu@gmail.com
74	Veronicah Chuchu	FIND	Kenya	Veronicah.chuchu@findx.org
75	Antony Nganga	People Daily-Media	Kenya	anganga@odkaot.com
76	Nicholas Wamalwa	MOH	Kenya	nicholaswamalwa@gmail.com
77	Centrine Wasike	MOH	Kenya	cencwasike@gmail.com
78	Henry Maina	MOH	Kenya	hemandazello@yahoo.com
79	Ali Afula	MOH	Kenya	Aliafula84@gmail.com
80	Rodgers Baraza	MOH	Kenya	Rlbarasa45@gmail.com
81	Mwachero Kina	MOH	Kenya	mwacharok@yahoo.com
82	Carolyne Wekesa	MOH	Kenya	carowekesa@gmail.com
83	Filimona Mandali	MOH	Kenya	filimona2014@gmail.com
84	Samuel Doe Ouma	Health Business Magazine-Media	Kenya	somesoo44@gmail.com
85	Jacqueline Safstrom	US CDC	USA	PeQ9@cdc.gov
86	Rebecca Dan	Africa CDC	Ethiopia	rebeccadan20@gmail.com
87	Dr. Evelyn Wesangula	ECSA-HC	Tanzania	ewesangula@ecsahc.org
88	Armenio Machiana	Free-lance INT-Media		avanch1@gmail.com
89	Gabrie Alebeche	Ethiopian Public Health Institute	Ethiopia	gebrien@gmail.com
90	Dr.George Serem	Africa CDC	Kenya	seremg@africacdc.org

	NAME	ORGANIZATION	COUNTRY	EMAIL
91	Julius C Ley	ECSA-HC	Tanzania	jhey@ecsahc.org
92	Dr. Sabira Sheikh	Africa CDC	Kenya	Sheikhs@africacdc.org
93	Dr. Keneth Yoni	Epidemiologist		kyoni103@gmail.com
94	Dr. Waheed Ariyo Bakare	Africa CDC	Ethiopia	bakarew@africacdc.org
95	Raphael Muoki	Mediamax-Media	Kenya	raphaelmuoki@gmail.com
96	Robinson Kisavi	Mediamax-Media	Kenya	Juniourrobin2@gmail.com
97	Leah Mukangai	Radio Africa-Media	Kenya	mutashileah@gmail.com
98	Erick Opon	Newbridge (Translation)		Rickerick9@gmail.com
99	Joshua Odero	USAID- IDDS	Kenya	jodero@fhi360.org
100	Raphael Okumu	Newbridge (Translation)	Kenya	Odhamboraph0@gmail.com
101	Andrew Thaiyah	USAID Kenya	Kenya	athoiyah@usaid.gov

Annex 3: Event photos

Figure 3: From Left to Right: Dr. Rebecca Dau (Africa CDC); Dr. Wande Alimy (Africa CDC, Head of One Health programme); Prof. Yoswa Dambisya , Director General, ECSA-HC; Dr. Patrick Amoth, OGW, Ag. Director General Kenya, MOH

Figure 4: Prof. Yoswa Dambisya, Director General, ECSA-HC opening remarks during the meeting's official opening ceremony.

Figure 5: Ag. Director General, Kenya MOH, Dr. Pathrick Amoth and Cabinet Secretary for Health, Kenya, MOH, Hon. Nakhumicha S. Wafula during the Official Opening of the Regional Meeting

Figure 6: Dr. Yewande Alimi (Africa CDC) and the Ag. DG, Kenya MOH, Opening remarks

Figure 7: Some Participants during the Regional Consultation meeting

Figure 8

Figure 9: Participants and implementing partners drawn from 14 Member States in East and Southern Africa during the week-long Regional AMS Meeting

Figure 10: Networking among participants at the Regional AMS Meeting

Figure 11: Participants committed and signed the pledge to become Antibiotic Guardians led by the Director General, ECSA-HC

Figure 12: Participants networking during the cocktail session organized by the participants

Figure 13: ECSA-HC Technical team from left to right Dr. Evelyn Wesangula, Senior AMR Control Specialist; Dr. Martin Matu, Director of Programs ECSA-HC; Dr. Khalide Azam, Senior Laboratory Specialist, ECSA-HC

Figure 14: Representatives from Zambia, ECSA-HC and USAID MTaPS (Dr. Ndinda Kusu far left)

Figure 15: Fowzia Mohamed, Africa CDC, Evelyn Wesangula ECSA-HS and Ndinda Kusu USAID-MTaPS representative

Figure 16: Networking over a cocktail during the meeting

Figure 17: Expanding networks and forging friendships