Webinar Report

African Strategies to Tackle AMR Across Human, Animal, and Environmental Health

Date: 18 November 2025
Time: 9:00–10:30 AM GMT
Event Series: World Antimicrobial Awareness Week (WAAW) 2025
Organizer: AMR Knowledge Hub and Community of Practice, The Global Health Network
Language: English
Objective: To facilitate knowledge exchange on antimicrobial resistance (AMR) among global health practitioners working across Africa

Event Leadership

Welcome Address
Adam Dale, Knowledge Exchange Lead, The Global Health Network

Moderator
Godwin Pius Ohemu, Graduate Assistant, AMR Knowledge Hub and Community of Practice, The Global Health Network

Scribe
Chinenye Chukwu-Mba, AfOx Ubuntu Fellow, The Global Health Network

Expert Panel

- Dr. Babafela Awosile, Assistant Professor, Texas Tech University, USA
- Dr. Robert Terry, Manager of Research Policy, TDR, WHO
- Dr. Kiplangat Sigei, Medical Affairs Manager, Anglophone Africa, bioMérieux

Session Overview

This webinar brought together international experts to address the critical challenge of antimicrobial resistance in Africa through a comprehensive One Health lens, integrating human, animal, and environmental health perspectives.

Key Presentations

1. Antimicrobial Resistance Drivers in Africa and Action Plans at the One Health Interface

Presenter: Dr. Babafela Awosile

The AMR Crisis in Context

Antimicrobial resistance was identified as one of the defining One Health challenges of our era, emerging through evolutionary pressures, antimicrobial misuse, and horizontal gene transfer mechanisms. The threat is not uniform globally, significant geographic and temporal inequalities exist in both the severity and urgency of AMR impacts across different regions.

Multifaceted Impacts

The consequences of AMR extend across multiple domains:

- Treatment failures and reduced therapeutic options
- Escalating healthcare expenditures
- Extended hospitalization periods
- Zoonotic disease transmission between animals and humans
- Increased morbidity and mortality (projected to reach 10 million deaths annually by 2050, according to the O'Neill Report)
- Emergence of novel infectious diseases

Primary Drivers of AMR

Six interconnected factors were identified as major contributors to the AMR crisis: human behavioral patterns, food production systems, agricultural practices, animal husbandry, ecosystem degradation, and inherent microbial adaptation capabilities.

Strategic Action Framework

The presentation outlined a comprehensive six-pillar approach to combat AMR:

I. Strengthening Drug Regulation and Stewardship

Implementing robust regulatory frameworks and promoting responsible antimicrobial use across all sectors.

II. Promoting Cross-Sector Collaboration

Fostering partnerships between human health, veterinary medicine, agriculture, and environmental sectors to address AMR holistically.

III. Advancing Antibiotic Research

Accelerating the development of new antimicrobial agents and alternative therapeutic approaches.

IV. Improving Diagnostics and Surveillance

Enhancing laboratory capacity and establishing comprehensive surveillance networks to monitor resistance patterns.

V. Encouraging Alternatives to Antimicrobials
Developing and promoting non-antibiotic interventions, including vaccines, probiotics, and infection prevention strategies.

VI. Enhancing Public and Professional Education
Building awareness and knowledge among healthcare providers, veterinarians, farmers, and the general public.

2. The Impact of Operational Research as a Tool to Tackle AMR with a One Health Approach

Presenter: Dr. Robert Terry

Operational Research: Democratizing Evidence-Based Solutions

Operational research (OR) was presented as an accessible, practical methodology that enables frontline workers, regardless of prior research experience, to use locally generated data to address context-specific AMR challenges. This approach empowers healthcare workers, veterinarians, and public health officials to become active participants in evidence generation.

The SORT IT Programme

The Structured Operational Research and Training Initiative (SORT IT), coordinated by the Special Programme for Research and Training in Tropical Diseases (TDR), has demonstrated significant global impact in building operational research capacity.

Evidence from the Field: Success Stories

Sierra Leone – Transforming Livestock AMR Surveillance
Operational research interventions successfully improved antimicrobial use reporting systems in the livestock sector. The initiative achieved 100% district-level submission compliance and substantially enhanced data quality, creating a robust foundation for evidence-based policy decisions.

Ghana – Integrated One Health AMR Research
Multiple operational research projects were implemented across diverse sectors, strengthening surveillance capabilities in hospitals, water systems, agricultural settings, and food production chains. These initiatives improved stakeholder engagement mechanisms, produced actionable evidence for policymakers, and demonstrated the feasibility of integrated One Health surveillance approaches.

TDR Communication Training Initiative
A specialized training program focused on research communication skills attracted over 2,000 participants globally. More than 140 professionals completed certification in critical competencies including stakeholder mapping, evidence brief development, and effective research communication strategies.

Broader Impact

These examples illustrate how operational research builds sustainable capacity, enhances data-driven decision-making processes, and facilitates the meaningful integration of One Health principles into national AMR action strategies.

3. Breaking the Resistance: How Diagnostics Empower Africa's Fight Against AMR

Presenter: Dr. Kiplangat Sigei

Africa's Diagnostic Challenge

Africa bears a disproportionate burden of antimicrobial resistance, exacerbated significantly by limited diagnostic infrastructure and capacity. Insufficient laboratory systems prevent timely identification of pathogens and accurate determination of resistance patterns, resulting in widespread empirical antibiotic prescribing that is often inappropriate and contributes to further resistance development.

Global and Regional Initiatives

International frameworks including the WHO Global Action Plan on AMR and the WHO Essential Diagnostics List (EDL) have catalyzed regional efforts to expand access to quality diagnostic tools and services across the continent.

The Critical Role of Diagnostics

Reliable diagnostic capacity is fundamental to achieving an optimal balance between necessary short-term empirical therapy and long-term antimicrobial stewardship objectives. Specifically, diagnostics serve four essential functions:

Guiding Appropriate Treatment
Enabling targeted, pathogen-specific therapy rather than broad-spectrum empirical approaches.

Strengthening Surveillance Systems
Providing the data infrastructure necessary for monitoring resistance trends and informing public health responses.

Supporting Workforce Development
Creating opportunities for capacity building among laboratory professionals and clinicians.

Informing Policy Decisions
Generating the evidence base needed for evidence-informed antimicrobial stewardship policies and interventions.

Interactive Discussion

The webinar concluded with an engaging question-and-answer session where participants explored practical applications of One Health approaches for addressing AMR challenges across diverse African contexts. The discussion emphasized the importance of context-specific solutions, sustained political commitment, and continued investment in infrastructure and capacity building.

Conclusion

This webinar successfully highlighted the urgent need for integrated, multisectoral approaches to combat antimicrobial resistance in Africa. The presentations demonstrated that effective AMR responses require coordinated action across human health, animal health, and environmental sectors, supported by robust diagnostics, operational research capacity, and strong stewardship frameworks. The experiences shared from Sierra Leone, Ghana, and other settings provide valuable blueprints for scaling up One Health interventions across the continent.

Key Takeaways

- AMR is projected to cause 10 million deaths annually by 2050 without urgent action
- Operational research empowers frontline workers to generate locally relevant evidence
- Diagnostic capacity is critical for appropriate prescribing and effective surveillance
- Cross-sector collaboration is essential for sustainable AMR responses
- Africa-led initiatives are demonstrating successful models for One Health implementation