Preventative Approaches bestseller for AMR in Africa - IPC, Access and Vaccines"

DR WANDE ALIMI

Africa's share of the global AMR burden is ~21%

1.07M
annual deaths[1] occurred across Africa (2019)

4.1M
potential AMR deaths in Africa by 2050

~20%
of patients across Africa have access to affordable antibiotics

~5%
Loss in GDP annually per country across Africa due to AMR

1. Deaths associated with resistance
Source: WHO Resist AMR Africa ; The Lancet: The burden of bacterial antimicrobial resistance in the WHO African region in 2019: a cross-country systematic analysis

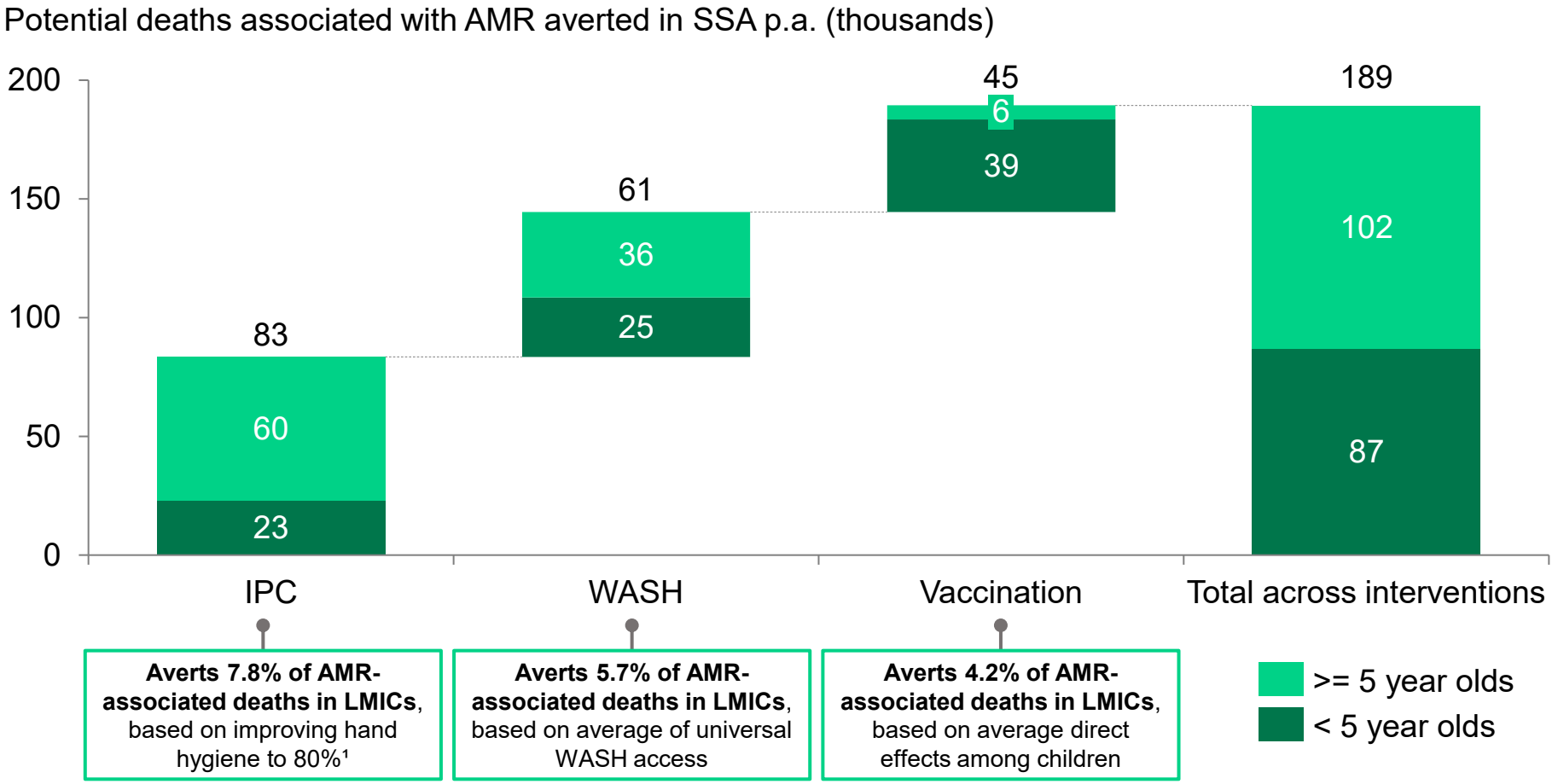
Africa falls behind on key AMR interventions of IPC/WASH, setting baselines and targets, and using data to inform policies

Above global average | Below global average
+/-5% global average | Priority improvements

	AMR intervention	Africa	The Americas	Eastern Mediterra-nean	Europe	South-East Asia	Western Pacific	Global average
		Average score per region from countries reporting to TrACSS (%, 2023)						
Address drivers of AMR in Africa	**IPC/WASH:** Programs implemented nationwide per WHO guidelines	**13%**	37%	47%	57%	36%	45%	**39%**
	Awareness: Nationwide, government-supported campaigns	**33%**	23%	35%	53%	45%	41%	**38%**
	Stewardship: Adopted AWaRe antibiotic classification on NEMLs	**57%**	33%	53%	39%	73%	27%	**47%**
Build evidence and improve reporting	**Set baselines:** Adequate technical capacity, resources and systems to collect data across sectors	**11%**	13%	18%	20%	36%	18%	**19%**
	Set targets: AMC/U data is used to inform decision-making and policies	**35%**	60%	35%	90%	73%	82%	**62%**
	Improve reporting: Established or starting implementation of integrated surveillance system for AMR	**50%**	47%	47%	51%	55%	50%	**50%**
Mobilize and coordinate resources	**Governance:** Data is used to advocate for policy change/resource allocation	**9%**	17%	65%	33%	45%	27%	**23%**
	One Health approach: Formalized, joint or integrated sectoral coordination	**48%**	43%	35%	61%	91%	45%	**54%**

Note: 46/54 African countries report to TrACSS vs. 131/148 globally; Data is self-reported by country representatives; Where questions were left blank, it was assumed countries were not implementing the intervention
Source: Tracking AMR Country Self-assessment Survey – TrACSS (7.0) 2023

~200k deaths associated with AMR, ~90k for children under 5, could be averted annually with 3 easily implementable preventative measures



- Implementing IPC, WASH and vaccination could avert **18%** of total deaths associated with AMR in SSA (**189k of 1.07M, 87k for < 5 yr olds**)
- Improving IPC, WASH and vaccination also supports overall health systems strengthening
- This estimate is conservative, based on prevention measures

1. Improvement to levels of highest performing countries globally
Note: All countries in SSA were assumed to have intervention outcomes consistent with LMICs. Across income groups, outcomes vary: 60-118k for IPC, 40-86k for WASH, 36-55k for vaccination, 136-259k in total
Source: The Lancet: Burden of bacterial antimicrobial resistance in low-income and middle-income countries avertible by existing interventions: an evidence review and modelling analysis, 2024 (link)

Existing interventions could prevent more than 750,000 AMR-associated deaths in LMICs each year

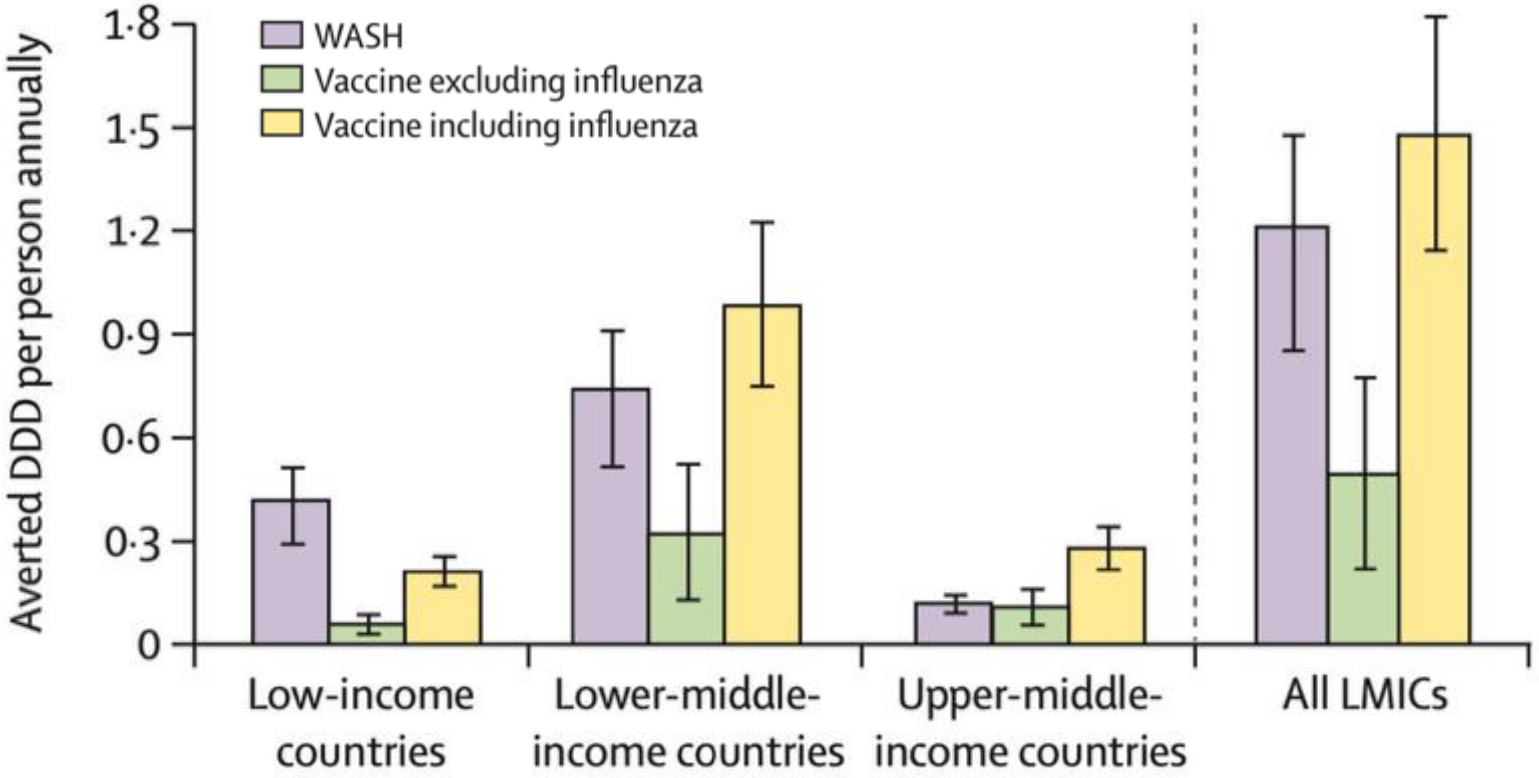
Source: (Lewnard et al. 2024)

337,000 deaths averted — Improvements in infection prevention & control

247,800 deaths averted — Universal access to water, sanitation, & hygiene services

181,500 deaths averted — Universal coverage of high-priority childhood vaccines

Antibiotic use avertible with universal WASH access and universal paediatric vaccine coverage



- Universal WASH averts **11.5%** of use in LMICs
- Universal coverage of vaccines averts **14.1%** of use in LMICs
- Universal coverage of vaccines (excluding influenza) averts **4.7%** of use in LMICs

THE LANCET

Source: (Mendelson et al. 2024)

The total AMR funding need in Africa is estimated at $2-6B per year, of which funding for IPC and WASH could avert 200k deaths per year

AMR has a disproportionate impact on Africa

>1M
deaths
p.a.

Deaths associated with AMR in 2019 represent **22%** of the global burden, and are expected to grow to **40%** by 2050 (**~4M** deaths per year in Africa)

There is a significant funding need for Africa's AMR response …

~$2-6B
p.a.

Estimated total required funding for AMR in Africa per year, based on World Bank and GLG economic modelling

… though implementing existing measures can avert deaths in the short term

200k
deaths
p.a.

Spending on existing cost-effective measures, such as WASH and IPC, could avert up to **~20%** of AMR associated deaths in Africa per year

Note: Detailed information on following pages
Source: The Lancet: Burden of bacterial antimicrobial resistance in low-income and middle-income countries avertible by existing interventions: an evidence review and modelling analysis, 2024 (link); O'Neill. Drug Resistant Infections 2017 (link); Global Leaders Group on Antimicrobial Resistance: Building the investment case for action against antimicrobial resistance, 2024, BCG analysis

IPC Legal framework and standards for safe healthcare facilities in Africa

2018

A strong request by MS for a legal framework on Infection Prevention and Control

2019-2020

TWG formed. Developed the draft framework. Review by MS and technical partners

2020

Regional validation workshops and providing IPC support for COVID-19

2020-2023

Final IPC Legal Framework and policy submitted for STC- HPDC for endorsement AU executive council endorsement

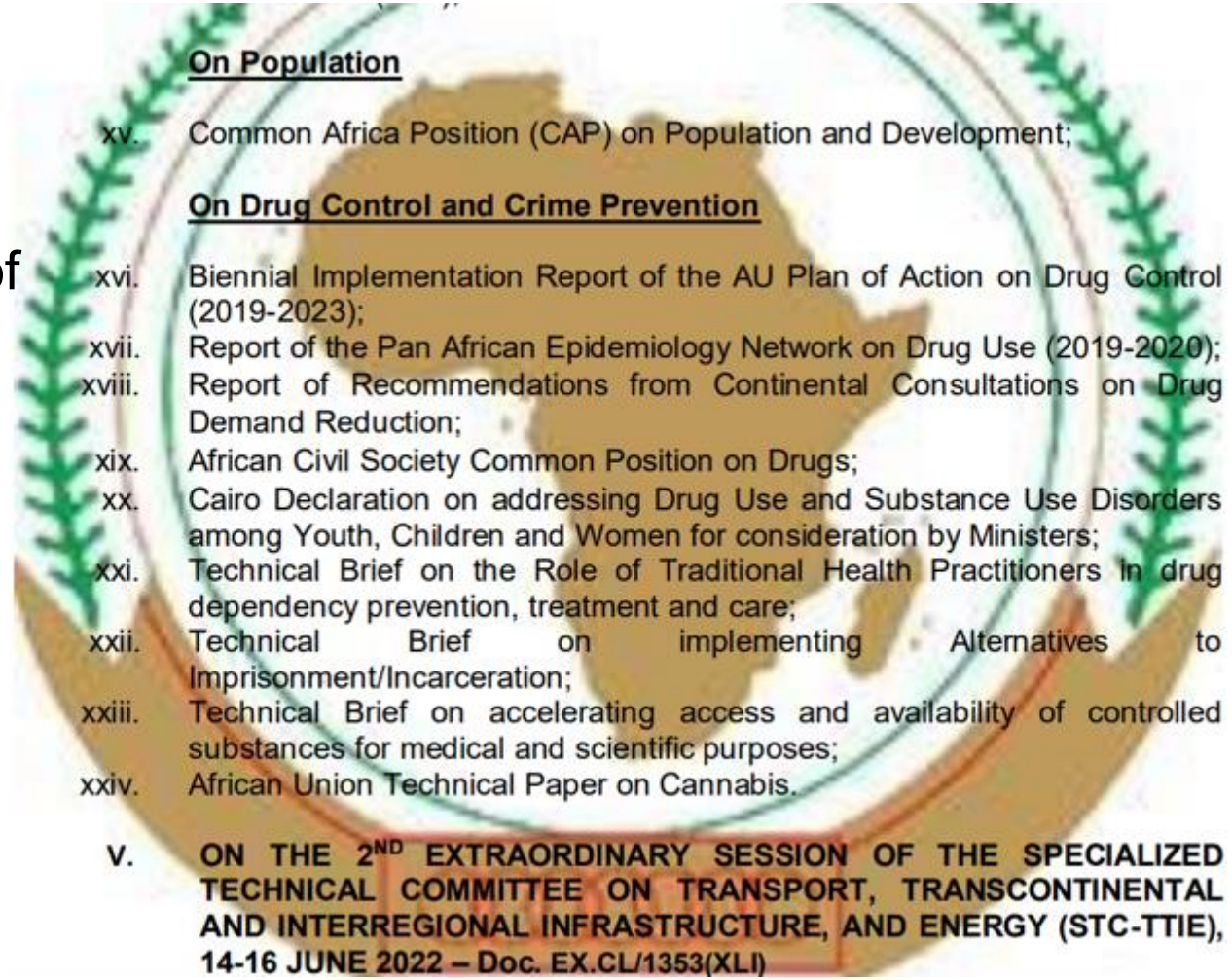
Implementation in 4 countries

2024-2025 – looking ahead

Endorsement of the IPC Legal Framework

The IPC Legal Framework has been endorsed and adopted by the Heads of State, the Executive Council, and the Specialized Technical Committee on Health, Drug, Population, and Control under

Decision decisions/42197-EX_CL_DEC_1168_-_1188_XLI



On Population

xv. Common Africa Position (CAP) on Population and Development;

On Drug Control and Crime Prevention

xvi. Biennial Implementation Report of the AU Plan of Action on Drug Control (2019-2023);
xvii. Report of the Pan African Epidemiology Network on Drug Use (2019-2020);
xviii. Report of Recommendations from Continental Consultations on Drug Demand Reduction;
xix. African Civil Society Common Position on Drugs;
xx. Cairo Declaration on addressing Drug Use and Substance Use Disorders among Youth, Children and Women for consideration by Ministers;
xxi. Technical Brief on the Role of Traditional Health Practitioners in drug dependency prevention, treatment and care;
xxii. Technical Brief on implementing Alternatives to Imprisonment/Incarceration;
xxiii. Technical Brief on accelerating access and availability of controlled substances for medical and scientific purposes;
xxiv. African Union Technical Paper on Cannabis.

V. ON THE 2ND EXTRAORDINARY SESSION OF THE SPECIALIZED TECHNICAL COMMITTEE ON TRANSPORT, TRANSCONTINENTAL AND INTERREGIONAL INFRASTRUCTURE, AND ENERGY (STC-TTIE), 14-16 JUNE 2022 – Doc. EX.CL/1353(XLI)

High level political advocacy for IPC and WASH in Africa

Assembly/AU/Decl.3(XXXIII) Declaration On African Common Position On Antimicrobial Resistance

Increase the proportion of healthcare facilities implementing infection control and prevention programmes and antimicrobial stewardship programmes (Recommendation 3(a));

Increase access to clean water, sanitation, and hygiene in healthcare facilities, farms, schools, households, and community settings (Recommendation 3(c));

DECLARATION ON AFRICAN COMMON POSITION ON ANTIMICROBIAL RESISTANCE
THIRD ORDINARY SESSION OF THE SPECIALISED TECHNICAL COMMITTEE ON HEALTH, POPULATION AND DRUG CONTROL (STC-HPDC-3) CAIRO, EGYPT 29 JULY- 2 AUGUST 2019

RECALLING the commitments, strategies, and guidance from international organizations, intergovernmental organizations, and Member States regarding Antimicrobial Resistance (AMR) and the highest level commitment shown by Africa's Heads of State and Government to improve the health of Africans, including:

- Agenda 2063, the Africa We Want
- The Africa Health Strategy, 2016-2030
- Animal Health Strategy for Africa, 2018 - 2030
- African Union Framework for Antimicrobial Resistance Control, 2020-2025
- Africa Centres for Disease Control Framework for Antimicrobial Resistance Control, 2018-2023
- Declaration of Heads of State on Accelerating Implementation of International Health Regulations in Africa (2017)
- Political declaration of the High-Level Meeting of the UN General Assembly on AMR (2016)
- The 2030 Agenda for Sustainable Development
- Antimicrobial Framework for Action of the Inter-Agency Coordination Group
- The WHO Global Action Plan on Antimicrobial Resistance
- The FAO Action Plan on AMR
- The OIE Strategy on Antimicrobial Resistance
- International Health Regulations IHR (2005)
- Abuja Declaration and Africa Scorecard on Domestic Financing for Health
- Continental Free Trade Area (CFTA)

ACKNOWLEDGING that addressing AMR requires action by governments, international organizations, private sector, academia, and civil society, across human, animal, and environmental health sectors; and that African Union organs have begun implementing programs to address AMR, including the Africa Centres for Disease Control and Prevention (Africa CDC), Inter-African Bureau for Animal Resources (AU-IBAR), African Union Pan- African Veterinary Vaccine Centre (AU-PANVAC), Inter-African Phytosanitary Council (AU-IAPSC), and AU Pan-African Tsetse and Trypanosomiasis Eradication Campaign;

RECOGNIZING that antimicrobials are a resource shared by humans for the benefit of

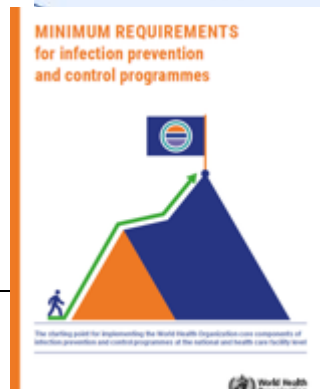
IPC Legal Framework and IPC Standards

IPC Legal Framework Document:

- Creates government IPC Program
- Gives the government IPC Program authority to set IPC standards
- Gives the government IPC Program the duty to create
  - Education and training
  - Monitoring and surveillance

IPC Standards Document:

- Tells facilities what is necessary
- Tells health care workers how to follow best practices for infection prevention and control



AU MEMBER STATES DOMESTICATING IPC LEGAL FRAMEWORK

AfricaCDC
Centres for Disease Control and Prevention

- Cameroon
- Nigeria
- Malawi
- Liberia

PROGRESS

- **NIGERIA**
- Amended the NCDC Act to include the National IPC program
- National IPC Regulations developed and adopted
- Adopted the Africa CDC IPC standards
- A Legal Asseement validated and adopted

CAMEROON

- Minister of Health appoints the national IPC focal point
- National IPC Standards and Norms developed and adopted
- National IPC action plan and national IPC strategic plan 2023-2027 developed and endorsed
- Monitoring and Evaluation tool and framework was developed

MALAWI

- Legal Assessment Report validated and adopted
- IPC taskforce formed
- Advocated for the inclusion of National PC Program in the National Strategic Plan
- Supported the review of the National IPC Policy

th


IPC
IMPLEMENTING A SUSTAINABLE NATIONAL IPC PROGRAMME
THE IPC LEGAL FRAMEWORK
The Copper


IPC


IPC
IMPLEMENTING A SUSTAINABLE NATIONAL IPC PROGRAMME
THE IPC LEGAL FRAMEWORK


African Union
HIGH-LEVEL ADVOCACY MEETING FOR THE LEGAL FRAMEWORKS ON INFECTION PREVENTION AND CONTROL AND BIOSAFETY AND BIOSECURITY

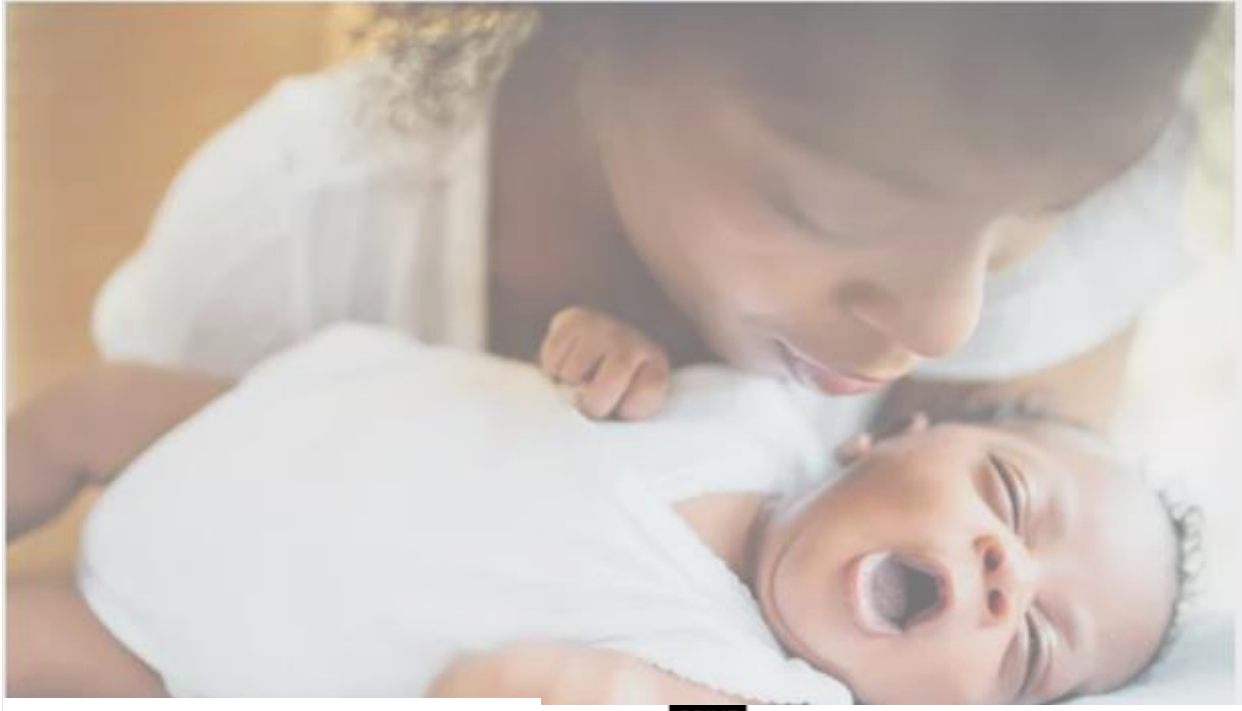
IPC Legal Framework

- IPC Legal framework developed, reviewed and approved by MS will address the following gaps in strengthening the health system:
  - Gives the establishment of national IPC programme a legal backing
  - Evidenced based guidelines
  - Integrated IPC Education and training at all levels
  - Incorporation of HAI into surveillance system at all levels
  - Establishment of a programme to monitor, audit and provide prompt feedback for compliance at all levels

"[Healthcare-associated] infections cost money and lives," said Dr. Tochi Okwor, the national IPC program coordinator for Nigeria. "Fortunately, the risk of these infections occurring can be minimized by infection prevention and control. The IPC Legal Framework developed by Africa CDC provides countries with one more tool to demonstrate strong political commitment which is critical for IPC."

Genomic Surveillance of Antimicrobial Resistance Use case: Neonatal sepsis

- Neonatal sepsis causes an estimated 750 000 annual deaths worldwide with mortality highest in Africa
- Africa remains the only the region globally that failed to reduce neonatal mortality rates, making the Sustainable Development Goal survival unlikely to be achieved by 2030.
- *Klebsiella pneumoniae is the one of the most* common pathogens isolated, associated with hospital-acquired infections, which are increasingly resistant to existing antibiotics.
- Cost-effective intervention such as IPC and WASH can be an effective intervention for neonatal sepsis.
- The increasing frequency of antimicrobial resistance is of great concern for African countries faced with insufficient access to antibiotics, a high burden of infectious diseases, inadequate resources, and weak health-care systems.



Children's Health · News

Neonatal sepsis: Alarming number of newborns losing their lives

Apr 29, 2022 · by Lilita Gcwabe

PRIME

Newborn mortality hopes still hanging by a thread

Sunday, October 23, 2022

Home » Africa » Kenya: Multidrug resistant Klebsiella pneumoniae outbreak in newborns at Nairobi hospital

Kenya: Multidrug resistant Klebsiella pneumoniae outbreak in newborns at Nairobi hospital

by NEWS DESK

September 19, 2022 · Africa, Headlines · 1 Comment

HEALTH

Antimicrobial resistant bacteria found in newborn children

These superbugs were most likely transmitted from mothers or the hospital environment to the newborns

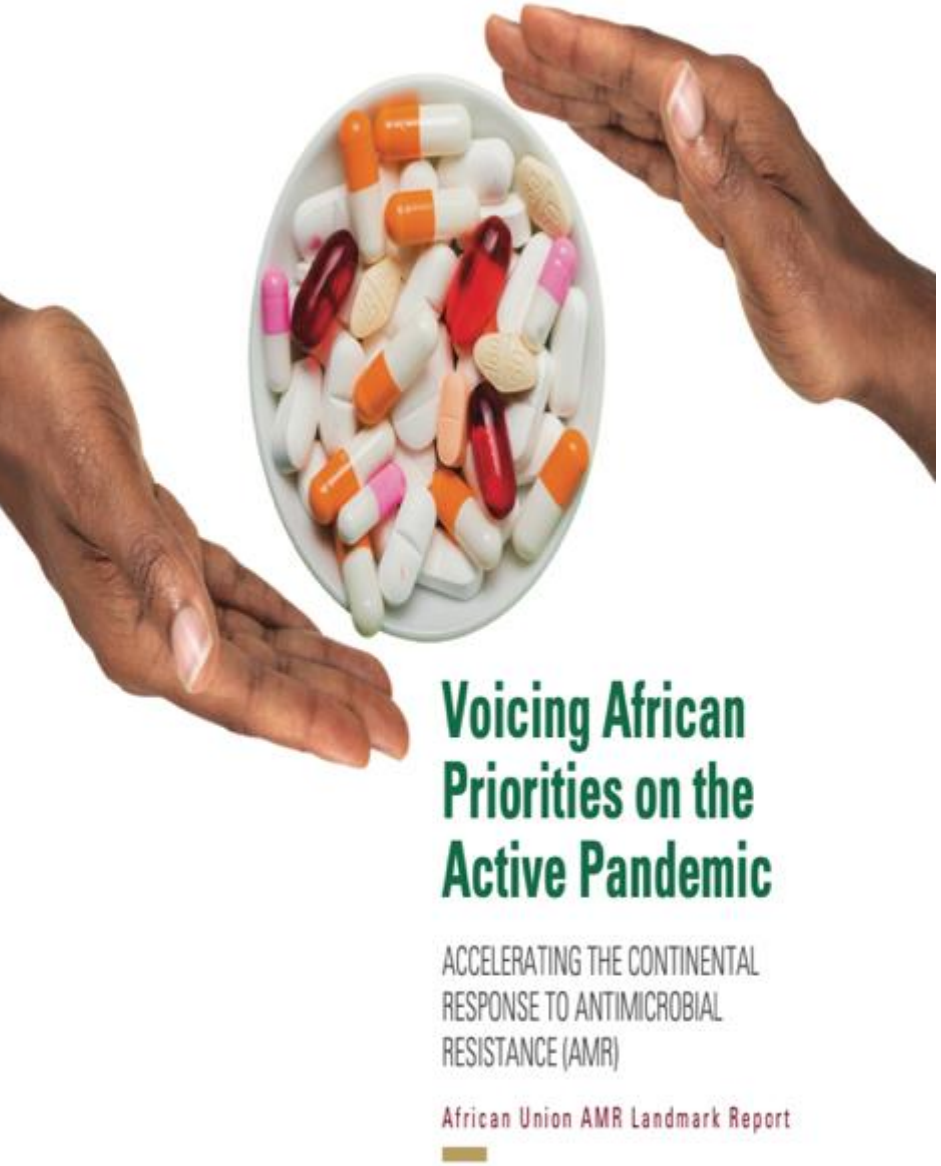
Scourge of superbugs killing Malawi's babies

By Madlen Davies and The Bureau of Investigative Journalism

Updated 7:12 AM EDT, Wed August 8, 2018

African Union

AFRICA CDC



- Elevate African priorities and share of voice on AMR
- Recommend concrete actions in the African context
- Build political will to stimulate funding opportunities
- Strengthen the African Union's position to advance multi-stakeholder initiatives on AMR

Three objectives can catalyze tangible short- and long-term AMR actions in Africa

Accelerate progress

Objective 1:

Address AMR drivers in the African context

Addressing the spread of AMR in Africa through increasing prevention and ensuring access to necessary resources

Define and implement enablers

Objective 2:

Build evidence and improve reporting

Building surveillance and reporting capabilities to monitor the progress of AMR in Africa

Objective 3:

Mobilize and coordinate resources

Securing the financial resources and technical capabilities amongst key stakeholders to lead the AMR response

Country-led implementation with continental/international support

Country, continental, and international responsibilities to implement

Summary of short- and long-term actions to support the objectives to combat AMR in Africa

Objective	1 Address AMR drivers in Africa	2 Build evidence & improve reporting	3 Mobilize & coordinate resources
Key challenges	Low uptake of WASH/IPC, mixed levels of awareness on AMR risks, lack of resources and governance on initiatives	Need for coordinated surveillance programs, unequal human/animal sector coverage, lack of African countries reporting to global databases	Unpredictable funding flows, unclear ownership between stakeholders, and funding supply can be misaligned with demand needs
Priority actions requiring **short-term** progress	• Implement WASH and IPC core components across sectors, increase knowledge of alternative options for antibiotics, and support awareness to improve accountability in civil society • Create incentives to ensure vaccines, diagnostics, and first- and second-line treatments for priority pathogens are available and affordable • Strengthen health systems to close prevention and access gaps, including microbiology laboratory testing capacity, improving infrastructure, and regulating antimicrobials for sale of livestock/produce	• Set country-level AMR baselines for human and animal health • Define and measure a core set of continental indicators, to create high quality and comparable data across countries • Systematically measure the cost of inaction to motivate policymakers and other stakeholders to prioritize AMR funding • Introduce data-sharing platforms (e.g. peer learning groups) for best practices on to cost and implement NAPs • Endorse high level political targets from regional or global agendas (e.g. 10-20-30), to be supported by country-level technical targets once baselines are set	• Define funding gaps for AMR in Africa, and align topics for greatest need (e.g. international funding focuses on surveillance and R&D, with governments needing to increase funding for prevention and access) • Include funding and resourcing estimates in country NAPs, and setting clear milestones so funding is unlocked as progress is achieved • Set dedicated policies and budget line items for AMR actions, to ensure resources are focused with measures of accountability
Additional **long-term actions**	Include AMR-specific measures in IPC training, expand incentives for affordability of vaccines, diagnostics, and medicines, and improve health care infrastructure, delivery, and coverage	Consolidate a continent-wide database of priority pathogens, commission regular impact studies, and set technical targets in NAPs tracked through surveillance programs to strengthen data-based decisions	Integrate AMR into broader agendas through a One Health approach, to secure predictable and sustainable resources
Impact	**~200k** deaths averted per year with positive economic ROI		**~$2-6B** funding need in Africa per year

Creating enabling environment for EQUITABLE ACCESS through policies, financing, instruments

African Union

AFRICA CDC
Centres for Disease Control and Prevention
Safeguarding Africa's Health

Partnerships for African Vaccine Manufacturing (PAVM) Framework for Action

African Union

BIONTECH

Our DNA How We Translate Science For Patients COVID-19

Overview
Press Releases
Events & Presentations

GERMAN

BioNTech Plans to Initiate the Construction of an ufacturing Facility in Africa

INSIDE DEVELOPMENT | GLOBAL HEALTH

Rwanda chosen to host the African Medicines Agency

By *Sara Jerving* // 18 July 2022

Global Health | Trade & Policy | Institutional Development | Democracy, Human Rights & Governance | African Union Commission (AU)

Issue Brief

UNDP
Empowered lives. Resilient nations.

African Union Model Law for Medical Products Regulation:
Increasing access to and delivery of new health technologies for patients in need

VOA

African Leaders Call for More Investment in Healthcare

Share

There are clear social and economic benefits in investing in African production of health commodities.

Improve **health security** and capacity for emergency response

Improve **regulatory harmonization** between countries to **facilitate trade**

Elevate **technological expertise and capabilities**

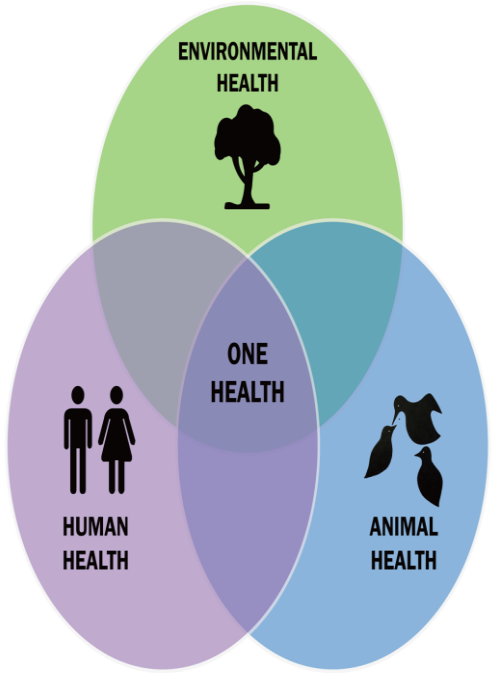
Facilitate economic growth

Environmental

- Agrochemicals or Pesticides
- Fertilizers
- Soil conditioners, liming and acidifying agents
- Methane emission reduction agents

Human health

- Vaccines
- Therapeutics
- Diagnostics and medical devices
- Medical equipment and supplies
- Digital tools



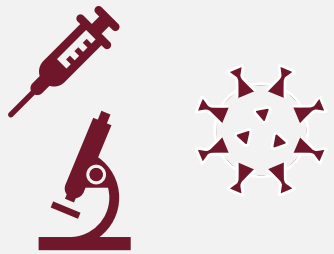
Animal health

- Medicated feed additives
- Veterinary therapeutics and vaccines
- Vet parasiticides
- Veterinary diagnostics

21

Equitable Access: Big picture thinking

Vaccines ,diagnostics & therapeutics; Abx



- There is a need to adopt comprehensive approaches to combatting AMR, interventions such as immunization, access to Dx, Abx
- Vaccines and diagnostics often under-utilized have he potential to reduce community reliance on and consumption of antimicrobials.

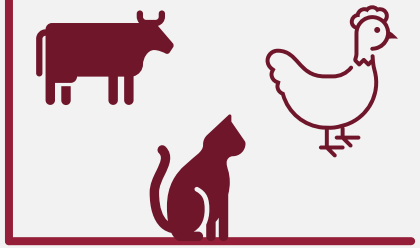
Reduce use, overuse and misuse of antimicrobials

- Reduce the use and overuse of antibiotics for bacterial and viral infections .
- The use of vaccines to prevent S. pneumoniae, Hemophilus type B, Salmonella Typhi, tuberculosis (TB), etc show the value of vaccines in reducing infection and subsequently the need for antibiotics

Population safety for Africa

- Reducing infection at a patient level can prevent transmitting infection to other people, providing population protection by reducing the risk of infection.

One Health approach to containing AMR



- Antimicrobials used in animals are identical or related to those used in humans.
- Improving access to ”AMR products” The role of veterinary vaccines and Dx in preventing AMR burden

Political attention for local manufacturing of medical products

- Anchoring on the AU Agenda 2063 and commitment made by the AU HoSGs to strengthen local manufacturing in Africa to manufacture at least 60% of vaccines and medical products domestically by 2040

It is critical to elevate African priorities in global AMR discussions, particularly to support country initiatives for prevention and access- G20

Global AMR priorities reported by the GLG and Quadripartite Secretariat (WHO, FAO, WOAH, UNEP) …

Accountable governance

Global and national governance structures to implement AMR response, including NAPs

One Health approach

AMR response across human, animal, and environmental sectors

Target setting & surveillance /reporting

Capacity to support surveillance systems and analyze data to set targets and drive action

Financing & resource mobilization

Defined measures for adequate & sustainable AMR funding, incl. expanding scope of existing financial instruments

… often mention, but understate priorities at the center of Africa's AMR response

Increasing preventative measures

Increasing WASH and IPC, good stewardship and husbandry practices, environmental management, and developing alternatives to antimicrobials

Ensuring equitable access

Equitable and affordable access to quality medicines, vaccines, and diagnostics, for humans and animals

Prevention and access measures must be supported by overall health systems strengthening, including healthcare infrastructure, capabilities, regulation, etc.

Source: GLG Recommendations for Consideration (March 2024); AMR Multi-Stakeholder Partnership Platform Key Recommendations for Action on AMR for Consideration by UN Member States in the UNGA HLM on AMR (May 2024); WOAH White Paper on UNGA HLM (2024); UN Concept Note for AMR Multi-Stakeholder Hearing (May 2024); UNGA A/RES/78/269 (scope, modalities, format & organization of HLM on AMR)

African Union

Scan to read the report

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