Mapping Antimicrobial Resistance and Antimicrobial Use Partnership

MAAP
Mapping AMR & AMU Partnership

Measure levels of antimicrobial resistance (AMR) and antimicrobial use (AMU) based on existing, historical, records, assess the relationship between the two and provide policy recommendations to strengthen AMR and antimicrobial consumption (AMC) surveillance capacity and contain AMR.

Antimicrobial Resistance (AMR) has been identified as one of the leading public health threats of the 21st century.

NEARLY

1.3 MILLION
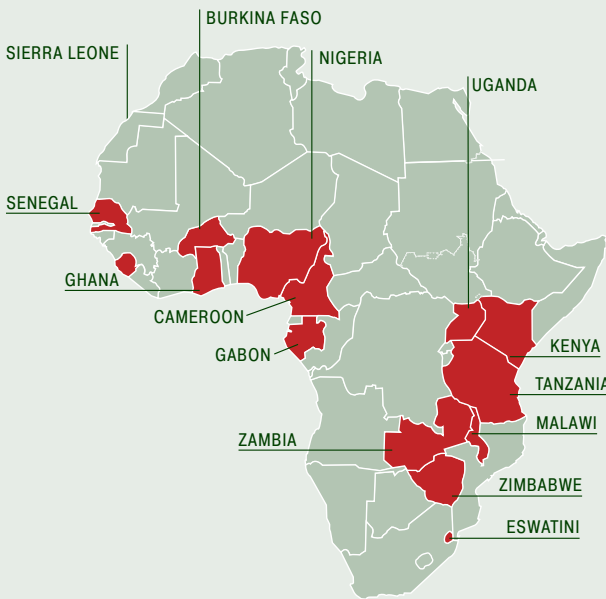
deaths attributed to AMR in 2019

$US

100 TRILLION

lost global production by 2050 without immediate action

Africa has highest mortality rate from AMR infections in the world, with

27.3 DEATHS
PER 100,000

attributable to AMR

SIERRA LEONE

BURKINA FASO

NIGERIA

UGANDA

SENEGAL

GHANA

CAMEROON

GABON

KENYA

TANZANIA

MALAWI

ZAMBIA

ZIMBABWE

ESWATINI

The MAAP project, led by, and for Africans, represents the first time that large quantities of AMR and AMC data are being systematically collected, processed, and evaluated in Africa.

MAAP REVIEWED

819,584

AMR records spanning from 2016 to 2019, from

205 LABORATORIES across **14 COUNTRIES**.

326 hospital and community pharmacies and **16** national level datasets on antimicrobial consumption.

The quantity and quality of data on AMR and antimicrobial consumption and use are less than optimal in Africa, limiting our ability to understand the efficacy of commonly used drugs as well as the drivers of resistance.
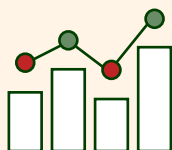
Most estimates are based on **statistical modeling**

Data often recorded **by hand** making it unfit for aggregated analytics

Little data on use of antimicrobial medicines in human health or in agriculture and food production systems

ONLY

1.3% of the biology laboratories across the 14 countries perform bacteriological testing

Of 205 participating laboratories:

26% of labs use electronic laboratory information system

80% perform less than 1,000 Antimicrobial Susceptibility Tests per year

ONLY

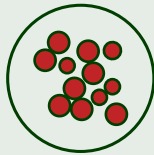**23%** are ISO 15189 accredited for bacteriology testing

ONLY

20% use automated methods for pathogen identification or AST

ONLY

5 OF **15** antibiotic-resistant pathogens prioritized by the WHO for causing the greatest threat to human health were found to be consistently tested in most countries.

Three pathogens are of immediate concern:

Enterobacterales

Staphylococcus aureus

Pseudomonas aeruginosa

12 African countries have Drug Resistance Index (DRI) scores that show that AMR is a significant hazard.

A score higher than **25%** sets off alarm bells: 12 countries scored at least **TWICE** that.

The risk of AMR is lower with:

Higher average education level

Higher GDP

Higher proportion of doctors and nurses

Out of almost 180,000 samples tested for antimicrobial resistance, **88% HAD NO INFORMATION** on patients' clinical profile while the remaining **12% HAD INCOMPLETE INFORMATION.**

Combined lack of access and erratic use of antimicrobials magnify the crisis

67% of antibiotics used in healthcare settings were skewed towards four drugs only

AT LEAST

80% of total drug consumption, represented by Access drugs in all but one country as per WHO recommendation

86% of WHO Essential medicine list (EML) Reserve category drugs are found neither in national EML nor documented in the country

UP TO

34 uncategorized antibiotics were found to be in circulation