

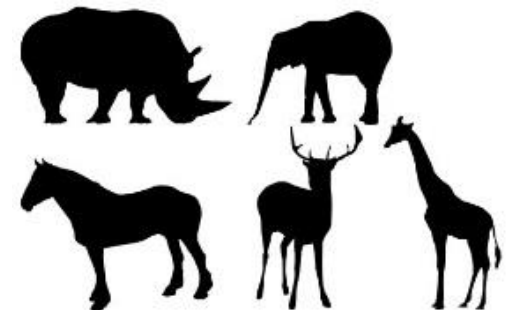
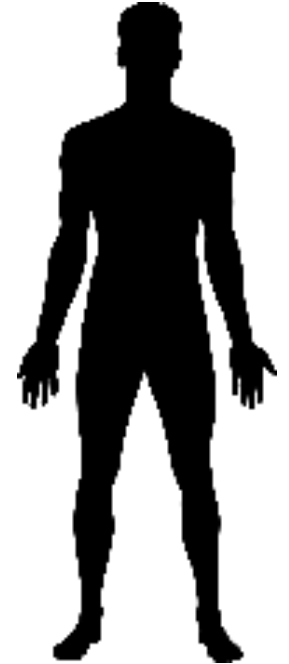
What Can a Framework for Surveillance Laboratory Networks for Antimicrobial Resistance in Five Regions of Africa Look Like: Role of Africa CDC Regional Collaborating Centers

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ASLM

Why does AMR surveillance matters?

Estimate trends in AMR rates and detect the emergence and potential spread of AMR to inform guidelines on:

- ❑ empirical treatment of bacterial infections:
 - In settings where AMR testing can not be done because of limited resources.
 - In situation when empirical treatments need to be initiated rapidly.
- ❑ Prevention of AMR transmission



Common barriers in establishing AMR surveillance in Africa

Laboratory networks

- Insufficient capacity of lower levels laboratories to collect and share data on AMR. Clinical data cannot feed into the surveillance system.
- No AMR containment strategies at national level and absence of 'actionable' data.
- Lack of staff supervision on the ground.

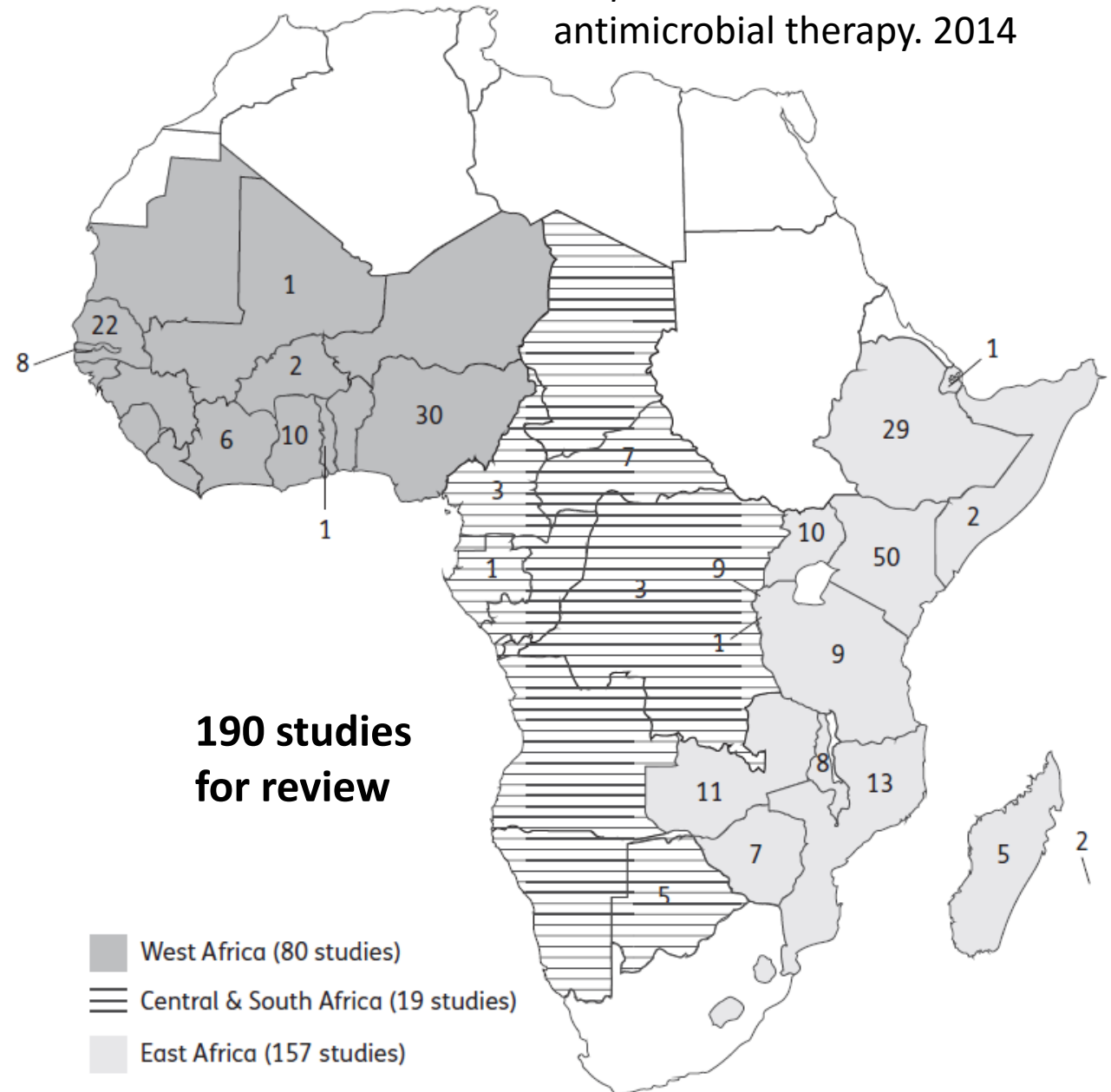
Larger context

- Lack of awareness on AMR.
- Poor inter sectoral collaboration under the One-Health concept.
- Logistical challenges in areas such as the supply chain management.
- No research to improve AMR diagnostics

Paucity of quality data on AMR from Africa

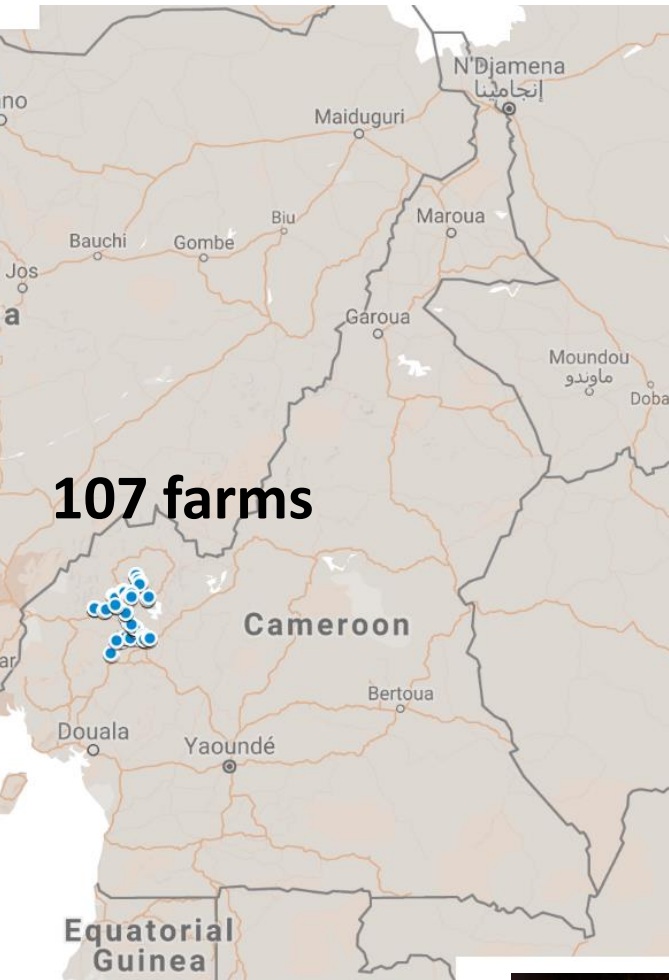
- ❑ 61% of studies from East/South African region
- ❑ 60% of studies are hospital-based
- ❑ 73% in urban areas
- ❑ 42% on febrile illnesses
- ❑ <50% report on quality procedure of susceptibility testing

Leopold et al, Journal of antimicrobial therapy. 2014

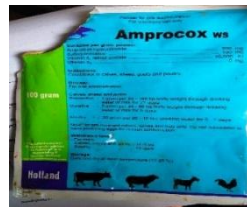


pathogens	antibiotic	Median prevalence
<i>Enterobacteriaceae</i>	chloramphenicol	31.0% - 94%
<i>Salmonella enter. typhi</i>	Nalidixic acid	15.4% - 43%

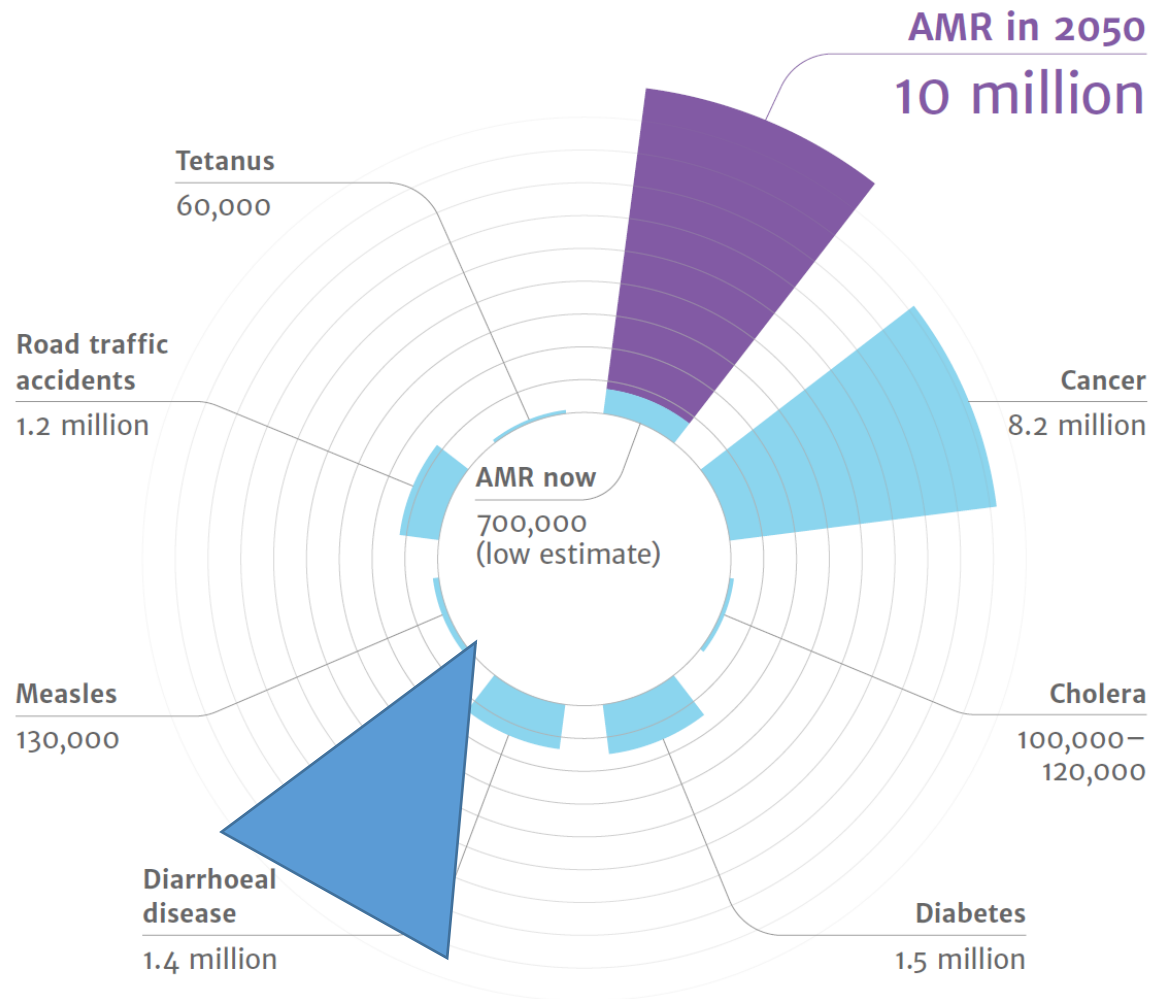
Exploring practices in antibiotic usage in poultry farms from the West and North West region of Cameroon (GHSS-AIGHD)



- ❑ 95.3% of the farms used antimicrobials
- ❑ 340 antibiotic formulations were found (counterfeit!)
- ❑ Veterinarians are never the first contact for advise.
- ❑ Poor biosecurity practices and biosafety practices
 - ❑ rodents seen in >80% of the farm
 - ❑ foot bath not used in 1/3 of the farms



Deaths attributable to AMR every year



AMR surveillance should be done in the context of a holistic set of interventions to reduce the demand in antibiotic consumption



INTERVENTION 1: A GLOBAL PUBLIC AWARENESS CAMPAIGN.

INTERVENTION 2: IMPROVE SANITATION AND PREVENT THE SPREAD OF INFECTION.

INTERVENTION 3: REDUCE UNNECESSARY USE OF ANTIMICROBIALS IN AGRICULTURE AND THEIR DISSEMINATION INTO THE ENVIRONMENT.

INTERVENTION 4: IMPROVE GLOBAL SURVEILLANCE OF DRUG RESISTANCE AND ANTIMICROBIAL CONSUMPTION IN HUMANS AND ANIMALS.

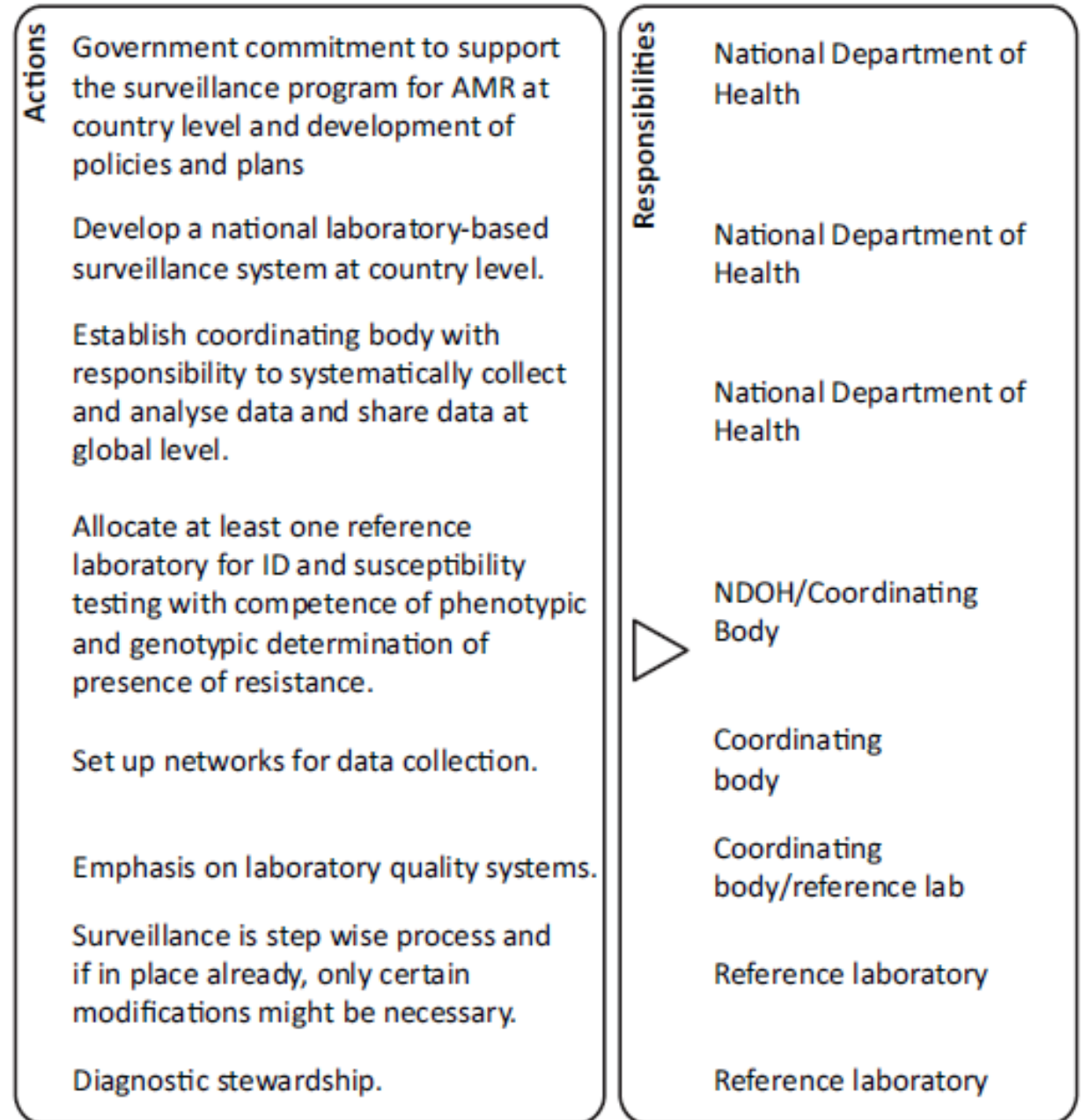
INTERVENTION 5: PROMOTE NEW, RAPID DIAGNOSTICS TO REDUCE UNNECESSARY USE OF ANTIMICROBIALS

INTERVENTION 6: PROMOTE DEVELOPMENT AND USE OF VACCINES AND ALTERNATIVES.

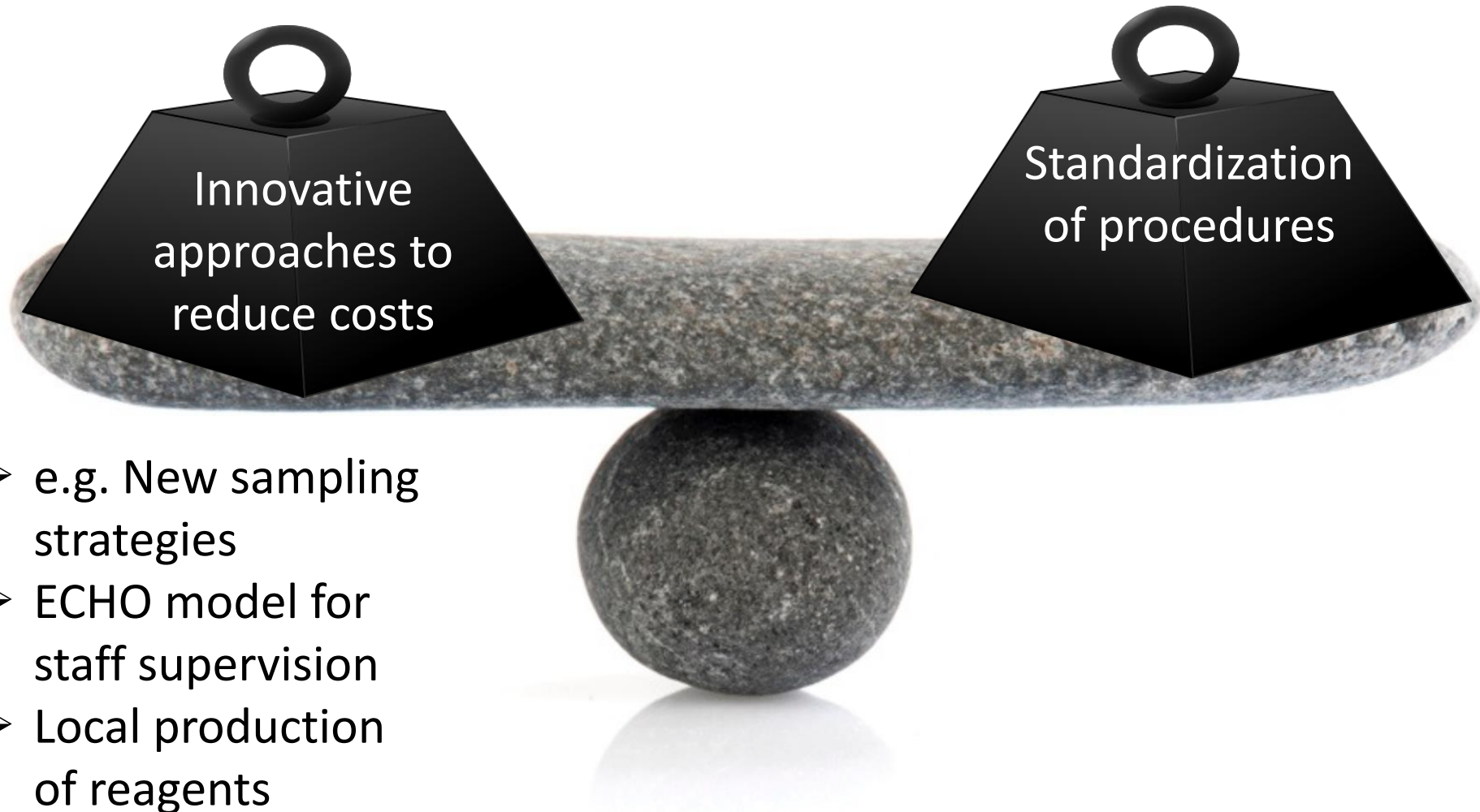
INTERVENTION 7: IMPROVE THE NUMBER, PAY AND RECOGNITION OF PEOPLE WORKING IN INFECTIOUS DISEASES .

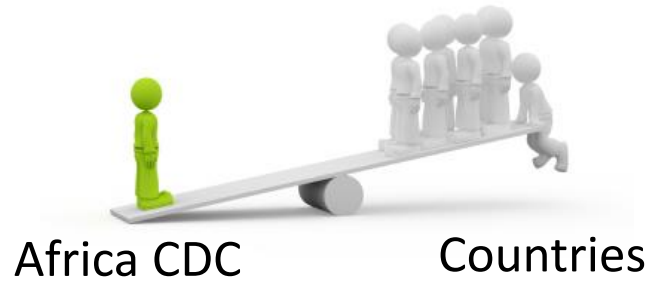
Global & regional AMR surveillance depend on surveillance networks in-country.

Stepwise establishment of an AMR surveillance network at country level.



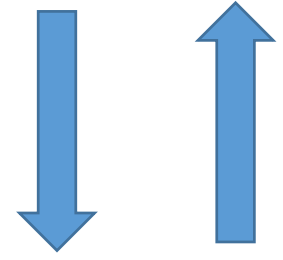
Moving forward with AMR surveillance in a context of limited resources





Africa CDC
Regional center of
excellence

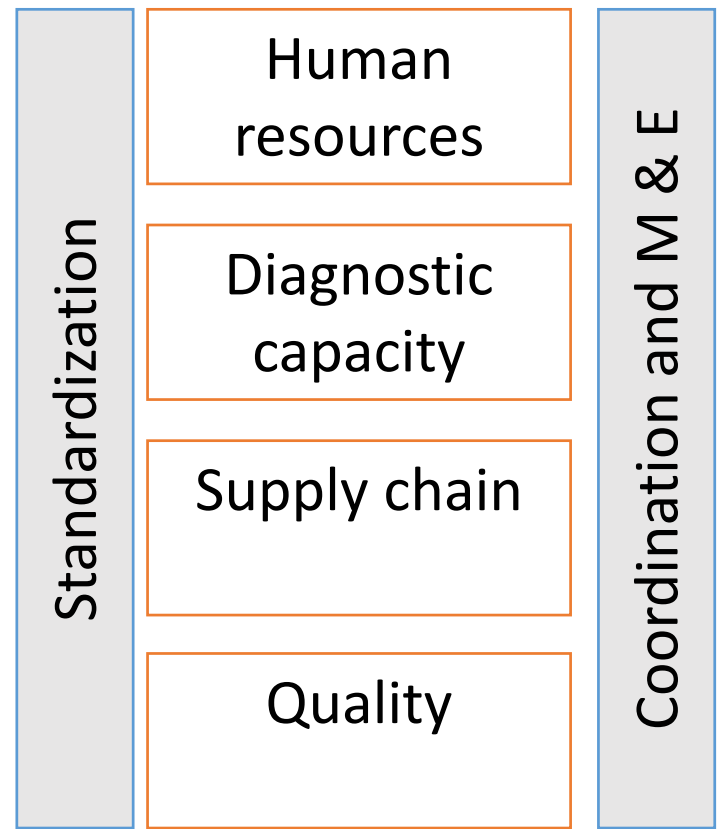
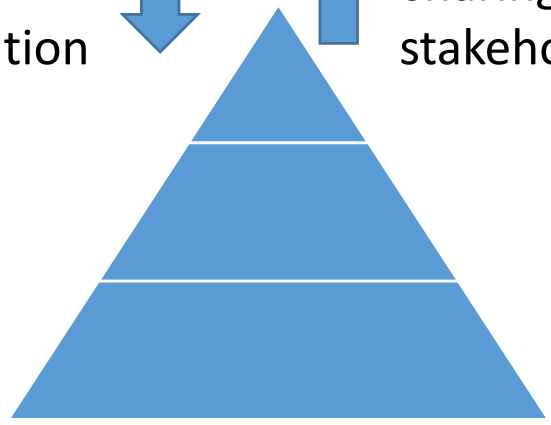
- Provide a **standardized** overview of AMR prevalence at regional level to inform national and regional policies
- Part of the alert system



National Public
Health institute

Capacity
strengthening
&
coordination

Data
analysis and
sharing with
stakeholders



Africa CDC Regional Integrated Surveillance and Laboratory to contribute to the standardization of approaches for surveillance

- Advise countries on the prioritization of organisms that should be monitored.
- Advise on the selection of antibiotics to be tested.
- Provide access to standardized practices for conducting laboratory-based surveillance of AMR
- Provide advanced and specialized testing.
- Setting up a database for collating and sharing information with stakeholders through existing mechanisms such as IDSR.
- Establish and maintain inter-sectoral (One-health) collaboration for AMR surveillance at regional level.

Thank you