Strengths of the CGIAR AMR Hub

Arshnee Moodley, Hub leader, a.moodley@cgiar.org
Before 1993

Foundations of good healthcare system

Importance of prudent use and IPC

Strong databases: CRP number, Strain database, Digital and linked

Future

Continue to be bold

Danish consumers are world champions at organic consumption
CGIAR: 15 research centres; local presence in 108 countries and 50 years of experience

Unequalled partnerships network of more than 3,000 partners from national governments, academic institutions, global policy bodies, private companies and NGOs

https://www.cgiar.org/cgiar-at-50/
ILRI’s presence (since the early 1970s)

Main campuses: Nairobi, Kenya and Addis Ababa, Ethiopia

Offices in 15 other countries
- Staff: 700
- Budget: US$100 million (2021)
- Senior scientists from 40 countries
Global and national food trade policies to mitigate AMR:
- bans
- user fees (e.g. increase price of antimicrobial)
- restrictions on products raised using antimicrobials

(A vraam et al 2021)

Market value of Africa’s animal-source foods to grow to ~$151 billion by 2050 (from ~$37bn in 2019)

Most livestock products are sold locally and informally
Addressing AMR is a balance act in LMICs

- Food security
- Livelihoods
- Incentives
- Access
- National interests

- Intensification (inc. productivity)
- Reducing Antimicrobial use
- Deficiencies
- Excess
- Global interests

**Impact on global poverty:** pronounced increase in extreme poverty- additional 28.3 million people (high-impact AMR scenario)

**Impact on livestock output:** decline in global livestock production 2.6-7.5% per year
Understanding impacts of AMR in the local context

Making a case for country investment

<table>
<thead>
<tr>
<th></th>
<th>LMICs</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much human AMR comes from agriculture?</td>
<td>Don’t Know</td>
</tr>
<tr>
<td>Interventions shown to reduce use at scale</td>
<td>No</td>
</tr>
<tr>
<td>Interventions are affordable</td>
<td>Don’t know</td>
</tr>
<tr>
<td>Interventions are feasible</td>
<td>Maybe, maybe not</td>
</tr>
<tr>
<td>Unintended negative consequences</td>
<td>Maybe large</td>
</tr>
<tr>
<td>Effect on human and animal overall well-beings</td>
<td>Don’t know</td>
</tr>
</tbody>
</table>
CGIAR AMR Hub  mitigating agricultural associated AMR risks
Fundamentals of reducing AMU and spread of AMR in the agricultural sector

**Reduce use**
- AMU surveillance
- Ban/restrictions
- Education-Awareness campaigns
- Evidence based treatment decisions (diagnostics)
- Treatment guidelines
- Vaccines use
- Limiting profit of prescribers
- Differential taxation

**Reduce transmission**
- AMR surveillance
- Biosecurity
- Hygiene/decontamination
Fundamentals of reducing AMU and spread of AMR in the agricultural sector

**Reduce use**
- AMU surveillance
- Ban/restriction of specific antimicrobials
- Education-Awareness campaigns
- Evidence based treatment decisions
- Treatment guidelines
- Vaccines use
- Limiting profit of prescribers

**Reduce transmission**
- AMR surveillance
- Biosecurity
- Hygiene/decontamination

**Challenges in LMICs**
- Poor vaccine uptake
- Limited diagnostic capability
- Limited access to veterinary services
- Substandard/counterfeit antibiotics
- Easy access & inexpensive antibiotics
- Little knowledge amongst users and prescribers
- No/little Surveillance of AMU/AMR (indicator bacteria)
- Lack of cost-effective alternatives
- High prevalence of infectious disease
  - Some information in humans, little to none in animals

- Limited financial subsidies
- Low trust in authority
- Poor quality inputs e.g. feed
- Corruption
- Poor vaccine uptake
- Limited diagnostic capability
- Limited access to veterinary services
- Substandard/counterfeit antibiotics
- Easy access & inexpensive antibiotics
- Little knowledge amongst users and prescribers
- No/little Surveillance of AMU/AMR (indicator bacteria)
- Lack of cost-effective alternatives
- High prevalence of infectious disease
  - Some information in humans, little to none in animals

- Limited financial subsidies
- Low trust in authority
- Poor quality inputs e.g. feed
- Corruption
Hub Project Activities

**Major activities**
- AMU, drivers, KAP
- AMR Prevalence & Transmission (interfaces)
- Cap. Building (lab cap and mentorship)
- Interventions incl. pilot studies, economic analyses

**Minor projects**
- AMU and AMR in crop systems
- Fate and transport of AMR in water bodies
- AMR in wildlife and bushmeat
- AMR and manure
- AMR Policy

ILRI alone: 2020-2025, AMR projects equal US$ 6.8 million
Policy Challenges in LMICs

- Low political commitment
- Little awareness of the issue
- Weak engagement of all stakeholders
- Limited capacity and resources to implement policies
- Absence of national surveillance
  - Data for action??

- Kenya: $2.64M ($0.3M animal sector)
- Uganda: $11.28M (3.7M animal sector)
- Denmark: $149M ($36M-animal sector)
CGIAR AMR Hub

- Strength – partnerships (Multi CG centres, external partners incl. governments)
Mitigating agricultural associated AMR risks together!