Preserving critically important antimicrobials (for humans)

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1. Awareness & understanding
   - Communication
   - Education, training

2. Knowledge & evidence
   - Surveillance – AMR, AMU
   - Laboratories
   - Operational research

3. Infection prevention & control
   - IPC in Healthcare
   - IPC in Animal health, food
   - IPC in Community

4. Optimise use
   - Regulations, access
   - Antimicrobial stewardship
   - Animal health, agriculture

5. Investments, R&D
   - New medicines, innovations
   - Investments
Global trends of AM use (livestock)

- Globally, 73% of all antimicrobials sold on Earth are used in food-producing animals.
- Linked with rising AMR in animals and humans.

Figure 0-3: Antibiotic consumption by livestock, top ten countries, 2010-2030 (projected for 2030)
Source: Van Boeckel et al. 2015
WHO Report on Surveillance of Antibiotic Consumption

Executive Summary
The Selection and Use of Essential Medicines 2019

WHO-GLASS – antibiotic consumption
Essential Medicines List

AWaRe (180)

1. **Access** (48) – should be available at all times as treatments for 25 most common infections

2. **Watch** (110) – includes antibiotics recommended as 1\textsuperscript{st} or 2\textsuperscript{nd} choice treatments for a small number of infections; includes most of the “highest-priority critically important antimicrobials” for human medicine and veterinary use – prioritized for AMS & monitoring

3. **Reserve** (22) – includes antibiotics such as colistin and some cephalosporins – last-resort options used only when all other alternatives have failed

► 2019 WHO AWaRe Classification Database of Antibiotics
Critically Important Antimicrobials

Highest priority
- Quinolones
- Cephalosporins (3/4/5)
- Glycopeptides
- Macrolides/ketolides
- Polymyxins
WHO Guidelines on Use of Medically Important Antimicrobials in Food-Producing Animals

• Recommends limiting use of medically important antimicrobials in food-producing animals

• To preserve effectiveness of medically important (especially critically important) antimicrobials

• Supports Global Action Plan on AMR

Systematic review in *The Lancet Planetary Health* – interventions that restrict antibiotic use in food-producing animals reduced antibiotic-resistant bacteria in these animals by up to 39%
<table>
<thead>
<tr>
<th>WHO classification and prioritization of medically important antimicrobials</th>
<th>Recommendation 2</th>
<th>Recommendation 3</th>
<th>Recommendation(s) 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medically Important</td>
<td>Growth Promotion use</td>
<td>Prevention use (in absence of disease)</td>
<td>a. Control use (in presence of disease)</td>
</tr>
<tr>
<td>Critically Important</td>
<td>Complete restriction</td>
<td>Complete restriction</td>
<td>Responsible and prudent use.</td>
</tr>
<tr>
<td>High Priority</td>
<td>Complete restriction</td>
<td>Complete restriction</td>
<td>Responsible and prudent use.</td>
</tr>
<tr>
<td>Highly Important</td>
<td>Complete restriction</td>
<td>Complete restriction</td>
<td>Responsible and prudent use.</td>
</tr>
<tr>
<td>Important</td>
<td>Complete restriction</td>
<td>Complete restriction</td>
<td>Responsible and prudent use.</td>
</tr>
</tbody>
</table>
Summary

• AMR is a global priority – needs **One Health action**
  • Animal health, human health, plants/agriculture, food, environment
  • Technical, political, intersectoral, developmental
  • Global, national, local
• Optimize use of highest priority critically important antimicrobials
• **Antimicrobials: Handle with Care**
• **WAAW: 18-24 November**
Thank you