Need to conserve critically important antimicrobials for human health
### Critically Important Antimicrobials (CIA) for human medicine, 6th revision, March 2019

<table>
<thead>
<tr>
<th>Antimicrobial class</th>
<th>Criterion (Yes = ●)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CRITICALLY IMPORTANT ANTIMICROBIALS</strong></td>
<td>C1</td>
</tr>
<tr>
<td><strong>HIGHEST PRIORITY</strong></td>
<td></td>
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<tr>
<td>Cephalosporins (3rd, 4th and 5th generation)</td>
<td>●</td>
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<tr>
<td>Glycopeptides</td>
<td>●</td>
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<tr>
<td>Macrolides and ketolides</td>
<td>●</td>
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<tr>
<td>Polymyxins</td>
<td>●</td>
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<tr>
<td>Quinolones</td>
<td>●</td>
</tr>
<tr>
<td><strong>HIGH PRIORITY</strong></td>
<td></td>
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<tr>
<td>Aminoglycosides</td>
<td>●</td>
</tr>
<tr>
<td>Ansamycins</td>
<td>●</td>
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<tr>
<td>Carbapenems and other penems</td>
<td>●</td>
</tr>
<tr>
<td>Glycylcyclines</td>
<td>●</td>
</tr>
<tr>
<td>Lipopeptides</td>
<td>●</td>
</tr>
<tr>
<td>Monobactams</td>
<td>●</td>
</tr>
<tr>
<td>Oxazolidinones</td>
<td>●</td>
</tr>
<tr>
<td>Penicillins (natural, aminopenicillins, and antipseudomonal)</td>
<td>●</td>
</tr>
<tr>
<td>Phosphonic acid derivatives</td>
<td>●</td>
</tr>
<tr>
<td>Drugs used solely to treat tuberculosis or other mycobacterial diseases</td>
<td>●</td>
</tr>
</tbody>
</table>
WHO guidelines on use of medically important antimicrobials in food producing animals, 2017

- **overall reduction** in use of all classes of medically important antimicrobials in food-producing animals
- **complete restriction** of use of all classes of medically important antimicrobials in food-producing animals for growth promotion
- complete restriction of use of all classes of medically important antimicrobials in food-producing animals for prevention of infectious diseases that have not yet been clinically diagnosed
- antimicrobials classified as critically important for human medicine should not be used for control of the dissemination of a clinically diagnosed infectious disease identified within a group of food-producing animals
- antimicrobials classified as highest priority critically important for human medicine should not be used for treatment of food-producing animals with a clinically diagnosed infectious disease
IACG calls on all Member States to **phase out the use of antimicrobials for growth promotion**, consistent with guidance from the Tripartite agencies (FAO, OIE and WHO) and Codex Alimentarius, starting with an **immediate end to the use of antibiotics categorized as the Highest Priority Critically Important Antimicrobial Agents** on the WHO List of Critically Important Antimicrobials for Human Medicine.
4th GLASS report – 2019 data

- > 3 million laboratory-confirmed infections from 24,803 surveillance sites in 70 countries
- AMR in blood stream infections (SDG AMR indicators)
  - 36.6% ESBL *E. coli* (R to 3rd Gen Cephalosporins)
  - 24.9% MRSA
WHO Global TB report

- **71%** (2.1 out of 3.0 million) of people diagnosed with bacteriologically confirmed pulmonary TB tested for rifampicin resistance
- **132,222** cases of MDR-TB or RR-TB
- **25,681** cases of pre-XDR-TB or XDR-TB

Pre-XDR-TB – resistant to rifampicin and any fluoroquinolone
XDR-TB – resistant to rifampicin, plus any fluoroquinolone, plus bedaquiline or linezolid
• **Imipenem susceptibility**
  – *E. coli* 72%
  – *Klebsiella pneumoniae* 45%

• **A. baumannii**
  – 10-20% susceptibility against cephalosporins, carbapenems, monobactams and β-lactam-β-lactamase inhibitors

• **Pseudomonas aeruginosa**
  – 40% susceptibility for fluoroquinololones
  – 60-70% to cephalosporins, carbapenems, and aminoglycosides
NARS-NET 4th report, 2021 (57,282 isolates)

- **E. coli** and Klebsiella spp.
  - 3rd gen Cephalosporins – 77-79% R
  - 4th gen Cephalosporins – 63-69% R
  - High carbapenem R
  - 4% colistin R

- Pseudomonas spp. in ICU patients
  - Ceftazidime – 60% R
  - Piperacillin/tazobactam – 49% R

- Acinetobacter spp.
  - >50% resistant to almost all antibiotics tested
  - Minocycline – 26% R
Urgent health challenges for the next decade

13 January 2020

As a new year and a new decade kick off, we have a shared responsibility to act by approaching the United Nations Generation Health Agenda.

We need to realize that health is an inseparable part of society, but not against the effects of climate change, social disparities, and economic and social inequality.

All the challenges in this list demand action. We are not going to achieve these critical goals. There are three areas that we need to focus on:

1. Providing support to the most vulnerable, ensuring that no one is left behind.
2. Ensuring that everyone has access to affordable and effective medicines.
3. Creating a healthy and sustainable environment.

This means advocating for national action plans to tackle antimicrobial resistance by increasing awareness and knowledge, reducing infections, and encouraging prudent use of antimicrobials.

Dr Tedros Adhanom Ghebreyesus, WHO Director-General

NOTE: The challenges are not listed in order of priority. All are urgent, and many are interlinked.
1.2 trillion USD additional health expenditure per year expected by 2050 due to the rise of AMR
ONE HEALTH RESPONSE TO ANTIMICROBIAL RESISTANCE

Antimicrobial resistance is a global crisis. There is no time to wait. A sustained One Health response with a shared vision and goals is essential to tackle antimicrobial resistance and achieve the Sustainable Development Goals.

Interagency Coordination Group on Antimicrobial Resistance Recommendations

ACCELERATE PROGRESS IN COUNTRIES

INNOVATE TO SECURE THE FUTURE

COLLABORATE FOR MORE EFFECTIVE ACTION

INVEST FOR A SUSTAINABLE RESPONSE

STRENGTHEN ACCOUNTABILITY AND GLOBAL GOVERNANCE

SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
6 CLEAN WATER AND SANITATION
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
17 PARTNERSHIPS FOR THE GOALS
Thank you