OIE approach to estimating AMU in the veterinary sector

Pan-Africa Workshop on Effective Implementation of National Action Plan on Antimicrobial Resistance
22-24 January 2020
Lusaka, Zambia
The OIE

1924
Creation:
Office International des
Epizooties
(OIE)

2003
New common name:
World Organisation
for Animal Health
(OIE)

2016 -20
OIE Sixth Strategic Plan

301 Reference Centres
182 Member Countries
90 Partner organisations

For each Member Country:
- 1 National Delegate to the OIE
- 8 National Focal Points on specific subject matter, including one on Veterinary Products including AMR

Headquarters in
Paris
160 staff

12 Regional offices
80 staff
AMR discussed and guidance provided at the 20th OIE General Session in 1952 based on a issue raised by Members

First reference to AMR is made in 1948
OIE global database on AMU in animals

1. A system where all can contribute
2. That safeguards information
3. That is pragmatic regarding the data collected
4. That will help to collect comparable data
What do we want to achieve by collecting data?

- **Data**
  - (Data are discrete, objective facts that have no meaning in isolation)

- **Information**
  - (Information is data which is relevant and has purpose)

- **Decisions**
  - (Decisions are taken based on facts and knowledge)

- **Actions**
  - (Implementation of decisions)
What data is being collected?

<table>
<thead>
<tr>
<th>Qualitative Data</th>
<th>Quantitative Data</th>
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<tr>
<td><strong>Baseline Information</strong></td>
<td><strong>Option 1</strong></td>
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<td>• All Member Countries, including growth promoters</td>
<td>• Antimicrobial agents</td>
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<td>• Type of use*</td>
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* Type of use: veterinary medical use or growth promotion

**Animal groups means: ‘terrestrial food-producing animals’, ‘aquatic food-producing animals’ or ‘Companion animals’

- Comparable data over time
- Country owned
- Confidential – regional reporting
Validated Data Sources Selected by 94 Countries Reporting Quantitative Data from 2015 to 2017, Third Round

Number of Countries who submitted the template and reported quantities of antimicrobial agents used in animals

- Wholesalers: 31
- Retailers: 3
- Marketing Authorisation Holders: 21
- Registration Authorities: 5
- Feed Mills: 5
- Pharmacies: 5
- Farm shops/Agricultural suppliers: 0
- Industry trade associations: 5
- Wholesalers: 2
- Retailers: 1
- Feed Mills: 2
- Pharmacies: 0
- Agricultural Cooperatives: 0
- Producer Organisations: 0
- Veterinary Medicinal Products: 23
- Active Ingredients: 11
- Sales: 5
- Prescription: 4
- Farm records: 0
- Other: 10

Exchanges with Countries:
- 582 emails
- 20 phone calls
Units in the OIE AMU database

Active ingredient/animal biomass

mg/kg
**Nominator (active ingredient)**

- Member countries only report on the nominator
- Template and detailed guidelines on how to convert from *i.e.* international units (IU) to mg
- Special workshops on the database and entry of data.
As reported by the country to the OIE data collection for the target year

Antimicrobial agents (mg) = Animal biomass (kg)

Total weight of food-producing animals in the target year

Calculated Animal Biomass of a country for the target year
Animal Biomass (Denominator)

- Each country has variability in animal population numbers, production cycles and average weights.
- Animal biomass is calculated using country-level animal population data by species, data-derived estimates of their average weights by sub-region and country, and average reproductive rates of short-lived species (cycle factor).

  kilogram animal biomass for use as a denominator in analysis of antimicrobial use data (mg/kg)

- Allows for comparisons of trends between OIE Regions and over time.
Barriers to Providing Data on Quantities of Antimicrobial Agents in Animals, Third Round (2017)

From the 38 countries that reported barriers during the 2nd Round, 11 countries (29%) passed to report quantitative data for the first time in the 3rd Round.
Proportion of Antimicrobial Quantities (by Antimicrobial Class) Reported for Use in Animals During the Third Round from 2015 to 2017

Global - Proportion of Antimicrobial Quantities Reported for Use in Animals by 116 Countries

Africa - Proportion of Antimicrobial Quantities Reported for Use in Animals by 32 Member Countries in Africa
Use of Antimicrobial Agents as Growth Promoters, Third Round (2017)

N = 155

- 71% No Use of Antimicrobial Growth Promoters
- 29% Use of Antimicrobial Growth Promoters

Number of Countries Informing on the Use of Antimicrobial Agents as Growth Promoters in Animals

- Africa: n = 44, 10 countries using, 34 countries not using
- Americas: n = 30, 18 countries using, 12 countries not using
- Asia and the Pacific: n = 30, 16 countries using, 14 countries not using
- Europe: n = 44, 2 countries using, 42 countries not using
- Middle East: n = 7, 6 countries not using
Antimicrobial Growth Promoters Used in Animals in 7 Member Countries in Africa in 2017

- SULFONAMIDES (Including Trimetoprim): 1
- STREPTOGRAMINS: 1
- PENICILLINS: 1
- AMPHENICOLS: 1
- AMINOGLYCOSIDES: 1
- GLYCOPHOSPHOLIPIDS: 2
- POLYPEPTIDES: 3
- ORTHOMYCINS: 3
- MACROLIDES: 3
- TETRACYCLINES: 5

Number of Member Countries in Africa Reporting Use of Antimicrobial Class for Growth Promotion in 2017
Where can you find the data reports?

https://www.oie.int/en/scientific-expertise/veterinary-products/antimicrobials/
Sum up

- Mg/kg the agreed unit to report
- OIE Member Countries are committed to report and participation has been increasing over time
- Quality of data is increasing
- An electronic portal being developed for ease of entry, accuracy and usability
Acknowledgements

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