Antimicrobial use in animals: Analysis of the OIE survey on monitoring of the quantities of antimicrobial agents used in animals

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Introduction

Objectives of the questionnaire on monitoring the quantities of antimicrobial agents used in animals:

- to enhance the OIE’s engagement in the initiative to prevent antimicrobial resistance;
- to conduct a survey of the implementation by OIE Member Countries of OIE Terrestrial Animal Health Code Chapter 6.8. “Monitoring of the quantities and usage patterns of antimicrobial agents used in food producing animals”;
- to improve awareness and provide an overview of antimicrobial use in animals by OIE Member Countries;
- to determine what actions are needed and to help the OIE to develop its strategy in this field.
The experience gained from the second cycle of training workshops organised for the OIE National Focal Points for Veterinary Products was taken into account in the development of the questionnaire.
Survey on monitoring of the quantities of antimicrobial agents used in animals in OIE Member Countries

Questionnaire divided into two parts:

1. **General context** (three main questions - legislation covering Veterinary Medicinal Products (VMP) - ban on the use of growth promoters - a system for collecting quantitative data on antimicrobial agents used in animals)

2. **Implementation of the OIE standard** (Chapter 6.8. of the *Terrestrial Code*) – 2 sub-parts:
   - One part for those countries that **do not have an official system** for collecting quantitative data on antimicrobial agents used in animals (seven main questions);
   - One part for those countries that **have an official system** for collecting quantitative data on antimicrobial agents used in animals (nine main questions).
Replies and analysis

- Sent to all the OIE Delegates and copied to the OIE National Focal Points for Veterinary Products in June 2012 (final deadline September 2012).

- 152 questionnaires received from 178 OIE Member Countries = 85% replied.

- OIE National Focal Points for Veterinary Products were mainly in charge of filling in the Questionnaire.
Proportion of OIE Member Countries submitting questionnaires by OIE Regions

- **Africa**: 85%
- **Americas**: 93%
- **Asia Oceania**: 75%
- **Europe**: 91%
- **Middle East**: 75%
PART 1:
General Context
Proportion of OIE Member Countries having legislation covering Veterinary Medicinal Products

- Yes: 91%
- No: 9%

Region-wise distribution:
- Africa: 86% Yes, 14% No
- Americas: 93% Yes, 7% No
- Asia Oceania: 88% Yes, 13% No
- Europe: 98% Yes, 2% No
- Middle East: 89% Yes, 11% No
Aspects covered by legislation

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing authorisation</td>
<td>94%</td>
<td>6%</td>
</tr>
<tr>
<td>Manufacture</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Importation</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Distribution</td>
<td>94%</td>
<td>6%</td>
</tr>
<tr>
<td>Use</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>Monitoring of the quality</td>
<td>78%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Marketing authorisation, Manufacture, Importation, Distribution, Use, Monitoring of the quality.
Proportion of OIE Member Countries banning the use of antimicrobial agents as growth promoters

- Yes: 51%
- Partial: 19%
- No: 30%
Proportion of OIE Member Countries banning the use of antimicrobial agents as growth promoters per region

- **Africa**: 40% Yes, 60% No, 0% Partially
- **Americas**: 30% Yes, 70% No, 0% Partially
- **Asia Oceania**: 50% Yes, 50% No, 0% Partially
- **Europe**: 90% Yes, 10% No, 0% Partially
- **Middle East**: 20% Yes, 80% No, 0% Partially

Legend:
- **Yes**: Green
- **No**: Orange
- **Partially**: Gray
Growth promoters named by OIE Member Countries (number of quotations)

The three antimicrobial agent groups the most often quoted by OIE MC are:

1. Polypeptides (e.g. bacitracine)
2. Bambermycins (e.g. flavophospholipol)
3. Macrolides (e.g. Tylosin)
Conclusions for Part 1

- Legislation is in place on VMP in most of the OIE Member Countries (91%), however there is no control of the quality of products in 22% of these countries.
- Objective would be to have legislation in place and implemented in all the Member Countries.
- Use of antimicrobial agents as growth promoters is still allowed or uncontrolled in a number of Member Countries.
- The majority of Member Countries have no surveillance system of antimicrobial agents used in animals.
- Need for the OIE to continue capacity building and to support Member Countries to implement legislation on VMP.
PART 2: Implementation of the OIE standard (Chapter 6.8. of the Terrestrial Code)

Part 2A

Part 2B
PART 2A:
OIE Member Countries **without** an official system for collecting quantitative data on antimicrobial agents used in animals
Availability of the data

Qualitative data

Yes 79%
No 21%

Quantitative data

Yes 14%
No 50%
Partial 36%
Plan to set up an official system to collect quantitative data

- Yes: 65%
- No: 35%

Bar chart showing the number of OIE MCs by years:
- 1 year: 10
- 2 years: 23
- 3 years: 11
- 4 years: 5
- 5 years: 16
- 7 years: 1
- 10 years: 2
Conclusions for Part 2A

- A certain number of OIE Member Countries wishing to set up an official surveillance system have already relevant qualitative and quantitative data.

- In any case, all countries can start with limited "field studies", as a first step, and develop a national surveillance system of antimicrobial agents used in animals, as a second step.
PART 2B: OIE Member Countries with an official system for collecting quantitative data on antimicrobial agents used in animals
Proportion of OIE Member Countries with official system for collecting quantitative data

- Yes; 41; 27%
- No; 111; 73%
Characteristics of the existing system

- Exhaustive system: 59%
- Legal basis: 90%
- Permanent system: 97%
Data collection

Sources of the data:
1. Declarations by wholesalers/distributors
2. Customs/importers
3. Pharmaceutical industries

Availability of these data to the public:
- Yes: 56%
- No: 44%
Sum of the metric tonnes of antimicrobial agents used in 14 Member Countries for each year from 2007 to 2010

- **2007**: 4,692.90
- **2008**: 4,103.59
- **2009**: 3,690.15
- **2010**: 3,700.85
Distribution of the use of antimicrobial agents in the 25 Countries that provided quantitative data

mg of antimicrobial agents/Kg animal bodyweight

Countries
Conclusions for Part 2B

- Official system is in place in a limited number of countries.
- However in the past few years this number has increased.
- Official systems in place provide variable level of detail and few are able to provide details of the use per species.
- Only half of the countries make these results available to the public.
- Situation regarding the use of antimicrobial agents varies greatly from one country to another.
Thank you for your attention

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de la Santé Animale

World Organisation
for Animal Health

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de Sanidad Animal