



Organisation
Mondiale
de la Santé
Animale

World
Organisation
for Animal
Health

Organización
Mundial
de Sanidad
Animal

Collection of quantitative data on the use of antimicrobial agents including the establishment of an OIE database

OIE Regional Workshop for OIE National Focal Points
for Veterinary Products
Maputo, Republic of Mozambique
3 – 5 December 2013

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Introduction

- Data on the use of antimicrobial agents and on the antimicrobial resistance in the country are essential for any national policy to fight antimicrobial resistance;
- OIE has developed and updates regularly standards on the use of antimicrobial agents and for the containment of antimicrobial resistance,
- With regards to the surveillance of the use of antimicrobial agents in a country, there is the OIE *Terrestrial Animal Health Code* Chapter 6.8.
 - Chapter 6.8.: Monitoring of the quantities and usage patterns of antimicrobial agents used in food producing animals

<http://www.oie.int/en/international-standard-setting/terrestrial-code/access-online/>

Why is it important to have a surveillance of the use of antimicrobial agents in a Country?

Such a surveillance may allow:

- ✓ interpreting antimicrobial resistance surveillance data and assisting in responding to problems of antimicrobial resistance in a precise and targeted way
- ✓ giving an indication of trends in the use of antimicrobial agents in animals over time and potential associations with antimicrobial resistance in animals;
- ✓ assisting in risk management to evaluate the effectiveness of efforts and mitigation strategies
- ✓ ensuring transparency and communicating on the risks (if data published)

Situation worldwide – OIE Survey

- OIE developed a questionnaire in 2012 on monitoring the quantities of antimicrobial agents used in animals
- Questionnaire sent to all the OIE Delegates and copied to the OIE National Focal Points for Veterinary Products in June 2012 (final deadline September 2012)
- Results presented at the OIE Global Conference on the Responsible and Prudent Use of Antimicrobial Agents for Animals held in March 2013 in Paris, France

OIE Survey - Background

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.

OIE Survey - Objectives

- 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.

OIE Survey - Content

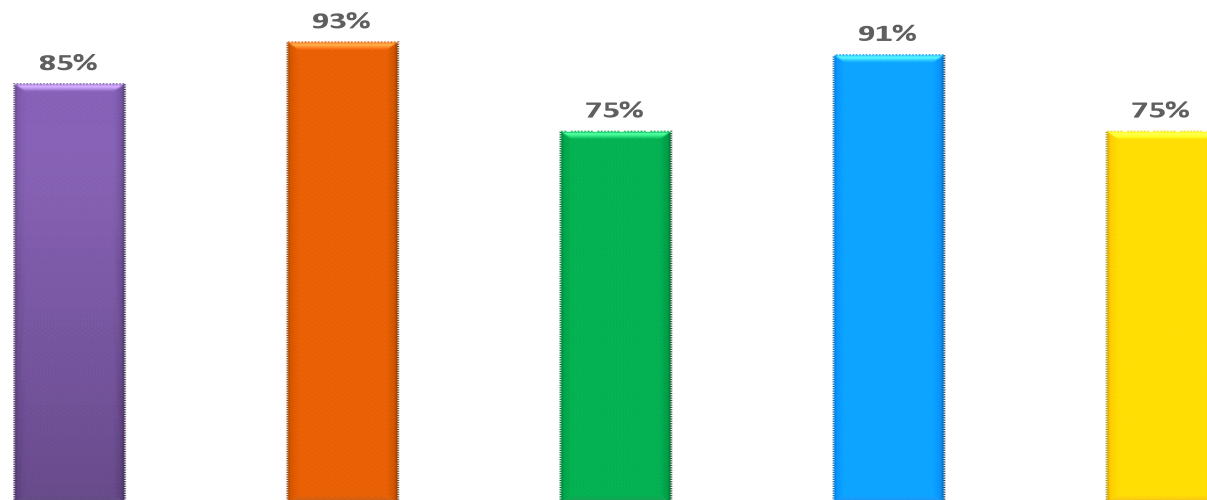
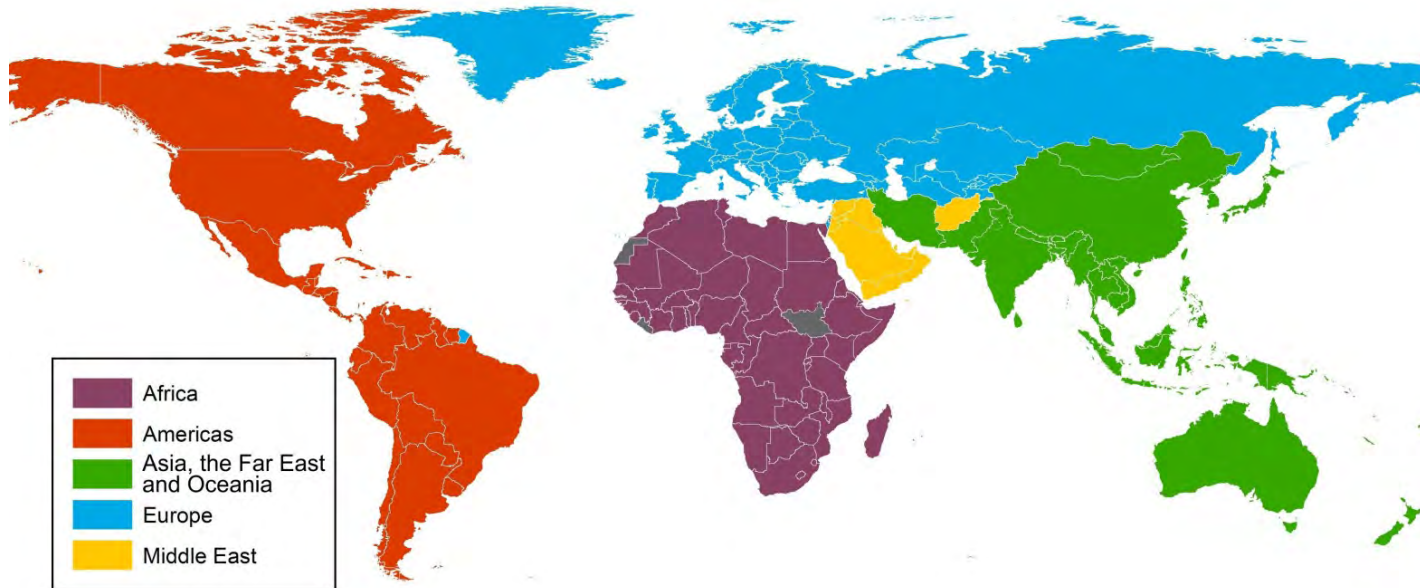
Questionnaire divided into two parts:

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).

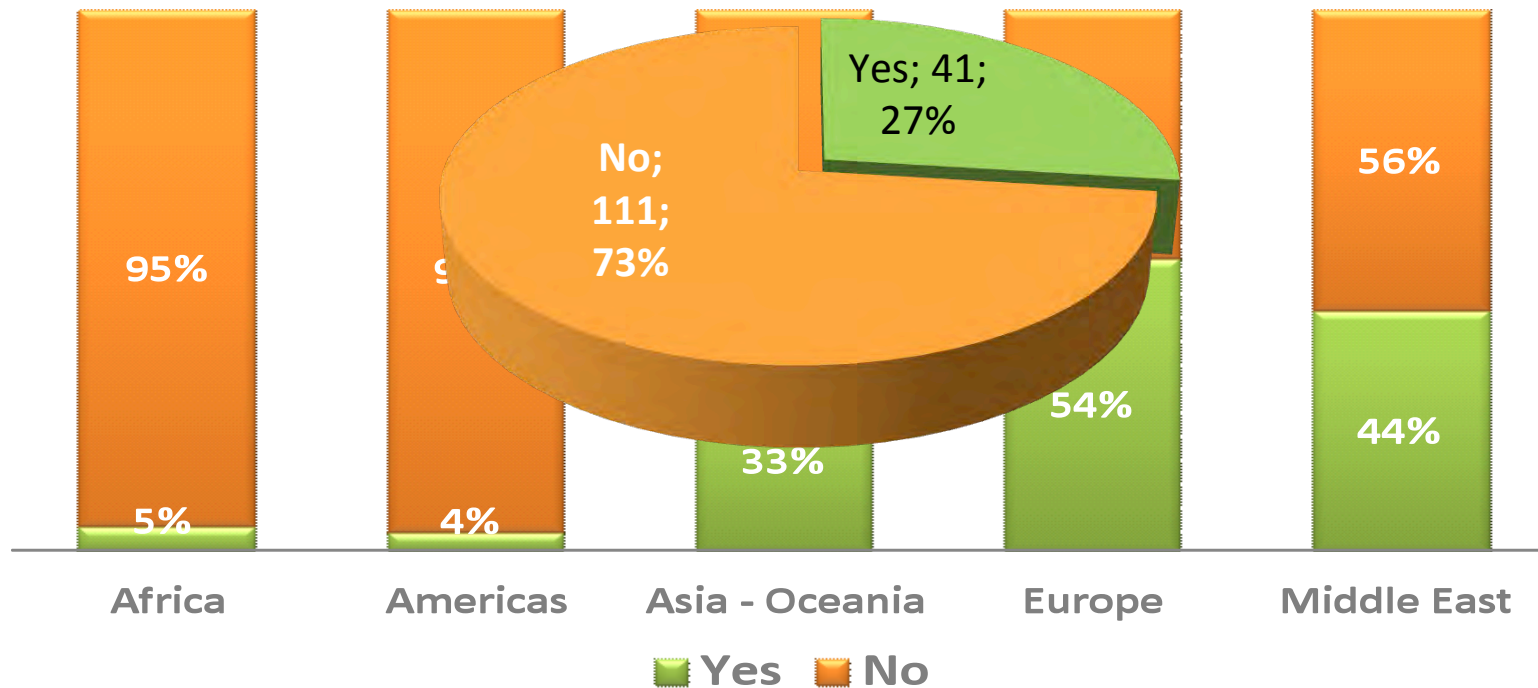
Replies and analysis

- 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

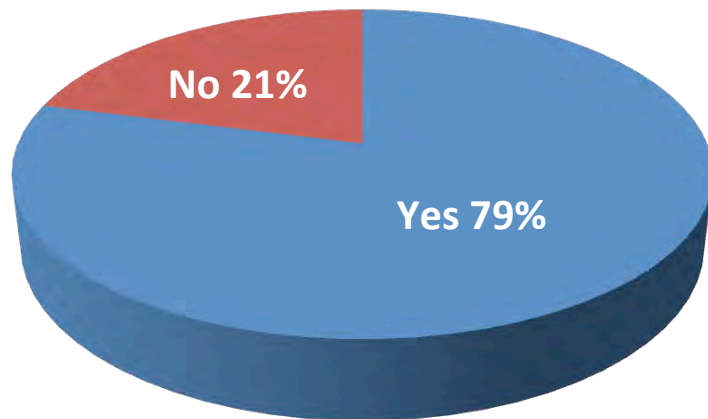


Proportion of OIE Member Countries with an official system for collecting quantitative data

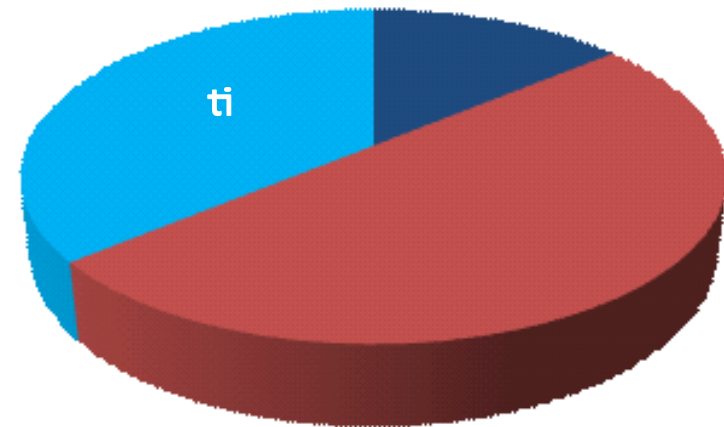


Availability of the data - Worldwide

OIE Member Countries without an official system for collecting quantitative data on antimicrobial agents used in animals



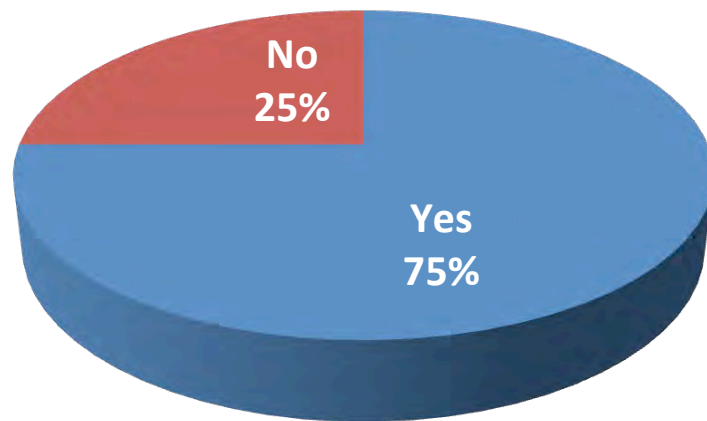
Qualitative data



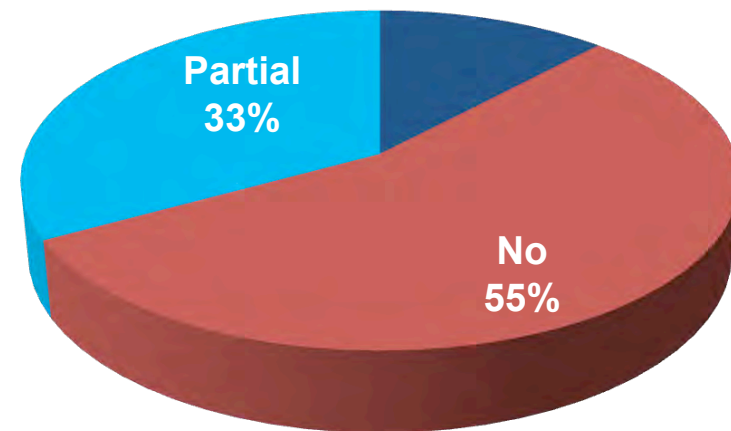
Quantitative data

Availability of the data - in Africa

OIE Member Countries without an official system for collecting quantitative data on antimicrobial agents used in animals

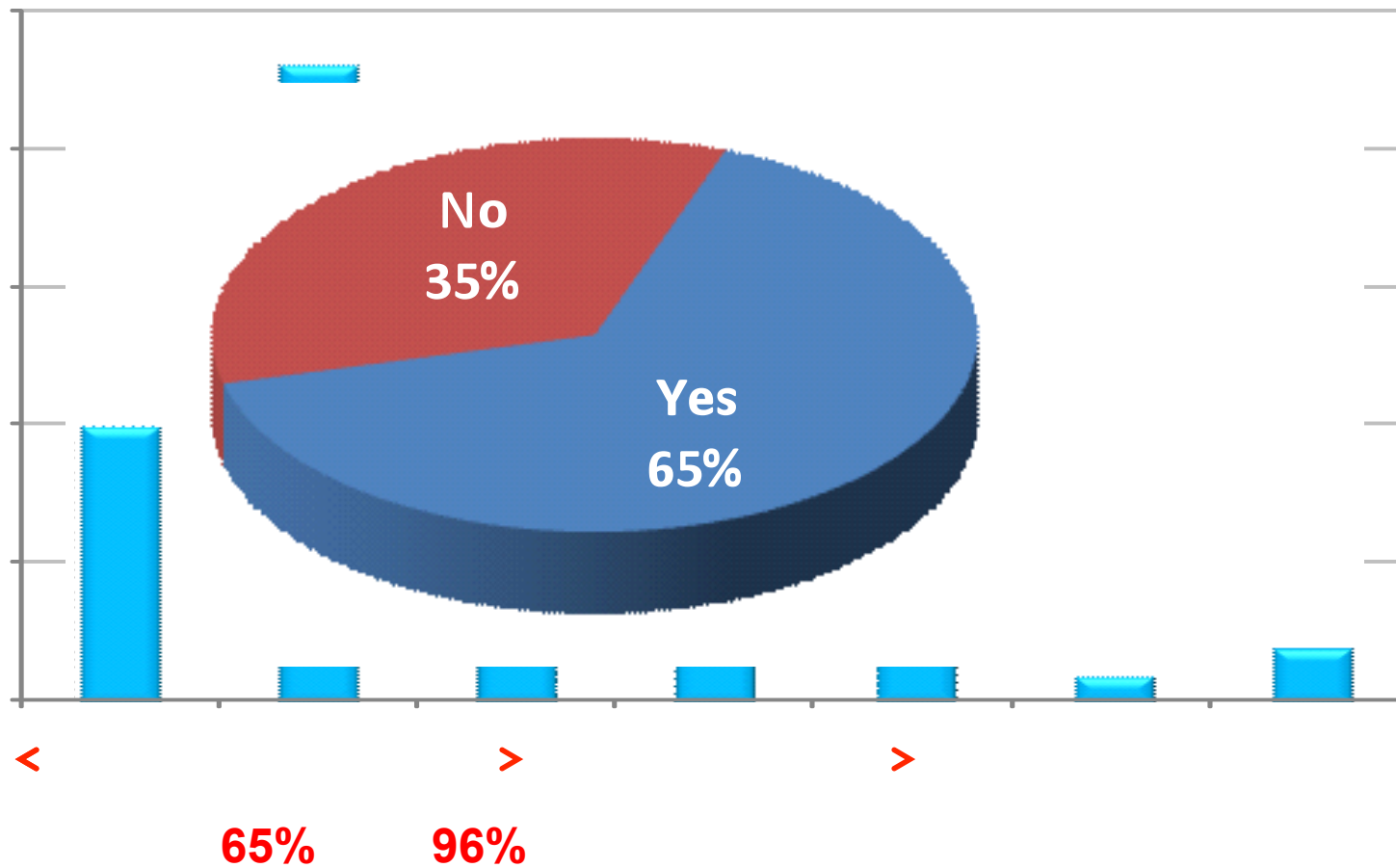


Qualitative data

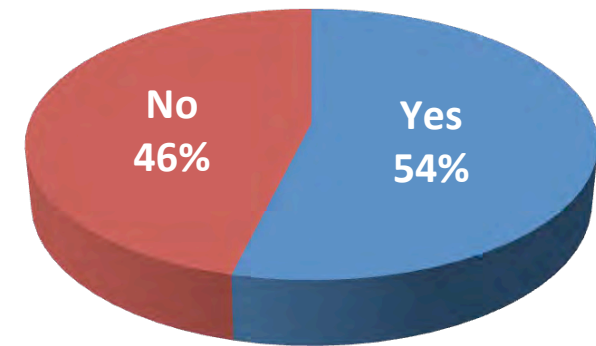
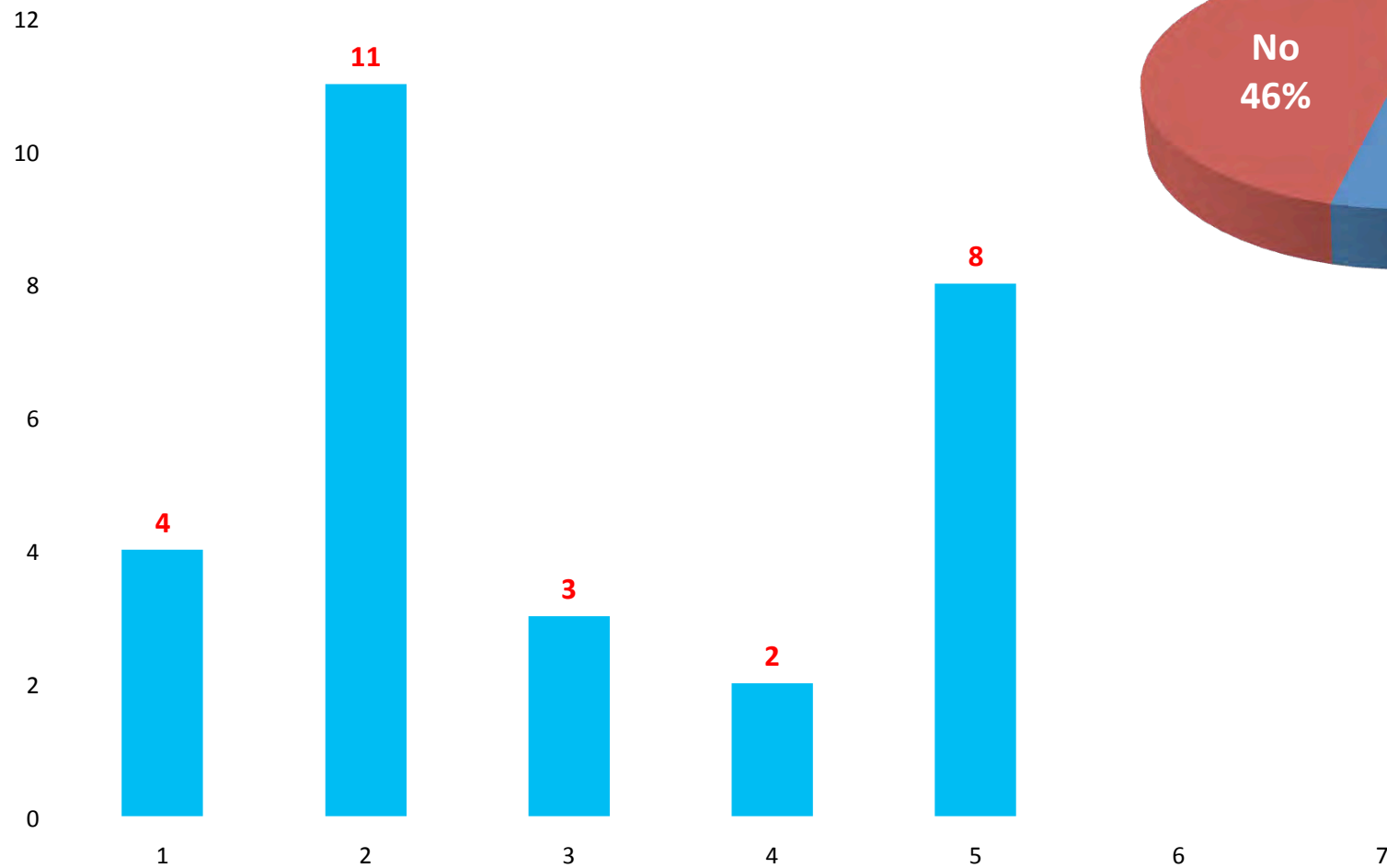


Quantitative data

Plan to set up an official system to collect quantitative data - Worldwide



Plan to set up an official system to collect quantitative data – in Africa



Recommendations of the OIE Global Conference



**OIE Global Conference on the Responsible
and Prudent Use of Antimicrobial Agents for Animals**

International Solidarity to Fight against Antimicrobial Resistance

Paris (France) 13 – 15 March 2013

To the OIE Member Countries

3. To develop and set up an official harmonised national system for collecting data on the monitoring of antimicrobial resistance in relevant animal pathogens and quantities of antimicrobial agents used in food producing animals at the national level based on the OIE standards.

To the OIE

7. To collect harmonised quantitative data on the use of antimicrobial agents in animals with the view to establish a global database.

Set up an official national system for collecting harmonised data

- Which sources?
- Which level of precision?
- Which data to collect?
- Which data need to be harmonised?

Set up an official national system for collecting harmonised data - Which sources?

- Basic sources (e.g. customs, import and export data, manufacturing and sales data);
- Direct sources (e.g. registration authorities, wholesalers, retailers, pharmacists, veterinarians, feed stores, feed mills and pharmaceutical industries);
- End-use sources (e.g. veterinarians and food animal producers)
- Other sources (e.g. internet)

Set up an official national system for collecting harmonised data - Which level of precision?

	Weight in Kg of the active ingredient (WAI)	WAI out of the total weight of food producing animals	Dosage regimens	Route of administration	All species	By species
Sales data	Level 1	X			X	
	Level 2	X				X
Exposure data	Level 3	X	X	X		X

How to interpret results?

Crucial to distinguish between:

- Sales volume
- Exposure to antimicrobial agents

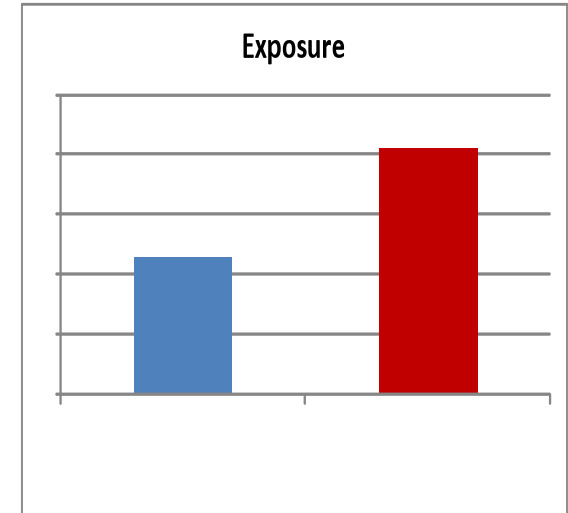
- Antimicrobial sales volumes do not represent precisely their use: Recent antimicrobials are more potent than old ones, and less active is needed to be administered to treat animals.

- To estimate animal exposure to antimicrobial agents it is need to take into account other factors such as the posology (mg/Kg) and the duration of administration. It is also needed to take into account the change in the total animal population according to time.

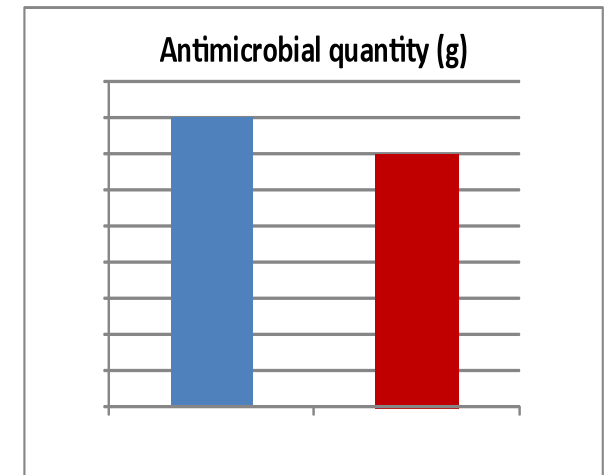
- Therefore a decrease in sales volume does not mean obligatorily that there is a decrease in Antimicrobial use.

Theoretical example

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Calculation performed according to the following elements:

- Animal weight: 50 Kg
- Posology: Oxytétracycline 20 mg/Kg during 3 days
- Posology: Fluoroquinolone 2 mg/Kg for 1 day

Set up an official national system for collecting harmonised data - Which data to collect?

	Level 1	Level 2	Level 3
VMP Name	X	X	X
MAH name	X	X	X
Id Sale package	X	X	X
Sale package description	X	X	X
Number of sold units	X	X	X
Active ingredient	X	X	X
Quantity of active	X	X	X
Conversion factor IU/g	X	X	X
Pharmaceutical form	X	X	X
Route of administration	X	X	X
Target Species		X	X
Posology mg/Kg			X
Treatment duration			X
<hr/>			
Number animals per species -			
Weight produced	X	X	X

Set up an official national system for collecting harmonised data - Which data need to be harmonised?

- The different classes of the antimicrobial agents
- The different pharmaceutical forms used
- The Animal species considered
- The Average weight of the different species
- The Units used

OIE *ad hoc* Group to set up a global database on the use of antimicrobial agents in animals

- First meeting will be held in January 2014
- **Aim:** to define how to set up a global database with harmonised data on the use of antimicrobial agents in animals
- International experts + Representatives from FAO and WHO

Thank you for your attention



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