

A pilot study on a methodological approach for reporting treatment incidence by indication on farm level

M Sjölund¹, S Strandberg², G Ståhle², C Greko¹

¹National Veterinary Institute, Uppsala, Sweden ²Sigill Kvalitetssystem AB (Seal Quality Systems Ltd.), Stockholm, Sweden, marie.sjolund@sva.se

Introduction

The network European Surveillance of Veterinary Antimicrobial Consumption (ESVAC) has since 2009 published reports on the sales of veterinary antimicrobials¹. The data presented has not yet been collected by animal species and age group. However, a proposal has been developed for standardized collection of national data on usage by species and age category. However, data on use of antimicrobials is also needed on herd level as a tool for farmers and veterinarians in the herd management schemes for improving health, productivity and as a consequence, reducing the need for antimicrobials. The aim of this study was to develop and pilot a simple and easy-to-use methodology for presenting treatment incidence by indication on herd level for Swedish pig herds.

Materials and Methods

Herds affiliated to a quality assurance system (the accredited standard IP) were contacted for participation in the study. The herds agreed to provide data on the number of animals treated by age category (piglets, weaners, fatteners and adult pigs) and by product during one year. Data on treatment indications were also collected by age category. Treatment indications were grouped as follows: diarrhea, respiratory disorders, lameness, wounds/skin disorders, other symptoms and udder related diseases for sows.

To allow for comparison between different herds irrespective of herd size, production type and completeness in delivered data, treatment incidence was calculated to be shown for 100 sows in production for piglets, weaners and adults. Treatment incidence among fatteners was calculated per 1000 fatteners. In the case that data was not collected during an entire year, the number of treatments was estimated from the number of reported treatments to fit a period of one year.

Results

Nineteen herds agreed to participate and 10 delivered data. Herd data are shown in table 1. Piglets and adults were the two age categories where most treatments were performed but treatment incidence varied between herds. Treatment indications for piglets and sows are shown in tables 2 and 3, respectively. Diarrhea and lameness were the most common indications in piglets. Treatments for lameness in piglets were performed in all herds but treatment incidence varied. Udder related disorders was the most common treatment cause in sows followed by lameness.

Table 1. Herd information and reporting period for herds reporting antimicrobial treatments by indication

Herd	Production type	# Sows	# Fatteners	Reporting period
1	Farrow-to-finish	180	4000	12 months
2	Farrow-to-finish*	240	2900	8 months
3	Farrow-to-finish	140	3350	3 months
4	Multiplier	112	1750	7,5 months
5	Farrow-to-finish	195	4300	12 months
7	Farrow-to-finish*	260	5800	9 months
9	Fattening	-	15000	10 months
11	Farrow-to-finish	85	1700	12 months
14	Nucleus	108	1650	12 months
17	Sow pool central unit	2200	-	6 months

* Sells growers

Table 2. Treatment incidence by indication for piglets expressed as the number of treatments per 100 sows/year

Herd	Diarrhea	Respiratory	Lameness	Skin/Wounds	Other
1	845		207		104
2	279	6	544	43	1
3			2160		
4	234	3	151	4	7
5	237	3	142	11	3
7	1181		758		72
11			320		
14			410		

Table 3. Treatment incidence by indication for sows expressed as the number of treatments per 100 sows/year

Herd	Udder	Lameness	Skin/Wounds	Other
1	66	7		3
2	53	17	9	
3	46	3		3
4	26	11		
5	56	8	7	25
7	17	21		20
11	12	12		4
14	20	36		
17	12	12	1	1

Conclusions and Discussion

Results for herds with a reporting period less than a year must be considered with caution as calculations may result in over- or underestimates of the true incidence.

The simple methodology developed for presenting treatment incidence by age category can aid farmers and veterinarians in identifying health disturbances by age category so that appropriate measures can be taken to improve health and thereby reduce the need for antimicrobials.

Acknowledgments

Participating farmers and the Swedish Board of Agriculture for funding (Dnr: 29-13194/10).

References

1. Sales of veterinary antimicrobial agents in EU/EEA countries – 1st, 2nd, 3rd ESVAC Reports