



IRISH MEDICINES BOARD REPORT ON CONSUMPTION OF VETERINARY ANTIMICROBIALS IN IRELAND DURING 2010

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Introduction

Further to the roll out of the European Commission's monitoring initiative throughout the Community in 2009 in a project known as the European Surveillance of Veterinary Antimicrobial Consumption (ESVAC), the IMB has completed its survey on the usage of veterinary antimicrobials for the year 2010. This report follows an earlier report provided by the IMB in respect of the 2009 situation and which is updated in this document.

As pointed out in the 2009 report, the consumption data provided in this report should be interpreted with caution; experience from other countries shows that it can take a number of years of collecting such information to establish absolute baseline values and to be able to analyse trends in the data. Indeed, on investigation of discrepancies between the 2009 and the 2010 returns, a number of errors in the returns of the companies involved came to light. The investigation of these errors has delayed the finalisation of this report by several months. While the IMB cannot rule out that further errors might come to light as more experience of the data analysis is gained, nevertheless, the report provides a useful benchmark from which trends can be derived.

Methodology

Companies marketing veterinary antimicrobial products in Ireland were requested to submit annual returns for quantities of dose forms sold at package level during 2010. The data to be provided were described in the ESVAC protocol (www.ema.europa.eu). Data were collected from a total of 40 individual antimicrobial substances contained in 517 product presentations which have been authorised for use in Ireland (including both medicines authorised nationally by the IMB as well as those authorised centrally by the EU Commission). The data are based on self-declarations by the companies responsible for marketing the products. It should be noted that certain other antimicrobial products (e.g. those authorised under special licence by the Department of Agriculture) or human antimicrobial medicines which might be prescribed by veterinary practitioners where there is no suitable veterinary alternative licensed were not included in this analysis.

The data were inputted into an IMB database and were also transmitted to the European Medicines Agency (EMA) for input into an ESVAC database. The data were validated by the EMA using the ESVAC data program in order to harmonise the data with the data on the sales of veterinary antimicrobial agents in other EU Member States. In conformity with the ESVAC protocol, the analysis of the data in respect of individual substances of the same antimicrobial classes have been grouped together and classified under the appropriate class headings. In this report the headings are as follows: penicillins, amphenicols, tetracyclines, fluoroquinolones, aminoglycosides, macrolides, lincosamides, sulphonamides & trimethoprim (TMP), cephalosporins and other classes.

Prompted by the identification of discrepancies in the data returns in relation to certain individual products between the years 2009 and 2010, the IMB sought further clarification from the marketing authorisation holders (MAHs) involved. These investigations, which involved a number of cases, led to a revision of the overall consumption data for both years.

Results

The total tonnage of veterinary antimicrobials used in Ireland was 93.2 tonnes in 2010 and 91.1 tonnes in 2009. These results are broken down by chemical classes used in Figures 1 and 2 and by dose form in Figures 3 and 4 below:

Figure 1. Proportional sales (based on tonnes sold) of the various classes of veterinary supplied in 2010 in Ireland

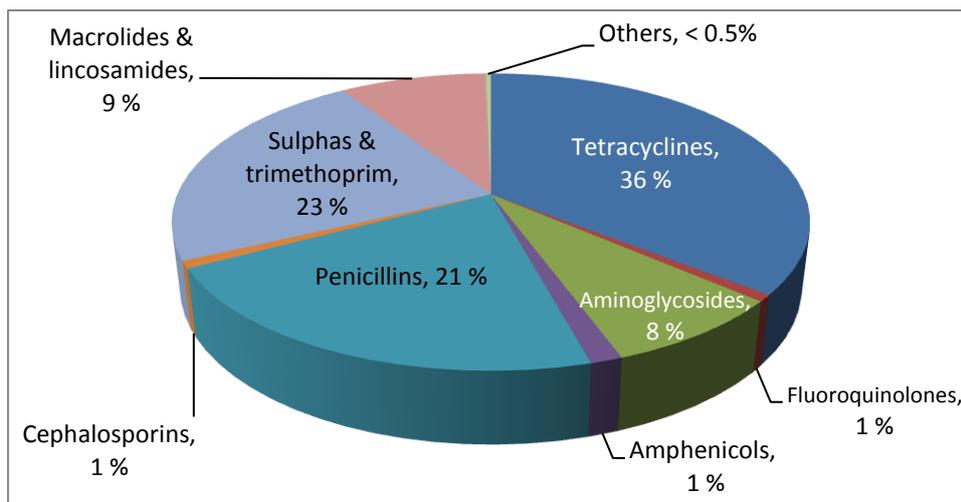


Figure 2. Proportional sales (based on tonnes sold) of the various classes of veterinary supplied in 2009 in Ireland

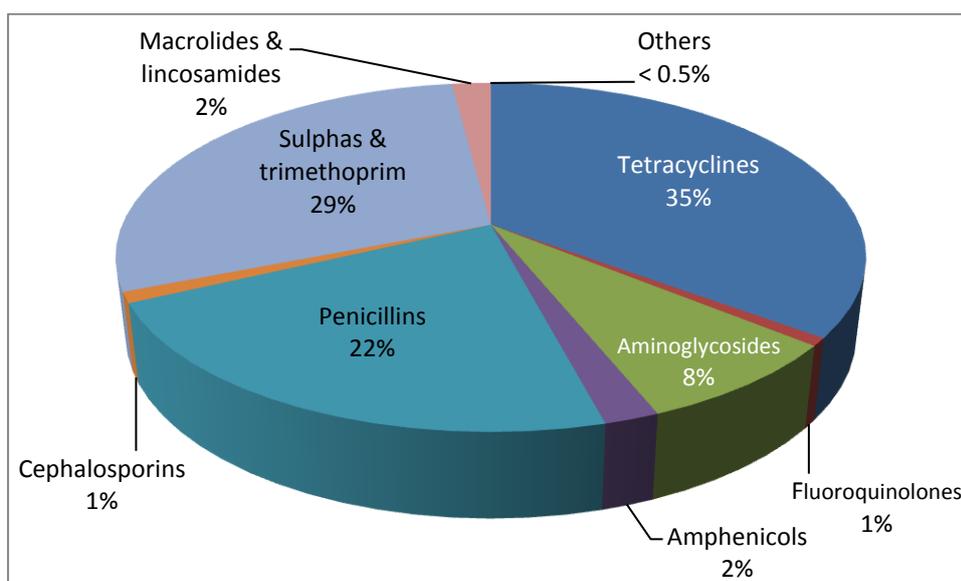


Figure 3. Dose form breakdown of veterinary antimicrobial substances sold in 2010 in Ireland

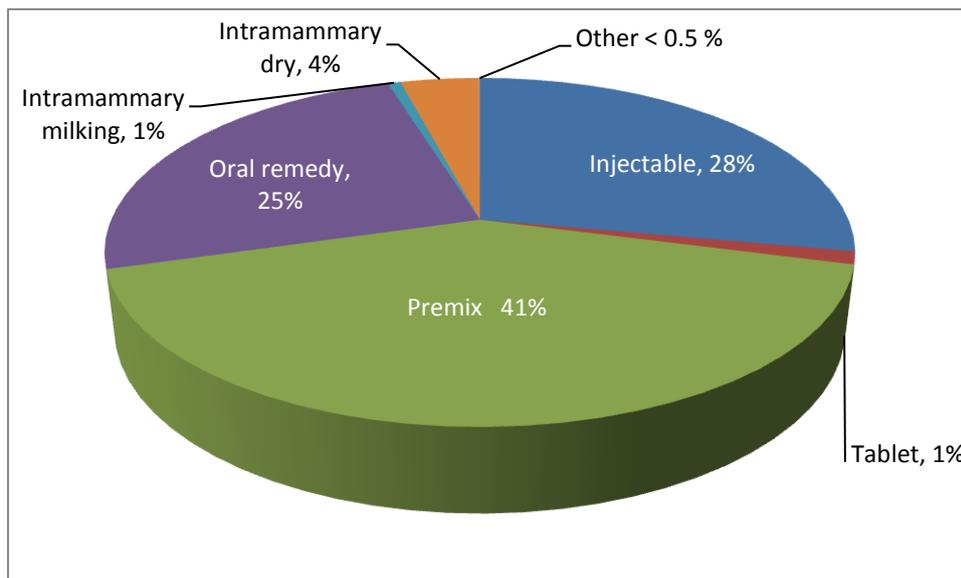
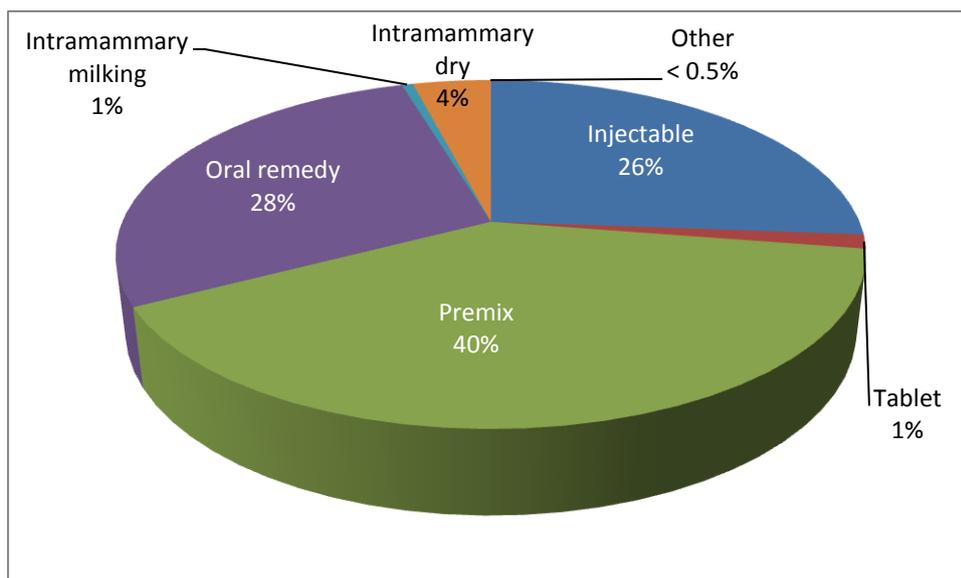


Figure 4. Dose form breakdown of veterinary antimicrobial substances sold in 2009 in Ireland



Discussion

Based on the experience of other European countries, it is expected that usage data in respect of three or more years are ideally needed to establish reliable trends in baseline values for usage of veterinary antimicrobial agents. That stated, the data are quite consistent between the two years, with an overall increase of 2% for 2010.

Tetracyclines, penicillins, aminoglycosides and trimethoprim/sulphonamide drugs account for 88% of the reported use of veterinary antimicrobials during 2010. This is similar to their usage in 2009 (94%). The reported use of cephalosporins, fluoroquinolones, macrolides and other antimicrobial classes amounts to approximately 12% of the total for 2010, being a significant change from the 6% declared for 2009. One possible explanation is that it might be due to underreporting of veterinary antimicrobial agents for 2009; the position will be monitored further in the coming years.

As was the case for 2009, the 2010 data show that medicated premix and other oral dosage forms continue to dominate (being approximately 67% of total consumption for 2010 and 69% for 2009). The declared usage of injectable forms was 28% in 2010 (comparable to 26% in 2009). The reported use of intramammaries appeared to be consistent between both years (4% for dry cow products, 1% for lactating cow products).

The IMB investigations of inconsistencies and dramatic changes in the declared consumptions for individual products yielded positive results. In one case a transcription error in the 2010 returns was found. In another, the MAH stated that they had included returns for both Ireland and the UK in their returns to the IMB. In other cases, the MAHs restated their returns for both years. These investigations led to a significant delay in the finalisation of this report.

The available analytical tools provided under the ESVAC project do not, at present, provide for direct comparisons between the position of Ireland relative to other EU Member States (as the data will be affected by the relative livestock species populations, production systems etc.). However, such a methodology (known as the 'Population Correction Factor') is in development by the EMA and is expected to become available over the coming months. To facilitate contextualisation of the Irish data, the reported sales of antimicrobials for several European countries for the year 2009¹ are given in Table 1 hereunder:

Table 1. Consumption of veterinary antimicrobials in nine European countries during 2009

Country	Tonnes sold
Czech Republic	82
Denmark	130
Finland	17
France	1064
Netherlands	514
Norway	6
Sweden	15
Switzerland	70
United Kingdom	403

In a recent report from Belgium², which states that that country has the third highest consumption of antimicrobial agents per kg biomass produced (behind the Netherlands and France), the consumption of antimicrobial agents in 2009 was stated to be some 304 tonnes.

Conclusion

As advised previously at time of project initiation in 2010, it can be difficult to ensure the reliability of the consumption data provided by MAHs on a self-declared basis. Nevertheless, the data provided for the years 2009-2010 indicate some overall trends:

- Overall consumption patterns were consistent between 2009 and 2010, with a 2% increase being reported.

¹ European Medicines Agency, 2011. 'Trends in the sales of veterinary antimicrobial agents in nine European countries (2005-2009)' (EMA/238630/2011)

² Belgian Veterinary Surveillance of Antimicrobial Consumption, National consumption report 2007-2009, http://www.belvetsac.ugent.be/pages/home/BelvetSAC_report_2007-8-9%20finaal.pdf. [accessed 15 November 2011]

- Medicated premixes are the biggest contributor to the overall usage, followed by other oral dose forms and by injectable presentations.
- The older classes of antimicrobial substances are responsible for nearly 90% of all veterinary usage.
- More sophisticated analytical tools are being developed which will facilitate international comparison of usage between EU Member States.

The IMB will continue to work with its partners within the European Medicines network to enhance the reliability and utility of future such reports.

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