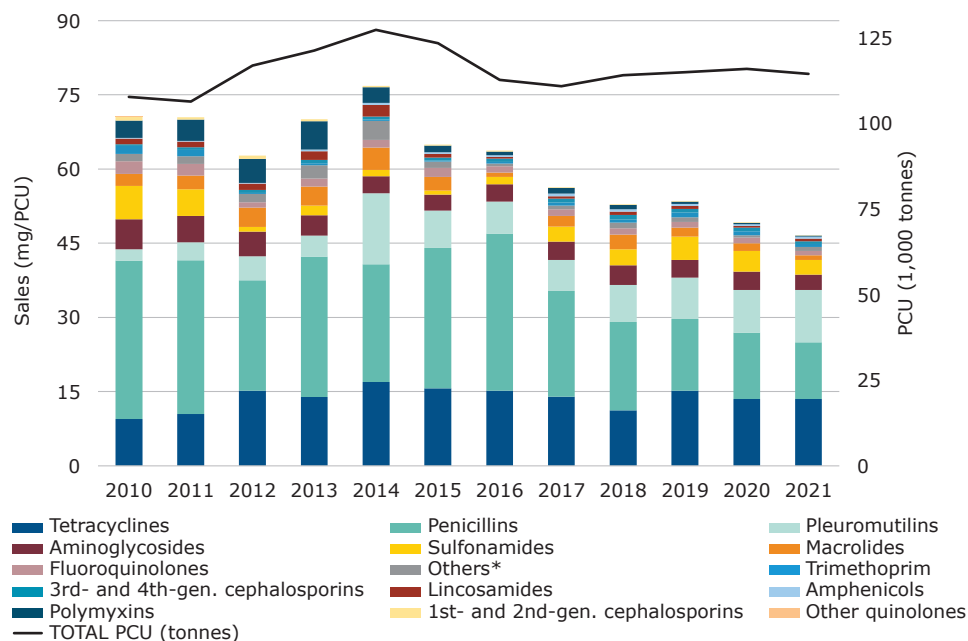


Sales trends by antibiotic class (mg/PCU) from 2010 to 2021^{1,2}



¹ Sales data sorted from highest to lowest in 2021.

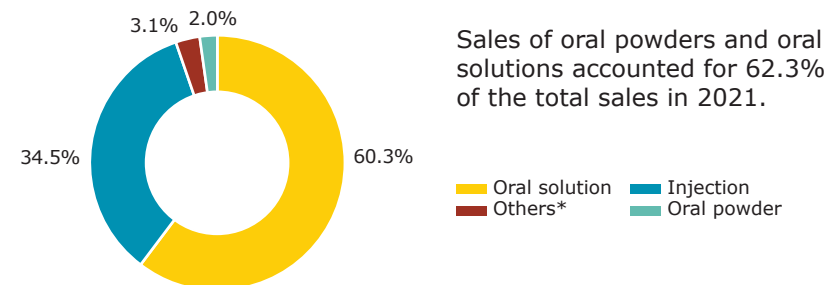
² No sales of other quinolones have been reported since 2011.

The class 'Others' includes sales of bacitracin, novobiocin, rifaximin and spectinomycin (classified as other antibacterials in the ATCvet system).

Since 2011:

- ↓ 33.8% overall annual sales (from 70.5 mg/PCU to 46.6 mg/PCU in 2021)
- ↓ 2.8% 3rd- and 4th-generation cephalosporin sales (from 0.55 mg/PCU to 0.53 mg/PCU in 2021)
- ↓ 61.9% quinolone sales (from 2.3 mg/PCU to 0.88 mg/PCU in 2021)
- 100% of all quinolone sales for the period 2011-2021 were of fluoroquinolones
- ↓ 95.5% polymyxin sales (from 4.3 mg/PCU to 0.19 mg/PCU in 2021)
- ↑ The PCU increased by 7.6% between 2011 and 2021

Proportion of sales (mg/PCU) by product form in 2021¹

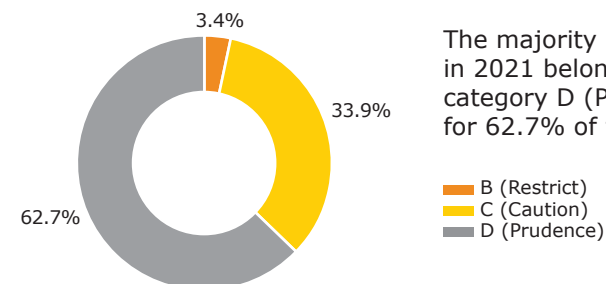


Sales of oral powders and oral solutions accounted for 62.3% of the total sales in 2021.

¹ No sales of premixes and bolus reported in 2021.

* Other forms include intramammary, intrauterine and oral paste products.

Proportion of sales (mg/PCU) by AMEG categories in 2021



The majority of antibiotic VMP sales in 2021 belonged to the AMEG category D (Prudence), accounting for 62.7% of the total sales.

2021 sales data

In 2021, overall sales decreased by 5.3% in comparison to 2020 (from 49.2 mg/PCU to 46.6 mg/PCU). The top three highest selling antibiotic classes were tetracyclines, penicillins and pleuromutilins, which accounted for 28.9%, 24.6% and 22.7% of total sales, respectively.



Country information

In Estonia, all wholesalers are required to report the sales of veterinary medicinal products to the State Agency of Medicines under the Medicinal Products Act of 2005. The State Agency of Medicines collects sales data at package level. Only sales from wholesalers to veterinarians, general and veterinary pharmacies are taken into account, in order to avoid double reporting caused by the inclusion of sales to other wholesalers. The results are published on the website and in the Statistical Yearbook of the State Agency of Medicines each year.

The national action plan for the reduction of antimicrobial resistance is updated regularly. Since 2021, the use of antimicrobials is regulated with strong recommendations to avoid 3rd- and 4th-generation cephalosporins for the treatment of food-producing animals, and antimicrobial sensitivity testing prior to use is mandatory.

As Estonia is a small country, changes in the treatment strategy or outbreaks on one or two major farms may significantly influence sales patterns. For example, after drastically increasing vaccination against *E. coli* strains since 2014, the overall colistin (polymyxins) use decreased remarkably.

Summary reports of consumption of antimicrobials and other veterinary medicines in Estonia are available on the websites below.

<https://www.raviamet.ee/en/statistics/statistics-veterinary-medicines>
<https://www.raviamet.ee/en/statistics/statistical-yearbooks>