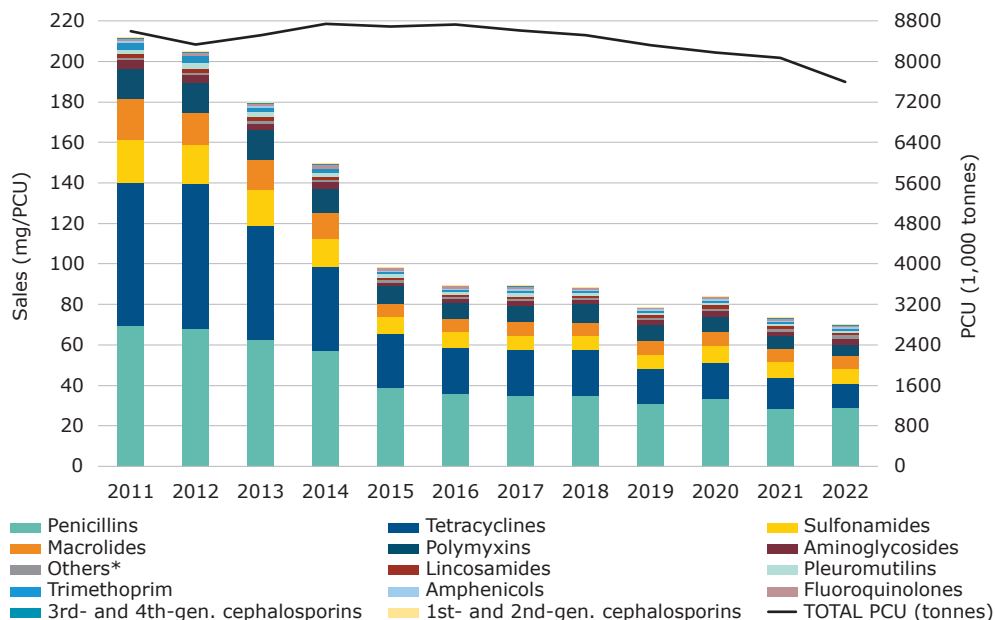




GERMANY

Sales trends (mg/PCU) of antibiotic VMPs for food-producing animals

Sales trends by antibiotic class (mg/PCU) from 2011 to 2022^{1,2}



¹ Sales data sorted from highest to lowest in 2022.

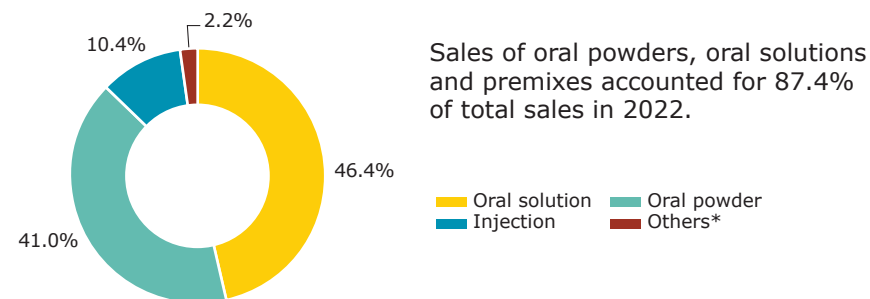
² No sales of other quinolones in any of the years.

* The class 'Others' includes sales of imidazole derivatives (metronidazole), nitrofurantoin derivatives (furazolidone) and other antibacterials (bacitracin and spectinomycin). Of note is that some of the sales could be for non-food-producing animals.

Since 2011:

- ↓ 67.0% overall annual sales (from 211.5 mg/PCU to 69.9 mg/PCU in 2022)
- ↓ 65.4% 3rd- and 4th-generation cephalosporin sales (from 0.40 mg/PCU to 0.14 mg/PCU in 2022)
- ↓ 29.8% quinolone sales (from 0.91 mg/PCU to 0.64 mg/PCU in 2022)
- 100% of all quinolone sales for this period were of fluoroquinolones
- ↓ 60.6% polymyxins sales (from 14.8 mg/PCU to 5.8 mg/PCU in 2022)
- ↓ PCU decreased by 11.6% between 2011 and 2022

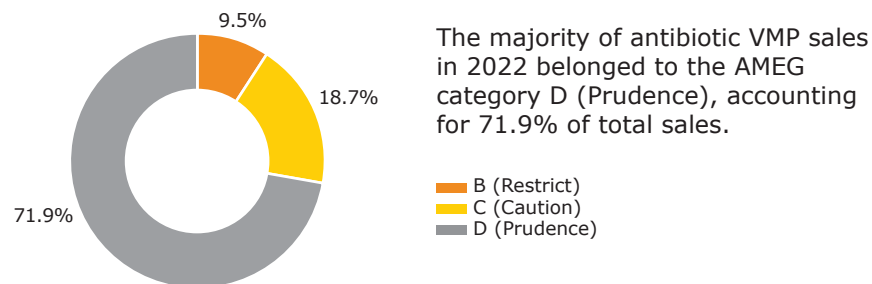
Proportion of sales (mg/PCU) by product form in 2022¹



¹ No sales of pre-mix products were reported in 2022.

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

Proportion of sales (mg/PCU) by AMEG categories in 2022



The majority of antibiotic VMP sales in 2022 belonged to the AMEG category D (Prudence), accounting for 71.9% of total sales.

2022 sales data

In 2022, overall sales decreased by 4.5% in comparison to 2021 (from 73.2 mg/PCU to 69.9 mg/PCU). The three highest selling antibiotic classes were penicillins, tetracyclines and sulfonamides, which accounted for 41.7%, 16.9% and 10.2% of total sales, respectively.

Country information

The antimicrobial minimisation concept introduced by the 16th Act to Amend the Medicinal Products Act came into force in the second half of 2014. Farms of certain categories and sizes that keep cattle, pigs, chickens or turkeys for fattening purposes must report, among others, the numbers of treated animals and treatment days for every antimicrobial product administered. Treatment frequencies are calculated per half-year period. If the individual treatment frequency of a farm exceeds the median treatment frequency of all farms of a certain production category, the farm must evaluate its antimicrobial usage in collaboration with a veterinarian. If the individual treatment frequency also exceeds the third quartile, a written action plan has to be provided for assessment by the competent authority. A direct numerical relationship between the antimicrobial minimisation concept and the decreases in sales of veterinary antimicrobial agents cannot be demonstrated, but the concept was shown to be effective by an evaluation study published in 2019¹.

On 1 March 2018, the 2nd Amendment of the Veterinary Pharmacies Prescription Regulation came into force. It is aimed at addressing the issue of antimicrobial resistance through an optimisation of therapy. In this context, susceptibility testing was, among others, made obligatory for the use of 3rd- and 4th-generation cephalosporins and fluoroquinolones.

In the course of Regulation (EU) 2019/6, national legislation was adapted and a new Veterinary Medicinal Products Act was introduced in Germany on 28 January 2022. The benchmarking concept already mentioned above was continued and slightly adapted. The foundations were laid to continue the collection of antimicrobial sales data and introduce the collection of antimicrobial use data in the future. Several awareness campaigns were carried out in connection with the new legislation. Furthermore, the German cabinet adopted the German Antibiotic Resistance Strategy (DART 2030²) in April 2023. It is intended to further deepen the results achieved with the predecessor strategy 'DART 2020'. The goals and measures to be achieved in the fight against antibiotic resistance at national level and in international cooperation are presented in 6 fields of action.

¹ https://www.bmel.de/SharedDocs/Downloads/EN/_Animals/Report-16thAMGAmendment.pdf?jsessionid=96E37C79E89933F7A1077517F7DD9EA6.live851?__blob=publicationFile&v=4

² https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/3_Downloads/A/Antibiotika-Resistenz-Strategie/DART_2030_bf.pdf