Sales trends by antibiotic class (mg/PCU) from 2010 to 2021[1]

Legend:
- Penicillins
- Tetracyclines
- Sulfonamides
- Lincosamides
- Macrolides
- Aminoglycosides
- Amphenicols
- Pleuromutilins
- Trimethoprim
- Others*
- Fluoroquinolones
- Other quinolones
- Polymyxins
- 1st- and 2nd-gen. cephalosporins
- 3rd- and 4th-gen. cephalosporins
- TOTAL PCU (tonnes)
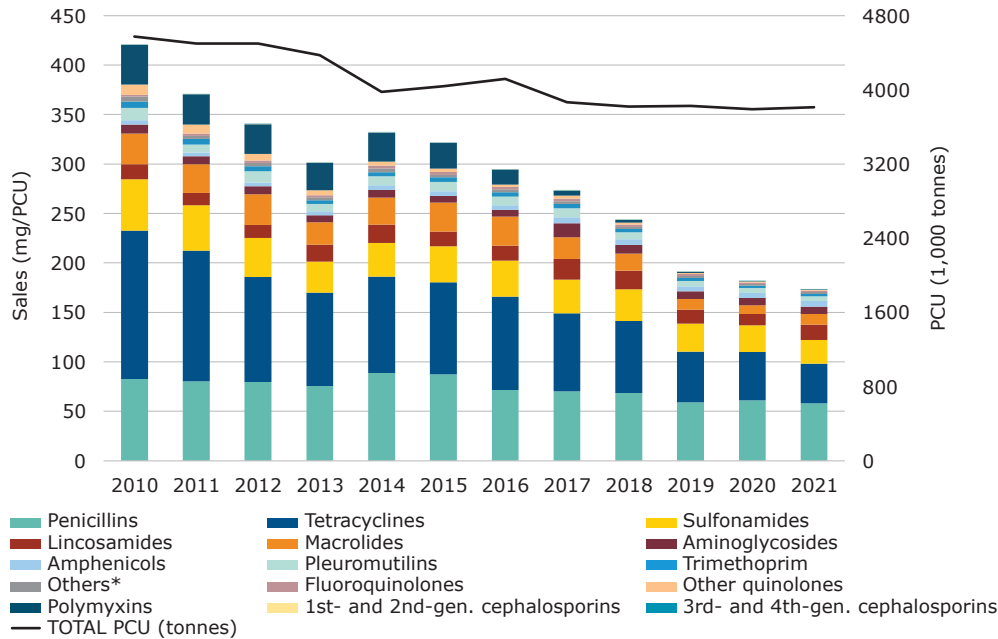
[1] Sales data sorted from highest to lowest in 2021.
* The class 'Others' includes sales of the following sub-classes: imidazole derivatives (metronidazole), nitrofuran derivatives (furazolidone) and other antibacterials (bacitracin, furaltadone, rifaximin, spectinomycin). Of note is that some of the sales could be for non-food-producing animals.

Since 2011:

- ⬇ 53.2% overall annual sales (from 371.0 mg/PCU to 173.5 mg/PCU in 2021)
- ⬇ 63.3% 3rd- and 4th-generation cephalosporin sales (from 0.36 mg/PCU to 0.13 mg/PCU in 2021)
- ⬇ 46.3% fluoroquinolone sales (from 2.2 mg/PCU to 1.2 mg/PCU in 2021)
- ⬇ 95.2% other quinolone sales (from 9.1 mg/PCU to 0.69 mg/PCU in 2021)
- ⬇ 97.9% polymyxin sales (from 30.7 mg/PCU to 0.65 mg/PCU in 2021)
- ⬇ The PCU decreased by 15.2% between 2011 and 2021

Proportion of sales (mg/PCU) by product form in 2021[1]

8.4%
37.4%
53.6%

- Oral solution
- Premix
- Injection
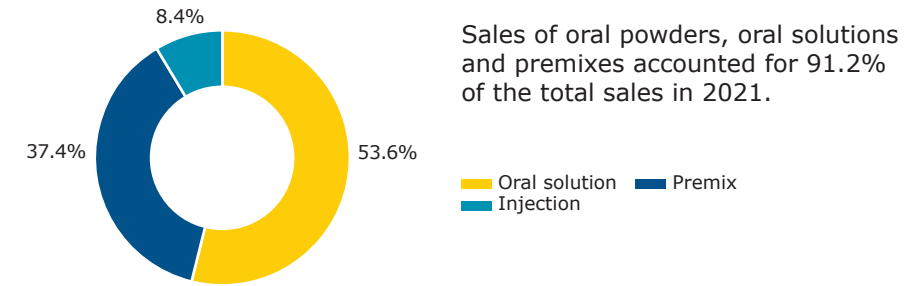
Sales of oral powders, oral solutions and premixes accounted for 91.2% of the total sales in 2021.

[1] No sales of bolus products in 2021.
* The sales of oral powders and other forms (including intramammary, intrauterine and oral paste products) are not represented in this figure and represent 0.2% and 0.4% of total sales, respectively.

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

1.5%
26.4%
72.1%

- B (Restrict)
- C (Caution)
- D (Prudence)
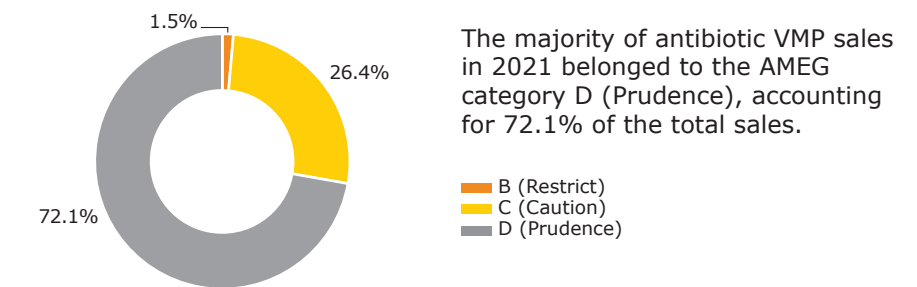
The majority of antibiotic VMP sales in 2021 belonged to the AMEG category D (Prudence), accounting for 72.1% of the total sales.

2021 sales data

In 2021, overall sales decreased by 4.6% in comparison to 2020 (from 181.8 mg/PCU to 173.5 mg/PCU). The three highest selling antibiotic classes were penicillins, tetracyclines and sulfonamides, which accounted for 33.4%, 23.2% and 13.8% of total sales, respectively.

Country information

In Italy, from 2010 to 2019, sales data represent sales from MAHs to wholesalers and feed mills. For 2020–2021, they represent sales of premixes from MAHs to wholesalers, and for all other pharmaceutical forms data represent dispensed e-prescriptions obtained from wholesalers and pharmacies for veterinarians, farmers and companion animal owners.

In April 2019, Italy adopted a computerised traceability system for the veterinary medicine supply chain. This VMP traceability system includes a central database for detecting the movements of packs of VMPs (sales data) along the production and distribution chains from the producer to the first recipient (wholesaler, pharmacy, feed mill), and an electronic veterinary prescription database for tracking VMPs from their prescription by the veterinarian to the end-user (veterinarians, breeders authorised to produce medicated feed for own-use, persons keeping companion animals) administering it to the animals (use data). Due to the implementation of this new system, the 2020 data source changed from sales from MAHs to dispensed e-prescriptions, except for premixes.

In 2022, electronic records of medicinal products used in food-producing animals will also be mandatory. This will improve the integrated system to categorise farms according to their risk of selection and dissemination of antimicrobial resistant microorganisms, which was already completed in 2021 for the bovine, pig and poultry sectors. In 2022, it will be updated to include other animal species (buffalo, sheep, goats, rabbits, horses and aquaculture). This system uses the data collected by the VMP traceability system, particularly use data, to define indicators of antibiotic use on farms, calculated using Defined Daily Dose Animal for Italy (DDDAit). It also collects and analyses information on other aspects of animal health, welfare and management standards. The availability of these data at the farm level represents an important step towards the development of an adequate antimicrobial stewardship programme.

The National Action Plan against Antimicrobial Resistance, launched on 2 November 2017, sets a target reduction (compared to 2016) in accordance with the primary and secondary indicators. Since 2017, all goals have been achieved: 10% reduction in the use of critically important antimicrobials and a reduction in sales of colistin below 5 mg/PCU. The new Plan (2022-2025) will also have similar indicators with an additional target on the use of human medicines in companion animals.

A fact-finding mission was carried out in Italy between 8 and 16 November 2018 in order to gather information on the prudent use of antimicrobials in animals[1].

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[1] https://ec.europa.eu/food/audits-analysis/audit_reports/details.cfm?rep_id=4111&rep_inspection_ref=xxx