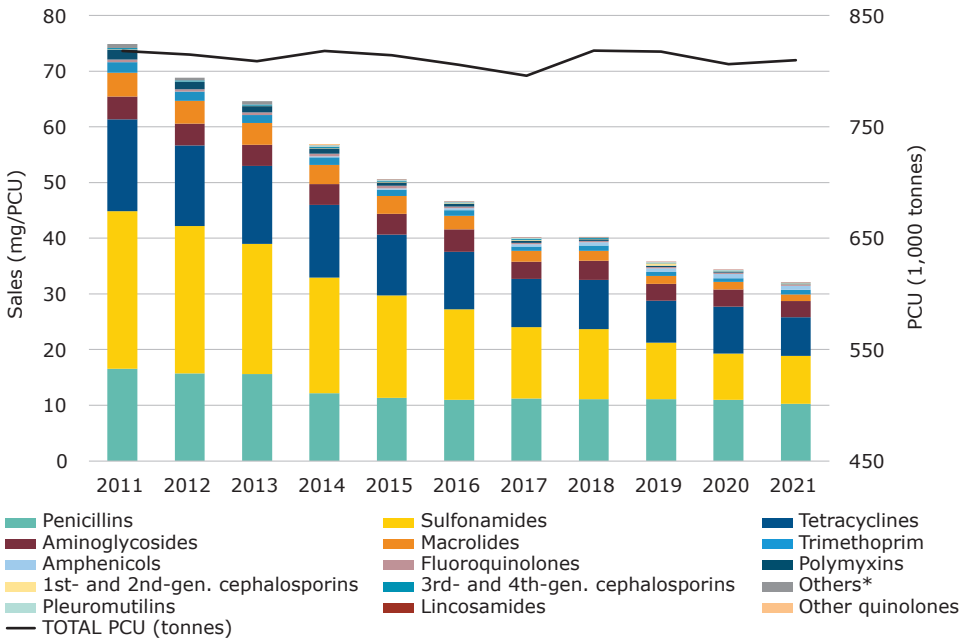
SWITZERLAND

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

Sales trends by antibiotic class (mg/PCU) from 2011 to 2021[1,2,3]

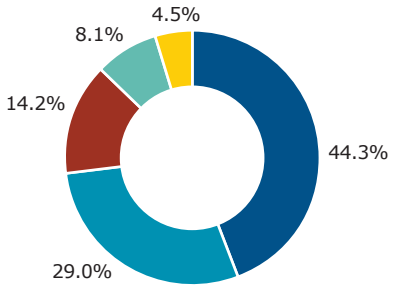


[1] Sales data sorted from highest to lowest in 2021.
[2] From 2011 to 2013, for reasons of confidentiality, amphenicols, other quinolones and pleuromutillins are grouped with 'Others' and lincosamides are grouped with macrolides.
[3] No sales of other quinolones since 2015.
* The class 'Others' includes sales of the following sub-classes: imidazole derivatives (metronidazole) and other antibacterials (spectinomycin). Of note is that some of the sales could be for non-food-producing animals.

Since 2011:

- 43.6% overall annual sales (from 56.8 mg/PCU to 32.0 mg/PCU in 2021)
- 68.8% 3rd- and 4th-generation cephalosporin sales (from 0.22 mg/PCU to 0.07 mg/PCU in 2021)
- 55.9% fluoroquinolone sales (from 0.46 mg/PCU to 0.20 mg/PCU in 2021)
- 100% other quinolone sales (from <0.01 mg/PCU in 2014 to 0 mg/PCU since 2015)
- 88.5% polymyxin sales (from 0.95 mg/PCU to 0.11 mg/PCU in 2021)
- The PCU decreased by 1.0% between 2011 and 2021

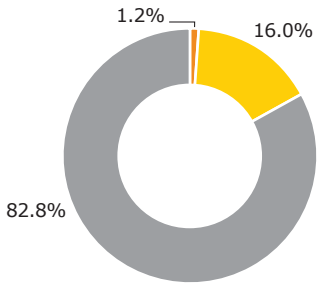
Proportion of sales (mg/PCU) by product form in 2021



Sales of oral powders, oral solutions and premixes accounted for 56.8% of the total sales in 2021.

*Other forms include intramammary, intrauterine, bolus 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 82.8% of the total sales.

2021 sales data

In 2021, overall sales decreased by 6.7% in comparison to 2020 (from 34.3 mg/PCU to 32.0 mg/PCU. The three highest selling antibiotic classes were penicillins, sulfonamides and tetracyclines, which accounted for 32.1%, 26.9% and 21.6% of total sales, respectively.

Country information

Data for 2011–2013 have not been submitted to the ESVAC database and changes to conversion factors are not reflected in these years. The data were provided by the country and can be retrieved from the 2011–2013 (third to fifth) ESVAC Report in Annex 9.

In comparison to 2014, when Switzerland adhered to the ESVAC protocol requirement, decreases were observed in sales of the three highest selling antibiotic classes: sulfonamides (58.6%), penicillins (15.5%, out of which 55% were beta-lactamase sensitive penicillins) and tetracyclines (47.1%).

The continuous decline in sales of 3rd- and 4th-generation cephalosporins (69.8% since 2011) is a long-term effect of the change in the Swiss legislation in 2016 forbidding stock delivery of products containing highest priority, critically important antimicrobials. Since then, such products may only be applied by the treating veterinarian but cannot be delivered as stock to the animal owner. Products containing fluoroquinolones and products with macrolides — very often premixes — are subject to the same restrictions described for 3rd- and 4th-generation cephalosporins and their sales have declined by 54.6% and 71.9% since 2011.

Apart from other antimicrobials, polymyxins — which are exclusively sold and used as colistin in food-producing animals — achieved one of the highest reductions in sales (93.9%) of all antimicrobial classes on sale in Switzerland, from 1.78 mg/PCU in 2011 to 0.11 mg/PCU in 2021, representing 0.3% of total sales. Under current Swiss legislation, colistin is not subject to the same restrictions as 3rd- and 4th-generation cephalosporins and fluoroquinolones and can still be stock-delivered to (mainly pig) farmers. The strong reduction in colistin sales therefore might be linked to an increased awareness among veterinarians (through continuing education) and farmers about antibiotic use and its effects, and also to the introduction and extensive use of vaccines against both porcine circovirus and Lawsonia infections, which have reduced the occurrence of diarrhoea and hence the need to treat secondary bacterial infections.

The overall decrease in sales (in mg/PCU) in the years under investigation is mainly linked to a reduction of use, mostly in pigs and calves treated as a group. As expected, two of the three top sellers (tetracyclines and sulfonamides) were frequently used in the form of premixes, very often in combination with a macrolide until the restrictions introduced in the year 2016. The use of such premixes showed a sharp decline in the following years. A decrease in individual treatments with critical antibiotics is also observed. In the context of the national strategy on antimicrobial resistance (StAR), with the development of guidelines on the prudent use of antimicrobials in cattle/calves, pigs and companion animals, vaccination campaigns and strengthened continuing education, management measures are being promoted and the restrictions introduced in 2016 are continuously monitored. As of 2019, veterinarians are legally required to declare every antibiotic treatment performed, either as group or individual therapy, in food-producing animals as well as in horses or companion animals. This mandatory declaration to a central database may explain an additional decrease in sales (in mg/PCU and in tonnes) observed for the years 2019 and 2020 following a slight increase in 2018. This increase was partly due to the switch to using higher doses of older-generation antibiotics instead of the critical antibiotics affected by the restrictions introduced in 2016.

All of the measures taken have strongly contributed to decreased sales of premixes and, hence, the overall decrease in sales.

Of note is that sales of antimicrobials for veterinary use reported by Switzerland are considered to be slightly overestimated, as data also cover trade in Liechtenstein, although no animal data characterising Liechtenstein are covered in the denominator currently used for analysis. Consumption of antimicrobials for veterinary use in Liechtenstein is considered to be very low.