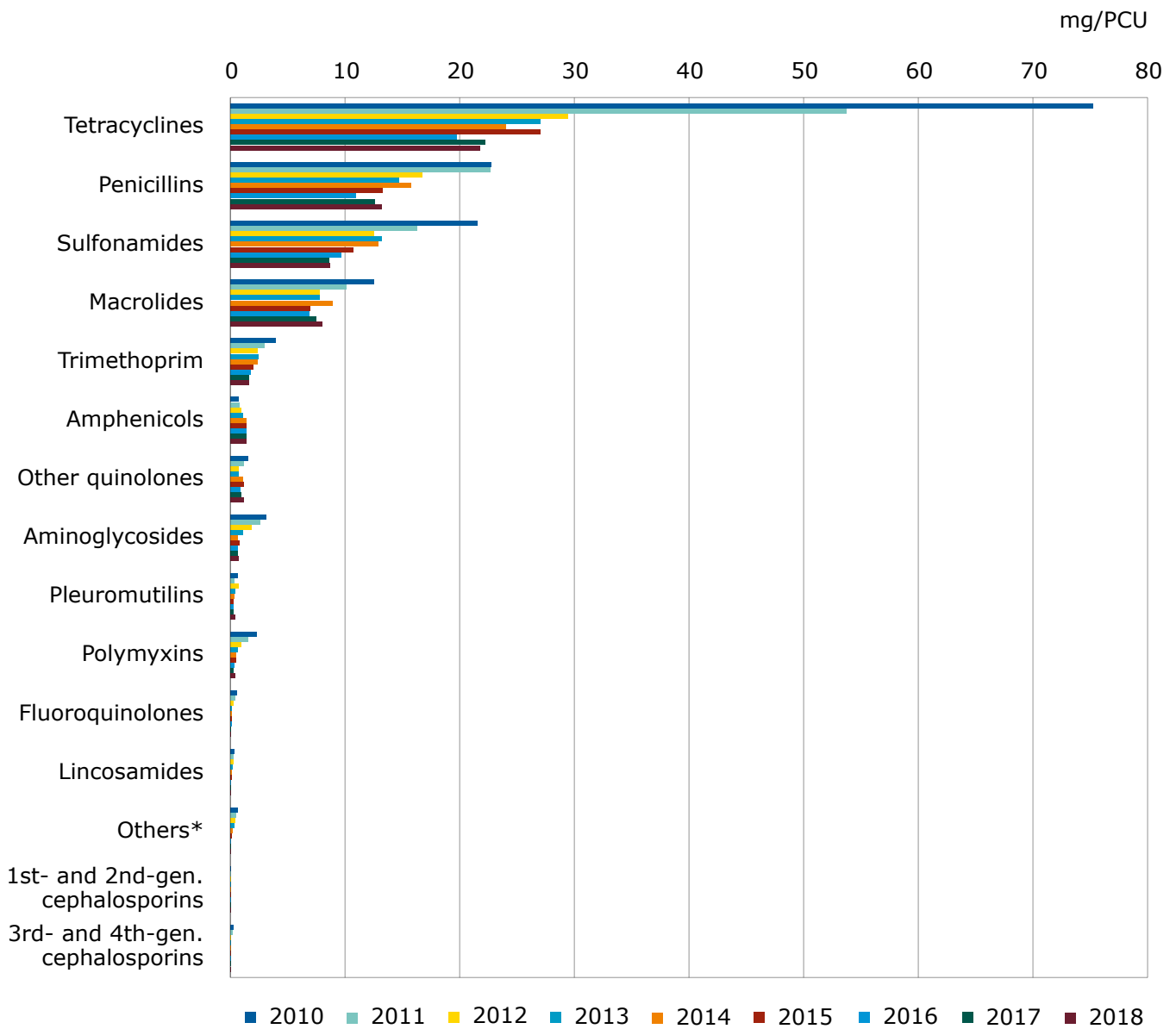


# NETHERLANDS



## CHANGES IN SALES (MG/PCU) ACROSS YEARS



\* Other antibacterials (classified as such in the ATCvet system).

A 49% drop in sales (in mg/PCU) of veterinary antimicrobial agents was observed from 2011 to 2018. Compared to 2010, sales declined by 61% in 2018. This is the result of efforts by the major production sectors and veterinarians which agreed with the government to set reduction targets in 2010 to reduce the use of antimicrobial agents in food-producing animals.

Relatively speaking, the reduction in sales of 3rd- and 4th-generation cephalosporins (100%), fluoroquinolones (85%) and colistin (75%) are the biggest, while the major decline in total sales is accounted for by tetracyclines, with a 60% reduction in sales (mg/PCU) since 2011.

Sales (mg/PCU) of 3rd- and 4th-generation cephalosporins fell by 100% from 2011 to 2018. In 2011, this subclass accounted for 0.16% of total sales, while for 2018, the figure was 0.001%. This result was achieved thanks to efforts within private quality-production systems. Private quality systems in pig and dairy cows banned most use of 3rd- and 4th-generation cephalosporins. In 2018, the sales of 3rd- and 4th-generation cephalosporins VMPs were 0.0003 mg/PCU, while the aggregated sales for 25 countries in 2018 were 0.18 mg/PCU.

Sales (mg/PCU) of fluoroquinolones fell by 85% from 2011 to 2018. In 2011, this subclass accounted for 0.4% of the total sales, while in 2018 this figure was 0.12%. In 2018, sales of fluoroquinolones were 0.07 mg/PCU, while the aggregated sales for 25 countries in that year were 2.42 mg/PCU.

Sales (mg/PCU) of other quinolones decreased by 0.4% from 2011 to 2018. This subclass is categorised as second line antimicrobials, in contrast to fluoroquinolones, which are classified as third-line antimicrobials. Quinolones (mainly flumequine) share some indications with, e.g., colistin, which is also classified as a second-line antimicrobial but with additional restrictions for use, comparable with third-line antimicrobials. For these reasons, not much has changed in the use of this subclass, which accounted for 1.99% of the total sales in 2018. While the aggregated sales for 25 countries in that year were 0.27 mg/PCU, sales of other quinolones in the Netherlands were 1.15 mg/PCU.

Sales (mg/PCU) of polymyxins (>99% colistin) decreased by 75% from 2011 to 2018; in 2011, this subclass accounted for 1.4% of the total sales, while in 2018, this figure was 0.7%. In 2018, sales of polymyxins were 0.39 mg/PCU, while the aggregated sales for 25 countries in that year were 3.31 mg/PCU.

As from 2013, antimicrobial susceptibility testing is mandatory for veterinarians before using 3rd- and 4th-generation cephalosporins and fluoroquinolones. Since 2015, this obligation has also been monitored for companion animals.

Several treatment guidelines have been introduced, addressing both food-producing and companion animals. E.g., for cattle veterinarians, a guideline for dry cow management was introduced in 2014, which resulted in a shift in antimicrobials applied and an overall reduction in antimicrobial dry cow treatment.

Since 2011, antibiotic use by livestock farms in the Netherlands has been monitored by benchmark indicators. The benchmark method for veterinarians was introduced in 2014 and veterinarians working in monitored livestock sector have access to their Veterinary Benchmark Indicator (VBI). Farms and veterinarians with a usage or VBI above the action/level benchmark are obliged to adapt their use or prescription patterns.

The monitored sectors are being gradually extended. In 2018, the following sectors were included: dairy cattle, veal calves, other cattle, pigs, broilers, turkeys and rabbits.

In the Netherlands, a fact-finding mission was carried out between 13 and 20 September 2016 to gather information on the prudent use of antimicrobials in animals<sup>1</sup>.

<sup>1</sup> [https://ec.europa.eu/food/audits-analysis/audit\\_reports/details.cfm?rep\\_id=3753&rep\\_inspection\\_ref=xxx](https://ec.europa.eu/food/audits-analysis/audit_reports/details.cfm?rep_id=3753&rep_inspection_ref=xxx)

