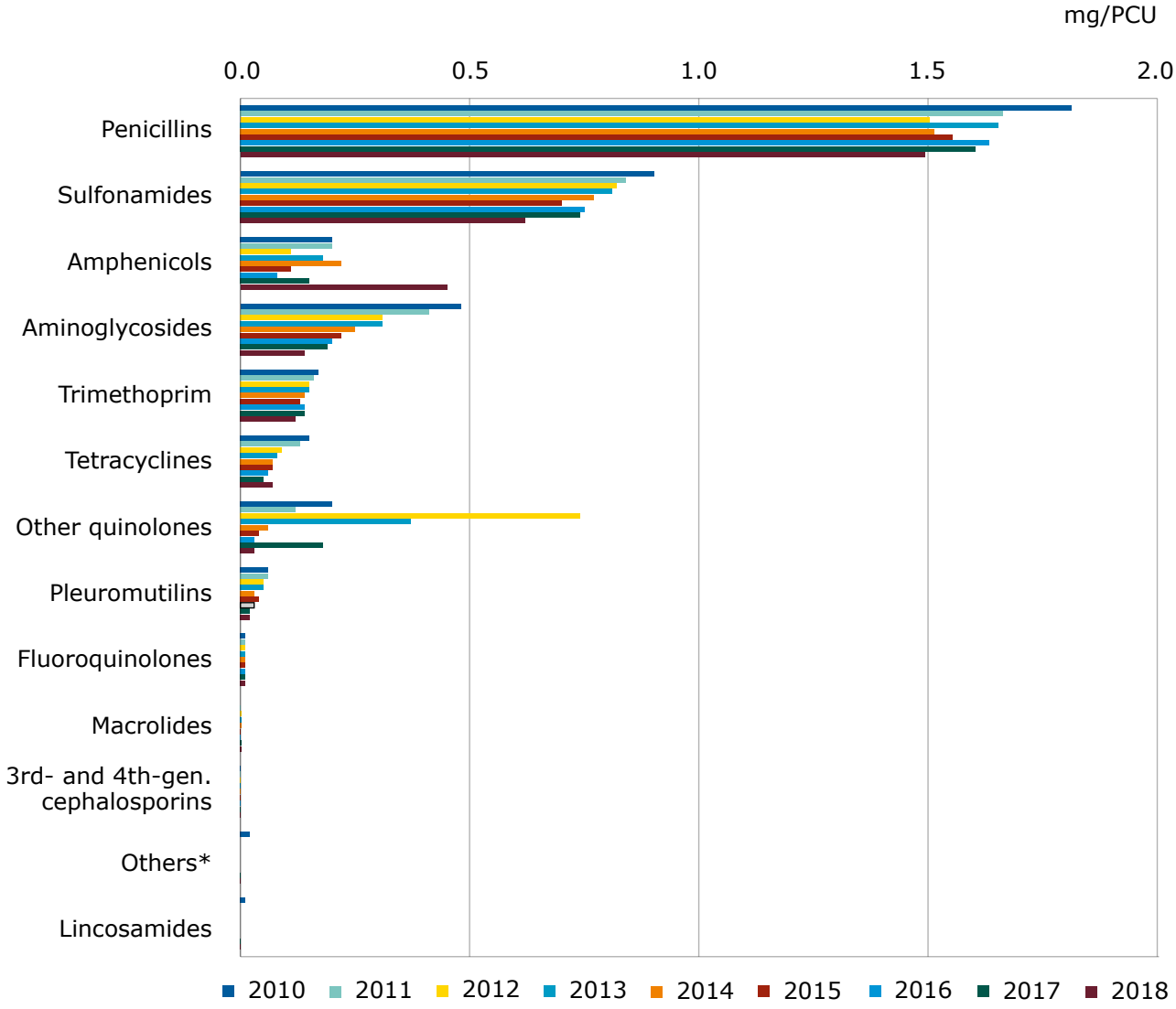
NORWAY

CHANGES IN SALES (MG/PCU) ACROSS YEARS



No sales of 1st- and 2nd-generation cephalosporins or polymyxins in any of the years.

Minor amounts of macrolides sold in 2011-2018 (< 0.001 mg/PCU).

From 2010 to 2018, the total sales of antimicrobials for food-producing animals fell from 4.0 mg/PCU to 2.9 mg/PCU (27 %). A decrease was noted for the most sold classes, i.e. penicillins, sulfonamides, aminoglycosides and trimethoprim. For amphenicols, which are almost solely used in farmed fish, and for other quinolones that are used in farmed fish only, a shift was observed in the proportion of amphenicols used. The overall reduction in sales from 2010 to 2018 is mainly accounted for by lower sales of VMPs containing penicillins, aminoglycosides and sulfonamides (combined with trimethoprim) used for terrestrial food-producing animals.

Of the AMEG Category B antimicrobials - i.e. 3rd- and 4th-generation cephalosporins, polymyxins and quinolones (fluroquinolones and other quinolones) - only quinolones are marketed in Norway for food-producing animals, including farmed fish. From 2010 to 2018, the proportion of sales of quinolones for food-producing animals has fluctuated but has been very low. In total, a decrease was observed. No VMPs containing 3rd- and higher generations of cephalosporins has been approved for food-producing animals in Norway via national procedures in the years 2010-2018.

Two 3rd-generation products have been approved via EU community procedures, but these are not marketed in Norway. Applications for special permits to use such VMPs marketed in other EEA countries for food-producing animals are normally not approved. An approval would only be given for specific animals if sensitivity testing precludes all other options. The same is applicable to polymyxins.

In 1996, the Norwegian husbandry organisations (NHO) agreed a target for a 25 % reduction in the consumption of antimicrobial VMPs for terrestrial food-producing animals over five years, with 1995 as the reference year. In parallel, the NHO initiated a responsible-use campaign, among other initiatives, by implementing the therapeutic guidelines the NHO had published in connection with the campaign. More comprehensive therapeutic guidelines were published by the Norwegian Medicines Authority in the late 1990s and have recently been revised.

From 1995 to 1999, a reduction of approximately 40 % in the sale of antimicrobials for terrestrial food-producing animals was achieved. Since then, sales of antimicrobial agents for use in terrestrial food-producing animals have been relatively stable, showing only minor fluctuations (NORM/NORM-VET reports). It should be noted that, since 1981, the sales of antimicrobials for use in farmed fish has declined by 99 %, while during the same period the production of farmed fish increased more than 100-fold.

In the National Strategy against Antibiotic Resistance (2015–2020) a target has been set to reduce the usage of antimicrobials for terrestrial food-producing animals by 10 % by 2020, with 2013 as the reference year. In the period 2013-2018, sales for this animal category (horses and oral paste excluded) have been reduced by 17 % both when measured in kg and in mg/PCU (NORM/NORM-VET 2018[1]).

The annual reports (NORM/NORM-VET) on antimicrobial consumption and antimicrobial resistance in the animal and human sectors in Norway are available in English on the Norwegian Veterinary Institute website[2].

[1] NORM/NORM-VET, 2018. Usage of Antimicrobial Agents and Occurrence of Antimicrobial Resistance in Norway. ISSN 1502-2307/1890-9965.
[2] http://www.vetinst.no/overvaking/antibiotikaresistens-norm-vet