

Actions taken in Germany to tackle antibiotic resistance and their possible influence on antimicrobial usage

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Introduction

The containment of antimicrobial resistance is one of the biggest challenges in today's medicine. Antimicrobials must be used intelligently in human and veterinary medicine. Different actions are described in the German Antimicrobial Resistance Strategies (DART, DART 2020) addressing the fight against antimicrobial resistance.

Actions taken in Germany in veterinary medicine

DART

2000

A. Guidelines

A. Guidelines for the prudent use of veterinary antimicrobial drugs

The Guidelines were developed by the German Federal Veterinary Surgeons Association (BTK) together with the Working Group of Leading Veterinary Officials (ArgeVet; last update: 2015). Key elements are: (1) diagnosis, (2) choice of active substance taking pharmacokinetic and –dynamic facts into consideration, (3) compliance with the labelling and (4) restricted use of active substances having a last resort definition.

DART

2006

B. ASV

B. Antimicrobial Sales Volumes (ASV)

In accordance to the national legislation, pharmaceutical companies have to report the volumes of antimicrobial medicinal products sold to veterinarians in Germany. The data are analysed as described by Hauck et al. (2014).

DART

2011

C. ATF

C. Antimicrobial Treatment Frequencies (ATF)

Based on the national legislation, only farms with certain production types and sizes have to report data about the use of antimicrobials. The following formula is used for the biannual calculation of the individual ATFs (Hemme et al. 2016):

$$ATF = \frac{\sum groups \times \sum treatments \times A}{\left(\frac{\sum time periods (animals kept \times days)}{number of days within the halfyear} \right)}$$

A = treated animals x duration of treatment course x number of active substances

DART 2020

2014

D. TÄHAV

D. Second Amendment of TÄHAV (TÄHAV)

The second amendment of the „Veterinary Pharmacies Prescription Regulation“ (TÄHAV) includes inter alia the following aspects: (1) restricted usage of 3rd and 4th generation Cephalosporins and Fluoroquinolones (labelling); (2) performing susceptibility testing under defined circumstances and when using 3rd and 4th generation Cephalosporins and Fluoroquinolones.

DART 2020

2018

E. EU veterinary medicinal regulation

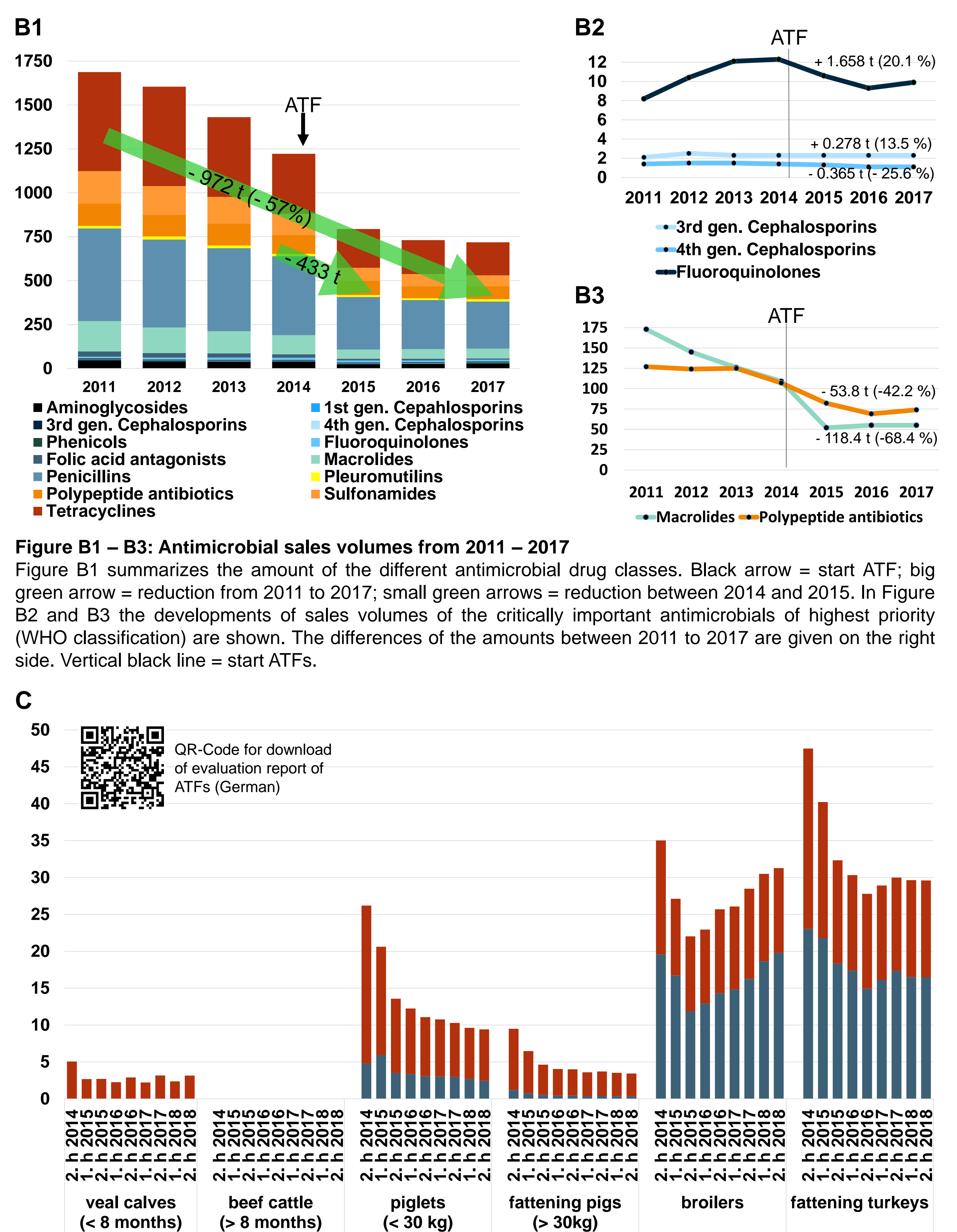
E. EU wide prohibition of growth promoters

DART 2020

2021

F. EU veterinary medicinal regulation

F. EU veterinary medicinal regulation



Conclusion

The establishment of a benchmarking system in 2014 lead to a reduction of total sales volumes in Germany. No consumption data are collected in Germany nowadays, but are part of the new European Veterinary Medicinal Regulation (RG (EU) 2019/6). The goal of intelligent use of antimicrobials is the containment of the spread of antimicrobial resistance. Therefore, for profound evaluation of measures, the linkage between antimicrobial consumption and antimicrobial resistance has to be investigated. An evaluation report of the ATF system was published by the Federal Ministry of Food and Agriculture in 2019.