

Incentive systems for veterinarians to promote a reduction of the prescription of antibiotics in calves

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Key words

Farm animal practice, veal calves, antimicrobials, economics, partial budgeting, sales, animal health

Aim of the study

The aim of this project was to provide novel collaborative approaches for Swiss veal calf value chains with reduced antimicrobial usage (AMU) taking into consideration the economic reality of current and alternative options in farm animal veterinary practice. Based on the veal calf production sector, the objectives were to investigate the turnover generated through antimicrobial sales in large animal practices in Switzerland and to estimate the impact of income losses for veterinarians due to a reduction of antimicrobial sales.

Material and methods

A survey was conducted among Swiss farm animal practices servicing veal calf producers. Data collected included general information about the veterinary practice. In addition, veterinary invoices for veal calf clients were analysed to assess the turnover of antimicrobials sold.

A partial budgeting analysis was conducted to assess alternatives at veterinary practice level to compensate for the economic impact of different scenarios of reduced AM prescriptions. Four scenarios were selected that reflected different policy options (e.g. benchmarking of AM use), including potential compensating actions for the veterinarians (e.g. increase the amount of consultancy services): Benchmarking at practice or calf operation level (Scenario 1 and 2), no right to dispense AM for practices (Scenario 3) and non-profit sales of AM by practices (Scenario 4). Scenarios and compensating measures were defined based on discussions during a European workshop within the framework of the project and scientific literature.

Results and significance

Based on annual veterinary invoices for 84 veal calf clients, results showed that 54% of the turnover from veal calf producers was attributable to sales of antibiotics followed by vaccinations (14.9%) and other drugs (14%). The proportion of visits and fees for examination and treatment as well as material costs was 16.5%. The revenues due to advisory work and diagnostic measures constituted 0.5% and 0.1%, respectively.

Results of the policy scenarios tested in the partial budgeting showed that a complete loss of income from AM sales (i.e. no right to dispense AM for veterinarians, Scenario 3) would significantly affect the net profit change of veterinary practices, and a compensation of income lost could potentially not be reached by the implementation of compensating activities. For the other scenarios, the net profit was positive for most of the simulations (>30 % of 10'000 simulations for all scenarios). A sensitivity analysis revealed that the most influencing factor was the margin on AM sales per year per calf operation. Furthermore, the number of clients per practice significantly influenced the output of Scenario 1 and 2, with larger practices having more potential to compensate the losses with other activities than small practices.

This study assessed the loss of income due to reduced antimicrobial sales to veal calf clients, which showed to be substantial for scenarios where AM cannot be dispensed or only be sold without profit. However, it needs to be considered that veal calf clients only account for a small proportion of clients in a common Swiss farm animal practice. Thus, further studies are needed to assess the financial impact on practice level considering the whole spectrum of clients. Still, future policy actions aiming at reducing antimicrobial usage should carefully consider the options and limitations of both the veterinarians and the farmers. Furthermore, this study revealed

that a change of management scheme at practice level is inevitable to compensate potential losses from reduced sales of AM at practice level.

Publications, posters and presentations

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