RESEARCH

"Antimicrobial use and resistance in cow-calf herds: will anything change after the switch to prescription only sales of medically important antimicrobials?"

HOW HAVE PRESCRIPTION-ONLY ANTIBIOTIC SALES AFFECTED ANTIBIOTIC USE AND RESISTANCE IN COW-CALF HERDS?

PROJECT NO.: ANH.10.19
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Background: Since December 2018, Canada's cattle producers have required a valid veterinary prescription before they can obtain antibiotics for their cattle. This meant that cattle producers who previously purchased over-the-counter antibiotics from farm supply stores were no longer able to do so and all producers likely had more regular contact with a veterinarian. The switch to prescription-only may have changed what types of antibiotics are being prescribed, purchased, and used on beef operations.

This project will use herds enrolled in the Canadian Cow-Calf Surveillance Network.

Objectives: The objectives of this study are to:

1. Antibiotic use and reasons for use in Canadian cow-calf herds to monitor impacts of the 2018 changes to prescription-only
2. Changes in access to and cost of antibiotics for treating sick animals and producer awareness of antibiotic stewardship and the importance of antibiotic resistance
3. Frequency of antibiotic use within cow-calf herds and examine factors associated with variation in frequency among and within herds using individual animal treatment records
4. Antibiotic resistance in fecal indicator organisms from cows and calves from spring and fall for comparison to national antibiotic resistance surveillance data collected at feedlots, packing plants, retail locations and in other livestock commodities
5. Cow-calf veterinarians' prescribing practices, experiences and information needs following the switch to prescription-only

Implications of the Research: The Western Canadian Cow-Calf Surveillance Network examined antimicrobial use in sentinel herds across the prairies. These results provide a baseline for comparison of antimicrobial use in cow-calf herds. This project will see if those usage trends have changed since prescription-only, and also examine what effect antimicrobial use patterns have on antimicrobial resistance at the cow-calf level.

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