

Mastitis-related antimicrobial use: Current practices on Canadian dairy farms

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Prevention and treatment of mastitis accounts for the majority of antimicrobial use (AMU) on dairy farms. Stewardship programs aimed at reducing AMU in the dairy sector have emerged over the last decade. In Canada, the 'Canadian Dairy Network of Antimicrobial Stewardship and Resistance' (CaDNetASR) encompasses 150 dairy farms in five regions and monitors antimicrobial resistance (AMR) and AMU patterns. To identify areas for reduction of mastitis treatments, structured questionnaires captured current on-farm AMU practices on a subset of 110 farms in British Columbia, Alberta, Ontario and Nova Scotia. Of these farms, 35% practiced selective dry cow therapy (DCT). Multifactorial methods were used to select cows for antimicrobial treatment: SCC (cut-off: 150,000 cells/mL), timepoint of previous clinical mastitis (CM) case and the number of CM events in the current lactation. For CM treatments, 54% of farmers used inclusion criteria to select cows for treatment: severity of symptoms, confirmed or suspected presence of bacteria and SCC (cut-off: 300,000 cells/mL). These outcomes will inform intervention studies in British Columbia and Alberta that measure the effect of selective DCT and selective CM treatment on AMU and AMR through the CaDNetASR program. Take home messages: There is an opportunity for reducing AMU related to DCT and treatment of CM on dairy farms in Canada.