

# Antimicrobial Usage and Vaccine Usage In Western Canadian Beef Calves

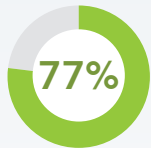
In 2014, 100 cow-calf herds in Alberta, Saskatchewan, and Manitoba reported their antimicrobial usage (AMU)<sup>1</sup>. In 2017, vaccine usage was studied. Median size of herds was approximately 230 cows<sup>2</sup>.

## Respiratory Disease

### AMs Used:

florfenicol with (53% of herds) or without flunixin meglumine (20%), oxytetracycline (15%), tilmicosin (10%) and tulathromycin (9%)

### AMU Frequency:



of herds reported AMU in calves for respiratory disease

Less than 5% of calves were treated in 48% of herds

67% of herds vaccinated pre-weaning calves for *Mannheimia hemolytica*

17% for *Pasteurella multocida*

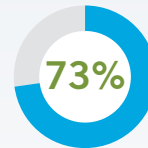
45% for *Histophilus somni*

## Diarrhea

### AMs Used:

sulfamethazine (44%), sulfadoxine/trimethoprim (23%), and florfenicol with (18%) or without (5%) flunixin meglumine

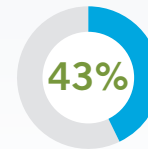
### AMU Frequency:



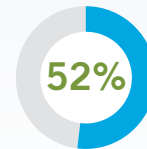
of herds used for calf diarrhea

Less than 5% of calves were treated for diarrhea in 46% of herds

### Vaccination of Dams to Protect Calves from Neonatal Calf Diarrhea:



*E. coli*



Rotavirus or coronavirus

## Navel Ill

### AMs used:

florfenicol with (32% of herds) or without (17%) flunixin meglumine, or oxytetracycline (19%)

### AMU Frequency:



of herds used for navel ill.

Less than 5% of calves were treated in 59% of herds

## Arthritis

### AMs used:

oxytetracycline (23%), florfenicol with (9%) or without (5%) flunixin meglumine, procaine penicillin (4%)

### AMU Frequency:



of herds used for arthritis

Less than 5% of calves were treated in 37% of herds

## Conclusions

The high proportion of herds treating bacterial navel infections and joint infections suggests potential for reducing crowding and fecal contamination of calving and nursery areas

<sup>1</sup> Can. Vet. J. 2019; 60; 255-267. <sup>2</sup> Can. Vet. J. 2019;60;414-422.