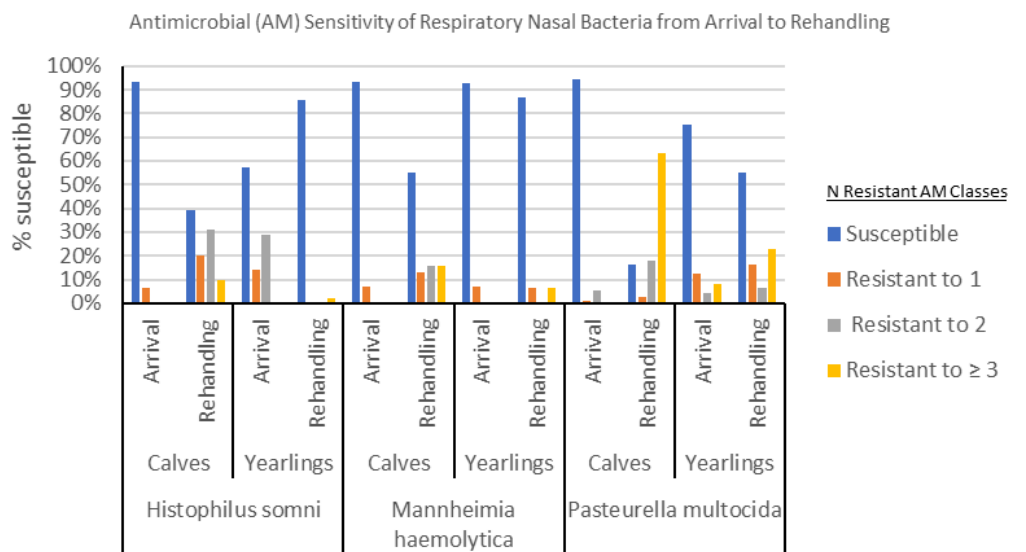


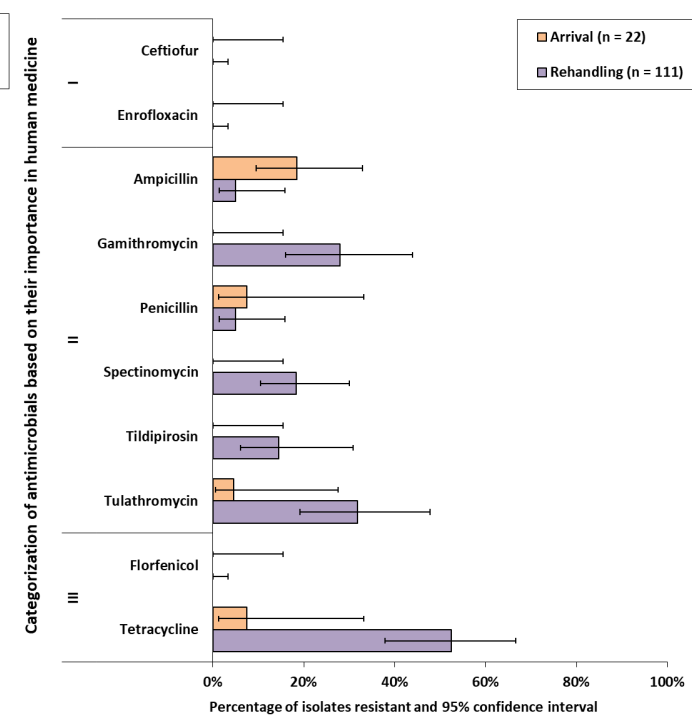
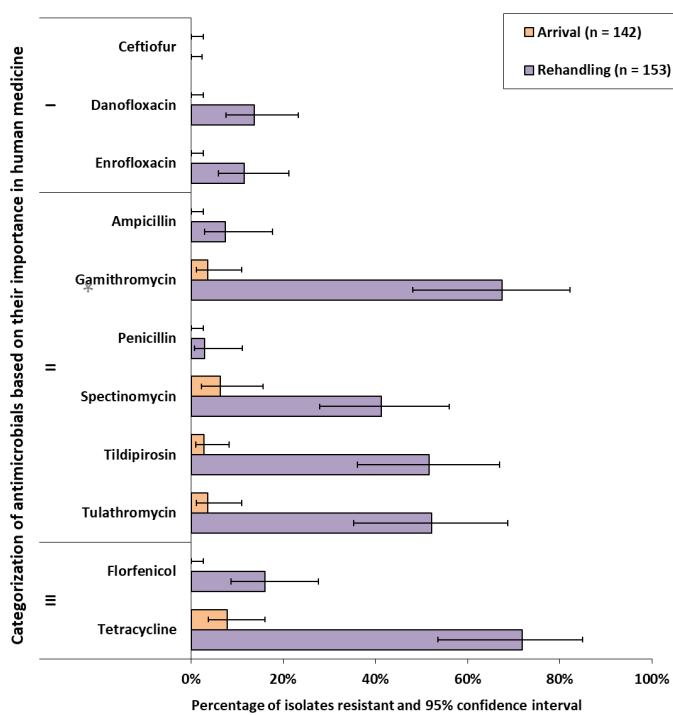
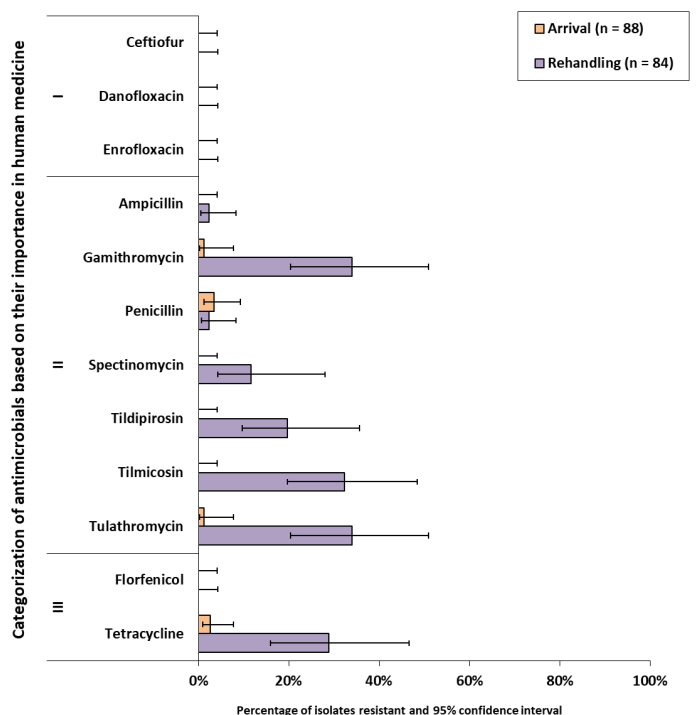
# BOVINE RESPIRATORY DISEASE (BRD) PATHOGEN ANTIMICROBIAL RESISTANCE (AMR) UPDATE - CFAASP 2023



- *Mannheimia haemolytica* (Mh), *Pasteurella multocida* (Pm), and *Histophilus somni* (Hs) were isolated on arrival and at ~75 days on feed (DOF) from deep nasopharyngeal swabs.
- The bacterial isolation rate of Hs increased from arrival to rehandling.
- Antimicrobial susceptibility to all tested antimicrobials decreased by 32% for Mh, 67% for Pm, and 40% for Hs from arrival to rehandling, with susceptibility reductions larger in calves.



ON FEEDLOT ENTRY, 93.5% OF RESPIRATORY BACTERIA FROM NASAL SWABS OF CALVES AND 75.0% FROM YEARLINGS WERE SUSCEPTIBLE TO ALL TESTED ANTIMICROBIALS.



MANNHEIMIA HAEMOLYTICA

PASTEURELLA MULTOCIDA

HISTOPHILUS SOMNI

MH AND HS RESISTANCE TO CLASS 1\* ANTIMICROBIALS WAS VERY LOW. PM RESISTANCE TO FLUOROQUINOLES INCREASED SIGNIFICANTLY FROM ARRIVAL TO REHANDLING.

- Multi-drug resistance (MDR), defined as resistance to 3+ antimicrobial classes, was uncommon in Mh, Pm, and Hs at feedlot arrival. MDR rates were highest at rehandling in Pm isolated from calves (64%).
- Resistance to macrolides (e.g., Draxxin, Micotil, Zuprevo, Zactran) and tetracyclines was common in all bacteria at 75 DOF, which is not unexpected, given their use during this high risk period for BRD and histophilosis treatment/control. Pm resistance to florfenicol (e.g., Nuflor) also increased at rehandling, which may be due to its common use to treat BRD clinical cases, which typically occur within 30 DOF.
- Compared to 2019-2022 CFAASP feedlot AMR data, there was a temporal trend of decreased bacterial resistance on arrival and increased bacterial resistance at rehandling (~75 DOF).
- We encourage feedlot producers to work with their veterinarians to improve disease detection/monitoring, antimicrobial stewardship, nutrition, and animal husbandry.



LEARN MORE ABOUT AMU/AMR IN CANADIAN FEEDLOT CATTLE ON OUR WEBSITE.



QUESTIONS?  
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\* For more information on Health Canada Veterinary Drug Directorate's classes of antimicrobials of importance in human medicine, click [here](#) to view the **Antimicrobial and Antibiotic Background for Feedlot Cattle**.