

CIPARS 2017 | Executive Summary

Innovations in Communication

At the Canadian Integrated Program for Antimicrobial Resistance Surveillance (CIPARS), we are modernizing how we share our information with different audiences. We are currently transitioning to our new communication tools and formats for the 2019 data. In the meantime, CIPARS will continue to deliver the same information, but in a modified manner. For the 2017 data, we will be releasing 4 documents: 2017 Figures and Tables, which includes the traditional summarized information but little accompanying text; 2017 Design and Methods; 2017 Integrated Findings; and 2017 Executive Summary (this document). Details about the innovative communication processes were raised with our national stakeholders in the Fall of 2019.

Key Findings

Antimicrobial consumption and antimicrobial use

The quantities of antimicrobials distributed to all animals (as reported by the Canadian Animal Health Institute) accounting for changes in the underlying animal populations, decreased by 12% between 2016 and 2017 (using European standard weights of animals). This decreasing trend was mirrored by a reduction in antimicrobial use reported by participating broiler chicken and grower-finisher pig farmers. Participating turkey farmers reported a small increase, though reported antimicrobial use was less on turkey farms than on broiler chicken farms. More of our volunteer sentinel farms in 2017, compared to 2016, reported not using any antimicrobials.

The reductions in antimicrobial use may be in response to the new poultry policy regulations for medically important antimicrobials (elimination of growth promotion and transitioning to prescription-only status).

Antimicrobial resistance

Since 2011, we have observed an increasing number of human, food, and animal *Salmonella* and *Escherichia coli* isolates resistant to 6 or more classes of antimicrobials.

Antimicrobial use and resistance

Third-generation cephalosporin use and *Salmonella* and *E. coli*: people and chicken(s)

Salmonella isolates from sick people had a decline in resistance to 3rd-generation cephalosporins; *Salmonella* and *E. coli* isolates from chickens(s) had the same pattern. The participating broiler chicken farmers reported no use of 3rd-generation cephalosporins.

Hence, the poultry industry initiative to eliminate the use of Category I antimicrobials (including 3rd-generation cephalosporins) for disease prevention is appearing to have the desired effect to reduce antimicrobial resistance, both in their commodity as well as in people.

Fluoroquinolone resistance and *Campylobacter*: people and chicken(s)

Campylobacter isolates from sick people had higher resistance to fluoroquinolones in British Columbia compared to the 2 other provinces where data existed. *Campylobacter* isolates from chicken(s) also had higher resistance to fluoroquinolones in British Columbia. Notably, the participating broiler chicken farmers reported no use of fluoroquinolones among their flocks.