Antimicrobial Resistance and Antimicrobial Use in Canada

CARSS CANADIAN ANTIMICROBIAL RESISTANCE SURVEILLANCE SYSTEM

Food Chain

Antimicrobial-resistant pathogens detected in the Canadian food chain are a potential source for antimicrobial-resistant infections in humans.

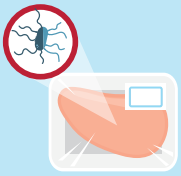
The Canadian Integrated Program for Antimicrobial Resistance Surveillance (CIPARS) collects, analyses, and communicates trends in antimicrobial use and in antimicrobial resistance for select bacteria from people, healthy/sick animals, and grocery store meat across Canada. The aim is to preserve the effectiveness of antimicrobials in animals and people. Based on the most recent data available in 2019.

RESISTANT BACTERIA

Increasing numbers of highly drug-resistant *Salmonella* isolates found in the Canadian food chain may represent an emerging public health threat.

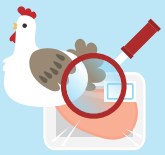
Isolates were resistant to at least **6** of **7** antibiotic classes tested.

Nalidixic acid-resistant *S.* Enteritidis isolates were recently identified for the first time since 2010 among retail chicken meat in Canada.



This may represent a step towards fluoroquinolone resistance, an antibiotic considered very important to human medicine.

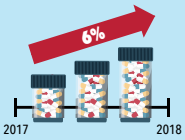
PHAC is observing increased resistance to 3rd generation cephalosporins among *Salmonella* isolates taken from broiler chickens on-farm and chicken meat purchased at grocery stores.



3rd generation cephalosporins are antibiotics of very high importance to human medicine.

ANTIBIOTIC USAGE

The quantity of antimicrobials distributed for use in animals increased by 6% between 2017 and 2018 when adjusted by animal weight and population size.



Category 1 antimicrobials, including fluoroquinolones, continue to be used among sick chickens under clinical supervision of a veterinarian.

Since 2015, there has been no reported use of ceftiofur (an antibiotic that is known to trigger resistance to antibiotics critically important to human medicine) among broiler chicken farms that participate in CIPARS.

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