Associations among antimicrobial use and phenotypic antimicrobial class resistance in E. coli isolates of turkey flocks

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Antimicrobial use (AMU) on poultry farms and its impact on antimicrobial resistance (AMR) in enteric bacteria is an emerging public health issue. As turkey meat is the fourth-most consumed meat in North America, there is a risk of foodborne transmission of resistant bacteria. We evaluated the on-farm surveillance data from the Government of Canada to assess associations between AMU and AMR in 1317 *E. coli* isolates from 334 turkey flocks. The significant association between the use of different antimicrobial classes and the development of resistance to the identical and different antimicrobial classes may indicate a co-selection for resistance.