

Not All Street Food Is Bad: Low Prevalence of Antibiotic-Resistant *Salmonella enterica* in Ready-to-Eat (RTE) Meats in Ghana Is Associated with Good Vendors' Knowledge of Meat Safety

ABSTRACT

Foodborne infections due to the consumption of meat is a significant threat to public health. However, good vendor and consumer knowledge of meat safety could prevent meat contamination with and transmission of foodborne pathogens like *Salmonella*. Thus, this study investigated the vendor and consumer perception, knowledge, and practices of meat safety regarding ready-to-eat (RTE) meat and how this affected the prevalence and antibiotic susceptibility of *Salmonella enterica* in RTE meats in the streets of Ghana. A semi-structured questionnaire was used to obtain the demographics, knowledge, and practices of meat safety data from RTE meat vendors (n = 300) and consumers (n = 382). *Salmonella enterica* detection was done according to the United State of America (USA)-Food and Drugs Administration (FDA) Bacteriological Analytical Manual. The disk diffusion method was used for antibiotic resistance testing. The results revealed that most of the respondents had heard of meat safety (98.3% vendors, 91.8% consumers) and knew that meat could be contaminated by poor handling (100.0% vendors, 88.9% consumers). The respondents knew that regular hand washing reduced the risk of meat contamination (100.0% vendors, 94.0% consumers). Responses to the practices of meat safety by vendors were generally better. A very low *Salmonella enterica* prevalence was observed in the samples, ranging between 0.0 and 4.0% for guinea fowl and beef, respectively. However, the six isolates obtained were resistant to five of the nine antibiotics tested, with all isolates displaying different resistance profiles. Overall, the good knowledge and practice of meat safety demonstrated by the respondents corroborated the negligible prevalence of *Salmonella* in this study, reiterating the importance of vendor meat safety knowledge. However, the presence of resistant *Salmonella enterica* in some of the meat samples, albeit in a very low prevalence, warrants stricter sanitary measures and greater meat safety awareness in the general population to prevent meat-borne infections and potential transmission of drug-resistant bacteria to humans.