

A Case Study of Antimicrobial Residue Prevalence in Poultry Meat from Informal Markets in Kinondoni Municipality, Dar es Salaam, 2015

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Abstract

The extensive use of antimicrobials in poultry production, frequently without veterinary supervision, creates a public health risk due to potential drug residues in meat. Informal markets serve as a primary source of poultry for urban populations in sub-Saharan Africa, but surveillance for these residues in such settings remains inadequate. This case study aimed to determine the prevalence of antimicrobial residues in poultry meat obtained from informal markets in Kinondoni Municipality, Dar es Salaam. Its objective was to generate preliminary data on the scale of this food safety issue in a typical urban context. A cross-sectional study design was employed. Poultry meat samples were purposively collected from various informal retail points across the municipality. The samples were analysed for antimicrobial residues using a standard microbial inhibition test. Analysis revealed a high prevalence of antimicrobial residues. Residues were detected in 78% of the sampled poultry meat, indicating a substantial potential for consumer exposure and a significant food safety concern. The findings demonstrate a concerning high prevalence of antimicrobial residues in poultry meat from the studied informal markets. This presents a direct public health risk, contributing to potential antibiotic resistance and other adverse health effects in consumers. Immediate actions should include strengthening the regulation of veterinary drugs and promoting good practices among poultry producers and vendors. The establishment of a routine surveillance programme for antimicrobial residues in food products is strongly recommended. antimicrobial residues, poultry meat, food safety, informal markets, public health, Tanzania This case study provides crucial preliminary evidence on antimicrobial residue contamination in a key urban food source, underscoring the urgent need for enhanced regulatory and monitoring frameworks within informal market systems.

Keywords: *Antimicrobial residues, Poultry meat, Informal markets, Sub-Saharan Africa, Food safety, Veterinary public health, Risk assessment*

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