Live chickens exposed for sale in the market as a potential source of Spread Cefotaxime-resistant of *E.coli*

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Introduction

E. coli from chickens is released into the environment and could transmit resistance genes to humans during market activities. In Kinshasa, infectious diseases and poor hygiene practices lead to an exaggerated use of antibiotics in livestock. Also, the sale of chickens on the ground in the markets is very common and this type of chicken is appreciated. The market concentrates a lot of human activity and could be the point of diffusion of *E coli* and other resistant bacteria. The aims of this study were to characterize the resistance profiles of *E. coli* from chickens using feces of chickens sold in the markets of Kinshasa.

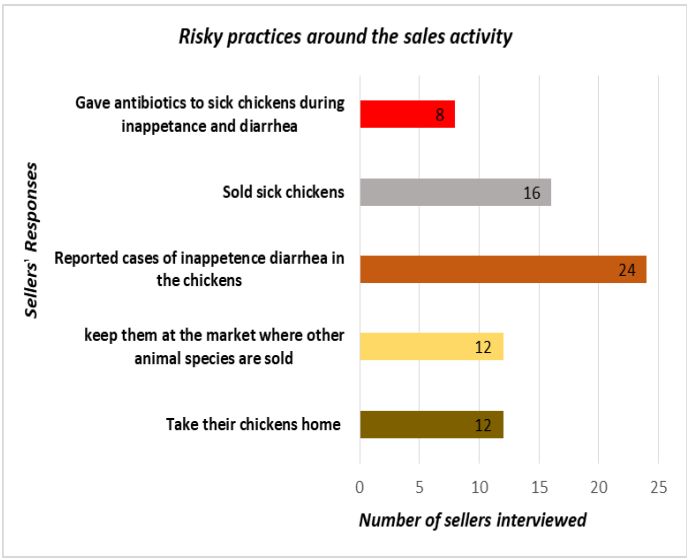
Study objectives:

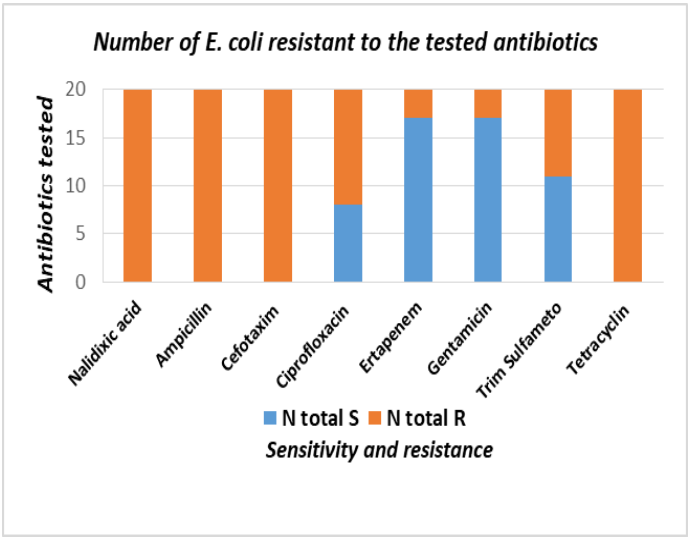
- Isolate antibiotics *resistant E.coli* in the feces of live chickens for sale
- Determine the resistance profile of *E.coli*
- Identify risks around the sale of live chickens for sale at the market

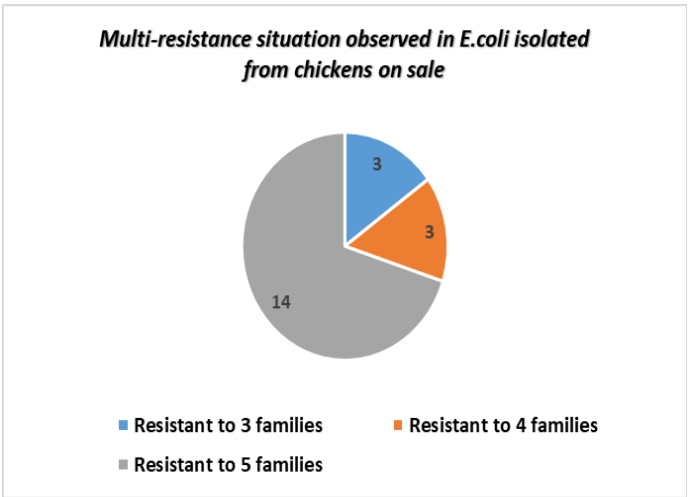
Materials and methods

Semi-structural interviews were carried out with 24 chicken vendors (50%) at the SELEMBAO market in Kinshasa and data were collected from chickens of 20 of the interviewed vendors (5 chickens per vendor). 100 cloacal swabs (5 per vendor) were taken at the market and sent to the Central Veterinary Laboratory in Kinshasa in tubes with transport gel and an isothermal tray. Pre-treatment and analysis of samples on a tray of 20 pools of samples (1 pool of 5 swabs per vendor) were in a sterile tube containing 15 ml BPW and incubated at 37°C for 24 hours. Inoculation was carried out using a MacConckey eyedropper and incubation at 37°C. Isolated colonies were plated on Kligler-Hajana and SIM media with the indole test for confirmation of *E.coli* at 37°C for 24 hours and the SIM test with Kovac reagent, after incubation for 24 hours. Antimicrobial susceptibility testing was performed by diffusion on agar Muller Hinton using 9 antibiotics (AMP 10µg, CIP 5µg, CTX 30µg,ETP 10µg, GMN 10µg, NAL 30µg,STX 25µg,TET 30µg). 4 to 5 colonies are placed in 5ml of physiological water. 75 µl of the suspension were poured into the dish containing the M - H medium. Antibiotic discs Oxoid and were placed on the medium using sterilized forceps and incubated at 37°C for 24 h. Inhibition zone diameters and interpretation are based on CA-SFM/EUCAST and ECOFF recommendations.

Results







Conclusion: Risky vendors' practices, combined with observation of high (multi-drug) resistance rates in *E.coli*, including Cefotaxim resistance (20/20), Ciprofloxacin resistance (12/20) and Ertapenem resistance (3/20) highlighted the needs to take actions at all levels. More studies are needed to evaluate the global situation in the country.

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