

Suspected food poisoning outbreak investigation, Chililabombwe District, Copperbelt, Zambia, April 2024

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Introduction

On the 7th of April, 2024, four health facilities in Chililabombwe District reported 89 cases of suspected food poisoning. All the patients had a history of eating from a common food outlet within 24 hours of the onset of symptoms. From 7th to 10th of April, 145 patients were line-listed. We investigated to establish the cause, verify the association, and inform the response.

Methods

We conducted a 1:1 unmatched case-control. A case was a resident of Chililabombwe presenting with vomiting or diarrhoea or abdominal cramps between the 5th and 10th of April, 2024 who ate from a common food outlet and controls were asymptomatic household members or workmates to the controls. Cases with complete addresses and/or contact details were actively traced and interviewed for food exposure. Food, water and stool samples were collected. Multivariate logistic regression was used to measure the odds of being a case for various food exposures at 95% confidence interval (95% CI).

Results

We recruited 60 cases and 74 controls. The median age was 28 (19.25,36). Majority had diarrhoea (100%), vomiting (90%), and abdominal cramps (86%). 62% developed symptoms within 6 hours of exposure and the mean hospital stay was 3 days. Exposures associated with increased odds of developing food poisoning were with eating shawarma (aOR=4.56: 95% CI 1.19-17.6, p= 0.027) and eating from a named food outlet (aOR=30.76: 95% CI 6.33-149.52, p<0.001). Results from the collected food samples showed the presence of staphylococcal aureus and E. coli in chicken, sauce, sausage, samosa and metamidophos in lettuce.

Conclusion

Our findings indicated a food poisoning outbreak caused by consumption of contaminated shawarma served on the 7th April, 2024 at a named food outlet. The epidemic curve, symptomatology, duration of symptoms and food sample results implicated a mixed exposure with staphylococcal aureus and E. coli. Metamidophos may have compounded the symptoms. We recommended temporal closure of the food outlet until hygiene in food preparation is addressed and adherence to the food safety act is met.