

Foodborne illness at a Combined School in Eastern Cape Province, South Africa, February 2022

Mafani N¹, Khwatsha N², Neti M³, Mdose H⁴, Kuonza L⁴

¹ Lilitha College of Nursing, Eastern Cape Department of Health - Bhisho, South Africa

² Sarah Baartman District Outbreak Response Unit – Eastern Cape Department of Health, Port Elizabeth, South Africa

³ Buffalo City District, Eastern Cape, South Africa,

⁴ South African Field Epidemiology Training Program, National Institute of Communicable Diseases, Johannesburg, South Africa.

Background

On 14 February 2022, a foodborne illness was reported at a school in Eastern Cape Province where 126 school learners presented with gastrointestinal illness after eating meals provided by the government-sponsored National School Nutrition Program. An investigation was conducted to establish the existence and extent of the outbreak, identify the source(s), causative agent(s), institute appropriate control and preventive measures.

Methods

A descriptive cross-sectional study design was used. Interviews were conducted using standardized questionnaires. Clinical records of exposed persons were reviewed. Samples from consumed food, stools, and vomitus were collected for analysis. Case definition was 'any learner who consumed meals served at school on 14 February 2022 and presented with symptoms of gastrointestinal illness.

Results

Among 241 school learners, 191 ate the meal, and 125 (65%) developed symptoms of gastrointestinal illness. Most affected were learners aged 10 to 14 (63%), females (73%), and grade 6 (31%). The risk of becoming ill was 32.72 times higher among those that ate the meal with an attack rate of 66%. Laboratory tests identified *Escherichia coli* (*E. Coli*) on maize meal pap, excessive yeast in sour milk, and fecal coliforms in water.

Conclusion

Prompt epidemiological, environmental, and microbiological investigation led to the conclusion that learners consumed infected food. The short incubation period, symptoms presented, and presence of bacterial contamination in food items suggested an association between food consumption and illness.

Advocacy message

Training of food handlers on proper hand washing techniques, importance of checking the status of food before cooking and during serving is required. Regular monitoring visits by environmental health practitioners to ensure compliance with food safety legislation.

Keywords: *Foodborne illness, contaminated food, school learners.*