Isolation of e. coli 0157:h7 from milk and cattle faeces from urban dairy farming and non dairy farming neighbour households in Dagoretti division, Nairobi, Kenya: prevalence and risk factors

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Abstract

Objective: To estimate the prevalence of E. coli 0157:H7 in milk and cattle faecal samples dairy and non dairy neighbouring households and to relate this prevalence to the risk to human health. Design: Cross sectional study. Setting: Urban and peri-urban households of Dagoretti, Division, Nairobi, Kenya. Subjects: Dairy farming households and non dairy farming neighbouring households. Results: E coli 0157:H7 was isolated from milk samples at three of 136 non-dairy neighbour households (2.2 % C.1. 0.5 % ,6.3 %) but was not found in any of the milk samples from the 260 milk samples from dairy households (0% c.1. 0.0%,1.4%). E.coli 0157 :H7 was also found in fifteen of285 pooled household cattle faecal sample (5.2%, C.I. 3.1 %,8.7%). One of the faecal isolates was found to have the marker for the production ofVT1. Discussions with focus groups revealed that the participants had limited knowledge aboutE. coli 0157 :H7. Focus group discussions and household questionnaires revealed practices increasing risk of E. coli infections to humans are associated with milking hygiene, drinking water source and treatment, and manure handling. Conclusions: E. coli 0157:H7 exists in urban setting and continuous surveillance is needed in case conditions and practices change favoring an increase in its prevalence and transmission to people.