

**THE POTENTIAL RISK POSED BY THE LOCALLY
SOLD UN-PROCESSED MILK IN THE
TRANSMISSION OF BRUCELLOSIS TO HUMANS IN
THE LIBERALISED MILK MARKET IN ELDORET
MUNICIPALITY**



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A Thesis Submitted in the Partial Fulfilment of the Requirements for the
Award of the Degree of Master of Public Health (Epidemiology and Disease
Control) in the School of Public Health,

MOI UNIVERSITY



November, 2008



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ABSTRACT

Introduction: Brucellosis is a zoonotic disease that has continued to afflict people in the whole world and indeed in Kenya where the prevalence of the disease has increased in the recent past along with the increased levels of milk hawking.

Objectives: The main objective of this study was to determine the role of hawked milk in transmission of brucellosis to humans in Eldoret.

Methodology: The design of the study was cross-sectional using 130 un-pasteurized milk samples collected from the hawkers selected using cluster and random sampling techniques and 14 pasteurized milk samples from shops in the selected estates. All samples were subjected to *Brucella* Milk Ring Test (MRT) for screening before the MRT positive samples could be inoculated on *Brucella* selective medium (Serum Dextrose or Blood Peptone agar enriched with Oxoid *Brucella* Selective Supplement) to isolate *Brucella*. A milk consumption questionnaire was administered to households in the selected estates to establish their milk consumption patterns. A number of analytical tools including SPSS were used in the analysis of results by comparing proportions and percentages of different groups of results.

Results: All samples tested with MRT were negative. Hawked milk was used by hotels and households with households consuming unpasteurized milk from 99.2% of hawkers who reported that 84.6% of their household customers used it for domestic purposes. 99% of interviewed households used milk with 77.5% using un-pasteurized milk compared to 83% who simply said they don't use packaged milk. 97% of all interviewed households used milk for making tea. 82.5% of all the households knew about brucellosis as compared to 17.5% who had no knowledge of the disease. Among household members reported to have suffered brucellosis, 51% were housewives, 14% housewives/students, 14% students, 14% farmers, 7% shopkeeper.

Conclusion: Milk sold by hawkers in Eldoret did not have *Brucella* but has the potential to transmit brucellosis if infected because many residents use it in their households. Although many Eldoret residents know brucellosis the proportion without knowledge is high for an urban area. Socio-economic household activity is a risk factor for brucellosis infection.

Recommendations: The test used in the confirmation of brucellosis among presenting purported brucellosis patients in health institutions needs validation. It is recommended that brucellosis testing be carried out on individual cows in sampled herds from catchment areas. Regular surveillance of the milk for brucellosis on its way from suppliers to the main outlets should be considered. Other means of brucellosis transmission should be identified and assessed for their role in transmission of the disease in the municipality. The department of public health in the municipal council of Eldoret and the district medical officer of health in Eldoret should consider establishing an awareness campaign about brucellosis for the residents.