

Emmanuel Othieno's Research Title

**BURDEN OF *Echinococcus* INFECTION IN SELECTED PASTORAL
AND AGRO-PASTORAL COMMUNITIES
OF UGANDA**

ABSTRACT

A cross sectional study was done to determine the burden of Cystic Echinococcus (CE) infection among the communities in selected pastoral and agro-pastoral communities of Uganda: in Karamoja region (Amudat, Moroto, Nakapiripirit and Napak districts); in Teso region (Kumi and Bukedea district); in Central region in Nakasoogola district and in Western region in Kasese district. Participatory methods and administration of questionnaire were used to determine the knowledge gaps, attitudes and beliefs of the communities and risk factors for existence of CE. Ultrasound scanning was done to determine the prevalence of CE among communities. Cost benefit analysis (CBA) was performed to determine the most cost-effective approach for intervention management of CE in the study areas. Communities in Northeastern region were more aware of CE as compared to those of Eastern, Central and Western regions respectively (OR 4.85, CI:0.60-6.57 $p < 0.001$). Overall, 3.4% respondents believed CE is caused by eating food and drinking water contaminated by dog faeces. None of the community members' including health staff, had been screened for CE. CE lesions were detected; 1.74% in Northeastern region with Napak district recording the highest (3.9%); 1.21% in Eastern region, 2.7% Central region and 2.2% in Western region in Kasese. There was no significant difference in the prevalence of CE between males and females. The liver organ had the highest number of CE lesions detected compared with other organs. Age beyond 40 years was a major risk factor for CE in all the regions. Other risk factors were mode of dog ownership in districts of Kumi in Eastern region and Kasese districts in Western region. Spring source of water was identified as a risk factor for CE in Karamoja. The model of first screening patients for CE at district hospital and then referring only positive cases to the regional hospital was found to be the most cost-effective intervention. The communities needed to be sensitized about CE infection and the risk factors associated with its acquisition and transmission. CE screening services should be established at district hospitals and only positives cases be referred to regional hospitals for intervention.