

Prevalence of Zoonotic Diseases and Associated Factors Among Reformed Poachers in Queen Elizabeth Conservation Area, Western Uganda

Ssali Ronald Ogwal
Dr. Ococh George
Mr. Eustes Kigongo
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Background. Zoonotic diseases, which transmit between animals and humans, pose significant health risks, especially in areas where human-wildlife interactions are frequent. In Uganda's Queen Elizabeth Conservation Area (QECA), poaching activities have historically been a primary source of livelihood for some communities. However, reformed poachers who have shifted away from poaching towards alternative livelihoods remain vulnerable to zoonotic infections due to previous and sometimes ongoing contact with wildlife.

Aim. This study aimed to assess the prevalence of zoonotic diseases and associated factors among reformed poachers in QECA, Western Uganda.

Methods. A cross-sectional study was conducted to detect zoonotic diseases and examine associated factors among 255 reformed poachers in the Queen Elizabeth Conservation Area, Western Uganda. A combination of purposive and convenience sampling methods was employed to recruit participants. Blood samples were collected following a protocol developed at the One Health Laboratory, Uganda Virus Research Institute (UVRI). ELISA IgG tests were conducted to determine the prevalence of zoonotic diseases, specifically Rift Valley Fever (RVF), Crimean Congo Hemorrhagic Fever (CCHF), and Brucellosis. Data collection utilized both qualitative and quantitative methods. Structured questionnaires were administered using tablets operated by trained research assistants. Quantitative data were analyzed using SPSS Version 29, employing univariate, bivariate, and multivariate analyses, as well as binary logistic regression to identify associated factors. Qualitative data supplemented the quantitative findings, providing a comprehensive understanding of the risk factors linked to zoonotic diseases.

Results. The prevalence of zoonotic diseases is 64.56%. Congo Crimean Hemorrhagic Fever was the most prevalent at 64.56%, followed by Brucellosis at 64.14%, and then Rift Valley fever at 46.84%. The factors associated to zoonotic disease were contact with wild life, low awareness of zoonotic transmission routes, and limited access to basic health services. Additionally, three themes were generated from qualitative data including affected groups, community and facility health response, and economic activities. xii

Conclusion. The study reports a high prevalence of zoonotic diseases among reformed poachers and these findings highlight critical areas for intervention, particularly in the education and provision of health services for reformed poaching communities in QECA. Implementing targeted health education, improving community access to health services, and strengthening One Health initiatives in QECA could mitigate zoonotic diseases among this population. The study underscores the need for a holistic approach to wildlife conservation and public health in regions where human-wildlife interactions are prevalent.

Key terms. Prevalence, Zoonotic Diseases, Associated Factors, Reformed Poachers, Conservation Area,