

An epidemiological study of lower respiratory tract infections in Harare, Zimbabwe

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Background: Lower respiratory tract infections (LRTI) are a leading cause of mortality and morbidity in all age-groups. In Zimbabwe, few epidemiological studies have mapped the aetiology and distribution of LRTIs as well as risk factors for LRTI-related mortality. Understanding the epidemiological profile of LRTIs is important in many ways. The aim of this study was to describe the aetiology and clinical aspects of LRTIs in patients reporting to a referral hospital in Harare, Zimbabwe.

Methods: The study was a cross-sectional survey of 103 patients who had microbiology reports associated with a clinical diagnosis of LRTI at the Harare Central Hospital during 2014. The records showed bacterial cultures were done on the majority of adult samples while most children samples were sent for viral testing. The record books had a lot of missing data.

Results: Enterobacteriaceae were the most frequently isolated organisms in the laboratory (11.7%). Pneumonia (45.6%) and influenza (44%) were the most prevalent acute respiratory illnesses in the study. HIV infection and underlying cardiovascular disease were significant risk factors for mortality with odds ratio of 4.78, $p= 0.016$ and 4.42, $p= 0.0028$ respectively.

Conclusion: Enterobacteriaceae were the most common isolates from patients with LRTI; with respiratory syncytial virus associated LRTIs being most common among children under 5. Being HIV positive and having cardiovascular disease is a strong predictor of death in patients with LRTIs. The amount of missing data also emphasized the importance of robust data management systems in hospitals to better inform epidemiological studies