

**Prevalence and Risk Factors for Multi-Drug Resistant Tuberculosis at LRRH in Lango
Sub-Region Northern Uganda: A Cross-Sectional study.**

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Background: The emergence of drug-resistant TB over recent years is a growing global public health threat in developing countries. Uganda is among the countries with the highest MDR TB burden globally, with an estimated prevalence of multi-drug-resistant tuberculosis at 1.4% among all new cases and 12.1% among previously treated TB cases.

Methods: A cross-sectional design was employed to collect data from 565 individuals using a data extraction tool and an interview guide for key informants to determine the prevalence of and factors associated with MDR-TB clients in LRRH. Quantitative data was analyzed with State Version 14 at univariate, bivariate, and multivariate levels. Applied thematic content analysis method was used for qualitative data analysis.

Results: The prevalence of MDR-TB at LRRH in Lango sub-region was found to be 14.8% (84/565). The logistic regression revealed that treatment literacy (AOR = 1.11, $p < 0.001$) and a history of TB treatment (AOR = 6.22, $P = 0.001$) associates with development of MDR-TB.

Conclusion: The study found out that 14.8% prevalence of MDR-TB at LRRH in Lango sub-region, surpass rates from previous research, including the 12.1% national prevalence among retreatment cases. Treatment literacy and history of treatment were the associated factors.

Recommendations: Enhancing treatment literacy, strengthening monitoring, improving diagnostic access, supporting previously treated patients, training healthcare professionals, engaging communities, and conducting continuous research for combating MDR-TB in Lango sub-region.

Keywords: *prevalence, Multi-drug resistance, Tuberculosis.*