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AI Diagnostics in Resource-Limited Settings of Malawi Caucasus Medical Centre 2008

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Abstract

This Data Descriptor describes a study conducted at Malawi Caucasus Medical Centre in Malawi to evaluate the application of AI diagnostics in resource-limited healthcare settings. A cross-sectional study was conducted with a sample size of 500 patients. Data were collected through electronic health records and included demographic information, clinical symptoms, and laboratory test results. AI models were trained on pre-existing datasets from Malawi and other similar resource-limited settings. AI diagnostic tools showed an accuracy rate of 82% in identifying common diseases compared to manual diagnosis by healthcare professionals, with a 95% confidence interval for the proportion accuracy. The AI-based diagnostics demonstrated promise in resource-limited environments but required further validation and integration into existing health systems. Further research is recommended to validate these findings in larger populations and to explore potential integration of AI tools into routine healthcare operations. AI, Malawi Caucasus Medical Centre, Disease Diagnosis, Resource-Limited Settings Model estimation used $\hat{\{\theta\}} = argmin\{\theta\} sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert 2^2$, with performance evaluated using out-of-sample error.

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