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# Applications of Artificial Intelligence and Machine Learning on the Diagnosis and Management of Sexually Transmitted Infections among Key Populations in Sub-Saharan Africa: A Bibliometric Analysis

Introduction: Sexually transmitted infections (STIs) pose a significant public health challenge in Sub-Saharan Africa, particularly among key populations who are gay men, men who have sex with men, female sex workers, transgender persons, people who use drugs, and incarcerated persons. Artificial intelligence (AI) and machine learning (ML) offer promising tools for enhancing the diagnosis and management of STIs. This study aims to explore the application of AI and ML in this context through a comprehensive bibliometric analysis. The primary aim of this study is to evaluate the scope and impact of AI and ML applications in the diagnosis and management of STIs among key populations in Sub-Saharan Africa. This will help to identify the volume and trends of research publications on AI and ML applications in STI management in Sub-Saharan Africa.

Methodology: A bibliometric analysis is being conducted using databases like Web of Science to retrieve relevant publications from 2010 to 2023. Keywords included "artificial intelligence," "machine learning," "sexually transmitted infections," "sexually transmitted diseases", "key populations," and "Sub-Saharan Africa." Data will be analyzed using bibliometric software tools to extract metrics such as publication trends, citation analysis, and co-authorship networks.

Preliminary Results: The analysis is expected to identify a significant increase in publications over the study period, from different countries in Sub-Saharan Africa. Scholars from universities and health organizations are expected to collaborate at local and international levels. The study will show the most frequently cited studies focused on the uses of AI/ML in the diagnosis and management of STIs in Sub-Saharan Africa.

Conclusion: The application of AI and ML in the diagnosis and management of STIs among key populations in Sub-Saharan Africa is an emerging field with growing research interest. The findings will highlight the potential of these technologies to enhance public health approaches to STI management in Sub-Saharan. The study will underscore the significance of leveraging AI and ML to enhance STI management among KPs in Sub-Saharan Africa. Artificial intelligence and ML contribute to better health outcomes and the reduction of STI prevalence in the region.

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