

Publication

Prevalence of fever of unidentified aetiology in East African adolescents and adults: a systematic review and meta-analysis

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BACKGROUND: Primary health care settings and hospitals of low- and middle-income countries have few accessible diagnostic tools and limited laboratory and human resources capacity to identify multiple pathogens with high accuracy. In addition, there is a paucity of information on fever and its underlying aetiology in the adolescent and adult population in East Africa. The purpose of this study was to estimate the pooled prevalence of fever of unidentified aetiology among adolescent and adult febrile patients seeking health care in East Africa. **METHODS:** We pursued a systematic review using readily available electronic databases (i.e. PubMed, Cumulative Index to Nursing & Allied Health Literature, Scopus, Cochrane Library and Web of Science) without language restriction from inception date of the respective databases to October 31, 2022. We adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. Identified studies were screened for relevance. Further analyses based on pre-set eligibility criteria were carried out for final inclusion. Two reviewers independently screened and extracted data. Risk of study bias was assessed. Meta-analysis of the prevalence of fever of unidentified aetiology was performed. **RESULTS:** We identified 14,029 articles of which 25 were eligible for inclusion, reporting data from 8538 participants. The pooled prevalence of febrile cases with unidentified aetiology was 64% [95% confidence interval (CI): 51-77%, $I(2) = 99.6\%$] among febrile adolescents and adults in East Africa. For the proportion of patients with identified aetiology, the studies documented bacterial pathogens (human bloodstream infections), bacterial zoonotic pathogens and arboviruses as the main non-malarial causative agents in East Africa. **CONCLUSIONS:** Our study provides evidence that almost two-thirds of adolescent and adult febrile patients attending health care facilities in East Africa might receive inappropriate treatments due to unidentified potential life-threatening fever aetiology. Hence, we call for a comprehensive fever syndromic surveillance to broaden a consequential differential diagnosis of syndromic fever and to considerably improve the course of patients' disease and treatment outcomes.

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