PREVALENCE, TRENDS, AND DISTRIBUTION OF HEPATITIS C VIRUS AMONG THE GENERAL POPULATION IN SUB-SAHARAN AFRICA: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Although the evidence is uncertain, existing estimates for hepatitis C virus (HCV) in Sub-Saharan Africa (SSA) has indicated a high burden. We estimated HCV seroprevalence and viraemic prevalence among the general population in SSA.

Methods: We searched Ovid Medline, Embase, Web of Science, APA PsycINFO, WHO Africa Index Medicus, and reference lists of published systematic reviews. Article quality was assessed using the Joanna Briggs Institute critical appraisal tool, and heterogeneity was evaluated using the index of heterogeneity statistic (I^2) and the Cochran Q test. Two analysis approaches were deployed in this study. One, to derive representative overall and subregional estimates of SSA, we weighted each country's HCV seroprevalence data with the 2021 United Nations country population sizes, using imputed seroprevalence estimates for countries with missing data. Two, a random-effects meta-analysis was used to pool prevalence by sex, age, residency, and calendar periods using all data from community-based studies.

Results: We synthesized 130 studies (129 for seroprevalence and 32 for viremia). The weighted HCV seroprevalence in SSA was estimated to be 2.30% (95% CI: 1.59-3.00), with regional variation: Africa-Southern (0.79%), Africa-Central (1.47%), Africa-Eastern (2.71%), and Africa-Western (2.88%). No significant differences were found between males (4.31%) and females (4.03%). It was 2.25%, 3.31%, and 16.23% for ages ≤20, 21-64, and ≥65 years, respectively. Seroprevalence was higher in rural (6.63%) versus urban (2.93%) populations. There is indication of seroprevalence decrement overtime from 5.74% and 4.35% to 3.03% in the years 1984-2000, 2001-2014, and 2015-2023, respectively. HCV viremia was 54.77% (95% CI: 47.80-61.66) among HCV seropositives.

Conclusion: Seroprevalence of HCV in SSA remains high. Populations aged ≥65 years, rural communities, and some countries in the Africa-Central and Africa-Western regions appear disproportionately affected. These results underline the need for high governmental commitment to achieve the 2030 global HCV elimination targets in SSA countries.

Keywords: HCV, prevalence, Sub-Saharan Africa, Systematic Review, Meta-Analysis

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