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GENERATING THE EVIDENCE TO SUPPORT THE ESTABLISHMENT OF A RESPIRATORY SYNCYTIAL VIRUS SURVEILLANCE SYSTEM IN CAMEROON: A STUDY PROTOCOL

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Objectives: To conduct a comprehensive review that will provide insights into the current burden of respiratory syncytial virus (RSV) in adults as a basis for establishing an RSV surveillance database in Cameroon.

Methods and analysis: A two-phase study approach will be considered. First, a systematic review comprising a comprehensive search of available literature from electronic databases including: PubMed, Embase, Cochrane databases, and grey literature search. Identified studies will be included if they reported on the RSV burden of disease among Cameroonian adults aged ≥18 years from January 1st, 1990 to December 31st, 2023. A narrative synthesis of the evidence will be provided. Additionally, a meta-analysis will be conducted using a random effect model if sufficient homogenous studies are identified. Data Screening, extraction and synthesis will be independently performed by two co-authors; and will be reported according to the PRISMA-P guidelines for writing systematic review protocols.

Secondly, a retrospective cohort design will permit data analysis on RSV among adults in the laboratory registers at the National Influenza Center. Records tracing will be explored to link patients' files from emanating hospitals to capture relevant demographic and clinical data. The International Classification of Diseases and Clinical Modifications 10th revision (ICD-10-CM) codes will be used to classify the different RSV outcomes, retrospectively.

Results: The primary outcome is to formulate a framework for establishing an RSV surveillance database in Cameroon. The secondary outcomes include; (i) estimates of RSV prevalence among Cameroonian adult age groups, (ii) RSV drivers, and (iii) clinical outcomes, including proportions of RSV-associated morbidity and/or death among age-stratified Cameroonian adults with medically attended acute respiratory tract infections.

Conclusions: The evidence generated from the two projects will be used for further engagement with relevant stakeholders, including policy makers, clinicians, and researchers, to develop a framework for systematically establishing an RSV surveillance database in Cameroon.

Keywords: Respiratory syncytial virus; Cameroon; Adult population; Respiratory Tract Infections; Surveillance; Database; Epidemiology; Clinical outcomes

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