STUDY PROTOCOL FOR TRENDS IN UPTAKE AND IMPACT OF THERMOSTABLE VACCINES IN AFRICA - SYSTEMATIC REVIEW

1.0 BACKGROUND

The introduction of thermostable vaccines has the potential to revolutionize vaccine distribution and accessibility, particularly in resource-limited settings such as Africa. These vaccines are designed to withstand higher temperatures without compromising their efficacy, eliminating the need for strict cold chain storage and transportation. Understanding the trends in uptake and the impact of thermostable vaccines in Africa is crucial for assessing their effectiveness and informing future immunization strategies in the region.

2.0 INTRODUCTION

This systematic review aims to analyze the trends in uptake and assess the impact of thermostable vaccines in Africa. By examining the available evidence, we aim to gain insights into the utilization of thermostable vaccines and their effectiveness in improving vaccine coverage and reducing vaccine-preventable diseases. This review will contribute to the existing knowledge on thermostable vaccines and provide recommendations for their implementation and further research in African countries.

3.0 OBJECTIVES

The objectives of this systematic review are as follows:

3.1 To determine the trends in the uptake of thermostable vaccines in African countries. 3.2 To assess the impact of thermostable vaccines on vaccine coverage and the reduction of vaccine-preventable diseases in Africa.

4.0 METHODS

4.1 CRITERIA FOR CONSIDERING STUDIES

4.1.1 TYPES OF STUDIES

Any design will be considered for inclusion in this systematic review.

4.1.2 TYPES OF PARTICIPANTS

This review will focus on studies conducted in African countries where thermostable vaccines have been implemented.

4.1.3 TYPE OF INTERVENTION

The intervention of interest is the utilization of thermostable vaccines in routine immunization programs in Africa.

4.1.4 OUTCOMES

The primary outcomes of interest include trends in the uptake of thermostable vaccines and their impact on vaccine coverage and the reduction of vaccine-preventable diseases in Africa.

4.1.5 SETTING

Studies conducted in various settings across Africa will be included in this review.

4.2 SEARCH METHODS FOR THE STUDIES

The search process will be conducted using two independent reviewers. A comprehensive search will be performed on relevant databases and websites, including Science.gov, ScienceDirect, Web of Science, PubMed, ClinicalTrials.gov, Embase, WHO, and Medline. The search terms will include "thermostable vaccines" AND "Africa," "vaccin*" AND "cold chain." In addition, key immunization stakeholders will be consulted, and references of relevant articles will be reviewed to identify any additional studies.

4.3 DATA COLLECTION

The selection of studies will be performed independently by two reviewers based on the evaluation of abstracts. Data extraction will be conducted by two researchers using a standardized extraction form. Any discrepancies between the reviewers will be resolved through discussion and consensus.

4.4 DATA SYNTHESIS

A narrative synthesis approach will be employed to analyze the data. The findings from the included studies will be synthesized to identify common trends and themes related to the uptake and impact of thermostable vaccines in Africa. If feasible, quantitative data will be summarized

using appropriate statistical methods. In addition, tables will be used to present key findings from the included studies.

5.0 ETHICAL CONSIDERATIONS

This systematic review will use publicly available data from published studies and will not involve the collection of primary data. Therefore, ethical approval is not required for this study.

6.0 DISSEMINATION

The findings of this systematic review will be reported in a scientific journal publication and presented at relevant conferences or meetings to share the results with the scientific community and stakeholders in the field of immunization.