

## INPLASY

## Integration Models for Delivering COVID-19 Vaccines through HIV Services in Low-and Middle-Income Countries: A Scoping Review Protocol

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**Corresponding author:**  
Nyanyiwe Masingi Mbeye

nmbeye@kuhes.ac.mw

**Author Affiliation:**  
Kamuzu University of Health  
Sciences.

Mbeye, NM; Chipojola, R; Banda, S; Kaude, P; Mdolo, A; Nwosisi, C;  
Mounier, SC.

## ADMINISTRATIVE INFORMATION

Support - UNICEF.

**Review Stage at time of this submission** - Completed but not  
published.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY2025100010

**Amendments** - This protocol was registered with the International  
Platform of Registered Systematic Review and Meta-Analysis Protocols  
(INPLASY) on 4 October 2025 and was last updated on 4 October 2025.

## INTRODUCTION

**Review question / Objective** To identify and describe models for delivering COVID-19 vaccines through HIV care services in low-and middle-income countries (LMICs).

**Rationale** To effectively tackle vaccine distribution for people living with HIV and enhance health outcomes, identifying and mapping the existing models used to deliver vaccines to this population is essential. Understanding these methods can help policymakers and healthcare providers design better research and implementation strategies. Furthermore, gaining a deeper insight into these models may offer helpful guidance on how future vaccine delivery and its integration into primary healthcare and vaccination programs can be improved, particularly in LMICs. This scoping review explored existing COVID-19 vaccine integration models in LMICs focusing on approaches relevant to PLHIV.

**Condition being studied** COVID-19; HIV.

## METHODS

**Search strategy** Database Query Number Query #4 #1 AND #2 AND #3  
EMBASE Search Strategy #3 (((((((('low-income countr\*' OR 'middle-income countr\*' OR 'developing countr\*' OR 'low-resource countr\*' OR 'resource-poor countr\*' OR 'underdeveloped countr\*' OR 'less developed countr\*' OR 'global south' OR 'sub-saharan africa'/exp OR 'sub-saharan africa' OR 'latin america'/exp OR 'latin america' OR 'south asia'/exp OR 'south asia' OR 'africa'/exp OR 'africa' OR 'southeast asia'/exp OR 'southeast asia' OR 'central america'/exp OR 'central america' OR 'eastern europe'/exp OR 'eastern europe' OR 'caribbean'/exp OR 'caribbean' OR 'pacific islands'/exp OR 'pacific islands' OR 'afghanistan'/exp OR afghanistan OR 'angola'/exp OR angola OR 'bangladesh'/exp OR bangladesh OR 'benin'/exp OR benin OR 'bhutan'/exp OR bhutan OR 'bolivia'/exp OR bolivia OR 'botswana'/exp OR botswana OR burkina) AND faso OR 'burundi'/exp OR burundi OR ...

#2 'hiv infections'/exp OR 'hiv infections' OR 'hiv'/exp OR 'hiv' OR 'hiv/aids'/exp OR 'hiv/aids' OR 'people living with hiv'/exp OR 'people living with hiv' OR 'plhiv' OR 'hiv care'/exp OR 'hiv care' OR 'hiv services' OR 'hiv treatment':ti,ab  
 #1 'covid-19 vaccines'/exp OR 'covid-19 vaccines' OR 'sars-cov-2 vaccine'/exp OR 'sars-cov-2 vaccine' OR 'covid-19 immunization' OR 'covid-19 vaccination':ti,ab.

**Participant or population** People living with HIV.

**Intervention** COVID-19 Vaccine integration models.

**Comparator** None.

**Study designs to be included** All empirical research approaches: quantitative, qualitative, and mixed methods such as observational studies, randomized controlled trials, quasi-experimental studies, cohort and case-control studies, and single-case reports.

**Eligibility criteria** Inclusion and exclusion criteria were defined using a modified Population, Intervention, Comparison, Outcomes (PICO) framework focusing on studies involving PLHIV, men and women aged 18 and older residing in LMICs. Since our main interest was on how COVID-19 vaccination is integrated into HIV care services, we included studies that reported on strategies or models for delivering COVID-19 vaccines through HIV care platforms.

**Information sources** We developed a thorough search strategy using Medical Subject Headings (MeSH) and Boolean operators. This strategy combined terms related to PLHIV, COVID-19 vaccines, and integration strategies. The search terms and strategies were based on an initial scoping search and consultations with experts.

**Main outcome(s)** Increased vaccine uptake; Increased vaccine coverage.

**Additional outcome(s)** Number of people living with HIV vaccinated.

**Data management** Two reviewers, PK and SB independently carried out the screening and review process using Rayyan, an online tool for managing systematic reviews. Any differences in opinion were resolved through discussion or with input from third reviewers, NMM or RC. In the first screening phase, we assessed titles and abstracts for eligibility. We then performed full-text screening on all records that met the inclusion criteria. We

documented the reasons for excluding studies during the full-text review stage.

**Quality assessment / Risk of bias analysis** Two independent reviewers carried out all the review processes. A third reviewer who is the senior reviewer reviewed the process, discussed and addressed any discrepancies.

**Strategy of data synthesis** We performed a narrative synthesis with tabulation to analyze the data.

**Subgroup analysis** None.

**Sensitivity analysis** None.

**Language restriction** English only articles.

**Country(ies) involved** Low and middle income countries.

**Keywords** COVID-19; HIV; vaccine integration; service delivery models; low- and middle-income countries.

**Dissemination plans** Through publications in peer reviewed journals, conference presentations.

#### Contributions of each author

Author 1 - Nyanyiwe Masingi Mbeye - Conceptualisation, methodology, investigation, Data curation, Writing and editing, Supervision.

Email: nmbeye@kuhes.ac.mw

Author 2 - Roselyn Chipojola - Investigation, Data curation, Writing and editing, Supervision.

Email: rchipojola@kuhes.ac.mw

Author 3 - Susan Banda - Data curation, data analysis, writing and editing.

Email: sbanda@kuhes.ac.mw

Author 4 - Prince Kaude - Data curation, data analysis, writing and editing.

Email: pkaude@kuhes.ac.mw

Author 5 - Aaron Mdolo - Conceptualisation, Supervision.

Email: amdolo@unicef.org

Author 6 - Charles Nwosisi - Conceptualisation, supervision.

Email: cnwosisi@unicef.org

Author 7 - Sandra Christine Mounier - Conceptualisation, Supervision.

Email: smounier@unicef.org