

# Missed Opportunities in Cervical Cancer Prevention for Adolescent Girls and Young Women Living with HIV: A Global Assessment of Integrated Care Models



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## Background

- Cervical cancer (CaCx) is the 4<sup>TH</sup> most frequently diagnosed cancer among females globally<sup>1</sup>.
- The primary sufficient cause of CaCx is persistent infection with Human Papillomavirus (HPV)<sup>2</sup>.
- Adolescent girls and young women (AGYW) face heightened risk of persistent HPV infection<sup>3</sup>.
- The overlap of CaCx and HIV exacerbates public health challenges urging intensified efforts in bolstering prevention and control measures.
- Integrating CaCx prevention strategies (HPV vaccination, CaCx screening (CCS), treatment for pre-cancerous lesions and educational interventions) into HIV care programs shows promise in effectively addressing this dual burden.



## Aim & Objectives

**Aim:** To assess the effectiveness of integrating CaCx prevention strategies into existing HIV care programs among AGYW living with HIV, globally.  
**Objectives:**

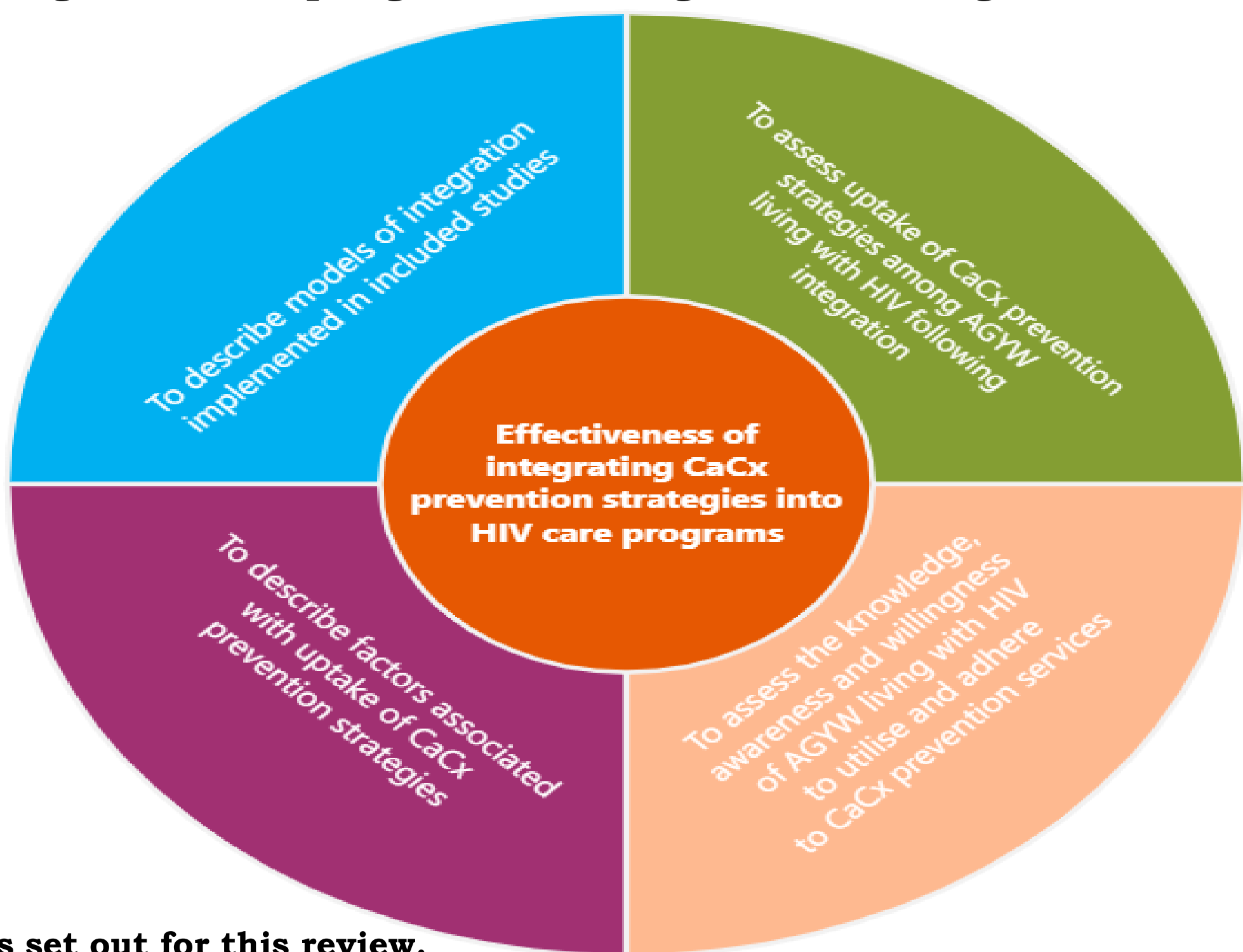


Figure 1. Objectives set out for this review.

## Methods

We conducted a mixed-methods systematic review and meta-analysis, guided by a registered (CRD42024535821) and published protocol<sup>4</sup>.

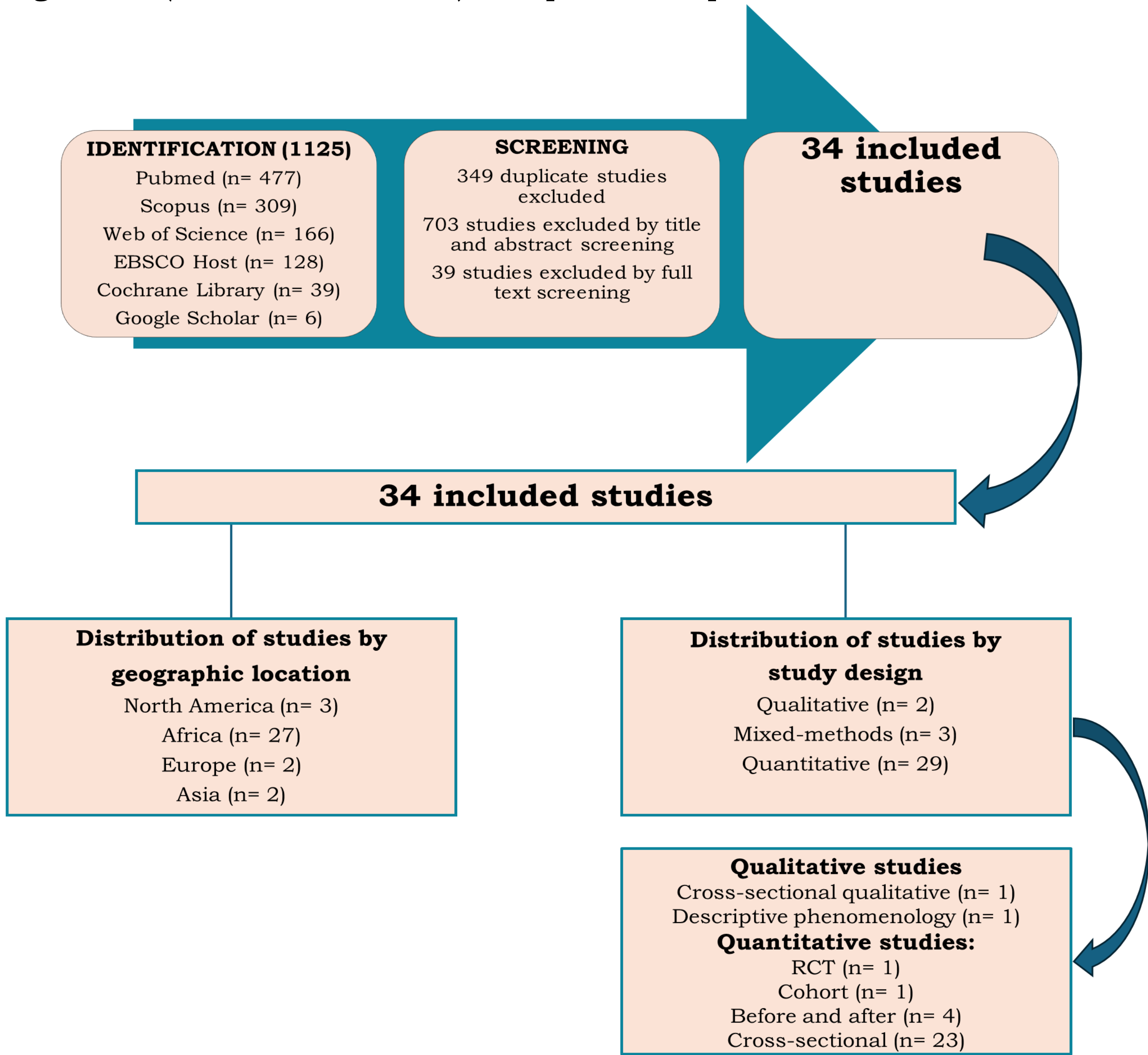


Figure 2. Summary of the data collection process.

## References

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- Govindsamy K, Noll S, Blose N, Amponsah-Dacosta E. Effectiveness of integrating cervical cancer prevention strategies into HIV care programmes: A mixed-methods systematic review protocol. Cobucci RNO, editor. PLOS One. 2025;20: e0306496. doi:10.1371/journal.pone.0306496.



## Key findings

### A. Integration of CaCx prevention strategies within existing HIV care services predominantly explored in the evidence base.

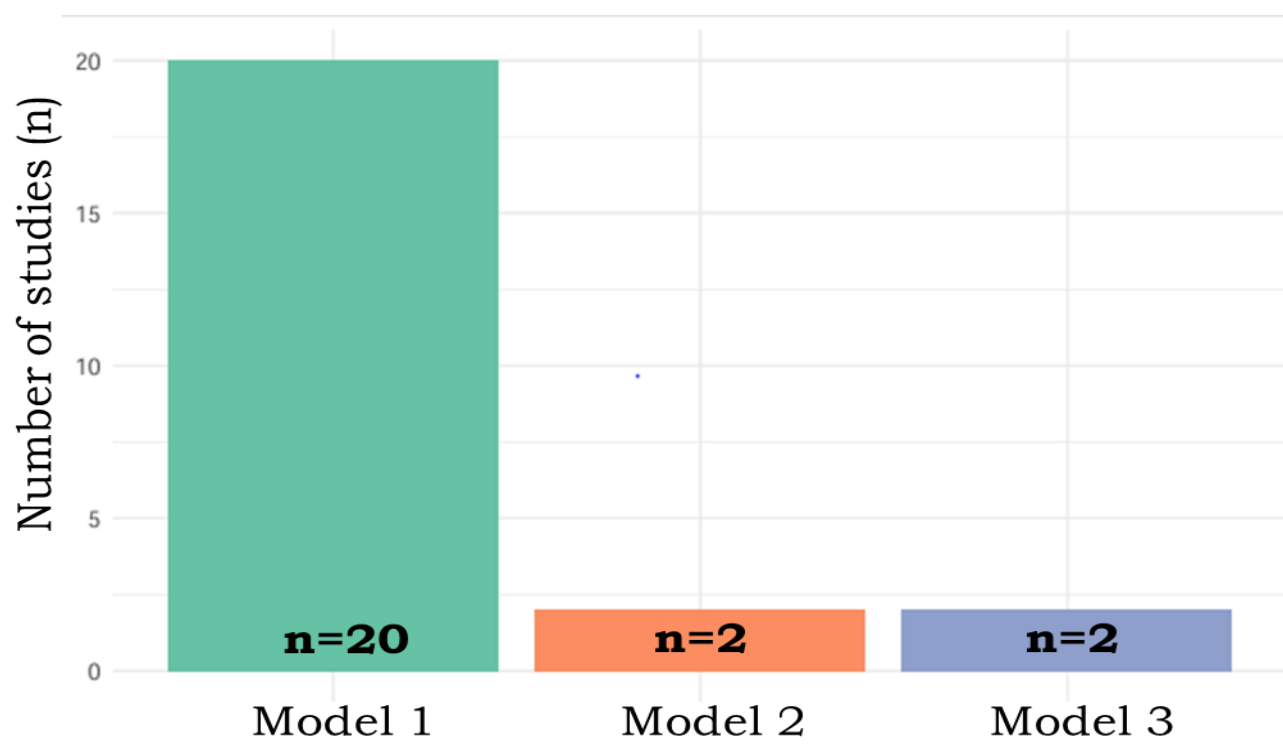


Figure 3. Distribution of integration models.

**Model 1:** Integration of CaCx prevention strategies **within existing** HIV care services (n=20/34) (Fig3).  
**Model 2:** Integration of CaCx prevention and HIV services that are offered **within co-located** health facilities (n=2/34) (Fig 3).  
**Model 3:** Integration of CaCx prevention and HIV services involving a **complex system** of healthcare professionals, health facilities, community involvement and/or digital systems (n=2/34) (Fig 3).

### B. Improved uptake of CCS among AGYW living with HIV following integration of CaCx prevention services with HIV care services.

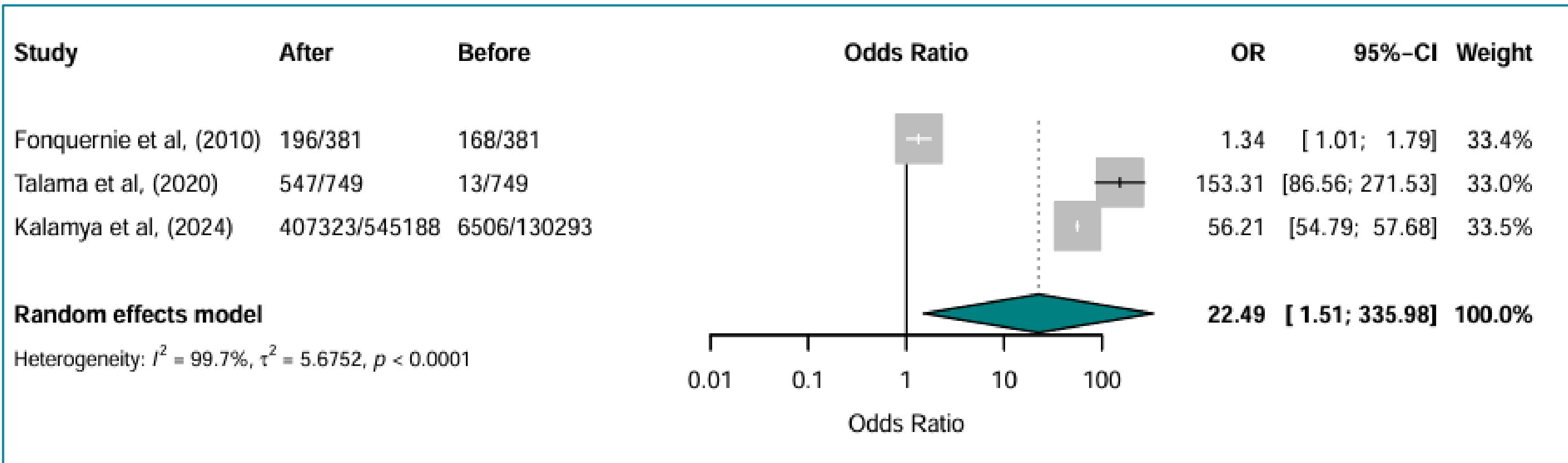


Figure 4. Forest plot of before and after studies (n=3) assessing uptake of CCS services among AGYW living with HIV following integration with HIV care services compared to no integration.

- The meta-analysis (see Fig 4) demonstrates that integration of CCS services with HIV care services **improves** uptake of CCS among AGYW living with HIV (pooled OR 22.49; 95% CI: 1.51, 335.98).
- However**, the certainty of this evidence is **very low** due to concerns about risk of bias, inconsistency, indirectness and imprecision.
- In addition, a meta-analysis (n=18) showed uptake of CCS among AGYW living with HIV, attending HIV care facilities that offered CCS services, at **50.25%** (95% CI: 0.34; 0.67), which is well below the WHO's global target of 70%<sup>1</sup>.
- Also: 0% uptake of HPV vaccination following integration (n=1), improved uptake of treatment of pre-cancerous lesions: 12.8% to 84.3% (n=1) and 86.2% received information about CCS from HIV clinics that offered integrated CaCx services (n=1).

### C. Factors associated with uptake of CCS services.

- Following factors found to be associated with higher uptake of CCS:
  - ✓ **Longer duration since HIV diagnosis** (pooled OR 1.60; 95% CI 0.82, 3.16)
  - ✓ **Longer duration in HIV care** (pooled OR 1.38; 95% CI 1.12, 1.71).
  - ✓ **Longer duration on ART** (pooled OR 1.90; 95% CI 1.06, 3.42).
- Facilitators of CCS: knowledge of facility conducting CCS, awareness of CCS, benefit of early diagnosis, avoiding risk of CaCx,
- Barriers CCS: myths/misconceptions, fear, privacy concerns, low perceived risk, limited healthcare worker capacity, and lack of reminder systems.

### D. Knowledge, awareness of CCS and willingness to utilize and adhere to CCS among AGYW living with HIV.

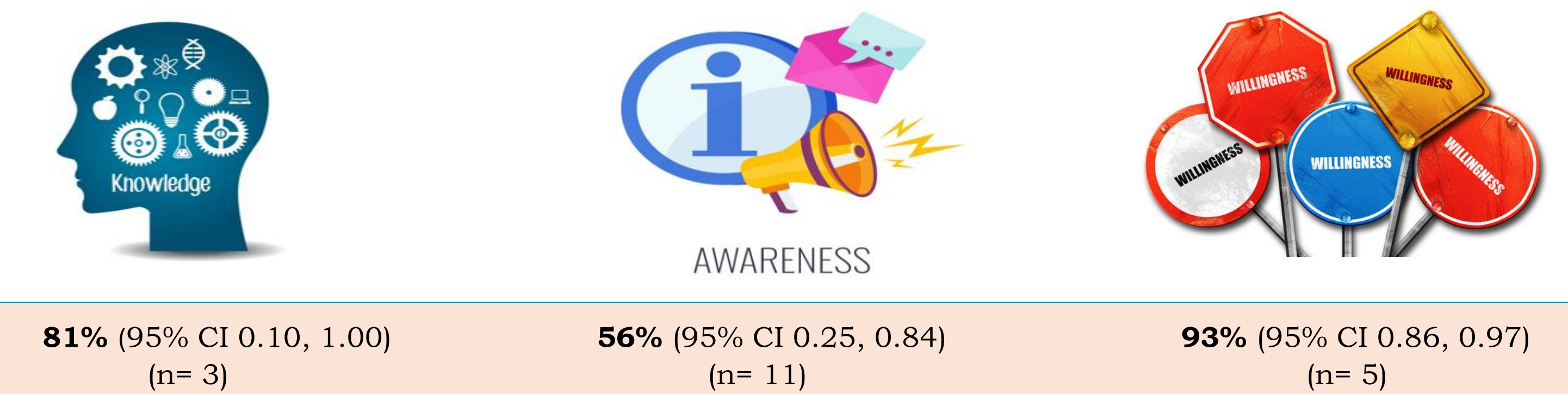


Figure 5. Pooled proportions of knowledge, awareness and willingness to utilize and adhere to CCS among AGYW living with HIV.

Despite AGYW living with HIV being knowledgeable, aware and demonstrating willingness to utilize and adhere to CCS (see Fig 5) uptake of CCS remains low at 50.25%.

## Implications for equitable CaCx prevention services

- Integration of CaCx and HIV care services has the potential to improve uptake of CCS among AGYW living with HIV, however further rigorous research is essential.
- Limitations: current evidence base focused primarily on CCS, with not much research available on other CaCx prevention strategies.