

Measures of Retention in HIV care: A Study within a review (SWAR)

Nadia Rehman, MSc, PhD(c)¹, Lawrence Mbuagbaw, MD, MPH, PhD^{1,2}, CASCADE Group

¹ Department of Health Research Methods, Evidence, and Impact, McMaster University, Hamilton, ON, Canada; ² Biostatistics Unit/The Research Institute, St Joseph's Health care, Hamilton, ON, Canada

Background

- More than 37 million people are living with HIV worldwide.¹
- Antiretroviral therapy (ART) lowers the viral load.²
- Retention in HIV care leads to improvement in health outcomes decreases healthcare costs and lowers the transmission of HIV.³
- Retention in HIV care is a big challenge.³
- Despite the importance of retention, there is **no gold standard definition** for retention in care.⁴

Objectives

- To **summarize** the definitions of retention in HIV care identified in RCTs
- To **identify** the pros, cons, and potential applications of the definitions used
- To develop a **framework** towards a standard definition of retention in HIV care

Methods

- Study design:** Study conducted within a previously published SWAR^{4,5}
- SWAR:** To resolve uncertainties in the conduct of the systematic review⁵
- Study selection:** Randomized controlled trials of interventions to improve retention in care in people living with HIV (PLHIV)
- Outcome:** How retention is measured across studies
- Descriptive statistics:** Frequencies and percentages of the study and participant characteristics

Study Selection and Data Reporting

Figure 1: Steps taken to identify relevant literature

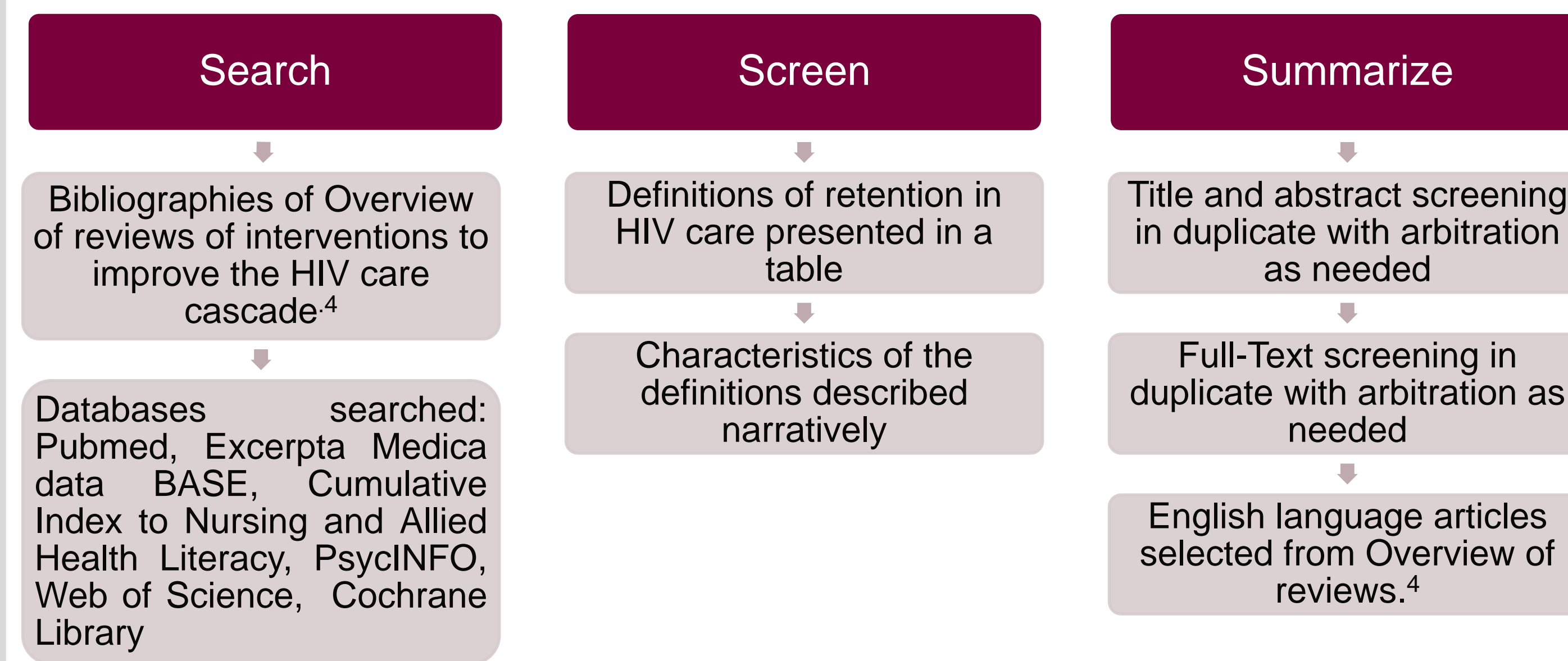


Table 1: Summary characteristics of the included studies

Study characteristics	n (%)
Country income level	
Low-income countries [*]	11 (22)
Low middle-income countries	12 (24)
Upper middle-income countries	12 (24)
Mixed-income countries	2 (24)
High income countries	13 (26)
Population characteristics	
General population	28 (56)
Female	34(62)
Racialized populations	21 (42)
Men who have sex with men (MSM)	1 (2)
Youth	4 (8)
Prisoners	2 (4)
People who inject drugs (PWID)	1 (2)
Intervention types	
Behavioral and education interventions	11 (22)
Digital interventions	9 (18)
Mixed interventions	7 (14)
Economic interventions	3 (6)
Peer or community-based interventions	6 (12)
Health system	5 (10)
Pharmacy-based	4 (8)
Task shifting interventions	5 (10)

Results

Figure 2: Study selection flow chart

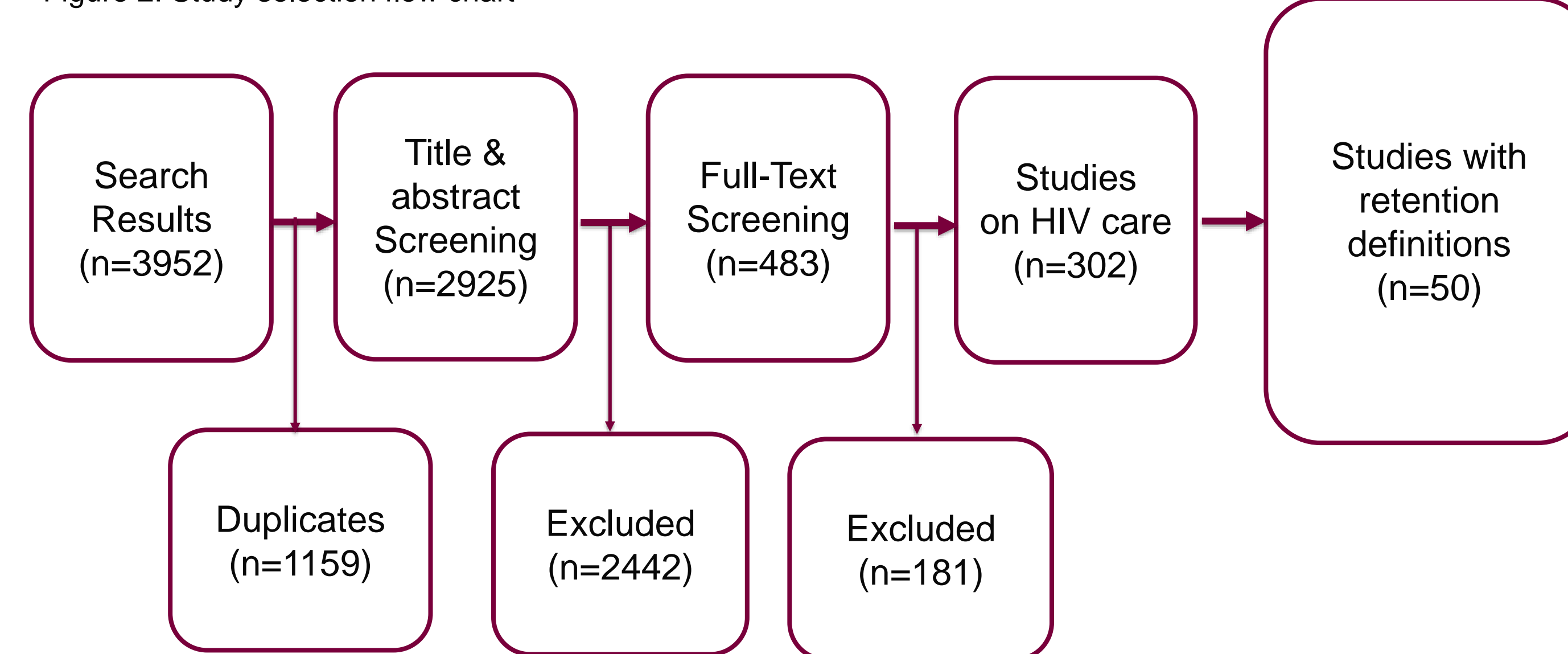


Table 2: Summary of the different types of definitions

Components	Pros	Cons	Suggestions
Follow up time (n=49)	Can be individualized	Limited in standardization	Well-defined time intervals and time to follow-up
Clinical visits (n=36)	Easy to measure Easy to compare	Limited in accounting for lost to follow-up Difficult to account for overall care	Kind of visits
Pharmacy-based visits (n=17)	Ensures adherence to ART	Covers only one aspect of HIV care	Patients' care visits
Administrative records (n=5)	Convenient to track patients	Does not account for lost to follow-up	Electronic data base
Visit counts (n=10)	Computationally convenient Easy to track patients	Missed, cancelled and emergency visits can falsify the count	Clarification of types of visits to be counted
Gap score (n=8)	Can be individualized	Computationally difficult Can depict falsified retention	Need to ensure patients are retained based on their special needs
Scheduled visits (n=16)	Easy to count Easy to track patients' retention	PLHIV have different kinds of scheduled appointments	Type of appointments
Group-level definitions (n=10)	Allows comparison amongst clinics, and site	Lacks the individuals' estimate	More clarification on numerators and denominators
Laboratory records (n=9)	Accurate depictions of surrogate outcomes	HIV care visits still needed Can falsify count Resource demanding Test sensitivity	Ensured tests along with care visits Linked with patients' clinical record

Limitations

- Cannot suggest or recommend a definition
- Only RCTs included

Strengths

- Novelty of the research question
- Exhaustive and comprehensive search
- Strong research methodology
- Study and trial characteristics

Conclusions

- Summarized definitions of retention in care
- Identified components used in definitions
- Identified pros, cons, and applications of the components for developing a framework toward a standard definition

Funding

The Ontario HIV Treatment Network (OHTN) grant number EFP-1096-Junior Inv.

References

- Global HIV & AIDS statistics https://www.unaids.org/sites/default/files/media_asset/UNAIDSFactSheet_en.pdf
- Mbuagbaw L, Mertz D, Lawson DO, et al. Strategies to improve adherence to antiretroviral therapy and retention in care for people living with HIV in high-income countries: a protocol for an overview of systematic reviews. *BMJ open*. 2018;8(9):
- Mbuagbaw, L., Hajizadeh, A., Wang, A., Mertz, D., Lawson, D. O., Smieja, M., ... & Thabane, L. (2020). Overview of systematic reviews on strategies to improve treatment initiation, adherence to antiretroviral therapy and retention in care for people living with HIV: part 1. *BMJ*
- Education section – Studies within a review (SWAR). *Journal of Evidence Based Medicine*. 2012;5(3)
- CASCADE (2021). Accessed 29 September, 2021. <https://hivcarecascade.com/>

CASCADE Group
Michael Wu, Cristian Garcia, Alvin Leenus, Hussein El-Kechen, Manika Bhandari, Babalwa Zani, Anisa Hajizadeh, Annie Wang, Rita E. Morassut, Jessica J Bartozko, Gohar Zakaryan, Oluwatonu Makanjuola, Diya Jhuit, Vaibhav Arora, Andrew Kapoor, Aaron Jones, Pascal Djiaueu