

# Free Antiretrovirals as a Key Tool Against the HIV Pandemic: A systematic review

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## KEY TAKEAWAYS

1. Providing free ARVs is associated with an increased number of people on treatment and increased viral suppression
2. Providing free PrEP is associated with increased PrEP utilization
3. This review suggests that providing free ARV drugs is a beneficial strategy for achieving UNAIDS/WHO 95-95-95 targets by 2030

## BACKGROUND

Despite advancements in HIV treatment, access to care remains a significant barrier to achieving the UNAIDS/WHO 95-95-95 targets, with many countries still struggling to meet these goals<sup>1</sup>. The WHO and UNAIDS advocate for free access to antiretroviral drugs (ARV) to improve treatment uptake and outcomes<sup>2</sup>. However, access policies vary widely between countries.

## OBJECTIVE

This systematic review aims to evaluate the impact of providing free ARV drugs on the HIV care cascade and PrEP use.

## METHODS

- Protocol registered on PROSPERO: CRD42024527274
- Indexed literature searched:
  - MEDLINE
  - Epistemonikos
  - Embase
  - Web of Science
  - CINAHL
  - The Scielo Citation Index
  - CNKI
  - Index Medicus
- Supplemented by grey literature searching and forward and backward citation tracking
- Full strategy available for consultation on Borealis: <https://doi.org/10.5683/SP3/YNSEEA>

## Inclusion criteria

1. Publications from 1996 and onwards
  2. People living with HIV or at risk of HIV
  3. Free access to ARV drugs explicitly specified or clearly implied as compared to charging out-of-pocket fees
  4. Report of the following outcomes:
    - 1) **Being on therapy** - second statement of the HIV care cascade - defined as the initiation or uninterrupted use of ARV drugs.
    - 2) **Being virally suppressed** - third statement of the HIV care cascade - defined as the last HIV-1 RNA viral load  $\leq$  200 copies/mL or the absence of virological failure.
    - 3) **Being on PrEP**, defined as receiving uninterrupted HIV pre-exposure prophylaxis according to local guidelines.
- \*Secondary endpoints, results not presented in this preliminary version: **HIV infection & Mortality**

## RESULTS

Medline = 9086  
 Web of Science = 8316  
 Embase = 7398  
 CINAHL = 4389  
 Grey literature = 1990  
 Citation searching = 1706  
 CNKI = 866  
 Scielo = 215  
 Global Index Medicus = 198

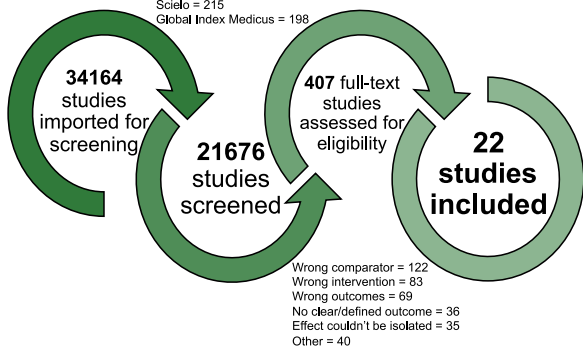
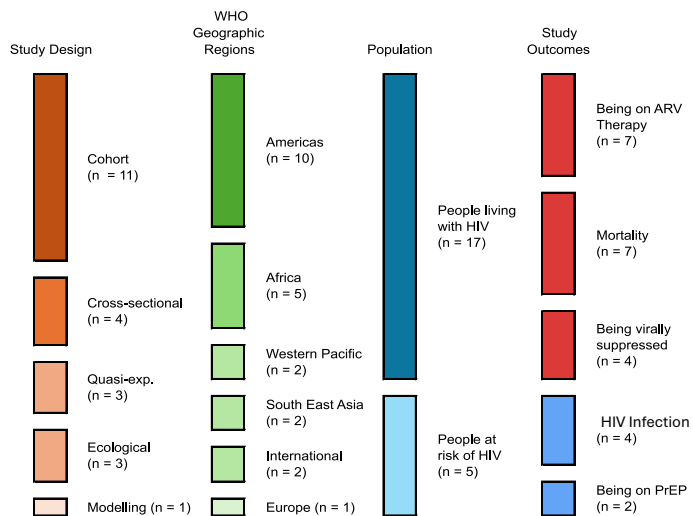


Fig 1. PRISMA flowchart



\*Two studies were included in two outcomes (Zachariah 2008 and Dean 2008)

†One study reported from the Antiretroviral Therapy in Lower Income Countries (ART-LINC) Collaboration, a network of treatment programs in Africa, Asia, and South America

Fig 2. Characteristics of the 22 included studies

Table 1. Impact of Free ARVs on HIV treatment Outcomes

OUTCOME	KEY FINDINGS WITH FREE ACCESS TO ANTIRETROVIRAL DRUGS
<b>Being on antiretroviral therapy (n=7)</b>	<b>Fennell (2023)</b> 37% more pregnant non-citizens living with HIV received antenatal ARVs after implementing a national free ARV program (p < 0.001).
	<b>Weigel (2009)</b> Adults initiated on ARV per quarter went from 182 before the start of the National Free ARV program to 494 after (p < 0.001).
	<b>Yi (2011)</b> Women not enrolled in a free ARV-support program (ADAP) were 2.4 times more likely to be off treatment (CI95: 1.49-3.71) compared to those enrolled in an ARV-support program.
	<b>Kahn (2002)</b> ARV use was higher in people enrolled in a free ARV-support program (ADAP) compared to Medicaid in four states of the United States.
	<b>Singh (2009)</b> 13% more children were receiving ARVs and were not lost to follow-up three years after the free countrywide access program began.
	<b>Zachariah (2008)</b> A trend suggested that more people were alive and on ARVs in the free access group compared to those paying for their medication (difference 5.1%, p = 0.1).
	<b>Ye (2024)</b> ARV discontinuation was lower in the group of people with out-of-pocket fees than those with free access (1% vs 3.4%, p < 0.001).
<b>Being virally suppressed (n=4)</b>	<b>Ludema (2016)</b> Among the uninsured, those with an ARV-support program (ADAP) had a lower risk of unsuppressed viral load (HR 0.49, CI95: 0.28-0.85).
	<b>Erly (2023)</b> Recipients with a free ARV-support program (ADAP) generally had better odds of having a suppressed viral load on the last measure than those not enrolled (RD 12%, CI95: 9-15%).
	<b>Lee (2021)</b> After copayment removal, virological failure went from 5 to 3.7 episodes/100 persons-year.
	<b>Diepstra (2017)</b> Viral suppression varied across RWHAP service combinations, with better aORs for recipients with free ARV-support program (ADAP) than those with other services but no free ARV-support program.

Table 2. Impact of Free ARVs on HIV prevention outcome

<b>Being on PrEP (n=2)</b>	<b>Dean (2024)</b> Imposing out-of-pocket costs of up to \$10 USD doubled the rate of PrEP abandonment compared to free access.
	<b>Dawit (2024)</b> PrEP abandonment was significantly higher in people with a high cost of prescription (> \$100 USD) compared to free access.

Abbreviation: ADAP, AIDS Drug Assistance Program; A USA federal prescription medication program for low-income people living with HIV; aOR, adjusted odds ratio; RW, Ryan White HIV/AIDS Program; A USA federal program offering various services for uninsured and underinsured people living with HIV

## LEGEND

- In favor of free ARVs, statistical difference
- In favor of free ARVs, no statistics or statistical trend
- In favor of out-of-pocket fees, statistical difference

## CONCLUSION

Providing free ARV drugs has a positive impact on various aspects of the HIV care and prevention continuum. Our results serve as a valuable reference for parts of the world that remain undecided about implementing a free ARV drug program.

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## REFERENCES

1. UNAIDS - Global Report 2023 [Internet]. UNAIDS 2023 Report. Available from: <https://thepath.unaids.org/>
2. Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach [Internet]. Available from: <https://www.who.int/publications-detail-redirect/9789240031593>