

Investing in HIV Prevention Strategic Choices for Zambia's Future Response



Lusaka, September 2026

Big gains — but new threats

Zambia has made strong progress against its AIDS epidemic, but abrupt funding losses and other challenges are disrupting its HIV programme. Services for preventing new HIV infections are especially at risk.

Zambia has reduced the annual number of new HIV infections per year by 66% since 2010. But the country still has a serious epidemic: **an estimated 23 000 people newly acquired HIV in 2025**. That brought to 1.3 million the number of people living with HIV and in need of life-saving antiretroviral treatment.

Continued, strategic HIV investments are needed to maintain the momentum of recent years and achieve epidemic control.

But HIV financing is under strain. Donor support is receding, and the Government is contending with many competing budget priorities in tight fiscal conditions. This presents it with difficult choices.

Zambia's extensive HIV treatment programme is saving lives, improving people's health and well-being, and preventing more people from acquiring HIV.

But treatment alone will not halt the epidemic: a *combination* of treatment and primary prevention is needed.

Primary HIV prevention remains crucial

A **mathematical modelling analysis**¹ was done to explore the impact of different investment scenarios for primary HIV prevention.

The analysis shows that if **funding for primary prevention programmes is halted, an additional 44 000 people will newly acquire HIV between 2026 and 2040**, compared with maintaining 2024 funding levels. Each of those new infections will entail life-long treatment costs.

On the other hand, if prevention funding is kept at 2024 levels, there would be 13% fewer new HIV infections in 2030 and 19% fewer in 2040, compared with a “no primary prevention” scenario.

Condoms, services for female sex workers and pre-exposure prophylaxis (PrEP) for key populations, were the most cost-effective investments.

If prevention funding were adapted to levels and modalities that achieve the 2030 global AIDS targets, Zambia would have 22% fewer new infections in 2030 and 28% fewer in 2040, compared with a scenario in which primary prevention is abandoned.

¹ The Goals model was applied using country-specific data and estimates agreed with in-country experts, based on the Zambia Spectrum file submitted to UNAIDS in 2025.

Trends in new HIV infections — Today’s funding decisions will have a lasting impact

Figures 1 & 2 show the anticipated impact of funding decisions on primary prevention and treatment. In a scenario in which **primary prevention is entirely defunded**, Zambia will have almost 1.5 times as many new HIV infections per year by 2050, compared to a scenario in which it achieves the global AIDS targets.

Figure 1. Projected new HIV infections in three prevention investment scenarios, Zambia, 2026–2050

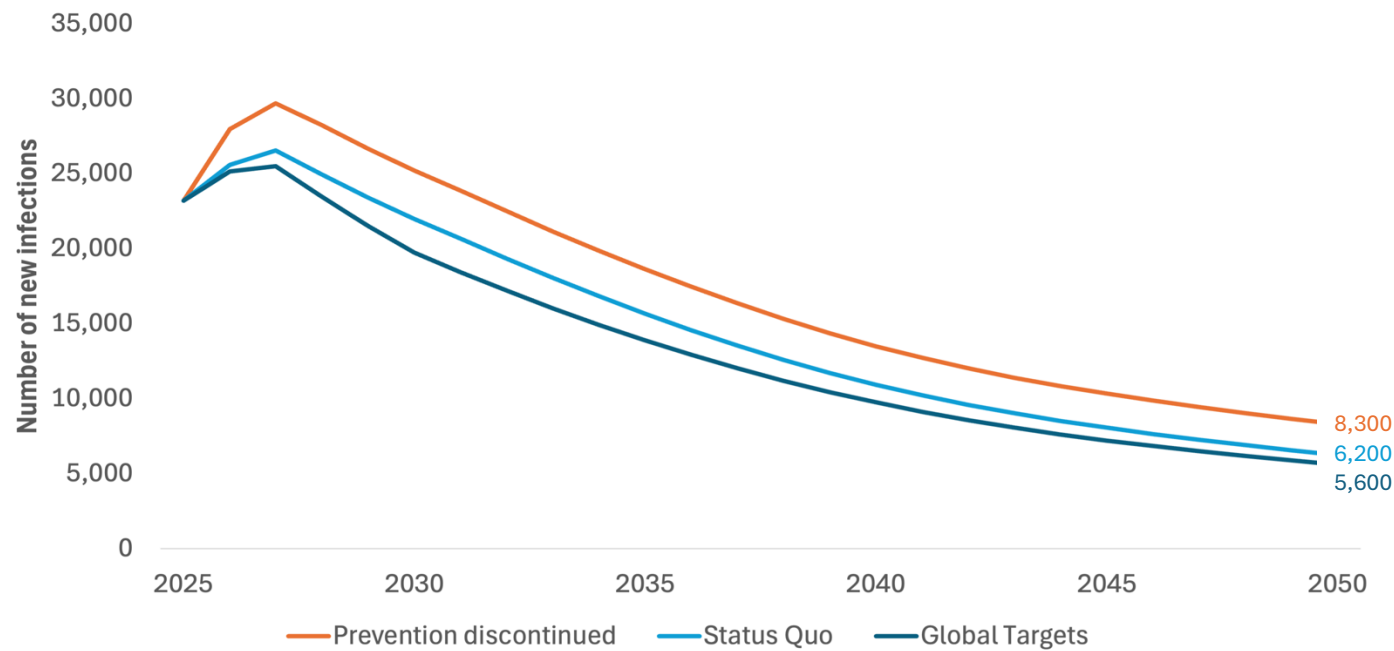
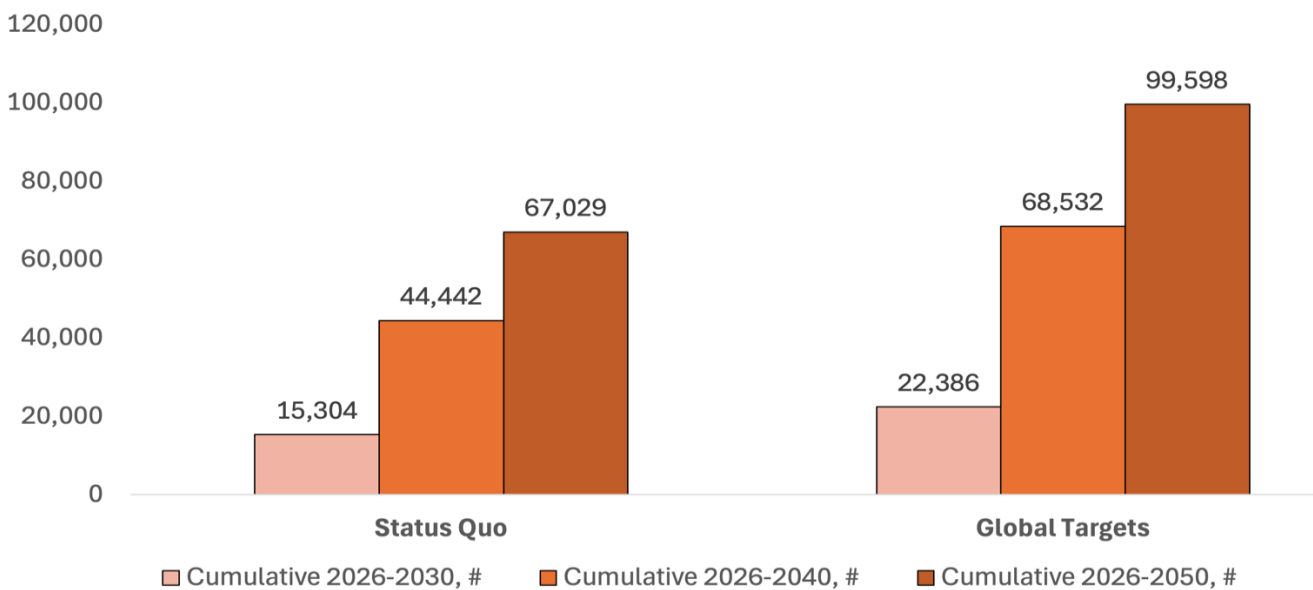


Figure 2. Projected new HIV infections averted compared to stopping HIV prevention funding, Zambia, 2026–2050 with status quo prevention and by achieving global targets



Source: Analysis by Avenir Health using the Goals model, August 2026.

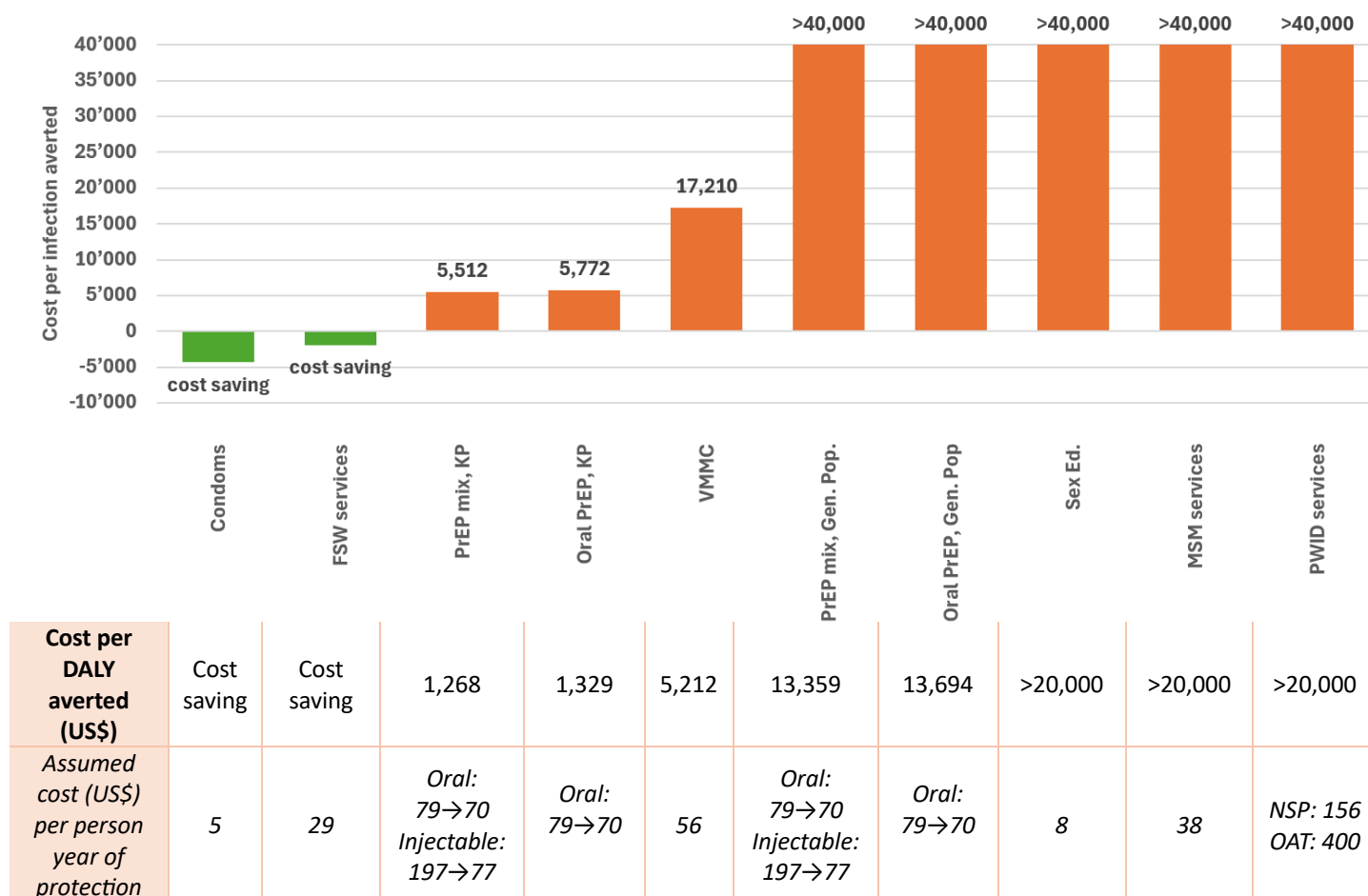
Notes: The global targets scenario includes a mix of primary prevention and treatment targets elaborated in the [HIV Prevention 2030 Framework](#). This includes differentiated targets for condom use (80% with non-regular partners and 95% in sex work settings) and differentiated targets for PrEP based on HIV incidence in the sub-population and other criteria reaching up to 80% in the sub-populations with highest HIV incidence rates. It also includes population-specific targets for VMMC and harm reduction.. The Global Targets scenario also includes scale-up of ART to 90% coverage by 2030 alongside scale-up of primary prevention programmes, as well as vertical transmission prevention as part of HIV treatment. Due to the high baseline coverage of vertical transmission programmes, coverage after 2024 is maintained at 2024 levels across all the scenarios.

Findings on specific primary prevention programme components

The analysis shows that condom supply and promotion for the general population and prevention services focused on female sex workers are both *cost-effective* and *cost-saving* (meaning the lifetime treatment costs averted exceed those programme costs, respectively) over the 2026–2100 period. They also have the *lowest costs* per DALY.² This constitutes a strong case for enhancing those programming areas.

Among primary prevention interventions, condoms account for the biggest share of averted HIV infections: some 54% in 2024.³ They offer the added benefit of protecting against other sexually transmitted infections and unplanned pregnancy. Also cost effective is the provision of PrEP (both oral and a mix of oral and long-acting) for key populations generally—a finding that supports the ongoing roll-out of PrEP, including long-acting versions, in Zambia.

Figure 3. Cost per new HIV infection averted for various HIV prevention interventions, Zambia, 2026–2100



Source: Analysis by Avenir Health using the Goals model, August 2026.

Notes: The model analysis is based on a mix of oral and injectable PrEP in the two “PrEP mix” interventions. The analysis assumes that PrEP is 100% oral in 2025, but transitions steadily to 70% injectable and 30% oral by 2030. The injectable component is initially cabotegravir-LA but switches to generic lenacapavir by 2028. Costs and benefits were modelled over 2025–2100. Costs and health benefits were discounted 3% annually. The analysis uses the Goals HIV simulation model, calibrated to the most recent country-specific epidemiological and programme data, to assess the relative impact of each listed intervention compared to stopping all primary prevention programmes. For condoms, the unit cost was US\$ 0.05 per condom, assuming an average of 100 condoms per year. The cost of injectable PrEP ARVs was assumed to decline from US\$ 180 USD to US\$ 60 by 2028.

VMMC = voluntary medical male circumcision; FSW = female sex worker; KP = key population; PWID = people who inject drugs; MSM = gay men and other men who have sex with men; Gen. Pop. = general population; Sex Ed. = sexuality education;

² One DALY—or disability-adjusted life year—represents the loss of the equivalent of one year of full health.

³ Stover J, Glaubius R, Pretorius C. Importance of sustaining demand and supply for condoms: what can we learn from modeling? Avenir Health, January 2026.

Recommendations

The Zambia modelling shows that investing in *combined* prevention and treatment will generate the biggest, long-term impact against AIDS. Zambia can make even bigger gains against its epidemic if it:

- Avoids reductions in funding for effective primary prevention options;
- Increases demand for, access to and uptake of condoms, and positions them as a key, low-cost and scalable element of its HIV response, alongside antiretroviral treatment and PrEP (especially long-acting versions); and
- Focuses HIV investments and programmes to reach underserved populations who are at high risk of acquiring HIV.

Specifically:

- **Condoms remain cost-saving overall and a high priority.** Condom use levels with non-regular partners can be raised through a total market approach that includes robust, free condom distribution for populations with low incomes, strengthened stewardship, “last-mile” distribution, and low-cost demand generation that focuses on a generation of young people (15–29 years) which has not been exposed to condom promotion.
- **Female sex worker programmes are both highly effective and cost saving.** The emphasis should be on closing remaining service gaps, assuring trust and quality, and integrating PrEP, especially long-acting versions, at scale.
- **PrEP for other key populations**, including gay men and other men who have sex with men and people who use drugs, is also highly cost-effective. Due to their current high unit costs, **delivery models** for other prevention services for key populations should be reviewed and nationally sustainable cost structures should be sought. A mix of trusted access platforms such as virtual and peer-led outreach and co-location with existing public health services might offer greater value than more expensive vertical models and drop-in-centres. However, service access barriers, such as

stigma and discrimination, will have to be addressed.

- **PrEP provision for the general population** is not very cost-effective and cannot be widely promoted at currently available resource levels—though PrEP can be offered in settings with higher HIV incidence (e.g. for people seeking STI services). However, **access should not be denied to young people and adults who actively demand PrEP.**
- **If VMMC can be sustained at the assumed unit cost**, using an integrated model based on existing country infrastructure, it also remains a cost-effective intervention, particularly in areas with high HIV incidence.
- **Harm reduction programmes for people who inject drugs need to be sustained at high coverage.** Needle and syringe programmes are usually highly effective in reducing HIV and other infections. Overdose prevention and opioid agonist maintenance therapy have multiple health and social benefits, including reductions in crime and costs for detention and prosecution. Minimizing procurement costs for methadone and arranging cofinancing with other sectors can make these programmes viable.
- Comprehensive sexuality education remains an essential element of health education generally and should be universally integrated into school curricula. Given the multiple health and social benefits (and the relatively high cost-per-infection-averted from a strict, HIV perspective), sexuality education should be funded through regular education budgets.

Conclusion

Zambia has made strong gains against AIDS, but the epidemic remains a **major public health threat**. Ongoing strategic investment in primary prevention, including sustained condom and sex worker programmes, and expanded PrEP, in particular for key populations, is essential to achieve epidemic control and avoid incurring additional HIV treatment costs into the future.