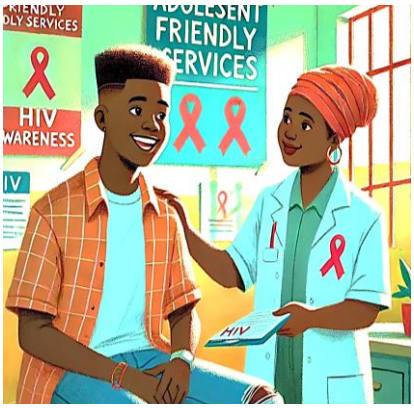
# FROM ADHERENCE TO HIV CONTROL

## Enhancing adolescent care through comprehensive youth-friendly services in Cameroon

## KEY MESSAGES




- Over the last decade, the number of adolescents living with HIV (ALHIV) who have achieved viral suppression has increased.
- A 2022 study reported a viral suppression rate of 63% among adolescents, using a definition of <50 copies/mL, while 84% have a suppressed viral load (<1,000 copies/mL) (2).
- In 2023, data from the National AIDS Control Committee reported that 41% of adolescents on ART achieved viral load suppression (3).
- The country has not attained the UNAIDS target to have 95% vital suppression in 2022 (4).
- Poor adherence is widely documented as being responsible for the large gap in VL suppression.
- "Scale Up Adolescent-Friendly Services" is the most cost-effective option, achieving the highest VLS (10,229) and the largest increase (2,161) at the lowest cost per additional adolescent ($258.70).
- Other options show lower impact: "Strengthening Mental Health Services" achieves 9,350 VLS with a higher cost per adolescent ($425.32), while "Therapeutic Education" has the smallest VLS increase (892) and highest cost per adolescent ($623.04).

## PROBLEM STATEMENT

At the end of 2023, an estimated 39.9 million people were living with HIV globally, with 1.3 million new infections recorded during the year (a 39% reduction since 2010). HIV-related deaths have also declined significantly, with 630,000 deaths in 2023, representing a 51% decrease since 2010 and a 69% drop since the epidemic's peak in 2004. Despite these advances, HIV remains a major global public health issue, having claimed 42.3 million lives to date (4).

With a significant concentration in sub-Saharan Africa, 5.1 million people living with HIV reside in Western and Central Africa, where 76% are receiving antiretroviral therapy (ART), and among those on ART, 70% have achieved viral load suppression. Over 80% of adolescents aged 10-19 living with HIV globally reside in sub-Saharan Africa with approximately 2.3 million adolescents aged 10–19 living with HIV. Young women and girls are disproportionately affected (4).

Based on data from the National Aids Control Committee, there were 481,147 people living with HIV (PLHIV) in Cameroon in 2023. Among them, 96.2% (431,763) were on antiretroviral therapy (ART), and 86% of those on ART achieved viral load suppression. For adolescents living with HIV (ALHIV), 46.2% (12,846 out of 27,785) of the expected cases were identified and started on ART. Among those on ART, 41.2% (5,371) achieved viral load suppression (3). In comparison, a study in 2022 reported that 63% of adolescents had viral load suppression using the definition of <50 copies/mL (2).

Cameroon has made significant achievements in its HIV response, yet despite the government's efforts to expand access to HIV testing, ART, and VL testing for the adolescents, progress has been slow. As efforts in the country focus on increasing the identification and access to treatment for ALHIV, there is significant opportunity to manage the HIV burden at an individual level as well as reduce HIV transmission by increasing viral load suppression in those on treatment. Yet, a significant proportion of ALHIV are not achieving VLS.

Poor adherence has been identified as the main cause associated with unsuppressed HIV among ALHIV, indicating a significant gap in achieving effective treatment outcomes (5) and efforts are underway to quantify this comprehensively (6). Self-reported adherence was reported to be 36.1% in Yaoundé in 2016 (7) and 82.9% in the North West and South West regions in 2018-2019 but dropped to 73.4% using medication possession ration methods (8). Poor adherence and unsuppressed viral load in adolescents have been documented in several studies across Cameroon, highlighting the need for targeted interventions to improve adherence and overall health outcomes for this population (5-13). This has led to increased drug resistance, treatment failure and increased morbidity and mortality among HIV positive adolescents.

- Adolescents living with HIV (ALHIV) face unique challenges that contribute to poor adherence and low viral load suppression rates. For ALHIV who were infected through mother-to-child transmission, adherence challenges often include transitioning into more self-managed care as they move into adolescence. This transition can be particularly difficult due to the increased pill burden and the need for more personal responsibility in managing their treatment regimen. Studies show that these adolescents might struggle with misconceptions about HIV and treatment, particularly regarding the side effects and necessity of lifelong medication (12).
- For adolescents newly infected with HIV, adherence issues might be influenced more by their behavioural and social context, such as stigma, psychological readiness,

and the support systems available to them. These factors can make it harder for them to integrate ART into their daily routines. Research indicates that behavioural interventions like motivational interviewing and peer support can be effective in improving adherence among this group (13).

Overall, while both groups face adherence challenges, the reasons and potential interventions may differ. Perinatally infected adolescents often require more targeted support as they transition into more independent management, while newly infected adolescents might benefit more from interventions addressing stigma and social support systems. In Cameroon, the National Guidelines for HIV Prevention and Care emphasize therapeutic education starting during post-test counseling. This process helps patients identify and address barriers to treatment adherence. The therapeutic education plan includes four key phases: initial education to raise awareness about the condition and treatment; ongoing educational support to reinforce adherence; re-education if there are lapses in adherence; and an evaluation of the patient's progress in managing their condition autonomously (14). It also includes contracts to allow adolescents to define the terms of counselling and support.

## POLICY OPTIONS

**GOAL: To increase VLS among ALHIV by improving adherence to ART.**

Policy measures to achieve this goal include the enforcement of therapeutic education, extension of adolescent friendly services in the community, and strengthening mental health.

### A) Implementation of structured therapeutic education program

**OBJECTIVE:** To engage adolescents actively participate in their healthcare, thereby improving retention in care and adherence to ART. While current therapeutic education exists, the proposed approach aims to offer more targeted support to address the unique needs of ALHIV.

**WHAT:** Current therapeutic education strategies for ALHIV have not fully addressed their specific needs. The proposed intervention aims to create tailored, age-appropriate educational support to improve understanding and retention in care among ALHIV. This would create a supportive environment and encourage adherence to therapeutic guidelines.

**WHY:** Insufficient therapeutic education leads to reduced adherence and poor VLS resulting in drug resistance, increasing the transmission of the virus, more opportunistic infections and death. This differs from current methods, which may use generic approaches that do not fully address the adolescent's experience of living with HIV.

**FEASIBILITY: HIGH** This structured educational approach builds on the Ministry of Health's extensive experience in delivering therapeutic education to people living with HIV. The new model leverages existing infrastructure while focusing on more personalized and adolescent-centered strategies, making it a practical and sustainable option for improving outcomes among ALHIV.

### B) Extension of adolescent friendly services model in each community

**OBJECTIVE:** To increase access to comprehensive, adolescent-centered HIV services that allow ALHIV achieve and maintain viral load suppression

**WHAT:** To provide holistic care to ALHIV by adolescent champions at the level of the community to improve adherence and retention in care. Champions within the adolescent-friendly HIV services model will play a pivotal role in providing peer support and enhancing engagement among ALHIV (facilitating peer support groups, providing counseling and therapeutic education, advocating for adolescent-friendly services, building relationships with health care providers and monitoring and feedback).

**WHY:** Insufficient adolescent-centered care can lead to auto-stigmatization, inadequate confidentiality, psychosocial problems, lack of support from family and friends, poor relationships between the adolescents and the health care providers and drug refusal. This can, in turn, lead to poor adherence.

**FEASIBILTY: HIGH** This model leverages the strengths of peer support and community involvement to empower adolescents and make HIV care more accessible, supportive, and effective. Although the government is encouraging piloting of HIV adolescent friendly services in some communities, there is the need to standardize and scale-up the comprehensive package and the implementation strategy.

### C) Strengthening mental health services

**OBJECTIVE:** To improve the overall well-being and quality of life of ALHIV and to support them in achieving and maintaining VLS.

**WHAT:** To integrate mental health care into adolescent HIV services to improve adherence to treatment and retention in care. Adolescent champions will provide peer support, raise awareness about mental health and adherence, and identify warning signs for referral, while health care professionals and psychosocial workers handle diagnosis, therapeutic interventions, and management of complex cases.

**WHY:** Insufficient mental health support will lead to more cases of anxiety, depression, bullying, internalized stigma and other mental health disorders among ALHIV, which can lead to adolescents stopping treatment or not accessing health services.

**FEASIBILITY: MEDIUM** There are some pilot initiatives aimed at addressing mental health, but these lack a standardized approach. This means the quality and type of care can vary significantly (15). There was no formal link of mental health services with other sectors. In addition, community awareness of mental health disorders is still low.

| Output | Status Quo | Therapeutic education | Scale Up Adolescent-Friendly Services | Strengthening Mental Health Services |
|---|---|---|---|---|
| Number of adolescents with VLS | **8,068** | 8,960 | **10,229** | 9,350 |
| Increase in number of adolescents with VLS | **N/A** | 892 | **2,161** | 1,282 |
| Costs (in US $)per 3 years | **$244,106** | $799,858 | **$803,160** | $789,362 |
| Cost difference between SQ and options | **N/A** | $555,752 | **$559,055** | $545,256 |
| Cost per additional ALHIV achieving VLS | **N/A** | $623.04 | **$258.7** | $425.32 |

The comparison of the different options for improving viral load suppression (VLS) among adolescents reveals that "Scale Up of Adolescent-Friendly Services" is the most effective and cost-efficient choice.

This option results in the highest number of adolescents with VLS (10,229) and the largest increase in VLS (2,161). Despite having the highest total cost ($803,160 ), it offers the lowest cost per additional adolescent achieving VLS ($258.70 ), making it the most cost-effective. "Strengthening Mental Health Services" also shows a significant impact with 9,350 adolescents achieving VLS and an increase of 1,282, at a total cost of $789,362 and a cost per additional adolescent of $425.32 . "Therapeutic Education" has the smallest increase in VLS (892) and the highest cost per additional adolescent ($623.04 ), with a total cost of $799,858.20.

Therefore, "Scale Up Adolescent-Friendly Services" stands out as the best option, providing the most significant improvement in VLS among adolescents in a cost-effectiveness analysis.

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## RECOMMENDATIONS

The Scale-up of Adolescent Friendly Services is the most cost effective and feasible option to increase VLS among adolescents. Strengthening adolescent friendly services will combine therapeutic education, skill development, sharing accurate information about health, linking adolescents to other local champions (peer support); and promote participation of adolescents in their fight against HIV. The Ministry of Public Health should work closely with other stakeholders like the Ministry of Youth and Physical Education and international bodies working on HIV to implement this policy.

## NEXT STEPS

Here are some critical steps for implementing the extension of the adolescent-friendly services model in communities:

1. **Develop a standardized implementation plan: To establish a comprehensive, standardized package of services for adolescent-friendly HIV care.**
    - *Engage stakeholders (healthcare providers, adolescent champions, community leaders).*
    - *Analyze existing data from HMIS to inform the adaptation of services.*
    - *Define key components of the service model (peer support, counseling, education, advocacy).*
    - *Draft operational guidelines and protocols.*
    - *Develop training materials for adolescent champions and healthcare providers.*
    - *Plan logistics for service delivery (supply chain management, staff roles, scheduling).*
2. **Training and capacity building: To equip adolescent champions and healthcare providers with the necessary skills.**
    - *Conduct training sessions for adolescent champions on peer support, counseling, and education techniques.*
    - *Train healthcare providers on adolescent-friendly communication, confidentiality, and psychosocial support.*
    - *Develop and distribute training manuals and resources.*
3. **Implementation and pilot testing: To test the standardized model in selected communities and assess its feasibility and impact.**
    - *Implement the model in pilot communities.*

- *Monitor and evaluate the model's effectiveness (adherence rates, viral load suppression, psychosocial well-being).*
- *Gather feedback from stakeholders and adapt the model as needed.*

4. **Scale-up and expansion: To expand the model to additional communities across the region.**
    - *Based on the results of the pilot, refine the standardized implementation plan.*
    - *Secure government and donor support for scaling up the model.*
    - *Provide ongoing technical support to communities.*
    - *Establish monitoring and evaluation systems to track progress and outcomes at scale.*
5. **Sustainability planning: To ensure long-term sustainability of the adolescent-friendly HIV services model.**
    - *Identify sustainable funding sources (government, NGOs, donors).*
    - *Advocate for policy changes to institutionalize the model.*
    - *Develop community ownership and responsibility through training and empowerment.*
    - *Monitor and evaluate the model's impact over time.*

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## EDITORIAL TEAM