

TECHNICAL BRIEF

ADOLESCENT-FRIENDLY HEALTH SERVICES FOR ADOLESCENTS LIVING WITH HIV: FROM THEORY TO PRACTICE

DECEMBER 2019

PEER DRIVEN ADOLESCENT HIV MODELS OF CARE



WHO/CDS/HIV/19.39

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Suggested citation. Adolescent friendly health services for adolescents living with HIV: from theory to practice. Technical Brief. Geneva, Switzerland: World Health Organization; 2019 (WHO/CDS/HIV/19.39). Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

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Printed in Switzerland.

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ACKNOWLEDGEMENTS

This document is the result of collaborative work between the Department of HIV and Global Hepatitis Programme, WHO and the HIV/AIDS section, United Nations Children's Fund (UNICEF).

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Peer supporters and health providers outside Mulago-Mbarara AIDS Program (MJAP), ISS Clinic in Uganda

1. INTRODUCTION

Adolescents 10–19 years old comprise one sixth of the world's population. Almost 90% live in low- and middle-income countries, where access to health and social services may be limited for myriad reasons (1). Since the number of adolescents is expected to rise significantly through 2050, achieving the Sustainable Development Goals, including the targets for universal health coverage, requires addressing their unique needs (1).

Worldwide in 2018, 1.65 million adolescents were living with HIV and an estimated 190 000 were newly infected with HIV. The situation is especially dire for adolescent girls, who account for 74% of the adolescents acquiring HIV (2). Although data on treatment coverage among adolescents are limited, access to and uptake of antiretroviral therapy are often reported to be lower than for older age groups (3,4). In 2017, among 40 countries with available data, 43% of adolescents living with HIV were receiving antiretroviral therapy (5), and those receiving antiretroviral therapy had lower rates of viral suppression than adults. The most recent data on AIDS-related deaths indicate a decline of only 16% among adolescents 15–19 years old versus a 35% decline among people 20 years and older (4).

Addressing the distinct and diverse needs of adolescents living with HIV to improve their HIV-related outcomes requires a comprehensive and integrated approach. The approach should also leverage global commitments to adolescent health, including the Global Strategy for Women's, Children's and Adolescents' Health (2016–2030) (6) and the Global Accelerated Action for the Health of Adolescents (AA-HA!) (7), which provides policy-makers with guidance on how to set priorities for, plan, implement, monitor and evaluate adolescent health programmes, including HIV.

The 2014 WHO report *Health for the world's adolescents: a second chance in the second decade* (8) recommended developing and implementing national quality standards and monitoring systems as a key step in transforming how health systems respond to adolescent health. Since then, global standards with implementation guides on delivering high-quality adolescent services have been developed and rolled out (9). However, these standards need to be adapted to align with issues related to adolescents living with HIV, improved access to HIV testing services, support for adherence to antiretroviral therapy, viral load monitoring, age-appropriate disclosure, and peer support, all of which are essential to assuring adolescents' overall health and well-being as well as achieving viral load suppression and preventing AIDS-related deaths in adolescents living with HIV.

There is currently limited implementation of guidance regarding the provision and monitoring of adolescent-friendly health services to ensure that adolescents living with HIV receive appropriate services that meet their unique needs.

Although examples of excellent practices of adolescent-friendly health services for adolescents living with HIV exist (10,11), many remain poorly documented, have limited scale, and the quality and standards vary widely across service delivery points (12–14). HIV services for adolescents living with HIV often have limited integration with other adolescent health services such as those for mental health, adolescent sexual and reproductive health. Many adolescents living with HIV therefore continue to receive services that do not meet the explicit principles for providing adolescent-friendly health services: equitable, acceptable, accessible, appropriate and effective (15).

In 2018 and 2019, WHO and partners conducted technical consultations in 16 countries to assist in improving service delivery for adolescents living with HIV. Following from these consultations and in response to requests from countries, this publication primarily seeks to define and clarify the key elements of adolescent-friendly health services, summarize existing guidance on adolescent-friendly health services and differentiated service delivery for adolescents living with HIV while showcasing best-practice case studies based on country experience in implementing these services.

This technical brief will be useful to HIV programme managers in health ministries and other adolescent-related line ministries, especially those in low- and middle-income countries in sub-Saharan Africa, in implementing, monitoring and evaluating peer-based and adolescent-responsive and -friendly services for adolescents living with HIV. The publication will also be a valuable resource for health-care workers and will assist international organizations, nongovernmental organizations and other implementing partners in better contextualizing, planning and delivering peer-based and adolescent-responsive and -friendly services for adolescents living with HIV. It briefly describes the criteria and standards for providing adolescent-friendly health services, summarizes some of the key peer-based implementation evidence, details examples and key characteristics of five peer-based adolescent service delivery models and offers programmatic considerations for providing adolescent-responsive and -friendly services to ensure meaningful engagement of adolescents as a key focus.

The publication is aligned with and summarizes the essential global implementation guidance from documents on adolescent service delivery including *Making health services adolescent friendly* (16), *Global standards for quality health-care services for adolescents* (9), *Key considerations for differentiated antiretroviral therapy delivery for specific populations* (17) and *A decision framework for differentiated antiretroviral therapy delivery for children, adolescents and pregnant and breastfeeding women* (18).

2. ADOLESCENT-FRIENDLY HEALTH SERVICES

2.1 Key principles and understanding

Adolescence is a critical period of human development, with rapid and increasing physical, hormonal, neural, psychosocial, cognitive, emotional, sexual and reproductive development and maturation (8). Health services for adolescents and how they are delivered represent a significant determinant of quality of life for adolescents and should reflect the following key changes during adolescence: emerging autonomy but limited access to resources; dramatic increase in quantity and variety in social relations potentially increasing vulnerability; movement from dependence to interdependence, balancing autonomy and connection; developing self- and sexual identity, including capacity for self-direction; enhanced but evolving cognitive ability and greater impulsivity; and gap between biological maturity and assumption of adult roles (8).

Delivering adolescent-friendly health services can be challenging, since adolescents are a heterogeneous group with different expectations and preferences. The WHO quality of care framework provides a useful working definition of adolescent-friendly health services. To be considered adolescent friendly, health services should be accessible, acceptable, equitable, appropriate and effective (Box 1).

Box 1. WHO-defined characteristics of adolescent-friendly health services

Equitable: all adolescents, not just certain groups, are able to obtain the health services they need.

Accessible: adolescents are able to obtain the services that are provided.

Acceptable: health services are provided in ways that meet the expectations of adolescent clients.

Appropriate: the right health services that adolescents need are provided.

Effective: the right health services are provided in the right way and make a positive contribution to the health of adolescents.

Source: *Making health services adolescent friendly: developing national quality standards for adolescent friendly health services*. Geneva: World Health Organization; 2012 (16).

Specific interventions and/or delivery platforms and approaches to adolescent populations have shown significant improvements in health outcomes (lower pregnancy rates); health-care utilization (presentation at a clinic for mental health, HIV counselling and testing and outpatient visits); uptake of services (HIV testing); knowledge (acquiring HIV and sexually transmitted infections, preventing pregnancy and sexual health); attitudes (towards sex and HIV testing); sexual risk-reduction behaviour (condom use); and service acceptability (19–29). HIV services provided to adolescents living with HIV should therefore be tailored to their specific needs through what is now widely termed adolescent-friendly health services.

2.2 Global standards for high-quality health-care services for adolescents

The principles of adolescent-friendly health services have been clearly outlined (Box 1). In 2015, WHO and UNAIDS translated the principles into eight global standards for quality health-care services for adolescents (30), with each standard reflecting a critical facet of service delivery as well as its criteria. The standards were accompanied by an implementation guide that highlighted necessary steps at the national, district and facility levels to achieve the standards and assessment tools to measure implementation. However, for these key principles and standards to be useful to country HIV programmes, they need to be aligned with clear activities and should be triangulated with HIV-specific considerations (Box 2). Table 1 shows examples of activities that country programmes could consider in attaining each of the standards. These activities need to be linked to results to improve specific outcomes to improve the health of adolescents living with HIV.



Visitors from CDC and USAID offices join in a group photo with OTZ youth
© Centre for Health Solutions (CHS)

TABLE 1. ACTIVITIES ALIGNED WITH THE GLOBAL STANDARDS FOR QUALITY OF HEALTH-CARE SERVICES FOR ADOLESCENTS

Global standard	Description	Example of activities implemented to attain this standard
1. Adolescents' health literacy	The health facility implements systems to ensure that adolescents are knowledgeable about their own health and they know where and when to obtain health services	Training of peer supporters, also adolescents living with HIV in HIV prevention, sexual and reproductive health, mental health and life skills Developing job aides on HIV testing, care and treatment, viral load monitoring, adherence counselling and contraceptive information and provision specific to adolescents Peer supporters and treatment literacy staff address HIV knowledge and adherence the concerns of adolescents
2. Community support	The health facility implements systems to ensure that parents, guardians and other community members and community organizations recognize the value of providing health services to adolescents and support such provision and the utilization of services by adolescents	Adolescents living with HIV and their caregivers join clubs and are involved in both joint and separate activities Conducting sensitization sessions within schools to eliminate stigma and promote testing, adherence and retention by school-attending adolescents living with HIV Engaging parents and guardians during caregiver sessions and introducing the services
3. Appropriate package of services	The health facility provides a package of information, counselling, diagnostic, treatment and care services that fulfils the needs of all adolescents. Services are provided in the facility and through referral links and outreach	Standard operating procedures developed and implemented to provide standard and simplified information on the available package of services Constitute a ministry-led multidisciplinary mentorship team on capacity-building for the needs of the adolescents
4. Providers' competencies	Health-care providers demonstrate the technical competence required to provide effective health services to adolescents. Both health-care providers and support staff respect, protect and fulfil adolescents' rights to information, privacy, confidentiality, non-discrimination, non-judgemental attitude and respect	Training of health-care workers at service delivery points on providing adolescent-friendly health services within an integrated service package Regular meetings, on-site support and mentorship, and refresher workshops Peer educator curriculum package and teen club guide for peers and health-care providers to use
5. Facility characteristics	The health facility has convenient operating hours, a welcoming and clean environment and maintains privacy and confidentiality. It has the equipment, medicines, supplies and technology needed to ensure effective service provision to adolescents	Age band clinic appointment and flexible opening hours outside regular clinic hours, such as evenings or weekends or school holidays to facilitate convenient hours and a safe space for HIV care and psychosocial support discussions Multidisciplinary teams scheduled to provide different services; to refill antiretroviral medicine, conduct viral load testing and counsel clients Develop and adhere to the infection prevention and control policies
6. Equity and non-discrimination	The health facility provides high-quality services to all adolescents regardless of their ability to pay, age, sex, marital status, education level, ethnic origin, sexual orientation or other characteristics	Services provided free of charge with no out-of-pocket expenses Client satisfactory survey done periodically to get feedback for improvement Involvement of multi-layered and multisectoral agencies, including social protection services and the district health team
7. Data and quality improvement	The health facility collects, analyses and uses data on service utilization and quality of care, disaggregated by age and sex, to support quality improvement. Health facility personnel are supported in participating in continual quality improvement	Develop and implement a monitoring and evaluation framework that clearly defines process and outcome indicators Develop and implement standard data collection tools at the facility level and a reporting template that capture age, sex and outcomes Quality improvement teams to routinely review disaggregated data and brainstorm for solutions with health facility staff and district councils
8. Adolescents' participation	Adolescents are involved in planning, monitoring and evaluating health services and in decisions regarding their own care and in certain appropriate aspects of service provision	Implementation of youth advisory groups and processes for design, implementation and feedback on services Peer supporters taking part in relevant health team meetings such as case reviews and advocacy for adolescent-friendly health services Training of peers to be self-health managers, to motivate self and others and to be a source of positive peer pressure to others

Source: Global standards for quality health-care services for adolescents: a guide to implement a standards-driven approach to improve the quality of health care services for adolescents (30).

Box 2. HIV-specific implementation considerations for adolescents living with HIV

- Align approaches for HIV service delivery with WHO and national adolescent-friendly health service standards, protocols and activities
- Include the implementation of adolescent-friendly approaches in HIV health service supervisory and monitoring systems
- Ensure training, research and personal development opportunities for health service providers on adolescent HIV treatment and care
- Engage service providers, adolescents and other key stakeholders to identify acceptable and feasible activities
- Implement adolescent-friendly health service approaches in all HIV services used by adolescents, including antenatal care for pregnant adolescents living with HIV
- Establish links and referral pathways to ensure a comprehensive continuum of care, especially for the transition from paediatric to adult HIV services
- Address the needs and vulnerabilities of adolescents from key populations

Source: Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection: recommendations for a public health approach – second edition (15).

In addition to the routine services needed by adolescents, adolescents living with HIV need additional specific HIV-related services that support access to HIV prevention, testing, disclosure of their HIV status, linkage to treatment and care, retention, adherence and viral load testing. However, as previously noted, evidence indicates that adolescents living with HIV are underserved by current HIV services and have significantly worse access to HIV testing, antiretroviral therapy coverage, and viral load suppression (3,12,15). adolescents living with HIV are at high risk of loss to follow-up both before and after antiretroviral therapy initiation, with pregnant adolescents living with HIV and adolescent key populations particularly vulnerable (3).



Gladys Asinyen and David Kerio are young people living with HVI who volunteer at Lodwar County Referral Hospital in Turkana County, Kenya. Through the Red Carpet program, Gladys, 19, works with children and adolescents 10-24 who have tested positive for HIV. She follows up with her clients, linking them to care and treatment. She is now at university working on a diploma in HIV management. David, 21, is a peer educator. He mentors other adolescents and helps the hospital maintain up-to-date records on adolescents and children. He is undertaking a diploma in community health.

2.3 The importance of peer support for adolescents living with HIV: evidence and examples

Meaningful adolescent engagement is one of the standards for high-quality adolescent-friendly health services, and adolescent peer support is a key strategy to achieve this standard. Although robust descriptions of actual service delivery models focusing on or intentionally including adolescents are not readily available, many health facilities in low- and middle-income countries within sub-Saharan Africa appear to be including peer support activities for adolescents and young people living with HIV. Such models provide support in a variety of ways, such as individual or group support, community- or facility-based and in-person or virtually.

A survey of 218 facilities carried out in 23 countries in sub-Saharan Africa in 2014 found that 49% offered some form of peer support for adolescents and young people living with HIV (31). According to systematic reviews of the literature, although peer support has not shown consistent effectiveness for adolescent and youth HIV prevention (32) or sexual health education (33), some peer support programmes have demonstrated impact on improving health-seeking behaviour and HIV treatment outcomes for adolescents and young people living with HIV, such as linkage, adherence to antiretroviral therapy, retention in care and viral suppression. However, most information on outcomes has come from programme reports, evaluations and conference abstracts, with very few described in peer-reviewed literature.

Although most examples of peer support models focus on retention in care and/or adherence to antiretroviral therapy as outcomes, a three-session peer support group intervention in South Africa (34) and the use of community adolescent treatment supporters in the Zvandiri model in Zimbabwe (11) both showed improved linkage to care. Zvandiri also found that community adolescent treatment supporters were effective at improving retention and adherence, with young people receiving the intervention 3.9 times more likely to self-report adherence to antiretroviral therapy compared with the control group (11).

Another study from Malawi described teen clubs and found that adolescents and young people living with HIV engaged in teen clubs had 3.7-times lower odds of attrition than those who did not participate (35). Additional descriptions of adolescents and young people living with HIV peer support groups and peer supporters have resulted in improved clinic attendance and/or retention (36–39). A systematic review of factors influencing adherence to antiretroviral therapy among adolescents and young people living with HIV corroborated identified peer support as a facilitator of adherence (40).

Examples of the effect of peer support on viral suppression are few. A survey of 71 health facilities in 13 countries in sub-Saharan Africa revealed that facility-based peer support was associated with a seven-fold increase in likelihood of aggregate viral suppression in adolescents and young people living with HIV when compared with the regional viral load suppression rate (adjusted odds ratio 6.95, confidence interval 1.28–37.59) (41). Kenya has been rapidly scaling up the Operation Triple Zero programme that has observed increases in viral load suppression rates among adolescents and young people living with HIV (10). In Zimbabwe, a cluster randomised trial found that the Zvandiri programme resulted in 42% lower prevalence of virological failure or death at 96 weeks among participants compared to those only receiving MoHCC standard of HIV care at rural clinics (42).

Although most examples found peer support to positively influence adolescents and young people living with HIV outcomes, one study in Kenya (43) reported no difference in retention after monthly peer support groups, health provider training in adolescent-friendly health services and a dedicated adolescent and youth clinic day. The authors suggested that this may have resulted from the heterogeneity of intervention across facilities or the varying fidelity of the intervention. In addition, most examples of peer-support are health-facility based, except for Zvandiri, which provides peer support both in the facility and community.

More research and information are needed to assess whether physical location affects effectiveness and to better understand the extent to which text messaging, WhatsApp and other social media could enhance or replace in-person peer support. There continues to be an urgent need for operational and implementation research to assess the effectiveness of and best practices within peer support programmes.

Adolescent service delivery models

With an increasing number of countries moving towards test and treat all, more people living with HIV are tested and diagnosed and initiate antiretroviral therapy, resulting in an increased number of clients at the health facility level. New developments in service delivery, including differentiated service delivery, show the way forward to responding to the heightened client volume while providing high-quality care with the right intensity and frequency and considering clients' needs and preferences (15).

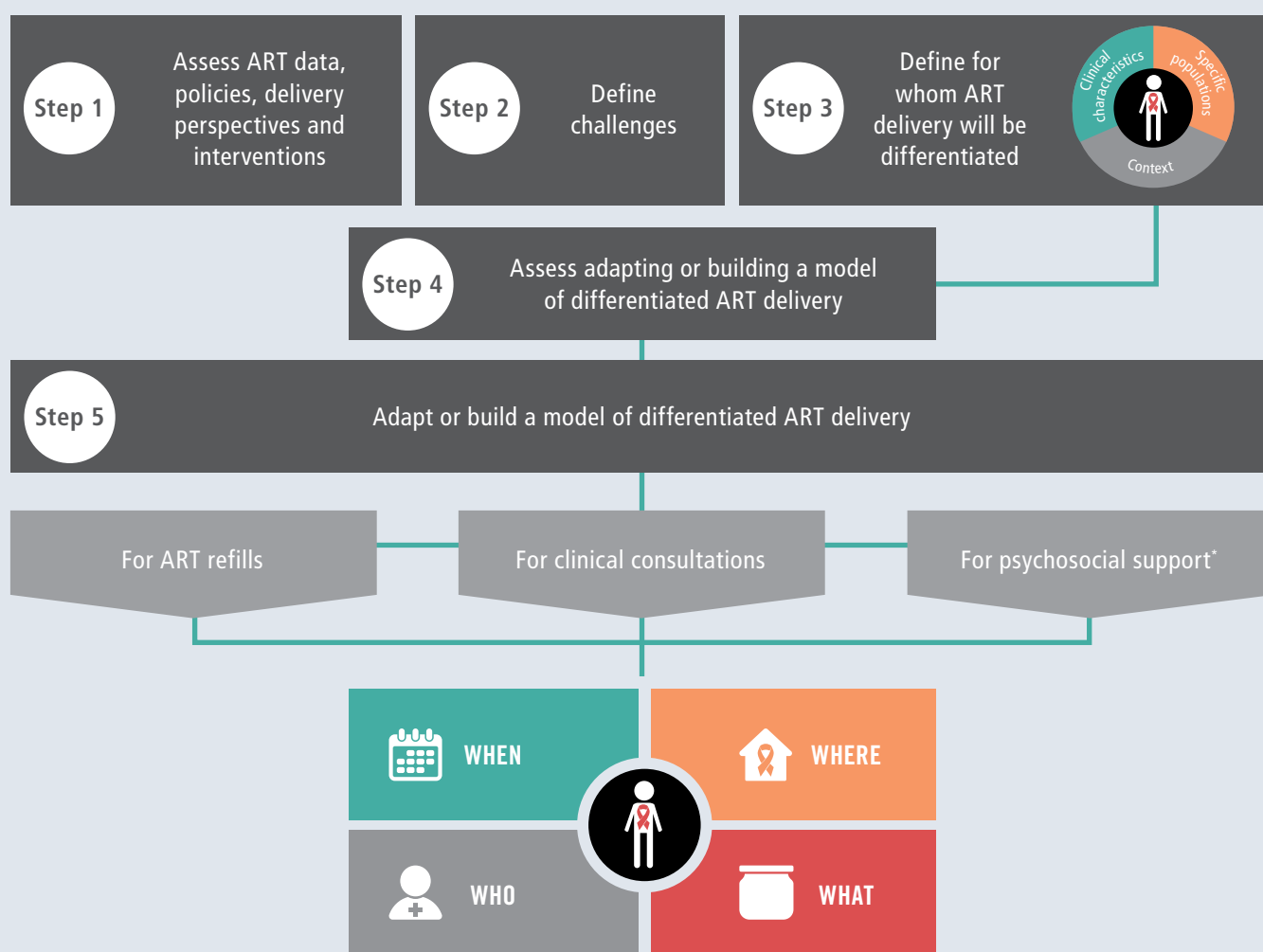


CATS-led adherence counselling during a home visit to a client in rural Zimbabwe © Zvandiri

Differentiated service delivery applies across the HIV care continuum to all three 90–90–90 targets. Differentiated antiretroviral therapy delivery is a component of differentiated service delivery. It aims to improve retention and viral suppression by optimizing models of drug and care delivery. Differentiated antiretroviral therapy delivery focuses specifically on clients who are receiving treatment. Differentiated service delivery also includes models suited to testing people unaware of their HIV status to viral suppression of HIV clients enrolled in care.

Although differentiated antiretroviral therapy delivery models were initially developed for stable adult clients in high-prevalence settings, differentiated antiretroviral therapy delivery applies to all populations, including children, adolescents and pregnant and breastfeeding women (17). Differentiated antiretroviral therapy delivery models are context- and population-specific and developed based on a five-step approach (Fig. 1).

FIG. 1. FIVE-STEP APPROACH TO DIFFERENTIATED ANTIRETROVIRAL THERAPY DELIVERY FOR SPECIFIC POPULATIONS



* A new set of 'psychosocial building blocks' is included in the *Decision Framework for Specific Populations*. Psychosocial support, such as peer environments, can improve stable clients' long-term adherence but should not impede implementation of differentiated ART delivery.

Source: *A decision framework for differentiated antiretroviral therapy delivery for children, adolescents and pregnant and breastfeeding women* (18).

TABLE 2. KEY CONSIDERATIONS FOR DIFFERENTIATED ART DELIVERY FOR ADOLESCENTS**Building blocks for the ART delivery model****2.1. ART refill visits**

Building blocks		Considerations
When	Every 3–6 months	- ART refills can either be provided at each clinical consultation visit or can be dispensed between clinical visits but need not be more frequent than every three months. - If adolescents attend school away from home, extending ART refill periods to accommodate school terms should be given priority. - If possible, providing extended adolescent-specific service hours (late afternoon and/or weekends) should be considered to support adolescent access after school hours.
Where	Primary health care	ART refills should be provided as close to people's homes as possible. Out-of-facility individual or group collection ART delivery models can be considered.
	Out of facility	Pregnant or breastfeeding adolescents should continue to be supported within differentiated ART delivery models for clinically stable adolescents.
Who	Lay providers	- The 2016 WHO consolidated ARV guidelines already recommend that trained and supervised lay providers be able to distribute ART between clinical visits, including to adolescents. - Adolescent-friendly orientation of lay providers should be considered (see the WHO guidelines on making health services adolescent friendly).
What	ART refill	- ART refills should be dispensed based on dosages reflected in the clinician's script. - If possible, family planning repeat visits should be aligned with ART refill visits. If oral contraception is provided, refills could be distributed along with ART refills.
	Referral check	Clear referral pathways should be put in place. Lay providers should always check whether there are any health or psychosocial concerns, triggering a referral.
	Adherence check	Can include self-report, pill count or pharmacy records.

2.2. Clinical consultation visits

Building blocks		Considerations
When	Every 3–6 months	- In general, clinically stable adolescents do not need to be clinically reviewed more than twice a year. This provides sufficient opportunity for a clinician to identify and assess adherence, any newly arising psychosocial issues, mental health disorders and/or sexual and reproductive health needs. - Clinical consultations should be scheduled with the school calendar in mind. If it helps adolescents, efforts should be made to schedule clinical consultations during school holidays. - If possible, providing extended adolescent-friendly service hours (late afternoon and/or Saturdays) could be considered to support adolescent access after school hours.
Where	Primary health care	- Clinical care should ideally be provided in primary health care closer to the people's homes. - If possible, providing clinical consultations within adolescent-friendly designated service space could be considered.
	Outreach from primary health care	If mobile outreach services are provided to adults receiving ART in remote areas, adolescents should also be included.

Building blocks		Considerations
Who	Nurses Midwives Clinical officers Doctors	- The 2016 WHO consolidated ARV guidelines already recommend nurses to maintain ART for adolescents. - Adolescent-friendly orientation of service providers should be considered (see the WHO guidelines on making health services adolescent friendly).
What	Adolescent clinical consultation	- Follow country guidelines for adolescent clinical assessment, including but not limited to TB screening, psychosocial health and sexual and reproductive health assessments and adherence check. TB screening and assessment of exposure to TB contacts should be maintained. - In settings that are endemic for TB and have a high risk of TB infection, offering TB screening more frequently than every six months may be appropriate. TB screening could also be conducted during ART refill visits. - Most adolescents should have achieved adult dosage weight bands, with no further dosage adjustments required. If the adolescent is below the adult threshold weight, follow the approach for children: check the weight and manage any dosage adjustments required until the next clinical consultation.
	Mental health assessment	The prevalence of mental health disorders among adolescents necessitates annual mental health assessment. This may include drug and alcohol screening.
	Laboratory tests	The 2016 WHO consolidated ARV guidelines recommend annual viral load assessment for clinically stable adolescents (if viral load testing is not available, CD4 counts every six months).
	Rescript	The ART and family planning scripting period should cover the period until the next clinical consultation (not only until the following ART refill visit).

2.3. Psychosocial support

Building blocks		Considerations
When	Every 1–6 months	- Psychosocial support should be available and accessible either as part of the package of support at ART refill visits (see above) or separately. - Such support should be available for take-up at a frequency appropriate to the specific needs of the adolescent.
Where	Primary health care	- Psychosocial support is ideally provided as close to people's homes as possible. - If low concentrations of adolescents make support groups at the community level unfeasible, virtual support could be considered or, alternatively, less frequent attendance at more centralized locations such as youth-friendly primary health cares or individual one-on-one home support. - Pregnant or breastfeeding adolescents should continue to be supported within adolescent peer support environments.
	Out of facility	
	Virtual environment	
Who	Lay providers	Community-based organizations, including the providers of services for orphaned and vulnerable children and lay providers, could be considered for providing these services.
	Peers	
What	Peer group environment	Adolescents benefit from peer support environments such as support groups.
	Referral check	Clear referral pathways should be in place. Every contact with an adolescent should be used for checking whether there are any health or psychosocial concerns, triggering a referral.
	Onward disclosure support	Despite growing independence, adolescents benefit from caregiver support. Psychosocial support packages should consider supporting adolescents to disclose their status to adult support structures and involve such adults in their care.

Source: Key considerations for differentiated antiretroviral therapy delivery for specific populations: children, adolescents, pregnant and breastfeeding women and key populations. Geneva: World Health Organization; 2017

Several countries in sub-Saharan Africa have incorporated differentiated service delivery into their national guidelines. In addition, major donors, including the United States President's Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund to Fight AIDS, Tuberculosis and Malaria, have promoted the adoption of differentiated service delivery models in several countries, especially through targeted support to roll out reduced frequency of clinic visits and longer antiretroviral therapy refills (multi-month dispensing) for clinically stable people living with HIV. The scaling up of differentiated service delivery models for adolescents lags behind that of adults, with some resistance to reducing the frequency of clinical consultations and extending antiretroviral therapy refills for this population.

It is critical that adolescent peer-based models be aligned with the principles of providing differentiated services for adolescents. This section highlights several existing peer-based models providing services for adolescents living with HIV. Although many excellent peer-based models exist, this section profiles five examples and describes each in terms of the building blocks of differentiated service delivery – when (frequency of services), who (cadre of staff), where (location of services) and what (package of services provided). Also highlighted are the costs, any data on scale and outcomes as well as the challenges and lessons learned. In addition, this section highlights key lessons for adapting each model and provides practical examples of implementing each global standard for adolescents living with HIV.

The five models were selected based on the following criteria:

- **Evidence of effectiveness:** documented evidence of impactful, data-proven implementing experiences of differentiated service delivery models;
- **Evidence of scale:** widely implemented across the multiple facilities, districts and countries;
- **Evidence of sustainability:** duration of implementation (two years or more), use of existing structures in the country (health workers, supply chain, data systems and facility structures) and health ministry involvement or engagement;

- **Population focus:** service delivery model is largely focused on adolescents living with HIV; and
- **Geographical focus:** implemented in sub-Saharan Africa.

The service delivery models featured include Ariel Adherence Clubs; Baylor College of Medicine International Paediatric AIDS Initiative Teen Club programme; Operation Triple Zero; REACH (Re-Engage Adolescents and Children with HIV); and Zvandiri. These models are currently being implemented in multiple countries across sub-Saharan Africa for adolescents living with HIV and have shown evidence of improved adherence, retention in care and viral suppression (see Annexes 1–5).

Central to the success of service delivery models for adolescents is that they reflect the key elements of the global standards for adolescent-friendly health services (see Table 1 for examples of activities aligned to the global standards). A key feature of all the models is the involvement and engagement of adolescents in services delivered across the HIV cascade (see Table 3) and, for some, encompassing integrated service packages including mental health, sexual and reproductive health. However, national policies need to reflect the provision of services by lay providers and peers, including antiretroviral therapy refills (15,17).

Although there are featured examples of models delivering multi-month antiretroviral therapy refills for stable adolescents, this is not the case for all the models featured. Adolescents would benefit from regular peer support, but adolescents who are stable require client-centred services that give priority to less frequent, 3- to 6-month antiretroviral therapy refills for those who are stable. Adolescents can receive antiretroviral therapy refills from lay providers, peers can provide psychosocial support and adolescents benefit from peer support environments such as support groups.

RECOMMENDATIONS

- Adolescent-friendly health services should be implemented in HIV services to ensure engagement and improved outcomes (strong recommendation, low-quality evidence).
- Trained and supervised lay providers can distribute ART to adults, adolescents and children living with HIV (strong recommendation, low-quality evidence).
- Community-based approaches can improve treatment adherence and retention in care of adolescents living with HIV (conditional recommendation, very low-quality evidence).
- Training of health-care workers can contribute to treatment adherence and improvement in retention in care of adolescents living with HIV (conditional recommendation, very low-quality evidence).
- Adolescents should be counselled about the potential benefits and risks of disclosure of their HIV status to others and empowered and supported to determine if, when, how and to whom to disclose (conditional recommendation, very low-quality evidence).

Source: World Health Organization, 2016. Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection: recommendations for a public health approach.

Most of the models remain largely facility based. Adolescent community antiretroviral therapy models need to be better reflected and understood, considering sufficient and reliable support and resources, including a flexible and reliable drug supply, access to high-quality clinical management, a reliable monitoring system that can follow adolescents in and out of the community to the clinic and a nationally supported cadre of lay health workers (15).

Finally, the five adolescent service delivery models featured provide an integrated package of services that includes psychosocial support. Given the importance of mental health in adolescence and its effect on adherence, sufficient space and time should be made available to identify and assess any newly arising psychosocial issues, mental health disorders, drug and alcohol use or dependence and/or sexual and reproductive health needs (17).

RECOMMENDATIONS

- Less frequent clinical visits (3–6 months) are recommended for people stable on ART (strong recommendation, moderate-quality evidence).
- Less frequent medication pickup (3–6 months) is recommended for people stable on ART (strong recommendation, low-quality evidence).

Source: World Health Organization, 2016. Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection: recommendations for a public health approach.

TABLE 3. POINTS ALONG THE HIV CASCADE COVERED BY THE ADOLESCENT SERVICE DELIVERY MODELS

Points along the HIV cascade	Prevention	Finding	Testing and linking	Psychosocial care and HIV knowledge	Accessing SRH services/ secondary prevention	Adherence and viral load suppression	Retention	Finding LTFU	Transition to adult care
AAC									
BIPAI Lesotho									
OTZ									
REACH									
Zvandiri									

Annexes 1 to 5 provide more detailed information on the five service delivery models. Please note that information in the annexes are as submitted by partners.

3. KEY CONSIDERATIONS FOR SUCCESSFULLY IMPLEMENTING ADOLESCENT-FRIENDLY HEALTH SERVICES

HIV programmes should provide coordinated leadership to support adolescent service delivery platforms in reaching adolescents living with HIV with high-quality services and at scale. Evidence shows that interventions are too often fragmented or limited in scope and thus ineffective to tackle the underlying causes of poor health outcomes among adolescents living with HIV (12–14).

Adolescent-friendly health services should be seen as a systematic way of delivering services and be fully integrated into quality of care policies and strategies within HIV programmes and adolescent health strategies. In addition, they should be mainstreamed into existing structures at all service delivery points and supported by mechanisms that facilitate implementation at all levels of care. Adaptation to the local context is critical to ensure their applicability in all adolescent service delivery areas in health facilities and communities, with measures in place to monitor quality and performance for desired outcomes. A shift is needed from past approaches of building parallel services or implementing project-based models for delivering services to adolescents living with HIV to an approach in which adolescent HIV services are an integral part of overall health systems, including in all relevant health policies, strategies and programmes.

The five adolescent-friendly service delivery models featured in this brief all included a core component of peer psychosocial support. Boxes 3 and 4 show the lessons that can be learned from these examples.

Box 3. Key considerations for adapting and scaling up peer-based, adolescent-friendly models for service providers and implementing partners

- Conduct routine assessments to map, assess and plan, set targets and monitor progress and quality. This could be done through baseline, mid-term and end-line assessments and preferably not done vertically but aligned with broader, ongoing assessments.
- Orientation and training of peer counsellors, youth trainers, health-care workers, local and international implementing partners and agencies on adolescent-friendly services, policies to promote and protect adolescents' health, expectations and the roles and responsibilities of the peer counsellors.
- Standardized selection of peer counsellors through clearly set and consistent selection criteria
- Mentorship of the peer counsellors, implementing partners and health-care workers through regular on-the-ground mentorship, including through digital and remote mentorship.
- Care of peer counsellors and health-care workers: paramount to the success of the programme is the care for the peer counsellors and health-care workers. For peer counsellors, this means the full package of differentiated care is given priority for peer counsellors, while available services including HIV prevention, testing, treatment, psychosocial services, where needed, are available to health-care workers.
- Transition plan for peer counsellors ageing out of the programme. Transition is a process and requires time for planning and adequate support throughout the entire transition process.
- Provide expanded service options and training, including but not limited to TB, sexual and reproductive health and rights, young mothers, disability and mental health.

Box 4. Key programmatic enablers for effectively scaling up peer-based, adolescent-friendly models for policy-makers and programme managers

- Government ownership, leadership and coordination, especially the health ministry but together with other key line ministries
- Integration of adolescent differentiated service delivery within national policies, strategies and plans
- Advocate and promote policies and guidelines to promote and protect the health of adolescents
- Adopt monitoring and evaluation frameworks with age-disaggregated indicators and integration within national tools
- Use WHO global standards for high-quality health-care services for adolescents
- Standardizing adolescent service delivery training curricula, service delivery tools and materials
- Bidirectional linkage between community interventions and health facilities
- Meaningful engagement of adolescents and young people in designing, planning and implementing, monitoring and evaluating the programme
- Budgeting and resource mobilization for sustained support for integrated peer-led service delivery and support for the peer supporters



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Leaders within the OTZ group discuss issues pertaining to adolescent health during a group sessions © CDC



Multi-disciplinary community outreach for enhanced cases - CATS, Community Nurse and Case Care Worker © Tsvangirai Mukwazhi

4. CONCLUSIONS

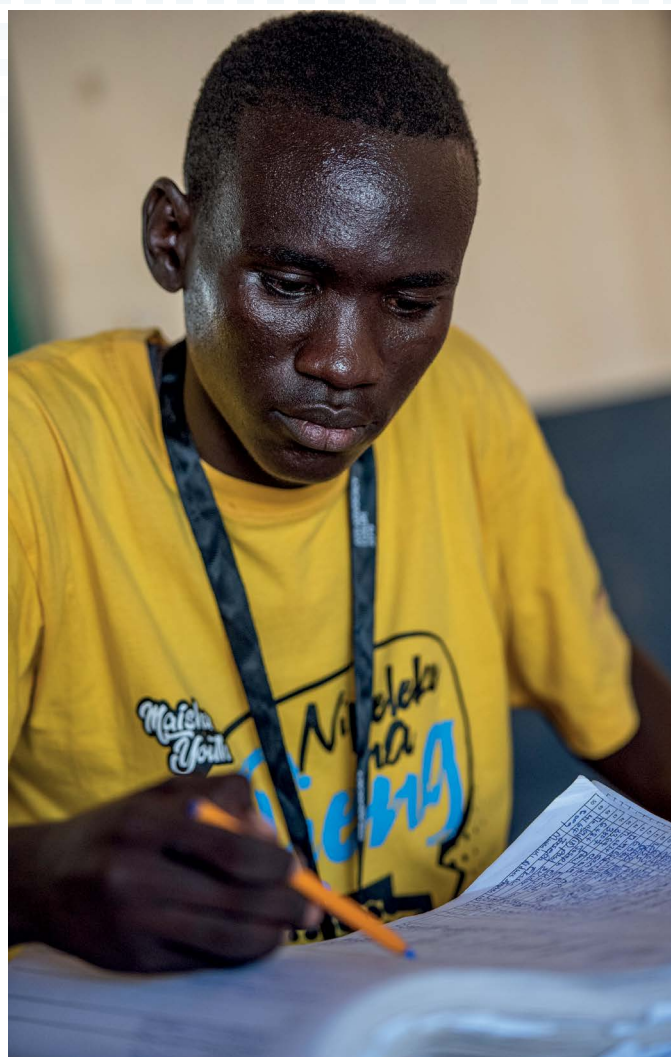
The delivery of person centred and integrated services to all adolescents living with HIV by adolescent friendly service providers during adolescent friendly hours and in an adolescent friendly environment are essential.

The meaningful engagement of adolescents in the planning, monitoring and evaluation of health services and in decisions regarding their own care is key as an integral component of effective adolescent HIV care.

It is essential that the meaningful participation and engagement of adolescent peers is encouraged and supported by programs and that they are empowered and trained as effective peer educators, counsellors, trainers and advocates. WHO, working with partners will continue to support processes, initiatives and actions, including on involving and engaging adolescents towards improving adolescent HIV outcomes.

Careful contextual considerations need to be made when adapting peer based service delivery models. In particular, the WHO adolescent service delivery recommendations including on the use of lay providers, reducing the frequency of medication pickups and refills need to be well reflected.

Efforts and investments are needed for countries to move from theory to practice and to scale up peer driven adolescent HIV models that have already shown results or significant promise, through south to learning to extend the benefits of successful interventions to other countries and regions. With a substantial range of effective and appropriate interventions that can be delivered at scale, progress can be accelerated to meet international targets and to improve adolescent HIV services and ultimately the health and well-being of adolescents living with HIV.



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ANNEX 1. ARIEL ADHERENCE CLUBS

Background and introduction

Ariel Adherence Clubs (AACs) are psychosocial support groups for children and adolescents living with HIV 5–19 years old developed by the Elizabeth Glaser Pediatric AIDS Foundation and have been implemented since 2007. They are based on the premise that children and adolescents living with HIV will optimize health outcomes if clinical services are complemented with excellent social support and age-appropriate information about HIV infection, treatment, adherence, HIV status disclosure, positive living and life skills needed for growing into healthy adults living with HIV. The Elizabeth Glaser Pediatric AIDS Foundation is currently implementing AACs in seven countries. The clubs are contextualized in each country to ensure that they address local and context-specific challenges for the children and adolescents accessing care, amid changing treatment packages and technology. From 2017 to 2019, the Elizabeth Glaser Pediatric AIDS Foundation supported AACs at 105 facilities across six regions in the United Republic of Tanzania within the United States Agency for International Development (USAID)/Afya Boresha Northern Zone Project.

Countries where implemented: Côte d'Ivoire, Democratic Republic of the Congo, Eswatini, Lesotho, Malawi, Uganda and United Republic of Tanzania (this summary focuses on the United Republic of Tanzania)

Merveille Mulema (secretary) and Chadrack Mudikisi (president) present at the Ariel Club at the Elonga Health Center in Kinshasa, DRC. The Ariel Club is a space where trained adolescents provide psychosocial support to their peers on adherence to ARVs, the process of disclosure, and other issues that children and adolescents living with HIV face. Its HIV/AIDS unit is supported by EGPAF's IHAP-Kinshasa project under USAID/PEPFAR funding © Eric Bond / EGPAF 2018



Summary information

Frequency of peer group meetings	Monthly
How	Facilities with the highest volume of children and adolescents living with HIV were chosen to start and implement AACs. The following are key elements of AACs. • Clinical service delivery (antiretroviral therapy refill, laboratory testing and clinical care) occurs on the same day as the monthly support group meeting, which also assists in addressing bottlenecks and overcrowding at facilities and streamlining care. • Psychosocial support and group and peer health education in safe spaces to enable participants to engage with other children and adolescents living with HIV to discuss everyday matters (not always about HIV), have fun, play and normalize their experience of living with HIV. • Counselling of caregivers (to assist in improving adherence) through health education and individual counselling sessions.
Recruitment	AACs have recruited adolescents living with HIV to train them as facilitators during club meetings and to integrate peer education. Peer educators, accompanied by health-care workers, also provide outreach health education to schools and sometimes help to track adolescents in the community who miss clinic appointments.
Outcomes	Integrated services Adolescent-focused services were offered in HIV clinics through peer-facilitated AACs with integrated clinical services. Sexual and reproductive health services such as HIV testing, family planning, sexually transmitted infection screening and management, and gender-based violence care were available in HIV, reproductive and child health and the outpatient department. The number of adolescents utilizing sexual and reproductive health services increased at adolescent- and youth-friendly service sites, compared with other service sites, for HIV testing, sexually transmitted infection and gender-based violence care but not for family planning services.

	Visit attendance More than half (53%) of all adolescents attending adolescent- and youth-friendly service sites attended at least one AAC versus only 37% of adolescents at other service sites who attended AACs ($P < 0.0001$). Further, adolescents attended more AACs at adolescent- and youth-friendly service sites than at other service sites ($P < 0.0001$). Adolescents at adolescent- and youth-friendly service sites who were eligible for HIV viral load testing were significantly more likely to have viral load tested (72%). Of the 20 adolescent- and youth-friendly service sites, 78% of adolescents eligible for HIV viral load testing who attended AACs had viral load tested versus 29% among those not attending AACs ($P < 0.0001$). Almost 92% of those attending AACs in their first six months on antiretroviral therapy were retained at six months versus 79% among those not attending AACs ($P = 0.01$). Viral suppression Although adolescents at adolescent- and youth-friendly service sites who were eligible for HIV viral load testing were significantly more likely to have HIV viral load tested, viral suppression rates did not differ between adolescent- and youth-friendly service sites (67%) and other service sites (66%; $P = 0.58$). The full programme report includes information about the characteristics of intervention versus non-intervention sites. Non-intervention sites include more older adolescents who have been receiving antiretroviral therapy for a shorter period (about one year) than intervention sites, which include younger and older adolescents who have been receiving antiretroviral therapy for a long time (four years or more).
Costing	Cost analysis showed that AACs can be implemented at an annual cost of US\$ 117 per adolescent supported or US\$ 340 per month per facility (assuming that about 35 adolescents living with HIV attend). These costs reflect the initial start-up programme year, including training costs but not the salaries of existing ministry staff. In subsequent programme years, costs would decrease with the elimination of national training and five-day peer training. Subsequent years would retain annual meeting costs and the equivalent of about two days of training as a refresher for selected providers and/or peers.
Challenges and lessons learned	The following key issues can ensure success. • Work in collaboration with government to ensure alignment with national HIV guidelines in developing training materials for service providers and to build sustainability by ensuring annual budgets and plans include AACs. • Identify health facilities that are most suitable for implementing the AAC model, such as those with a high volume of children and adolescents 5–19 years old so that groups are large enough to justify the number of staff members and other resources required. However, groups should be limited to about 25 participants to avoid long waits. • Ensure that health-care providers supporting AAC activities are appropriately trained and sensitized to work with children and adolescents living with HIV and to receive appropriate oversight and supervision. • Evolve club approaches to address client needs, including clinics for those with high viral load. AAC created a special Victory Club for children and adolescents living with HIV and caregivers to improve the traditional enhanced adherence-counselling model with specialized workshops and adherence support at home. • Recognize the value of engaging peers who are good role models (stable on treatment) to conduct support group discussions and share their own experiences growing up with HIV in the local environment. • Facilitate linkages from AACs to other social protection and community development opportunities, such as education and nutrition support, spiritual guidance and income generation assistance. The following lessons were learned. • Adolescents older than 15 years who are diagnosed and linked to care have psychosocial needs that require additional forms of differentiated care. They require more active follow-up, counselling and HIV treatment education and may benefit from being paired with an experienced treatment buddy or adolescent peer educator to support their treatment outside the clinic and AAC.

Key points to ensure successful adaptation of this model in other national or subnational areas	• Ensure there is an standard operating procedure for supervising AACs and for the expected client outcomes. Shifting to Saturday with a new team creates initial logistical challenges but should not affect the quality of care. • Conduct data reviews that look at the entire children and youth population at the facility to understand club attendance and needs for the sites. AACs are a supplement for those who prefer additional care models. • Be ready to keep evolving AAC content and the information that is led by AAC members. The information needs and interests of adolescents living with HIV will change over time. AACs have benefited by sharing materials and approaches between countries. The most popular materials are those written by adolescents and young people living with HIV directly using simple facilitation and discussion techniques.
Links and resources	Ariel Adherence Clubs: increasing retention in care and adherence to life-saving antiretroviral therapy among children and adolescents living with HIV in United Republic of Tanzania. Washington (DC): United States President's Emergency Plan for AIDS Relief; 2019 (https://www.pepfarsolutions.org/solutions/2018/1/13/ariel-adherence-clubs-increase-retention-and-adherence-among-children-and-adolescents-living-with-hiv-in-tanzania-fzwjc). Antelman G. Evidence from Ariel Adherence Clubs in United Republic of Tanzania. 22nd International AIDS Conference, 23–27 July 2018, Amsterdam, Netherlands (http://programme.aids2018.org/Programme/Session/212). Resources produced by the Elizabeth Glaser Pediatric AIDS Foundation to support AACs during this period: • Disclosure toolkit: http://www.pedaids.org/resource/disclosure-of-hiv-status-toolkit-for-pediatric-and-adolescent-populations • Treatment failure algorithm: http://www.pedaids.org/resource/new-horizons-management-of-treatment-failure-for-pediatric-and-adolescent-patients-resource-package
For more information	Contact: Maryanne Ombija, mombija@pedaids.org

Information on building blocks for the service delivery model (for clinically stable clients)

	Antiretroviral therapy refills	Clinical consultations	Psychosocial support	Consistency with WHO DSD recommendations
When	Monthly ^a	Monthly ^a	Monthly ^a	●
Where	HIV clinic	HIV clinic	HIV clinic	●
Who	Clinician, pharmacist	Clinician	Health-care provider plus peer and/or community health worker	●
What	Antiretroviral therapy refill (after review of treatment regimen and dosing)	Screening for signs and symptoms Reviewing side-effects Laboratory testing every six months Contraception check	Group health education, including on sexual and reproductive health and contraception (plus individual counselling as required)	●

^aAACs meeting monthly, and the date of the meeting is aligned with the clinical consultation and antiretroviral therapy refill.

Colour code: Green: aligned; Yellow: partially aligned

ANNEX 2. BAYLOR COLLEGE OF MEDICINE INTERNATIONAL PEDIATRIC AIDS INITIATIVE TEEN CLUB PROGRAMME

Background and introduction

In August 2003, the first Teen Club programme sponsored by the Baylor College of Medicine International Pediatric AIDS Initiative (BIPAI) for adolescents living with HIV began at the Centre of Excellence in Uganda in partnership with Mulago Hospital. Teen club programmes have since expanded to many other countries across the BIPAI network and have been used as a globally recognized intervention model that empowers adolescents living with HIV through peer support. Expansion of teen club programmes to various outreach sites has allowed adolescents who are not enrolled at a centre of excellence for primary care and treatment to benefit from the teen club model. For some countries, these satellite teen clubs operate as satellite centres of excellence. In others, centres of excellence partner with nongovernmental organizations and hospitals to implement satellite teen clubs, enabling decentralized psychosocial care and support interventions for adolescents. In Botswana, the main Botswana-Baylor Centre of Excellence Teen Club in Gaborone has grown from four members in 2005 to more than 800 members today and expanded to seven satellite teen clubs across the country. The table below provides an overview of the teen club programmes, using the case of BIPAI Lesotho where country-specific information is needed.

Countries where implemented: Botswana, Eswatini, Lesotho, Malawi, Uganda and United Republic of Tanzania (for sections where country-specific information is needed, this summary focuses on Lesotho)

Support from friends at teen club © Smiley Pool



Summary information on the BIPAI Teen Club programme

Overview	The Teen Club programme aims to empower adolescents living with HIV to build positive relationships, improve their self-esteem and acquire life skills through peer mentorship, adult role-modelling and structured activities, ultimately leading to improved clinical and mental health outcomes and a healthy transition into adulthood. Teen clubs supplement psychosocial and educational interventions provided during clinic visits.
Where services are provided	Baylor College of Medicine Children's Clinical Centres of Excellence in Botswana, Eswatini, Lesotho, Malawi, Uganda and United Republic of Tanzania
Who is provided services	BIPAI Lesotho Inclusion: fully disclosed adolescents and young people living with HIV, 11–25 years old, requires caregiver consent and agreement to confidentiality Exclusion: married and pregnant teens
Who provides the services	All countries use centre of excellence clinic staff in addition to peer educators (adolescents living with HIV)
Frequency of peer-group meetings	BIPAI Lesotho Teen clubs meet monthly, usually on Saturdays

How	The Teen Club model uses monthly peer meetings to offer peer support and provide educational components on HIV education, disclosure, adherence, sexual and reproductive health and rights, life skills and transitioning to adult HIV care. The model varies between sites. • Pre-teen club preparation: staff and peer educators assist with coordination and preparation of monthly teen club meetings and help to brainstorm themes, icebreakers, lecture topics and strategies to engage participants. • Teen clubs: staff and peer educators and teen leaders assist in implementing teen club, a monthly psychosocial support group. They coordinate the introduction of club events, perform educational skits, lead icebreakers and discussions and encourage active participation. Teen club events usually include large group games, drama and theatre activities, pool parties, safaris, sports and art sessions. Health service provision maybe included in the teen club day depending on the site. BIPAI Lesotho BIPAI Lesotho also provides technical support to other implementing partners to establish, run and manage teen clubs and teen camps and to train teen leaders to assist in facilitating teen club meetings. They also assist in setting up a standard curriculum to replicate the model while ensuring a standardized and sustainable strategy for the care of adolescents living with HIV.
Recruitment	• Recruited from the cohort of adolescents living with HIV attending the clinic and provided with a one-year contract and job description. • Undergo one week of induction training and then are linked with counsellors and social workers for on-the-job training. • Trained by and work alongside clinicians and counsellors within the clinic, participating in social service rounds, continuing education and staff meetings. • Meet regularly with managerial staff for performance review and support. • Build their own skills in counselling, working with technology, communication, leadership, time management, sexual and reproductive health and HIV management. As their skills improve, they are assigned additional responsibilities and more adolescents living with HIV. • May assist with other activities around the clinic, such as front-desk duties and supporting clinic administration. • Access support from clinic counsellors if needed. • Receive a stipend to support their nutrition and transport. Peer educators and teen leaders receive training in leadership skills, group facilitation and reinforcement on being a leader by living a positive lifestyle and maintaining good adherence with suppressed viral load.
Outcomes	BIPAI Lesotho The knowledge of HIV was assessed before and after teen club. In 2015, the HIV Knowledge Test was administered to teen club participants and then repeated again between December 2016 and February 2017. A total of 720 teen club members and 54 new enrolees completed the pre- and post-tests. The average score for current teen club members was 55% and for new enrolees was 42%. Scores increased as age increased, from 37% correct among 10-year-olds to 57% among 15-year-olds to 65% among 20-year-olds. Compared with initial administration in 2015, the average score among teen club members 14–18 years old in Maseru declined from 63% to 61%, and the average score for teen club members 11–14 years of age in Maseru increased from 42% to 52%.

Costing	BIPAI Lesotho The teen club member cost averages about US\$ 3 per teen per month. Because of the high level of poverty and food insecurity in Lesotho, teen club provides morning snack and lunch for members 11–18 years old (about 480 monthly) and volunteers and transport to return home. Members 19–25 years old (about 71 monthly) are provided with one-way transport and a light snack. Clinic staff (doctors, nurses, social workers, psychologists and peer educators) who support teen club are only offered lunch. Peer educators are hired to assist with both clinic and teen club and earn a stipend of about US\$ 120 per month. Three designated staff members support teen club and psychosocial support services, and their combined monthly salary is US\$ 1300 per month.
Challenges and lessons learned	Key factors contributing to the success of this project • Working in partnership with government and with local community service organizations and antiretroviral therapy clinics • Innovative and responsive staff Challenges • Limited funding to expand the programme and address the increasing number of adolescents now living with HIV and the wider geographical coverage
Key points to ensure successful adaptation of this model in other national or subnational areas	• Obtaining approval and support from health ministries. An ideal arrangement would be health ministries embedding the model in their system as an essential health package, which would ensure the sustainability of the programme. • Including young people in planning and implementing the programme • Training peer educators so that they can facilitate teen clubs according to certain standards, especially in satellite teen clubs, to reach adolescents living with HIV in more remote sites outside the main hub • Encouraging facility staff buy-in and support, since the model requires working over the weekend • Using adolescent open forums during teen club meetings to advise and strengthen adolescent-friendly services
Links and resources	MacKenzie RK, van Lettow M, Gondwe C, Nyirongo J, Singano V, Banda V et al. Greater retention in care among adolescents on antiretroviral treatment accessing “Teen Club” an adolescent-centred differentiated care model compared with standard of care: a nested case–control study at a tertiary referral hospital in Malawi. <i>J Int AIDS Soc.</i> 2017;20:e25028. Agarwal M, Van Lettow M, Berman J, Gondwe C, Mwinjiwa E, Chan AK. Evaluation of a specialized psychosocial support intervention “Teen Club” in improving retention among adolescents on antiretroviral treatment (ART) at a tertiary referral hospital in Malawi. 7th IAS Conference on HIV Pathogenesis, Treatment and Prevention, 30 June–3 July 2013, Kuala Lumpur, Malaysia (http://www.differentiatedcare.org/Portals/0/adam/Content/C_b8Pha-6kyxt5iZ-bWmSQ/File/Agarwal%202013_Dignitas%20Teen%20Club%20outcomes%20IAS%202013.pdf). Teen clubs help retain adolescents in HIV care and treatment. Medford (MA): Management Sciences for Health; 2019 (https://www.msh.org/resources/teen-clubs-help-retain-adolescents-in-hiv-care-and-treatment). Gage AJ, Do M, Grant D, eds. Best practices for adolescent- and youth-friendly HIV services – a compendium of selected projects in PEPFAR-supported countries. Chapel Hill (NC): MEASURE Evaluation; 2017 (https://www.measureevaluation.org/resources/publications/tr-16-134). Promising practices in peer support for adolescents and young people living with HIV. Cape Town: Paediatric–Adolescent Treatment Africa; 2017 (http://teampata.org/wp-content/uploads/2017/06/Peer-led-Services-Promising-Practices.pdf).
For more information	Contact: Teresa Steffy: tfsteffy@bcm.edu; Diane Nguyen, BIPAI headquarters: diane.nguyen@bcm.edu

BIPAI Lesotho: information on building blocks for service delivery model (for clinically stable clients)

	Antiretroviral therapy refills	Clinical consultations	Psychosocial support	Consistency with WHO DSD recommendations
When	Three-monthly	3–6 monthly ^a	Monthly	●
Where	HIV clinic	HIV clinic	At teen clubs	●
Who	Clinician, pharmacist	Clinician	Teen club group leader, peer educators and clinic staff attending teen club	●
What	Antiretroviral therapy refill (after review of treatment regimen and dosing)	Screening for signs and symptoms Reviewing side-effects Laboratory testing every six months Family planning assessment	Group health education and psychosocial support	●

^a Stable clients receive three-monthly clinical visits; stable clients 18 years and older receive six-monthly clinical visits.

Colour code: Green: aligned; Yellow: partially aligned

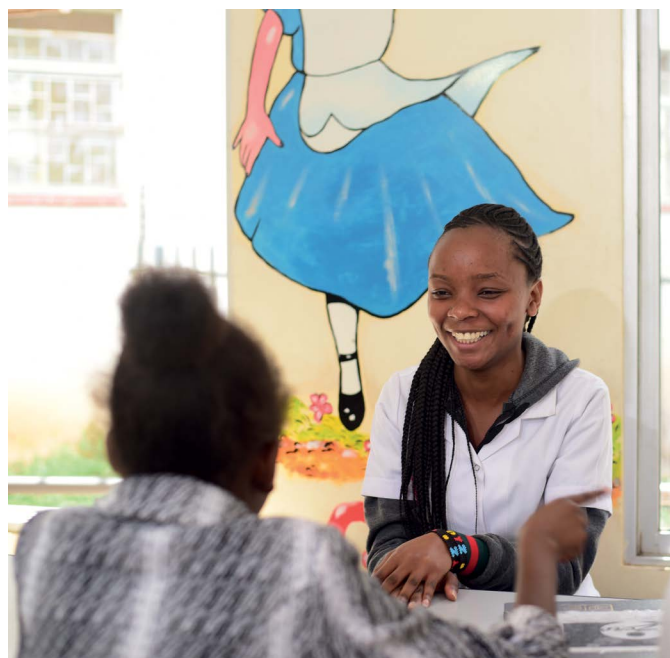
ANNEX 3. OPERATION TRIPLE ZERO

Background and introduction

The Operation Triple Zero (OTZ) initiative uses an asset-based approach to empower adolescents and young people living with HIV to adopt positive health behaviour and to be active co-producers of health interventions. Unlike deficit-based approaches in which adolescents and young people are viewed as a problem to be “fixed” and passive recipients of health services, OTZ promotes good health and well-being by enhancing effective participation, treatment literacy and self-health management. Triple zero represents: zero missed appointments, zero missed drugs or medications and zero viral load. The programme also promotes other zeroes, including zero stigma, zero deaths, zero sex for those abstaining, zero unprotected sex for sexually active young people and zero mother-to-child HIV transmission for pregnant and breastfeeding adolescents. This model has been scaled up in Kenya, where adolescents and young people living with HIV of different ages, cultures and education levels have adopted and owned the initiative. From 2016 to June 2019, the initiative expanded nationally, from a baseline of 70 members in one facility to reaching more than 27 counties with a high burden of HIV infection in Kenya and 29 795 adolescents and young people living with HIV in sites supported by the United States Centers for Disease Control and Prevention.

Country where implemented: Kenya; adaptations underway in Ethiopia and Nigeria

A member of OTZ meets with peers to discuss the importance of managing one's health
© CDC



Summary information on Operation Triple Zero

Overview	The primary aim of OTZ is to increase adherence, retention in care and viral suppression. It is geared towards motivating adolescents and young people to take responsibility for their health and commit to achieving improved outcomes (see above). Through a comprehensive HIV treatment literacy package and support from peers and health care workers (health-care workers), participants are empowered to take charge of their health and have a positive outlook into the future.
Where services are provided	Mainly based in health facilities. A few sites have begun expansion to reach adolescents and young people in the community.
Who is provided services	OTZ targets adolescents and young people living with HIV 10–24 years old. OTZ also focuses on adolescents and young people living with HIV who are pregnant and breastfeeding, some being married and some unmarried; this category is referred to as OTZ-Plus (the additional zero refers to an HIV-free infant). Another component of OTZ that is being developed is the support of adolescents in school and out of school.

Who provides the services	Facilitators of OTZ include the OTZ lead clinician, counsellor and OTZ adolescents and young people. Clinicians and counsellors lead in introducing asset-based adolescent programming and the OTZ concept to facility staff, caregivers and OTZ adolescents and young people. Caregiver OTZ focal people also share the caregiver aspects of OTZ with other caregivers. OTZ adolescent and young people leads facilitate OTZ meetings and share the self- health management concept with other OTZ members in the facility and community where applicable. OTZ adolescent and young people leaders are key and play a major role in facilitating site-level OTZ activities. They receive continual mentorship and oversight from facility clinician and counsellor OTZ leads. Technical advisers from the United States Centers for Disease Control and Prevention oversee OTZ implementation in the country. They have led in defining the OTZ package and service quality assessment to ensure standard implementation of OTZ package by implementing partners. They oversee OTZ scale-up, monitor performance and coordinate reporting.
Frequency	Support group meetings are monthly.
How	Adolescents and young people living with HIV receiving HIV treatment at clinics are encouraged to voluntarily join an OTZ club, regardless of their viral load. Health-care providers or adolescent peers who enrol adolescents and young people living with HIV support them in developing an individual treatment plan aimed at achieving triple zeroes. The OTZ package contains three components: (1) health-care provider, (2) caregiver and (3) adolescent. OTZ package for health-care workers The package for health-care workers involves training in the Kenya adolescent package of care, which includes the following: adolescent development, clinical assessment and HIV treatment, communication with adolescents, nutrition, mental health, sexual and reproductive health, psychosocial support, community services and transition to adult care. Health-care workers are also trained on asset-based approaches to adolescent programming; how to motivate, empower and nurture talents and leadership skills among adolescents and young people living with HIV. The goal of the health-care worker package is to build a competent health workforce to provide comprehensive HIV services and encourage positive health behaviour and effective participation of adolescents and young people living with HIV. OTZ package for caregivers Adolescents and young people living with HIV caregivers and guardians are trained on the Kenya caregiver training curriculum, which includes the following: basic information on HIV and AIDS, disclosure, adherence, nutrition, adolescent sexual and reproductive health, loss and grief, gender-based violence and stigma and discrimination. Further, caregivers are trained how to empower young people living with HIV to have a positive outlook into the future, have resilience and to develop the capacity and ability to thrive in challenging life situations.

OTZ package for adolescents and young people

The package for adolescents and young people includes an orientation about OTZ, the voluntary choice to join the OTZ club and guidance to develop an individualized health plan to achieve the three zeros. Adolescents and young people are guided on achieving HIV treatment goals and building health literacy. After enrolment, adolescents and young people are trained on positive outlook into the future, leadership, motivation, effective participation and transition to adult care. Connectedness among adolescents and young people aims to provide positive peer pressure and motivational messaging to uplift and sustain the shared goals of OTZ and is promoted through OTZ club meetings, open days and on social media where applicable. Clubs recognize and celebrate OTZ members who achieve viral suppression, to encourage maintaining suppression and support transition to reduced clinic appointments. The package for adolescents and young people empowers adolescents to make positive choices that ultimately result in positive health outcomes.

The role of OTZ adolescent and young people facility leaders in the programme is to enrol new members, link newly diagnosed adolescents and young people living with HIV to HIV care, facilitate access to HIV testing, provide support to adolescents and young people living with HIV with high viral loads, coordinate OTZ clubs and oversee various OTZ activities, including social media.

OTZ adolescent and young people leaders are recruited from the OTZ club for 10- to 24-year-olds. OTZ adolescents and young people facility leaders are sensitized during a half-day OTZ training on how to provide support and guidance to adolescents and young people living with HIV on self-health management. Champions go through six simplified modules of OTZ, including effective adolescent participation, comprehensive treatment literacy, positive outlook into the future, leadership, mentorship and motivation.

Outcomes

The OTZ initiative was rapidly scaled up from one site with 70 members in 2016 to 685 sites supported by PEPFAR and the United States Centers for Disease Control and Prevention by June 2019 with more than 29 000 adolescents and young people enrolled. The initiative was rapidly scaled up after results showed increased viral suppression rates for sites implementing OTZ.

Preliminary data from the OTZ initiative show that most adolescents and young people living with HIV who participate in OTZ attend their scheduled clinic appointments. Stable OTZ members receive multi-month prescriptions from three to six months.

Self-reported adherence has improved significantly across programmes, increasing from 88% in October 2017 to more than 96% in February 2019.

Overall, viral suppression also showed improvements over time. In Siaya County, 86% of adolescents who were receiving antiretroviral therapy had enrolled in OTZ by June 2018. From July 2017 to June 2018, viral suppression increased from 65% to 80% among 10- to 14-year-olds and from 66% to 84% among 15- to 19-year-olds.

Preliminary data for clients 10–24 years old from six implementing partners supported by PEPFAR and the United States Centers for Disease Control and Prevention also show a substantial improvement in viral suppression. Of 2742 adolescents and young people living with HIV, viral suppression increased from 71% to 82% after six months of enrolment in OTZ.

The programme also plans a future evaluation to determine how OTZ affects the social and mental well-being of adolescents and young people living with HIV in OTZ.

Costing

It involves adolescents and young people living with HIV and requires minimal additional costs, making it very easy to implement and scale up at the facility level. Compared with standard costs for adolescent HIV clinic costs in Kenya, the only additional costs are OTZ registers and a proportion of open day activities such as recognition of OTZ members. The programme will, however, need to plan for the availability of clinic space to accommodate adolescent-specific activities, including indoor games, capacity-building and engagement of adolescent peers as leads, printing health information and materials and extended working hours, including weekends, to accommodate the adolescents in school. Motivational activities, including retreats and awards for the best performing sites, certificates for achievers and most improved and exchange visits to the best performing sites also require additional resources. Adolescent-friendly resource centres equipped with appropriate tools for treatment literacy and improved life skills also require funding. A study on costing the implementation of the OTZ will be conducted in the future.

Below is a sample summary of budget implications of implementing OTZ in a facility with 200 OTZ members for 12 months. The costs will be much lower for smaller facilities.

Item	Cost per unit (Kenyan shillings)	Number	Total cost (Kenyan shillings)	Comments
Human resources for health – adolescent peer educators: OTZ adolescent and young people leaders	10 000	1	10 000	Per month
Human resources for health – adherence counsellors (OTZ counsellor lead)	47 023	1	47 023	Per month
Printing OTZ registers	1 200	1	1 200	Per register per facility
OTZ club meeting (previously known as psychosocial support group)	3 000	1	3 000	Per month per facility
OTZ open day (previously known as adolescent and young people camps)	558 500	1	558 500	Quarterly for 200 adolescents and 30 chaperones

Challenges and lessons learned

- Adolescents and young people living with HIV of different ages, cultures and education levels quickly adopted and owned the initiative, spreading it rapidly across peers.
- OTZ taps into intrinsic health assets within an individual, perpetuating self-drive to make positive health decisions that eventually translate into positive health outcomes and extrinsic assets from health-care workers and caregivers.
- The combination of both extrinsic and intrinsic assets results in positive health outcomes. This is primarily achieved by adolescents effectively participating in their health as part of a solution rather than demanding solutions from caregivers or health-care workers.
- Ownership of the OTZ initiative by adolescents and young people saves time and resources that would otherwise be used for counselling, making it easier and more cost-effective to scale up.
- One of the main challenges of implementing OTZ is ensuring that the entire OTZ package is implemented with fidelity.

Key points to ensure successful adaptation of this model in other national or subnational areas	The following are essential to successfully implement OTZ. • The adolescents and young people are trained on OTZ modules and empowered to be self-health managers and to have positive health behaviour that translates into positive health outcomes. • Health-care workers are trained on the adolescent package and how to infuse asset-based programming into HIV care services for adolescents. • Caregivers are trained to support adolescents and young people living with HIV and to provide asset-oriented support to them. • A clear monitoring and evaluation plan to track both processes and outcomes indicators. • Robust health systems: age-band clinic appointments, OTZ registers, OTZ individual health plan, facility telephone, a facility team comprising 1–2 health-care workers and an OTZ champion among adolescents and young people living with HIV, materials for OTZ.
Links and resources	Operation Triple Zero: empowering adolescents and young people living with HIV to take control of their health in Kenya. Washington (DC): United States President's Emergency Plan for AIDS Relief; 2018 (https://www.pepfarsolutions.org/solutions/2018/10/30/operation-triple-zero-empowering-adolescents-and-young-people-living-with-hiv-to-take-control-of-their-own-health). Retention in care – PrEP – tuberculosis science and community in the HIV response in the Caribbean. AIDS 2018 Post-Conference Workshop, Haiti, 28–29 November 2018 (https://www.iasociety.org/Web/WebContent/File/15_James_Wagude_Retention_in_antiretroviral_therapy_Kenya_Experience.pdf).
For more information	Immaculate Nduku Mutisya, yry1@cdc.gov; Lennah Omoto, yoc7@cdc.gov; Susan Hrapcak, LTZ8@cdc.gov

Operation Triple Zero: information on building blocks for the service delivery model (for clinically stable clients)

	Antiretroviral therapy refills	Clinical consultations	Psychosocial support	Consistency with WHO DSD recommendations
When	Three-monthly ^a (for stable OTZ members)	Every 3–6 months ^b	3-monthly+	●
Where	HIV clinic; a few clinics have adolescents and young people drop antiretroviral medicine to the community or schools	HIV clinic	HIV clinic	●
Who	Pharmaceutical technologist, nurse or clinician	Clinician and counsellor	Adolescents and young people living with HIV, lay counsellor or clinician led	●
What	Antiretroviral therapy refill	Screening for signs and symptoms Reviewing side-effects Laboratory testing every 6 months Family planning assessment	OZT club meetings, group health education and psychosocial support	●

^aAlignment of antiretroviral therapy refills and OTZ meetings, also align with school holidays and/or offered on weekend.

^bEvery three months for most; some have transitioned to every six months with promising results.

Colour code: Green: aligned; Yellow: partially aligned

ANNEX 4. REACH (RE-ENGAGE ADOLESCENTS AND CHILDREN WITH HIV)

Background and introduction

In 2015, Paediatric–Adolescent Treatment Africa (PATA) launched a two-year REACH pilot that integrated young people living with HIV as peer supporters into 20 health facilities across Cameroon, Ethiopia, Kenya, Malawi, Uganda and Zambia. Key findings from the pilot offered preliminary evidence that young peer supporters can contribute towards adolescent-friendly health services and established a firm foundation for scaling up the model. The pilot was supported by the One to One Children’s Fund and M-A-C AIDS Fund. Since 2017, Positive Action has supported PATA to implement REACH in 16 health facilities across Cameroon, Ethiopia, Kenya, Malawi, Uganda and Zambia with embedded regional learning. This learning is being used to inform the development of a suite of tools for implementing and scaling up the model within low-resource settings. This toolkit is being co-developed with and piloted by REACH health facilities and will be published in early 2020.

Countries where implemented: Cameroon, Ethiopia, Kenya, Malawi, Uganda and Zambia

Lubega Kizza, peer supporter at Mulago-Mbarara AIDS Program (MJAP), ISS Clinic, leads a session in Uganda



Summary information on REACH

Overview	REACH is a peer support model that integrates people 18–24 years old living with HIV as peer supporters into health facilities, where they play an integral role working alongside health providers to improve the quality of adolescent-friendly health services. The model also builds the capacity, agency and resilience of the peer supporters themselves through training, skills building, mentorship, supportive supervision and regional peer-to-peer linking and learning. Through the REACH programme, peer supporters have demonstrated their ability to constructively influence their peers as agents of change and role models for the way in which young people respond to their health care and psychosocial well-being.
Where services are provided	16 health facilities across Cameroon, Ethiopia, Kenya, Malawi, Uganda, and Zambia. Across these facilities, there are 23,450 adolescents and young people living with HIV (adolescents and young people living with HIV) on antiretroviral therapy (antiretroviral therapy).
Who is provided services	REACH’s primary client group is adolescents and young people living with HIV 10–24 years old. However, REACH has embedded a peer support model specifically targeting pregnant and postpartum young women living with HIV at REACH health facilities across Malawi, Uganda, and Zambia as well as the United Republic of Tanzania. ABCD addresses the psychosocial needs of these young mothers across four domains: ask: peer supporters assess their psychosocial needs on a regular basis; boost: peer supporters use cognitive behavioural therapy support group sessions based on WHO’s Thinking Healthy curriculum to promote positive thinking and living; connect: peer supporters refer and link the young mothers to professional care as needed; and discuss: providing peer supporters with an online interactive chat forum with professional advisers.
Who provides the services	Two peer supporters, who are 18–24 years old and living with HIV, are recruited per health facility. This allows peer supporters to work together and task share based on individual skills, interests, abilities and workloads. Aiming to have both male and female peer supporters enables adolescents and young people to receive peer services from a gender-concordant peer if they desire. Over the lifespan of REACH, we have found peer supporter recruitment and selection to be critical foundations for a successful programme.

Frequency	Variable by facility, weekly or monthly.
How	Training, preparedness and support REACH peer supporters are recruited according to the criteria above. They receive a job description, sign a memorandum of understanding and are inducted and oriented at their designated health facility. Each REACH health facility identifies local training most relevant to the peer supporter role that is low cost and focused on HIV, sexual and reproductive health and rights and antiretroviral therapy education and/or skills-building in disclosure and adherence support. The facility's peer supporters receive this training and are assigned to a health provider, who provides ongoing mentorship and supportive supervision and conducts an annual performance review. Together, the peer supporter and his or her health provider supervisor create an individual development plan for the peer supporter to access career development opportunities during his or her term as a peer supporter. To support implementation of the individual development plan, PATA provides each peer supporter with a small grant for personal development and livelihood-strengthening activities, focusing largely on entrepreneurship and small business support in the form of training or paid tuition. In addition, each peer supporter receives the REACH programme handbook (http://teampata.org/wp-content/uploads/2017/10/PATA-Peer-Supporter-Handbook-review-2017_Final.pdf), and PATA's practical toolkit for peer supporters (http://teampata.org/wp-content/uploads/2018/03/CHWToolkit_2017update_WEB.pdf). Finally, PATA convenes a biennial Youth Summit (http://teampata.org/portfolio/pata-2018-youth-summit-report), which peer supporters from across the region attend to link and learn. Service delivery REACH peer supporters co-develop and co-deliver services for their adolescents and young people living with HIV peers to improve adolescent-friendly health services, with a focus on: • peer support groups; • peer counselling; and • community outreach, including home visits for client tracing and psychosocial support. In addition, REACH peer supporters may perform administrative and operational tasks based on the facility's needs as part of their task-shifting role. These tasks include such activities as data entry, reception duty and pill counting. Service monitoring and evaluation In partnership with the Global Network of Young People Living with HIV (Y+) and other partners, PATA developed a client satisfaction scorecard (http://teampata.org/wp-content/uploads/2018/12/web_Y-clinic-leaflet-ENG-2018_UPDATED.pdf) for adolescents and young people to evaluate health provider attitudes on the day of a clinic visit. The scorecard is used across all REACH facilities to ensure that adolescents and young people play an active role in monitoring and evaluation and that facilities maintain quality standards in adolescent-friendly health services. Advocacy REACH and associated PATA programmes link peer supporters with national and global networks of young people living with HIV to raise the visibility of peer support models and drive the advocacy agenda to be focused on frontline priorities. REACH also facilitates a peer supporter WhatsApp group, a very simple yet effective platform for dialogue, consensus-building and information-gathering between peer supporters across countries. Three REACH peer supporters sit on PATA's Youth Advisory Panel. General PATA provides each health facility with a PATA local technical adviser to support REACH implementation and data management as well as mentor peer supporters.

Outcomes

Key results to date

Recent surveys among REACH peer supporters show that almost all (98%) consider themselves advocates for their peers. Most feel they have major (53%) or a fair amount (41%) of influence on improving services at their health facility. The majority (90%) reported that they frequently inform health providers about challenges young people face or make recommendations towards adolescent-friendly health services. Most (81%) reported that these lead to service improvement. Respondents provided examples of changes resulting from their advocacy, including improvements in existing services and facility procedures as well as additional services being introduced. These findings suggest that peer supporters understand themselves to be agents of change beyond their better-understood role of task-shifting and supporting service delivery. Young peer supporters report being advocates for their peers, who frequently leverage their experience to proactively raise issues, challenge existing practice, provide feedback and make recommendations.

PATA conducts an annual full assessment and an interim (six-monthly) sub-assessment for all REACH facilities. The annual full assessment focuses on service standards and client outcomes, and the interim sub-assessment examines health facility adherence to programmatic standards.

Health facility adherence to programmatic standards

- 87% of peer supporters attended two local technical training sessions, one in the first and the other the second half of the past year.
- 100% of peer supporters received monthly mentorship from their health provider supervisor or PATA local technical adviser in the past year.
- 83% of peer supporters had a performance appraisal in the past year.
- At three months into their term of service, 90% of peer supporters had an individual development plan.
- Almost all (94%) REACH peer supporters attended the most recent Youth Summit, convened in the United Republic of Tanzania in November 2018, which provided extensive skills-building and peer–peer interaction opportunities.
- Anonymous client satisfaction scorecards completed by 314 adolescents and young people living with HIV at REACH facilities on the day of a clinic visit show high levels of service satisfaction, with almost 64% of the sample reporting feeling better after receiving services

Client outcomes

- REACH health facilities tested 54% more adolescents and young people living with HIV for HIV than they had the year before REACH was initiated.
- Of those testing positive, 99% initiated antiretroviral therapy. This is a noteworthy increase from the already high baseline antiretroviral therapy initiation rate, which was 90%.
- Of the 23 450 adolescents and young people living with HIV receiving antiretroviral therapy at REACH facilities, just 5% are currently lost to follow-up and a further 5% do not have suppressed viral loads. These rates were 9% and 8%, respectively, at baseline.

Qualitative health facility reports highlight a range of positive changes, including improved support group attendance, disclosure rates, identification of opportunistic infections and relationships between health providers and adolescent clients. Facilities also report reduced client waiting times and health provider workloads. Client and peer supporter testimonies corroborate this evidence and emphasize the programme's positive impact on both clients and young peer supporters.

Costing

Cost per health facility

Item	Unit cost	Total cost per facility per year
Peer supporter stipend	US\$ 65 per peer supporter per month	US\$ 65 times two peer supporters per facility times 12 months = US\$ 1560
Peer support activities	US\$ 100 per peer supporter per year	US\$ 100 times two peer supporters per facility = US\$ 200
Small grant for personal development	US\$ 20 per peer supporter per year	US\$ 20 times two peer supporters per facility = US\$ 40
Health facility administration	US\$ 100 per health facility per year	US\$ 100
Total		US\$ 1900 ^a

^aExcludes: peer supporter transport for home visits; health provider supervisor time; space for peer support activities; and PATA local technical adviser time.

Challenges and lessons learned

Challenges

- Health facilities tend to have a hierarchical health team structure, and professional health providers often insufficiently recognize, respect and meaningfully engage peer supporters.
- Health facilities may request peer supporters to perform tasks that are beyond their designated role, training and capability.
- Peer supporters may be assigned large geographical areas (especially in rural settings) and be required to traverse long distances between client homes for home visits.
- Peer supporters have a high level of responsibility, undertaking important work with a high client burden but relatively low levels of training and support compared with professional health providers. This can lead to emotional exhaustion, depersonalization and burnout. In recent surveys, peer supporters described the emotional toll of witnessing peers adhering poorly and failing treatment and working very long hours. Some also described receiving inferior personal HIV care when providers began to see them as colleagues who need less care and support.
- Health facilities often have limited resources and space to implement peer support activities and ensure privacy and confidentiality.

Lessons learned

- Peer support programmes require good planning and sufficient investment
- Peer supporters should be included in all stages of the programme life cycle, including design, implementation and evaluation, to ensure that services are best tailored to meet the needs of adolescents and young people living with HIV.
- A health facility–situated peer supporter programme can only function effectively within a conducive clinic environment, which includes sensitized health providers.
- Although community-based peer supporter models importantly drive demand, sensitize communities, link clients to care and provide community-based antiretroviral therapy distribution and/or care, health facility–based peer supporter models such as REACH are best suited to improve adolescent-friendly health services, sensitize health providers, engage clients while they navigate the health system and provide safe and supportive health facility–situated spaces.
- Peer supporters should be fully integrated into the health team and included in appropriate meetings such as case reviews.

	• Peer supporters require a defined scope of work supported by a clear job description as a framework for expectations. • The peer supporter role is transitory rather than a long-term career prospect. The peer supporter role provides young school-leaving peer supporters with the opportunity to gain work experience, and peer support programmes should focus on teaching young peer supporters' new skills and providing them with psychosocial support, mentorship and training to improve their health, well-being, self-esteem, confidence and future career and study opportunities. • Peer supporters deserve fair remuneration, commensurate with their skill level and value-add. At a minimum, they require a stipend to support travel and basic needs • Peer supporters need pre-service training and ongoing in-service support through mentorship, ongoing supervision and performance reviews. In addition, peer supporter performance can be enhanced by appropriate job aids, supportive materials and regular feedback from health providers and clients • Peer supporters should be trained and supported to maintain boundaries with clients and colleagues and to give priority to self-care. • Peer supporters require regular debriefing and psychosocial support.
Key points to ensure successful adaptation of this model in other national or subnational areas	• The REACH programme is uniquely placed across multiple countries, settings, levels of care and private and public contexts in the region. This implementation diversity provides a platform for learning regional lessons and building real-world evidence on the key operational activities and mechanisms needed to effectively implement peer support services in low-resource health facilities. The programme's promising results to date emanating from this wide range of settings suggest that the model is replicable and transferable, with high potential scalability by resource-constrained governments within the region's varying contexts. • To support scale-up, PATA is developing a compendium of tools that will be published as a comprehensive REACH peer supporter toolkit to support other health facilities in the region to independently implement peer support services while meeting minimum quality standards. This toolkit is being co-developed with and piloted by REACH health facilities and will be published in early 2020. The toolkit has been tentatively titled "Integrating peer supporters into health facility teams: a good practice guide" and will be a practical reference primarily for health providers. The content will focus on the process of integrating peer supporters into the health facility team while providing simple, complementary tools, checklists and recommendations to facilitate and guide this process.
Links and resources	Project REACH: re-engaging adolescents and children in HIV treatment and care. Cape Town: Paediatric–Adolescent Treatment Africa; 2017 (http://teampata.org/wp-content/uploads/2017/06/REACH_WEB.pdf). PATA peer support programme handbook. Cape Town: Paediatric–Adolescent Treatment Africa; 2017 (http://teampata.org/wp-content/uploads/2017/10/PATA-Peer-Supporter-Handbook-review-2017_Final.pdf). Children, adolescents and HIV: a simple toolkit for community health workers and peer supporters. Cape Town: Paediatric–Adolescent Treatment Africa; 2018 (http://teampata.org/wp-content/uploads/2018/03/CHWToolkit_2017update_WEB.pdf). Mark D, Armstrong A, Andrade C, Penazzato M, Hatane L, Taing L et al. HIV treatment and care services for adolescents: a situational analysis of 218 facilities in 23 sub-Saharan African countries. J Int AIDS Soc. 2017;20(Suppl. 3):21591.
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REACH: information on building blocks for the service delivery model (for clinically stable clients)

	Antiretroviral therapy refills	Clinical consultations	Psychosocial support	Consistency with WHO DSD recommendations
When	Monthly, on a dedicated adolescent day	Monthly, on a dedicated adolescent day	Implemented as part of support group meeting. The frequency of meetings varies, but they are generally offered weekly on Saturdays by facility	●
Where	HIV clinic	HIV clinic	HIV clinic	●
Who	Pharmacist or nurse	Nurse	Peer supporters, with support and supervision from health provider supervisor	●
What	Antiretroviral therapy refill Screening signs and symptoms Reviewing side-effects Individual counselling, including disclosure support	Screening signs and symptoms Reviewing side-effects Individual counselling, including disclosure support	Support group (differentiated by age, viral suppression, disclosure status, young mothers, etc.)	●

Green: aligned; Yellow: partially aligned

ANNEX 5. ZVANDIRI

Background and introduction

The Zvandiri programme was established in Harare in 2004 in response to six adolescents living with HIV who wanted to begin a support group. Zvandiri (meaning “as I am” in Shona) aims to equip children, adolescents and young people living with HIV with the knowledge, skills and confidence to cope with their HIV status and to live healthy, safe and fulfilled lives. Africaid works in partnership with Zimbabwe’s Ministry of Health and Child Care, Ministry of Public Service, Labour and Social Welfare, Ministry of Primary and Secondary Education and the National AIDS Council of Zimbabwe and since 2009, has been developing a globally recognized, evidence-informed, peer-led model for supporting children, adolescents and young people living with HIV.

Over the years, the Zvandiri support groups have evolved into a model of differentiated service delivery, combining clinic and community, peer-led interventions that seek to improve the uptake of HIV testing services, retention, adherence and viral suppression among children, adolescents and young people living with HIV as well as their mental health, protection and sexual and reproductive health. This approach centres on trained, mentored people living with HIV 18–24 years old, known as community adolescent treatment supporters (CATS).

Countries where implemented: Zimbabwe since 2004; now adopted or adapted in Eswatini, Mozambique, Rwanda, Uganda, Namibia and Ghana.

The model has been developed in partnership with children, adolescents and young people living with HIV, with the various components of the model being piloted then scaled up progressively over the years in response to the evolving needs of children and adolescents living with HIV in Zimbabwe. In 2014, the Ministry of Health and Child Care adopted Zvandiri as a key component of its national accelerated action plan for HIV treatment for children and adolescents. With funding from PEPFAR, UNICEF and other partners, Zvandiri has been scaled up to 51 of 63 districts, reaching 45,000 CALHIV, with funding from PEPFAR, UNICEF, CIFF, The ELMA Foundation and other partners. It has differentiated further to include disability, mental health, social protection, SRH, and PMTCT services for CAYPLHIV. In 2016, the CATS model began being scaled up in Mozambique, United Republic of Tanzania and Eswatini under the READY+ programme, led by Frontline AIDS. In 2019, Uganda, Rwanda, Namibia and Ghana have also adopted the model.



A Zvandiri support group integrated within a facility based ART refill group © Prisca Matyanga and Dennis Tapfumaneyi

Summary information on Zvandiri

Overview	Zvandiri is an evidence-informed, multicomponent, differentiated service delivery model for children, adolescents and young people living with HIV in Zimbabwe that integrates peer-led, community and clinic interventions within government health services. Through the Zvandiri programme, Africaid provides differentiated HIV prevention, treatment, care and support services across the HIV cascade. Zvandiri is also a key component of the national HIV sensitive case management system implemented by the Ministry of Public Services, Labour and Social Welfare.
Where services are provided	Health facilities and community-based.
Who is provided services	The services are provided to 0- to 24-year-olds. Subgroups include: child-headed households, children, adolescents and young people living with HIV and disability, mental health conditions, TB, married adolescents living with HIV, serodiscordant young couples, at risk of or experiencing neglect and violence, pregnant and breastfeeding adolescent girls and young women, their partners and children, adolescents and young people who sell sex, inject drugs and are within the LGBTQI community
Who provides the services	CATS are young people living with HIV 18–24 years old who work between the health facilities and homes of children, adolescents and young people living with HIV (0–24 years old) to improve outcomes across the HIV care cascade.
Frequency of peer-group meetings	The frequency of contacts is determined by the clinical and psychosocial needs of individual adolescents. • Standard support is provided monthly for stable adolescents. • Enhanced support is stepped-up care for unstable clients.
How	CATS use index case finding to identify and refer children, adolescents and young people to HIV testing services and support pre- and post-HIV test counselling. Those who are diagnosed as HIV negative are then linked by CATS to prevention services, and those who are HIV-positive are linked to treatment and care and registered with Zvandiri. CATS also distribute HIV self-tests to people 16 years and older and support linkage to confirmatory testing at the health facility. CATS then support CAYPLHIV to adhere to treatment by providing peer-led, adolescent-focused information, counselling and support, helping them to understand their HIV diagnosis and support treatment adherence, drawing on their own experience. This is provided through home visits, group meetings, visits to clinics, and by sending SMS clinic and adherence reminders. Monthly community-based support groups facilitate learning, resilience and confidence building, and socializing and are integrated within facility-based ART refill groups. Community outreach teams provide more advanced care in the homes of CAYPLHIV for enhanced cases. Support groups are held for caregivers of CAYPLHIV. Within health facilities, CATS provide their clients with information and counselling on disclosing their HIV status, antiretroviral therapy initiation and adherence. CATS also participate in refill visits and register adolescents and young people for community follow-up at home and in support groups and refer those who need it to services such as TB investigations, sexual and reproductive health and rights, mental health, disability, preventing mother-to-child HIV transmission and child protection services. The programme helps make health services more efficient and effective by promoting linkage to care, tracing those lost to follow-up, strengthening adherence monitoring and linkage to viral load monitoring and changing health care provider attitudes and building their skills to provide strong youth-friendly services.

CATS provide the link between children, adolescents and young people living with HIV and health facilities, assisting in ensuring that children, adolescents and young people living with HIV are retained within HIV treatment services and that services are further differentiated according to their individual clinical and psychosocial needs. For example, the CATS model has been adapted for children, adolescents and young people living with HIV with disabilities or mental health conditions and for adolescent girls and young women who are pregnant or breastfeeding. Young mentor mothers support their peers around conception, pregnancy, feeding, parenting and preventing the mother-to-child transmission of HIV.

CATS also assist with income-generating projects; programmes for parents and caregivers; and adolescent involvement in advocacy campaigns and developing policy and guidelines.

Africaid in partnership with the Ministry of Health and Child Care, trains, mentors and supervises CATS in a supportive rather than directive way. CATS therefore actively participate in all aspects of programme planning, implementation, monitoring and evaluation.

The Ministry of Health and Child Care and the Zvandiri mentors are responsible for identifying and selecting new CATS, recruited from Zvandiri support groups. New CATS receive two weeks of theoretical and practical training including a vocational skills training programme and ongoing counselling training, mentoring, support and debriefing while in the role. Once trained, they join staff case management as well as weekly referral and case management meetings. Most CATS fit their work around education or vocational training and are paid a stipend every month and transport reimbursement every week. Individual CATS support a caseload of between 30 and 60 clients from their own or neighbouring communities.

CATS are supported through Zvandiri's Care for CATS scheme. This includes clinic-based CATS supervisors providing CATS with on-site mentorship, weekly visits from Zvandiri mentors, monthly CATS coordination meetings and regular monitoring for viral load, TB and mental health. In addition, more experienced CATS mentor younger CATS and shadow prospective CATS. Some older CATS become provincial mentors or interns in a full-time, paid role that involves supervising larger numbers of CATS over wider geographical areas and liaising with case care workers and multiple service providers.

A training-and small-business grants programme was introduced to extend support to the CATS and Zvandiri clients. Partnerships with local colleges and businesses, which provide training and apprenticeships in vocational skills and entrepreneurship, support older clients and "graduating" CATS to develop their skills for possible future careers.

Outcomes

Zvandiri has been scaled up across Zimbabwe through phased expansion, with replication of the model from Harare in 2004, to 6 districts in 2010, and to 3 provinces in 2011. In 2014, the MoHCC adopted Zvandiri as a key component of its national accelerated action plan for paediatric and adolescent HIV treatment. It has expanded into 51 of 63 districts, reaching 64,000 CAYPLHIV in 2019.

An RCT was conducted in Gokwe district in 94 adolescents (10-15 years), 47 randomised to standard of care plus CATS services (including weekly home visit) and 47 receiving only standard of care. At the 12 month follow up, with a response rate of 85% (intervention arm) and 60% (control arm) findings indicated that adolescents supported by CATS were 3.9 times more likely to adhere to treatment than the control group. At the start of the programme, adherence was at 44.2%, improving to 71.8%. Linkage to services and retention in care within the intervention group increased compared with a decrease in the control arm. The intervention group reported a statistically significant increase in confidence, self-esteem, self-worth and quality of life compared with a decrease in the control arm. The impact of the intervention was also felt to have a positive impact on caregivers. Limitations of the study included small sample size and the use of self-reported adherence (no viral load monitoring) (Willis et al; 2019).

	A cohort study was conducted in 2018 to measure the effectiveness of the Zvandiri programme on outcomes across the HIV cascade. CATS identified 15,223 contacts and sexual partners with unknown HIV status (linked to 9,353 index PLHIV) and referred them for HIV testing. Of them, 12,114 (79.6%) were tested and 1,193 (9.8%) were confirmed HIV positive. Of the latter, 1,153 (96.6%) were initiated on ART with 99% starting on the same day of diagnosis. Of those on ART, 1,151 (99.8%) were alive on ART at 6 months whilst 2 (0.2%) died. A total of 1,044 (91%) PLHIV underwent viral load testing at 6 months or later, of whom, 1037 (99.3%) were virally suppressed (<1000 copies/ml). (In Press) Further research is needed to establish the effectiveness of the CATS service on a larger scale and on viral suppression to provide additional evidence. Three RCTs have now been conducted: 1) a cluster randomised trial of the multi-component Zvandiri Programme, including a process evaluation and cost effectiveness study. In Press 2) an RCT of the effectiveness of the peer support intervention on viral suppression among adolescents with virological failure. In Press 3) an RCT of the effectiveness of an adolescent peer-led mental health intervention on HIV virological suppression and mental health. Study results available in 2020.
Costing	In 2015, the CATS model was costed by the Clinton HIV/AIDS Initiative and Pangea and found to cost \$22.53 per person per annum when implemented at scale. A cost-effectiveness study is currently being completed and will be available at the end of 2019.
Challenges and lessons learned	Partnerships • Government leadership and coordination were critical in driving the scaling up of an integrated, sustainable, differentiated service for children, adolescents and young people living with HIV. • The integration of community interventions for children, adolescents and young people living with HIV within the national HIV prevention, treatment and care programmes was achieved through strong collaborations with government, civil society and funding partners. • The integration of training, supervision and mentorship within national systems from an NGO at the national, provincial and district levels has been essential for government ownership and support for CATS. Working with adolescents • Evidence confirms that peer-led interventions are extremely effective for adolescents across the HIV cascade. • Adolescent involvement in all aspects of programme design and delivery, monitoring, evaluation and research has been critical, acceptable and sustainable. • A supportive, sustained relationship between programme staff and CATS is crucial. • Enabling youth autonomy leads to strong leaders and role models. • A designated physical space that is welcoming and safe promotes adolescent engagement and adolescent-friendly services. • Services need to be differentiated by age and by the clinical and psychosocial needs of individual adolescents. • Community treatment, care, and support programmes for children, adolescents and young people living with HIV strengthen both health and psychosocial outcomes. • Collaboration with the Ministry of Health and Child Care has supported the health of the CATS by strengthening viral load monitoring, linking eligible CATS to isoniazid preventive therapy and cervical cancer screening and linking symptomatic CATS to TB investigations.

	Data and monitoring and evaluation • A shared monitoring and evaluation system established with clinics or a national system would have helped to demonstrate the impact of a community-based intervention in improving retention, adherence, psychosocial well-being and sexual and reproductive health and mental health outcomes. • Use of programmatic data, together with partnerships with research institutions, has produced robust evidence for informing policy, service delivery and scale-up as well as resource mobilization. • Strengthened and scaled-up objective markers, including routine viral load testing and refined measures of mental health, are needed to demonstrate sustained impact. • Basic cost–effectiveness and cost–benefit data can strengthen evidence for good practice and sustainable impact.
Key points to ensure successful adaptation of this model in other national or subnational areas	• Government leadership and coordination of the adaptation process, including integration within national strategies, plans and training for children, adolescents and young people living with HIV. • Establishment of a solid baseline before beginning implementation. • Orientation and training for all supervisors and mentors (health-care providers, lead organizations, implementing partners and district stakeholders) before training the CATS • Recruiting young people for CATS training in accordance with predetermined eligibility criteria. • Standardized training of CATS facilitated by trained, experienced CATS trainers and experienced CATS. • Involving CATS supervisors and mentors during the CATS level 1 training. • Concrete, standardized and consistent onsite and e-mentorship for the CATS monthly. • Giving priority to care for CATS throughout the programme.
Links and resources	• Policy Brief. 2019 Differentiated Service Delivery for Adolescents Living with HIV in Zimbabwe – The Zvandiri Cluster Randomised Trial. August 2019 www.differentiatedcare.org • Willis, N., Milanzi, A., Mawodzeke, M., Dziwa, C., Armstrong, A., Yekeye, I., . . . & James, V. (2019). Effectiveness of community adolescent treatment supporters (CATS) interventions in improving linkage and retention in care, adherence to ART and psychosocial well-being: a randomised trial among adolescents living with HIV in rural Zimbabwe. <i>BMC public health</i>, 19(1), 117. • PEPFAR Solutions Peer Counselling to Improve Adolescent HIV Care and Support. https://www.pepfarsolutions.org/solutions/2018/1/13/zvandiri-peer-counseling-to-improve-adolescent-hiv-care-and-support-7dfym

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- https://www.youtube.com/watch?v=zlfCl4_Up2s
- <https://www.who.int/hiv/pub/guidelines/adolescents/en/>

**For more
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Zvandiri: information on building blocks for the service delivery model (for clinically stable clients)

	Antiretroviral therapy refills	Clinical consultations	Psychosocial support	Consistency with WHO DSD recommendations
When	Three-monthly	Three-monthly	Monthly	●
Where	HIV clinic	HIV clinic	HIV clinic or in the community	●
Who	Nurse or physician, peer counsellor, CATS	Nurse or physician, peer counsellor, CATS	Nurse, primary counsellors and CATS	●
What	Antiretroviral therapy refill Clinical assessment Sexual and reproductive health services Six-monthly mental health screening Annual viral load and disability screening	Clinical assessment Sexual and reproductive health services Six-monthly mental health screening Annual viral load and disability screening	Support group meetings – standardized, age-disaggregated curriculum on life skills and growing up with HIV Individual psychosocial support, including information, counselling, screening and up-referral as required	●

Colour code: Green: aligned; Yellow: partially aligned



Chadrack Mudikisi is the president of the Ariel Club at the Elonga Health Center in Kinshasa, DRC. The Ariel Club is a space where trained adolescents provide psychosocial support to their peers on adherence to ARVs, the process of disclosure, and other issues that children and adolescents living with HIV face. Its HIV/AIDS unit is supported by EGPAF's IHAP-Kinshasa project under USAID/PEPFAR funding © Eric Bond / EGPAF 2018



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