



2019



REGIONAL POLICY BRIEF

A FOCUS ON
DIFFERENTIATED SERVICE DELIVERY FOR ADOLESCENTS
AND YOUNG PEOPLE LIVING WITH HIV



"A Briefing Paper in the SAT SRHR Evidence Series"





ACRONYMS AND DEFINITIONS

AACs:	Ariel adherence clubs
AFHS:	Adolescent-friendly health services
AGYW:	Adolescent girls and young women
ALHIV:	Adolescents living with HIV
AYP:	Adolescents and young people
AYPLHIV:	Adolescents and young people living with HIV
ART:	Antiretroviral therapy
ARVs:	Antiretrovirals
AYFS:	Adolescent and youth-friendly services
AYP:	Adolescents and young people
CAYPLHIV:	Children, adolescents and young people living with HIV
DSD:	Differentiated service delivery
EGPAF:	Elizabeth Glaser Pediatric AIDS Foundation
HCP:	Health care provider
HCT:	HIV counselling and testing
IAS:	International AIDS Society
LGBTQI:	Lesbian, gay, bisexual, transgender, queer or questioning and intersex
MMP:	Multi-month prescription
MSF:	Médecins Sans Frontières
PATA:	Paediatric Adolescent Treatment Africa
SAT:	SRHR Africa Trust
SAHCS:	Southern African HIV Clinicians Society
SPEEDI:	Standardized paediatric expedited encounters for ART drugs initiative
SRH:	Sexual and reproductive health
SRHR:	Sexual and reproductive health and rights
WHO:	World Health Organization

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OVERVIEW

The adolescent HIV epidemic represents one of the most challenging and persistent public health issues facing East and Southern Africa. Adolescents and young people (AYP) account for an estimated 45% of new HIV infections worldwide, with young women disproportionately affected, and sub-Saharan Africa experiencing 70% of all new HIV infections. Approximately 1.2 of the 1.6 million adolescents (75%) living with HIV in sub-Saharan Africa are living in East and Southern Africa. While AIDS-related deaths in this region have declined in children and adults, such deaths amongst adolescents have tripled since the year 2000^{1,2} and remain the leading cause of death amongst adolescents in Africa¹⁰. Access and adherence to treatment and long-term retention across the HIV continuum of care remains a challenge for this age group due to a convergence of developmental, cognitive and behavioural factors as well as structural, health-systems, legislative, policy and programmatic gaps or barriers³⁻⁷.

Adolescents and young people are a unique and heterogenous population group that experience distinct and rapid physical, psychological and emotional changes. These changes impact how they perceive risk, make decisions and interact with health services⁸. Evidence has demonstrated that the HIV and health-related decisions that adolescents make will have long-term effects on their health for the duration of their lives⁴.

It is increasingly acknowledged that AYP are an important population to prioritise in our efforts to turn the tide on HIV^{1,9}, making effective adolescent service provision more important than ever before¹⁰. Promisingly, the work of adolescents and young people living with HIV (AYPLHIV), civil society and grassroots organisations, researchers, international policy makers and programmers has started to bring much-needed awareness, funding and a targeted response to meet the needs of AYP. In response to increased global awareness of these issues, there has been a recent surge in global and national-level guidance and initiatives to strengthen HIV service delivery for this population^{4,11,12}.

Differentiated service delivery (DSD) is one such initiative that has received increasing attention for its potential service delivery benefits and HIV-related health outcomes. It is a client-centred approach that spans prevention to retention in the HIV cascade of care and seeks to simplify and adapt HIV services for people living with, or at risk of acquiring HIV^{12,13}. With an estimated 95% of HIV service delivery remaining facility-based, largely undifferentiated for individuals or groups, there is an urgent need to explore alternate models that will assist in accelerating service delivery in our efforts to reach the 90-90-90 super-fast track targets¹⁴.

Focus on DSD models to-date has largely been on adult patients who are stable on antiretroviral therapy (ART)¹⁵. DSD, including treatment differentiation, has demonstrated improved HIV-related outcomes for ART-stable adults¹⁶⁻¹⁹, but there is little evidence on the presence and efficacy of differentiated service delivery models for adolescents, especially when considering differentiated platforms for ART delivery^{8,20,21}. Although global guidance¹² on DSD recognises the importance of adapting services for adolescents living with HIV, rigorous evidence on how to bring DSD models to scale for this important group is required^{11,19}. There is growing evidence on the role of community-based strategies in improving ART adherence through peer support, Youth Care Clubs and Teen Clubs. Such strategies and support structures offer an existing platform that can be leveraged and expanded upon to offer and investigate community or facility-based ART delivery options for AYP.



OBJECTIVE

The objective of this situational analysis is to review evidence to-date on differentiated service delivery and differentiated treatment platforms for ART delivery for AYPLHIV in East and Southern Africa (ESA). As per the scope of work, the focus includes adolescent-focused, community and health facility-based treatment models where antiretroviral therapy (ART) refills are included - including, but not limited to, community ART refill groups (CARGS)/ community ART adherence groups (CAAGS). In doing so, it aims to:

- Take stock of programmatic, experiential and academic evidence to-date on differentiated service and ART delivery for AYPLHIV.
- Examine strengths, gaps, challenges and identify future directions of differentiated service and ART delivery for AYPLHIV;
- Generate evidence and document current differentiated service and ART delivery platforms for AYPLHIV in ESA;
- Feature some promising and effective models involving differentiated service and ART delivery for AYPLHIV in the ESA region;
- Highlight pertinent research questions and gaps for consideration; and
- Make recommendations for a way forward, including replication, scale-up, and future directions.

METHODOLOGY

Findings in this situational analysis also drew on the following methods:

- (1) A desk review of academic, policy and grey literature on differentiated service and ART delivery for adolescents and young people (ages 10-24 living with HIV) in Eastern and Southern Africa;
- (2) In-depth review of four promising models of practice from the East and Southern Africa region on differentiated treatment service and ART delivery for adolescents and young people living with HIV. Presented as 'spotlights', they include a mix of group and individual service and ART delivery, either alone or combined with a psychosocial and adherence support services;
- (3) Informal consultations with internal and regional key stakeholders working in the fields of adolescent HIV and service differentiation; and,
- (4) Presentation and analysis of secondary data and findings from the 2017 PATA South Africa differentiation service delivery forum.

This situational analysis builds on recent initiatives that aim to fill the evidence gap on adolescent differentiated service delivery, including differentiated ART delivery.

These include the International AIDS Society (IAS) families review²², promising practices featured on differentiatedservicedelivery.org²³, a 2018 review by Reif and colleagues²⁴ and the recent PATA situational analysis and technical briefs on differentiated service delivery for AYPLHIV in South Africa²⁵.

WHAT IS DIFFERENTIATED SERVICE DELIVERY?

Defined as a client-centred approach that spans prevention to retention in the HIV cascade of care, differentiated service delivery seeks to simplify and adapt HIV services for people living with, or at risk of acquiring HIV^{12,13}. By adapting HIV services to the heterogenous needs, preferences and expectations of different populations, differentiated service delivery is a key strategy to achieve the ambitious UNAIDS 90-90-90 targets^{12,14,20,26}, and to end AIDS by 2030²⁷.

A differentiated approach to service delivery is structured around four key axes of care – considering for each client group^{24,25,28,29}:

- (1) **the specific service package** – such as ART refills, clinical assessment, viral load monitoring (WHAT);
- (2) **location** – such as the health facility, home or community (WHERE);
- (3) **provider** – such as a clinician, lay-provider or peer supporter (WHO); and
- (4) **frequency** – for example, monthly or every 2-6 months (WHEN).

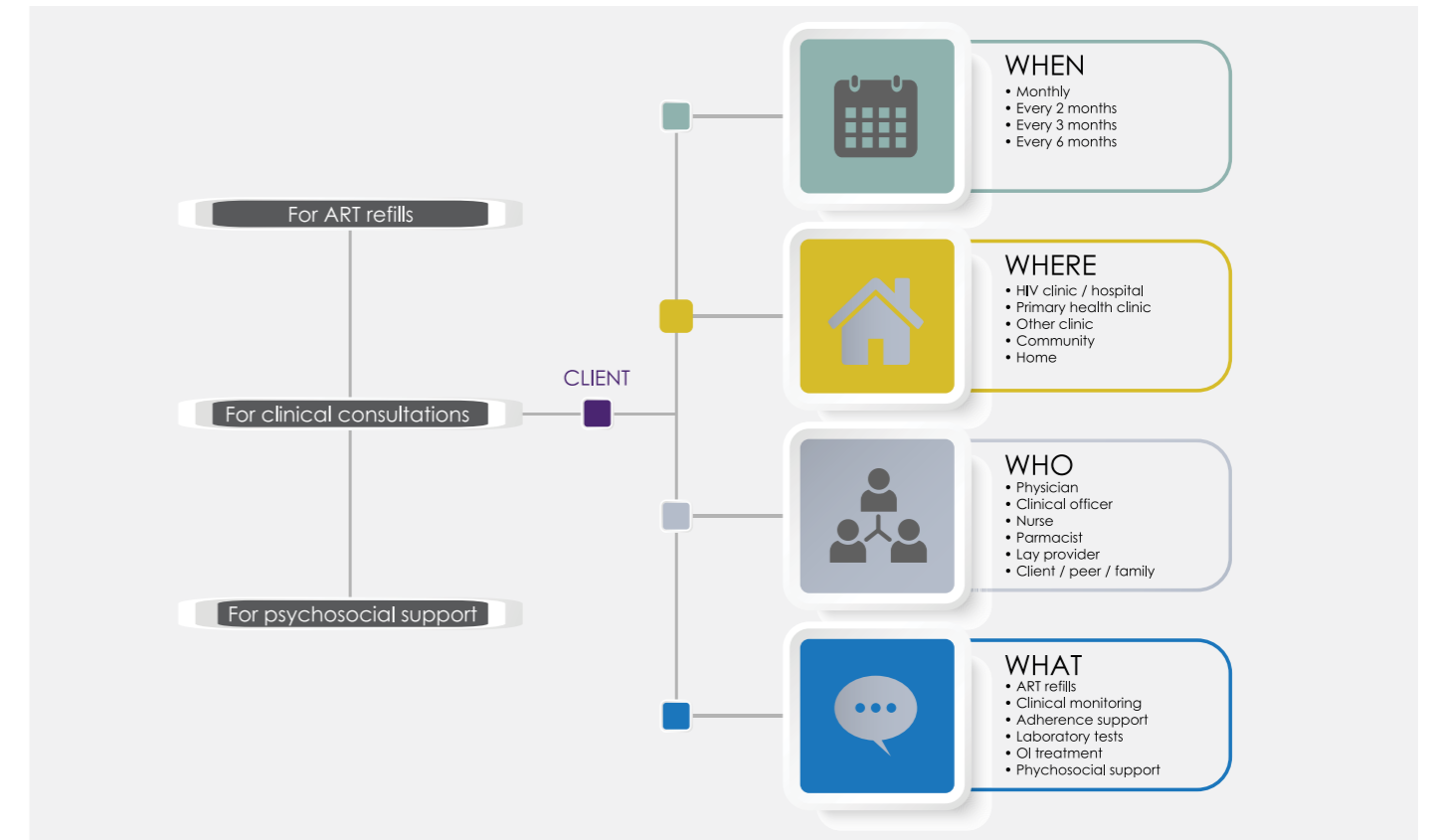


Figure 1 DSD Building blocks for specific populations²⁸

Together, these building blocks form a differentiated service model that can suit the needs of diverse clients within particular epidemiological contexts and local health systems, while retaining a public health approach. Stratification of groups (differentiation) is usually based on clinical characteristics such as disease stage, treatment status and adherence³⁰, as well as the sub-population (e.g. pregnant, adolescents, key population) and the context (e.g. urban or rural, conflict or stable setting)³¹.

As countries implement the 'Treat all' approach, additional patients have entered the health system, resulting in places in overcrowding and longer waiting times which may compromise the quality of services and patient outcomes⁸. DSD aims to support ART scale-up while reducing unnecessary burdens on the health system. DSD is associated with simplifying access and cost, addressing service inequalities and providing opportunity for communities to be more involved in treatment and care. DSD can also facilitate friendlier and more convenient service delivery for AYP³². Findings from a 2017³³ study on differentiated care models showed that differentiated care models can result in significant efficiency gains in terms of costs and health workforce. At the same time, differentiated service delivery aims to enhance quality and efficiency of services and improve patient experiences¹³.

The World Health Organization (WHO) and IAS have acknowledged the potential of DSD for adolescents (alongside other distinct populations) and outline rationale and practical steps towards the implementation of DSD for this group^{12,28}. The WHO proposes the incorporation of an additional three core principles for AYPLHIV. These include: (1) integrating parents or caregivers in young people's care (a family-based approach); (2) integrating psychosocial support and sexual and reproductive health (SRH) services; and (3) support groups and peer education²².



WHAT SERVICES CAN BE DIFFERENTIATED?

Differentiation of services can be applied to a variety of services, including²²:

- (1) Clinical consultations (who, where, what, frequency);
- (2) Refills and treatment (frequency, where, who);
- (3) Lab tests (frequency, where, what);
- (4) Adherence support – for adolescents this may be coupled with other support (e.g. family planning, stigma support, developmental support); and
- (5) Psychosocial support, including peer support.

This situational analysis initially intended to focus specifically on differentiated ART delivery and Community ART Refill

Groups (CARGS)/Community ART Adherence Groups (CAAGS), but was expanded to include a broader scope of differentiated service models that included a specific ART refill component, alone or in combination with other services.

The categories that were used in conceptualising this review include health provider or peer led, community-based and facility-based differentiated care. In reporting on findings, group and individual-based models of care, in line with the reporting on other relevant literature reviews were considered.

LITERATURE REVIEW FINDINGS¹

This literature review builds on a 2018 review²⁴ of evidence on differentiated models of care for outcomes across the HIV care continuum for adolescents and young people living with HIV and an IAS review, which included a review of child and adolescent differentiated ART delivery²².

In line with these studies, our review found that there is very limited literature and evidence on DSD for AYP, and especially so for differentiated ART delivery - although there is a growing literature on general differentiated ART

services across the HIV cascade of care. Whilst much of the literature highlights strategies to strengthen ART adherence in adolescent populations, including community and peer-led services, there is less on



Differentiation in practice - Models identified

ART delivery platforms using these methods.

Our review found **three facility-based, health provider-led, individual focused models** - the standardized paediatric expedited encounters for ART drugs initiative (SPEEDI) model in Tanzania³⁴, the multi-month prescription (MMP) model reviewed in six countries within Baylor Centres of Excellence²⁰ (featured as a spotlight) and a Ugandan intervention scaling up a family-centred approach. In the first two models described in more detail below, stable clients increased the time between their ART refills and clinic visits, therefore reducing the time they spent at the health facility^{20,35,36}. It has been suggested that this approach may save patient and health provider time, encourage patient engagement in care through simplifying their ART visit schedule and reduce congestion in health facilities^{20,30,37}. Identified models are described in further detail below:

The **SPEEDI** initiative provided for visits every two months, alternating fast-tracked medication pick-ups with standard clinical visits for stable children, adolescents and young adults with good adherence to ART and no medical or social complications. SPEEDI patients had low loss to follow-up and mortality rates, reduced wait times, improved satisfaction with clinic services and reduced patient burden on health centres³⁴.

Another promising differentiated treatment ART delivery model is **MMP**. This model, evaluated in seven Baylor Centres of Excellence in six countries in Eastern and Southern Africa, found that clinically stable adolescents can do well with extended ART refills and reduced clinical visits²⁰. Favourable outcomes in terms of retention in care, ART adherence, and viral suppression were found²⁰. Please see the 'spotlight' on this model later in this document.

A 2013 study of a Ugandan intervention which focused on scaling up child and adolescent care (ages 0-17) within a **family-centred approach** found improved enrolment in care and ART coverage³⁸. Treatment differentiation included family medication pick-ups for children and adolescents in school who are stable (for a maximum of two consecutive visits), fast-tracking of children and adolescents for medication pick-ups and clinical consultations, alongside tailored psychosocial support and task-shifting to nurses. This study did not use the term 'differentiation', as it was published before the move towards differentiated service delivery as it is now called. A limitation was that it did not report on adolescents as a separate age group. However, it is included here given that findings suggest that family-centred treatment differentiation approaches for children and adolescents are operationally feasible, result in strong ART coverage, and can be rapidly scaled up³⁸.

Although not included as primary findings in this review, the IAS DSD families review²² identified two additional models of differentiated ART delivery for stable children and adolescents for which results have not been published. One was a three-monthly refill model for children and adolescents in Kenya, with each refill combined with a clinical consultation^{22,39}. Another model was the community-based ART model (C-BART) that provided ART refills for 3 to 6 months at fixed remote sites in Namibia, combined with a clinical consultation. Data was not disaggregated between adults and children in this model, although evidence showed good viral suppression^{22,40}.

Our review also identified three facility-based group models, including the Medicines Sans Frontiers (MSF) youth clubs (see featured spotlight), the WITS RHI youth clubs, Tanzanian Ariel Adherence Clubs, and the Malawi teen club model (see featured spotlight). It also identified a teen club model in eSwatini⁴¹, which is not reported on further because we could not ascertain if they differentiate treatment services. The youth clubs and teen club models included a differentiated facility-based ART refill component provided by health providers. The Malawi Teen Club provided standard of care activities alongside adolescent-focused group adherence counselling and psychosocial support, and reported reduced loss to follow-up amongst participants who attended the club²¹.

The Malawi Teen Club provided standard of care activities alongside adolescent-focused group adherence counselling and psychosocial support, and reported reduced loss to follow-up amongst participants who attended the club²¹.

Ariel adherence clubs (AACs) are psychosocial groups for children, adolescents and young people living with HIV (CAYPLHIV) designed and implemented by the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) to address social and behavioural barriers to HIV treatment, retention and adherence faced by children and adolescents⁴². They have been strengthened to include ART refills, clinical consultations and laboratory testing to club participants on the same day as monthly club meetings⁴².

The MSF and WITS RHI youth clubs both provide integrated support for ART adherence and retention in care, mitigate social isolation through strengthening peer support and networking opportunities and provide differentiated

treatment refills based on clinical stability. The WITS RHI model^{43,44} conducted a pilot study with the model in two South African provinces, Gauteng and North West as part of their adolescent innovations project. To-date there are currently 589 AYPLHIV accessing these services, and programme data indicates promising results with 81% of participants retained in care and 75% achieving viral suppression after 12 months. Costing for this model reports an estimated \$5 per month/per member⁴⁴. The MSF YCC in Khayelitsha, South Africa has also demonstrated improved retention in care⁴⁵, and has recently been transferred out of health facilities and into the community, although evidence on the community clubs is not yet available.

Our search also identified the adult MSF model, which previously included some younger participants within a primarily adult community-based adherence club¹⁶. Despite strong retention outcomes for adults, there was not a significant difference in adolescent outcomes. In this model, participants were differentiated by stability, but not age. This model has since been modified for adolescents and young people specifically, as described above.

Additionally, **one group model with strong community ties** was identified in the ESA region. The Africaid Zvandiri Community Adherence Treatment Supporter (CATS) model^{11,46} includes a strong peer-led community focus, with ART delivered by health providers at health facilities. It has been adapted to include supporting the provision of ART refills, and CATS roles have been expanded to supporting facility-based adolescent ART refill groups²⁸. For more information, please see the 'spotlight', later in this document.

Another community model was identified in Haiti. Although outside of the scope for this review for regional regions, this study demonstrated improved retention in care in a community-based group initiative. In this model, clinical services, including refills were performed by a nurse during cohort meetings alongside counselling and social activities⁴⁷.

“ It has been suggested that this approach may save patient and health provider time, encourage patient engagement in care through simplifying their ART visit schedule and reduce congestion in health facilities ”





Other relevant literature review findings

This review also identified several studies, which highlight adolescent and youth-friendly services (AYFS) as being critical to DSD. These may include a range of services, including; HIV and SRH service integration, peer and community-based adolescent individual and group support, supported transition from child to adult services as well as social protection. These are presented below, alongside consideration of how they may interact with differentiated service delivery.

AYFS

Although there is not a one-size-fits-all model for AYFS, there is a growing evidence that suggests that providing 'adolescent-friendly' services can support improved adolescent experiences and health-related outcomes. An existing adolescent - and youth- friendly service delivery approach must underpin implementation of DSD models for AYPLHIV. Further, training and mentorship on AYFS and DSD are required to support healthcare provider (HCP) to deliver effective quality DSD models for AYPLHIV. These suggestions align with a recent survey carried out by PATA at their differentiated survey delivery forum⁸, which reiterate the importance of friendly health providers attitudes and the welcoming and non-stigmatizing provision of health services.

Integrating quality psychosocial support

Psychosocial support is an important aspect to DSD building blocks for AYPLHIV and must be firmly integrated into differentiated ART delivery. Health providers, including peer supporters and other community cadres, need to be trained and mentored with the necessary skills and provided with tools to deliver quality psychosocial support to AYPLHIV.

Mapping the currently available psychosocial support groups or services may also help to identify avenues for ART refill groups and may offer potential partnerships with community-based organisations. For adolescents under the care of parents or caregivers, making family support part of the minimum care package for DSD may be an effective approach.

Supporting peers, health care providers and community workers

Service delivery platforms beyond the health facility, such as community and peer interventions, are essential to DSD models for AYP. They are critical to facilitate early identification of challenges, rapid proactive follow-up and to activate additional support for AYPLHIV. For this reason, HCP and other cadres of lay support providers need to be well-orientated, provided with the necessary tools and trained and mentored in the development and management of DSD for AYPLHIV.

Social protection

Our review found that differentiated ART delivery is often combined with other forms of psychosocial or adherence-related care and support. This approach aligns with growing evidence that suggests that combinations of social protection including 'care', 'capability' and 'cash/in-kind', alongside clinical and biomedical intervention may support ART adherence and adolescent health outcomes by addressing multiple needs simultaneously and supporting improved resilience⁴⁸⁻⁵³.

A REVIEW OF INTERNATIONAL GUIDANCE: DIFFERENTIATED ADOLESCENT TREATMENT SERVICE DELIVERY – INTERNATIONAL AND NATIONAL POLICY PROVISIONS

In recent years, there has been an increased focus on delivering differentiated services, including for adolescents and young people. The WHO has provided specific guidance on this, alongside donor agencies and global organisations such as the IAS, PEPFAR, the Global Fund, UNAIDS and MSF, as well as national governments in some countries such as Kenya, Zimbabwe, eSwatini and South Africa³³. This next section provides an overview of key international guidance documents as they relate to differentiated adolescent ART delivery. It also reviews Zimbabwe and South Africa's policy guidance in relation to differentiated ART delivery.

Promisingly, these documents are well-aligned, all generating complementary recommendations along a number of key themes. In summary, key guidance from these national and international policy documents in relation to differentiated ART delivery, and differentiated services more generally, include:

- Adolescent and youth-friendly services;
- Saturday or after-school clinics so that adolescents do not miss school;
- Consideration of school holidays and the unique needs of students at boarding school;
- Facility and/or community-based rapid ART refills;
- Reduced clinical visits and multi-month refills for stable adolescents;
- Community linkages and services (including linking mechanisms between clinic and community, as well as the provision of community services where appropriate);
- Peer support groups and youth care clubs;
- Psychosocial support; and
- Integrated HIV and SRH.



SERVICE USER PERSPECTIVES

In 2018, PATA held a differentiated service delivery forum with adolescents, health providers and experts from South Africa. They surveyed young people accessing services and health provider on differentiated service delivery as part of a commitment to the greater and meaningful involvement and participation of YPLHIV in the generation of evidence for sustainable, effective policy and programming.

Survey respondents were asked about their experience of key aspects of DSD. Most respondents attended the health care facility for ART refill monthly (32.9%, n=27) or every two months (29.3%, n=24), with the majority collecting their ART from the clinic pharmacy (68.7%, n=55). For the clinical consultation, 36.7% (n=29) of respondents indicated that they attend monthly and 22.8% (n=18) every two months. Three monthly ART refills were preferred and monthly pick-up the least preferred method. The place for ART refill that participants indicated would be the most convenient for them was at a community dispensary or pick-up point. Respondents added other desirable options such as; commercial pharmacy, delivery at home, the nearest doctor or mobile clinic.

The health provider survey reports on views of a select and experienced group of health providers who have had previous exposure to differentiated service delivery. However, the results of this small survey indicate some progress towards an understanding of DSD and highlight important considerations for implementation challenges. Of the participants completing the survey, 81.8% (n=9) reported that their services currently provide DSD for AYPLHIV. Most services offered multiple delivery models, with 91.7% (n=11) providing the individual facility-based model, 83.3% (n=10) of the health provider-managed group model, 66.7% (n=8) the out-of-facility individual model and 41.7% (n=5) the client-managed group model. These findings align with the literature review, in which most models were health facility-based and health provider-led.

The survey identified several critical facilitators for DSD implementation.

These included:

1. mechanisms that support access to services such as phone appointment reminders, Health Connectors to link newly diagnosed patients and the use of mobile technology or social media for communication;
2. mechanisms to enhance ease of clinical appointments such as dedicated adolescent and youth-friendly service (AYFS) days, giving fast-track cards to reduce queuing time, easy to use screening tools and provision of comprehensive services in one appointment; and
3. implementation of supportive service delivery models such as YCC and other peer-led interventions. These also align with the limited, but growing literature on differentiated service delivery generally, although most don't extend to offering differentiated ART delivery outside the health facility.

They also documented challenges in DSD implementation. These included difficulties in engaging all relevant stakeholders, such as not having clarification from the government on their role in supporting DSD, not engaging with AYPLHIV sufficiently to identify the best-suited models and the reluctance of AYPLHIV to attend community-based services. Additionally, structural and system barriers such as shortage of space, lack of human resources, weak booking systems, and the inability of HCP to adapt to change. For successful implementation, HCP surveyed suggested strengthening tracing and follow-up mechanisms and placing a greater emphasis on monitoring and evaluation systems to measure progress and keep track of effectiveness. This aligns with what the evidence recommends for generating more rigorous evidence to determine how best to implement and scale up differentiated service delivery models for adolescents living with HIV.



SPOTLIGHTS

Spotlight 1: Multi-month prescriptions, Baylor International Paediatric AIDS Initiative²⁰

Context:

The Baylor International Paediatric Initiative (BIPAI) Centres of Excellence (CoE) provide HIV and SRH services to children and adolescents living with HIV in East and Southern Africa. The MMP model provides ART-stable children and adolescents multi-month prescriptions to limit how much time they spend at the health facility^{20,36,54}.

Aim:

MMP may save patient and health provider time, encourage patient engagement in care through simplifying their ART visit schedule and reduce congestion in health facilities^{30,37,55,56}. However, little evidence is currently available on the inclusion of adolescents in differentiated treatment service delivery, including reduced clinic visits and extended ART refills²⁰.

This study was undertaken to describe 5-year patient outcomes among children and adolescents on ART who transitioned into MMP in BIPAI CoEs. It examined the impact of MMP on clinical outcomes among children and adolescents living with HIV using data for almost 23,000 children and adolescents at seven facilities in six African countries – Botswana, Lesotho, Malawi, eSwatini, Tanzania (two centres) and Uganda. It considered outcome measures of mortality, loss to follow-up, ART adherence and immunosuppression as measured by CD4 and viral load. The findings presented below focus on the adolescent study outcomes.

Approach:

- Free, comprehensive HIV care for HIV-infected infants, children and adolescents was provided by CoEs in alignment with contemporary national and international guidance.
- There were not established, standardized criteria for patient eligibility to transition into MMP across facilities and decisions varied by patient, provider and facility. However, in general, patients were transitioned to MMP when they were considered clinically stable (improving CD4 count or viral load suppression or minimal HIV-associated morbidity), and ART adherent (pill count measured at 95%-105%). This typically occurred after 6-9 months of monthly prescriptions.
- Once moving to MMP, patients received fewer clinical visits and extended ART refills to last until their next scheduled clinical appointment.
- Participants were considered to have transitioned to MMP if they had 3 consecutive visits occurring between 56 and 180 days of each other.
- Alongside MMP, adherence counselling and

support were provided to patients. Centres also had designated personnel to track patients missing clinic visits.

- Analysis was conducted using patient data from standardized electronic medical records of patients who had transitioned to MMP from January 2003 to June 2015.

Results:

- Adolescents on ART who transitioned to MMP maintained favourable outcomes in terms of retention in care, ART adherence, immunosuppression, viral suppression and death. Transition to MMP with less frequent clinical visits and extended ART refills was operationally feasible.
- Favourable clinical outcomes were high and relatively stable throughout the first five years of MMP amongst children and adolescents. These included 87%-94% acceptable immunologic response, 75-80% adherence and 79%-85% viral suppression.
- In line with the literature that demonstrates higher mortality and poorer adherence amongst adolescents^{54,57-59}, there were significant differences in outcomes between age groups. Adolescents aged 15-19 had less favourable loss to follow up and mortality outcomes and those ages 10-19 had worse rates of viral suppression. Despite this, study findings suggest that MMP doesn't worsen adherence amongst adolescents⁶⁰.
- MMP saves time for health care providers and patients. Providers may benefit from the reduced patient load.

Considerations & lessons learnt:

- Successfully implementing MMP requires clinical criteria for assessing adherence or clinical progress. These may include pill count, CD4 and VL testing, alongside clinical determination of HIV associated morbidity. Staff must be trained to interpret these measurements and make clinical assessments.
- Facilities in this study were relatively well-staffed, and personnel were well-trained and possibly more confident with managing paediatric HIV than other health providers might be.
- Given that patients receiving MMP were those who were clinically stable, retained in care and surviving, it is perhaps not surprising that their outcomes remained favourable.
- Implementation challenges (reported anecdotally in the study) included forecasting and supply chain limitations, such as stock outs.
- The study did not have a monthly prescription comparison group, so cannot make definitive

conclusions despite demonstrating promising results.

- Reservations for adopting the MMP model for ALHIV include that their unique adherence issues may preclude their engagement in DSD^{20,26,29}. However, there is no evidence that increasing clinical visits for ALHIV will necessarily improve ART adherence.

Key Features

When? Every 56-180 days (2-6 months)

Where? Health facility – Baylor CoE

Who? Pharmacist, nurse, nurse technician, clinical officer, physician (facility dependent)

What? ART refills, Clinical monitoring, Adherence support (for stable and unstable) Psychosocial support?, Lab tests



For more information: <https://bipai.org>

Spotlight 2: "Teen Club" - an adolescent-centred differentiated care model in Malawi

Context:

Teen clubs have been documented as a promising model of differentiated service delivery for adolescents living with HIV²¹.

A Teen Club was established in 2010 at Tisungane Clinic, a tertiary referral HIV clinic based in Zomba Central Hospital in Southern Malawi. HIV prevalence and density are highest in Southern Malawi and the urban areas of Zomba, Lilongwe and Blantyre⁶¹. The Tisungane Clinic Teen Club was a collaborative project of the Malawian Ministry of Health, Dignitas International and the Baylor College of Medicine Clinical Centre of Excellence.

Aim:

Teen Clubs aim to improve retention in care and antiretroviral therapy (ART)-related health outcomes amongst ALHIV. This study aimed to build the evidence base on differentiated service delivery for ALHIV by evaluating whether attendance in a Teen Club improves retention in care.

Approach:

- The Teen Club at Tisungane Clinic is a targeted psychosocial support intervention that provides ART refills and dedicated clinic time, education about sexual and reproductive health, and support for treatment adherence and positive living.
- Club eligibility requirements include: between the ages of 10 and 19, on ART and have completed the disclosure process. Participants are referred to the Teen Club by an ART clinician or a nurse.
- The Teen Club provided for all standard of care activities, which included ART prescribing and nurse

refills, clinical review, family planning and lab testing as well as structured adolescent-focused group adherence counselling and psychosocial support (described more in detail below). In the standard of care, ALHIV attended the clinic every month for the first 6 months, then every two to three months (pending stable adherence). As described in the spotlight above, MMP is an already differentiated model.

- In addition to being a targeted psychosocial support intervention, the teen club also provides access to clinical visits and pill refills. They engage a number of service delivery interventions that improve retention in care and adherence to ART for ALHIV. Services include medication collection from nurses, adherence assessments, peer counselling and support, youth-friendly services, SRH education, adherence and disclosure support and improved clinic opening times to increase accessibility. Those requiring additional clinical assessment are referred to a clinician. While teens wait for clinic or adherence counselling visits, facilitated art, games, sport and drama sessions are delivered. Attendees generally participate over several hours. Lunch is also provided.
- Clubs are run on Saturday mornings, so that adolescents do not need to miss school to attend. Only ALHIV are attended to at the clinic on Saturdays.
- Clinicians provide specialised clinical care, while a designated non-physician staff member (e.g. nurse, nursing aid, lay community health provider, expert patient) leads educational and other activities. Clinicians have all received training and mentorship in paediatric HIV care, while nursing and lay staff had been trained on the teen club curriculum⁶².
- The model was adapted from the BIPAI CoE Curriculum (available at: <https://www.k4health.org/toolkits/alhiv/bipai-malawi-teen-club-life-skills-curriculum>) and modified for the setting. It was run by the Ministry of Health and Ministry of Health Staff with the support of Dignitas International.
- Participants in the study were registered at Zomba Central Hospital and routine monitoring and evaluation was included as part of the study⁶³. A review of patient records was conducted from March 2010 (when the Teen Club was started) to the end of 2015.

Results:

- Teen clubs are effective in reducing attrition from care in ALHIV. Exposure to the Teen Club was associated with 3.7-times greater odds of retention than the standard of care.
- Older ALHIV (ages 15-19) were at significantly higher risk (two times higher) of attrition from care than their younger (ages 10-14) peers. This is in line with other evidence⁶⁴⁻⁷¹ on adolescent HIV outcomes, and further highlights the importance



of age-specific programming and transitioning protocols²¹.

- Youth-friendly strategies demonstrate promise in improving ALHIV retention in care, and this study contributes to this small evidence base. Further research into ALHIV transition from paediatric to adult care, with attention to differentiated models of care are needed.

Considerations and lessons learnt:

- There may be selection bias for participants that attended the Teen Club – that is, by nature of choosing to attend they may have been clients more likely to be retained in care and treatment self-efficacious.
- This is one of the first studies that look at retention in care as an outcome for adolescent focused differentiated care, and more evidence on this subject is required. The most comprehensive systematic review⁷² notes there are only a small number of studies that form the available evidence base.
- Lack of Teen Club attendance and registration records were a challenge in defining exposure.
- This work has been scaled up in Malawi, with 135 Teen Clubs in 26 districts using the Baylor model. They have proven highly successful for reaching and retaining ALHIV, and are cost-effective at (\$2.50/teen/session)⁷³.
- Implementation by, or alongside, national governments is crucial to ensure sustainable intervention and impact.

Key features

What?

Standard of care:

ART prescribing, ART refill, Clinical review, Family Planning, Laboratory testing

Teen club:

In addition to the above, group counselling activities, individualized psychosocial support, activities promoting positive peer-based social interactions, lunch

When?

Standard of care:

Every month for the first six months, then every two to three months pending adherence (already differentiated across stable/unstable). During clinic hours, Monday- Friday 8-5.

Teen Club:

As per the Malawi MOH guidelines (available here: http://cms.medcol.mw/cms_uploaded_resources/18381_16.pdf), every one or two months, pending adherence and duration of time on treatment. Saturday mornings.

Where?

Health facility – Zomba Central Hospital

Who?

Standard of care:

Nurses (allowed to prescribe and refill ART)

Clinicians (advanced clinical review)

ART counsellors and clerks, adult expert clients (for psychosocial support only, not ART dispensing)

Teen Club:

Nurses (allowed to prescribe and refill ART)

Clinicians (advanced clinical review)

ART counsellors and clerks, expert clients and ALHIV expert clients (for peer and transition support).

Additional information:

- <https://bipai.org/teen-clubs>
- http://www.differentiatedcare.org/Portals/0/adam/Content/6fT3wVA2XkC69AeuuaCOaA/File/Ngoma_Country_presentation_Malawi.pdf
- <https://www.msh.org/resources/teen-clubs-help-retain-adolescents-in-hiv-care-and-treatment>
- Contact: Dr Joe Theu, Medical Program Manager, Dignitas International Malawi Country Program, PO Box 1071, Zomba, Malawi; j.theu@dignitasinternational.org



Spotlight 3: Khayelitsha Youth Care Clubs^{23,74-77}

Context:

HIV prevalence amongst South Africans ages 15-19 is estimated among the highest in the world at 15.5%⁷⁸. In 2012, MSF piloted youth clubs at the Site C Youth Clinic in Khayelitsha – a peri-urban township of an estimated 500,000 people outside of Cape Town⁷⁴.

Aim:

To provide integrated support for ART adherence and retention in care for adolescents and young people living with HIV^{15,79,80}, and to mitigate social isolation through strengthening peer support and networking opportunities.

Approach:

- Each club is a closed group of approximately 20 members, ages 15-25. To join, participants must be living with HIV, have been disclosed to and be independently taking ART. Clubs are separated by school status – school-going clubs meet in the afternoons, whereas non-school going clubs meet in the morning.
- Members can be recruited by any health facility staff, including clinical staff, clerks, counsellors and health navigators.
- Clubs include a mixture of AYPLHIV that have been newly initiated onto ART (for less than six months) and those who are stable on ART (on ART for over six months, and have achieved viral suppression). Youth with high viral loads receive the normal standard of clinical care.
- Sessions are based on a standardised guide and cover a variety of topics, such as relationships, stigma and disclosure. Clubs also provide psychosocial support and linkages to SRH and other health services.
- Lay counsellors are responsible for preparing and facilitating club sessions, and following-up with participants who miss club visits. Nurses do not attend club sessions, but are responsible for clinical management such as viral load tests, family planning services and the provision of routine clinical care. Weight and symptom checks are done by counsellors at the start of the club.
- The delivery of ART is differentiated: Newly initiated members receive monthly ART from nurses at the clinic, whereas stable, long-term patients receive their pills every two months at the club sessions. Lay counsellors collect pre-packed ART from the clinic pharmacy to distribute to ART-stable patients every two months.
- Additional club activities include peer support (in person, as well as over social media via WhatsApp and Facebook), social outings, education, advocacy activities, career guidance and skills development.
- Clubs meet every month for the first six months to

encourage bonding and social cohesion among club members, then every two months thereafter. At the age of 26 years, members are transitioned to an adult adherence club.

- After the programme's pilot in 2012, it was expanded out to five facilities, including some which are not youth specific. In 2018, the clubs started to be transitioned to NGOs and government organizations and held in the community at schools, churches or community halls - rather than at the health facility. Scale-up at other facilities in Khayelitsha is ongoing, and the evidence of the effectiveness of the community-based clubs are not yet published, although preliminary results are promising.

Results:

- MSF supported the adoption of this model by the South African National Department of Health and the Southern African HIV Clinicians Society (SAHCS). A similar model is also being run by the WRHI.
- Youth clubs are a feasible differentiated model of treatment and care that improves the retention in care of AYPLHIV, including for those who are newly initiated and not yet stable. Findings demonstrate better retention in care amongst participants attending clubs, compared to those not attending clubs who had initiated onto ART at City of Cape Town clinics in Khayelitsha. At six months, 94% of club patients (ages 15-19) were retained in care, as opposed 89% of non-club patients at Site C youth clinic, and 82% of non-club patients from other clinics. At 12 months, 89% of club patients (ages 15-19) were retained in care, as opposed to 80% of non-club patients at Site C youth clinic and 77% of non-club patients from other clinics.
- This model provides participants an opportunity to receive integrated SRH services and ART services, reducing the risk of missing family planning appointments.
- Members are provided with constant and structured social support through lay counsellors and peers.
- Given that loss to follow-up is higher amongst those newly initiated, it is important to find strategies to support adherence and retention early. This model aims to support newly initiated participants by grouping them with stable participants, and to motivate them by offering the possibility of accessing medication bi-monthly at the club once they are stable.
- Through task-shifting to lay counsellors and integration of services, this model reduces the workload on clinical services.
- Anecdotal evidence suggests that the provision of more integrated, one-stop services and reduction in waiting times may decrease loss-to follow up.

Considerations & lessons learnt:

- Facility-level buy-in is important for the successful initiation and running of clubs. Strategies that improved recruitment of new participants included: motivating staff to consistently invite AYPLHIV to participate, setting targets and monitoring of numbers of participants recruited.
- Improving youth attendance takes work and time. Intermittent club attendance was as an issue for some members, who only attended every second club session. This highlights the importance of balancing the value of establishing group cohesion, with clinic visits.
- Where possible, forming separate youth clubs for perinatally and horizontally infected youth may allow for tailoring session focus to specific issues that may affect these groups

Newly initiated or on ART with unsuppressed viral load (unstable patients)			
	ART refills	Clinical consultations	Pshychosocial support
WHEN	Monthly	Monthly	Monthly
WHERE	During clinical consultation	Fast tracked after a YCC	In a YCC
WHO	Counsellor/Health Promoter/Peer Educators	Nurse or Clinician	Counsellor/Health Promoter/Perr Educators
WHAT	ART refill	Clinical consultation ART refill Blood draw Rescript	Screening for Contraception use, poor Nutrition and Pshychosocial Well-being Interactive youth-focussed discussion

On ART with suppressed viral load (stable patients)			
	ART refills	Clinical consultations	Pshychosocial support
WHEN	Monthly for the first 12 months, thereafter every 2 months	Once a year to review viral load	Monthly for the first 12 months, thereafter every 2 months
WHERE	In a YCC	At a YCC Clinica visit (one month after a blood visit)	In a YCC
WHO	Counsellor/Health Promoter/Peer Educators	Nurse or Clinician	Counsellor/Health Promoter/Perr Educators
WHAT	Pre-packed ART refill	Clinical consultation Blood draw Rescript	Screening for Contraception use, poor Nutrition and Pshychosocial Well-being Interactive youth-focussed discussion

Tables: Key Features for YCCs - Unstable and stable patients

Additional information:

Box 4: Youth Club members testimonies of strengthened support network

Mpho Maketha spending 67 minutes in my clinic (Site C Youth)

"This was our club date and we as the group decided to do something nice for our clinic because it was the 18th of July, Madiba Day. We decided to spend our 67 minutes doing a clean-up campaign, showing the health care workers that we are thankful of what they doing for us and by making sure that every month we get our medication. I was very excited during this activity because all eyes were on us and people were not looking at us being HIV+ but at us being active at our clinic with our counselors. we were all happy singing, playing with water enjoying seeing our clinic clean. The club made us to be sisters and brothers. We plan and do thing together and this is something that I never thought I'll be part of, but today I am grateful and happy to be part of this big happy family."

Nomvuyiseko Gqola's baby shower

"Without me knowing my club members whom I now call them my friends, they organized a surprise baby shower for me and my other friend who's also a club member. This was a very special day for me and my unborn baby. I really felt happy an got a sense of family, before this day I had nothing for my baby but just before the day ended I went home with a bag full of baby clothes. I am thankful that I joined my club and had to know other young people who are also living with HIV and taking care of their health, they have made a huge difference in my life."

Olwelthu Zamliza's home visit by fellow club members

"This is one of the days that I will never forget in my life, when I think about it I burst into tears of joy because during this period of my life I was falling apart. I had no hope of anything, bu my group members showed me care and support, they bought me food and sweets with a gift. I had stopped going to the clinic and tot he club plus the worst part I stopped taking my medication because of the challenges my family had. My club members came over to my home and hey checked why I haven't been coming to the clinic and how they can assist me, so we talked and cried together, but at the end of the day we all left with smiles and I am back at my club now."



Spotlight 4: Africaid Zvandiri refill groups

Context:

Young adults have the highest HIV incidence of any group in Zimbabwe, and prevalence has increased⁸¹. Rates of retention in care and viral suppression are low amongst in this group^{82 83}.

Aim:

Zvandiri, meaning "As I am" is a multicomponent differentiated service delivery model for children, adolescents and young people, developed to respond to their poor adherence, retention in care, mental health and sexual and reproductive health outcomes¹¹. It integrates peer-led community interventions within government health services¹¹ with an aim to support the physical, social and mental wellbeing of children, adolescents and young people living with HIV across the HIV cascade of care¹¹.

Approach¹¹:

- Adolescents and young people living with HIV between the ages of 18 and 24 are at the forefront of service delivery in the model. They are trained, mentored and supervised by the Ministry of Health and Child Care as community adolescent treatment supporters (CATS). They support CAYPLHIV across the HIV cascade of care and work alongside health facilities in their communities.
- Adolescent treatment refill groups were introduced in Zimbabwe in 2017, and the CATS model was used as a way to build on an existing psychosocial support intervention.
- Support groups and refill days are integrated so that CAYPLHIV can access services at the same time at the health facility. Viral load measurements and other clinical and psychosocial support services are also done on the same day.
- Groups are made up of 10-20 similarly aged AYPHIV. Refills are pre-packed and labelled to facilitate fast distribution and are provided in the allocated health facility room where the group meets. Group members who have any specific clinical problems are directed to a clinician.
- CATS lead the support groups and co-facilitate the refill process with a nurse.
- Meetings are held on Saturdays or during the week, depending on the facility and patient needs. Additional programming is provided during school holidays, as holiday refill groups are an opportunity to reach many young people.
- Although groups are facility-based, CATS provide additional community-based support. They conduct home visits and use SMS and WhatsApp to remind adolescents of refill groups.
- Differentiation is based on clinical and psychosocial circumstances of clients. The standard support is based on viral suppression for six months, attending

all scheduled clinic visits in the last three months; and psychological stability and safety. Services include monthly treatment and care clinic review and refill visits for the first two years. If patients have been on ART for greater than two years, on adult doses, and are fully disclosed, they attend the clinic every six months with three monthly ART refills. They also attend a monthly support group.

- Enhanced support is provided to participants who have commenced ART in the last three months, have an opportunistic infection, have had a viral load over 1000 copies/mL in last six months, have missed more than more scheduled clinic visit in last three months, are psychologically distressed, neglected/abused or pregnant. Enhanced support includes weekly or monthly clinic visits depending on clinical and psychosocial circumstances, monthly support groups, bi-weekly home visits and joint home visits with community nurses, social welfare, village health providers and case care workers.

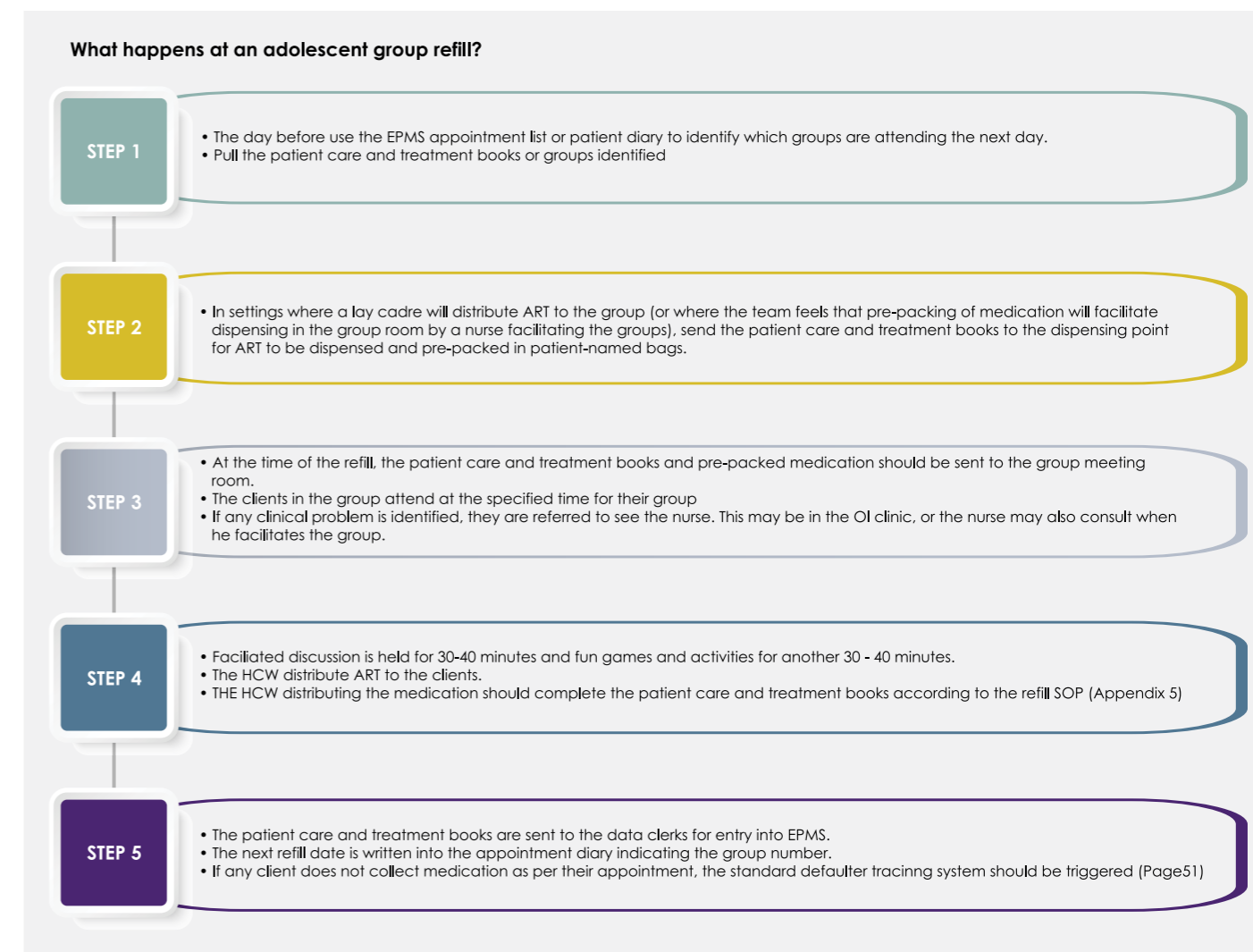
Results:

Programmatic evidence indicates that this approach has improved uptake of adherence, and retention in care and improved survival, health, psychosocial well-being, adherence, disclosure and retention in care among CAYPLHIV in Zimbabwe^{28,84}:

- Data from 148 PEPFAR-supported sites suggested improved linkages to care, compared to those in non-Zvandiri sites⁸⁵.
- 2017 data from 161 sites showed that 5868 CAYP were mobilized by CATS through index case finding, 17% of whom were diagnosed with HIV. Of these, 94% were initiated onto ART, and 96% of these were retained at six months and 98% at 12 months.
- Self-reported adherence after 12 months improved significantly among adolescents using Zvandiri services in a rural district. Compared with the control group receiving standard care, they were 3.9 times more likely to adhere to treatment in self report⁴⁶.
- Further impact evaluation, including two randomized control trials which will examine virologic suppression are underway with results forthcoming¹¹.
- This model been cited as a best practice and recommended for scale-up by a variety of national, regional and national governmental and non-governmental bodies^{11,86}. It has been adopted by the Government of Zimbabwe³¹ and has been scaled up to 51 of 63 districts and reaches 40,213 CAYPLHIV¹¹.

The building blocks of facility-based adolescent groups refills incorporating CATS after 2017			
	ART refills	Clinical consultations	Pshychosocial support
WHEN	3 monthly	6 monthly	3 monthly*
WHERE	PHC	PHC	PHC with additional visit in the community, outside the health facility`
WHO	Primary counsellor CATS	Nurse	CATS
WHAT	ART and Contrimoxazole refills Referral check	Clinical consultation SRH services Blood draw (annual if VL)	Peer support SRH education Adherence check Referral check

*More frequently outside of model as required
Africaid Avandiri adolescent group refills incorporating CATS^{28(p24)}



From Zimbabwe Ministry of Health and Child Care Operational and Service Delivery Manual for the Prevention, Care and Treatment of HIV in Zimbabwe, 2017³¹.

For more information: www.africaid-zvandiri.org





DISCUSSION: FINDINGS, LESSONS AND CONSIDERATIONS FOR SCALE-UP AND IMPLEMENTATION

Strong Policies, a paucity of evidence:

There is a well-developed international policy framework on adolescent DSD, including differentiated treatment, which has been developed by organisations including the WHO, IAS and SAHCS. National governments in some countries, such as South Africa and Zimbabwe have also developed coherent and well-aligned DSD policies. However, there is a documented gap in the evidence on DSD for AYPLHIV^{11,20-22,24}, including differentiated ART delivery. Recent reviews conducted by the IAS²², Reif and colleagues²⁴, and PATA²⁵, found that there is very little literature on adolescent-specific DSD and that there is a significant gap between policy and what is happening on the ground. Informal consultations with key stakeholders, alongside a close reading of the literature suggest that there are few programmes or interventions that are providing differentiated adolescent treatment services that extend to community models of ART delivery. Rigorous evidence on the design and scale-up of effective DSD models to scale for children and adolescents living with HIV is required¹¹.

Complicating this issue of limited evidence, there is inadequate access to adolescent-specific implementation evidence, as adolescents are often grouped with adults or children despite their diverse and unique clinical and psychosocial needs²². This is exacerbated by the fact that countries define adolescence differently and that age-disaggregated data is limited²² making it difficult to distinguish adolescent-specific models and to track their health outcomes.

What does the (limited) evidence tell us?

Differentiated models of care for this group are in the very early stages of development, although some display positive preliminary outcomes²⁴. Despite increasing evidence on adult DSD - including differentiated ART delivery, there is a paucity of evidence on DSD for AYPLHIV. This is especially true for evidence on differentiated ART delivery, and our review found only a few such models. Those identified were mostly in Southern Africa, facility-based and health provider-led. Despite this, the limited evidence suggests that differentiating service delivery - including differentiated ART delivery, is promising in responding to the needs of AYPLHIV to improve ART adherence, viral suppression and retention in care. In addition, it can minimize the health facility and health provider burden.

The models found in the literature review, some of which are featured in the 'spotlight' section include less frequent treatment refills for stable AYPLHIV, such as in the multi-month prescription (MMP) and SPEEDI models and dedicated clinic hours and space for refills and other clinical and individual and group psychosocial services in the Malawi Teen Club model. Facility-based health provider or lay counsellor-led group refills which build on existing psychosocial support interventions such as Youth Care Clubs, Ariel Adherence Clubs and the Zvandiri CATS model were also found to be promising.

Specific places where the evidence is particularly thin include

1. regional differences in available evidence;
2. community-based and peer-led treatment ART delivery for AYPLHIV;
3. clinically 'unstable' adolescents; and
4. key sub-populations of AYPLHIV. These are described below.

What about community-based, peer-led treatment service differentiation?

Differentiated peer and community-based ART delivery have demonstrated strong evidence of health-related outcomes^{16,37,87,88} for adults, and are being increasingly encouraged. Peer and/or community-led differentiated service and ART delivery outside of the health facility are being recommended for adolescents as well, although in practice there are few models currently implementing community ART delivery for AYPLHIV. International guidance recommends differentiated community-based and peer-led service and ART delivery, and less frequent clinic visits and ART pick-ups for clinically stable AYPLHIV while also providing scope to increasingly shifting ART delivery to community platforms.

In this time where the scale-up of differentiated services are being encouraged as part of an ambitious push to meet the 90-90-90 goals, it is an opportune moment to consider the feasibility and effectiveness of transferring differentiated service

and ART delivery designed for adults to adolescents. As a highly heterogeneous population with unique and varied needs, is such an approach for adolescents feasible and appropriate? We know that what works in one group might not work in another, and there are documented substantial developmental, psychosocial and lifestyle differences between adolescents and adults.

A 2015⁸⁹ review article focusing on issues facing adolescents in ART adherence in sub-Saharan Africa acknowledged that effective intervention for adolescents may differ from adults. We found evidence of an adult community-based adherence group that included adolescents¹⁶ that found that adults demonstrated strong adherence and retention outcomes, but the adolescents did not¹⁶. This example spurred the development of an AYP-only group with promising results and speaks to the need to consider adolescent differentiation separately.

The evidence on differentiated adolescent treatment services is almost exclusively health-facility based and health provider-led. There is little empirical data for the inclusion of adolescent peers delivering differentiated treatment services²⁰ and our review did not find any models where peers were solely responsible for treatment differentiated services - although other non-treatment related models demonstrating the power of peers were identified.

Only one adolescent-specific model was community-based, but results are still forthcoming. Although there are many adolescent DSD initiatives which include peer-led or community-based psychosocial support services, none were identified where adolescent and young peers were solely responsible for treatment delivery.

Documented reservations for adopting differentiated models for AYPLHIV include that their unique adherence issues may preclude their engagement in differentiated service delivery^{26,29}. In informal consultations, some experts in this review noted concerns of;

- (1) adding additional responsibilities to adolescent peers in the form of treatment refills; and
- (2) the potential risks of moving ART delivery further into communities, given risks of loss-to-follow-up and disengagement from care in an already high-risk group. There is a concern that expanding community-based ART delivery may also hold potential risks in delinking or isolating this group from a range of effective, consistent and integrated healthcare service.

It has been suggested that the best interests of the client, should be used as a guiding principle for health providers reluctant to reduce the frequency of visits for adolescents⁹⁰. Unfortunately, there is little evidence to guide what such 'best interests' might be in relation to treatment differentiation for AYPLHIV and the efficacy and risks of community-based and peer-led ART refills in this under-researched and poorly-resourced context. However, the evidence does not suggest that increasing clinical visits for AYPLHIV improves their adherence²⁰, and published findings on the MMP and SPEEDI models demonstrate that clinically stable adolescents receiving less frequent clinical consultations and refills do not perform worse than those receiving the standard of care²⁰. Findings from the Khayelitsha MSF model which has recently been transitioned to the community and the Africaid Zvandiri randomised control trial (RCT) will be valuable in beginning to fill these gaps.

A few other studies are relevant here. A programme comparing HIV-positive children and adolescents in a community home-based care and a facility-based family centred approach in Uganda found retention was higher in the community home-based care model, but did not find differences in long-term survival⁹¹. Treatment was not differentiated in this model as participants in both models attended monthly clinic appointments. Similarly, the Africaid Zvandiri model, which includes strong community-based and peer-led components to their intervention has demonstrated promise, although RCT results are forthcoming. Another review in Uganda did not find ART distribution method (facility or community-based) to be a significant factor in ART attrition⁹². These mixed findings, although helpful, do not yet provide enough evidence to provide recommendations about peer and community-based treatment differentiation. This review strongly suggests that further, rigorous evidence on these, as well as other aspects of adolescent DSD are required.



Differentiation in practice – stability & age

The main categories along which differentiation was considered in studies in this review included 'stable'/'unstable'²², and age.

Stability:

Although categories varied slightly, stability in our reviewed tended to be measured alongside international guidelines, such as being based on clinical outcomes including CD4 count, and (more recently) viral load. Retention in attendance at multiple simultaneous visits being used as a measure of clinical stability. Being 'newly' (less than 6 months on treatment) was also used as a differentiating measure in some models. Beyond clinical outcomes, some models (such as Africaid Zvandiri) differentiated based on clinical, as well as psychosocial well-being and stability in considering differentiating treatment and services.

A recent situational analysis on adolescent DSD in South Africa²⁵ also found that most of the published literature on differentiated ART delivery is based on "stable" adults. Given that differentiation usually occurs along 'stability' categories, there is an evidence gap with what works for adolescents who are less stable.

Age⁸ was also considered in differentiating services. Groupings might include older and younger adolescents and young people (for example, 10-14, 15-19, 20-24/6). In terms of determining if an individual/family approach may be taken²², age will be important to consider with older adolescents should ideally being transitioned from a family to individual approach²². In other cases, such as the MSF youth clubs, rather than differentiating based on age, groupings were made based on in and out of school²³.

It has been suggested that the needs of vertically and horizontally acquired ALHIV might be different²³ and that other factors, such as the transition between paediatric and adult care, and pregnancy require further differentiation. Future differentiated service delivery models should include AYPLHIV who are at greatest risk of poor outcomes, not adherent to treatment and who are disengaged from care²⁴.

Key considerations for adolescent DSD design, scale up and implementation

The IAS recommends considering existing peer support or psychosocial interventions for AYPLHIV to be leveraged to include distribution of ART refills as a way to support less frequent visits to the health facility²⁸. In line with these guidelines, the Child Survival Working Group released a policy brief in 2018 on the provision of differentiated services to children and adolescents⁹⁰ which recommended a number of steps for scaling up differentiated ART delivery:

1. **conducting a situational analysis** of the context including available data, policies and current models of ART delivery, perspectives of key stakeholders including adolescents themselves to ensure a client-centred approach, and assessing available resources including support interventions and human resources;
2. **Defining challenges** that can be addressed through differentiated ART delivery;
3. **Defining clinical characteristics, specific populations and contexts** of clients who will receive differentiated treatment;
4. Considering if there is a differentiated ART service for adults or psychosocial support interventions that can be adapted or leveraged; and
5. Adapting or building a model.

Given that obtaining buy-in for, and implementing new models is challenging and can take time, the IAS recommends piggy-backing on differentiated service delivery models which have already been implemented – such as the MSF adherence clubs in Khayelitsha that were adapted into a youth club model²². However, in doing so, it is important to consider the model building blocks, any changes to stability and referral criteria²². Important lessons and key considerations for the implementation of DSD for AYPLHIV are presented below. The provision of AYFS, including psychosocial and peer support, alongside social protection are central components that must be considered and integrated into any DSD for AYPLHIV. These are explored in detail below, alongside other important considerations – namely, adolescent sub-populations, the meaningful participation of AYPLHIV in the design and implementation of DSD and health system resilience, sustainability and scalability. These key considerations are based on PATA's²⁵ 2018 Situational Analysis on Differentiated Service Delivery in South Africa, literature review findings, spotlights, and perspectives of key partners.



1. **Ensuring meaningful participation of AYPLHIV**

The greater and meaningful involvement of AYPLHIV in all aspects of the HIV response and across the cascade of care cannot be understated. The success of DSD models is reliant on acceptability by AYPLHIV. AYPLHIV need to be empowered to participate in developing DSD models, be engaged in their delivery, in addition to supporting continuous evaluation.

Engaging young people as equal partners in their health is critical, as it ensures that DSD models are responsive to the needs of AYPLHIV, facilitates on-going commitment and trust and ultimately results in improved health outcomes. Additionally, it equips them with knowledge and insight and motivates them as an advocate and ambassador for other AYPLHIV. For these reasons, efforts should be focused to ensure adolescents are involved in discussions about their care in particular as they move between service delivery models and across "stable" and "unstable service" packages.

2. **Building on what works – AYFS, psychosocial support, peer support and social protection**

The literature review presented a number of promising interventions which have evidence of efficacy in supporting HIV-related outcomes for AYPLHIV. The provision of AYFS, including psychosocial and peer support, alongside social protection and integrated sexual and reproductive health services are central components that must be considered and integrated into any DSD for AYPLHIV.

3. **Being responsive to diverse needs and sub-populations**

Adolescents and young people are diverse and have changing needs. Although founded on a people-centred approach, further differentiation, beyond population age band and "stable" or "unstable" will be required for these populations groups and may be context specific. As a heterogeneous group, some sub-populations of adolescents may be additionally vulnerable and require further support. Many of the studies reviewed identified particular subgroups of ALHIV that merit additional attention. This suggestion aligns a body of evidence which demonstrates that certain adolescents, especially those from key populations have poorer health-related outcomes. Such additionally vulnerable sub-groups include:

- Pregnant adolescents and young mothers. Further efforts are urgently required to explore and understand the best interventions and DSD models that can meet their needs and those of their infants.
- Adolescents with comorbidities such as substance abuse or mental illness;
- Adolescents transitioning from child to adolescent

care or adolescent to adult care;

- Gender. Generally, more young females accessing services than young males;
- Adolescents experiencing violence;
- Adolescents who sell sex;
- Adolescents living in poverty; and
- Adolescents who identify as lesbian, gay, bisexual, transgender queer or questioning and intersex (LGBTQI).

4. **Building health system and programme resilience**

Adapting or building DSD models for AYPLHIV within existing health services requires planning and commitment from all implementing stakeholders. Service decentralisation associated with various DSD models - in particular, outreach or out-of-facility ART refills may place an additional burden on already limited staff capacity. Thus, successful implementation may require the identification of dedicated staff members and additional planning and resource management. Additional considerations include:

- Safety considerations are important when implementing community-based models that may involve work or travel to higher crime areas.
- Mechanisms for tracing AYP, follow up and interventions to ensure reengagement in services are an important consideration when designing and implementing DSD of AYPLHIV.
- Further research including cost-effectiveness evaluations is required to demonstrate improvements associated with DSD models regarding patient loads, experiences of service convenience, treatment outcomes and cost savings.
- For DSD models to be successful for AYP, investments in community and peer support interventions are required, and strong links between the facility, community and other services need to be prioritised.
- Clear operating procedures are required for the implementation of DSD including the monitoring of overall physical health, adherence, mental health, retention, and social concerns.
- Consideration should be given to providing support for peer providers in managing their health, be linked to opportunities for educational advancement and, or socio-economic strengthening.

5. **Considering sustainability and scalability**

Many of the DSD models currently available for AYPLHIV are delivered in clinical services with external funding or with support from partner organisations, or in specialised paediatric or adolescent health services. To support the scale-up of DSD for AYPLHIV, partnership with national and provincial governments are necessary. Introduction of DSD models will require upfront buy-in and investment, the involvement of the relevant stakeholders and requisite capacity and training of staff within health facilities to ensure they are effectively maintained and sustained.

Amidst weakening health system environments, there are concerns that DSD models may result in young people becoming disengaged and delinked to care, placing them at an increased risk. Structural challenges exist in providing dedicated AYFS especially when there is insufficient dedicated AYFS space or staffing. Efforts such as offering extended or weekend hours only for adolescents can support the creation of adolescent-designated space. Similarly having designated room, even if for certain times, for adolescent clinical consultations and, or ART refill distribution can be an effective service model.

While offering DSD, including differentiated ART delivery to AYPLHIV is a promising intervention, it is crucial that health systems are sufficiently robust to coordinate, track and support their implementation. Otherwise, rather than supporting improved adherence, retention in care and health outcomes as intended, there is the risk that poorly implemented DSD could exacerbate LTFU, destabilize linkages to health facilities and pose additional health risks in this already vulnerable population.

“

Amidst weakening health system environments, there are concerns that DSD models may result in young people becoming disengaged and delinked to care, placing them at an increased risk.

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CONCLUSION

Despite promising advancements in service delivery, AYPLHIV in East and Southern Africa are still accessing and adhering to HIV treatment and careless – and dying more – than children and adults. This represents one of the biggest public health crises in the region and requires a committed and innovative response in research, policy and programming. Ongoing investments for services that respond to the heterogeneous needs of AYPLHIV, including differentiated service and ART delivery will be required.

There is a growing policy and academic literature that encourages adult differentiated services - including differentiated ART delivery. Based on their promise in supporting adult health outcomes, these models are also being encouraged for AYPLHIV as a way to stem the AYP HIV crisis. Although global guidance¹² on DSD recognises the importance of adapting services for adolescents living with HIV, rigorous evidence on how to bring DSD models to scale for this important group is required^{11,19}.

This situational analysis has considered differentiated ART delivery models, alongside broader approaches that apply to DSD more generally. Although there is a paucity of evidence on this topic, this situational analysis highlights some interventions which are already being shown to be important in adolescent treatment adherence and therefore complement the effective delivery of services. These include the role of community-based strategies for improving ART adherence through peer support, Youth Care Clubs and Teen Clubs. Such strategies and support structures offer an existing platform that can be leveraged and expanded upon to offer and investigate community or facility-based ART delivery options for AYP. AYFS, social protection, and other individual and group-based psychosocial support interventions are also crucial aspects that must be integrated into any differentiated service and ART delivery platform that may be considered. It is recommended that in moving towards differentiated services - including ART delivery for AYPLHIV, that such DSD interventions build on these foundational components of service delivery for AYP, with an aim to progressively and sustainably provide services that meet their needs.

This situational analysis highlights continued gaps in the evidence, and key questions, that if not addressed, will hinder the adolescent differentiated treatment response. Further, and more rigorous evidence is required on the feasibility and efficacy of peer-led, community-based adolescent differentiated services and ART delivery and the degree of differentiation that maximizes efficiencies while best responding to the diverse needs ALHIV. Findings also suggest that it will be important to further consider the needs of particularly vulnerable sub-groups of adolescents in differentiated responses, and to build the evidence base on what differentiated ART delivery platforms work best for adolescents, including those that have been deemed clinically 'unstable'.

This situational analysis contributes to the limited but growing evidence on differentiated service delivery with particular interest in differentiated ART delivery for ALHIV. It includes a review of policy, academic and grey literature and presents promising models for adolescent-focused differentiated ART delivery. Acknowledging the importance of the greater and meaningful involvement of AYPLHIV and front-line health providers, it has also incorporated secondary PATA data, generated by key stakeholders, health providers, and AYPLHIV themselves.

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APPENDIX 1 – LITERATURE REVIEW METHODS

Literature review methods

Search terms: *different combinations of the following search terms were used:*

* differentiated care * differentiated service delivery * HIV treatment * ART adolescents * Africa *Community-based ART (C-BART) * Community-based Adherence Support (CBAS) * Standardized Paediatric Expedited Encounters for ART Drugs Initiative (SPEEDI) Multi-month Prescription (MMP) * Community ART Refill Groups (CARGs) (CAAGS= COMMUNITY ART ADHERENCE GROUPS) COMMUNITY ART GROUPS (CAGS)

Notes on search terms:

- The term 'differentiated service delivery' is relatively new in the adolescent HIV sphere. As such, some examples of differentiation may be missed in reviewing literature. Few articles were found using the terms 'differentiated care' or 'differentiated service delivery' despite many studies that would fall under this category, most referred rather to the specific treatment model adopted (e.g. C-Bart, community support, youth-friendly clinics, SPEEDI, CARGs, etc). As such, this term might not be part of the lexicon used by all researchers in the field. The use of this term was found more in newer articles, demonstrating a recent change of terminology and focus towards differentiated service delivery.
- Many of the study titles referred to adherence outcomes rather than the intervention e.g. attrition rates.

Inclusion & exclusion criteria

- Articles needed to refer to some type of **differentiated** ART delivery **for adolescents in Southern or East Africa**. We did not search for additional studies in the global south, but where found, we included them as additional information within presented findings.
- Reviews covering Sub-Saharan Africa were included as all of them referred to research in the regions of interest.
- Studies that did not have an ART delivery component were excluded but presented as summary findings in the discussion section.
- Studies that included both adolescents and adults but did not disaggregate data for adolescents were excluded.
- Study quality was not considered as a criterion for inclusion.

Search Platforms:

Google Scholar, Journal of the IAS, Ebsco Host, additional sources were found through identifying key references for review from potentially eligible studies for review

This search identified both rigorous academic studies, such as randomised controlled trials and smaller observational studies as well as several case studies, programmatic write-ups and reports, and policy and guideline documents referring to differentiated care. The majority of studies found were conducted in Southern Africa, with South Africa having the largest number in this group. Within Southern Africa, case studies and research were found from South Africa, eSwatini, Mozambique, Zimbabwe and Malawi. The research from East Africa came predominantly from Uganda, with a few studies found from Kenya and only one study from both Rwanda and Tanzania. Given the small number of studies, it is unclear if the evidence and resources dedicated to differentiated adolescent services are related to HIV burden or available resources. Of these studies identified, many were excluded because they did not meet the inclusion criteria of differentiated ART delivery, or did not have an adolescent-specific focus.



APPENDIX 2 – NARRATIVE REVIEW OF INTERNATIONAL AND NATIONAL ADOLESCENT DSD POLICIES

- The WHO guidance for differentiated ART delivery for adolescents¹², recommends that the stability criteria for adults also apply to adolescents. These include: a minimum of one year on ART; no adverse drug reactions; no current illness – including mental health conditions; a good understanding of lifelong adherence; evidence of treatment success as measured by two consecutive viral load measures of less than 1000 copies/ml; and access to psychosocial support.
- They further suggest that the frequency of clinic visits for adolescents should be kept to a minimum¹⁵, recommending treatment refills every 3-6 months for adolescents clinically defined as 'stable'. They suggest that refills be provided either at the primary healthcare facility or out-of-facility by lay providers. Clinical consultations are also recommended every 3-6 months, and psychosocial support every 1-6 months¹².
- These guidelines also suggest that for the first year on ART, care must be provided as close to the home as possible, that ART refills are aligned with clinical review visits and that psychosocial support in the form of support group is provided – either alongside clinical review visits at the community level. Youth orientated services, such as AYPLHIV-oriented staff, hours or spaces in clinics are also recommended. From the second year on ART onwards, they recommend simplifying ongoing access to HIV care as long as possible, prioritising reduced frequency of HIV-care-related visits, alongside longer periods between refills, quick pick-ups and psychosocial support services as close to the home as possible. They also recommend considering de-linking ART refill collection and psychosocial support from clinical review visits¹⁵.
- The Southern African Clinician's Society guidance¹⁵ also acknowledges the importance of differentiating services for adolescents living with HIV. They recommend models that allow for uninterrupted school attendance such as Saturday or after-school clinics, youth care clubs, community or facility-provided fast ART refills and support groups as potential models¹⁵. Going beyond available international guidance on DSD for AYPLHIV, they also include service delivery building blocks for both stable and unstable AYP at initiation and after the second year of ART¹⁵. This guidance also recognises periods of instability inherent in the development of this population and emphasises the importance of including AYPLHIV in the decision-making process, as they move from stable to unstable individuals. For AYPLHIV struggling with illness, adherence or social environment issues, it is suggested that consideration should be given to whether increasing visit frequency is desirable or whether intensified support can be provided without increasing visit frequency. Also included in the guidance are important considerations for providing adherence support for vulnerable population groups including pregnant adolescent girls, those from key populations and those with disabilities²³.
- Similarly, the WHO Key considerations for differentiated service delivery for specific populations¹² guideline also acknowledges the importance of service delivery options to support routine life patterns directly after initiation onto ART and considers the developmental, mental health and specific sub-population challenges¹². They suggest that for clinical consultation and ART refills, that semi-annual clinical reviews are sufficient if possible combined with family planning¹². They also stipulate that ART refills need not take place more frequently than every three months, and recommend that they can take place outside health facilities, closer to a person's home, and be managed by lay providers¹². Monthly psychosocial assessments and additional adherence support interventions linked to clinical consultations and ART refills are also recommended¹², alongside considering school schedules and holidays in the provision of treatment and support¹².
- The IAS Differentiated Service Delivery Framework (building blocks model below) also highlights key considerations for adolescent differentiated service delivery, recommending aligning visits based on their time needs (WHEN), youth-friendly or peer support environments (WHERE), considering the possibility of adding ART refills within peer support environments (WHO) and SRH needs assessments (WHAT).

WHEN	<p>Fluctuating mental health and SRH needs Adolescence is a period of fluctuating mental and SRH needs. A clinician seeing an adolescent every 6 months would provide sufficient opportunity to identify these needs. Adolescents can also choose to see a clinician in between, if required.</p> <p>Aligning visit schedule to school calendar Reducing visit frequency enables visits to be scheduled during school holidays. Malawi and Zimbabwe specifically allow longer ART supplies (6 - 12 months) for clients who attend school or university far from home. Rwanda provides 3-month refills, but aligns adolescent appointments with the school breaks.</p>
WHERE	<p>Youth-friendly spaces Adolescents value adolescent-designated space. Offering extended or weekend hours specifically for adolescents automatically creates adolescent-designated space. Where extending hours is not possible, consider designating a specific room in the facility for adolescent clinical consultations and/ART refill distribution (even if only operational as such for specific periods). Where ART refills are provided at community collection points, adolescent-specific collection times should be considered.</p> <p>Alternative peer support environments Where there are too few adolescents clients on ART to make forming support groups close to the clients' home feasible, alternatives to face-to-face peer support groups, including access to virtual support groups or chat rooms, could be considered.</p>
WHO	<p>Possibility of adding ART refills within peer support environments There may be peer support environments either within the clinic or run by CBOs or as part of other adolescent programming that can provide ART refills. The CBO group facilitator could be considered for distributing pre-packed ART refills.</p>
WHAT	<p>SRH needs assessment SRH assessment and family planning (FP) provision remains essential and should not be placed at risk. Where possible, FP return dates should be aligned with ART refills dates. Oral contraceptives can be provided with ART refills.</p>

From the IAS Differentiated Service Delivery Framework¹³

In 2018, PATA, in collaboration with the Child Survival working group, IAS, United Nations Children's Fund and WHO released a policy brief on the provision of differentiated services to children and adolescents⁹⁰. It recommends that adolescents should access differentiated ART based on age and that policies should support each of the building blocks for differentiated ART delivery as recommended in the IAS decision framework²⁸ - including longer access to ART refills (every 3-6 months) and less frequent (every 6 months) clinical consultations for clinically stable adolescents. The brief further recommends the decentralization of ART refills through group models and community venues, including enabling lay providers, and peers to provide ART refills.

They suggest that clinically stable adolescents can benefit from

1. accessing differentiated ART delivery
2. designing services to keep families together as much as possible,
3. less frequent clinical follow-up and longer refills, and
4. leveraging peer psychosocial support interventions to include ART distribution²⁸.

The brief also notes that strong engagements with peer providers, community platforms, youth-friendly spaces and clinic times that don't conflict with school hours, consider school holidays, designated clinic spaces and aligning family visits where applicable as all important considerations in differentiated ART delivery.

The Zimbabwean National operation and service delivery manual includes a number of recommendations related to adolescent treatment and differentiated services. For example, consideration of adolescent time needs, including extending opening hours to accommodate them before or after school or on weekends, and for adolescents and boarding school, aligning refills with holiday dates³¹. They also recommend once stable 6-month clinical follow-ups and refills once they are on adult doses, virologically suppressed and without concurrent opportunistic infections can receive a refill after 3 months, and that they should be provided with the option of fast track, community member or club refills³¹. To learn more about the refill model, please see the Africaid Zvandiri spotlight.

South Africa has three key guidance documents that support the implementation of DSD for AYPLHIV. The National Department of Health (NDoH) Adherence Guidelines for HIV, TB and NCDs Policy provides recommendations for linkage to care, adherence to treatment and retention in care⁹³. Published in 2016, before the WHO guidance which includes DSD, these guidelines do not explicitly mention the term 'differentiated service delivery' although many recommendations incorporate the foundations for DSD implementation.

These include:

1. reduced frequency of clinical consultations and repeat prescription collections;
2. separating medicine pick-up from clinical assessments;
3. alternative repeat prescription collection strategies;
4. treatment delivery or collection closer to home;
5. tracing systems for those missing appointments; and
6. the integration of other chronic care including mental health screening.

Similar to the national adherence guidance, National Adolescent and Youth Health Policy (AYHP)²² does not directly recommend DSD, although it covers key considerations such as integrating HIV and SRH services where feasible, adolescent and youth-friendly spaces, consideration of adolescent's time, strengthening referral systems to link services, peer models, support groups among other recommendations⁷⁷.





APPENDIX 3 – BEYOND DIFFERENTIATED ART DELIVERY: CURRENT IMPLEMENTATION OF DSD MODELS IN SOUTH AFRICA

Although out-of-scope of this review, the recent PATA situational analysis⁸ on differentiated service delivery for adolescents in South Africa featured some non-treatment specific DSD models. They are summarised below, given their proximity to the topic, as well as their potential relevance and potential for piggy-backing to include treatment components:

Healthcare-provider managed groups provide psychosocial support groups facilitated by HCP in combination with improved adolescent HIV standard of care (SOC)²⁶. Mentorship is provided through technical support from Right-to-Care, to establish support groups and improve the SOC to be able to introduce adolescent-only afternoons or days, pre-packaged ART, priority youth cards and psychosocial support. Using an established support group manual, the HCP are trained to facilitate support groups for both “stable” AYPLHIV and enhanced adherence groups for those unsuppressed on ART. The support groups cover multiple aspects of psychosocial support including stigma, disclosure, mental health and well-being, health management, and sexual and reproductive health²⁶. A recent mixed-methods evaluation of this model indicated that the number of adolescents in enhanced adherence groups had decreased across all clinics at just six months of the interventions. The evaluation indicated overall acceptability of adolescent clinic days, the recognition of psychosocial components in treatment adherence, improved referrals, the introduction of peer educators as facilitators and strengthening of networks of support. However, capacity issues of lack of time and competing priorities were also highlighted. Recommendations from the evaluation included the need to continue training on psychosocial support for all cadres for HCP, to strengthen community linkages in addition to providing support for the continuity and sustainability of the support groups²⁶.

Out- of – facility – support groups, such as the Hlanganani Programme (DTHF) which supported recently HIV diagnosed young people between 16 -24 years through their clinic journey²⁰. The Out of Facility support model has been adapted to provide ongoing adherence support and facilitate the transition from adolescent to adult care services. Hlanganani Plus offers weekly cognitive behavioural support group sessions in a safe social space with virtual support. Facilitated by a trained layperson the sessions cover four modules during a period of 22 weeks in Gugulethu, Cape Town. Modules cover life skills and resilience, the concept of well-being and goal management training. An evaluation of this expanded model is currently being conducted to identify successful outcomes of the 120 AYP enrolled²⁷.

Facility-based-Individual Model. The Health Connectors are a cadre of peer navigators who are strategically placed in primary health care facilities to help AYPLHIV to access and navigate services. For those AYPLHIV recently diagnosed they support linkage to care and retention in care, assisting in the cascade from HIV diagnosis to ART initiation. For AYP who are HIV negative, they support access to HIV prevention. All health connectors are young people themselves who are trained graduates of a national health promotion programme. Although not counsellors they are knowledgeable about the health care system and provide health information and psychosocial support face-to-face and by telephone and social media. The Health Connectors make proactive referrals to clinical and social services and can facilitate index tracing processes²⁵. Since the inception of the Health Connector Programme in March 2017, 875 AYP have enrolled, of which 775 were living with HIV and 100 were HIV negative. Currently, there are 331 active patients within the programme, remaining on average for a five-week period. The success of the model hinges on the Health Connectors being adequately trained, and having practical tools that assist them in providing the requisite information, and how to make appropriate referrals and implement effective strategies when presented with issues²⁵.

RESOURCES

- National Department of Health - [Adolescent and Youth Health Policy](#)
- National Department of Health - [Adherence Guidelines for HIV, TB and NCDs: Policy and service deliver guidelines for linkage to care, adherence to treatment and retention in care](#)
- Southern African HIV Clinicians Society - [Guidelines: Adherence to antiretroviral therapy in adolescents and young adults](#)
- International AIDS Society - [Differentiated Care for HIV: A Decision Framework for Differentiated Antiretroviral Therapy Delivery - For children, adolescents and pregnant and breastfeeding women](#)
- World Health Organisation - [Key Considerations for differentiated antiretroviral therapy delivery for specific populations: children, adolescents, pregnant and breastfeeding women and key populations](#)
- Adolescent Treatment Coalition - [Differentiated Service Delivery for Adolescents – Video Series](#)
- Child Survival Working Group - [Providing Differentiated Service Delivery to Children and Adolescents](#)



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