

Integrating psychosocial interventions and support into HIV services for adolescents and young adults

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TECHNICAL BRIEF

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Abbreviations and acronyms

ABCD	Ask-Boost-Connect-Discuss
ALHIV	adolescents living with HIV
ART	antiretroviral therapy
CATS	Community Adolescent Treatment Supporters
CBT	cognitive-behavioural therapy
CSO	civil society organization
DSD	differentiated service delivery
EpiC	Meeting Targets and Maintaining Epidemic Control
GBV	gender-based violence
HP4M	HealthPlus 4 Men
IVR	interactive voice response
LGBTQIA+	lesbian, gay, bisexual, transgender, queer, intersex and asexual
M&E	monitoring and evaluation
NGO	non-governmental organization
OIDP	one2one™ Integrated Digital Platforms
ORA	Online Reservation and Case Management App
OTZ	Operation Triple Zero
OVC	orphans and vulnerable children
PATA	Paediatric-Adolescent Treatment Africa
PMTCT	prevention of mother-to-child transmission
PSG	Peer Support Group
PSS	psychosocial support
RCT	randomized controlled trials
SRH	sexual and reproductive health
VOOV	Voice of Our Voices
WHO	World Health Organization



1. Background

Adolescence, defined as the period between 10 and 19 years of age, is a developmental stage during which many psychosocial and mental health challenges emerge (1). Studies show that 34.6% of all mental health disorders begin by 14 years of age and 62.5% by 25 years (2). More broadly, adolescents are also navigating the transition to adulthood, exploring their autonomy and identity as they undergo rapid physical and social changes. In the context of these significant developmental, physical and social shifts, mental health needs may increase, even for adolescents and young people with no diagnosis. For adolescents who experience additional stressors, supporting their mental health and psychosocial well-being means recognizing and understanding their distinct experiences. However, while adolescence is a time of emerging and intensifying challenges, this period also presents important opportunities for optimizing mental health and development trajectories.

Adolescents and young adults living with HIV typically have additional mental health needs linked to their experiences of living with and managing a chronic illness, along with prevailing stigma and discrimination (3). Globally, there are 3.3 million adolescents and young adults living with HIV between 15 and 24 years of age, and in 2021 27.5% new HIV infections worldwide were among young people in this age bracket (4). Evidence shows that this group has higher rates of mental health challenges than their peers living without HIV (5). A recent meta-analysis found that the prevalence of depression among adolescents living with HIV is 26.07% – more than twice the rate in the general adolescent population (6). Other research has shown higher rates of anxiety,

depression, post-traumatic stress disorders and substance abuse in this population (7). Additionally, emerging evidence is exploring how internalized, enacted and perceived stigma relates to poor mental health for adolescents and young adults living with HIV. Peer relationships become increasingly central during adolescence; while these bonds can be a form of support, they may also increase anxiety around involuntary disclosure for youth living with HIV. Fears of rejection and isolation in friendships and/or romantic relationships may compound poor mental health (8). For young people who acquired HIV perinatally, adolescence is also a period when caregivers or parents may disclose to them, and this process needs to be well managed and supported. Learning to manage one's own care and treatment can similarly add new layers of stress for young people.

There is a well established link between mental health and HIV outcomes. Poor mental health can directly affect the health and well-being of adolescents and young adults living with HIV by negatively affecting their ability and motivation to seek health care and to be retained in HIV care. HIV-associated mortality has declined at a slower pace in adolescents than in other populations, highlighting the significant and dire consequences of treatment interruptions and inadequate support for care, monitoring and adherence for this population (9). For adolescent girls and young women who become pregnant and give birth, these impacts can also extend to their children (10, 11). Evidence shows that younger mothers are at significantly higher risk of mother-to-child transmission of HIV than are older mothers (12, 13).



During an adolescent ART refill day at the clinic, young peers and a nurse use adolescent-focused fact sheets and group discussion to share information with other young people
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Additionally, numerous psychosocial risks, including layered stigma, isolation and shame, can lead to prolonged periods of poor mental health for young mothers living with HIV, as well as challenges in accessing HIV care (14, 15).

Marginalization through restrictive practices, policies or norms may be similarly detrimental to the physical and mental health of broader populations of adolescents and young people living with HIV. For women living with HIV, and adolescent girls and young women in particular, gender-based violence (GBV) is also common. This may come in diverse forms, such as experiencing violence after disclosure of a positive status to a partner or withstanding verbal and emotional abuse from caregivers. In societies with inequitable gender norms or limited economic opportunities for women, lack of financial resources can exacerbate the risk of HIV acquisition and continue thereafter, increasing the likelihood of poor mental health outcomes (16).

Additionally, in many parts of the world, adolescents and young people living with HIV are also members of key population groups, and can experience multiple, interconnected risks to both their mental health and their HIV care. These groups include young gay men and other men who have sex with men, people who inject drugs, transgender youth, sex workers and people in prison (17). Experiencing criminalization, social marginalization and amplified stigmatization, adolescents and young people belonging to these groups are at higher risk of poor mental health and suicidality than their peers.

The needs of adolescents and young adults living with HIV differ significantly due to their individual experiences of HIV infection and disclosure; their socioeconomic status and living environment; social, cultural and religious norms; the presence or absence of supportive relationships; and other intersecting vulnerabilities, such as inequitable gender norms or belonging to a key population. Social environments thus have a key role in shaping their mental health and related needs. Adolescents are currently faced with ongoing challenges to their mental health, which are linked to diverse shocks from the COVID-19 pandemic, economic and employment insecurity, and exposure to multiple types of violence.

Mental health promotion and prevention is thus a critical priority for this group. Psychological and clinical services for mental health are out of reach for many of the world's adolescents and youth, especially in the countries and settings most affected by HIV. Broader-based interventions have greater potential to reach adolescents and young adults living with HIV at scale and to be tailored to their specific needs. Psychosocial interventions have the potential to support healthy behaviours, bolster mental health and lead to improvements in physical and mental health for this group (18, 19). These interventions can also play a role in preventing or mitigating mental health disorders. While these are critical strategies for supporting the mental health of all adolescents and young people, they are especially important for adolescents and young adults living with HIV, given their distinct experiences and the additional stressors they manage while living with chronic illness.



Adolescents doing cartwheels in a park © WHO / Palash Khatri

2. Rationale: why this brief?

This technical brief seeks to establish the importance of implementing psychosocial interventions to optimize HIV outcomes and support mental health for adolescents and young people living with HIV; to provide evidence included in the recent WHO guidelines to educate on how this can and has been done; and to chart a way forward for the integration of mental health and HIV services for this population. It provides approaches and examples of integration of interventions within health services. This brief also aims to identify emerging best practices and strategic actions to ensure that sustained investments in the health and well-being of this important demographic group can be realized at a pivotal global moment.

It builds on key findings from two recent, related WHO guidelines: the 2021 [Updated recommendations on service delivery for the treatment and care of people living with HIV](#) and the 2020 [Guidelines on promotive and preventive mental health interventions for adolescents: Helping Adolescents Thrive HAT](#) (see Box 1). Importantly, the brief also builds on [participatory work](#) with adolescents and young adults from 49 countries, centred on their values, preferences and needs linked to mental health and psychosocial support (PSS). This work reiterates the transformative role that these interventions can have on health equity, tailored services, and physical as well as mental health for adolescents and young adults living with HIV.

This publication can serve as a concise resource and reference document for HIV, social and mental health programme managers in ministries of health, social development and other adolescent-related line ministries, especially those in high HIV-burden, resource-limited countries and settings. The publication will also be a valuable resource for international organizations, non-governmental organizations (NGOs), and other partners in implementing and practising adolescent-responsive integration of psychosocial interventions within HIV services. This brief is aligned with the values and principles of broader global guidance, including the [Global Strategy for Women's, Children's and Adolescents' Health \(2016–2030\)](#) (20) and the [Global Accelerated Action for the Health of Adolescents \(AA-HA!\)](#) (1), and provides a roadmap of current and emerging evidence and future directions to consider in integrating psychosocial support interventions with HIV care.



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Box 1. Recommendations on psychosocial interventions for adolescents and young people living with HIV

[Updated recommendations on service delivery for the treatment and care of people living with HIV \(2021\)](#) (18)

Recommendation: Psychosocial interventions should be provided to all adolescents and young adults living with HIV (strong recommendation; moderate-certainty evidence).

[Guidelines on promotive and preventive mental health interventions for adolescents: Helping Adolescents Thrive \(2020\)*](#) (19)

Recommendation: Universally delivered psychosocial interventions should be provided for all adolescents. These interventions promote positive mental health, as well as prevent and reduce suicidal behaviour, mental disorders (such as depression and anxiety), aggressive, disruptive and oppositional behaviours, and substance use (strong recommendation; low certainty of evidence).

Important remarks: Based on available evidence, interventions should cover social and emotional learning, which may include components such as emotional regulation, problem-solving, interpersonal skills, mindfulness, assertiveness and stress management.

Recommendation: Psychosocial interventions should be considered for pregnant adolescents and adolescent parents, particularly to promote positive mental health (mental functioning and mental well-being) and improve school attendance (conditional recommendation; low certainty of evidence).

Important remarks: Based on available evidence, cognitive behavioural skills-building programmes may be considered for pregnant adolescents and adolescent mothers.

***Note:** Adolescents living with HIV were included specifically in one of the scoping questions during the 2020 guidelines process. At the time of the Guidelines Development Group (GDG) meeting, no recommendations were made due to limited evidence (three randomized controlled trials (RCTs) identified). The updated 2020 guidelines incorporated these three RCTs with a broader set of studies using expanded outcomes, and they were able to integrate considerations from 2020 with additional inputs to make a strong recommendation.

3. Psychosocial interventions for adolescents and young adults living with HIV

3.1 What are psychosocial interventions?

Psychosocial interventions involve interpersonal or informational activities, techniques or strategies to improve health functioning and well-being (20). They may utilize social, behavioural, and/or psychological approaches, or a combination of these, to achieve desired outcomes (21), which may extend beyond mental health. Psychosocial interventions are amenable to being delivered in home, community and/or clinical settings, as well as in digital spaces, reaching adolescents and young adults where they are. These interventions, often multi-dimensional in their aims and approach, may draw on a range of resources, including diverse facilitators/delivery personnel and different approaches. They aim not only to facilitate behaviour change but also to support adolescents and youth living with HIV to identify and work on solutions to social, behavioural, emotional and economic barriers to optimal health and well-being.

“When someone does not have a support system and is feeling down, they skip their medicine as they believe it will not help. They may also take too much medication, i.e., they take three to four pills instead of one, out of anger or frustration of their situation.”
(WHO Values & Preferences Report, India)

“[The challenges linked to] adherence can have a huge effect on mental health and for many, including myself, can make you feel like you’ve failed. Without the support many struggle with adherence and blame themselves when actually [there could] be a number of factors.”
(WHO Values & Preferences Report, Questionnaire response)

3.2 Interventions that aim primarily to improve mental health

Although research on the mental health of adolescents and young adults living with HIV is expanding, few interventions are primarily focused on improving mental health in this group.

A group of evidence-based interventions has prioritized mental health for adolescents and young adults living with HIV in innovative ways. In the WHO’s 2020 *Helping Adolescents Thrive HAT guidelines*, three interventions that were evaluated in randomized controlled trials (RCTs) addressed mental health as a primary outcome and targeted adolescents living with HIV aged 10–19 years (19). The VUKA intervention engaged young

adolescents aged 9–14 years and their family members at two clinical sites in South Africa, and aimed to promote health and mental well-being through sessions focused on adherence, communication and HIV education (22). Significant improvements in caregiver-child communication and child antiretroviral therapy (ART) adherence were identified.

In Zimbabwe, community adolescent treatment supporters – trained young peers living with HIV – provided differentiated counselling and support through home visits, support groups and mobile health and clinic review sessions (23–25). This intervention facilitated improvements in linkages to care and viral suppression, resulting in a significant reduction in symptoms of common mental disorders and increases in confidence, self-esteem and self-worth in participating adolescents.

A third intervention, based in the United States, used mindfulness-based stress reduction with adolescents and young adults living with HIV, aged 14–22 years, and found that participants had better emotional control, coping and life satisfaction post-programme when compared to controls (26).

A number of recent studies in high-HIV burden areas have sought to quantify the impact of new mental health-focused interventions for adolescents and young adults living with HIV. These new interventions included peer-delivered problem-solving therapy in Zimbabwe (25); family-based approaches, including the VUKA-related CHAMP+ intervention in Thailand (27); an integrated economic intervention in Uganda (28); and a resilience-promoting intervention with orphans in United Republic of Tanzania (29).

3.3 Interventions that use psychosocial approaches to improve broader health outcomes

Beyond a specific focus on mental health, a broader cross-section of interventions has leveraged psychosocial approaches to improve outcomes related to HIV, including improved adherence to ART (30), reduction in viral load (31), improved linkage to care and retention in care (32) and reduced sexual risk behaviours (33). These interventions may also improve mental health through fostering empowerment, promoting positive framing of sexual health, supporting practices for self-care and facilitating support networking among adolescents and young adults living with HIV, alongside other mechanisms to boost resilience and well-being (34). As such, they may act more indirectly on promotive and preventive strategies for improving mental health and well-being.

The 2021 WHO guidelines for adolescent service delivery drew from 30 studies which assessed interventions that utilized diverse strategies and engaged populations, including newly diagnosed youth, young men who have sex with men, and adolescent girls and young women.

4. Exploring psychosocial interventions: what do they look like?

4.1 Evidence-based approaches vary

Psychosocial interventions employ a spectrum of evidence-based approaches, grounded in behavioural science and clinical practice. Some degree of personalization and tailoring can be useful for adolescents and young adults living with HIV, who face diverse challenges and HIV trajectories. Approaches to support adherence, promote positive mental health and prevent mental disorders – specifically for this population – might include *motivational interviewing*, which supports increasing motivation for positive behaviour change. *Cognitive-behavioural therapeutic approaches*, where participants are taught about the link between thoughts, feelings and behaviours and are assisted to replace unhelpful thoughts with helpful ones to interrupt these cycles (35), might also be used. Both of these approaches have been used to support adolescents and young adults living with HIV in confronting stigma, enhancing their self-concept and increasing adherence to ART (32, 36). For adolescents and young adults who exhibit symptoms of mental health problems, more focused, indicated support may be required, in line with WHO recommendations (19).

There are also specific models that may be uniquely suited to supporting adolescents and young adults living with HIV. For example, the *positive deviance model* underlying the use of peer-delivered interventions suggests that specific individuals may possess certain less-common strengths or inner resources or assets that enable them to identify solutions to problems better than their peers (37). This approach may be a particularly important means to engage adolescents and young adults living with HIV in order to reduce stigma, to promote taking charge of their health, increase treatment adherence, share coping strategies and navigate other challenging situations (38). Peer-driven models tap into both intrinsic and extrinsic health assets among adolescents and young people, and motivate them to test and ultimately adopt behaviours that result in positive health outcomes (39). More broadly, support networking and resource identification is a strategy that is embedded in many psychosocial interventions for adolescents and young adults living with HIV (40).

It is important to emphasize that psychosocial intervention approaches should always be aligned with human rights principles and not contribute to creating harm for participants. Such provisions include ensuring that counselling interventions are not promoting behaviours that serve as impediments to key population service access, such as so-called conversion therapy for homosexuality, abstinence from drug use or cessation of sex work. Similarly, these interventions should not include compulsory or involuntary treatment that goes against medical ethics, principles of consent or access to quality health (41).

4.2 How can these interventions be delivered?

Psychosocial interventions might adopt different formats, depending on the structure, implementation setting, desired outcomes and intended population (35). In-person or digital sessions have engaged individuals as well as groups of adolescents and young adults living with HIV. For interventions that target younger participants or seek to change participant outcomes on multiple levels, family-based formats have also been used.

In certain instances, mixed groups by age and gender are appropriate; in other cases, interventions have opted to divide groups for different reasons. Dividing groups by age may enable differentiated responses to meeting adolescents where they are. For example, younger adolescents may be coping with disclosure within the family and dynamics around transitioning in care (22), whereas older adolescents and young adults may want to talk about navigating intimate relationships, stigma and future aspirations (42). Studies that separate groups by gender may be responding to participant preferences around discussing sensitive topics, thereby aiming to make participation more fluid and minimizing discomfort (32). Certain means of engagement may also reflect social or gender norms, which is an important consideration for implementers seeking to retain participants over time.

Integration into existing systems and across the HIV care continuum is another important consideration (43). Since many adolescents and young adults living with HIV need to be in contact with health systems, the clinical or health facility interface may be a logical space to reach and/or recruit for interventions. For example, facility-linked adolescent adherence clubs, incorporating a psychosocial support component delivered by peers, provide safe spaces to regularly exchange knowledge, experiences and solutions (38). For those individuals not yet linked to care, community-based structures may be leveraged to initiate this process. Digital modalities have also expanded the options for how adolescents and young adults can be engaged. Virtual sessions, chat groups and internet-based games, where participants can choose avatars and engage with health education, have all been piloted for use with adolescents and young adults living with HIV (31, 44, 45). Additionally, other remote interventions have included telephonic counselling and text message reminders (30).

4.3 Who delivers them?

Psychosocial interventions for adolescents and young adults living with HIV are delivered by a diverse set of implementers. In some settings, health providers or other allied health staff may be appropriate delivery personnel, especially in one-on-one settings or when adolescents and young adults are managing other comorbidities (46). Because there are inadequate numbers of specialists to deliver

these interventions in many settings, task-sharing with non-specialists has become key to optimizing coverage. Lay counsellors or peer mentors are also an increasingly common choice of delivery personnel (47). These individuals may be relatively inexpensive to train and employ, and they could have expertise grounded in the communities in which they work. Existing supportive relationships may improve adherence among marginalized groups of adolescents and young adults who have poorer retention and treatment adherence (48). Peers might also be able to support adolescents and young adults living with HIV to change adherence practices and sustain these changes over longer periods (23).

4.4 What factors support uptake of these interventions?

Beyond engaging directly with adolescents and young adults, psychosocial interventions typically need to be attuned to the environments that youth are occupying. There are also numerous opportunities to integrate psychosocial interventions within existing services and points of contact with adolescents and young adults. Some interventions explicitly link to structures that can support better outcomes for adolescent and young adult participants; these might include family engagement or leveraging other support networks for adolescents and young adults living with HIV. There may be provisions that improve economic security or smooth financial barriers to adherence, especially for adolescents and young adults living in low-income settings (49). Additionally, empowering and supporting participants in other aspects of their lives could reduce stressors that are known to reduce engagement in care (23). Differentiated service delivery (DSD) models are also critical to participant uptake, especially for adolescents and youth and individuals from key populations, and the WHO recommends that psychosocial support is integrated into DSD models (39). Additionally, interventions that are more embedded in health and clinical settings may engage health workers in the context of the intervention, or in parallel, in order to ensure that adolescents and young adults are receiving sensitive, responsive care and services for HIV as well as other health needs. One-stop centres and other integrated platforms of service delivery can be particularly useful in reaching adolescents and addressing multiple needs concurrently.

4.5 How do we know they are acceptable to adolescents and young adults?

Psychosocial intervention approaches for adolescents and young adults living with HIV may include the adaptation of approaches used for adults; however, they could also integrate youth-driven approaches. As part of the 2021 WHO updated recommendations on service delivery for the treatment and care of people living

with HIV, two consultations with adolescents and young adults living with HIV highlight their values and preferences for peer-led psychosocial interventions.

The first consultations involved 388 adolescents and young adults across 45 countries and emphasized the importance of psychosocial support and the critical role peers have to play. Young people emphasized that peers must play a key role in the services they receive and that peer-led interventions should be multi-component, forming a package across clinic, community and digital platforms.

"I was living in deep psychological turmoil... but when I got this education it helped me a lot to overcome those thoughts and move on." (WHO Values & Preferences Report, female participant, 18 years)

"Before establishment of the club meetings I was very lonely. I used to have self-destructive feelings, but after the club, things have changed. I got hope because there were... other adolescents with [the] same issue as me, then that was my relief." (WHO Values & Preferences Report, Questionnaire response, male participant, 13 years)

Some studies work to integrate adolescents and young adults living with HIV from early on: co-development of interventions with adolescents and young adults is becoming a more prominent aspect of these interventions, as researchers and practitioners recognize the importance of equitable, intentional and mutually-respectful youth engagement (50, 51, 52). Importantly, these approaches may maximize acceptability, feelings of satisfaction and value, and attendance and engagement with the intervention.



After a counselling session and with permission from the caregiver, a young peer shares information around HIV testing services with another peer.
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5. Key strategic actions for integrating psychosocial interventions into HIV services

A recent UNAIDS-WHO guide details important considerations for integrating mental health and HIV interventions across all ages (43). Psychosocial services and their integration into services for adolescents and young adults living with HIV should be implemented in a way that is acceptable to them. Listed below are **key strategic actions** that build from the evidence reviewed above and reflect current programmatic learning and examples. These **seven strategic actions** demonstrate what is needed to scale up the related interventions and integrate them into clinical practice, community settings or other places where adolescents and young adults can be reached.

Strategic action 1: Psychosocial interventions need to reflect the experiences and needs of adolescents and young people living with HIV, including members of key populations, who might require additional support.

While certain interventions may be particularly effective with youth more broadly, adolescents and young adults living with HIV who represent key populations – including adolescent and young adults engaged in sex work, individuals identifying as lesbian, gay, bisexual, transgender, queer, intersex and asexual (LGBTQIA+) and adolescent and young mothers – may require differentiated approaches that respond to their specific experiences. These approaches should account for contextual differences that may be associated with additional risks to their physical and mental health and well-being.

Despite additional challenges that these groups might face accessing services, there are also ample opportunities for integrating psychosocial support into the services they routinely receive. For example, prevention of mother-to-child transmission (PMTCT) services for young mothers could also contain key provisions for psychosocial support that helps young mothers to address, and potentially overcome, contextual challenges that they may be facing with adhering to treatment and administering infant prophylaxis. These challenges might include disclosure to partners; internalized stigma from experiencing adolescent pregnancy and HIV; exposure to GBV; enacted stigma from community members and/or rejection from families; and limited social support.

Adolescents and young adults facing specific vulnerabilities may require further broad-based support. Individuals from key populations in particular may be facing homelessness due to family rejection, early withdrawal from school, lack of adequate nutrition, exploitation in employment and trafficking, along with criminalization and other structural barriers. As such, support should be socially grounded as well as attuned to the ecosystem of the young person.

Case study: EpiC in Eswatini

Since April 2021, with the support of FHI 360, the Voice of Our Voices (VOOV) and HealthPlus 4 Men (HP4M), local NGOs have been implementing the EpiC (Meeting Targets and Maintaining Epidemic Control) project in Eswatini. Peer outreach through local community-based organizations provide non-stigmatizing HIV services to key population members, who may avoid health facilities because of stigmatization or criminalization. VOOV and HP4M provide safe spaces for individuals who often experience stigma and discrimination when they seek health services. VOOV works with female sex workers and HP4M works with LGBTQIA+ communities, including specifically young key populations under the age of 25, through mobilizing and engaging those aged between 18 and 25 years and providing a package of HIV prevention services and referrals for other services. Engaging established and trusted organizations as partners not only improves health service access to key population groups, but also creates opportunities for members of these groups to gain stable employment through outreach efforts. Outreach workers who have lived through similar experiences of stigma, discrimination and violence may have knowledge of networks within the communities they are serving, making it easier for them to find peers who have been poorly reached. Both VOOV and HP4M hire former beneficiaries as staff members, who now work to engage in health outreach.

Strategic action 2: Psychosocial interventions need to be grounded in the contexts in which they are implemented and responsive to implementation-specific factors.

Beyond tailoring strategies to target specific needs, psychosocial interventions should also be attuned to contextual factors that might shape implementation and uptake. These efforts involve having a clear understanding of the implementation environment and context, as well as a sense of how evidence-based strategies can be adjusted or planned to fit this context. They also involve adjusting strategies based on changes in contexts or across individuals' and communities' needs. For instance, digitally delivered interventions hold promise for reaching more individuals and standardizing intervention content, and they have been shown to be effective in reaching adolescents and young people in urban settings. In other contexts, however, barriers linked to internet connectivity, electricity or access can limit their use. Adaptability and flexibility built into the structure of a programme can be particularly effective where implementers are trained in a number of soft skills as well as intervention content, and where agency is promoted in engaging with adolescents and young adults.

There is also a need for consistent and repeated assessments to monitor mental health, alongside HIV outcomes, as adolescents and young adults transition through this developmental period. Individuals may have stable mental health for a period of time, then require more intensive support at certain points. Interventions should be responsive to fluctuations in mental health, HIV care and other support needs, and they should provide regular opportunities for re-evaluation.



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Case study: Peer Support Groups in Lesotho

The Elizabeth Glaser Pediatric AIDS Foundation has implemented tailored Peer Support Groups (PSGs) in Lesotho. The PSG model uses a story-based curriculum, with a story at the centre of each session, which is aimed at encouraging adolescents and young adults living with HIV to learn, reflect, connect via shared experiences and apply lessons to their respective lives. These stories reflect a set of core topics, and recognize adolescents and young adults as more than just clients; additional topics beyond HIV are included, such as relationships, education, employment, finances and pregnancy. Furthermore, adolescents and young adults provide input on additional topics beyond those in the curricula. The model encourages flexibility to allow integration of the sessions facilitated by the peers into future sessions. Support group members are encouraged to share their experiences, support one another in disclosure and treatment management, discuss fighting discrimination and talk about AIDS-free living and sexual health.

PSGs consist of small groups of up to 25 individuals organized by age groups (10–14, 15–19, 20–24 years), who meet at least monthly and are led by a designated peer leader who is usually a trained, experienced adolescent or young person living with HIV. Some groups are further divided by gender, and there are separate groups for key populations and young mothers. Groups can connect via social media or in person, and can also link to separate sessions for parents/caregivers, friends, partners and teachers. Peer leaders support adolescents and young adults living with HIV with treatment adherence and follow-ups, facilitate sexual and reproductive health information and education, and link them to community-based resources, social support services and health care, as needed.

Case study: LoveYourself in Philippines

LoveYourself (<https://loveyourself.ph>) is a youth-founded organization, operating in the Philippines since 2011, that promotes health education, awareness and access to services through an empowerment framing for young people and men who have sex with men. Providing a multi-level platform for support, it engages 1100 youth volunteers across its programming. While LoveYourself includes a suite of services for sexual health (including HIV prevention), transgender health and mental health, its services for adolescents and young people living with HIV include counselling and Xpress ART refill services, as well as a user-friendly digital map of 160 sites where they can access HIV treatment and care. Its Flourish Circle provides a small group setting, run by trained Peer Support Specialists, who provide accessible psychosocial support and a supportive environment for young people experiencing a range of mental health challenges. Participants of the Flourish Circle are screened prior to joining and commit to 12 sessions over several months.

Love Yourself also operates community centres in multiple metropolitan areas, sometimes jointly with other health service providers, that provide free HIV testing and counselling services and other inclusive sexual and reproductive health services. Services all prioritize adolescent- and youth-responsive, non-judgemental approaches. Finally, LoveYourself is engaged in HIV advocacy, and it distributes the Ripple Awards to champion individuals, organizations and projects shaping HIV advocacy in the Philippines.

“Creating a platform where young adolescent role models are used to inspire others to do well in their adherence keeps hope alive.” (WHO Values & Preferences Report, Questionnaire response)

“I could not face the society and the self-stigma was always around me, but I got support and somebody sharing her own experience and monitoring me, making sure that I attend the support groups. When my date for resupply was near, they would remind me. Psychosocial support (PSS) really helps adolescents living with HIV.” (WHO Values & Preferences Report, Zimbabwe)



Group of young friends in cool pose, standing and sitting on pallet and metal bars, in front of railings by an urban waterfront. © WHO / Yana Panfilova

Strategic action 3: Training and supporting peer counsellors to deliver quality psychosocial support with a variety of approaches can facilitate meaningful engagement of adolescents and young adults in service delivery.

Identifying and training interested adolescents and young adults to provide psychosocial support for peers is a critical way to promote adolescent-responsive health services for this group. In addition to ensuring services are equitable, acceptable, accessible, appropriate and effective (39), peer counsellors can also provide relatable and non-judgemental perspectives. Training, supervision, facility-based support, compensation and their own psychosocial support should be carefully managed to ensure that peers are adequately supported in their roles. Importantly, not all adolescents and young adults will respond to psychosocial support provided by their peers; a smaller number of individuals will require support or mental health intervention from more qualified adherence counsellors or psychologists. Peer training and referrals protocols should also be robust to enable identification of such cases and link individuals to onwards referrals.

Case study: Ask-Boost-Connect-Discuss, in Kenya, Malawi, United Republic of Tanzania, Uganda, Zambia

Ask-Boost-Connect-Discuss (ABCD) is a package to guide peer supporters living with HIV to deliver psychosocial support for pregnant adolescents and young mothers living with HIV. Since 2019, it has been delivered by partners of Paediatric-Adolescent Treatment Africa (PATA) at clinic sites in Kenya, Malawi, United Republic of Tanzania, Uganda and Zambia, reaching approximately 250 young mothers thus far. ABCD relies on a peer support-clinic mentor relationship and strong facility-based integration.

Many of the participating young mothers facing isolation, blame and multiple types of stigma also learn of their HIV status during their first antenatal appointment. Linking these groups to facilities enables peer supporters to identify and enroll young mothers at these pivotal moments. In small group settings, peer supporters guide participating young mothers through modules that utilize cognitive-behavioural therapy (CBT) approaches in tandem with components such as psychoeducation and support networking. In some implementation settings, ABCD has moved from being strictly facility-based to a more flexible delivery approach, enabling young mothers to convene with peer supporters where they are most comfortable. Peer supporters also have a supervisor with whom they meet regularly who provides logistical support as well as additional mentorship and debriefing support, as needed.



Patient during a Neurocognitive and psychophysiology lab session at the National Medical Research Center for Pediatric Hematology, Oncology and Immunology in the outskirts of Moscow.
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Strategic action 4: Routine monitoring and evaluation activities and research should align with indicators, measures and standardized tools for evaluating HIV-specific outcomes and programmes among adolescents and young adults.

There is a paucity of research or evaluation efforts that deliver comparable findings relating to psychosocial interventions and their outcomes or impact. These gaps include poor or lack of age disaggregation of data and a dearth of data from high HIV-burden settings. Effective monitoring and evaluation (M&E) systems can be useful for making quality improvements in service delivery, as well as for identifying gaps needed to improve accountability and to generate lessons to guide future programming.

M&E systems should be carefully considered in the implementation of integrated psychosocial and HIV services, with particular emphasis on age disaggregation along 5-year age bands by age and gender, with specific efforts to include data on and to monitor adolescents who may be marginalized and young key populations.



Peer Supporter going for a community visit under the READY+ Programme
© Frontline AIDS/Peter Caton, 2019

Case study: Zvandiri in Zimbabwe

Zvandiri integrates evidence-based, HIV and mental health and psychosocial support services for children, adolescents and young adults living with HIV in Zimbabwe. Services are primarily delivered by trained, mentored peer counsellors living with HIV, known as Community Adolescent Treatment Supporters (CATS), Young Mentor Mums and Young Mentor Dads, who are embedded within the national HIV and mental health response. The design, delivery and scale-up of Zvandiri has been informed by programme data, evaluations and research to generate evidence on young people's service delivery needs and the impact and effectiveness of Zvandiri's interventions. Zvandiri is also delivered through DSD ART models for adolescents, and ensures that all services for adolescents and young people enrolled in DSD models are maintained (23).

This systematic approach to evidence generation has relied on the development of indicators to track both clinical and psychosocial outcomes for this population; strengthened and scaled-up objective markers, including viral load and refined measures of mental health; peer-led collection of real-time, client-level programme data for 65 000 clients, using a customized electronic record system; and research collaborations to generate robust evidence of need and effectiveness. Three randomized trials confirm improved adherence, retention, viral suppression and mental health outcomes among adolescents registered in Zvandiri compared with those receiving standard of care, while costing and cost effectiveness studies have also been conducted. These research outcomes align with Zvandiri's programme data. This has strengthened the evidence-base for global and national guidelines, service delivery and resources allocated for paediatric and adolescent HIV and mental health.

Strategic action 5: Integration relies on multi-sectoral coordination and political will to support the scale-up of successful interventions.

Scale-up considerations should start from early on in the planning and implementation of evidence-based programmes. To effectively expand participation and build buy-in, diverse stakeholders, including representatives from the health, education, justice, social development, finance, civil society, academic and non-profit sectors, alongside community members, should be engaged to map needs and align priorities. Integration should be specifically supported through national strategies and policies, and within results-monitoring frameworks.



Peer supporter during Covid19 Awareness, 2020 © Frontline AIDS/Peter Caton

Case study: Operation Triple Zero in Kenya and Nigeria

Operation Triple Zero (OTZ) is a youth-focused, multi-sector approach that has been implemented in Kenya, and Nigeria, as well as other countries in sub-Saharan Africa. Its name refers to 1) zero missed appointments, 2) zero missed antiretroviral drugs, and 3) zero viral load.

In Kenya, OTZ reflects a collaboration between the Ministries of Health, Education, and service providers for orphans and vulnerable children (OVC) [55]. The health facility acts as the entry point for enrolment into OTZ. Adolescents and young adults living with HIV, identified by clinicians, are linked to OVC or school gatekeepers depending on the need. OVC case managers conduct household assessments to ascertain specific needs, and facilitate the following services tailored to these needs: supported disclosure, emotional support during loss and grief, and directly observed therapy for orphans or neglected ALHIV in the community. The Ministry of Education is more intensively involved for adolescents who are enrolled in boarding schools. In these cases, facility-based OTZ team members identify ALHIV in boarding schools, train school gatekeepers and identify a schoolteacher or matron to be treatment supporter or a case manager for directly observed therapy. Case management discussions are held monthly to discuss individual patient progress, and include the OTZ clinical team, and representatives from OVC, Ministry of Health, and Ministry of Education. The multi-disciplinary team refers and links any identified cases that are beyond their mandate for child protection or social justice support.

In Nigeria, OTZ is implemented by RISE Nigeria (Reaching Impact, Saturation, and Epidemic Control) in four states, also in close partnership with the Ministry of Health and OVC services. Facility support staff work closely with OTZ peer champions to engage and motivate adolescents and young adults living with HIV. OVC support includes tracking participants with treatment interruptions and provision of psychosocial and nutritional support as needed. Adolescent clubs are supplemented by comprehensive adolescent and youth-friendly services, peer-peer mentorship and support, a treatment literacy package, and connections to HIV testing, counselling, and treatment services. There are also opportunities for caregivers and parents of adolescents to meet separately, in order to learn about age-appropriate disclosure and adherence support.

Strategic action 6: Continuing expansion of communication platforms and virtual learning spaces for community members, health providers, programmers and policy-makers is a critical way to enable cross-sector sharing, education and dissemination.

Learning and sharing across diverse sectors is a critical means of disseminating best practices, while ensuring that health providers, programmers, policy-makers and other practitioners are up-to-date on the best available evidence for HIV and psychosocial support. Virtual engagement platforms for communication and learning can provide a forum for case sharing, troubleshooting and providing expert input.

Case study: WHO TeleECHO webinar series

The WHO TeleECHO webinar series is a platform for information sharing and interactive discussion on progress and pending issues on scaling up paediatric and adolescent HIV services in priority countries. The overall goal is to flag challenges, share solutions and trigger technical assistance by various stakeholders at global or regional level. The bimonthly webinars have been used to highlight global updates on key issues, as well as for mutual exchange of experience between countries on clinical and programmatic considerations. The webinars are primarily targeted towards health care providers, programme managers and partners from across Africa.

Case study: PATA Linking & Learning Hub as a platform for broadly applicable education

Through its network of frontline health care providers and its linking and learning approach, PATA is uniquely placed to facilitate sharing of knowledge, promising practices and service delivery models so that all children and adolescents living with HIV in sub-Saharan Africa receive optimal treatment and people-centred care, and are supported to live long and healthy lives. Through various mediums, PATA provides a platform for peer-to-peer learning and has the potential to reach more than 650 clinic teams, who form the PATA network of frontline health providers in sub-Saharan Africa.

- The PATA Linking and Learning Hub provides a powerful platform and interactive space for regional collaboration, capacity-building and peer-to-peer exchange. The platform is accessible to PATA's network of frontline health providers, facilities and communities, as well as to strategic partners working to improve paediatric and adolescent HIV service delivery in sub-Saharan Africa. It provides access to online PATA events, webinars, summits and training courses, providing an interactive safe space for PATA's growing network of frontline health providers and community partners.
- **PATA Summits** bring together its network of health and service provider teams, global experts, national programme managers, Ministry of Health representatives and young leaders living with HIV in a collaborative **link and learn** approach. Key to PATA methodology is providing those on the frontline of service delivery an opportunity to access global guidance and technical input, whilst also giving policy-makers and stakeholders the opportunity to engage with everyday operational barriers in service delivery.
- **PATA REAL** quarterly webinar series brings together health care providers for case-based practical peer-to-peer learning. The webinars provide a reality check, sharing real unfiltered cases from the frontline, namely, **Reviewing cases**, **Engaging peers** and **Accessing experts' advice** from a panel of experts in HIV treatment in care, while **Learning lessons** from each other's cases. Cases shared on the REAL webinars include both clinical and psychosocial case presentations.
- Through its support for the **Paediatric Adolescent HIV Learning Collaborative for Africa (PAHLCA)**, PATA facilitates access to an excellent platform for sharing best practices and fosters south-to-south evidenced-based learning between Ministries of Health, strategic partners and health managers working in delivering paediatric and adolescent HIV services.

Strategic action 7: Embracing a systems perspective can help to reinforce responsive health systems in the face of unanticipated disruptions and shocks.

Advancing integrated and responsive services, while considering population needs from a systems level, can also be protective in the face of unanticipated shocks or crises. The COVID-19 pandemic has created a greater need for mental health services and has increased people's willingness to access telehealth. It has also supported emerging evidence that virtual mental health services work for a wide range of individuals. The pandemic spurred rapid changes in how health systems were able to operate and support patients. This urgency stemmed from COVID-19 itself, as well as from the associated social and economic ramifications of ongoing lockdowns and shifts in service availability. Consequently, psychosocial support has had to adapt in real-time for adolescents and young adults living with HIV, including through digitally linked platforms (53, 54), while implementers remain cognizant of contextual challenges and of mitigating unintended harms.

Case study: MENA MOVES in Tunisia, Morocco and Algeria

MENA MOVES was first implemented by FHI 360, starting in September 2021 in Tunisia, Morocco and Algeria. The programme provides access to trauma-informed, non-stigmatizing therapy to youth in vulnerable groups, including youth living with HIV and young LGBTQIA+ people. MENA MOVES utilized QuickRes, an online application, to allow members of the public to easily make reservations for mental health services using a smartphone, tablet or laptop. It uses the existing Online Reservation and Case Management App (ORA) software developed by FHI 360. This enables people to make appointments quickly and confidentially, facilitating their access to tele-mental health services. While clients were not directly asked to comment on MENA MOVES, out of respect for anonymity and the importance clients and civil society organizations (CSOs) place on security, CSOs noted that clients find services useful and that services contribute to clients' well-being. There is a desire for greater coverage so that more people can use the services and for more support for those who prefer in-person services (e.g., transport).

Case study: one2one™ in Kenya

one2one™, implemented by LVCT Health, is a forum for adolescents and young people aged 10–24 years in Kenya to access quality, non-judgemental and reliable information; it provides linkages to services specifically on sexual reproductive health (SRH), mental health, GBV and HIV. one2one™ relies on a hybrid stepped-care model of interventions, from the lowest to the most intensive, matched to the individual's needs, with an aim to provide alternative and responsive digital solutions for young people. one2one™ Integrated Digital Platforms (OIDP) comprise the toll-free hotline (1190), bulk SMS, social media, a website, YouTube, a chatbot with digital personalized information, closed WhatsApp chat groups and Interactive Voice Response (IVR). Offline advice is also available through peer counsellors and health care providers, with referrals made for special care. Each of these channels provide an opportunity for young people to engage and access information from professional counsellors accredited by the Kenya Counselling and Psychological Association. The platform also serves as a virtual safe space for open peer-to-peer discussions that help young people make informed choices with guaranteed confidentiality, and it provides varying levels of support tailored to individual needs.

"Having the support I needed would mean that certain areas of my life wouldn't be held back, i.e., my social life. Growing up is very difficult with so many changes and having support in such a big aspect can make a massive change." (WHO Values & Preferences Report, Questionnaire response)



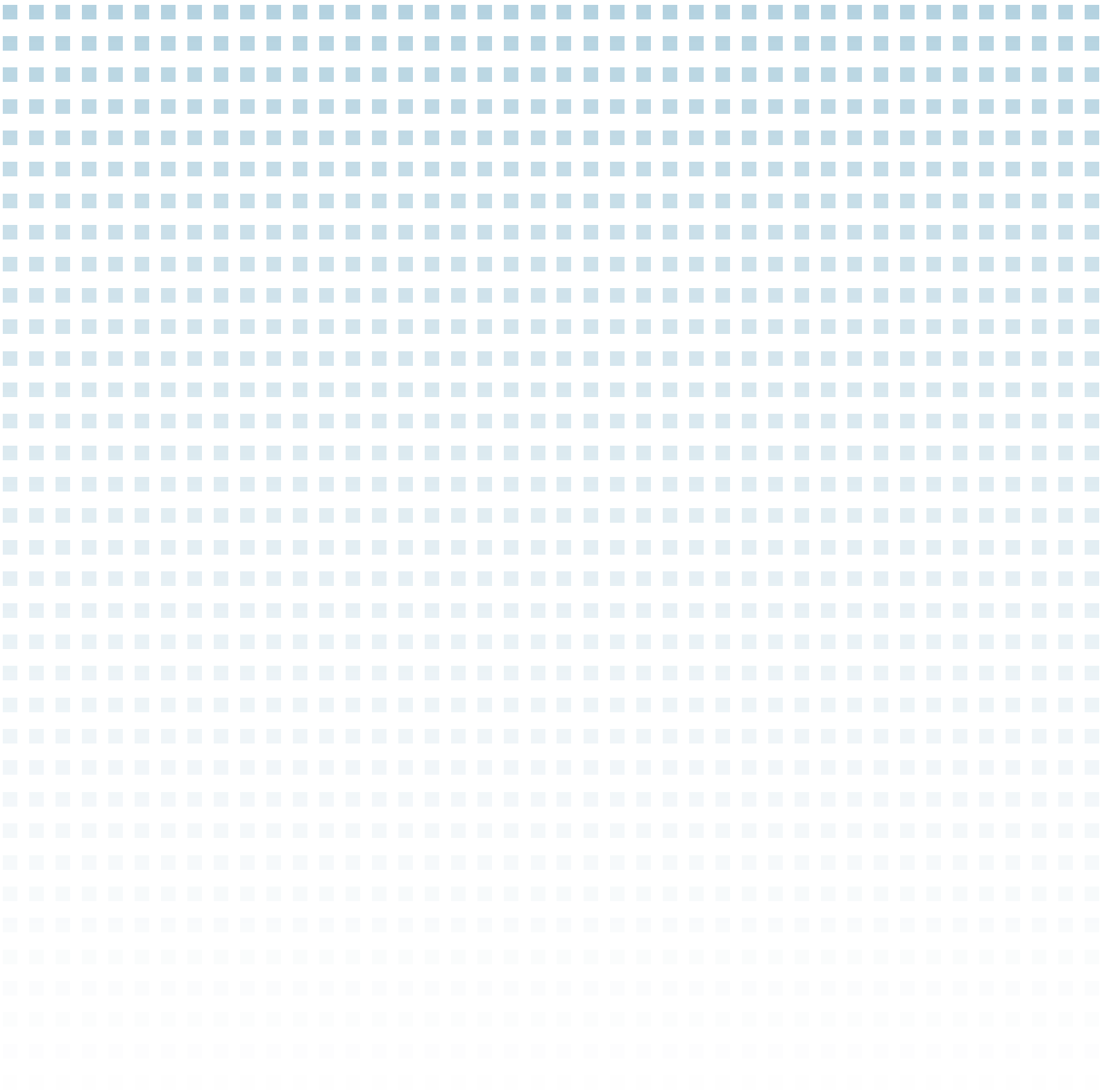
Vimbai engages Kundai in a counselling session during a home visit. She uses games to support discussions around HIV treatment, adherence and mental health. @Zvandiri/ Stephen Chikosi

References

1. [Global accelerated action for the health of adolescents \(AA-HA!\): guidance to support country implementation](#). Geneva: World Health Organization; 2017.
2. Age at onset of mental disorders worldwide: large-scale meta-analysis of 192 epidemiological studies. *Mol Psychiatry*. 2022;27(1):281–95.
3. Laurenzi CA, Skeen S, Gordon S, Akin-Olugbade O, Abrahams N, Bradshaw M, et al. Preventing mental health conditions in adolescents living with HIV: an urgent need for evidence.
4. In Danger: UNAIDS Global AIDS Update 2022. Geneva: Joint United Nations Programme on HIV/AIDS; 2022.
5. Vreeman RC, McCoy BM, Lee S. Mental health challenges among adolescents living with HIV. *J Int AIDS Soc*. 2017;20:21497.
6. Ayano G, Demelash S, Abraha M, Tsegay L. The prevalence of depression among adolescent with HIV/AIDS: a systematic review and meta-analysis. *AIDS Res Ther*. 2021;18(1):23.
7. Di Gennaro F, Marotta C, Saracino A, Occa E, Putoto G. Mental health needs of adolescents with HIV in Africa. *Lancet HIV*. 2022;9(6):e376.
8. Kip EC, Udedi M, Kulisewa K, Go VF, Gaynes BN. Stigma and mental health challenges among adolescents living with HIV in selected adolescent-specific antiretroviral therapy clinics in Zomba District, Malawi. *BMC Pediatr*. 2022;22(1):253.
9. Idele P, Gillespie A, Porth T, Suzuki C, Mahy M, Kasedde S, et al. Epidemiology of HIV and AIDS among adolescents: current status, inequities, and data gaps. *J Acquir Immune Defic Syndr*. 2014;66:S144–S53.
10. [Learning session on HIV-affected adolescent mothers and their children in sub-Saharan Africa: meeting report](#). Geneva: World Health Organization; 2020.
11. World Health Organization and UNICEF. [Safeguarding the future: giving priority to the needs of adolescent and young mothers living with HIV](#). Geneva: World Health Organization; 2021.
12. Horwood C, Butler LM, Haskins L, Phakathi S, Rollins N. HIV-infected adolescent mothers and their infants: low coverage of HIV services and high risk of HIV transmission in KwaZulu-Natal, South Africa. *PLoS One*. 2013;8(9):e74568.
13. Ronen K, McGrath CJ, Langat AC, Kinuthia J, Omolo D, Singa B, et al. Gaps in adolescent engagement in antenatal care and prevention of mother-to-child HIV transmission services in Kenya. *J Acquir Immune Defic Syndr*. 2017;74(1):30.
14. Toska E, Laurenzi CA, Roberts KJ, Cluver L, Sherr L. Adolescent mothers affected by HIV and their children: a scoping review of evidence and experiences from sub-Saharan Africa. *Glob Pub Health*. 2020;15(11):1655–73.
15. Roberts KJ, Smith C, Cluver L, Toska E, Zhou S, Boyes M, et al. Adolescent motherhood and HIV in South Africa: examining prevalence of common mental disorder. *AIDS Behav*. 2022;26(4):1197–210.
16. Jewkes RK, Dunkle K, Nduna M, Shai N. Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: a cohort study. *Lancet*. 2010;376(9734):41–8.
17. Putting young key populations first: HIV and young people from key populations in the Asia and Pacific Region (advocacy brief). Joint United Nations Programme on HIV/AIDS; 2022.
18. [Updated recommendations on service delivery for the treatment and care of people living with HIV](#). Geneva: World Health Organization; 2021.
19. [Guidelines on mental health promotive and preventive interventions for adolescents: helping adolescents thrive](#). Geneva: World Health Organization; 2020.
20. World Health Organization. “Global strategy for women’s, children’s and adolescents’ health 2016–2030.” Geneva: WHO (2015).
21. England MJ, Butler AS, Gonzalez ML. Psychosocial interventions for mental and substance use disorders: a framework for establishing evidence-based standards. Washington (DC): National Academies Press (US); 2015.
22. Institute of Medicine Committee on Prevention of Mental Disorders. In: Mrazek PJ, Haggerty RJ, editors. Reducing risks for mental disorders: frontiers for preventive intervention research. Washington (DC): National Academies Press (US); 1994.
23. Bhana A, Mellins CA, Petersen I, Alicea S, Myeza N, Holst H, et al. The VUKA family program: piloting a family-based psychosocial intervention to promote health and mental health among HIV infected early adolescents in South Africa. *AIDS Care*. 2014;26(1):1–11.
24. Mavhu W, Willis N, Mufuka J, Bernays S, Tshuma M, Manganah C, et al. Effect of a differentiated service delivery model on virological failure in adolescents with HIV in Zimbabwe (Zvandiri): a cluster-randomised controlled trial. *Lancet Glob Health*. 2020;8(2):e264–e75.

25. Willis N, Milanzi A, Mawodzeke M, Dziwa C, Armstrong A, Yekeye I, et al. Effectiveness of community adolescent treatment supporters (CATS) interventions in improving linkage and retention in care, adherence to ART and psychosocial well-being: a randomised trial among adolescents living with HIV in rural Zimbabwe. *BMC Public Health*. 2019;19(1):117.
26. Simms V, Bernays S, Chibanda D, Chinoda S, Mutsinze A, Beji-Chauke R, et al. Risk factors for HIV virological non-suppression among adolescents with common mental disorder symptoms in Zimbabwe: a cross-sectional study.
27. Webb L, Perry-Parrish C, Ellen J, Sibinga E. Mindfulness instruction for HIV-infected youth: a randomized controlled trial. *AIDS Care*. 2018;30(6):688–95.
28. Nestadt DF, Saisaengjan C, McKay MM, Bunupuradah T, Pardo G, Lakhonpon S, et al. CHAMP+ Thailand: pilot randomized control trial of a family-based psychosocial intervention for perinatally HIV-infected early adolescents. *AIDS Patient Care STDS*. 2019;33(5):227–36.
29. Cavazos-Rehg P, Byansi W, Xu C, Nabunya P, Bahar OS, Borodovsky J, et al. The impact of a family-based economic intervention on the mental health of HIV-infected adolescents in Uganda: results from Suubi+ Adherence. *J Adolesc Health*. 2021;68(4):742–9.
30. Harding R, Wei G, Gwyther L, Miti E. Improving psychological outcomes for orphans living with HIV in United Republic of Tanzania through a novel intervention to improve resilience: findings from a pilot RCT. *AIDS Care*. 2019;31(3):340–8.
31. Garofalo R, Kuhns LM, Hotton A, Johnson A, Muldoon A, Rice D. A randomized controlled trial of personalized text message reminders to promote medication adherence among HIV-positive adolescents and young adults. *AIDS Behav*. 2016;20(5):1049–59.
32. Whiteley L, Brown LK, Mena L, Craker L, Arnold T. Enhancing health among youth living with HIV using an iPhone game. *AIDS Care*. 2018;30(4):21–33.
33. Hosek SG, Harper GW, Lemos D, Burke-Miller J, Lee S, Friedman L, et al. Project ACCEPT: Evaluation of a group-based intervention to improve engagement in care for youth newly diagnosed with HIV. *AIDS Behav*. 2018;22(8):2650–61.
34. Rongkavilit C, Naar-King S, Wang B, Panthong A, Bunupuradah T, Parsons JT, et al. Motivational interviewing targeting risk behaviors for youth living with HIV in Thailand. *AIDS Behav*. 2013;17(6):2063–74.
35. Laurenzi CA, Melendez-Torres GJ, Page DT, Vogel LS, Kara T, Sam-Agudu NA, et al. How do psychosocial interventions for adolescents and young people living with HIV improve adherence and viral load? A realist review. *J Adolesc Health*. 2022;71(3):254–69.
36. Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. Geneva: World Health Organization; 2021. Report No. 9240031596.
37. Naar-King S, Lam P, Wang B, Wright K, Parsons JT, Frey MA. Brief report: maintenance of effects of motivational enhancement therapy to improve risk behaviors and HIV-related health in a randomized controlled trial of youth living with HIV. *J Pediatr Psychol*. 2008;33(4):441–5.
38. Sarnkhaowkhom C, Phonsuk P, Santre S, Suksatan W. Applying of positive deviance approach to promote young adults' and adolescents' health: a literature review. *Sustainability* [Internet]. 2022;14(17).
39. Denison JA, Burke VM, Miti S, Nonyane BAS, Frimpong C, Merrill KG, et al. Project YES! Youth Engaging for Success: a randomized controlled trial assessing the impact of a clinic-based peer mentoring program on viral suppression, adherence and internalized stigma among HIV-positive youth (15–24 years) in Ndola, Zambia. *PLoS One*. 2020;15(4).
40. Adolescent friendly health services for adolescents living with HIV: from theory to practice, December 2019: technical brief. Geneva: World Health Organization; 2019.
41. Laurenzi CA, du Toit S, Ameyan W, Melendez-Torres GJ, Kara T, Brand A, et al. Psychosocial interventions for improving engagement in care and health and behavioural outcomes for adolescents and young people living with HIV: a systematic review and meta-analysis. *J Int AIDS Soc*. 2021;24(8).
42. Consolidated guidelines on HIV, viral hepatitis and STI prevention, diagnosis, treatment and care for key populations. Geneva: World Health Organization; 2022.
43. Dulli L, Ridgeway K, Packer C, Murray KR, Mumuni T, Plourde KF, et al. A social media-based support group for youth living with HIV in Nigeria (SMART Connections): randomized controlled trial. *J Med Internet Res*. 2020;22(6):e18343.
44. Integration of mental health and HIV interventions: key considerations. Geneva: World Health Organization; 2022.
45. Dulli L, Ridgeway K, Packer C, Plourde KF, Mumuni T, Idaboh T, et al. An online support group intervention for adolescents living with HIV in Nigeria: a pre-post test study. *JMIR Public Health & Surveillance*. 2018;4(4):e12397.

46. Naar-King S, Outlaw AY, Sarr M, Parsons JT, Belzer M, Macdonell K, et al. Motivational Enhancement System for Adherence (MESA): pilot randomized trial of a brief computer-delivered prevention intervention for youth initiating antiretroviral treatment. *J Pediatr Psychol*. 2013;38(6):638–48.
47. Brown LK, Kennard BD, Emslie GJ, Mayes TL, Whiteley LB, Bethel J, et al. Effective treatment of depressive disorders in medical clinics for adolescents and young adults living with HIV: a controlled trial. *J Acquir Immune Defic Syndr*. 2016;71(1):38–46.
48. Belzer ME, Naar-King S, Olson J, Sarr M, Thornton S, Kahana SY, et al. The use of cell phone support for non-adherent HIV-infected youth and young adults: an initial randomized and controlled intervention trial. *AIDS Behav*. 2014;18(4):686–96.
49. Bouris A, Jaffe K, Eavou R, Liao C, Kuhns L, Voisin D, et al. Project nGage: results of a randomized controlled trial of a dyadic network support intervention to retain young black men who have sex with men in HIV care. *AIDS Behav*. 2017;21(12):3618–29.
50. Bermudez LG, Ssewamala FM, Neilands TB, Lu L, Jennings L, Nakigozi G, et al. Does economic strengthening improve viral suppression among adolescents living with HIV? Results from a cluster randomized trial in Uganda. *AIDS Behav*. 2018;22(11):3763–72.
51. Audi C, Jahanpour O, Antelman G, Guay L, Rutaihwa M, van de Ven R, et al. Facilitators and barriers to antiretroviral therapy adherence among HIV-positive adolescents living in United Republic of Tanzania. *BMC Public Health*. 2021;21(1):2274.
52. Laurenzi C, Ronan A, Phillips L, Nalugo S, Mupakile E, Operario D, et al. Enhancing a peer supporter intervention for young mothers living with HIV in Malawi, United Republic of Tanzania, Uganda, and Zambia: adaptation and co-development of a psychosocial component. *Glob Public Health*. 2022:1–15.
53. Oliveras C, Cluver L, Bernays S, Armstrong A. Nothing about us without RIGHTS – meaningful engagement of children and youth: from research prioritization to clinical trials, implementation science, and policy. *J Acquir Immune Defic Syndr*. 2018;78(1):S27.
54. Policy brief: Virtual interventions in response to HIV, sexually transmitted infections and viral hepatitis: Innovate – Implement – Integrate. Geneva: Joint United Nations Programme on HIV/ AIDS and World Health Organization; 2022.
55. Recommendations on digital interventions for health system strengthening: WHO guideline. Geneva: World Health Organization; 2019.
56. Operation Triple Zero: Empowering Adolescents and Young People Living with HIV to Take Control of Their Health in Kenya — PEPFAR Solutions Platform



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