NEW HORIZONS
ADVANCING PEDIATRIC HIV CARE

Johnson&Johnson

Elizabeth Glaser Pediatric AIDS Foundation
Fighting for an AIDS-free generation

New Horizons Collaborative

Building Health Systems Capacity Reaching HIV Epidemic Viral Suppression Targets in All Children and Adolescents

Introduction

Great progress has been made by many countries in reaching the UN 95-95-95 targets for HIV epidemic control, and several countries are approaching or have achieved them. However, children and adolescents living with HIV (CALHIV) consistently fall behind adults in reaching these targets, and the third 95 target of sustained viral suppression among these populations is particularly difficult to achieve. During last decade, the ***New Horizons Collaborative***, funded by ***Johnson & Johnson*** and supported by the ***Elizabeth Glaser Pediatric AIDS Foundation (EGPAF)*** and ***Partnership for Supply Chain Management***, has been working with countries in sub-Saharan Africa (SSA) to advance high-quality, sustainable care for treatment-experienced CALHIV. Right to Care, Imperial Logistics and CIPHER were previous collaborators in New Horizons.

The New Horizons Collaborative supports:

- Health systems strengthening and capacity building among healthcare workers (HCWs);
- Decentralization of pediatric and adolescent HIV care and treatment decision making;
- The development of data tracking systems for CALHIV with unsuppressed viral load (VL);
- Antiretroviral drug resistance testing (DRT);
- Antiretroviral therapy (ART) regimen switch decisions;
- Knowledge sharing and disseminating generated evidence through conference abstracts, manuscripts, technical tools, and annual technical workshops.

As of 2024, ten countries are members of the collaborative: ***Cameroon, Eswatini, Kenya, Lesotho, Nigeria, Republic of Congo, Rwanda, Uganda, Zambia,*** and ***Zimbabwe***.

Health Systems Strengthening

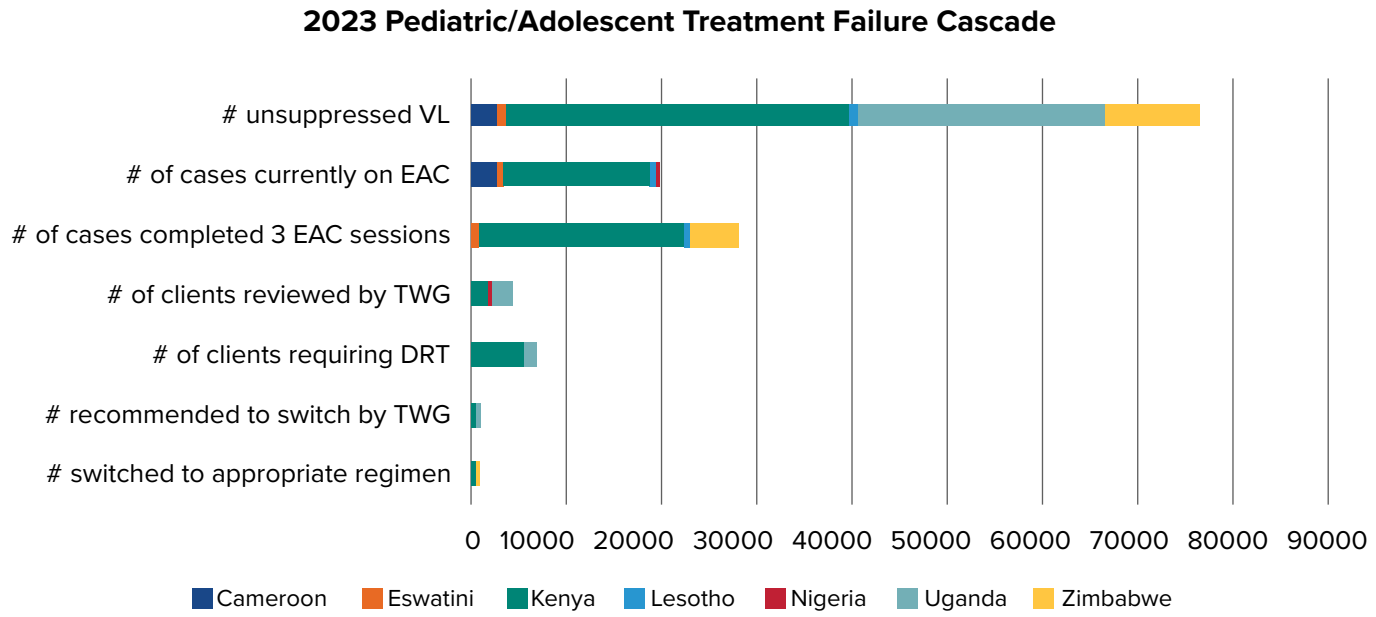
The collaborative has invested in capacity building of HCWs focusing on identified knowledge and experience gaps in the management of treatment-experienced CALHIV. All NH countries have conducted trainings in-person, virtually, and hybrid formats on treatment failure management (TFM), disclosure of HIV status, transition of care, DRT, and ART regimen sequencing.

The capacity building programming included clinical mentorship and supportive supervision, through which HCWs received regular in-person or virtual training and visits at their facility. These activities allowed HCWs to receive on-the-job mentorship as they worked through the challenges of pediatric and adolescent HIV management. Additionally, some countries, such as ***Kenya,*** have leveraged their technical working group (TWG) networks to add virtual continuing education (CE) trainings to their meetings. The clinical mentorship and these trainings have increased the capacity of HCWs to identify unsuppressed VL and manage treatment failure among CALHIV. Most importantly, increasing HCWs' capacity to manage complex issues, such as transitioning clients from failing second-line ART and interpreting DTR results, has led to improved health outcomes with higher rates of retention in care, ART optimization, and an increased number of CALHIV with viral suppression.

Tracking CALHIV within the Treatment Failure Cascade

Identifying and tracking CALHIV with unsuppressed VL is of paramount importance to optimize their ART regimen and increase treatment adherence. Incomplete documentation at the facility level, in both high VL registers and individual patient medical records, is a significant barrier to identifying CALHIV in need of enhanced adherence counseling (EAC), repeat VL testing, DRT, and follow up. New Horizons implements a pediatric and adolescent treatment failure cascade that tracks CALHIV with unsuppressed VL at each level of the cascade, as shown in **Figure 1.**

Figure 1: The New Horizons Treatment Failure Cascade for 2023 in Seven Countries



The treatment failure cascade begins with the number of CALHIV with unsuppressed VL. These CALHIV are then enrolled in monthly EAC sessions and must complete a minimum of three sessions before retesting for VL response. The CALHIV who do not respond to EAC are referred to a regional or national TWG for case review to determine if they are eligible for DRT. The treatment failure cascade tracks the ordered DRT results and the following TWG's reviews and final determination on the need to switch the ART regimen.

By developing national databases for CALHIV, New Horizons has strengthened treatment cascade data collection, reporting, and usage. Facilities were mentored to identify CALHIV with unsuppressed VL and clients identified are promptly engaged in EAC. Facilities also track clients who qualified for DRT and documented DRT results, make referrals to TWGs, and respond to TWG recommendations on regimen switches by making the switches and tracking client outcomes on newly prescribed ART.

Countries in the New Horizons Collaborative worked closely with national Ministries of Health (MOH) to integrate treatment failure cascade tracking for CALHIV into ART and HIV data collection tools, national HIV management guidelines, and in several cases, into national ART databases.

Uganda was the first New Horizons country to design and build a national database tracking CALHIV on third-line ART, which also includes clients with unsuppressed VL on second-line regimens, those requiring DRT and their DRT results, cases reviewed by TWGs, and the number of ART switch decisions made based on DRT results. This approach had crucial impact on the quantity and quality of national data for treatment-experienced CALHIV. Uganda shared their treatment failure database success with other New Horizons countries at the 2022 annual meeting and hosted teams from ***Cameroon*** and ***Nigeria*** for south-to-south learning visits to share experiences in database development, usage, and maintenance. Uganda also hosted a virtual meeting for ***Kenya*** MOH representatives on the national treatment failure and DRT database. As of June 2024, ***Cameroon, Lesotho,*** and ***Kenya*** were developing national databases to track the outcomes of CALHIV with unsuppressed VL, including tracking the number of clients on second- and third-line ART and DRT results.

Decentralization

Within the first few years of the New Horizons Collaborative, country members recognized that the access to and decisions made about third-line ART in CALHIV took place mostly at the national level. The major reasons for this centralized approach to third-line ART management included low numbers of eligible cases, limited access to and expertise with interpreting DRT results, limited access to third-line ART commodities, and limited capacity of HCWs to make ART switch decisions. The centralized model of treatment failure management frequently resulted in delays and gaps in client care and prolonged the time that CALHIV remained on failing ART regimens. Centralized access to care for advanced ART options increased travel time and decreased timely access to care and treatment for many CALHIV with unsuppressed VL and HIV resistance. National TWGs had multi-month backlogs of cases, and some national TWGs were not active.

One of the most significant achievements of the New Horizons Collaborative has been decentralizing the management of CALHIV on second- and third-line ART regimens to reduce the timeline for DRT and treatment optimization. In ***Zimbabwe,*** all second-line pediatric and adolescent ART management is decentralized to the lowest facility offering ART, with third-line ART available at regional referral hospitals. In ***Kenya***, the ART switch decision tree for CALHIV has been decentralized to eight regional TWGs. ***Eswatini*** has decentralized third-line pediatric care to six facilities; prior to 2020, all pediatric clients were referred to a center of excellence with Baylor College of Medicine International Pediatric AIDS Initiative, and decentralized management was only available at the hospital level, not the health facility level. ***Uganda*** implemented a hub and spoke decentralized model, where 3rd line care is managed at the parent facility with the regional 3rd line subcommittees support and mentorship of HCWs, while 3rd line ART switch decisions are made by national 3rd line ART subcommittees.

Increased Access to 3rd Line ART

Johnson & Johnson's donation of pediatric and adult formulations of darunavir (DRV) and etravirine has been vital to the success of the New Horizons Collaborative, supporting over 2,300 CALHIV on second- and third-line ART. Through the Partnership for Supply Chain Management, New Horizons has worked with MOHs on commodity forecasting and supply chain strengthening in eight of the ten member countries. The collaborative has also assisted its member countries with sourcing ritonavir for DRV dosing. New Horizons and Johnson & Johnson have dedicated staff to assist countries with forecasting and tracking shipments of the donated products. As part of the annual workshop for HCWs and MOH staff, New Horizons has also held sessions on forecasting of pediatric drug formulations, pharmacovigilance, and drug-drug interactions.

Knowledge Sharing and Evidence Generation

Evidence generation and knowledge sharing has been of paramount importance to New Horizons since its inception. The collaborative has published seven abstracts and two manuscripts on treatment failure management, VL, and health outcomes among CALHIV. New Horizons has also presented oral abstracts and posters at multiple global platforms including International AIDS Society (IAS) conferences, Pediatric HIV Workshop, INTEREST Workshop, and Adolescent HIV Workshop. The collaborative organized a global webinar in collaboration with UNICEF and WHO and held satellite sessions at the 2017, 2021, and 2023 IAS conferences, with a fourth satellite scheduled for July 2024. Finally, with the support of New Horizons, adolescents and young people living with HIV in member countries have participated and presented at major conferences such as Women's Collective, IAS conferences, and Pediatric and Adolescent HIV workshops.

To optimize training and capacity of HCWs, caregivers, and community to support pediatric and adolescent HIV care and treatment, New Horizons has developed several technical toolkits. The first was a Pediatric/Adolescent Treatment Failure Management Toolkit for HCWs. This tool defines different types of treatment failure and has an easy-to-use flowchart to walk HCWs through the steps to manage a client failing their current regimen. This toolkit was first published in 2019 and was updated to reflect WHO guidelines changes in 2022. The second toolkit is on Disclosure of HIV Status in pediatric and adolescent practice. This toolkit has five modules guiding different scenarios: HCWs disclosing perinatal HIV status to a child, HCWs assisting a caregiver in disclosing perinatal HIV status to a child, adolescents disclosing horizontally acquired HIV status to their caregiver, and adolescents disclosing their HIV status to partners and to peers.

The third toolkit is on Transition of HIV Care for CALHIV, which is aimed at HCWs and caregivers to support transitions that can affect the HIV care continuum, including from pediatric to adolescent care, from adolescent to adult care, between facilities, from one location to another, and through school transitions such as moving in or out of a boarding school.

Figure 2: New Horizons Toolkits

All three toolkits are available to download online in English and French and are also available as training modules with PowerPoint presentations and training guidance. These toolkits have been widely disseminated among global stakeholders such as PEPFAR and CDC-supported programs in SSA and have been shared on several joint webinar platforms with WHO. New Horizons is currently working on translating all toolkits into Portuguese as well.

The fourth toolkit on Self-Management of HIV and Transition of Care is currently under development. This toolkit is aimed at adolescents and includes a self-guided tool for learning to manage one's own health, HIV care, and transition from the pediatric/adolescent clinic to adult care. This toolkit will be available in Q3 of 2024. Importantly, the EGPAF Committee of African Youth Advisors (CAYA) has collaborated with the New Horizons team to contribute to the development of the Disclosure of HIV Status, the Transition of Care, and Self Care toolkits for adolescents.

Advocacy

The New Horizons Collaborative uses its successes with managing treatment-experienced CALHIV, heath systems strengthening, and generated evidence to advocate for decentralization of pediatric and adolescent HIV care, increased access to DRT, and national guideline changes to include optimized ART options for CALHIV. In 2022, New Horizons used its extensive experience working with collaborative countries to introduce a generic fixed-dose formulation of darunavir/ritonavir (DRV/r) into clinical practice and include it in the national ART guidelines.

Conclusion

The New Horizons Collaborative has made strides in care and treatment for treatment-experienced CALHIV who face challenges reaching and maintaining viral suppression, reaching over 2300 clients since 2014. With New Horizons' support, important innovations have been implemented across member countries such as rollout of the national pediatric and adolescent treatment failure databases, decentralized networks of TWGs, increased HCWs capacity in managing pediatric and adolescent HIV, and wider access to second- and third-line ART options among CALHIV. More partnerships are needed to continue this momentum of reaching the most vulnerable CALHIV and achieving the third 95 global target for HIV epidemic control.