



New Horizons Collaborative

Building Health Systems Capacity to Manage Pediatric HIV

Introduction

As countries work towards the UNAIDS 95-95-95 goals for HIV epidemic control, the third 95 of viral suppression becomes pivotal, especially for children and adolescents living with HIV (CALHIV). An estimated 10-20% of CALHIV have an unsuppressed viral load (VL) on their current first- or second-line antiretroviral therapy (ART) regimens and are facing the risks of delayed growth and development, and increased rates of comorbidities and HIV resistance. To prevent adverse health outcomes associated with unsuppressed VL, healthcare systems need to promptly identify treatment failure, provide CALHIV tailored enhanced adherence counselling (EAC), and be prepared to transition patients with unsuppressed VL to other antiretroviral drugs when indicated. To improve treatment failure management, it is vital to strengthen healthcare systems and the capacity of healthcare workers (HCWs) to identify, support, and transition eligible CALHIV to new ART regimens.

For the past decade, the **New Horizons Collaborative**, funded by **Johnson & Johnson** and supported by the **Elizabeth Glaser Pediatric AIDS Foundation (EGPAF)**, **Partnership for Supply Chain Management**, and **Right to Care**, has been working with countries in sub-Saharan Africa to advance high-quality, sustainable pediatric and adolescent care for CALHIV with confirmed treatment failure on first- and second-line ART. The collaborative has done this by implementing activities and training HCWs to provide a holistic approach to meeting the needs of CALHIV with unsuppressed VL on ART. As of 2024, ten countries were members of the collaborative: **Cameroon, Eswatini, Kenya, Lesotho, Nigeria, Republic of Congo, Rwanda, Uganda, Zambia, and Zimbabwe.**

The Need for Capacity Building

The management of treatment failure is a multi-step process requiring complex coordination and accountability. The process is as follows: assure high coverage of CALHIV with VL testing, identify CALHIV with unsuppressed VL, enroll them in EAC, document their EAC attendance and outcomes, retest clients for VL, refer clients to drug resistance testing (DRT), discuss the DRT results, discuss advanced cases at technical working group (TWG) meetings, make a regimen-switch decision for the client, and support the client switch to the new ART regimen.

These steps require HCWs to understand the significance and consequences of unsuppressed VL, have knowledge and skills to conduct effective EAC, conduct multidisciplinary team reviews for the eligible cases, and make regimen-related decisions. Many HCWs are not fully comfortable managing CALHIV who have unsuppressed VL and have limited training or experience with pediatric and adolescent EAC, DRT and results interpretation, and selection of the new ART regimens, particularly for high-treatment experienced patients with HIV resistance. Typically, CALHIV with treatment failure on second-line ART are referred to district or regional health facilities, which can slow down the care and treatment cascade. New Horizons works with its ten member countries on innovative approaches for building HCW capacity in the management of CALHIV with treatment failure to improve outcomes and to decentralize the process of advanced pediatric and adolescent HIV management.

Innovative Approaches

Traditionally, capacity building for HCWs in SSA has been delivered via large group trainings, in which participants gather for a multiple-day training to learn about various parts of managing treatment failure in CALHIV. This is very beneficial when time and budget allow for it, as experts can be brought in to train more people at one time. The New Horizons Collaborative supported a series of larger HCWs group trainings each year, including an annual technical workshop that gathered national experts and MOH officials from all member countries to share country successes and challenges in managing CALHIV who experience treatment failure.

With the challenges of gathering during the COVID-19 pandemic and the growing need for multiple HCW training sessions on different topics, New Horizons

implements innovative ways of capacity building. In some countries, the collaborative supports **smaller onsite trainings directly at health facilities**, which eliminates the need for HCWs to travel away from their work sites for training. Other countries offer **continuing education sessions during TWG meetings**, allowing for different educational topics to be covered at each meeting many HCWs are attending. Some countries have transitioned to **virtual trainings**, using platforms such as Zoom, which significantly decreased the cost of the sessions and allowed for more diversity among the presenters and wider attendance online. Finally, most New Horizon countries have instituted **tailored mentorship programs** in which EGPAF and MOH staff regularly visit facilities in person or virtually to work one-on-one with HCWs. This allows for building individual mentorship relationships with greater flexibility and accessibility. **Table 1** shows training and mentorship numbers from the collaborative countries during 2023.

Table 1: Number of trainings and mentorship visits in 2023 by country

	# of trainings held	Average # of HCWs trained per session	# of mentorship site visits	Average # of HCWs mentored per visit
Cameroon	6	32	6	9
Eswatini	1	29	565	4
Kenya	42	62	1,181	1
Lesotho	25	24	93	0
Nigeria	4	33	20	11
Rwanda	1	96	0	N/A
Uganda	2	217	6	296
Zimbabwe	4	30	0	N/A

In 2023, eight New Horizons Collaborative countries provided:

- **84 trainings for HCWs**
- **1,871 mentorship visits**
- **approximately 4,400 HCWs with training on treatment failure management on CALHIV**

Since 2014, an estimated 15,220 HCWs have been trained on treatment failure management, disclosure, and facilitating transition of care.

Expert-Led Trainings in Nigeria, Rwanda, and Zambia

In Nigeria, the collaborative identified a lack of knowledge of DRT, finding that HCWs needed training in recognizing indications for DRT, interpreting DRT results, and making decisions about ART regimens. In 2023, Johnson & Johnson and EGPAF collaborated with the MOH to support **three expert-led, in-person trainings in Nigeria** for 100 pediatricians and HCWs on treatment failure in CALHIV.

Due to COVID-19 pandemic travel restrictions, a **virtual training for Zambia HCWs** was held in 2022, in which EGPAF and Zambia MOH experts trained 734 Zambia MOH and HCWs on treatment failure management in CALHIV. This training included principles of drug resistance, DRT and ART sequencing, review of the WHO HIV management guidelines on ART regimens and DRT, Zambia national HIV management guidelines, review of case studies, and introduction of generic darunavir/ritonavir formulation. The HCWs were also trained to use New Horizons technical toolkits on disclosure of HIV status, transition of care, and treatment failure management. In 2023, with support from New Horizons, EGPAF conducted a **hybrid training in Rwanda** for 81 HCWs on treatment failure management and disclosure of HIV status in CALHIV using these toolkits.

Continuing Education in Kenya

Kenya has a robust national program of regional TWGs that in their regular virtual meetings offer training **through continuing education (CE)**. In 2023, New Horizons collaborated with the National HIV Program to facilitate 13 webinar sessions through the national ECHO training and CE platform. These webinars covered diverse topics, including a package of services for CALHIV with treatment failure, HCW use of a data collection software application for mentorship, management of advanced HIV disease, childhood TB, and TB co-infection in CALHIV. By using the already-existing infrastructure of TWGs that meet regularly to discuss cases, the CE trainings build on these case discussions and bring a variety of important topics to hundreds of HCWs each year.

Clinical Mentorship

Eswatini and **Lesotho** use clinical mentorship for building new skills for HCWs and filling gaps in treatment failure management among CALHIV. Trainings focused on identifying CALHIV with unsuppressed VL, reviewing EAC procedures and documentation, and incorporating phone follow-up and home visits into EAC. Clinical mentorship in both countries has yielded impressive results for retaining CALHIV in EAC. In Lesotho, approximately 76% of CALHIV with unsuppressed VL received extensive EAC in 2023. Mentorship at 65 sites in Eswatini focuses on programmatic data quality, EAC documentation, timely repeat VL testing, and DRT, including data on sample collection, results delivery, and turnaround time and ART decision outcomes.

In **Zimbabwe**, New Horizons uses a hybrid approach with trainings and mentorship on treatment failure management among CALHIV. In 2023, 60 HCWs from four provinces were trained on pediatric and adolescent ART management, including health promotion officers, health information officers, lab scientists, nursing managers, medical officers, and pharmacists. Training sessions covered HIV drug resistance, third-line ART options for CALHIV (including potential side effects and drug interactions), DRT, EAC, and monitoring and evaluation of clients on the treatment failure cascade. After these initial trainings, EGPAF conducted in-person and virtual trainings at four provincial hospitals, followed by clinical mentorship at two of these hospitals. The Zimbabwe MOH has expanded these training to lower-level facilities. This hybrid approach reaches greater numbers of HCWs, facilitated hands-on experience by allowing HCWs to apply the concepts in clinical practice, and improved CALHIV management and outcomes through ongoing mentorship.

In 2023, **Cameroon** adopted a similar approach with mentorship and training, offering six trainings and ECHO virtual sessions on data flow, mental health, service indicators, quality improvement, third-line ART commodities, and the role of community in management of CALHIV. In addition, new onsite facility trainings for HCWs led to optimized pediatric and adolescent HIV data collection and reporting, as well as wider eligibility for DRT among CALHIV with treatment failure. With ongoing support from the Cameroon MOH, the country is witnessing a rapid uptake of treatment failure management activities since joining the New Horizons Collaborative in 2020.

Figure 1: Participants in the New Horizons 2023 Annual Workshop in Lusaka, Zambia



Annual Workshops

Throughout the last decade, New Horizons hosted annual technical workshops during which representatives from all member countries gathered to share best practices, challenges, and progress made in national programs, with a focus on the pediatric and adolescent treatment cascade for CALHIV with unsuppressed VL. These workshops are a highlight of the collaborative; delegations, represented by HCWs, pediatric and HIV experts, MOH representatives, and youth living with HIV, led and facilitated interactive sessions on different aspects of pediatric and adolescent HIV care and the treatment cascade. Country representatives share national pediatric and adolescent HIV data, treatment failure management guidelines, their national progress on DRT access and results, access to diverse pediatric ART formulations, EAC processes and outcomes, and exchanged approaches to HCW trainings. The workshops also provide timely updates on major global health conferences such as CROI, IAS, and the Pediatric and Adolescent HIV Workshops and trainings on the New Horizons toolkits. EGPAF's Committee of African Youth Advisors (CAYA) has sent youth representatives from several countries to attend and facilitate sessions, spotlighting the challenges and needs of the treatment-experienced CALHIV and giving them a platform to engage in dialogues with HCWs and national policy makers.

South-to-South Learning Country Exchanges

As a follow up to the 2021 annual workshop, country teams expressed strong interest in continuing the south-to-south learning facilitated by the workshop and

in visiting leading New Horizons countries to learn from their programs and progress. Uganda hosted several EGPAF and MOH colleagues from Cameroon and Nigeria on visits in 2022 and 2023 to learn about the Uganda national database on pediatric ART outcomes and HIV DRT. Uganda also hosted a virtual south-to-south learning session with the Kenya MOH and EGPAF staff in 2023 about the national pediatric HIV database. As a result of these exchanges, both Cameroon and Kenya are currently in the progress of creating national databases to track treatment failure and third-line ART outcomes among CALHIV. Most recently in 2024, Cameroon hosted the New Horizons team from the Republic of Congo, the collaborative's newest member country, to share Cameroon's national program on third-line ART and treatment failure among CALHIV to the Republic of Congo's efforts in building their own national third-line ART program.

Looking Ahead

As the New Horizons Collaborative celebrates its tenth anniversary, member countries continue to build capacity in pediatric and adolescent HIV management among their HCWs and strengthen the national health systems. New Horizons has greatly elevated the needs of treatment-experienced CALHIV who have unsuppressed VL and has supported building up national capacity to manage the care and improve the short- and long-term health outcomes of the member nations' greatest assets — children and adolescents. Going forward, the countries in the collaborative are committed to reaching the most challenging third 95% target for viral suppression among CALHIV.