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27TH NETWORK MEETING DIGITAL ABSTRACT GUIDE

HOST: BAYLOR FOUNDATION UGANDA

9-13 NOVEMBER 2026 | NAIROBI, KENYA

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Baylor College of Medicine
BAYLOR GLOBAL HEALTH

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Oral Abstracts

Theme 1: Advancing Self-Reliance Through Sustainable and Innovative Health Systems

2: Driving Sustainability through Partnership, Collaboration, and Local Support in Low-Income Countries: Lessons from Texas Children's Global HOPE Program in Malawi

Constance Nyasulu, Sam Makuti, Dr Rizine Mzikamanda, Nthongase Makamo

Background: Pediatric oncology care systems in low-income countries are often heavily dependent on external donor support, raising concerns about sustainability and local ownership. Global strategies such as the WHO Global Initiative for Childhood Cancer emphasize awareness, early diagnosis, and strong partnerships as key drivers for sustainability. In Malawi, the Texas Children's Global HOPE Program, which supports the pediatric ward at the National Cancer Center, implemented annual awareness campaigns, aligned with the international childhood cancer day and the September awareness month celebrations to promote early care-seeking, mobilize local resources, and strengthen collaboration. The objective was to evaluate the impact of these activities on advancing sustainable childhood cancer care.

Description: From 2023-2025, a series of awareness and fundraising activities were conducted in Lilongwe, including gold ribbon campaigns, media engagements, community outreach, trading center whistle stops, charity aerobics, bell-ringing ceremonies, and fundraising galas. Activities were implemented in collaboration with the Ministry of Health, philanthropic stakeholders, and community leaders. Annually, specific priority areas were identified to guide targeted awareness and fundraising efforts, including play therapy and education needs in 2023, palliative care and social work services in 2024, and nutrition and physiotherapy in 2025. Structured reports were used to capture data on reach, partnerships, and funds raised.

Outcomes and Lessons Learned: Over 2 years, more than 4,000 individuals were reached through community and media engagements. Approximately USD 41,000 was raised, supporting over 250 children and families with palliative care, psychosocial support, education, play therapy, and nutrition services. Partnerships increased from 4 to 13, including banks, NGOs, corporate organizations, and media houses. Key milestones included childhood cancer being featured in the 2024 Standard Bank Malawi "Be More Race," significantly enhancing visibility and fundraising. Increased government engagement was observed through contributions to national awareness materials, development of childhood cancer registers, and participation in Ministry of Health technical working groups. Key lessons learned were that visibility is essential for attracting partners and mobilizing resources, empowered local systems and ministry partnerships are critical for long-term sustainability beyond donor funding, and that communities in low-resource settings are willing to actively engage in awareness, advocacy, and fundraising efforts.

Next steps: Targeted awareness campaigns demonstrate that sustained, community-led efforts supported by multisectoral partnerships can advance more sustainable models of pediatric cancer care in low-income settings. Future campaigns will emphasize embedding childhood cancer activities within national health education and policy structures to further reinforce sustainability.

77: Advancing Technical Skills of Local Staff to Reduce Testing Delays at The Paediatric Oncology Unit at Botswana-Baylor Children's Clinical Centre of Excellence, Gaborone, Botswana

Ludo molwantwa, Abhilash SATHYAMOORTHI, mogomotsi matshaba

Background:

The Paediatric Haematology Oncology (PHO) program at Botswana-Baylor Children's Clinical Centre of Excellence (BBCCCOE) was established in 2007. Back then, most services including diagnostic and treatment where outsourced to South Africa. Bone marrow aspirates (BMA) was one of the diagnostic tests required to confirm the majority of childhood leukemias. In instances where BMA alone was unable to confirm a suspicion, a Bone Marrow Aspiration along with a trephine biopsy (BMAT) was performed for more accurate results. The PHO Program, previously, did not have any trained personnel to carry out the BMAT and often relied on skilled staff from partner institutions like the University of Botswana. However, in 2024, Medical Officers (MO) at PHO were trained in BMAT with the purpose of reducing the reliance on outside experts and related costs. We aimed to look at the impact of this training in 2025 to date.

Description:

Building in-house technical skills to perform BMAT was essential to PHO as the shortage of skilled personnel posed a significant challenge to the faculty. PHO MOs were assigned to the University of Botswana Haematopathologist, where they received hands-on training and mentorship on BMAT. After performing a satisfactory number of procedures, they were now qualified and competent to complete them independently. Every MO now assigned to PHO is trained and competent in BMAT.

Lessons learnt:

In 2025-2026, a total of 59 BMAs with 42 of them being BMATs were carried out by the PHO MO. The training helped the PHO department become more self-reliant which led to a reduction in waiting periods for BMAT with patients being tested within 2 days of admission as opposed to 7 days on average prior to the training. This resulted in early diagnoses and earlier initiation of treatments thereby reducing the turn-around times from 14 days in the past to roughly 5 days. Delegation and role definition where also achieved as nurses were more engaged with chemotherapy administration reducing the load of work on the MO. This also resulted in improved patient centred care.

Next steps:

This initiative demonstrated that local capacity building through training and education can help address health system issues and improve patient care while reducing operating costs. The next step will now be to introduce similar training models for other important procedures like flow cytometry in an effort to increase local expertise and standard of care.

95: Navigating the United States Government Funding Transition: A Scenario-Based Financial Resilience Framework for Sustaining HIV and Tuberculosis Programs in Uganda

Albert Maganda, David Mpagi, Kate Kabajaasi, James Owona, Lino Nyingaling, Marie-Solome Nassiwa-Martin, Dithan Kiragga

BACKGROUND: Baylor Foundation Uganda (BFU), Uganda's largest HIV and Tuberculosis program, faces a funding transition as United States Government (USG) support, comprising 80% of secured income ($35.9M of $44.5M in FY24/25), shifts toward Government of Uganda (GoU) ownership under President's Emergency Plan for AIDS Relief (PEPFAR) transition policies; with approved budgets declining 15% over two years (from $42.7M in FY23/24 to $36.2M in FY25/26). We describe an innovative financing and workforce-planning model designed to sustain service delivery across multiple funding scenarios.

DESCRIPTION: BFU developed a comprehensive scenario-based financial resilience framework to ensure care continuity for 300,000+ patients across 47 districts while navigating unprecedented funding uncertainty.

The framework integrated four stress-test scenarios (Best-Case to Worst-Case) modeling USG retention rates from 85% to 15%, GoU replacement capacity (5-50%), non-USG funding growth projections (0-8% annually), and cost inflation (5-8%). Key components include: A dynamic income forecasting model projecting 4-year cumulative income ranging from $129.6M (Best-Case) to $38.3M (Worst-Case); Staffing scenario overlays linking headcount retention (45-100%) to income trajectories; A three-tier project prioritization matrix categorizing 25+ projects as Essential (maintain), Conditional (scale-down), or cut based on mission-criticality, funder diversification, and GoU transition potential; and Monthly refresh protocols enabling real-time recalibration as transition clarity improves. The model was piloted with FY25/26 baseline data ($35.5M annualized income, and 418 staff) and validated against historical performance (104-110% income realization rates FY23-25).

LESSONS LEARNED: Critical USG retention threshold was ~55%, below which, structural deficits emerged by FY27/28 regardless of cost controls. Non-USG diversification from 13% (FY23/24) to 20% (FY25/26) provided partial insulation but remained below the 40% financial stability target. Staff cost ratios must remain below 70% of income to maintain operational sustainability. In worst-case scenarios, minimum programming budgets ($5.6M) can sustain essential services but require 55% workforce reductions (230 staff) with $2.2M severance obligations. The framework enabled evidence-based board discussions, early GoU engagement for priority USG project continuity, and proactive non-USG diversification targeting European, Asian, and United Nations partnerships.

NEXT STEPS: This framework demonstrates that data-driven scenario planning can transform funding uncertainty into an actionable strategy by securing commitments for high-impact GoU programs before USG funding cliffs; accelerating non-USG portfolio growth to 40% by FY28/29; building a 6-month operating reserve (~$21M) under best-case trajectories; and institutionalizing quarterly model updates. Replicable across Texas Children's Global Health Network sites facing PEPFAR transition pressures, it offers a scalable template for strengthening responsive strategic planning and financial resilience in donor-dependent organizations.

100: Sustaining HIV Programs Amidst Foreign Aid Shifts: Experience from a Decentralized Direct Local Partner Sub-granting Model for Health Financing in Uganda

J. Denise Birungi, Joachim Akankwasa, Micheal Juma, Calvin Epidu, Hilda Sekabira, Leticia Namale, Dithan Kiragga

Background: Declining and unpredictable external financing threatens HIV program sustainability in Uganda. To strengthen government ownership and continuity, Baylor Foundation Uganda (BFU) implemented a decentralized Direct Local Partner (DLP) sub-granting model that integrates HIV financing into the Ministry of Health, Finance, Planning, and Economic Development, and Local Government (LG) across Fort Portal, Hoima, and Mubende regions.

Description: A semi-annual review (October 2025–March 2026) assessed the DLP model across 28 LGs: 23 districts, two cities, and three municipalities, supporting 330 health facilities (HFs): 99 directly sub-granted and 231 off-sub-grant budget support. Eight LGs received direct subgrants for integrated service delivery in addition to their public health functions. BFU trained and embedded 140 multidisciplinary Technical Assistance (TA) teams, achieving a 1:2 TA team-to-HF ratio, to lead planning, budgeting, cost-matching, performance-aligned resource allocation, financial management, healthcare integration training, mentorship, and supervision. Across two sub-granting cycles, only half (US$264,003/US$528,008) was disbursed to 28 LGs and 330 public HFs, leveraging government primary health care funds while avoiding duplication. Continued funding was contingent on at least 75% accountability for and liquidation of advances. Lessons were synthesized from implementation experience, program reviews, and financial performance monitoring.

Lessons learned: The LG-led TA model strengthened ownership, accountability, implementation efficiency, and service continuity, as shown by key achievements.

Financial accountability was high: 97% (US$256,444/264,003) of disbursed funds were liquidated; 89% (25/28) of LGs achieved at least 75% liquidation, and 79% (22/28) achieved 100%.

All HFs integrated HIV services into primary healthcare, achieving a level 3 integration score of 76.8%; 88% (289/330) adopted the Mixed OPD model, and 12% (41/330) the Chronic Care Clinic model. Service performance and quality remained strong, with most LGs exceeding HIV testing targets: 110% (9,563/8,654) of new HIV-positive individuals identified, 99% (9,429/9,563) linked to antiretroviral treatment (ART), 105% (225,943/215,792) of ART volume, and 97% overall viral suppression. The model reached 44,644 populations at high risk of HIV with prevention services, achieved 99% (6,343/6,387) HIV testing among TB patients, 93% (6,017/6,468) TB treatment success, 86% (3,559/4,161) TB cure rate, and a 2% (125/6,272) vertical transmission rate.

The decentralized DLP model demonstrates a catalytic and scalable approach for sustaining HIV services amidst declining foreign aid.

Next steps: Next steps include scaling up and strengthening institutional capacity for performance-based financing, reducing government bureaucracy to ensure the timely release of Indicative Planning figures, and adopting One Health planning to enhance national health security across human, animal, and environmental sectors.

101: DTG/3TC is Non-Inferior to DTG-based 3-Drug ART in Children with HIV: D3/Penta 21 Week 96 Results

Anna Turkova, Man Chan, Adeodata Kekitiinwa, Dickson Bbuye

DTG/3TC is Non-Inferior to DTG-Based 3-Drug ART in Children with HIV: D3/Penta 21 Week 96 Results

Authors: Anna Turkova, Man K Chan, Adeodata R. Kekitiinwa, Cissy Kityo, Philippa Musoke, Tim Cressey, Avy Violari, Moherndran Archary, Ebrahim Variava, Pablo Rojo, Steven B. Welch, Margaret J. Thomason, Carlo Giaquinto, Deborah Ford, on behalf of the D3 Trial Team (including Dickson Bbuye of Baylor Uganda D3 Trial Team).

Background: Adult studies have shown that dolutegravir plus lamivudine (DTG/3TC) is non-inferior to dolutegravir-based 3-drug regimens (3DR) for maintaining HIV viral suppression. Data in children remain limited.

Methods: D3/Penta 21 is a 96-week randomized non-inferiority trial evaluating DTG/3TC versus DTG-based 3DR in children aged 2 to <15 years with sustained viral suppression and no prior treatment failure. Participants were randomized 1:1 to DTG/3TC or DTG plus two nucleoside reverse transcriptase inhibitors. The primary endpoint was the intention-to-treat adjusted Kaplan–Meier estimated proportion with confirmed viral load (VL) ≥50 copies/mL (viral rebound) by week 96. The non-inferiority (NI) margin and significance level depended on the control event rate (9.5% NI margin, 99% CI for 7% event rate). Routine VL monitoring occurred every 6–12 months; children with real-time viral rebound on DTG/3TC returned to 3DR, with additional 12-weekly VL testing performed retrospectively.

Results: A total of 386 children were enrolled (193 DTG/3TC; 193 control): 74% from Uganda, 15% South Africa, 9% Thailand, and 3% UK/Spain. Median age was 8.3 years (2.2–15), median weight 23 kg (10–80), and 46% were male. At week 96, 99% remained in follow-up. Confirmed viral rebound occurred in 11 (5.9%) DTG/3TC participants versus 13 (6.6%) controls [difference −0.75% (99% CI −7.2 to +5.6); P=0.76], demonstrating non-inferiority. Among those with rebound, VL was <50 copies/mL at week 96 in 7/11 DTG/3TC and 9/12 control participants. Per-protocol results were similar: 4.9% versus 6.7% [difference −1.8% (99% CI −8.2 to +4.2); P=0.45]. Cross-sectional VL ≥50 copies/mL at week 96 was comparable (4.6% vs 6.5%; P=0.41).

Safety outcomes were similar. Fifteen serious adverse events (11 children) occurred in DTG/3TC versus 12 (9 children) in controls (P=0.65), including one death unrelated to HIV/ART. Grade ≥3 clinical adverse events occurred in 18 children versus 11 (P=0.18), all unrelated to ART. No ART-modifying adverse events occurred.
Conclusions: DTG/3TC demonstrated efficacy and safety comparable to DTG-based 3DR and provides a simplified maintenance treatment option for children living with HIV.

126: Scaling Comprehensive Sickle Cell Disease Care through Health Systems Strengthening and Cascade Capacity Building in Uganda

Angella Mirembe Nanteza, Isaac Tumusiime, Philip Gitta Kasirye, Ruth Namazzi, Anne Akullo, Josephine Denise Birungi, Susan Nabadda, Dithan Kiragga

Background: Despite Uganda having one of the world's highest burdens of sickle cell disease (SCD), access to comprehensive services has traditionally been centralized, resulting in delayed diagnosis and poor treatment access. In October 2024, the Sickle Cell Access, Linkages, Care and Expansion (SCALE) Program was established to strengthen health system capacity and develop a scalable model for integrating comprehensive SCD services into routine primary healthcare.
Description: Between November 2024 and March 2026, Baylor Foundation Uganda, with funding from the Bristol Myers Squibb Foundation through Texas Children's Global HOPE and in collaboration with the Ministry of Health and national partners, implemented a health systems strengthening approach in the Kayunga sub-region. Key interventions included point-of-care newborn and infant screening, decentralization of comprehensive SCD care, training and mentorship of healthcare workers, strengthening referral pathways, and integration of SCD services into maternity, neonatal, immunization, outpatient, and community outreach platforms. Four regional mentors based at Kayunga Regional Referral Hospital provided mentorship and technical support to lower-level facilities while supporting establishment of new SCD clinics. This approach enabled rapid service expansion while informing development of a sustainable national cascade training strategy involving Regional and National Trainers of Trainers to support future scale-up.
A total of 17,745 individuals were screened for SCD and 439 diagnosed individuals were successfully linked to care and 263 health workers across 12 facilities were trained, enabling expansion of services from one clinic at baseline to a ten-facility regional network. Across all sites, 2,734 patients were registered, with 83% (2,261/2,734) retained in care. Introduction of point-of-care rapid diagnostic testing eliminated delays associated with dried blood spot testing and improved early linkage to care. Hydroxyurea uptake reached 94% (887/931) among eligible patients and penicillin V uptake reached 97% (247/254).
Lessons Learned: The program demonstrated that task-sharing, continuous mentorship, reliable commodity supply, and integration into existing primary healthcare platforms are critical for successful decentralization of SCD services. However, reliance on small specialist teams at regional referral hospitals is unlikely to support nationwide expansion, highlighting the need for broader capacity-building approaches.
Next Steps: Future scale-up will transition from regional mentorship to a sustainable cascade training model in which National and Regional Trainers of Trainers will build healthcare workers' capacity across Uganda to establish and sustain comprehensive SCD services. Additional priorities include strengthening community-based follow-up systems, improving digital health information systems, and supporting nationwide implementation of integrated newborn screening and comprehensive SCD care in primary healthcare settings.

153: Lessons: Community Outreach Service Delivery Program

Zinga* Kiuvu, Thithili Makhesi, Khotso Lerole, Mpho Lehloma

Background: With an HIV prevalence of approximately 17% (Lesotho National HIV Estimates, 2025), Lesotho remains among the countries most affected by HIV globally. In rural districts such as Mokhotlong, children and adolescents living with HIV face persistent barriers to accessing comprehensive care, including geographic isolation, poverty, and health system constraints. Community outreach-based service delivery models are critical for improving access, strengthening linkage to care, enhancing adherence and retention, and supporting psychosocial well-being. These models are crucial in remote mountains with limited healthcare. This study evaluated the effectiveness of a community outreach program in Mokhotlong District.
Description: Baylor Foundation Lesotho operates a Satellite Centre of Excellence in Mokhotlong District providing both facility-based and integrated community outreach services. These services support 60 clients aged 2 - 81 years, including children, adolescents, and their families. A multidisciplinary team comprising two clinicians, a pharmacy technician, a social worker, and a driver conduct weekly outreach visits to Bafali, Matsoaing, Senkoase, and Masaleng communities. Services include routine clinical care, adherence counselling, medication refills, and same-day laboratory specimen collection and transport to the district hospital.
Evaluation and Outcomes: A structured monitoring and evaluation framework was applied to assess effectiveness, linking inputs and activities to measurable outputs and outcomes. Quantitative indicators included adherence (pill counts), viral load suppression, and patient retention. Qualitative insights were obtained through telephonic interviews of 7 clients, exploring patient experiences and perceived service gaps.
Thematic analysis of qualitative data revealed high levels of client satisfaction, with participants emphasizing improved access to healthcare services and reduced transportation costs. However, gaps in service provision were noted, particularly the absence of cervical cancer screening within the outreach package.
Quantitative results demonstrated strong program performance. At the most recent assessment, among 42 patients with documented adherence, 88% (37) achieved good adherence, 10% (4) fair adherence, and 2% (1) poor adherence. Among 60 patients whose viral load was assessed, suppression was high: 95% (57) had undetectable viral loads, while 5% (3) had low-level viremia. Retention in care was excellent, with only one patient lost to follow-up between January 2025 and April 2026.
Lessons Learned and Next Steps: The outreach program in Mokhotlong district improved access to HIV care while maintaining high levels of adherence, viral suppression, and retention. Expanding the outreach package to include preventive services, particularly cervical cancer screening, could further strengthen comprehensive care delivery in remote communities.

154: Treatment Cascade and Identification of Resistance in Children, Adolescents and Young Adults Living with HIV on Integrase Strand Transfer Inhibitor-based ART in Five Eastern and Southern African Paediatric HIV Centres

Katherine Simon, Alexander Kay, Duc Nguyen, Kenneth Nobleza, Sandile Dlamini, Florence Anabwani-Richter, Tamanda Hiwa, Menard Bvumbwe, Brigid O'Brien, Miriam Abadie, Jacqueline Balungi-Kanywa, Elizabeth Maidl, John Farirai, Abhilash Sathyamoorthi, Mogomotsi Matshaba, Kevin McKenzie, Teresa Steffy, Andreas Isaac, Neema Kipiki, Heather Haq, Sarah Perry

Background: The introduction of dolutegravir (DTG)-based antiretroviral therapy (ART) for children, adolescents and young people living with HIV (CAYWH) has improved virologic suppression. Regional surveillance demonstrates the emergence of HIV drug resistance (HIVDR) to Integrase Strand Transfer Inhibitors (INSTIs) in CAYWH at higher rates than in adults. Our objective is to describe the treatment monitoring cascade for

CAYWH on INSTI based ART in five pediatric HIV Centres of Excellence (COEs) in Botswana, Eswatini, Lesotho, Malawi and Uganda.

Methods: We conducted a multi-country retrospective cohort study using demographic and clinical data to characterize the treatment monitoring cascade for CAYWH on DTG from January 2017 to December 2024. Frequencies/proportions were used to describe cascade outcomes across COEs. Drug resistance scores were calculated using Stanford HIVdb (resistance defined as score ≥15).

Results: The analysis included 14,403 CAYWH ≤24 years who started DTG before January 2025; 52.0% (7,484) were female. During the analytic period, 8.6% (1,234) of these CAYWH on DTG experienced treatment failure (2 consecutive VL ≥ 1,000 copies/mL). Only 11.3% (139/1,234) were able to access targeted genotype testing and only 7.5% (92/1,234) were able to access genotypic testing for INSTI resistance. Amplification was successful in 114/163 samples (69.9%) in 103 clients, with HIVDR identified in 60/114 (52.6%) samples among 55 clients. Low, intermediate or high-level INSTI resistance was identified in 27/92 (29.4%) samples in 26 clients.

Conclusion: Limited access to genotyping remains a major gap in HIVDR care and likely contributes to underestimated DTG resistance among CAYWH experiencing treatment failure. Routine VL monitoring with genotyping for those with persistent failure should be prioritized to identify CAYWH with resistance and guide selection of treatment regimens, even in resource-limited settings. Increasing access to DTG genotyping will be increasingly important as cumulative treatment exposure drives rising resistance rates.

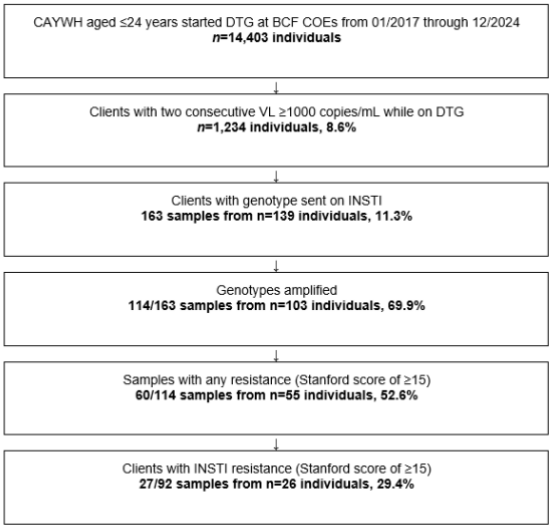


Figure 1. This flow chart depicts the treatment cascade for CAYWH ≤24 years old exposed to dolutegravir (DTG) at 5 paediatric centres in Eastern and Southern Africa. Viral load; VL, People living with HIV; PLHIV, Baylor Children's Foundation Centres of Excellence; BCF COEs, Integrase strand transfer inhibitors; INSTI.

157: Conditional Cash Transfers to Reduce Treatment Abandonment of Childhood Cancer in Malawi: Preliminary Results from Observational Implementation Study

Fatsani Rose Manase, Casey L McAtee, Rizine Mzikamanda

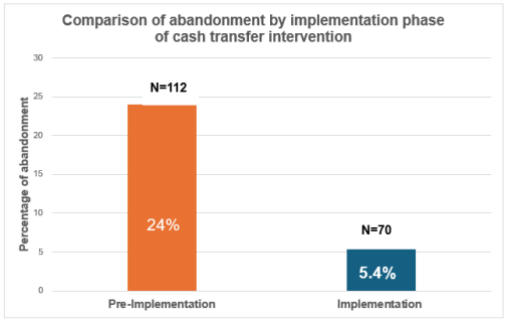
Background: Treatment abandonment is a common barrier to curing childhood cancer in Africa. Centers have implemented many strategies to reduce abandonment, typically targeting transportation access and social support. Conditional cash transfers are a simple, evidence-based intervention to achieve social and health outcomes, but they have not been widely studied in pediatric oncology. This study evaluates a conditional cash transfer program to prevent treatment abandonment in Malawi. Here, we present results of an interim analysis of this ongoing study.

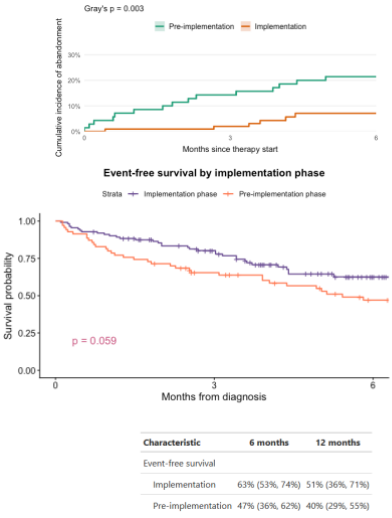
Methods: This is a prospective observational-implementation study evaluating the implementation and effectiveness of the cash-transfer program. Families receive 30 USD in monthly installments conditional on continuing therapy. Abandonment rates in the pre-implementation and implementation phases are compared using Fine-Gray analysis accounting for competing risks and follow-up time. Secondary objectives include evaluating effects of transfers on caregiver stress and food insecurity.

Results: A total of 182 patients have been recruited (112 implementation, 70 pre-implementation). Thirty-one percent are from within Lilongwe, 10% from Mzimba (~300 km away), and 15% live over 300 km from the hospital.•Seventeen patients (23%,N=70) abandoned therapy in the pre-implementation phase versus six (5.4%,N=112) in the implementation phase (Fine-Gray p=0.008). •Median follow-up is six months. Event-free survival at six months is higher in the cash-transfer cohort, 71% (95% CI, 61–83%) versus 57% (95% CI, 47–70%), with the log-rank test trending toward significance (p=0.09). •Caregiver stress decreased significantly during the implementation phase (ANCOVA p=0.02). At diagnosis, 85% of patients came from food-insecure homes. There was no significant trend of the cash transfers on food insecurity

Conclusion: Conditional cash transfers likely reduce treatment abandonment substantially, possibly mediated by improvements in caregiver stress and food insecurity. If sustained and generalized, they should be considered essential budget items for pediatric cancer care in low-resource settings

Acknowledgement: We would like to acknowledge Texas Children's-Hospital Global Hematoncology Pediatric Excellence through Baylor Children's Foundation Malawi for support towards development of this project and abstract





Characteristic	6 months	12 months
Event-free survival		
Implementation	63% (53%, 74%)	51% (36%, 71%)
Pre-implementation	47% (36%, 62%)	40% (29%, 55%)



Theme 2: Integrating Priority Health Services into Primary Health Care Services

28: Association between Depression, Anxiety, Viral Load Suppression, and Antiretroviral Adherence Among Adolescents and Young Adults Living with HIV at Botswana-Baylor Children's Clinical Centre of Excellence (BBCCCOE)

Elizabeth Rodriguez, Onkemetse Phoi, John Farirai, Abhilash Sathyamoorthi, Mogomotsi Matshaba

Background:

There is a high prevalence of depression and anxiety among adolescents and young adults living with HIV (AYALWH) (1). The developmental transition in AYA is a crucial time for mental health and wellbeing (2). It's been shown that poor mental health can be associated with higher incidence of non-adherence and non-viral suppression (2).

In this study, we aim to determine if there is an association between depression, anxiety, adherence, and viral load suppression in AYALWH who attend BBCCCOE.

Materials and Methods:

A descriptive cross-sectional study was conducted among 376 AYALWH who received care at BBCCCOE from November 2024 to June 2025. Clients were approached and were offered voluntary mental health screening. Client's age ranged from 10- 24 years old. The Patient Health Questionare-9 (PHQ9) and Generalized Anxiety Disorder-7 (GAD7) were used. Depression and Anxiety were defined as scores ≥10. Adherence was defined as good (≥95%) or poor (<95%), and viral suppression was defined as <200 copies/mL. The most recent viral load and adherence percentages were obtained at the time of the survey. Associations were assessed using chi-square tests and odds ratio with 95% confidence intervals.

Results:

The median age was 21 years (IQR 18-23), 57% were female and 43% were male. Depression was present in 33% and anxiety was present in 20% of AYA. Overall, 18% had poor adherence, 83% were suppressed, and 17% were non-suppressed.

Depression was not associated with poor adherence (OR 0.94, 95% CI 0.53 - 1.65, p = 0.83) or with being non-suppressed (OR 0.67, 95% CI 0.38-1.16, p= 0.15). Anxiety was associated with poor adherence (OR 2.19, 95% CI 1.22-3.94, p= 0.008, p<0.05) and was not associated with being non-suppressed (OR 0.99, 95% CI 0.51-1.94, p=0.98).

Conclusion:

No statistical significance was found between depression, anxiety, and viral suppression. However, statistical significance was noted between anxiety and poor adherence. This would suggest that those who have anxiety may experience periods of non-adherence and will require close monitoring to prevent non-viral suppression. The high prevalence of depression and anxiety (53%) of AYALWH at BBCCCOE further endorses the recommendation to include mental health screening in clinic visits for all AYALWH.

99: Reaching Adolescent Mothers Where It Matters: Lessons from Young Mother Clubs in Songwe Region, Tanzania

Lilian Komba, Rainald Mgimba, Benson Mayalla, Evance Mgeyi, Neema Kipiki, Kija Nyalali, Nehemia Nahashon, Msafiri Swai, Pastory Sekule, Lumumba Mwita

Background: Adolescent girls and young women (AGYW) in Tanzania remain disproportionately affected by HIV due to structural, social, and biological vulnerabilities. In Songwe Region (HIV prevalence 6.0%), AGYW account for 68% of new infections among young people. Limited access to adolescent-friendly services, low HIV prevention knowledge (33.4%), gender-based violence, and high rates of teenage pregnancy (44.7%) further increase their risk. Pregnant and breastfeeding adolescents face additional barriers to accessing appropriate HIV prevention and sexual and reproductive health (SRH) services. The UNICEF-supported aHERO project was established to address these gaps by improving HIV prevention, SRH awareness, and resilience among adolescent mothers through a peer-led, community-integrated approach.

Description: Young Mother Clubs (YMCs) were implemented under the aHERO project in 30 high-volume health facilities across Tunduma, Mbozi, and Songwe districts. The program targets adolescent mothers aged 10–24 years attending antenatal and postnatal clinics. The YMC model provides structured, age-appropriate support through peer-led sessions facilitated by trained Young Mother Mentors. Interventions include HIV prevention education, treatment adherence support, psychosocial counseling, and SRH awareness. The program is integrated within facility and community systems, ensuring continuity of care through collaboration with community health workers, peer supporters, and treatment advocates for referral and follow-up. Since September 2025, 1,099 adolescent mothers have been enrolled, with 70% completing at least 7 out of 10 sessions, demonstrating strong participation and retention.

Lessons Learned: The YMC model improved uptake and engagement in HIV services among adolescent mothers. Postnatal HIV testing increased by 69% (from 13 to 22 clients per month). Male partner testing increased from 195 to 210 per month, and couple testing rose from 25.6% to 28.7%. Peer mentorship created safe and supportive spaces, reducing

stigma, improving psychosocial well-being, and strengthening trust in health services. The model also facilitated peer-to-peer knowledge transfer beyond the health facility into the community. Integration with community systems enhanced follow-up and referral pathways. However, challenges included limited enrollment capacity and competing socio-economic demands that affected consistent participation.
Next Steps: Young Mother Clubs represent a scalable model for delivering integrated HIV prevention and SRH services to adolescent mothers. Future efforts will include a formal evaluation to assess effectiveness, acceptability, and feasibility across different settings. Findings will inform the reframing of the Mother Mentor model to strengthen adolescent-friendly services, while guiding scale-up, improving program coverage, and addressing barriers to participation for sustained impact in high-burden settings.

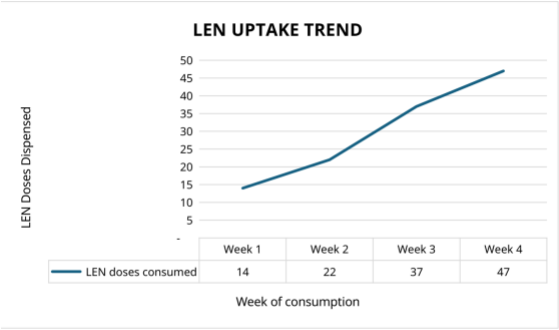


Figure 1:Graphical representation of Lenacapavir uptake in Phase 1 HFs in Fort Portal Region

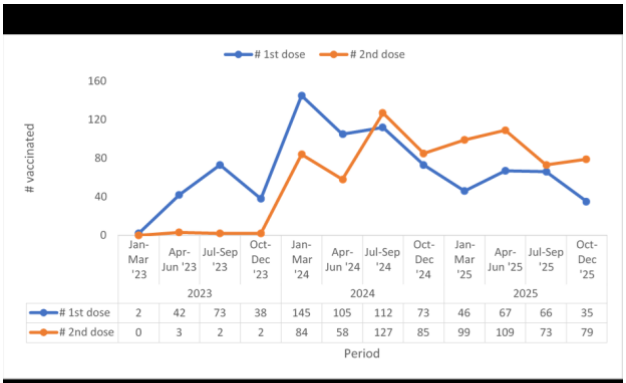
116: Lenacapavir Rollout as a Strategy to Enhance HIV Pre-Exposure Prophylaxis Uptake in Fort Portal Region, Uganda.

Henry Kalungi, Edgar Sserunkuma, Richard Jjuuko, Saadick Ssentongo Mugerwa, Allan Ruyonga, Jolly Rose, Fairuzi Naiga, Irene Adulo, Ambrose Kibuuka, Henry Akankwasa, Lydia Kwaje, Annet Zalwango, Benjamin Muwanika, Michael Juma, Dithan Kiragga
Background: Pre-Exposure Prophylaxis (PrEP) remains a cornerstone of HIV prevention among populations at high risk of HIV (PHRHIV). Lenacapavir (LEN), a long-acting injectable PrEP administered twice yearly was recently introduced in Uganda, following evidence from clinical trials demonstrating near-complete protection against HIV acquisition with efficacy of 100% and 96% among cisgender women and men, respectively. Baylor Foundation Uganda (BFU), in collaboration with Ministry of Health (MOH) and local stakeholders, implemented a phased LEN roll out across selected facilities Fort Portal region. This abstract describes the strategies used and early implementation outcomes.
Description: Between January 2026 and June 2026, BFU introduced LEN across 13 phase 1 health facilities in seven districts and Fort Portal city. Preparatory activities included, alignment of national policy and implementation guidance with existing PrEP frameworks, revision of training, Information, Education, and Communication materials, and training National Trainers. Following stakeholder engagements with technical and political leaders, LEN training was decentralized to the regional level, resulting in 61 health workers being trained as regional trainers. These trainers supported development of district-specific LEN rollout plans, health facility (HF) readiness assessments and closure of identified implementation gaps. A total of 143 Health Workers from 13 facilities were trained on demand creation, eligibility screening for LEN and other PrEP options, switching between options, Monitoring and Evaluation and pharmacovigilance. Local Authority (LA) leadership conducted radio talk shows to supplement MOH radio announcements and spot messages. Continuous health education was conducted at multiple HF and community entry points across all phase 1 HFs and hot spots. MOH delivered 280 doses of LEN of which 120 were given to PHRHIV within four weeks.
Lesson leaned
Early community sensitization, health worker training, and local authority engagement facilitated rapid uptake of LEN following commodity availability. However, initial stock limitations resulted in early stockouts, highlighting the need for improved forecasting and supply chain planning during scale-up.
Next Steps: The findings reinforce BFU's continued interest in building resilient programmatic systems that support LA ownership of HIV prevention strategies in the Fort Portal region. BFU will continue building capacity for LEN implementation, having set up a foundation for long-term LA-led LEN provision.

119: Integrating Human Papillomavirus Vaccination into Routine HIV Care Improves Vaccine uptake and completion Among Girls Aged 9–14 Living with HIV in Uganda.

Immaculate Nakagwa, Alexandra Njuba Meeme, Diana Bukirwa, Cathbert Tumusiime, Jacqueline Balungi Kanywa, Jane Nakawesi, Richard Jjuuko Kyakuwa, Dithan Kiragga
Background: Cervical cancer remains the leading cause of cancer mortality among women in Uganda, with over 6,000 new cases reported annually. Persistent infection with Human Papilloma virus (HPV) is the main cause, making HPV vaccination a key prevention strategy. Uganda Ministry of Health guidelines, recommend a two-dose HPV vaccination schedule for girls aged 9–14 living with HIV. Despite this recommendation, HPV vaccine uptake and completion remain suboptimal at Baylor Foundation Uganda. By May 2023, HPV vaccination uptake among eligible girls was only 0.52% and completion at 0.15%, highlighting missed opportunities. To address these gaps, Baylor foundation Uganda implemented an integrated HPV vaccination program within routine care services aiming at improving uptake, completion, and timely administration of HPV among girls living with HIV.
Description: The program was implemented between 2023 and 2025 at the Baylor Foundation Uganda Center of Excellence (BFU-CoE) in Kampala for girls aged 9–14 living with HIV. Eligible clients were identified during clinic visits, provided health education and offered on-site HPV vaccination. Caregivers were engaged and clients were issued HPV vaccination cards and scheduled for the second dose with active follow-up supported by a focal person coordinating vaccination activities, appointment tracking and vaccine availability. Data were recorded in clinic registers and electronic medical records while a tracking tool was used to monitor initiation, completion and dosing intervals. Data reviews guided implementation and follow-up.
Lessons Learned: A total of 803 girls living with HIV initiated HPV vaccination and 721 (90%) completed compared with only 52 initiations recorded between 2020 and 2022. Integration into routine HIV services, combined with sensitization, caregiver engagement, a focal person and client tracking, substantially improved uptake and completion. However, delayed completion of the second dose and incomplete documentation remained challenges. Among adolescents with complete records (n=721), the median interval between doses was 9 months (IQR: 6–11), exceeding recommended timelines. The program demonstrates that integrated service delivery, dedicated documentation systems, and active follow up are critical for achieving high HPV vaccination coverage and timely completion among girls living with HIV.
Next Steps: Future efforts will strengthen follow-up by actively tracking girls due for second-dose completion using appointment registers and phone reminders, improving documentation system, maintaining a focal person to coordinate HPV services, and conducting routine data reviews to identify missed opportunities. The program will also expand

community and school linkages to improve vaccination coverage and timely completion of the two-dose schedule.



142: Influence of Sociocultural Factors on School Conflicts Among Wayuu Students in Manaure, La Guajira

CLARA ROSA LOPEZ ROYS, ELIANA MARCELA VILLERA FLOREZ

Background: School coexistence in Indigenous settings is shaped by sociocultural factors that interact with conventional educational models. However, there is limited evidence on how Wayuu cultural practices influence the emergence and management of school conflicts within Indigenous educational institutions. This study aimed to analyze the influence of sociocultural factors on school conflicts among students attending the Laachon Mayapo Rural Ethno-Educational Boarding School in Manaure, La Guajira, Colombia.

Methods: A qualitative study with an ethnographic design was conducted between November 2024 and April 2025. Participants included tenth-grade Wayuu students, teachers, and members of the educational community selected through purposive sampling. Data were collected through participant observation, semi-structured interviews, and document review. A total of 15 interviews were conducted, and the data were coded and analyzed using thematic analysis, complemented by source triangulation to enhance the credibility and consistency of the findings.

Results: The analysis identified four major findings. First, Wayuu family practices, based on respect for elders, collective child-rearing, and dialogue, influenced how students managed school conflicts. Second, tensions emerged between institutional school rules and traditional cultural practices, particularly regarding authority, discipline, and coexistence. Third, the predominance of Spanish as the language of instruction limited the participation of some students and hindered the recognition of their cultural identity. Finally, participants identified the pütchipü'üi (traditional Wayuu mediator) as a legitimate conflict-resolution mechanism with the potential to strengthen peaceful conflict management through an intercultural approach.

Conclusions: Sociocultural factors play a decisive role in shaping school coexistence among Wayuu students. Incorporating intercultural pedagogical strategies, strengthening the use of the Wayuunaiki language in educational processes, and integrating traditional mediation mechanisms, such as the pütchipü'üi, may improve school coexistence, reinforce cultural identity, and promote school retention. These findings support the development of culturally responsive educational models that strengthen collaboration among schools, families, and Indigenous communities

155: Improving Immediate Postpartum Family Planning Uptake at Public health facilities in Uganda

ALICE ASIIMWE, Emmanuel Mugisa, Leticia Namale, Albert Maganda, Dithan Kiragga

Background: Immediate postpartum family planning (IPPFP) is one of the high-impact interventions for reducing unintended pregnancies and improving maternal and newborn health outcomes. However, its uptake remains low in many low-resource settings. In Uganda, according to the national health system data, IPPFP uptake stands at 6%. Several barriers including lack of information on use of IPPFP and inadequate provider skills result in missed opportunities. The EMPOWER program aimed to address some of these barriers and this abstract presents the uptake of IPPFP in supported sites and districts in Mid-Western Uganda.

Program description: Between August 2025 and March 2026, with funding from the United Kingdom, the Empowering Women for Better Reproductive Health Outcomes (EMPOWER) program updated the skills of midwives working in delivery and postnatal wards at supported facilities. Midwives were trained and mentored with an aim to improve their implant and intrauterine devices (IUDs) insertion skills. FP commodities were also provided in the delivery and postnatal wards. The midwives counselled women during antenatal care and, for those who missed, while in labour. Women who consented were given their preferred method after delivery and before discharge. We collected program data on uptake of family planning within 48 hours of delivery from 49 supported health facilities in 8 mid-Western Uganda districts. The IPPFP uptake was compared with the previous year's over a similar time frame (August 2024 to March 2025).

Evaluation and Outcomes: Of the 48,889 women who delivered at the targeted sites in 8 months, 5,171 (11%) consented and adopted a method in the immediate postpartum period during the program, compared with 3,454/48,330 (7%) in the previous year. This was a 48% increase in IPPFP uptake. Beyond the immediate postpartum period, 61,501 women received implants and 9,850 IUDs between August 2025 and Mar 2026, compared to 53,043 implants and 9,189 IUDs between Aug 2024 and March 2025. This was 16% and 7% increase in uptake, respectively.
Lessons Learned and Next Steps: Integrating counselling, provider mentorship, and commodity availability within delivery and postnatal wards can increase IPPFP uptake in public health facilities. Sustaining and scaling this model will require continued mentorship, reliable commodity supply, routine data review, and integration of IPPFP counselling into antenatal, labour, delivery, and postnatal workflows.

184: Strengthening Youth HIV Care and Prevention Services through Implementation Science: A Stakeholder-Driven Approach to Developing and Delivering a Family Nurse Practitioner and HIV Peer Leader Training Programme in Eswatini.

Phumzile Dlamini, Kai Lockart, Bonisile Nsibandze, Debrah Vambe, Alexander Kay

Background: Eswatini achieved significant gains in reaching the national 95:95:95 targets; however, young people remain a priority population, with new HIV infections among adolescent girls and young women persistently high. Developing an implementation science (IS) research agenda on youth HIV prevention and care and integrating it into Family Nurse Practitioner (FNP) training ensures that youth-focused IS is sustainably maintained through ongoing FNP engagement.
This project aims to strengthen youth HIV care and prevention in Eswatini by introducing IS training for FNPs and HIV peer leaders. Objectives include developing a national IS research agenda focused on youth HIV prevention and care; integrating IS principles and evidence-based interventions into the FNP curriculum; identifying strategic clinical placement sites and linking HIV peer leaders with FNPs practicum sites.

Description: Baylor Foundation Eswatini, in collaboration with the University of Eswatini (UNESWA), implemented a project to strengthen IS capacity among FNPs and facility- and community-based HIV peer

leaders, to develop a national IS research agenda focused on youth HIV prevention and care. The project began with stakeholder mapping involving the Eswatini National Research Department and the Eswatini National AIDS Program. A stakeholder meeting was held to identify priority service delivery gaps and to influence the Eswatini national research agenda (NRA) on issues pertaining youth HIV prevention and care. An IS training curriculum was developed and reviewed by IS experts, resulting in a five-day intensive pilot IS training workshop for FNPs and HIV peer leaders, delivered using a hybrid model that combined didactic lectures, interactive case studies, and group discussions. Participants used identified gaps to develop three IS research projects, which were presented at the end of training.
Lessons Learnt: Early stakeholder engagement was key to a successful intervention. Involving the national programme in the NRA review ensured IS training was anchored in validated service delivery gaps. Integration of HIV peer leaders facilitated the sharing of lived experiences, strengthening collaboration between FNPs and peer leaders to help close the evidence-to-practice gap. Continuous education points and certificates of attendance supported training completion.
Next Steps: Stakeholder engagement will support sustainability through integration of IS into FNPs' curriculum, either as an elective or embedded within existing coursework. Peer leaders will continue supporting youth-focused HIV services, while FNPs will be linked to Baylor Centres of Excellence for clinical mentorship. Structured interviews with peer leaders, FNPs, UNESWA faculty, and facilitators will assess training effectiveness and inform future project scale-up.

191: Understanding HIV Risk and SRH Vulnerabilities Among AGYW in Songwe, Tanzania: Baseline Insights for aHERO Project

Kija Nyalali, Nehemia Nahashon, Rainald Mgimba, Benson Mayalla, Evance Mgeyi, Neema Kipiki, Msafiri Swai, Lilian Komba, Pastory Sekule, Lumumba Mwita, Mary Mweteni

Background: Adolescent girls and young women (AGYW) are disproportionately affected by HIV, yet gaps remain in understanding their sexual and reproductive health (SRH) knowledge, behaviors, and access to services in high-burden settings. In Songwe Region, Tanzania, limited evidence exists to guide targeted, context-specific interventions. This study aimed to assess HIV risk, SRH knowledge, attitudes, practices, and service utilization among AGYW to identify key vulnerabilities and inform implementation of the aHERO project.
Methods: A baseline cross-sectional study was conducted between May and June 2025 in Mbozi, Songwe, and Tunduma districts. The study included in-school (n=115) and out-of-school (n=227) AGYW. Data were collected using semi-structured interviews assessing HIV prevention knowledge, SRH practices, service uptake, and attitudes toward adolescent SRH interventions. Descriptive analysis was performed to summarize key indicators across populations.
Results: A total of 392 AGYW aged 10 - 27 years were enrolled. HIV prevention knowledge was limited, with 61% identifying condoms, only 6% aware of PrEP, and 20% reporting incorrect or no knowledge. Half (50%) reported sexual debut, of whom 26% had never used condoms, while 53% did not perceive themselves at risk of HIV. HIV testing was the most utilized service (29%), whereas uptake of family planning (18%), STI treatment (7%), and PrEP (0.5%) remained low. Engagement with peer educators was reported by 43%, but only 25% completed referrals. Decision-making autonomy varied, with lower autonomy among younger adolescents: 63% reported autonomy in sexual activity, 57% in contraceptive use, and 48% in pregnancy decisions. Social norms remained restrictive, with only 36% supporting independent access to contraception and 34% accepting teenage pregnancy. Among female respondents, 31% had ever been pregnant. Economic vulnerability persisted, with 55% receiving training, but only 33% initiating income-generating activities and 6% accessing financial support.
Conclusion: Significant gaps in HIV knowledge, SRH service uptake, and decision-making autonomy persist among AGYW in Songwe, particularly among younger adolescents. These findings underscore the need for strengthened age-appropriate SRH education, expanded youth-friendly services, improved referral systems, and interventions addressing harmful gender norms and economic vulnerability. The results provide critical evidence to guide targeted, integrated interventions and inform program design aimed at reducing HIV risk and improving adolescent health outcomes in similar high-burden settings.

201: From Daily Pills to Twice-Yearly Protection: Early Uptake and Acceptability of Long-Acting Lenacapavir in Butha-Buthe District, Lesotho

Moliehi Chabalala, Makatleho Sejana

Background: Continuity on daily oral pre-exposure prophylaxis (PrEP) remains a challenge for people at substantial risk of HIV acquisition, with continuation declining rapidly after the first month of use (Stankevitz et al., 2020). Lesotho introduced oral PrEP (TDF/3TC) in 2016. By December 2025, Baylor Lesotho-supported facilities recorded only 76 one-month refill visits among 221 clients initiated on PrEP the previous month, a proxy return rate of 34%. Long-acting HIV prevention options may address barriers such as pill fatigue, stigma, and frequent clinic visits. Injectable Cabotegravir (CAB-LA) was introduced in 2024, and the 2026 National ART Guidelines incorporated injectable PrEP preparations as part of the national comprehensive HIV prevention strategy. Following district-level training, Lenacapavir (LEN) was launched at Dr Strong Thabo Makenete Hospital (DSTMH) in Butha-Buthe on 30 March 2026.
Objective: To assess the early uptake and acceptability of LEN and document implementation experiences during the first three months of rollout in Butha-Buthe District.
Methods: A descriptive assessment was conducted using routine program data, client interviews, and healthcare worker feedback from three facilities: DSTMH, Seboche Mission Hospital, and St Paul Health Centre. 58 healthcare workers, including nurses, counsellors, laboratory personnel, and pharmacy staff, were trained before implementation. Quantitative data assessed uptake, while qualitative feedback explored acceptability and implementation experiences.
Results: 85 new clients initiated LEN, including 54 females (63.5%) and 31 males (36.5%). Fifteen clients (17.6%) were adolescent girls and young women aged 15–24 years, while adults aged 25–44 years accounted for 64% of initiations. Additionally, 150 clients transitioned from oral PrEP or CAB-LA to LEN. Clients cited freedom from daily pill-taking, reduced stigma, fewer clinic visits, and confidence in long-lasting protection as key reasons for choosing LEN. Healthcare workers reported strong client demand and perceived LEN as a strategy to improve PrEP continuity and expand uptake. Challenges included limited community awareness, commodity stock-outs across all three facilities, fear of injections among some clients, and weaknesses in documentation systems.
Conclusion: Early implementation findings demonstrate high acceptability of LEN among clients and healthcare providers in Butha-Buthe District. The twice-yearly dosing schedule was perceived as convenient, discreet, and potentially more manageable than daily oral PrEP. Strengthening supply chain management, provider capacity, documentation systems, and demand-creation activities will be critical to optimising uptake and supporting the scale-up of long-acting HIV prevention services.

220: The Healthy Habits Map: A Navigator-Led Behavioral Assessment Tool Calibrated for Adults with Obesity — Baylor Foundation Black Sea, Constanța, Romania

Ana-Maria Schweitzer, Mihaela Bogdan

Background: Adults with obesity present a multifactorial behavioral risk profile that standard clinical encounters rarely assess systematically. At Baylor Clinic (Baylor Black Sea Foundation, Constanța, Romania), an

integrated lifestyle medicine model combines health navigator services, movement programming, nutritional counseling, and group behavior-change programs. The aim of this project was to develop a standardized navigator assessment tool calibrated to the specific physiological baseline of adults with obesity, enabling structured lifestyle evaluation and individualized, evidence-based risk communication across ten behavioral domains.

Description: The Healthy Habits Map is a navigator-administered clinical instrument covering: nutrition, movement, sleep, stress management, substance use, social connection, screen hygiene, health monitoring, existential psychology, and quality of life. The tool uses concrete, observable behavioral questions — "What time was your last coffee yesterday?" to assess sleep-impairing caffeine use, or "How many times per week do you do strength training?" rather than "How would you rate your physical activity?" Each response is classified as pass or fail, generating a 10-point domain score and a composite behavioral profile visualized as a radar chart.

Each score is interpreted against published epidemiological baselines specific to adults with obesity: MASLD prevalence of approximately 80% (25–33% in the general population), obstructive sleep apnea in approximately 75% of cases, and a type 2 diabetes relative risk approximately seven times higher than at normal weight. Even a favorable behavioral score in a domain is interpreted with the underlying structural risk made explicit to frame behavioral change as acting on a concrete, quantified risk rather than an abstract recommendation.

Three domain-specific adaptations followed from this evidence base: * movement addressing sarcopenic obesity and mechanical joint loading, and recommends low-impact resistance exercise as the primary clinical entry point; * sleep prompting screening for undiagnosed obstructive sleep apnea before interpreting poor sleep scores as behavioral. * psychological addressing internalized weight stigma as a prerequisite for sustainable behavioral change planning, preceding any nutritional or physical activity intervention.

Lesson Learned

Standard behavioral instruments underestimate obesity-specific baseline risk. Separating modifiable behavioral risk from structural physiological risk improved clinical framing accuracy. Addressing internalized weight stigma explicitly, rather than as a generic psychological risk, emerged as a prerequisite for sustainable behavioral intervention planning.

Next steps: Systematic data collection is underway to evaluate navigator acceptance and patient engagement. Validation against clinical biomarkers (HbA1c, hepatic enzymes, sleep study referral rates) will assess predictive accuracy. Adaptation for additional chronic disease profiles, including HIV-related metabolic complications, is planned within the Baylor network.

Theme 3: Clinical and Programmatic Innovations to Drive Quality of Care

21: Improving Adherence and Treatment Outcomes Using Telephone Intensive Adherence Counselling among Persons living with HIV and on Antiretroviral Therapy in Uganda: A Continuous Quality Improvement Project.

Fiona Felistus Tendo, Jacqueline Balungi, Joan Nassozi, Lawrence Engurat, Cathbert Tumusiime, Dithan Kiragga

Purpose: Three Intensive Adherence Counselling (IAC) sessions are recommended by the Uganda Ministry of Health for people living with HIV (PLHIV) who have detectable plasma viral loads above 200 copies/ml. Baseline data on three IAC completions and Viral load suppression (VLS) at the Baylor Foundation (BFU) Uganda Center of Excellence were 21.4% (346/1,622) and 36.4% (591/1622) respectively as of August 2024 below the expected 95% for all non-suppressed PLHIV. This study describes how telephone IAC improved adherence and viral suppression among persons living with HIV at the clinic.

Methods: Between August 2024 and July 2025, a team of counselors at the call center extracted and reviewed viral load data from the national central public health laboratories' electronic dashboards and routine IAC data from electronic medical records at BFU. Using driver diagrams, stigma, missed clinic appointments, limited community follow-up of unsuppressed clients, transport challenges, and delayed identification and tracking of clients requiring IAC as the drivers for suboptimal IAC and VLS. Guided by the Plan–Do–Study–Act, the team tested and refined interventions through iterative cycles, including training the counselors in telephone IAC, assigning roles for data review and client tracking and implementing three structured counselling sessions delivered one month apart to clients with plasma viral loads above 200 copies/ml. Data was monitored monthly using run-charts and summarized with frequencies and percentages.

Results: Of the 1,066 clients eligible for IAC, 55.4% (559/1,066) were female. The median age was 20 years (Interquartile range, 15-27). At baseline, 21.4% (346/1,622) clients completed all three IAC sessions, of whom 39.0% (135/346) received at least one telephone-based service. By the close of the project, completion of three IAC sessions doubled with an increase by 241% (51.7/21.4)) to 51.7% (551/1,066), with 85.9% (916/1,066) reflecting a 220% rise in receiving at least one telephone service. The overall VLS at baseline was 36.4% (591/1,622) and (36.5%) 344/943 among females. By the end of the CQI project, overall VLS doubled with an increase by 209% (75.9/36.4) from 36.4% to 75.9% (813/1,066) overall and 78.0% (396/508) among females.

Discussion: We observed improvements in IAC completion and VLS. Telephone-based intensive adherence counselling is a promising strategy for improving VLS among PLHIV who are non-adherent to ART. However, some limitations noted, include inconsistent client phone access, telephone network challenges, and risks of accidental disclosure when not in private space. Adoption of this innovative model within HIV care could be considered.

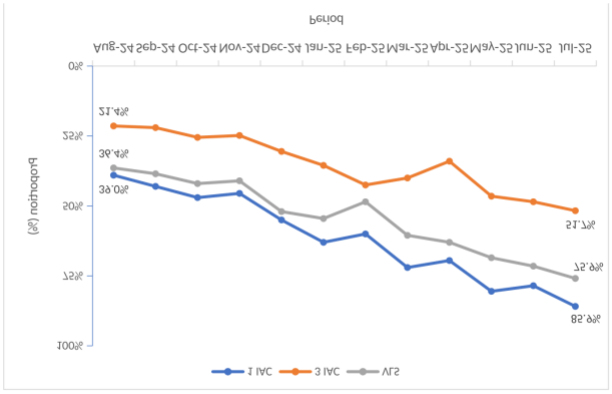


Figure 1: Proportional trends in IAC and VLS suppression (Aug 2024-July 2025)

34: Assessing maintenance, replication, and overall impact of a digital training package for improving HIV index case testing outcomes in Malawi

Nora Rosenberg, Meredith Wang, Tapiwa Tembo, Katie Mollan, Sarah Rutstein, Mike Chitani, Elijah Kavuta, Victor Mwapasa, Vivian Go, Saeed Ahmed, Katherine Simon

Background: Index Case Testing (ICT) is an evidence-based practice to diagnose people with HIV and support UNAIDS 95% testing target. However, ICT rollout has been suboptimal due to inadequate health worker skills. We developed a blended learning training package for

health workers combining individual and small-group tablet-guided sessions and one-on-one phone feedback. The package improved HIV testing and diagnosis in a cluster randomized controlled trial over one-year of follow-up. This analysis examines maintenance, replication, and overall impact over two years of follow-up.

Methods: A cluster randomized controlled trial was conducted with follow-up from October 2022-September 2023 (year 1) at 33 health facilities (clusters) in Malawi. Clusters were randomly assigned in 2:1 to receive standard ICT implementation (Standard arm, n=22) versus the package (Enhanced arm, n=11). In the subsequent year, the Enhanced clusters continued implementation, the Standard clusters received the package, and all clusters were followed from October 2023-September 2024 (year 2). Data on client testing and new HIV diagnoses were abstracted quarterly from Malawi Ministry of Health HIV registers and calculated as facility-level rates. Negative binomial mixed-effects models were fit to estimate impacts on contact client testing and new HIV-positive diagnoses. To assess maintenance, years 1 and 2 were compared among the 11 Enhanced clusters. To assess replication, periods before and after receiving the package were compared in the Standard clusters. To assess overall impact, all periods exposed and unexposed to the package were compared over two years.

Results: In the Enhanced arm, contact client testing (RR=1.01, 95%CI: 0.86–1.20) and new diagnoses (RR=1.15, CI: 0.85–1.56) were similar in year 2 versus year 1, suggesting maintenance. In the Standard Arm, contact client testing (RR; 1.19, CI: 1.00–1.40) and new HIV diagnoses (1.30, 1.10–1.70) increased in year 2 compared to year 1, indicating replication. Across all 33 clusters, contact client testing (RR=1.17, CI: 1.01–1.35), and new diagnoses (RR=1.39, CI:1.12–1.72) were higher after receiving the package compared to before, supporting overall impact.

Conclusions: Positive impacts of the package were sustained and replicated, strengthening the original finding that this package could positively impact the first UNAIDS 95% target.

39: Improving CD4 Testing Among Eligible Patients at the Baylor Uganda Centre of Excellence Through Adaptive Quality Improvement Strategies.

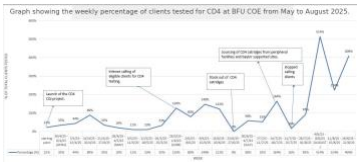
Joel Jonathan Mangeni*[1], Diana Bukirwa[1], Alexandra Njuba Meeme[1], Julius Ddungu[1], Nelson Muhumuza[1], Geoffrey Lutwama[1], Lawrence Engurat[1], Lameck Kiyimba[1], Richard Jjuuko Kyakuwa[1], Jacqueline Balungi[1], Dithan Kiragga[1]

Purpose: Advanced HIV disease (AHD) is a major contributor to HIV-related morbidity and mortality, particularly in resource-limited settings, where timely CD4 screening remains inadequate yet essential. Uganda's 2022 consolidated guidelines for prevention and treatment of HIV and AIDs, recommend CD4 testing for high-risk AHD patients. At Baylor Foundation Uganda Center of Excellence (BFU-COE), only 22% (60/267) of eligible patients received CD4 testing during January-March 2025, leaving a 78% gap. This project aimed to increase CD4 testing coverage among eligible patients from 22% to 95% by August 2025.

Methods: Between May and August 2025, a multidisciplinary Quality Improvement (QI) team comprising a team of clinicians, nurses, counsellors and laboratory staff led the initiative. The team defined the CD4 eligibility criteria as: those with high-level viremia, newly initiated on ART, re-engaging in care after interruption of treatment for 90 days, or WHO Stage 3/4 disease. Clinicians identified eligibility, nurses screened and flagged clients, laboratory coordinated testing and cartridge availability while counsellors handled calls and follow-ups. Using process mapping and fishbone analysis, the team identified key drivers of suboptimal CD4 testing coverage, including patient flow challenges, incomplete patient contact information, failure to flag CD4-eligible clients, limited discussion of CD4 testing during weekly case review meetings, and stockouts of CD4 cartridges. The primary measure was the weekly proportion of eligible clients who received CD4 testing. Other process measures included cartridge availability, identification of eligible clients at triage, and successful patient recall. Data was documented in the QI journal and reviewed weekly. Through Plan-Do-Study-Act (PDSA) cycles, the team tested and implemented change ideas, including updating patient contact information, flagging eligible clients, strengthening weekly case reviews, and conducting reminder calls. To address cartridge stockouts, additional cartridges were obtained through redistribution from Baylor-supported regions, and the Visitect CD4 testing standard operating procedure was introduced

Results: By August 2025, CD4 testing coverage increased from 22% to 100%, exceeding the target of 95%. Improvements were driven by strengthened triage, counsellor-led follow-up, and consistent test availability. Performance above target reflected clearance of a backlog of untested eligible patients and identification of additional patients requiring testing.

Discussion: Adaptive QI strategies substantially improved CD4 testing coverage. Coordinated teamwork, proactive patient follow-up, and improved commodity availability were key drivers of success. These findings demonstrate the potential of multidisciplinary QI approaches to strengthen AHD screening in high-volume HIV clinics. Limitations included reliance on externally sourced supplies and difficulty in reaching some clients by phone.



63: Beyond the Trial: One-Year Virological Outcomes and Retention After Transition from BREATHER PLUS to Routine HIV Care in Uganda

Muhammad Lutalo, Resty Babirye Okello, Cathbert Tumusiime, Louis Diana Anena, Naomi Apoto, George Patrick Akabwai, Dithan Kiragga, Deborah Ford, Sarah Pett, Adeodata Rukyalekere Kekitiinwa

Background: People living with HIV (PLHIV) enrolled in clinical trials transition to routine HIV care after study completion. Differences in follow-up intensity, adherence support, and monitoring between research and routine care may affect retention and virological outcomes, but evidence on post-trial outcomes remains limited. The BREATHER Plus (BP+) trial compared short-cycle therapy (SCT; 5 days on ART, 2 days off) with continuous therapy (CT) among adolescents aged 12–<20 years with HIV in sub-Saharan Africa and found SCT inferior to CT for maintaining virological suppression. At trial completion, all participants returned to CT through a structured transition process including adherence counselling, caregiver engagement, staff sensitization, and clinic database alerts. This study evaluated viral suppression and retention at study exit and 52 weeks after transition to routine HIV care among former BP+ participants at Baylor Foundation Uganda (BFU).

Methods: This retrospective observational cohort study used data from BP+ participants enrolled at the BFU Centre of Excellence between June 2022 and April 2025. Viral suppression and retention data were extracted from routine clinic databases and assessed at study exit and 52 weeks post-transition (22 May 2026). Viral load monitoring followed routine care schedules. Retention was defined as documented clinic attendance and viral suppression as ≤200 copies/mL. Descriptive and comparative analyses, including McNemar's and Fisher's exact tests, were performed using SPSS Statistics.

Results: Among 111 participants, 73 (66%) were female. At study exit, median age was 19.7 years (IQR 17.9–21.1) and median ART duration was 14 years (IQR 13–16). Trial arms were equally represented (55 CT; 56 SCT). All participants remained in care 52 weeks after transition. Viral suppression was 96% (107/111) at study exit and 98% (109/111) 52 weeks after transition, with no significant difference between both time points (McNemar's p=0.625). Overall, 106 participants were suppressed at both assessments. Of the four unsuppressed at study exit, three achieved suppression by 52 weeks, while one remained unsuppressed at

both time points. At 52 weeks, suppression rates were similar between prior trial arms: 100% (55/55) for CT and 97% (54/56) for SCT (Fisher's exact p=0.496).

Conclusions: Viral suppression and retention remained high 52 weeks after transition from clinical trial to routine HIV care, with no differences between participants previously assigned to SCT or CT. These findings support structured transition practices to maintain continuity of care after trial completion. Longer-term follow-up and evaluation in non-centres of excellence are needed to assess generalizability.

Table 1. Viral suppression status at study exit and 52 weeks post-transition

At study exit	52-wk not suppressed	52-wk suppressed	Total
Unsuppressed	1 (25.0%)	3 (75.0%)	4
Suppressed	1 (0.9%)	106 (99.1%)	107
Total	2 (1.8%)	109 (98.2%)	111

Table 2. Viral suppression by previous trial arm (CT versus SCT)

52-week status	CT	SCT	Total
Not suppressed	0	2	2
Suppressed	55	54	109
Total	55	56	111

67: Systematic Disclosure Monitoring in Pediatric HIV Programs Facilitates Timely, Intentional Status Disclosure for Adolescents in Malawi.

Golden Kang'oma, Albert Kaonga, Florence Longwe, Macmillan Mvula, Katherine Simon, Harold Mweleya, Carrie Cox

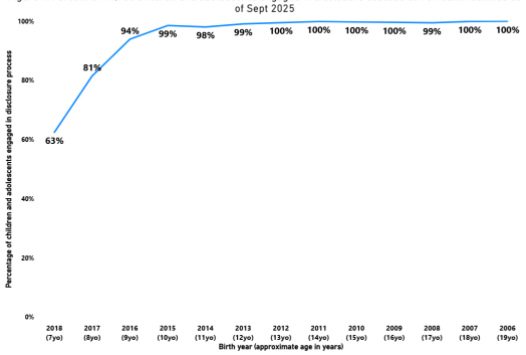
Background: Developmentally appropriate disclosure of HIV status can benefit adolescents' well-being, relationships, and adherence. Despite global guidance recommending training and implementation of intentional disclosure, systems to longitudinally track children's disclosure status and identify support needs remain inadequate. We describe implementation of a tracking and mentorship system to maximize developmentally appropriate intentional disclosure through ongoing skills development at 95 Ministry of Health facilities across 5 districts in south and central Malawi, supported by Baylor Foundation Malawi Tingathe program.

Description: Following an audit that confirmed each of the 95 facilities had at least one clinical and one lay health worker trained to deliver intentional disclosure counseling, disclosure registers were introduced in October 2021 to track the disclosure process for children and adolescents. Program data review by district clinical and adolescent officers (DAOs) identified facilities with below average rates of disclosure for intensified supportive supervision. Intensified support to identify barriers to disclosure skills building, and mentorship to build capacity for new staff was conducted throughout. Routine program data was analyzed from January 2022- September 2025.

Lessons learned: In January 2022, 75% of adolescents had documented disclosure and as of September 2025, 97% of 11,980 adolescents had documentation. Nearly half (45%, 141/316) of children not yet in the disclosure cascade were ~7 years old (birth cohort 2018) aligning with developmentally appropriate disclosure. (Figure 1) Targeted support was provided to facilities with adolescents missing expected disclosure to implement client-centered plans to deliver developmentally appropriate disclosure counseling.

Next Steps: Systematic, longitudinal monitoring of disclosure processes in routine program settings facilitates timely disclosure and prevents incomplete or accidental disclosure, ensuring age-appropriate, intentional disclosure as children mature. Structured follow-up enables targeted support for guardians to address concerns, allowing adolescents access to their status and care engagement. Ongoing monitoring builds healthcare worker capacity to support families through disclosure, developing advanced counselling skills for complex conversations as children mature.

Figure 1: Percent of 11,980 children and adolescents engaged in disclosure cascade at 95 health facilities as of Sept 2025



74: Characteristics and 10-year Outcomes of Adolescents with Virological Failure on Dolutegravir- based ART regimens at Botswana-Baylor Children's Clinical Centre of Excellence.

John Farirai, Ava Avalos, Koketso Mokomane, Shimane Lekalake, Bonnie Kgathi, Boitumelo Thuto, Ontibile Tshume, Abhilash SATHYAMOORTHI, mogomotsi matshaba

Background: Botswana achieved the UNAIDS 95-95-95 targets in 2022 with 98% of People Living with HIV on antiretroviral therapy (ART) having a suppressed viral load (VL). A major contributing factor to this achievement was the introduction of Dolutegravir (DTG) regimens in June 2016. Despite this success; adolescents and young people (AYALH) lag behind with viral suppression rates estimated at 91%. Botswana-Baylor Children's Clinical Centre of excellence (BBCCCOE) is an HIV referral Centre which manages over 2300 children, AYALH, mostly vertically transmitted.

Methods: A retrospective chart review in May 2026 on 500 AYALH switched to DTG based ART after 2016 was conducted using the electronic medical records. Data on who had Virological failure (VF) before or after switching was retrieved and analyzed for demographic and clinical characteristics including 10-year clinical outcomes.

Results: 50 patients were identified (22 (44%) Males and 28 (56%) Females). The average age at switch to DTG-based was 15.6 years; 26 (52%) had VF at switching, while 24 (48%) developed VF later on. Prior to switching, 24 (48%) were on NVP/EFV-based (1st line) and 26 (52%) were on LPV/r-based. Of the 26 with detectable VL at switch, 13(50%) were on 1st line and 2nd line each. At the 10-year follow up, 6(12%) had an Opportunistic infection; Pulmonary TB (1), Pelvic Inflammatory Disease (1), Herpes Zoster (2) and Seborrheic dermatitis (2). The average CD4 dropped from 676/28% at switch to 441/22% in 2026(WHO Immunological Stage 1 to Stage 2). As of May 2026; 44(88%) remain in care and 6 (12%) were lost-to-follow-up, no deaths recorded. Of the 44 in care; 43 are on Tenofovir or Tenofovir Alafenamide /Lamivudine/DTG (TLD/TAF-ED) and 1 on Tenofovir/Lamivudine/Darunavir/Ritonavir; 30 (68%) were Virally suppressed, 7(16%) had viremia (VL<1000) and 7 (16%) had VF; overall 84% had a VL<1000 copies/ml.

Conclusion: While VF rates amongst AYALH are higher than adults, this study showed that, most AYALH with VF on DTG-based ART were able to remain in care without clinical failure. Furthermore, viral suppression improved over time and there were no deaths. These findings may have been due to the one tablet a day dosing, fewer adverse events and higher barrier to resistance of DTG, but a more in-depth analysis would help understand these findings more clearly. AYALH with VF need psychosocial support and encouragement to adhere to their medications given the long-term benefits.

122: Improving HIV Status Disclosure Among Adolescents 10 -19 years Through Structured Caregiver Engagement and Clinic-Based Disclosure Support at Baylor COE Clinic, Uganda

Denis Ssemakula, Diana Bukirwa, Lameck Kiyimba, Betty Kasule, Jackson Zizinga, Cissy Ssemambo, Richard Jjuuko, Jacqueline Balungi Kanywa, Dithan Kiragga

Purpose:

HIV status disclosure among children and adolescents is essential for improving treatment adherence, psychosocial wellbeing, self-care, and long-term HIV outcomes. However, at Baylor Foundation Uganda Center of Excellence Clinic, disclosure rates among HIV-positive adolescents aged 10–19 years remained low at 27% despite Ministry of Health recommendations promoting structured and age-appropriate disclosure. The team aimed to improve HIV status disclosure among children and adolescents aged 10–19 years enrolled at BFU-COE Clinic from 27% to 95% within six months through targeted caregiver engagement and structured disclosure support interventions.

Methods:

Between February and August 2026, a Quality Improvement project was initiated at the BFU-COE clinic. A multidisciplinary QI team comprising nurses, counsellors, peer educators, and data personnel defined disclosure as the process of informing a child or adolescent of their HIV-positive status in an age-appropriate, gradual, and supportive manner. Using fishbone analysis, the team identified barriers to disclosure, including reduced face-to-face interactions, caregiver fears of emotional distress, stigma, disclosure readiness, cultural barriers, and documentation gaps in the electronic medical records system. Through three Plan-Do-Study-Act cycles, interventions tested included booking all eligible adolescents for psychology review at triage, scheduling represented clients for follow-up physical appointments to create disclosure opportunities, updating clients' disclosure status in the electronic system where counselling notes confirmed disclosure, and conducting routine health education sessions on the benefits of disclosure in waiting and counselling rooms. Process measures included integrating caregiver counselling and disclosure support into routine clinic care, with weekly review of routine clinic data through documentation journals.

Results:

Following implementation of the interventions, disclosure rates improved significantly from a baseline of 27% (611/2247) to weekly performance levels ranging between 75% (140/186) and 95% (135/142) over the first 16 weeks of implementation. The highest performance achieved was 95% (135/142) in week two. Improvement was attributed to increased structured disclosure opportunities, enhanced caregiver engagement, and strengthened provider-led health education and counselling. The project also improved identification of documentation gaps and promoted multidisciplinary involvement in disclosure support.

Discussion:

Even with challenges like caregivers declining HIV disclosure for their children, citing concerns about emotional distress and perceptions that children were not yet ready for disclosure, structured caregiver engagement combined with clinic-based disclosure support interventions can significantly improve HIV disclosure among adolescents in HIV care settings. Integrating disclosure support into routine clinic workflows and strengthening caregiver education are feasible, low-cost, and scalable strategies for improving HIV care outcomes in resource-limited settings.

Table 1. Weekly HIV status disclosure performance (baseline–week 16)

Week	Disclosed	Eligible	Percentage
Baseline	611	2247	27%
W1	48	55	87%
W2	135	142	95%
W3	140	186	75%
W4	91	107	85%
W5	64	78	82%
W6	54	62	87%
W7	85	97	88%
W8	74	87	85%
W9	57	68	84%
W10	105	118	89%
W11	133	151	85%
W12	146	174	84%
W13	123	136	90%
W14	127	145	88%
W15	128	143	90%
W16	103	117	88%

127: "More Than a Missed Dose": Structural, Relational, and Health-System Determinants of Vertical HIV Transmission in Eswatini: A Qualitative Study

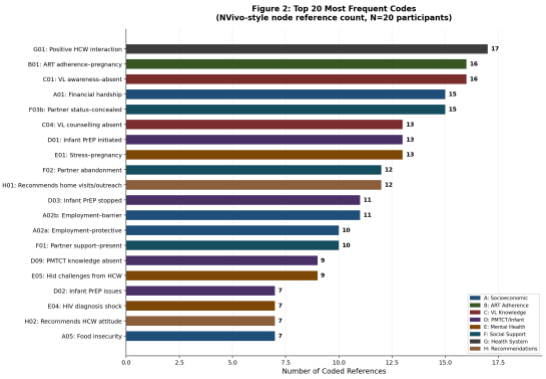
Kanyamanda Xavier Katembo, Babongile Blisset Nkala, Sandile Dlamini, Florence Anabwani R, Alexander Kay, Jaime Petrus, Debrah Vambe, Anna Mandalakas, Oslinah Tagutanazvo

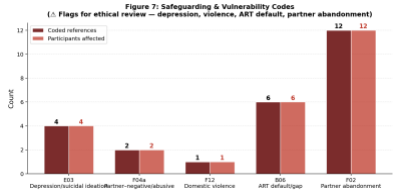
Background: Vertical transmission of HIV remains a public health challenge in Eswatini despite the availability of Prevention of Mother-to-Child Transmission (PMTCT) services. Understanding the lived experiences of mothers whose children acquired HIV while taking ART is essential for identifying persistent gaps in the PMTCT cascade.

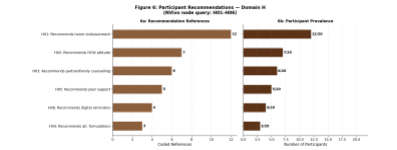
Methods: We conducted in-depth qualitative interviews with 20 mothers of children with HIV below 5 years attending care to Baylor clinics(Eswatini). A framework thematic analysis was performed using a structured coding matrix across eight domains:socioeconomic factors, ART adherence, viral load knowledge, PMTCT and infant prophylaxis, mental health, social support and stigma, healthcare system factors, and participant recommendations. NVivo node-based analysis was performed. All coded excerpts were generated and analyzed to identify determinants of MTCT and barriers to PMTCT service engagement.

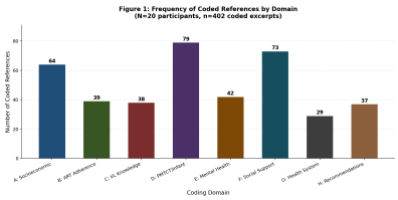
Results: All 20 participants were single or not married at the time of their child's infection. Financial challenge was reported by 12/20 (60%), with lack of transport funds as the most common barrier to clinic attendance. ART adherence difficulties during pregnancy were documented in 16/20 (80%),complete treatment default in 7/20 (35%), driven by side effects, family sabotage, and medication stock-outs at peripheral facilities. Viral load awareness was absent in 19/20 (95%), and 13/20 (65%) had received no viral load counselling despite documented antenatal care contacts; 9/20 (45%) received no structured PMTCT education. Partner abandonment occurred in 12/20 (60%), and deliberate partner concealment of HIV-positive status was identified in 15/20 (75%) the most prevalent determinant of MTCT across the cohort. Psychosocial burden was substantial: pregnancy-related stress was reported by 16/20 (80%), 10/20 (50%) hid challenges from healthcare workers, and three participants described depression or suicidal ideation. Despite these adversities, 17/20 (85%) reported positive healthcare worker interactions, particularly at specialist facilities, and four participants demonstrated marked resilience and active self-determination. Participants universally provided actionable recommendations, most frequently citing community outreach and home visits (12/20, 60%), improved healthcare worker communication (8/20, 40%), and structured peer support (6/20, 30%).

Conclusions: Effective PMTCT programming in Eswatini must extend beyond facility-based clinical care to address male partner engagement and testing, community-level outreach, psychosocial support including mental health screening and peer-led adherence models. The findings may work as foundation for these and other targeted interventions design within the PMTCT cascade.









158: Reducing Maternal and Neonatal Mortality in High-burden Regions in Uganda through Health provider Mentorship and Facility-level support

ALICE ASIIMWE, Rodgers Tugume, Greg Opio, Denise Birungi, Albert Maganda, Dithan Kiragga

Background: Neonatal mortality in Uganda declined only marginally over the last two decades, from 27 to 22 deaths per 1000 live births in 2022. Maternal mortality declined from 435 to 189 deaths per 100,000 live births. Bunyoro and Tooro remain high-burden regions for maternal mortality, with institutional ratios of 123 and 77 deaths per 100,000 live births, and neonatal mortality rates of 6 and 4 deaths per 1000 live births, respectively. Avoidable factors contributing to this mortality included inappropriate interventions, lack of skilled providers, and lack of essential supplies. The Newborn care program funded by the ELMA Foundation aimed to reduce maternal and neonatal mortality in the two regions by addressing provider knowledge and skills gaps and strengthening facility readiness. This abstract shares the achievements and lessons from this program.

Program Description: Between April 2022 and June 2025, the program supported 28 health facilities with neonatal care units (NCUs) space in Bunyoro and Tooro regions. Interventions included on-site mentorship in emergency obstetric and neonatal care (EmONC), functionalization of neonatal care units, referral systems support, leadership engagement, routine data reviews, maternal and perinatal death surveillance and response (MPDSR), and community engagement. Regional Obstetricians and Paediatricians served as mentors and worked alongside facility teams to identify and address priority skills gaps.

Evaluation and Outcomes: The program achieved 1,060 health worker mentorship contacts, functionalized 9 NCUs that were not admitting babies, and increased small and sick newborn annual admissions from 3,342 to 4,931. Newborn survival improved from 89% to 92%. The case fatality rates declined for birth asphyxia by 26%, neonatal sepsis by 56%, and prematurity by 6%. Institutional neonatal mortality rate reduced from 5.7 to 4.7 in Bunyoro and 3.5 to 2.4 deaths per 1000 live births in Tooro. Similarly, the institutional maternal mortality ratio in Bunyoro reduced from 123 to 68 and in Tooro from 77 to 60 deaths per 100,000 live births.

Lessons Learned: On-site mentorship strengthened provider competency and improved service outcomes, but skills improvement alone was insufficient. Health facilities also required essential equipment, oxygen, medicines, supplies, reliable data use, and accountable leadership. A comprehensive facility-level package was more effective than mentorship alone in sustaining improvements in maternal and newborn care.

Next Steps: Future efforts should scale a minimum facility- and district-specific tailored package, combining mentorship with commodities, equipment, referral strengthening, leadership accountability, and routine data review to sustain reductions in maternal and neonatal mortality.

Theme 4: Strengthening Global Health Security through Preparedness, Response, and Innovation

66: Improving Infection Prevention and Control Using a Continuous Quality Improvement Approach at Nine Health Facilities in Uganda

Daniel Wenani, Richard Jjuuko Kyakuwa, Anne Loy Alupo, Robert Majwala, Peter Elyanu

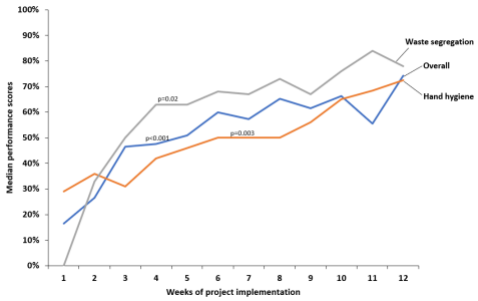
Purpose: The 2025 Ebola outbreak highlighted the need to strength infection prevention and control (IPC) to prevent healthcare-associated transmission, especially among healthcare workers. Post-outbreak IPC compliance remained low at health facilities in Uganda, with hand hygiene at 36% and waste segregation at 21%. We conducted a quality improvement (QI) collaborative to improve hand hygiene and waste segregation compliance among healthcare workers at nine health facilities across Uganda.

Methods: We implemented continuous QI projects at five regional referral hospitals and four high-volume lower-level facilities. Work improvement teams (WITs) comprising health facility IPC committee members conducted root cause analyses using Pareto charts and fishbone analysis, identifying people-related factors, logistical challenges, and poor feedback as key causes of poor compliance. Before project initiation, we trained health workers in the IPC QI package, followed by baseline assessments. We then implemented a change package that included mentorship sessions, supervision visits, and community of practice sessions via the weekly Zoom platform, where different teams shared progress on the implementation of their QI projects, as documented in their documentation journals. These changes were implemented using a Plan-Do-Study-Act cycles for 12 weeks, October–December 2025, and team met monthly to evaluate changes. Hand hygiene compliance was measured using the WHO hand hygiene assessment tool, while for waste segregation, teams developed and adopted a locally made tool adapted from the IPC assessment tool to measure compliance. Median performance scores with interquartile ranges (IQR) were compared between baseline and end-line at $p<0.05$. WIT members collected data weekly.

Results: Overall IPC compliance improved from a median baseline score of 17% (IQR:13%-27%) to 74% (IQR:63%-79%) at end line ($p<0.001$). By

project type, hand hygiene compliance improved from 29% (IQR:14%-33%) at baseline to 73% (IQR: 59%-79%) at end-line (p=0.003), while waste segregation compliance improved from 0% (IQR: 0%-38%) to 78% (IQR: 67%-88%) (p=0.02).

Discussion: A QI approach improved hand hygiene and waste segregation compliance at selected health facilities in Uganda. Change ideas included using reminders or job aids, orientation of new staff or students, assignment champions to health facility units, and strengthening routine monitoring and feedback mechanisms. Barriers included staff rotations and transfers, high patient workload, influxes of students and interns, limited doctor involvement, inconsistent alcohol-based hand rub sanitizer supplies, and renovation-related interruptions. Adopting the change ideas would sustain IPC gains even after outbreaks if we are to protect health workers from infections.



83: Bipartite Network Analysis Reveals Contact-Sharing Hubs and Community Structure within Tuberculosis Contact Investigation Networks in Eastern Uganda

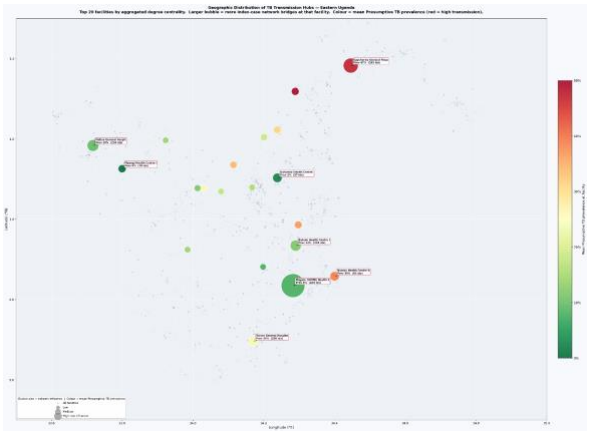
Joshua Brianwong Clark, Diana Cherotin, Lwanga Sssekiswa, Ssaadick Sentongo, Richard Jjuuko, Ronald Khamasi, Patricia Nahirya, Alexander Mugume, Denise. J Birungu, Dithan Kiragga

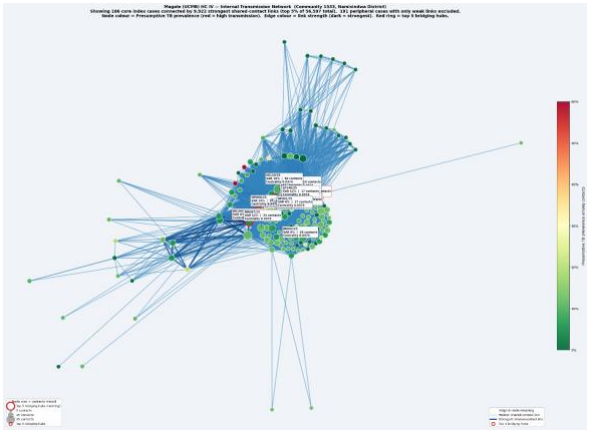
Background: Tuberculosis (TB) contact investigation data are typically analysed as independent index-contact pairs, limiting the ability to identify overlapping social networks and shared contacts across multiple investigations. This approach may overlook highly connected individuals and facilities that occupy central positions within contact investigation networks. Network analytic methods offer an opportunity to characterise these structures and identify high-leverage points for targeted public health interventions. We sought to characterise the structure of TB contact investigation networks in Eastern Uganda and identify highly connected contact-sharing hubs and communities that could inform prioritisation of contact investigation and preventive interventions.

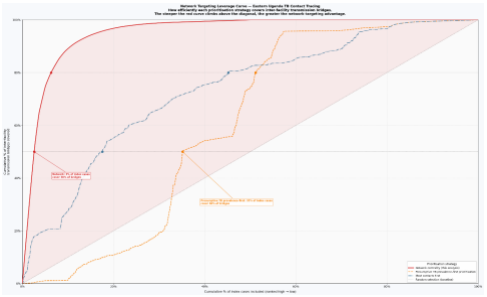
Methods: We conducted a retrospective network analysis of routine TB contact investigation data collected in Eastern Uganda between January 2024 and May 2026. A weighted bipartite graph was constructed from 35,616 contact investigation records in the digital contact tracing system, linking 8,293 index TB cases to 24,329 unique contacts. Edge weights combined five empirically derived exposure scores: socialise frequency, interaction type, relationship, PPE, and room sharing (AUC = 0.60). The bipartite network was projected onto the index-case partition, connecting index cases that shared one or more contacts. Louvain community detection identified contact-sharing communities, while degree centrality quantified network connectivity and identified highly connected nodes. Analyses were performed in Python 3.13.9.

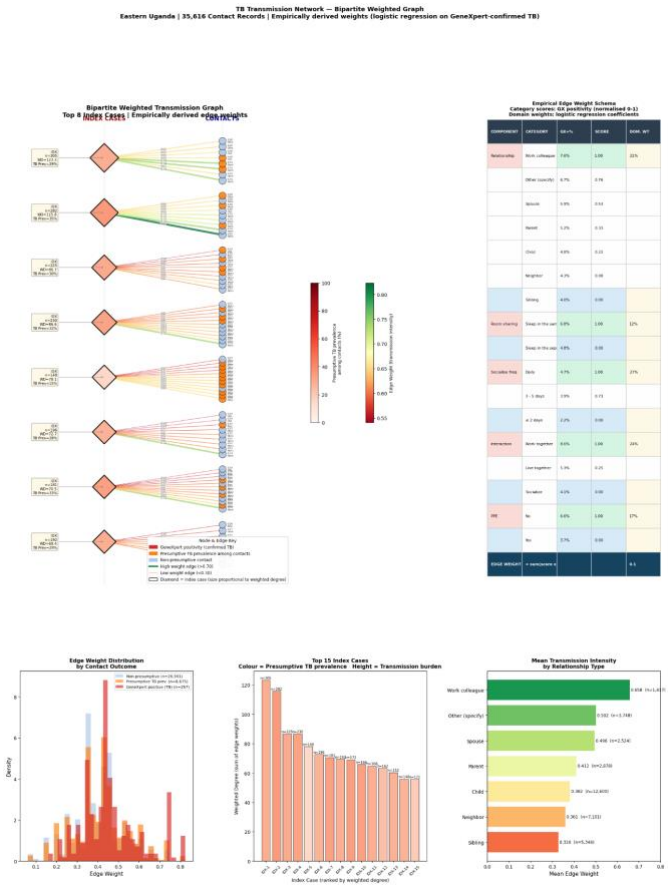
Results: The network comprised 33,551 weighted index-contact connections. Projection onto the index-case network yielded 82,685 shared-contact links distributed across 540 multi-index components (sub-networks where at least two index cases shared one or more contacts). Louvain analysis identified 5,523 contact-sharing communities. The most highly connected nodes were concentrated within a large community anchored around Magale HCIV in Namisindwa District. Individual index cases within this community connected to up to 3.7% of all linked nodes in the projected network, despite presumptive TB prevalence ranging from 0% to 19.2%. Network leverage analysis showed that prioritising the top 2% of index cases ranked by degree centrality captured 50% of all shared-contact bridges, whereas presumptive TB prevalence rate-based prioritisation required approximately 35% of index cases to achieve comparable network coverage.

Conclusions: Bipartite network analysis reveals contact-sharing structures that conventional reporting misses. Highly connected facilities and index cases occupy strategic positions within overlapping contact networks and may serve as efficient targets for intensified contact investigation, TB preventive therapy, and community engagement. Integrating network metrics into routine district TB reviews could improve resource prioritisation by focusing interventions on the most connected network components. Prospective evaluation is needed to assess public health impact.









217: Evaluation of Global Treatment Decision Algorithms for Tuberculosis Screening in Children Living with HIV: an analysis of the TB GAPS Study, July 2023 to October 2025

Debrah Vambe, Abigail Seeger, Mbongeni Dube, Brigid E. O'Brien, Adamson Munthali, Teresa Steffy, Lilian Komba, Phumzile Dlamini, Peter Elyanu, Crystal Cazier, Durbbin Mulengwa, Subhadra Nandakumar, Joshua Doyle, Anand Date, Alexander Kay, Anna Mandalakas

Background: In 2022, the World Health Organization (WHO) published Treatment Decision Algorithms (TDAs) to improve pediatric tuberculosis (TB) diagnosis. TDAs were developed for children <10 years with symptoms suggesting pulmonary TB. However, TB is often asymptomatic and symptom-agnostic TB screening tools exist for people with HIV, such as C-reactive protein (CRP) and chest x-ray (CXR). We evaluated the performance of TDAs with expanded, symptom-agnostic entry criteria in children with HIV (CWH) aged 0-9 years.

Methods: TB GAPS enrolled CWH into a prospective TB screening and diagnostic cohort in five high-TB-burden countries: Eswatini, Malawi, Lesotho, Uganda, and Tanzania. All children received CRP and CXR despite symptoms. We compared the diagnostic accuracy of TDAs (TDA-A includes CXR and TDA-B excludes CXR) using standard (WHO-defined TB symptoms for TDA entry) and expanded entry criteria including TB symptoms of any duration, CRP ≥ 5 mg/L, or an abnormal CXR. Sensitivity, specificity, and diagnostic yield, were calculated using the U.S. National Institutes of Health (NIH) consensus definition inclusive of lateral-flow lipoarabinomannan assay.

Results: During July 2023 through October 2025, we evaluated 948 CWH (median age 6 years, range 0-9); 90 met NIH consensus criteria for TB. With the expanded criteria applied to TDA-A, sensitivity was 88.9% (95% confidence interval (CI): 80.5–94.5) and specificity was 72.0% (95%CI: 66.9–76.8) (Figures 1, 2). The expanded criteria applied to TDA-B demonstrated a lower sensitivity of 80.0% (95%CI: 70.2–87.7) but a higher specificity of 91.7% (95%CI: 88.2–94.4). When TDA entry criteria was limited to participants with standard TB symptoms, diagnostic yield was 46.7% (42/90) for TDA-A and 40% (36/90) for TDA-B, compared to 88.9% (80/90) for TDA-A and 74.4% (67/90) for TDA-B when using the expanded, symptom-agnostic entry criteria.

Conclusions: Reliance on standard, symptom-based entry criteria for TDAs failed to identify over half of CWH meeting the NIH consensus definition for confirmed or unconfirmed TB, compared to only 11% using the symptom-agnostic criteria. These findings suggest that performance of TDAs in CWH may be improved by expanding entry criteria to include symptom-agnostic screening tools, which may be a promising adjunct to close the TB diagnostic gap and end TB.

Figure 1 data. Sensitivity of treatment decision algorithms (selected legible values from supplied table)

Entry criterion	TDA	Sensitivity
Prolonged symptoms	A	84%
Prolonged symptoms	B	72%
Symptoms, any duration	A	86.8%
Symptoms, any duration	B	77.6%
CRP screening	A	88.9%
CRP screening	B	75.9%
Symptoms or CRP or CXR	A	88.9%

Figure 2 data. Specificity of treatment decision algorithms (selected legible values from supplied table)

Entry criterion	TDA	Specificity
Prolonged symptoms	A	72.2%
Prolonged symptoms	B	72.2%
Symptoms, any duration	A	75.6%
Symptoms, any duration	B	89%
CRP screening	A	75.2%
CRP screening	B	90.2%
Abnormal CXR	A	39.8%
Symptoms or CRP	B	90.6%

221: Utilization and Determinants of Blood Culture in Managing Suspected Sepsis Among Hospitalised Children <5 years: A Mixed-Method Study at Four Ugandan AMR Surveillance sites.

R Kisame, R Kooko, G Matovu, S Nabadda, I Muugerwa, I Mugerwa, S Kasango Dembe, C.N. Adibaku, A Kisakye, H Kajumbula, R.J. Kyakuwa, J. Nakawesi, P.N. Ntege, P. Elyanu, D. Kiragga

Background: Bloodstream infections caused by multidrug-resistant pathogens remain a major cause of under-five mortality. Blood culture (BC), the gold standard for sepsis diagnosis, remains underutilised, with limited evidence on clinical, behavioural, and system factors, highlighting broader Diagnostic Stewardship (DS) challenges and impacting antimicrobial resistance (AMR) containment. We assessed the extent and determinants of BC requests (BCR) among hospitalised children <5 years with suspected sepsis at four Ugandan AMR surveillance sites.

Methods: Between 09/2024 and 09/2025, we conducted a cross-sectional mixed-methods study at four Uganda AMR surveillance sites, approved by Makerere University's Ethics Committee, with administrative clearance from participating hospitals and a consent waiver for retrospective record review. The study collected data using a structured data abstraction tool, reviewed 618 patient records (234 for 2024 and 384 for 2025) and interviewed 20 clinicians, using the Theoretical Domains Framework (TDF) to explore behavioral determinants. Quantitative data were analyzed using Modified Poisson regression in SPSS version 26, and qualitative data underwent thematic analysis, using NVivo version 15 with deductive coding to TDF domains.

Results: Average BCR rates among children with suspected sepsis improved by 42.6%, from 19.7% (46/234) in 2024 to 28.1% (108/384) in 2025. Modified Poisson regression identified factors associated with increased BCR: severe acute malnutrition (aPR 1.3, 95% CI 1.14–1.34), sickle cell disease (aPR 1.3, 95% CI 1.19–1.40); WHO danger signs (aPR 1.1, 95% CI 1.00–1.14); and involvement of senior clinicians (aPR 1.2, 95% CI 1.08–1.32) and consultants (aPR 1.4, 95% CI 1.21–1.48). Prior antibiotic exposure reduced the likelihood of request (aPR 0.9, 95% CI 0.84–0.96).

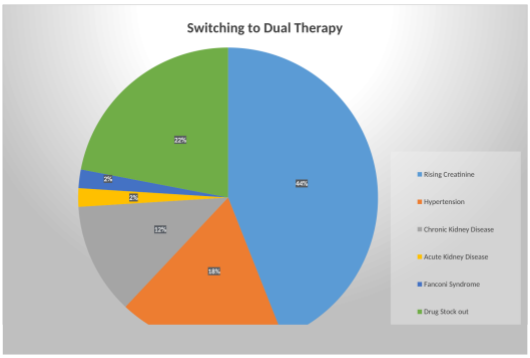
Thematic analysis highlighted four key behavioral determinants: motivation amid systemic constraints; institutional and environmental barriers; mentorship; teamwork; and emotional fatigue, leading to adaptive test rationalization.
Conclusions: Despite high clinician awareness and enhanced laboratory capacity, BC utilisation in routine paediatric care remained low. Beyond laboratory barriers, behavioral and clinical workflow factors influence test utilisation. Addressing these challenges by integrating behavioral interventions, clinical decision support tools, and quality improvement within DS programs is essential to ensure equitable access, improve pediatric sepsis management, and strengthen AMR containment.

Poster Abstracts:
Morning Poster Session

25: A Dual Therapy Evaluation at Botswana-Baylor Children's Clinical Centre of Excellence (BBCCCOE)

Abhilash SATHYAMOORTHI, Koketso Mokomane, John Farirai, Mogomotsi Matshaba

Background: Antiretroviral therapy (ART) in Botswana has evolved tremendously since the very first regimen of Zidovudine twice daily over almost three decades ago. In recent times, clients have become accustomed to Dolutegravir (DTG) combination regimens that are taken once a day and Darunavir for those who were unable to achieve viral suppression with DTG. Newer anti-retrovirals (ARVs) regimens are well tolerated and clients experience few side effects. One such combination is Lamivudine/ Dolutegravir (Dual Therapy). It was procured by Botswana in 2024 for being safe to use among those with or at risk for renal problems and geriatric populations. The aim of this study was to assess characteristics of all clients on Dual therapy at BBCCCOE.
Methods: A retrospective chart review of all clients on Dual Therapy since June 2024, was conducted using the electronic medical record (EMRx). Demographic, clinical and laboratory data was collected. The first client at BBCCCOE was initiated in June 2024.
Results: A total of 45 (28 males [62%], 17 females [38%]) ranging from 13 to 84 years were identified (n =45). 44 (98%) maintained an undetectable viral load of less than 200 copies/ml and a CD4 count of above 350 since initiation. The reasons attributed for switching to dual therapy were rising Creatinine levels without co-morbidities (20 [44%]), hypertension (8 [18%]), chronic kidney disease (5[12%]), acute kidney disease (1 [2%]) and fanconi syndrome (1[2%]). 10 (22%) were also switched due to drug stock-outs. After switching, 35 clients (78%) experienced a drop in Creatinine levels helping improve renal function while those switched for drug stock out reasons, reported little to no change in their Creatinine. 1 (2%) reported side effects (itching and myalgia) to Dual Therapy and a switch back to a Tenofovir alafenamide (TAF) based regimen.
The results appear to suggest that dual therapy was very well tolerated and optimal for those with renal disease with or without other comorbidities. However, given the relatively small sample size, more studies involving multiple centres, diverse age groups, other co-morbidities and statistical analyses will be necessary to appreciate these findings better.
Conclusion: Dual therapy was well tolerated by clients (from 13 to 84 years) at BBCCCOE and its safety among the aging and those with renal problems make it ideal. With the increasing popularity and availability of injectables, dual therapy may potentially become the mainstay of ART in Botswana among those who prefer tablets.



24: Low-Tech Optimization for Program Management in Botswana for Adolescents Living with HIV

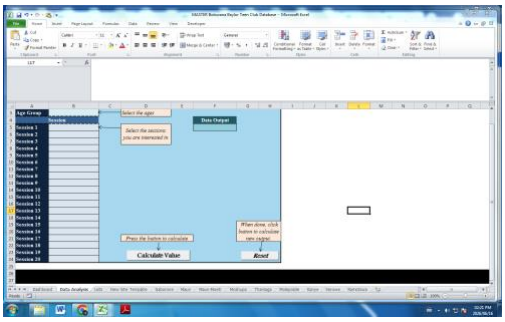
Evan Hall, Kenneth Katse, Mogomotsi matshaba

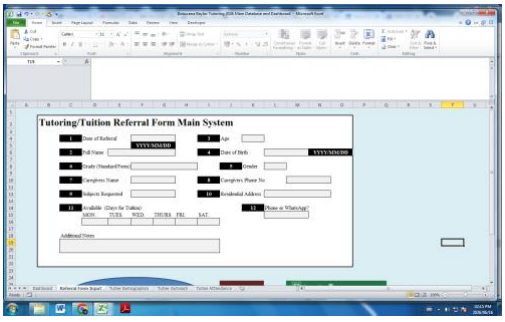
Background:
The Adolescent Centre at Botswana-Baylor Children's Clinical Centre of Excellence in Gaborone oversees several non-clinical programming offerings to youth and adolescents living with HIV and relevant training for healthcare personnel. Collecting and reporting relevant data for these programmes is essential to sustaining and growing program objectives and maintaining functional operations. Even so, there is limited funding and technical assistance to establish a robust dashboard in Botswana. The objective of this initiative through these programmes was to generate low-tech optimization that increased accessibility of monitoring and complied with strict data privacy laws in Botswana.
Description:
Utilizing existing software through Microsoft Excel compatible with clinic desktops, separate dashboards and interfaces were created for each programmes's unique needs. For programmes that required consent forms, a digitized system allowed for electronic input and secure storage for clinic personnel reference. In addition, attendance data was streamlined with standardized formatting and VBA Macro code to generate relevant data points in real time for reports and monitoring. These systems were implemented for Teen Club, tutoring, and volunteer programmes.
Lessons Learned:

There was a greater increase in efficiency and accuracy when reporting for programmatic data along with easy real-time assessment of programme impact, including attendance, trends, and recruitment levels. A primary benefit of such dashboards are their low-cost implementation, low-tech alignment, and overall security through password protection and encryption. The creation of these macrosystems have also allowed for sustainable assessment of program growth by assessing through consistent formulas and data input standards. While the creation of these dashboards confer a high degree of technical familiarity with Excel, once fluency is obtained, these systems can be created quickly and with robust outcomes.

Next Steps:

As programmes are increasingly resource constrained, the ability to monitor and maintain programme operational visibility is essential. By identifying and optimizing low-tech solutions, other low-resource settings may benefit from implementing similar dashboard systems for their monitoring and evaluation divisions. Our next steps aim to develop technical guides and comprehensive training modules that will increase staff awareness and utilizations of such systems, which ultimately improve on healthcare delivery.





76: Strengthening Palliative Care Clinic at the Paediatric Oncology Unit at Botswana-Baylor Clinical Centre of Excellence, Gaborone, Botswana

Ludo molwantwa, Thato Kaang, Sewelo Sosome, Abhilash SATHYAMOORTHI, mogomotsi matshaba

Background:

The Paediatric haematology and oncology (PHO) department cares for patients requiring palliative care. In principle, all patients must be enrolled in palliative care from the time of diagnosis and escalated to end of life care, at the appopriate time. Palliative care comprises a holistic approach to managing a patient's diagnosis taking into account the physical, psychological, social and spiritual components. The purpose of the Palliative Care clinic was to enroll patient families requiring palliative care, carrying out full assessment with a goal of de-stigmatizing palliative care and ensuring holistic patient care.

Description:

In 2025, Botswana Baylor Clinical Centre of Excellence (BBBCCOE) embarked in enhancing its PHO Palliative clinical service. This included establishing a weekly clinic for either the inpatient or outpatient clients. Wednesday afternoons were chosen and the venue was the PHO ward office room at Sir Ketumile Masire Teaching Hospital. The team members consisted of a Paediatrician with a special interest in palliative care, social worker and occasionally a nurse. Close family members, specifically primary caregivers of patients, and other relatives would be invited.
A comprehensive palliative assessment would be conducted including advanced care planning for end of life preparation. Social care was also installed that helped liaise families with local social workers once they were placed on homebased care.

Lessons learned:

10 families were assessed with some requiring follow-up sessions with both the social worker and clinician. Families were initially apprehensive when the term palliative care was introduced. However, following a detailed explanation that discussed the support being provided, it alleviated anxiety and allowed them to open up and speak freely.
Grievances were often voiced during the initial phases but as acceptance and understanding of the illness improved, most families were appreciative of the service. Furthermore, active listening and the encouragement of spiritual support was much appreciated by families. The end-of-life advanced care planning yielded acceptance from most families when the transition transpired.

Next steps:

The proposed steps, looking ahead, would involve a formal a validated questionnaire to assess the impact of the clinic on the affected families. Given the vocal appreciation for the Palliative Care Clinic, the style of communication and provision of health information including the linkage to other services leading to community owned care the hope is to be able to extend its successful principles to general paediatrics clinics in the hope of providing high quality care given to all patients in the future.

152: Increasing Computer-Aided Tuberculosis Detection Through Workflow Innovation and Quality Improvement

Florence Anabwani-Richter, Debrah Vambe-Ruswa, Alexander Kay

Increasing Computer-Aided Tuberculosis Detection Through Workflow Innovation and Quality Improvement

Florence Anabwani-Richter1, Debrah Vambe-Ruswa1, Alexander Kay1,2
1. Baylor College of Medicine Children's Foundation – Eswatini, Mbabane, Eswatini 2. The Global Tuberculosis Program, Texas Children's Hospital, Section of Global and Immigrant Health, Department of Pediatrics, Baylor College of Medicine, Houston, Texas, United States

Purpose:

Computer-Aided Tuberculosis Detection Using Artificial Intelligence (CAD-AI) is recommended for TB screening in people with HIV (PWH) and has recently been introduced in Eswatini, a high TB-HIV burden country. Uptake of CAD-AI at the Baylor Children's Foundation family-centered HIV-TB clinic was slower than anticipated, triggering a quality improvement initiative. Our objective was to describe a quality improvement intervention as a model for other HIV-oriented health facilities introducing CAD-AI into TB screening and diagnostic algorithms.

Methods:

Using a Key Driver Diagram, we targeted three primary drivers: streamlined radiology–TB workflow, triage-led CAD-AI ordering, and completion of the post-CAD-AI screening and diagnostic cascade. Across three Plan–Do–Study–Act (PDSA) cycles, we mapped workflows, integrated a CAD-AI module and QuickView dashboard into the clinic electronic medical record (EMR), implemented triage-led CAD-AI ordering, standardized CAD-AI score capture, and streamlined radiology to TB diagnostic patient flow. Asymptomatic PWH ≥15 years of age without a CAD-AI screen within 12 months,

and all symptomatic PWH were eligible. CAD-AI scores ≥10 were considered positive to support national threshold setting.

Results:

Over an 11-month implementation period (June 2025–May 2026), 1,573 of 2,177 (72%) eligible PWH underwent CAD-AI screening. 1335 (85%) had scores <10, indicating low TB probability, while 238 (15%) scored ≥10 requiring further workup using GeneXpert (GXP) or TB lipoarabinomannan (TB-LAM). 26 (2%) were diagnosed with TB and initiated treatment, with 11 (42%) being asymptomatic patients who may have otherwise gone undetected. Our run chart (Figure 1) demonstrates that clients screened with CAD-AI increased following electronic medical record module integration and triage-led initiation in PDSA-1. Ongoing improvements in clients per month screened with CAD-AI, as well as CAD-AI score documentation, real-time CAD-AI result visualization, and reductions in TB diagnostic delays were achieved in PDSA 2 and 3.

Discussion:

Focusing on uptake as the primary improvement variable demonstrated that digital tools alone were insufficient without workflow integration. Embedding CAD-AI within electronic medical records, capacitating triage to initiate CAD-AI screening, and improving data governance increased screening coverage and enabled timely TB detection. This QI approach illustrates strategies for optimizing utilization of CAD-AI in resource-limited settings.

Figure 1: Quality Improvement (QI) run chart depicting progressive increase in CAD-AI uptake across sequential PDSA cycles between June 2025 and May 2026



175: Pulmonary Trajectories and Immunological Correlates in Post-Tuberculosis Lung Disease: A Prospective Cohort Study

Babongile Blisset Nkala, Abigail Seeger, Jodie Ashford, Cristian Coarfa, Debrah Vambe, Alexander Kay, Siphiwe Ngwenya, Nkulungwane Mthethwa, Ntsiki Sikhondze, Anna Mandalakas, Andrew R. DiNardo

Background: Post-tuberculosis lung disease (PTLD) is common but remains inadequately characterized particularly, in sub-Saharan Africa where the dual burden of Tuberculosis and HIV further increases the risk of developing the condition. Despite microbiologic cure, persistent lung damage contributes to reduced quality of life, increased cardiovascular risk, and premature mortality.

Methods: The study prospectively enrolled 201 microbiologically confirmed TB participants in Eswatini between December 2023 and February 2025. Spirometry was performed at baseline, end of treatment (EOT), and 12 months, with acceptable and good quality measurements included in the analysis. Lung function outcomes were defined using Global Lung Initiative (GLI) Z-scores: obstruction (FEV_1/FVC Z-score < −1.645), restriction (FVC Z-score < −1.645), and clinically significant decline (≥40 mL loss). Lung age was estimated using the Morris and Temple equation. End-of-treatment cytokine concentrations (unstimulated and mitogen-stimulated Log_2 fold-change) were correlated with EOT spirometric outcomes using Spearman correlation.

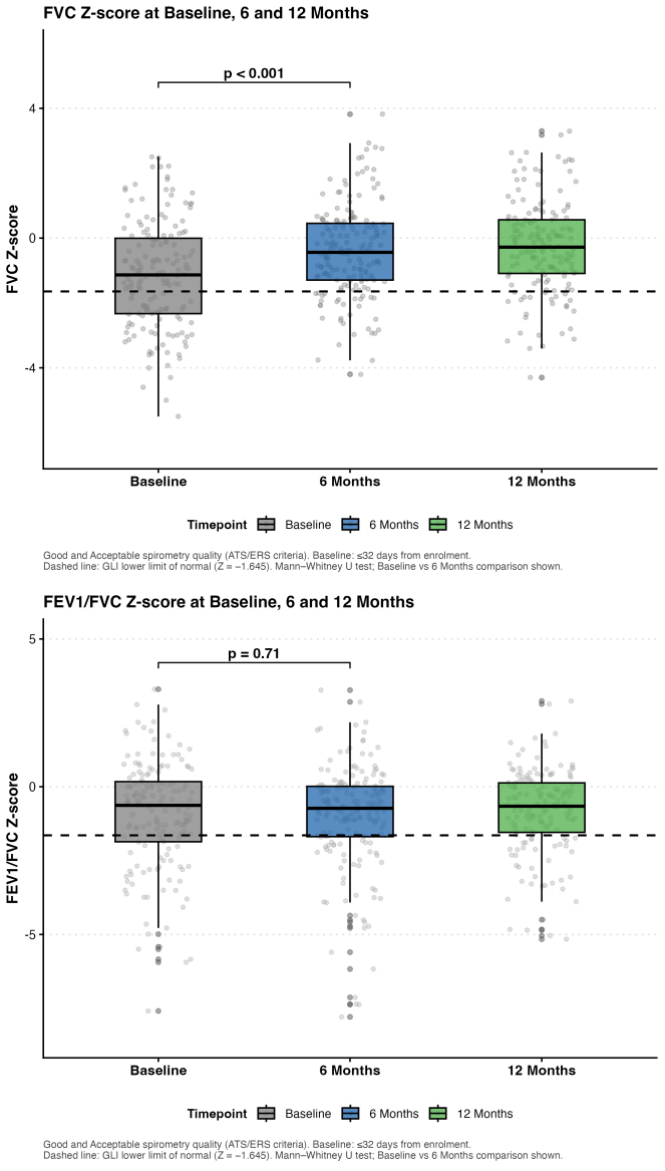
Results: Worsening lung function: At EOT, 27.6% of participants had obstructive spirometry (FEV_1/FVC Z-score < −1.645) and 18.9% had restrictive spirometry (FVC Z-score < −1.645). Clinically significant FEV_1 and FVC decline (≥40 mL) occurred in 20.9% of participants between baseline and EOT, rising to 31.9% and 28.8% respectively between EOT and 12 months, indicating progressive lung function deterioration continues beyond treatment completion.

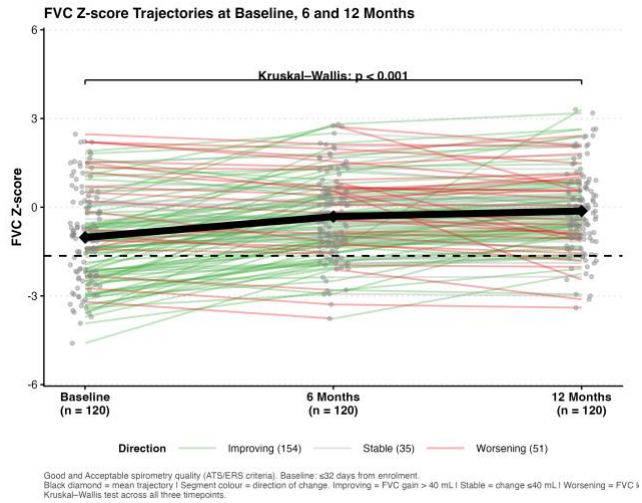
Lung age substantially exceeded chronological age at all three timepoints (median chronologic age 36 years vs median baseline lung age of 103 years vs 91 years at 6 months and 90 years at 12 months; Mann whitney p-value < 0.001), reflecting accelerated pulmonary ageing that persists after antimicrobial cure.

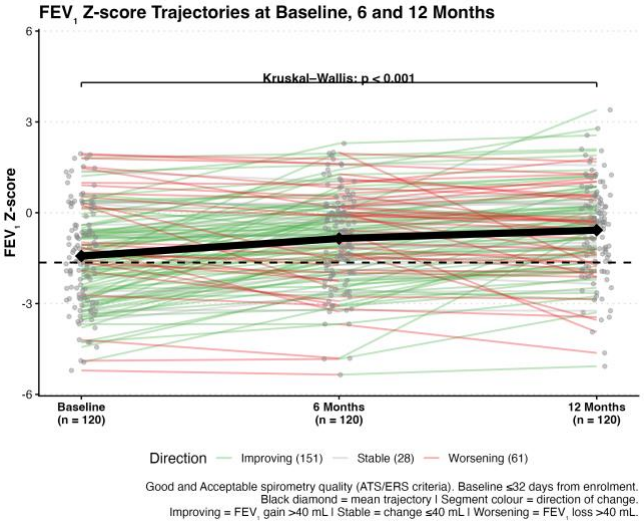
End-of-treatment cytokine profiles were associated with EOT lung function. Elevated Log_2FC IL-6 and IFN-γ at 6 months were negatively correlated with EOT FEV_1/FVC Z-score ($p < 0.1$), with participants meeting criteria for obstructive spirometry demonstrating higher stimulation-index responses, demonstrating that persistent immune activation is a contributor to post-treatment airflow obstruction.

In multivariable logistic regression, older age (OR 1.04 per year, 95% CI 1.01–1.07; p = 0.016) and baseline obstructive spirometry (OR 7.28, 95% CI 3.19–17.47; p < 0.001) independently predicted EOT obstruction. Baseline restrictive spirometry was the dominant predictor of EOT restriction (OR 105.45, 95% CI 13.05–13,723; p < 0.001).

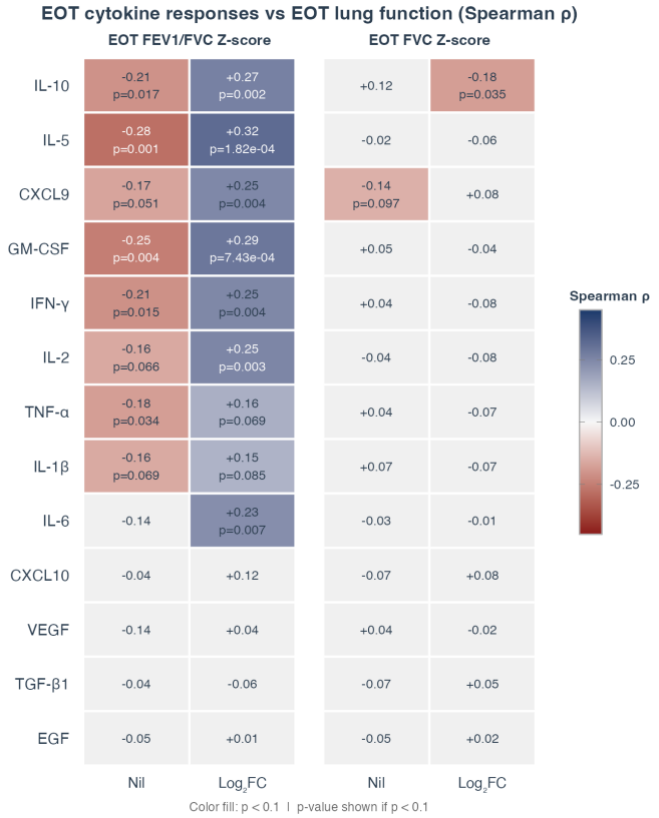
Conclusions: Concerningly, >30% of TB patients with successful antimicrobial therapy have progressive lung damage extending beyond the end of treatment. Long-term follow up remains essential for all successfully treated TB patients.











174: Integrating Post-TB Lung Disease (PTLD) into Clinical Care in Eswatini: From Research to Policy

Debrah Vambe, Babongile Nkala, Ntsiki Sikhondze, Nkulungwane Mthethwa, Alexander Kay, Anna Mandalakas, Siphiwe Ngwenya, Ntombifuthi Ginindza, Christoph Lange, Andrew DiNardo

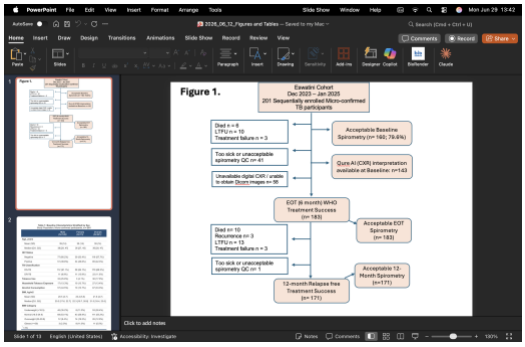
Background: While TB cure remains the primary programmatic goal, over half of TB survivors develop Post-TB Lung Disease (PTLD), resulting in reduced quality of life and increased mortality. In Eswatini, a high TB/HIV-burden setting, the burden of PTLD was previously unquantified, and no formal care framework existed. This study aimed to characterize post-TB lung impairment and translate the findings into national policy and programmatic guidance.

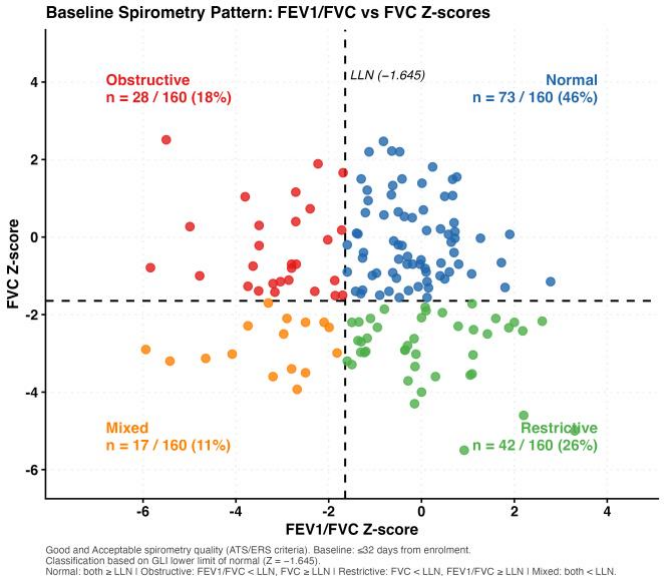
Description: Implemented across six health facilities in Eswatini, the study paired health-system engagement with prospective clinical characterization of TB survivors. Stakeholder sensitization with the National TB Control Program (NTCP) and Non-Communicable Disease (NCD) Program began in May 2023, followed by broader engagement in October 2023. Health workers from the six facilities were trained on spirometry between November 2023 and February 2024. A prospective cohort enrolled 201 bacteriologically confirmed TB patients[1], with pulmonary function tests (PFTs) and chest X-rays conducted at baseline, six months (end of treatment), and 12 months. Determining the magnitude of PTLD in the country and key interventions were incorporated into the National TB Strategic Plan (2024–2028). A multi-sector strategy of over 24 consultative meetings culminated in a national consensus meeting in November 2025 with interest to discuss preliminary findings.

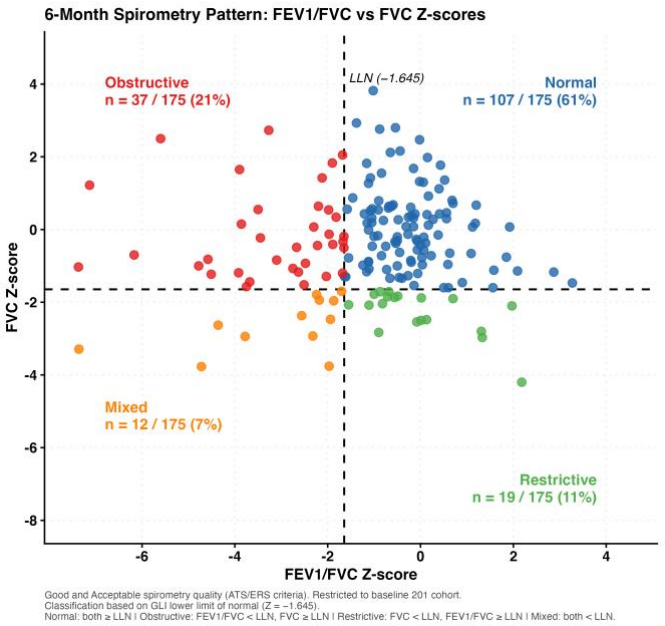
Lessons learned: Spirometry proved feasible in clinical settings, completed by 93% (187/201) of participants at baseline, 86% (172/201) at six months, and 79% (159/201) at 12 months. At six months, 38% showed impaired lung function: 21% (37/173) obstructive, 10% (17/173) restrictive, and 7% (12/173) mixed. Visible fibrosis rose from 22.1% at baseline to 51% at month six, indicating structural damage persists despite successful treatment, though

younger patients recovered better. These findings directly informed the 2025 Eswatini National Integrated TB Management Guidelines, which now recommend PFT screening at baseline, month two and at treatment completion, with referral pathways for pulmonary rehabilitation and integrated TB/HIV/NCD care. Coordinated TB/NCD collaboration was essential to translating evidence into policy.

Next steps: With investment in training and equipment, spirometry can be scaled into routine post-TB care nationally. Implementing the new referral pathways and integrated TB/HIV/NCD services will help ensure TB survivors achieve long-term respiratory health, not only treatment completion. Continued monitoring will track program impact and guide national scale-up.







131: Bridging the Gap between Evidence and Youth HIV Practice: Introduction of Implementation Science into the Family Nurse Practitioner Program at the University of Eswatini

Kwatekai Lockhart, Phumzile Dlamini, Bonisile Nsibandze, Debrah Vambe, Alexander Kai

Background:

Eswatini continues to be listed among the highly HIV-burdened countries. Preparation of advanced practice nurses is a key strategy to improve adolescent HIV care and prevention. In 2017, the University of Eswatini (UNESWA) established a three-year part-time Master of Nursing Science in Family Nurse Practice (FNP) to meet growing healthcare demands. The program prepares nurses for advanced primary healthcare roles and emphasises leadership, research, and policy influence in a nurse-led health system. Our project sought to expand FNP exposure to implementation science (IS) to enhance their response to gaps in adolescent HIV prevention and care.

Description:

As part of the Local Implementation Science Network (LISN), the FNP curriculum was analysed for IS-related gaps, and the National Research Agenda (NRA) was reviewed to identify opportunities for youth-oriented IS. IS training was then integrated into the FNP program as a new workshop module focusing on IS methodology to improve youth HIV prevention and care. Stakeholder and alliance member meetings guided the development of training materials and practicum components, ensuring alignment with the NRA and tailoring content to a youth-focused curriculum. HIV peer leaders from health facilities and the community participated to share experiences and inform the design of IS projects.

Lessons learned:

The assessment identified gaps in youth-focused HIV prevention, including limited multidisciplinary collaboration and insufficient scale-up of PrEP and HIV services for adolescents. These findings informed a five-day intensive pilot IS training workshop (40 hours) that combined didactic sessions, evidence-based interventions, case studies, and practical tools. A total of 14 participants (eight nurses and six HIV peer leaders) were trained. IS projects were developed using IS frameworks across three groups focused on prevention, loss to follow-up, and mental health, involving adolescent peer leaders and FNP students.

Next Steps:

Integrating IS into the FNP curriculum demonstrated strong collaboration among stakeholders and UNESWA. As an elective course, it helped FNPs and HIV peer leaders understand key IS concepts and identify barriers that hinder translation of evidence-based practice into real-world settings. This initiative can help build a sustainable cadre of implementation scientists to improve youth-focused HIV prevention and care, while involving HIV peer leaders strengthens acceptability and adoption of interventions. FNPs will continue to serve as mentors and change agents addressing barriers in HIV prevention and care, and the IS course will be formally incorporated into the curriculum as an elective or core component.

197: PrEP Uptake Following Introduction of Long-Acting PrEP Options (Cabotegravir and Lenacapavir) in Lesotho

Motlatsi Letsika, Roto None, Ntaoleng Mohlabane, Mosa Molapo Hlasoa

Background: HIV prevention remains a cornerstone of global efforts to reduce new HIV infections. Identifying individuals at substantial risk of HIV and offering tailored prevention options is essential for epidemic control. In Lesotho, prior to 2025, HIV prevention options included condoms, behavioral change interventions, oral pre-exposure prophylaxis (PrEP), and the Dapivirine vaginal ring. Despite these options, program data from FY2024 indicated a low national PrEP uptake of 38%, potentially due to limited choice and barriers associated with daily or short-acting methods.

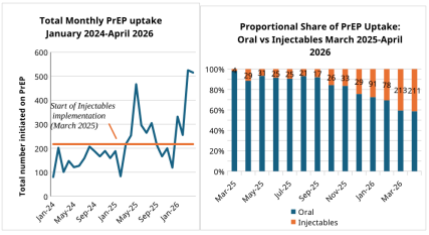
Introduction Two long-acting PrEP methods, Cabotegravir long-acting injectable (CAB-LA) and Lenacapavir injection (LEN) were introduced nationally in March 2025 and February 2026 respectively, at selected sites. Expanded PrEP choice has the potential to improve uptake by aligning prevention methods more closely with client lifestyles, preferences, and adherence capabilities. Baylor Lesotho is implementing community based comprehensive HIV prevention programming aimed at sustaining the HIV epidemic control gains that the country has already achieved. PrEP is offered across different population groups in the CDC-funded CoHip-SEC project's four implementation districts, alongside additional prevention services.

Objective: To describe PrEP uptake in Lesotho following the national introduction of CAB-LA and Lenacapavir and to compare uptake patterns between March–April 2024/25 and March–April 2025/26.

Methods: We analyzed programmatic PrEP data from March–April 2024/25 compared to March–April in 2025/26. The analysis focused on changes in PrEP uptake and explored whether the availability of additional long-acting options was associated with increased PrEP initiation.

Results: Program data showed consistently low PrEP uptake from January 2024 to March 2025, before the introduction of injectable PrEP. Following the introduction of long-acting injectable PrEP options, uptake increased sharply from March 2025 through April 2026. However, a decline observed between March and April 2026 may have been associated with stock-outs of injectable PrEP options, while oral PrEP remained adequately stocked.

Conclusion The introduction of additional PrEP options appears to be an important factor in improving PrEP uptake in Lesotho. Although uptake may also have been influenced by other factors, including intensified demand creation activities and increased public awareness, the observed increase suggests that expanding prevention choices can better meet clients' preferences, lifestyles, and adherence needs. Ensuring consistent availability of all PrEP options, particularly long-acting methods, will be critical to sustaining uptake and strengthening HIV prevention across population groups.



61: Bridging the Gap in Viral Load Monitoring Coverage Among Children, Pregnant and Breastfeeding Women on Antiretroviral Therapy in Phalombe, Malawi.

Andrew Sulani, Albert Kaonga, Tapiwa Tembo, Elizabeth Wetzel, Felix Joshua, Enock Mbalati, Robert Majoni, Carrie M. Cox, Katherine R. Simon

Background:

Viral load (VL) monitoring is essential for assessing Antiretroviral Therapy (ART) effectiveness among people living with HIV (PLHIV). Malawi HIV guidelines recommend VL testing every 6 months for children on pediatric ART regimens and pregnant and breastfeeding women (PBFW), and every 12 months for those on adult ART regimens to facilitate timely clinical interventions. Despite this guidance, there are missed opportunities for VL collection. We describe the results of an audit-guided intervention to close VL monitoring gaps by identifying those with missed or delayed testing milestones and flagging health records for catch-up VL collection.

Description:

We abstracted VL collection data from the national Electronic Medical Record (EMR) for children 0-19 years, PBFW on ART receiving care at 14 health facilities in Phalombe District, Malawi, from April – June 2025 to establish baseline VL coverage and guide targeted catch-up interventions. For children on pediatric regimens and PBFW, VL collection was classified as on time (0–6 months since last collection), slightly overdue (7–9 months, still appropriate for guiding clinical interventions) and overdue (>10 months). For youth on adult regimens, classification was on time (0–12 months), slightly overdue (13–18 months), and overdue (>18 months). Health records were reviewed before and during ART clinics and across service delivery points (ART, outpatient, and maternity) to identify clients due for VL testing and flag overdue clients for community health worker (CHW) tracing. VL-focused health talks were given to clients, caregivers, and CHWs and clinical staff received mentorship during supportive supervision. Progress was monitored quarterly with repeated cohort audits.

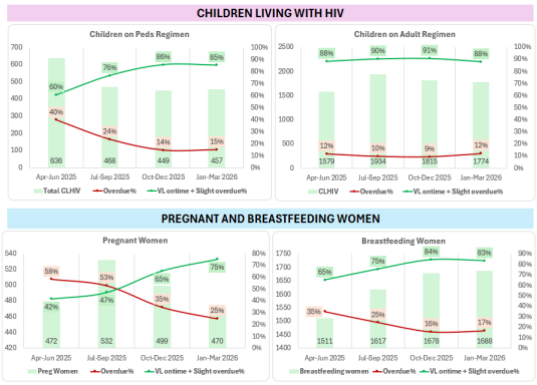
Lessons learned:

At baseline (April–June 2025), 40% (252/636) of children on pediatric regimens, 12% (188/1579) of children on adult regimens, 58% (275/472) of pregnant women and 35% (527/1511) of breastfeeding women had overdue VL. By the March 2026 audit, catch-up collection resulted in improvement in nearly all groups, with 15% (68/457) of children on pediatric regimens, 12% (216/1774) of youth on adult regimens, 25% (117/470) of pregnant women, and 17% (281/1688) of breastfeeding women remaining in follow-up for overdue VL.

Graphs below show the trend of the quarterly audit from the baseline April – June 2025 to Jan – March 2026.

Next Steps:

An audit-guided intervention identified gaps in VL monitoring coverage and led to improvements in VL coverage. Continued efforts are needed to close remaining gaps and ensure that all eligible children, pregnant women, and breastfeeding women receive timely VL testing.



114: CERVICAL CANCER SCREENING ON WOMEN OF REPRODUCTIVE AGE UNEARTHING SILENT GYNAECOLOGICAL CONDITIONS AT BAYLOR FOUNDATION MALAWI COE.

Moses Tambala, Menard Bvumbwe, Ellen Phiri, Louis Kaluso Nyasulu
Moses Tambala 1 Menard Bvumbwe 2 Ellen Phiri 3 Louis Kaluso Nyasulu4

BACKGROUND: The cervical cancer screening program at the Baylor Foundation Malawi Centre of Excellence (COE) plays a vital role in women's health. By integrating it with comprehensive HIV and reproductive health services, other previously silent conditions are identified that women may not otherwise have sought medical care for. Cervical cancer screening is recommended from 25 years of age; however, as a Centre of Excellence, screening is offered from age 20 at the client's request, given that this group may also be at higher risk of HPV infection. This review aimed to describe gynaecological conditions identified incidentally during cervical cancer screening over a six-month period.

METHOD

Routine program data was extracted retrospectively from the Cervical Cancer Screening Register over a six-month period, spanning from November 2025 to May 2026. Clients who underwent HPV DNA testing were excluded, as this method does not involve a speculum examination.

RESULTS: A total of 37 women were screened using Visual Inspection with Acetic Acid (VIA). Of these, 30 (81%) tested negative and 6 (16%) tested positive for precancerous lesions.

Among the 37 women, 12 (32%) presented with other gynaecological conditions, as follows: cervicitis (5), extensive genital warts (4), genital ulcer disease (1), lower abdominal pain (1), and candidiasis (1).

All clients received treatment for sexually transmitted infections, except for the 4 with extensive genital warts, who were referred for cauterization.

CONCLUSION: A substantial proportion of women screened for cervical cancer had other gynaecological conditions that would otherwise have gone undiagnosed. This highlights a missed opportunity among clients who undergo HPV DNA testing alone, as it does not involve speculum or pelvic examination. Cervical cancer screening awareness messages should therefore include information on the identification of other gynecological conditions.

161: Strengthening Appointment Adherence and Readiness for Transition to Adult HIV Care Through an Adolescent-Centered Transitional Clinic: Experience from Baylor Foundation Malawi

Hazel Lakudzala, Kelvin Jobo, Emily Mwase

Background: Adolescents living with HIV (ALHIV) often experience challenges in remaining engaged in HIV care and successfully transitioning from pediatric to adult HIV services. Inadequate transition preparation may result in poor appointment adherence, loss to follow-up, suboptimal treatment adherence, and adverse health outcomes. Developmentally appropriate transition programs can enhance self-management skills and prepare adolescents for independent care. This study evaluated the effectiveness of the Baylor Foundation Malawi Transitional HIV Clinic in improving appointment adherence and readiness for transition to adult HIV services among adolescents aged 16–19 years.

Methods: A qualitative case study was conducted among 70 ALHIV enrolled in the Baylor Transitional HIV Clinic between January and December 2025. The clinic provides comprehensive adolescent-centered transition services, including HIV treatment literacy, transition readiness education, adherence and psychosocial counselling, peer support, life-skills training, sexual and reproductive health education, recreational activities, and mentorship from healthcare workers and peer champions. These interventions are designed to strengthen treatment adherence, self-management, disclosure confidence, appointment keeping, and independent navigation of adult HIV services. Data were collected using structured questionnaires, focus group discussions, and key informant interviews with healthcare providers. Participants shared experiences regarding clinic participation, antiretroviral therapy (ART) self-management, appointment adherence, and preparedness for transition. Qualitative data were analyzed thematically.

Results: Of the 70 adolescents enrolled, more than 90% consistently attended their scheduled clinic appointments throughout the study period, demonstrating strong retention in care. Participants reported improved knowledge of HIV, ART, and the importance of lifelong treatment. Over 85% expressed confidence in independently managing their medications and clinic appointments, while the majority felt adequately prepared to transition to adult HIV services. Peer support groups and interactive discussions promoted shared learning, reduced stigma and social isolation, and enhanced psychosocial well-being. Healthcare providers observed notable improvements in adolescents' treatment literacy, self-advocacy, decision-making, personal responsibility, and overall maturity. High attendance and active participation reflected increased engagement in care and commitment to treatment.

Conclusion: The Baylor Transitional HIV Clinic may effectively improve appointment adherence, engagement in care, self-management skills, and readiness for transition to adult HIV services among ALHIV. Adolescent-centered transition models can strengthen continuity of care, improve long-term treatment outcomes, and reduce loss to follow-up. Further research should evaluate post-transition retention, ART adherence, and viral suppression, while assessing the feasibility of scaling up similar transition models in resource-limited settings.

193: Scale-up of Human Papillomavirus Screening Among Women Living with HIV in Suburban Lilongwe, Malawi

Fraser Tembo, Smith Chipapa, Chisomo Zinyemba, Mathews Katamabale, Blair Sibale, Chikondi Chiweza

Background: Cervical cancer remains the most common cancer among Malawian women of reproductive age, with high-risk human papillomavirus (HPV) as the primary cause. To improve early detection and treatment of cervical cancer, Malawi's Cervical Cancer Prevention Programme (CECAP) adopted HPV triage in addition to Visual Inspection with Acetic Acid (VIA) for women ages 25-49, in line with 2021 WHO recommendations. We describe implementation of HPV screening among women living with HIV in Lilongwe district, a suburban setting where HPV testing remains limited.

Description: In May 2025, coordination with the Ministry of Health and District CECAP Coordinator, four facilities with lab capacity and VIA-trained staff started HPV triage. Implementation included: (1) Clinical and laboratory staff training on HPV specimen collection, processing, and result interpretation; (2) Delivery of HPV test kits,

preservatives, cartridges and documentation tools; (3) facility staff sensitization meetings on HPV triage; (4) lay cadres mentorship on HPV referral and follow-up to maximize CECAP screening completion (5) intensified health talk frequency and updated CECAP/HPV flip charts. On ART clinic days, eligible women received group HPV and sample self-collection instructions before self-collecting HPV samples privately in ~5 minutes. Evaluation and Outcomes:
Routine program data from May 2025 to May 2026 was evaluated. In total, 1733 were screened with HPV DNA tests (Mean age 37 years and SD 9). Of 1733, 86% (1496/1733) women completed screening. Nearly 1/2 of tests were HPV positive (46%, n=789/1733). About 3/4 of women with HPV+ results had VIA (70%, n=556/789) and 75 women with precancerous lesions were diagnosed. 49 were eligible for thermocoagulation and got treatment and 25 were referred for further care. Overall screening data are summarized in Table 1
Lessons Learned: Self-collected HPV testing demonstrates potential for scale-up using existing facility staff if testing materials are consistently available. However, long-term sustainability remains a challenge due to constraints related to human resources, costs and supply chain reliability. With HPV triage, CECAP-trained nurses can focus on screening women with HPV+ results.
Next Steps: Next steps focus on advocating with MoH and partners to secure a dedicated, uninterrupted HPV test kit supply chain, Mentorship for VIA providers and lab collaboration aim to reduce HPV test turnaround time for same-day completion. Site expansion depends on resource availability.

HPV SCREENING FOR WOMEN LIVING WITH HIV MAY 2025 TO MAY 2026

Facility	HPV tests	HPV positive (%)	VIA Done	VIA Positive (%)	Completed CECAP screening
Area 25 Community Hospital	1419	635(45%)	452	60	1236
Lumbadzi Health Centre	287	142(49%)	98	15	243
Bang'ombe Health Centre	23	12(52%)	6	0	17
Chiwamba Health Centre	4	0	0	0	0
Total	**1733**	**789(46%)**	**556**	**75(13%)**	**1496**

35: STRENGTHENING EARLY PATIENT IDENTIFICATION, REFERRAL, AND TRACKING OF CHILDREN WITH SUSPECTED CANCER IN MALAWI, USING A DIGITAL PLATFORM

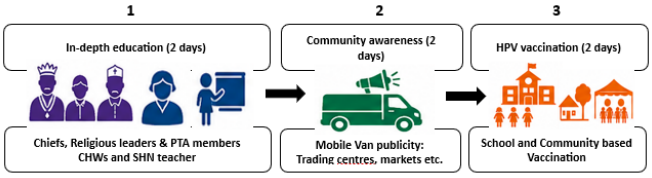
Samuel Makuti, Fatsani Manase, Noel Mwango, Amos Makoza, Constance Nyasulu, Stuart Kalirani, Lexa Chandidya, Rizine Mzikamanda, Nmazuo Ozuah

STRENGTHENING EARLY PATIENT IDENTIFICATION, REFERRAL, AND TRACKING OF CHILDREN WITH SUSPECTED CANCER IN MALAWI, USING A DIGITAL PLATFORM
Background and Aims
In resource-limited countries like Malawi, delayed recognition of childhood cancer, weak referral pathways, and poor patient follow-up contribute to late diagnosis and failure to complete therapy. Mkono is a smartphone and web digital platform that supports early symptom identification, prompt referral, and tracking of children with suspected cancers irrespective of where they live. Mkono leverages community-based health care workers (HCWs) such as Health Surveillance Assistants (HSAs), and Community Nurses (CN) to improve referral for childhood cancers. We report preliminary results from a pilot study of Mkono in Malawi.
Methods: Training of HCWs through didactic lectures, community awareness activities and educational resources on the Mkono platform were completed in two districts of Malawi – Salima and Mzimba, from January to February 2026. Pre- and post-training assessments were conducted among 167 users of Mkono. Specifically designed tools were used to assess knowledge of childhood cancer warning signs, confidence in identifying suspected cases, perceived ease of follow-up of referred patients, and acceptability of the platform. Data is reported using descriptive statistics.
Results: User knowledge and confidence levels improved substantially following training. The proportion of respondents who felt confident or very confident in identifying warning signs increased from 57% pre-training to 100% post-training, and from 16% to 81% respectively. Before the training, only 15% reported confidence with patient follow-up, and post-training this proportion increased to 100%. Of all respondents, 99% indicated they would recommend Mkono to other HCWs. Over 2 months, 34 suspected pediatric cancer cases have been entered into the platform.
Conclusions: Preliminary findings suggest that Mkono digital platform is feasible, acceptable, and showing early uptake among health workers, with promise to improve identification, referral, and tracking of children with suspected cancer in Malawi.

180: Bridging the Missed Opportunity Gap: A Community-Linked Approach to Improve Human papillomavirus (HPV) Vaccination Uptake in Rural Malawi.

Mathews Katambalale, Smith Chipapa, Fraser Tembo, Chisomo Zinyemba, Chikondi Chiweza

Background: Cervical cancer is caused by Human papillomavirus (HPV). The World Health Organization recommends HPV vaccination of girls as the primary prevention for cervical cancer. The goal is for 90% of eligible girls to be vaccinated by 2030. Malawi provides a single-dose HPV vaccine targeting 9-year-old girls. Missed eligible girls (ages 9-14) are expected to be vaccinated at any point of contact. However, HPV vaccination coverage remains suboptimal (~46%), resulting in missed opportunities especially among out-of-school girls. Barriers to vaccination include vaccine hesitancy due to safety concerns and misconceptions, such as fears about infertility, limited knowledge and awareness of the HPV vaccine, and challenges with vaccine access. We implemented a community-linked approach to improve HPV vaccine uptake among eligible girls across Baylor Foundation Malawi supported health facilities.
Description: Between May 2025 and May 2026, we partnered with the Ministry of Health - Expanded Programme on Immunization (EPI) to promote HPV vaccine awareness and uptake through support of specific vaccination campaigns in our catchment area of all four health facilities: Area 25 Community Hospital, Lumbadzi, M'bangombe, and Chiwamba Health Centres. The vaccine was provided by EPI with support from partners including Gavi, UNICEF, and WHO, and we supported Community Health Workers (CHWs) to efficiently administer the vaccine. Our approach used In-depth education with community gatekeepers, Health Surveillance Assistants (HSAs), and School Health and Nutrition (SHN) teachers on cervical cancer, Community awareness using a Mobile Van, and HPV vaccination in Schools and Communities.
Lessons learned: Three vaccination campaigns were successfully supported over the one-year period. A total of 8,469 eligible girls were vaccinated in both schools and communities. 92 community gatekeepers and 182 HSAs and SHN teachers were trained through in-depth education. The mobile van reached 25,963 people in the community through sensitization activities. The engagement with community gatekeepers, HSAs and SHN teachers played a big role in demand creation and improved vaccine uptake. School-based sessions reached the majority of eligible girls, while mop-up community vaccination successfully identified and vaccinated out-of-school girls, girls missed during school sessions, and nomadic populations.
Next steps: To conduct a follow-up Knowledge, Attitudes, and Practices (KAP) study among groups who were educated and communities reached to determine which components of the approach were most effective in improving vaccine uptake.



42: Smart Timesheet: Reducing Errors and Effort, Transforming Workforce Management Through Digital Timesheet Solutions at Baylor Foundation Malawi

Aubrey Chirwa, Solomon Tchaya, Jacob Todd, Joseph Mhango, Phoebe Nyasulu

Background: Baylor Foundation Malawi, with approximately 1,208 staff across four service lines, relied on a paper-based timesheet system since its establishment in 2006. The manual process resulted in inefficiencies, including delays in completion and approval, challenges in tracking submissions, data-entry errors, and increased printing and storage costs. Attempts to automate timesheet management using ARUTI and Sage300 between 2022 and 2024 were unsuccessful due to limitations in allocating work hours by budget line and restricted access outside the local network. This abstract describes Smart Timesheet, a digital solution developed by the Foundation's ICT department to improve workforce efficiency and support operations amid ongoing funding cuts.

Description Smart Timesheet is a web-based application developed by the Baylor-Malawi ICT department. The application integrates with existing human resources and finance systems that the foundation was already using. It was developed using open-source software and installed on existing hardware. It is currently being used to manage employee attendance records by automating monthly timesheets. It features a user-friendly interface that enables easy entry of work hours while incorporating validation checks to minimize errors. Staff can monitor progress through direct system access and automated email notifications. Submitted timesheets then undergo sequential approval by the Head of Department, Human Resources, and finally the Finance team. The application was piloted in 2024 beginning with a few selected administrative departments. Following successful testing, the application was rolled out to the COE and PHO service lines in 2025.

Lessons Learnt The implementation of Smart Timesheet demonstrated that meaningful operational improvements can be achieved using locally developed digital solutions built on existing infrastructure. Built-in validation checks have reduced errors and improved data accuracy. By eliminating manual timesheet forms and streamlining the approval process, the application has reduced the time required for both timesheet completion and approval. Consequently, staff can dedicate more time to core responsibilities and other productive activities, while management benefits from improved monitoring and accountability.

Next Steps: Plans are underway to scale the application to additional service lines across Baylor Foundation Malawi further improving workforce efficiency and improving accuracy and transparency of attendance data. A smooth rollout is anticipated, supported by structured training and capacity-building initiatives to ensure effective adoption across all service lines.



159: EMPOWERING ADOLESCENT MOTHERS THROUGH FAMILY PLANNING ADVOCACY: A COMMUNITY BASED INITIATIVE AT AREA 25 COMMUNITY HOSPITAL, LILONGWE, MALAWI

Nomsa Kafumba, ruth Moyo

Teenage pregnancy rates are declining globally, yet they remain high in low-income countries, with an estimated 21 million pregnancies each year—half of which are unintended. In Malawi, teenage pregnancies have risen by 3% between 2016 and 2025, and adolescents continue to have the highest unmet need for family planning. Similarly, adolescent deliveries at Area 25 Community Hospital increased from 16.6% in 2024 to 20% in 2025, highlighting the need for preventive and community-driven interventions.

In response to this growing challenge, Area 25 Community Hospital introduced a project aimed at reducing adolescent pregnancies in surrounding communities by improving knowledge, advocacy, and uptake of family planning services among adolescents. The initiative adopted a peer led approach by training adolescent mothers as FP advocates, recognizing their lived experiences as a powerful tool for influence and behavior change.

A structured 15-week program was implemented involving 18 adolescent mothers who formed the Generation Hope Group. With support from an Obstetrician and gynecologist, nurse and a vocational service provider, participants received training in leadership development, public speaking, drivers of adolescent pregnancy, and modern family planning methods. Community engagement sessions and youth-focused advocacy activities were also conducted to promote local ownership and sustainability.

Early outcomes demonstrated increased knowledge of FP methods, improved confidence and communication skills among participants, and the initiation of peer led advocacy activities within youth spaces. The initiative represents a shift from reactive management of adolescent pregnancies to proactive prevention through empowerment, leadership, and community participation. The project demonstrates that equipping adolescent mothers with leadership and advocacy skills can strengthen reproductive health awareness, foster community engagement, and contribute to reducing adolescent pregnancy rates in a sustainable and scalable manner.

62: Outcomes Among Infants With Single, Dual or Triple Exposure To HIV, Syphilis, and Hepatitis B: A Comparative Study

Tiwonge Msonda, Melvin Kunsembe, Tariro Chimhanda, Mwayi Kazembe, Maya Brasher, Monika Patil, Chikondi Chiweza, Nomsa Kafumba, Stella Jumbe, Magret Mnyayi, Edward Wiltone, Gerald Phiri, Hendrina Mchenga, Chisomo Zinyemba, Deborah Mzikamanda, Jeffrey Wilkinson

Background: Globally and in Malawi, maternal infections—HIV, syphilis, and hepatitis B (hep B)—continue to contribute significantly to adverse pregnancy and infant outcomes. Each infection increases risks such as prematurity, low birthweight and infant death. However, many mothers present with more than one infection, especially in high-burden settings with limited antenatal screening, delayed treatment, and weak follow-up systems.

Despite the growing emphasis on WHO's Triple Elimination Initiative, most studies and facility audits still look at each infection separately. Very little is known about the risks and outcomes among infants exposed to multiple infections simultaneously. This study aimed to determine how outcomes differ between infants exposed to single, dual or triple maternal infections at A25CH.

Methods: This was a one-year retrospective comparative study that included all exposed infants delivered from 1 February 2025 to 31 January 2026, with documented exposure status. Exposure categories included single (only HIV, syphilis, or hep B), dual (any two infections) and triple (HIV, syphilis, and hep B). Patient information

was manually extracted from hard copy registers into redcap. Outcome measures included birth data (low birth weight, gestational age, fifth minute Apgar score), and confirmed HIV infection at six weeks. Data were exported to excel for cleaning then to SPSS for analysis. A two-tailed significance level of α = 0.05 was used for all inferential tests.

The dataset comprised 526 neonatal records which were first filtered to retain only infants within the study period. One infant was dropped due to missing exposure status yielding a final analytic sample of N = 525.

Results: Conclusion

Birth outcomes did not differ significantly between infants with single versus dual exposure. However, small sample sizes and high rates of loss-to-follow-up may substantially underestimate true infection and impact on longer-term outcomes. Low infant testing rates limit conclusions about breakthrough infection rates but highlight the need for improved follow-up and testing.

Table 1. Prevalence of single, dual, and triple exposure

Exposure category	n	% of total (N = 525)
Single exposure (any one infection)	498	94.9%
– HIV only	437	83.2%
– Syphilis only	28	5.3%
– Hepatitis B only	33	6.3%
Dual exposure (any two infections)	27	5.1%
– HIV + Syphilis	23	4.4%
– HIV + Hepatitis B	4	0.8%
– Syphilis + Hepatitis B	0	0.0%
Triple exposure (HIV + Syphilis + Hepatitis B)	0	0.0%

Table 2. Birth outcomes by exposure group

Outcome	Single exposure	Dual exposure	Test statistic	p-valuea
Gestational age (weeks), median (IQR)	38.0 (37.0–39.0), n=439	38.0 (37.0–39.0), n=25	U = 5315.5	0.788
Apgar at 5 minutes, median (IQR)	10.0 (10.0–10.0), n=468	10.0 (10.0–10.0), n=25	U = 5641.0	0.504
Low birth weight (<2500g), n (%)	71/478 (14.9%)	2/26 (7.7%)	Fisher's exact	0.404
Mode of delivery (C/S), n (%)	94/480 (19.6%)	5/25 (20.0%)	Fisher's exact	1.000

Table 3. Infant testing status

Testing status	Single exposure (n = 437)	Dual exposure (n = 27)
Tested (positive/negative/inconclusive)a	133 (30.4%)	12 (44.4%)
Not testeda	304 (69.6%)	15 (55.6%)

118: Xpert Host Response test performance in children, and adults with HIV; results from a multi-country, prospective diagnostic accuracy study for tuberculosis: An Analysis of the TB GAPS Study, July 2023 to July 2025.

Chisomo Kutengule, Abigail Seeger, Durbbin Mulengwa, Subhandra Nandakumar, Mbongeni Dube, Brigid E O'Brien, Adamson Munthali, Teresa Steffy, Debrah Vambe, Lilian Komba, Phumzile Dlamini, Peter Elyanu, Bonny Mulindiwa, Joshua Doyle, Anand Date, Anna Mandalakas, Alex Kay

Background: Currently, most tuberculosis (TB) diagnostics rely on a sputum sample, which people with HIV (PWH) and children often cannot produce. The Xpert Host Response (Xpert-HR) test uses a blood-based gene signature as a TB risk score. Our objective was to evaluate the accuracy of the Xpert-HR test in PWH, using the test's design-locked semi-quantitative thresholds derived from continuous, quantitative values.

Methods: 461 children (0-14 years) and 579 adults (≥15 years) with HIV were prospectively recruited in Eswatini, Lesotho, Malawi, Tanzania, and Uganda starting in July 2023. Participants with presumptive TB (any tuberculosis symptoms, elevated C-reactive protein (≥5 mg/L), abnormal chest x-ray, or positive lateral-flow lipoarabinomannan assay (LF-LAM)) were eligible for Xpert-HR test. Xpert-HR test accuracy was evaluated at pre-defined semi-quantitative thresholds (negative, low-risk, high-risk, and positive). The accuracy of a positive result was compared to a microbiologic reference standard (MRS) of Xpert Ultra or LF-LAM and composite clinical reference standards – the National Institutes of Health (NIH) consensus definition in children and World Health Organization (WHO) clinical disease criteria in adults. Accuracy of the Xpert-HR test was also evaluated using other semi-quantitative thresholds and Youden's index using the reported cycle-threshold based gene-signature score, optimized by population and reference standard.

Results: Xpert-HR test sensitivity and specificity were most favorable when 'high-risk' and 'positive' results were considered positive. In children, test sensitivity was 38.0% compared to the MRS and 40.4% compared to the NIH composite reference standard, with specificity of 69.5% and 71.7% for each reference standard, respectively (Table). Among adults, test sensitivity was 51.8% compared to the MRS and 65.9% compared to WHO clinical disease criteria, with corresponding specificities of 60.0% and 60.9%. Performance improved modestly when the gene-signature score was used to determine the result, though it remained suboptimal (Figure).

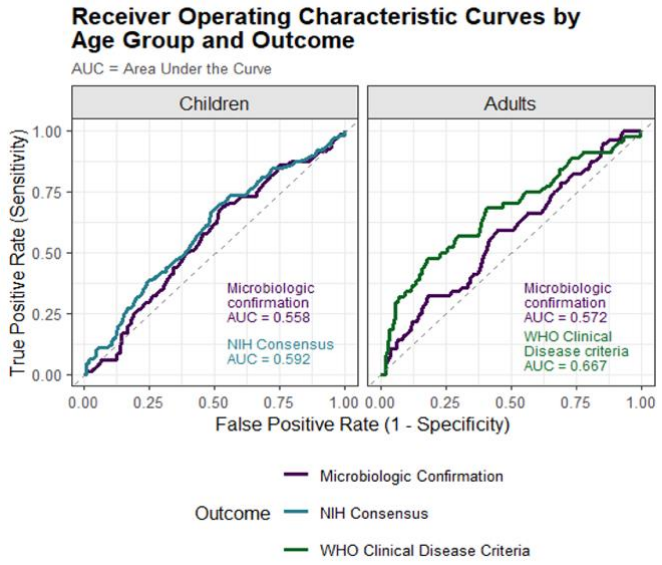
Conclusion: The Xpert-HR test does not meet current WHO target product profile thresholds for screening or diagnostic accuracy for non-sputum TB tests. We identified an optimal cut-point of the continuous score by maximizing Youden's index across all Xpert HR-score values. A score-derived cutoff improved diagnostic accuracy compared with the manufacturer-defined semi-quantitative categories, suggesting the manufacturer-defined categories may not be optimal for PWH, especially children.

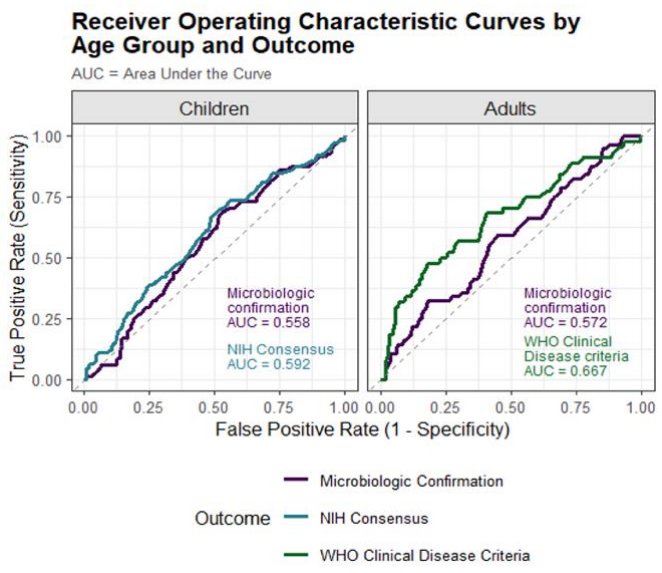
Table. Diagnostic performance of Xpert Host Response thresholds

Age / reference	Threshold	Total	TP / TN / FP / FN	Sensitivity (95% CI)	Specificity (95% CI)
Children / Microbiologic Confirmation	Positive	461	1 / 381 / 9 / 70	0.01 (0.00, 0.08)	0.98 (0.96, 0.99)
Children / Microbiologic Confirmation	Positive or High Risk	461	27 / 271 / 119 / 44	0.38 (0.27, 0.50)	0.70 (0.65, 0.74)
Children / Microbiologic Confirmation	Positive, High Risk or Low Risk	461	53 / 127 / 263 / 18	0.75 (0.63, 0.84)	0.33 (0.28, 0.38)
Children / NIH Consensus	Positive	435	3 / 339 / 7 / 86	0.03 (0.01, 0.10)	0.98 (0.96, 0.99)
Children / NIH Consensus	Positive or High Risk	435	36 / 248 / 98 / 53	0.40 (0.30, 0.51)	0.72 (0.67, 0.76)
Children / NIH Consensus	Positive, High Risk or Low Risk	435	67 / 119 / 227 / 22	0.75 (0.65, 0.84)	0.34 (0.29, 0.40)
Adults / Microbiologic Confirmation	Positive	579	6 / 499 / 24 / 50	0.11 (0.04, 0.22)	0.95 (0.93, 0.97)
Adults / Microbiologic Confirmation	Positive or High Risk	579	29 / 314 / 209 / 27	0.52 (0.38, 0.65)	0.60 (0.56, 0.64)
Adults / Microbiologic Confirmation	Positive, High Risk or Low Risk	579	47 / 119 / 404 / 9	0.84 (0.72, 0.92)	0.23 (0.19, 0.27)
Adults / WHO Clinical Disease Criteria	Positive	579	8 / 513 / 22 / 36	0.18 (0.08, 0.33)	0.96 (0.94, 0.97)
Adults / WHO Clinical Disease Criteria	Positive or High Risk	579	29 / 326 / 209 / 15	0.66 (0.50, 0.80)	0.61 (0.57, 0.65)
Adults / WHO Clinical Disease Criteria	Positive, High Risk or Low Risk	579	40 / 124 / 411 / 4	0.91 (0.78, 0.98)	0.23 (0.20, 0.27)
Table. Xpert Host Response diagnostic accuracy by semi-quantitative threshold. The test was evaluated in 461 children and 579 adults enrolled in a tuberculosis screening and	Table. Xpert Host Response diagnostic accuracy by semi-quantitative threshold. The test was evaluated in 461 children and 579 adults enrolled in a tuberculosis	Table. Xpert Host Response diagnostic accuracy by semi-quantitative thresh	Table. Xpert Host Response diagnostic accuracy by semi-quantitative threshold. The test was evaluated in 461 children and 579 adults	Table. Xpert Host Response diagnostic accuracy by semi-quantitative threshold. The test was evaluated in 461 children and 579 adults	Table. Xpert Host Response diagnostic accuracy by semi-quantitative threshold. The test was evaluated in 461 children and 579 adults enrolled in a tuberculosis

Age / reference	Threshold	Total	TP / TN / FP / FN	Sensitivity (95% CI)	Specificity (95% CI)
diagnostic study in Eswatini, Lesotho, Malawi, Tanzania, and Uganda starting July 2023. TP = true positive, TN = true negative, FP = false positive, FN = false negative, CI = confidence interval. / Table. Xpert Host Response diagnostic accuracy by semi-quantitative threshold. The test was evaluated in 461 children and 579 adults enrolled in a tuberculosis screening and diagnostic study in Eswatini, Lesotho, Malawi, Tanzania, and Uganda starting July 2023. TP = true positive, TN = true negative, FP = false positive, FN = false negative, CI = confidence interval.	screening and diagnostic study in Eswatini, Lesotho, Malawi, Tanzania, and Uganda starting July 2023. TP = true positive, TN = true negative, FP = false positive, FN = false negative, CI = confidence interval.	old. The test was evaluated in 461 children and 579 adults enrolled in a tuberculosis screening and diagnostic study in Eswatini, Lesotho, Malawi, Tanzania, and Uganda starting July 2023. TP = true positive, TN = true negative, FP = false positive, FN = false negative, CI = confidence interval.	enrolled in a tuberculosis screening and diagnostic study in Eswatini, Lesotho, Malawi, Tanzania, and Uganda starting July 2023. TP = true positive, TN = true negative, FP = false positive, FN = false negative, CI = confidence interval. / Table. Xpert Host Response diagnostic accuracy by semi-quantitative threshold. The test was evaluated in 461 children and 579 adults enrolled in a tuberculosis screening and diagnostic study in Eswatini, Lesotho, Malawi, Tanzania, and Uganda starting July 2023. TP = true positive, TN = true negative, FP = false positive, FN = false negative, CI = confidence interval. / Table. Xpert Host Response diagnostic accuracy by semi-quantitative threshold. The test was evaluated in 461 children and 579 adults enrolled in a tuberculosis screening and diagnostic study in Eswatini, Lesotho, Malawi, Tanzania, and Uganda starting July 2023. TP = true positive, TN = true negative, FP = false positive, FN = false negative, CI = confidence interval. / Table. Xpert Host Response diagnostic accuracy by semi-quantitative threshold. The test was evaluated in 461 children and 579 adults enrolled in a tuberculosis	enrolled in a tuberculosis screening and diagnostic study in Eswatini, Lesotho, Malawi, Tanzania, and Uganda starting July 2023. TP = true positive, TN = true negative, FP = false positive, FN = false negative, CI = confidence interval.	screening and diagnostic study in Eswatini, Lesotho, Malawi, Tanzania, and Uganda starting July 2023. TP = true positive, TN = true negative, FP = false positive, FN = false negative, CI = confidence interval.

Age / reference	Threshold	Total	TP / TN / FP / FN	Sensitivity (95% CI)	Specificity (95% CI)
			screening and diagnostic study in Eswatini, Lesotho, Malawi, Tanzania, and Uganda starting July 2023. TP = true positive, TN = true negative, FP = false positive, FN = false negative, CI = confidence interval.		





120: Predictors of virologic failure following optimization to dolutegravir in children, adolescents and young adults living with HIV in five Eastern and Southern African pediatric HIV centres of excellence

Sarah Perry Hope, Katherine Simon Tingathe, Diane T Nguyen, Kenneth Jhune Nobleza, Lindokuhle P Dlamini, Florence Anabwani-Richter, Menard Bvumbwe, Brigid O'Brien, Miriam Abadie, Jacqueline Balungi Kanywa, Elizabeth Maidl, John Farirai, Abhilash

Sathyamoorthi, Kevin McKenzie, Teresa Steffy, Isaac A, Neema Kipiki, Nandita Sugandhi, Heather Haq, Alexander Kay

Background: Viral suppression rates have improved dramatically since the global rollout of dolutegravir (DTG)-based Antiretroviral Therapy (ART) in 2018. Despite this progress, improvement in children, adolescents and young adults with HIV (CAYWH) has trailed that in adults. Our objective is to define rates of viral suppression in CAYWH transitioned to DTG and identify risk factors for virologic failure (VF).

Methods: This retrospective cohort study analyzed CAYWH (0-24 years) receiving DTG at pediatric HIV Centres of Excellence (COEs) in five Sub-Saharan African countries before January, 2025. Client characteristics were reported as proportions (categorical) or medians (continuous). Multivariable logistic regression models were used to determine factors associated with VF (two consecutive Viral loads (VL) ≥1000 copies/mL) on DTG.

Results: Of 13,092 CAYWH optimized to DTG before January 2025, 51% were female (6,671). At DTG optimization 8.34% (1,092/13,092) of clients were unsuppressed (VL≥1000 copies/mL). At the end of the analytic period CAYWH on DTG had a cumulative virologic failure rate of 8.48% (1,110/13,092). Rates of VF were higher in CAYWH who were unsuppressed (38.64%; 422/1,092) or had low-level viremia (51-999 copies/mL) (9.77%; 327/3,348) at optimization, compared with those who were undetectable (4.17%; 361/8,652) (Figure 1). In multivariable models, children aged 0-5 years (odd's ratio (OR) 0.90, p=0.63) were no longer at increased odds of VF; however, adolescents aged 10-14 years (OR 1.56, p=0.001) or 15-19 years (OR 1.93, p<0.001) had greater odds of VF compared to children aged 5-9 years. In addition to age and viremia at optimization, taking TB treatment or a cation during DTG exposure, and optimization from a protease inhibitor all significantly increased failure odds (Table 1).

Conclusions: Optimizing to dolutegravir reduced the odds of treatment failure in the youngest children, but rates of failure among CAYWH still exceed the <5% target. Previous viremia on prior regimens and the adolescence period remain strong predictors of failure on DTG underscoring the need for novel treatment approaches and new formulations for CAYWH with recurrent viremia.

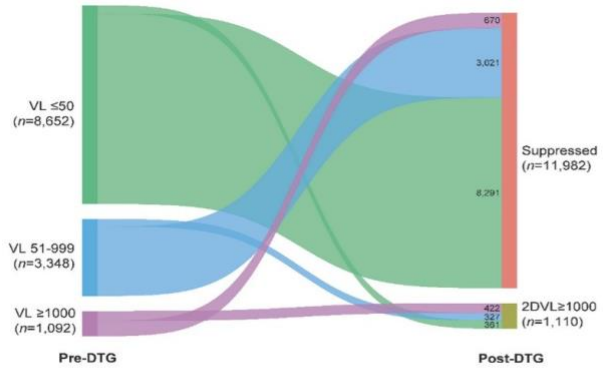


Figure 1. This alluvial plot represents CAYWH (n=13,092) stratified by viral load value (copies/mL) before DTG introduction in the left column and the number in each group meeting criteria for virologic failure (2 detectable viral loads ≥1,000 copies/mL) after introduction of DTG vs continued suppression in the right column through December, 2024. Viral Load; VL, detectable viral load; DVL.

203: Tuberculosis Screening in Children and Adolescents with HIV: Analysis of the TB GAPS Study Cohort, 2023-2025

Alexander Kay, Abigail Seeger, Debrah Vambe, Subhadra Nandakumar, Brigid O'Brien, Teresa Steffy, Lilian Komba, Phumzile Dlamini, Peter Elyanu, Joshua Doyle, Anand Date, Anna Mandalakas

Background: Global guidelines recommend screening children and adolescents with HIV (CAWH) for tuberculosis (TB) symptoms or exposure at every clinical encounter. Current recommendations rely on symptom-based screening, and evidence supporting symptom-agnostic screening tests such as C-reactive protein (CRP), chest x-ray (CXR), or lateral flow-lipoarabinomannan (LF-LAM) assays in this population remains limited. We evaluated the diagnostic accuracy of these screening tests.

Methods: CAWH aged 10-19 years were prospectively enrolled from July 2023-December 2025 across sites in Eswatini, Lesotho, Malawi, Tanzania, and Uganda. Participants were assessed for presumptive TB, defined as any positive result among the following tests: 4-symptom-screen (4SS) (cough, fever, weight loss, night sweats or TB exposure in children <10 years), elevated CRP (≥5 mg/L), abnormal clinician-interpreted CXR , or positive LF-LAM. Participants with presumptive TB underwent diagnostic testing with Xpert Ultra using age-appropriate specimens. Participants with negative results on all screening tests were followed longitudinally to identify TB and exclude misclassification. Screening test accuracy was assessed against age-specific composite reference standards: the National Institutes of Health Pediatric TB consensus definition (participants 0-14 years) and TB treatment initiation (15-19 years).

Results: Of 5,133 participants, 5,004 (97.5%) had valid results for all screening assessments, including 972 children (0-9 years),1,429 young-adolescents (10-14 years), and 2,603 older-adolescents (15-19 years). Among participants, 103 (2.1%) had TB according to study criteria. 4SS had the highest sensitivity across all assessed screening approaches, exceeding 90% in children aged 0-9 years (91.8%, 95%CI: 81.9-97.3%) and adolescents aged 10-14 years (92.3%, 95%CI: 64.9-99.8%)(Table). Sensitivity for all screening tests was lower among adolescents 15-19 years. LF-LAM had the highest specificity across age groups; CRP and CXR had higher specificity than 4SS.

Conclusions: Although CRP, CXR, and LF-LAM showed higher specificity, symptom-based screening identified most TB cases. These findings support continued use of 4SS for routine TB screening in children and adolescents with HIV.

Table: Diagnostic accuracy of symptom-dependent and symptom-agnostic screening modalities in children and adolescents with HIV. Participants 0-19 years old with valid results for all screening tests were enrolled between July 2023 and December 2025 in Eswatini, Lesotho, Malawi, Tanzania, and Uganda.

Screening Test	Age Group (years)	Reference	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)
4SS	0-9	NIH-CD	56	280	5	631	91.8% (81.9-97.3%)	69.3% (66.2-72.2%)
CRP	0-9	NIH-CD	41	142	20	769	67.2% (54-78.7%)	84.4% (81.9-86.7%)
LF-LAM	0-9	NIH-CD	17	48	44	863	27.9% (17.1-40.8%)	94.7% (93.1-96.1%)
CXR	0-9	NIH-CD	48	142	13	769	78.7% (66.3-88.1%)	84.4% (81.9-86.7%)
4SS	10-14	NIH-CD	12	297	1	1119	92.3% (64-99.8%)	79% (76.8-81.1%)
CRP	10-14	NIH-CD	8	99	5	1317	61.5% (31.6-86.1%)	93% (91.6-94.3%)
LF-LAM	10-14	NIH-CD	0	31	13	1385	0% (0-24.7%)	97.8% (96.9-98.5%)
CXR	10-14	NIH-CD	8	92	5	1324	61.5% (31.6-86.1%)	93.5% (92.1-94.7%)
4SS	15-19	TBT-I	22	458	7	2116	75.9% (56.5-89.7%)	82.2% (80.7-83.7%)
CRP	15-19	TBT-I	15	294	14	2280	51.7% (32.5-70.6%)	88.6% (87.3-89.8%)
LF-LAM	15-19	TBT-I	9	34	20	2540	31% (15.3-50.8%)	98.7% (98.2-99.1%)
CXR	15-19	TBT-I	15	179	14	2395	51.7% (32.5-70.6%)	93% (92-94%)

Abbreviations: TP; true positive, FP; false positive, FN; false negative, TN; true negative, CI; confidence interval, 4SS; Four Symptom Screen, CRP; C-reactive protein, LF-LAM; lateral flow-

29: Reducing the mother-to-Child HIV Transmission among HIV exposed infants in Eastern Uganda: A quality improvement approach, October 2023 – March 2026

Saadick Ssentongo, Richard Kyakuwa JJuko, Ronald Khamasi, Andrew Katawera, Lwanga Sekiswa Zimwanguyiza, Fred Nghania, Eddy Okwir,

Daniel Esogu, Alexander Mugume, Patricia Nahirya Ntege, Denise Birungi, Dithan Kiragga

Purpose. Uganda has made remarkable progress in reducing mother-to-child transmission (MTCT) from 25% in 2010 to 6% in 2023. However, despite the high Prevention of MTCT coverage, MTCT among HIV-exposed infants (HEI) increased to 5% (30/627) in April-June 2024. We implemented a quality improvement intervention to reduce the MTCT across 161 facilities in 16 districts of Eastern Uganda.

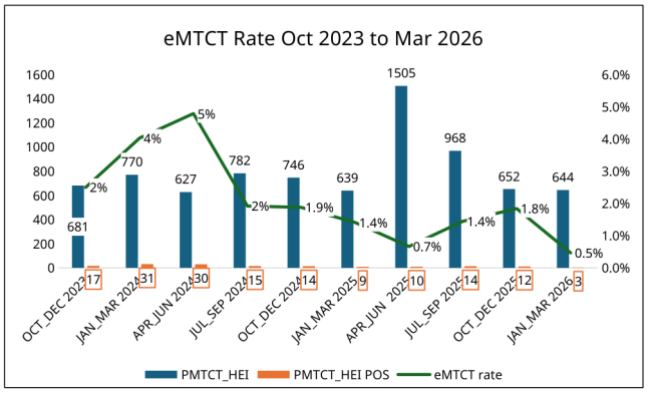
Methods: From July 2024 to March 2026, a QI initiative was implemented in Eastern Uganda. PMTCT mentors from 16 districts identified the root causes (RCs) of MTCT using fishbone diagrams and profiling of HIV positive infants. Major (RCs) identified included maternal treatment interruption, late HIV diagnosis and antiretroviral therapy (ART) initiation, poor viral suppression, and late presentation of HEI. Facilities implemented prioritised change ideas through Plan-Do-Study-Act (PDSA) cycles. Interventions included maternal and partner health education, maternal HIV retesting with timely ART linkage, point-of-care testing for timely adherence support in mothers with non-suppressed viral load, and trained mentor mothers providing peer psychosocial support to mothers virtually and physically. Monthly meetings reviewed each PDSA cycle and informed the next course of action. Facilities reported aggregate monthly data on HEI tested and HEI testing HIV-positive from EID registers, which were plotted in run charts. Quarterly MTCT rates were calculated as the proportion of HEI-positive infants among all tested in the respective period. A two-quarter rolling average was applied, and the Cochran-Armitage χ^2 test was used to assess the statistical significance of trends in positivity over time.

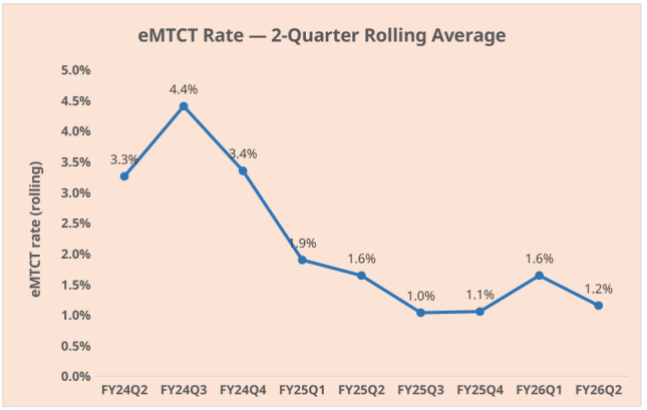
Results: A total of 8,014 HEI was tested from October 2023 to March 2026, with an overall MTCT rate of 1.9% (155/8014) tested HIV-positive. Following the intervention at the end of Apr–Jun 2024, the MTCT rate declined to 1.9% (15/782) in July–September 2024 and was sustained below 2% thereafter, reaching 0.7% (10/1505) in April–June 2025 and 0.5% (3/644) in January–March 2026. The two-quarter rolling average fell from 4.4% (January–June 2024) to 1.2% (October 2025–March 2026), a 74% relative reduction. The mean MTCT rate fell from 3.8% in October 2023- June 2024, before the intervention, to 1.4% after implementation (July 2024-March 2026), a 63% relative reduction ($p < 0.001$).

Discussions.

The MTCT rates across Eastern Uganda declined and sustained at below 2% following the implementation of a multifaceted QI intervention. Intensified maternal retesting, ART adherence support, and EID strengthening using a QIA can deliver progress toward national elimination targets of reducing pediatric HIV infections.

Trend in EID positivity rates





57: Trends, associated factors, and mutation Patterns of Dolutegravir Resistance among persons living with HIV Undergoing Resistance testing in Eastern Uganda. Cross-sectional retrospective study

SAADICK SSENTONGO, Richard Kyakuwa JJuko, Ronald Khamasi, Andrew Katawera, Lwanga Sekiswa Zimwanguyiza, Fred Nghania, Eddy Okwir, Daniel Esogu, Alexander Mugume, Patricia Nahirya Ntege, Denise Birungi, Dithan Kiragga

Background: In 2026, Uganda adopted the WHO recommendation of transitioning all people living with HIV (PLHIV) to dolutegravir (DTG)-based antiretroviral therapy. However, despite the increased mortality and poor treatment outcomes associated with DTG resistance, there is limited evidence on it. This paper aimed to determine the trends and the factors associated with DTG resistance among PLHIV who underwent HIV drug resistance testing in Eastern Uganda.

Methods: We retrospectively analysed routine HIV drug-resistance (HIVDR) data from national databases for 185 facilities across 16 districts in Eastern Uganda, from January 2020 to June 2026. We included individuals on a DTG-based regimen who underwent HIVDR genotyping following virological failure (with at least 2 viral loads >1000 copies/mL). The primary outcome was DTG Resistance, defined as high-level or intermediate resistance among clients with Virological failure. The Mann-Kendall test was used to test trends in quarterly DTG resistance prevalence. Factors associated with DTG resistance were assessed using logistic regression and reported as adjusted odds ratios (aOR) with 95% confidence intervals.

Results: of the 942 clients, 52.4% (494/942) were females. Overall, 17.6% (166/942) had dolutegravir resistance. DTG resistance was 16.1% (52/322) among those aged 0–19 years and 18.4% (114/620) among those aged ≥20 years. Among DTG-resistant clients, 95.2% (158/166) carried ≥1 integrase strand transfer inhibitor (INSTI) mutation; the most common were E138K (63.3%), G118R (33.1%), G140A (27.7%), and Q148K (22.9%). The DTG-resistance prevalence

increased from 16.7% (3/18) in January–March 2023 to a peak of 24.2% in July–September 2023 (23/95), then declined to 17.5% (7/40) in January–March 2024 and to 13.4% (9/67) by January–March 2026 (Mann-Kendall, p=0.11 overall). Factors associated with DTG resistance were the presence of NRTI resistance-associated mutations (aOR 35.7, 95% CI 14.9–85.7; p<0.001), age ≥20 years (aOR 1.88, 1.17–3.01; p=0.009) and a greater number of pre-sampling regimen changes (aOR 1.20, 1.00–1.44; p=0.049). A higher viral load at the time of the resistance test (aOR 0.68 per log10 copies/mL, 0.51–0.90; p=0.007).

Conclusions: DTG resistance was detected in one in six clients with suspected treatment failure. It occurred almost exclusively with NRTI resistance and was more likely among adults and those with multiple prior regimen changes. This finding highlights the need to identify clients with extensive treatment experience and accumulated NRTI resistance as priority groups for enhanced adherence support, resistance testing and timely regimen optimisation.

58: Closing the Hepatitis B Screening Gap in Pregnancy: Lessons from a Large-Scale Quality Improvement Initiative in Eastern Uganda.

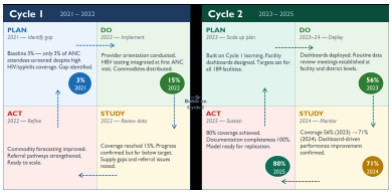
Diana Cherotin, Joshua Clark Brianwong, Eddy Okwir, Frehd Nghania, Richard Jjuuko, Albert Maganda, Alex Mugume, Patricia Nahirya, Dithan Kiragga

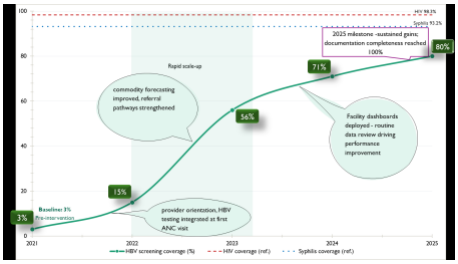
Purpose: Hepatitis B virus (HBV) infection remains a major public health concern among pregnant women in Uganda, with an estimated prevalence of 4.8%. Although HIV services are integrated into antenatal care (ANC), HBV screening has remained limited, creating missed opportunities to prevent mother-to-child transmission. In Eastern Uganda, only 3% of pregnant women attending ANC were screened for HBV in 2021, compared with over 90% screened for HIV and syphilis. This quality improvement initiative aimed to increase HBV screening coverage from 3% to 80% between 2021 and 2025 by integrating HBV services into routine ANC and HIV platforms.

Methods: Baylor Foundation Uganda, in partnership with district local governments, implemented this initiative across 16 districts and 189 health facilities in Eastern Uganda, serving approximately 200,000 pregnant women annually. A multidisciplinary team comprising nurses, data clerks, clinical officers, and district health teams developed interventions after routine performance reviews using a driver diagram, which highlighted persistently low HBV screening despite high uptake of other ANC services. Using Plan–Do–Study–Act cycles, the team tested and refined provider mentorship, routine HBV screening at the first ANC visit, strengthened referral and treatment pathways, improved commodity forecasting, and regular dashboard review. Data were drawn from the routine health information system and subjected to monthly quality checks. Key measures included HBV screening coverage, treatment uptake, and documentation completeness.

Results: During implementation, 759,497 pregnant women attended ANC. HBV screening coverage increased from 3% in 2021 to 15% in 2022, then to 56% in 2023, 71% in 2024, and 80% in 2025, following interventions that addressed provider orientation, stock-outs, referrals, and performance monitoring. Among 1,872 women diagnosed with HBV, 103 (5.5%) were also living with HIV. Treatment uptake among HBV-positive pregnant women increased from 23% to 69%, while documentation completeness improved from 20% to 100%. Key enablers included strong HIV service infrastructure, leadership engagement, mentorship, and better commodity management.

Discussion: Integrating HBV screening into routine ANC and HIV services improved screening coverage, treatment uptake, and documentation quality without major additional resources. Embedding HBV screening into ANC workflows, mentorship, commodity planning, and performance review strengthened sustainability and reduced reliance on project support. This approach has been adapted for other maternal and child health interventions. Limitations include intermittent commodity stockouts and treatment follow-up. Future efforts should focus on commodity availability, treatment follow-up, and integrated strategies for triple elimination of HIV, syphilis, and hepatitis B.





213: Turning Routine Data into an Implementation Strategy: Data-Driven Facility Bench-marking to Reduce Missed Opportunities Across the PMTCT Cascade in Rural Uganda

Aston Mucunguzi, Gloria Tumwijukye, Calvin Epidu, Denise Birungi, Dithan Kiragga

Background: Routine health information systems in many low-resource settings are primarily used for reporting rather than improving service delivery. Although district-level Prevention of Mother to Child Transmission (PMTCT) indicators often suggest satisfactory performance, they can mask substantial variation between facilities and across the PMTCT cascade. We implemented a district-led bench-marking approach to transform routine program data into actionable intelligence for identifying implementation gaps, promoting peer learning, and strengthening quality improvement across rural public health facilities.

Description: Between April 2023 and October 2025, Baylor College of Medicine Children's Foundation Uganda, in collaboration with district health teams, implemented a data-driven quality improvement initiative across public health facilities in Kibale, Kakumiro, and Kagadi districts. Routine PMTCT data were analyzed quarterly across key cascade indicators, including antenatal HIV testing, maternal ART initiation, maternal HIV re-testing, early infant diagnosis (EID), and final infant HIV outcomes. Facility bench-marking identified performance gaps and high-performing sites. District learning sessions, peer mentorship, virtual technical support, and routine performance dashboards facilitated the dissemination and adaptation of successful implementation practices, including workflow redesign, proactive client tracking, routine dashboard review, and adaptive commodity redistribution.

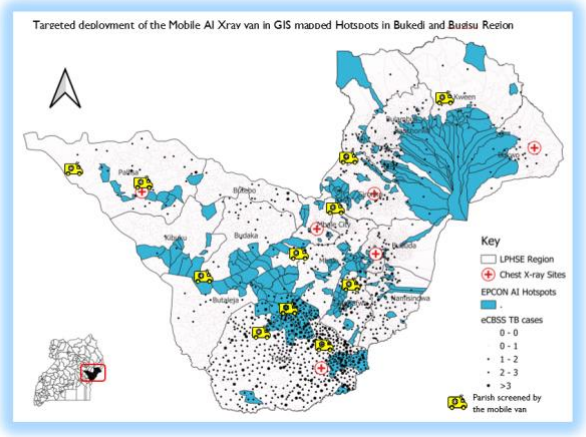
Lessons Learned: Facility bench-marking revealed implementation gaps that were not apparent from district aggregate performance alone. The greatest variation occurred during maternal HIV re-testing and longitudinal infant follow-up, while maternal HIV testing and ART initiation remained consistently strong. Sharing locally developed solutions through structured learning sessions enabled lower-performing facilities to adapt successful practices from higher-performing sites, progressively reducing performance variation across facilities while minimizing dependence on resource-intensive supervisory visits. Routine program data proved to be a powerful

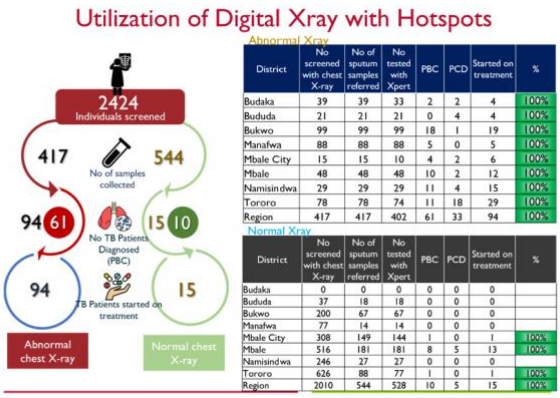
implementation tool by strengthening local ownership, supporting timely decision-making, and fostering continuous quality improvement using existing health system resources.
Next Steps: This approach demonstrates that routine program data can drive implementation improvement rather than simply fulfill reporting requirements. Future efforts will focus on institutionalizing facility bench-marking within district performance review systems, expanding peer-learning networks, and applying this implementation model to strengthen other maternal, child health, and HIV service delivery program. Broader adoption of this low-cost strategy could accelerate equitable PMTCT performance and contribute to eliminating vertical HIV transmission in resource-limited settings.

11: Data-Driven Deployment of an AI Mobile CXR Van to Accelerate TB Detection in Eastern Uganda

Joshua Brianwong Clark, Diana Cherotin, Lwanga Sssekiswa, Richard Jjuuko, Patricia Nahirya, Alexandre Mugume, Ronald Khamasi, Dithan Kiragga

Background: Eastern Uganda continues to miss a sizeable share of tuberculosis (TB) cases (about 40%) despite expanded facility-based screening. Routine surveillance through the electronic Case-Based Surveillance System (eCBSS) and digital contact tracing provides granular spatiotemporal signals but remains underused for directing high-yield interventions. We used a data-driven approach that fused eCBSS and other routine "big data" streams to guide dynamic deployment of an AI-assisted mobile chest X-ray (CXR) van to accelerate TB detection.
Description: During the September 2024 Community Active Screening and Testing Plus (CAST+) campaign, we integrated eCBSS event data (case notifications and GPS data), digital contact-tracing outputs, electronic medical records, and community active-case-finding logs into a harmonised data mart. A geospatial hotspot engine (kernel-density surfaces with time-weighted clustering) generated weekly micro-catchment risk maps at the parish/village level. An optimisation layer ranked outreach sites by expected yield, combining historical positivity and access. The AI-assisted mobile CXR van was deployed to prioritised hotspots, where community members underwent digital chest X-ray screening. Computer-aided detection (CAD) software provided real-time interpretation, and individuals who exceeded the predefined AI threshold (≥50%) were referred for GeneXpert testing in accordance with the National TB and Leprosy Programme (NTLP) guidelines. A digitalised workflow supported consent, registration, geotagging, referrals, and linkage.
Lessons Learned: The targeted screening model was implemented across 92 identified TB hotspots, resulting in 2,424 community chest X-rays. Of these, 417 individuals had abnormal CXR findings, resulting in 109 TB diagnoses, all of whom were initiated on treatment. The TB yield among individuals screened in geospatially prioritised hotspots was 11%, substantially higher than the 1.2% yield observed through routine symptom-based community screening, which identified 69 TB cases among 5,503 presumptive cases from 38,992 people screened. The integrated digital workflow improved real-time monitoring, referral completion, and patient traceability from screening through treatment initiation. The experience demonstrated that combining routine surveillance data, geospatial analytics, and AI-enabled mobile CXR screening can substantially improve the efficiency and effectiveness of active TB case finding.
Next Steps: The approach provides a scalable precision public health model that can be integrated within existing NTLP systems to strengthen TB case detection. Future efforts will focus on institutionalising routine hotspot generation, expanding AI-assisted mobile screening to additional districts, and evaluating cost-effectiveness and long-term impact on TB notifications and treatment outcomes. Broader adoption could increase case detection, reduce diagnostic delays, and accelerate progress toward End TB targets in underserved and hard-to-reach communities.





District	No screened with chest X-ray	No of sputum samples referred	No tested with Xpert	PBC	PCD	Started on treatment	%
Budaka	39	39	33	2	2	4	100%
Bududa	21	21	21	0	4	4	100%
Bukwo	99	99	99	18	1	19	100%
Manafwa	88	88	88	5	0	5	100%
Mbale City	15	15	10	4	2	6	100%
Mbale	48	48	48	10	2	12	100%
Namisindwa	29	29	29	11	4	15	100%
Tororo	78	78	74	11	18	29	100%
Region	417	417	402	61	33	94	100%

District	No screened with chest X-ray	No of sputum samples referred	No tested with Xpert	PBC	PCD	Started on treatment	%
Budaka	0	0	0	0	0	0	
Bududa	37	18	18	0	0	0	
Bukwo	200	67	67	0	0	0	
Manafwa	77	14	14	0	0	0	
Mbale City	308	149	144	1	0	1	100%
Mbale	516	181	181	8	5	13	100%
Namisindwa	246	27	27	0	0	0	
Tororo	626	88	77	1	0	1	100%
Region	2010	544	528	10	5	15	100%

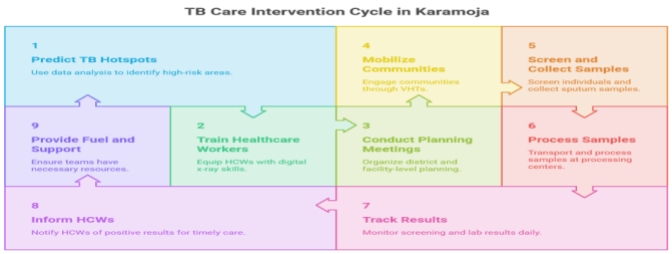
70: Strengthening tuberculosis detection and surveillance using artificial intelligence: Evidence from a scalable model in Karamoja region, Uganda.

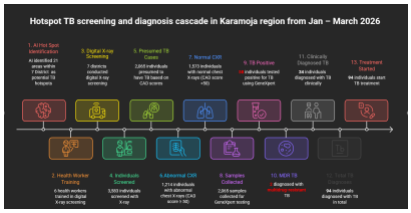
Victor Lomonyang, Saadick Sentengo, Ronald Khamasi, Richard Jjuuko, Daniel Esogu, Leonard Rotich, Alex Mugume, Denise Birungi, Dithan Kiragga

Background: Tuberculosis (TB) is a significant public health problem in Karamoja, where nomadic lifestyles and distance from health facilities complicate timely diagnosis and treatment. Between October and December 2025, only 64% of expected TB cases were notified, leaving a 36% case-detection gap. To address this, Baylor Foundation Uganda (BFU) targeted Artificial Intelligence (AI) predicted hot spots, deployed AI-enhanced digital X-rays units, and labxpert disease surveillance to fast-track TB results from Hub sites.
Description: From January - March 2026, BFU supported seven of nine districts (77.8%) of Karamoja, prioritized 21 TB hotspots predicted by National TB and Leprosy Program (NTLP) using data analysis technology (EPCON's Epi-control AI platform). Trained 6 health care workers to operate digital x-ray units, supported seven district and 21 facility level planning meetings. A multidisciplinary outreach team combined advance community mobilization by village health teams, conducted mobile digital chest X-ray screening embedded with Computer Aided Detection for TB (CAD4TB), sputum sample collection, on-site counseling and prompt linkage to TB treatment. Samples were transported through existing hub network for GeneXpert testing; LabXpert surveillance and SMS alerts supported rapid result dissemination while district vehicles, fuel, and daily output monitoring embedded delivery within existing systems.
Lessons learnt: A total of 21 AI-predicted TB hot spots were identified across seven districts in Karamoja region. Six healthcare workers were trained on digital chest X-ray screening. During the

intervention, 3,583 individuals were screened using digital chest X-ray, of whom 2,065 (57.6%) were identified as presumptive TB cases based on CAD4TB scores. Overall, 1,214 (33.9%) individuals had abnormal chest X-ray findings (CAD score ≥50), while 1,573 (43.9%) had normal chest X-rays. A total of 2,065 sputum samples were collected and tested using GeneXpert. Among those tested, 58 bacteriologically confirmed TB cases were identified, including two rifampicin-resistant TB cases. In addition, 34 patients were clinically diagnosed with TB, resulting in 94 total TB cases diagnosed, all of whom were initiated on treatment. Using AI-supported digital X-rays improved accuracy of case identification and enabled quick on-site decisions.

Next steps: Findings highlight AI-driven diagnostics and mobile outreach as key to enhancing TB care for undeserved nomadic populations. Future efforts should focus on expanding mobile digital X-ray use, improving community health worker skills, and integrating TB screening within primary health care to ensure sustainability. This strategy aimed to reduce health equity gaps by providing timely TB diagnostics to marginalized groups, and by shaping global health policy in comparable settings.





87: Digital performance monitoring to improve Prevention of Mother-to-Child Transmission service delivery in resource-limited settings: Successes from Eastern Uganda.

Diana Cherotin, Joshua Clark Brianwong, Eddy Okwir, Frehd Nghania, Lwanga Ssekiswa Zimwanguyiza, Richard Jjuuko Kyakuwa, Alex Mugume, Albert Maganda, Dithan Kiragga

Background: Despite ongoing investments in Prevention of Mother-to-Child Transmission (PMTCT) services in Uganda, several PMTCT indicators in Eastern Uganda remained below national targets. For example, HIV retesting during antenatal care was 45% (64,991/142,933) in 2021 compared with the national target of 95%. Routine performance monitoring relied mainly on quarterly reviews, delaying identification of service delivery gaps and corrective action. Although data were routinely reported through the District Health Information System 2 (DHIS2), frontline health workers often lacked practical tools to interpret and use data for decision-making. We describe the implementation and outcomes of a low-cost digital performance monitoring approach to strengthen PMTCT service delivery.

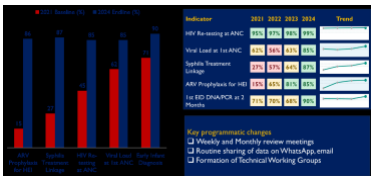
Description: Between 2021 and 2024, an Excel-based PMTCT dashboard was implemented across 189 PMTCT facilities supported by Baylor Foundation Uganda in 16 districts of Eastern Uganda. Updated through an API using DHIS2 data, the dashboard displayed key indicators and enabled drill-down analyses from the regional to the facility level. Priority populations included pregnant and breastfeeding women; and HIV-exposed infants. Monthly performance review meetings were institutionalized and supported by mentorship, supportive supervision, and rapid feedback through WhatsApp, email. A retrospective before–after analysis of DHIS2 indicators from January 2021 to December 2024 was conducted. Percentage-point differences between baseline (2021) and endline (2024) were calculated. Data quality assurance included routine DHIS2 validation checks and cross-verification with facility registers during supervision visits.

Evaluation and Outcomes: Trend analysis demonstrated improvements in key PMTCT indicators between 2021 and 2024. HIV retesting during antenatal care increased from 45% to 85%. Antiretroviral prophylaxis uptake among HIV-exposed infants rose from 15% to 86%, while early infant diagnosis testing increased from 71% to 90%. Linkage to syphilis treatment improved from 27% to 87%, and viral load uptake among pregnant women at first antenatal care increased from 62% to 85%. District teams reported earlier identification of data quality gaps and more timely corrective actions.

Lessons Learned: Digital performance monitoring strengthened PMTCT service delivery when combined with routine review meetings, mentorship, and rapid feedback. Integrating PMTCT indicators into a unified dashboard promoted continuity of care and routine data use. Leveraging existing DHIS2 infrastructure and low-cost digital tools may enhance routine data use and improve PMTCT service delivery in resource-limited settings.

Next Steps: Future efforts will focus on institutionalizing monthly review meetings, embedding dashboard use within routine mentorship and supervision, strengthening DHIS2 data quality and utilization, and transitioning to DHIS2-native dashboards to enhance sustainability and near real-time access.





144: Sustaining Digital Health Platforms Through Primary Health Care Financing: A District led Transition Model in Uganda.

Kiiza Patrick, Ronald Oceng, Anthony Kavuma, Richard Jjuuko, Emmanuel Tumwine, Calvin Epidu, David Damba, Michael Juma, Albert Maganda, Dithan Kiragga

Background Baylor Foundation Uganda (BFU) facilitated health facilities (HF) in Hoima City, Kikuube and Buliisa districts with internet connectivity through monthly subscriptions of data-bundles enabling real-time access of digital-health platforms, Health Information Exchange-(HIE), and real time access and response to data calls. Before donor funding reduction, BFU facilitated internet connectivity in (42/42, 100%). With reduced funding (29/42, 69%) lost internet access, affecting daily digital-health programs. This neccesitated sustainable government-led financing mechanism to maintain digital-health functionality. We describe a district-led model that integrated internet costs into PHC financing to sustain digital-health platforms.

Description: In June 2025, BFU Health Information Systems staff identified an opportunity to integrate internet costs into Primary

Health Care Fund (PHC) workplans, and budgets of HFs supported across three districts. In consultation with the District Health Teams (DHT), seven HFs were selected to pilot this implementation model. Through a series of engagements with HF in-charges and the DHT, BFU emphasized the importance of adopting locally owned and sustainable solutions to support utilization of digital-health platforms for improved patient-level outcomes, like Improved continuity and coordination of care and timely service delivery.
Evaluations and Outcome: The integration of internet costs into PHC showed that health facilities can take great steps towards sustaining digital-health solutions through collaborative planning with DHT. Among the HFs that adopted the model there was increased ownership and utilization of the digital-based process from paper-based. As a result, (85%, 6/7) HF planned, budgeted and subsequently subscribed for internet using PHC funds. During quarter 3 of FY2025/26, (379/497, 76%) of viral-load requests were submitted electronically, eliminating the need for paper-based requests. This transition strengthened ownership of digital health platforms, aligned with MOH digital health agenda and reduced reliance on donor-funding. This experience demonstrates that locally driven and sustainably financed solutions are both practical and empowering for HFs.
Lessons learned Transitioning of internet costs to PHC is feasible and critical for long-term sustainability, relatedly involving the DHT from planning through implementation ensured acceptance and smooth intergration into budgets and not all HFs prioritized PHC-based Internet access as a critical operational need leading to uneven adoption.
Next Steps Scale-up intergration of internet costs into PHC budgets through use of the already subscribed HFs as learning sites. Continuous engagement of the DHT to prioritize digital-health needs during planning, budgeting and strengthening advocacy for digital-health at districts and national level through documenting best practices and peer-learning among HFs.

18: Using a Client Audit Tool to Strengthen Continuity of HIV Treatment among Persons Living with HIV in Tororo and Butaleja Districts, Eastern Uganda

Nathan Okiror, Joshua Clark Brianwong, Abudalahaziz Wambewo, Yusuf Namanya, Ssekiswa Lwanga, Andrew Katawera, Ronald Khamasi, Alex Mugume, Richard Jjuuko Kyakuwa, Jane Nakawesi, Patricia Nahirya, Denise Birungi, Dithan Kiragga

Background:
Continuity on antiretroviral therapy (ART) is essential for achieving sustained viral load suppression (VLS), reducing HIV-related morbidity and mortality, and advancing epidemic control. In Tororo and Butaleja districts of Eastern Uganda, client retention and viral load coverage (VLC) averaged 85% and 82%, respectively, below the national and UNAIDS target of 95%. To address these gaps, Baylor Foundation Uganda implemented a client audit tool across 35 supported ART sites to identify treatment interruptions, improve retention in care, and strengthen viral load monitoring. Description: Between July 2025 and March 2026, a retrospective programmatic review was conducted across 35 Baylor-supported ART sites (23 in Tororo and 12 in Butaleja). Multidisciplinary teams comprising clinicians, counsellors, linkage facilitators, and data assistants reviewed routinely collected facility data and client records using a standardized client audit tool extracted from the electronic medical records system. Health workers received training on the generation and utilization of audit reports to support appointment reminders, targeted phone follow-up, tracking of missed visits, and provision of integrated services at points of client contact. Additionally, client interviews were conducted to identify common reasons for treatment interruption and missed appointments.

Lessons learnt:
Implementation of the client audit tool was associated with improvements in both retention and viral load coverage. In Butaleja District, the number of active clients on ART (TX-CURR) increased from 3,096 during July–September 2025 to 3,196 by January–March 2026, reducing the gap toward the district target of 3,395. Viral load coverage improved from 80% to 94.4% over the same period. In Tororo District, TX-CURR increased from 12,472 to 13,105, surpassing the district target of 12,348, while viral load coverage increased from 82% to 96%. Overall, 733 additional clients were retained in care across the two districts within three reporting quarters. Key barriers to retention identified through client interviews included labor-related mobility, undocumented transfers, HIV-related stigma, and delayed follow-up after missed appointments.
Next steps The client audit tool proved to be an effective implementation strategy for identifying treatment gaps, tracing lost clients, and strengthening retention in HIV care. Integrating routine client audits into ART programming enhances accountability, improves TX-CURR performance, and supports progress toward the UNAIDS 95-95-95 targets. This model offers a scalable systems-strengthening approach for sustaining long-term HIV treatment outcomes in high-burden settings.

209: Utilising Quality Improvement Initiatives to Reduce Mortality Among Patients with Drug Susceptible Tuberculosis in Eastern Uganda.

Ssekiswa Lwanga Zimwanguyiza, Clark Joshua Brianwong, Kasi Timothy, Okwir Eddy, Ronald Khamasi, Alexander Mugume, Jjuuko Richard Kyakuwa, Dithan Kiragga

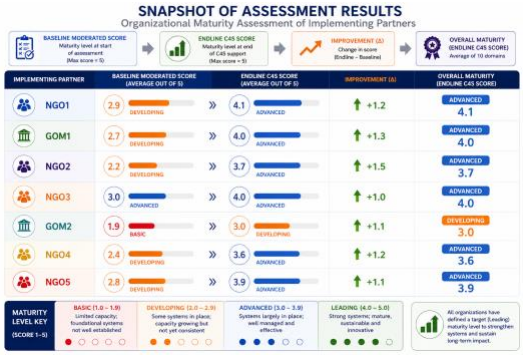
Background: Drug-susceptible tuberculosis (DS-TB) remains a major cause of preventable mortality. In January–March 2023, Local Partner Health Services Eastern reported a DS-TB treatment success rate of 91% and a death rate of 5.7% (93 deaths), exceeding the national target of less than 5%. Tororo and Butaleja hospitals contributed 31% (29/93) of all deaths. We describe a continuous quality improvement (CQI) initiative at Tororo and Busolwe hospitals to reduce DS_TB mortality from 5.7% to 3% within 12 months.
Methods: Between March 2023 and Dec 23 multidisciplinary work improvement teams implemented CQI interventions using root-cause analysis and iterative Plan-Do-Study-Act (PDSA) cycles. Baseline mortality data and 340 patient records were reviewed across the two hospitals, including 107 deaths during treatment. Teams audited patient records, performed fishbone analysis, process mapping, and run charts. At Busolwe hospital, root-cause analysis showed that 57% (26/45) of deaths were among TB/HIV co-infected patients, with CD4 coverage of 44%, (36/83) limited clinic organization, and inadequate staff assignment for TB monitoring. At Tororo hospital, 35% (22/62) of deaths occurred among clinically diagnosed patients without bacteriological confirmation, and mortality was higher among patients aged 60 years and above. Outcome measures were DS-TB mortality and treatment success rates. Process measures included GeneXpert testing among presumptive TB patients, CD4 and TB LAM (lipoarabinomannan) testing among TB/HIV co-infected patients, vital-sign documentation, clinician assessment, and screening for non-communicable diseases. Balancing measures included clinic workload, diagnostic turnaround time, and commodity availability. Using the Plan-do-study-cycles, teams tested and implemented interventions of a dedicated TB/HIV clinic day, placed VISITECT CD4 and TB LAM kits at the clinic, assigned technical staff to support TB services, and conducted mentorship on TB/HIV co-infection and advanced HIV disease at Busolwe hospital. In Tororo hospital, the team strengthened GeneXpert testing, clinician involvement in patient evaluation, routine vital-sign assessment, and non-communicable disease screening.

Results: The regional DS-TB mortality reduced from 5.7% to 3.2%, while treatment success improved from 91% to 94%. Weekly team reviews and monthly retention meetings supported rapid identification of patient-level gaps, adaptation of change ideas, and improved accountability for high-risk patients.
FIg1: TB mortality reduced from 5.7% to 3.0% in 12 months
Conclusion: Facility-led quality improvement, supported by routine data use, root-cause analysis, and PDSA cycles, contributed to reduced DS-TB mortality and improved treatment success in Eastern Uganda. The change package will be integrated into the health services integration framework and spread to other high-burden facilities.

215: Capacity for Sustainability of HIV Epidemic Control: A Comparative Analysis of a Phased and Participatory CYPRESS® Methodology in Malawi

J Denise Birungi, Jane Nakawesi, Albert Maganda, peter Elyanu, David Mpagi, Dithan Kiragga, Lorraine Mpaluko, Victor Chayamba, Geoffrey Musisi

Background:
The Capacity for Sustainability (C4S) initiative is a five-year (2023–2028) CDC/PEPFAR-funded institutional capacity-strengthening program implemented by Deloitte (Uganda) Limited with Baylor Foundation Uganda to strengthen implementing partners (IPs) delivering HIV, tuberculosis, and broader health programs in Africa. Implementation began in Malawi but ended prematurely in December 2025 following withdrawal of Government of the United States of America (USG) funding. This analysis examines how a phased, participatory CYPRESS® approach contributed to organizational maturity and generated practical lessons for sustaining HIV epidemic control.
Description:
Five CDC-funded non-governmental organizations and two Government of Malawi (GOM) institutions completed organizational capacity assessments using Deloitte's CYPRESS® methodology, combining self-assessment, independent assessment, and moderated consensus review across ten institutional domains, including governance, leadership, human resource/financial management, monitoring and evaluation, operations, external relations, resource mobilization, and mission delivery. Baseline findings informed co-created organizational roadmaps with 547 tailored interventions. Support included quarterly Grants Management boot camps, adaptive technical assistance (TA), policy and systems reviews, strategic planning, governance and risk management support, peer learning, and monthly performance reviews. Organizational maturity scores were normalized to a 5-point scale and summarized across domains.
Lessons learned:
Baseline maturity varied markedly across partners, requiring 45-107 tailored interventions per organization. Of 547 planned interventions, 269 (49%) were completed before project closure, with partner completion rates ranging from 24% to 83%. Despite shortened implementation, partners recorded measurable gains in institutional maturity, especially in grants management, governance, strategic planning, monitoring and evaluation, financial oversight, and systems documentation. Co-created improvement processes strengthened ownership and accountability, while adaptive TA improved readiness to compete for donor funding and engage private-sector partners. The government institute also advanced national health security priorities, including completion of the Joint External Evaluation and initiation of the National Action Plan for Health Security.
C4S demonstrated that participatory capacity strengthening can move beyond compliance-focused support to build durable institutional systems. The CYPRESS® model created a transparent pathway from diagnosis to action, enabling partners to prioritize high-impact reforms, track progress, and institutionalize improvements even under funding uncertainty.
Next steps:
The initiative established a foundation for sustainability, local leadership, and long-term ownership of HIV and broader health programs. Lessons from Malawi informed scale-up to 20 Government of Uganda (GOU) entities in October 2025, ahead of implementating the Memorandum of Understanding between the USG and GOU. Next steps will use co-creation, flexible TA, peer learning, and maturity tracking to sustain gains and accelerate country-led epidemic control.

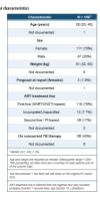


125: Predictors of Adverse Drug Reactions Among People Living With HIV at an Urban Ugandan HIV Clinic: A Retrospective Review

Godwin Murungi, Rogers Sekabira, Muzamil Nsibuka Kisekka, Nigel Kinyera Okot, Leticia Namale, Patricia Nahirya Ntege

Background: People living with HIV (PLHIV) are at high risk of Adverse Drug Reactions (ADRs) due to lifelong antiretroviral therapy, concomitant medications, and advanced disease. ADRs may compromise adherence and viral suppression, increase clinic visits and admissions, and add to program costs. To prevent ADRs, it is necessary to characterize the most common ADRs and the clients at risk of experiencing them. This study identified prevalent ADRs and their predictors among PLHIV attending the Baylor Foundation Uganda HIV clinic. Materials and Methods: We conducted a retrospective review of Uganda National Drug Authority pharmacovigilance ADR reports (January 2019 – December 2025) and extracted MedDRA-coded ADR terms alongside age, sex, pregnancy status, ART regimen, onset timing, concomitant medications, laboratory data, and causality assessments. We summarized patient characteristics and ADR patterns using descriptive statistics; and applied modified Poisson regression with cluster-robust standard errors to estimate adjusted risk ratios (aRRs) for predictors of ADR occurrence. Results: We reviewed 158 ADR case reports comprising 361 ADR term records, predominantly affecting the nervous system. Females (111/158, 70%) accounted for over twice as many reports as males (47/158, 30%). The median age was 28 (20,40) years. Patients on first-line ART were 118/158 (76%) and second-line 26/158 (17%). The most frequent ADRs were dizziness (23/361, 6.4%), vomiting (22/361, 6.1%), general body weakness (15/361, 4.2%), and bone pain (14/361, 3.9%). In the adjusted model, no factor reached conventional statistical significance ($p<0.05$). The closest trend was for ADR onset timing: Late onset (above median) (aRR 1.2, 95% CI 0.96-1.5, $p=0.119$). Median time to ADR onset was 590 days (IQR 47-1712). A limitation to the analysis was incomplete and low reporting. Severity, seriousness, and causality fields were completed in less than 33% of the ADR case reports, while CD4, viral load, and WHO stage were rarely documented.

Conclusion: Dizziness, vomiting, general body weakness, and bone pain were the most frequently reported ADRs. No independent predictors reached statistical significance, although late onset showed a modest trend. Substantial gaps in pharmacovigilance data limited the detection of meaningful predictors. Targeted training for clinic staff and integration of electronic medical records to supplement pharmacovigilance reporting are needed to improve data completeness and enable proactive ADR identification and prevention.





37: Strengthening Contact Tracing among Pulmonary Bacteriologically Tuberculosis Patients at the Baylor Foundation Uganda Center of Excellence through Quality Improvement Interventions.

Diana Bukirwa, Joel Jonathan Mangeni, Moses Mugerwa, Cathbert Tumusiime, David Kizito, Godfrey Nkuwe, Richard Jjuuko Kyakuwa, Jacqueline Balungi, Dithan Kiragga

Purpose: Tuberculosis (TB) remains a major public health challenge, especially among Persons Living with HIV (PLHIV). Systematic contact tracing is a key strategy for early detection, prevention, and interruption of TB transmission. In June 2025, none of the Pulmonary Bacteriologically confirmed (PBC) TB patients registered at the Baylor Foundation Uganda (BFU) Center of Excellence (COE) clinic had documented contact tracing, contrary to the Ministry of Health target of 100% coverage. This Quality Improvement (QI) project aimed to increase TB contact tracing coverage from 0% in June 2025 to 50% by December 2025 at the Baylor COE clinic.

Method: A QI project was conducted at the BFU COE clinic between June and December 2025. A multidisciplinary team comprising clinicians, nurses, and community health workers identified barriers to effective contact tracing through brainstorming sessions. Key challenges included backlog (before July 2025), inadequate client education, incomplete documentation, absence of clinician reminders, shortage of human resource, limited staff knowledge of TB contact tracing, and frequent client relocations. Using the Plan-Do-Study-Act (PDSA) model, two improvement cycles were implemented. Interventions included strengthened health education at all service points, identifying a focal person, introduction of an online contact-tracking register with weekly reviews, phone-based screening and follow-up of contacts, routine updating of client contact information, triage alerts for clients who require contact tracing, collaboration with the Baylor home care team for community outreach, and improved documentation practices. Data was collected from TB registers and contact-tracing logs and reviewed monthly. Indicators monitored included contact tracing coverage, contact screening rates, presumptive TB identification, GeneXpert testing, TB treatment initiation, and TB preventive therapy (TPT) uptake.

Results:

Contact tracing coverage improved steadily, surpassing the initial target of 50% and reaching 91% by December 2025. Overall, 102 contacts were listed, 87 screened for T.B, six were presumed, six tested with GeneXpert, 0 tested positive. However, one was started on Ant-TB treatment clinically, one declined TPT, 29 contacts were given TPT. Two index clients declined contact tracing.

Discussions:

Combining structured client education, enhanced documentation, phone-based screening and follow-up, triage alerts, identifying a focal person, and use of home care services improved TB contact tracing coverage among PBC TB patients. Limitations included: wrong client locator information, poor network coverage, work overload, and dependency on existing staff. The approach is a key strength and aligns with evidence supporting active, community-linked follow-up. Sustained implementation of these activities is essential to maintain high coverage rates.

Table showing PBC TB contact tracing results.

PERIOD	NUMBER OF PBCs	CONTACTS LISTED	CONTACTS SCREENED	CONTACTS PRSUMED	TESTED WITH GENE XPERT	POSITIVE TEST	STARTED ANT-TB TREATMENT	STARTED TPT
Jul-25	18	41	30	1	1	0	1	5
Aug-25	3	13	13	1	1	0	0	10
Sep-25	2	8	7	2	2	0	0	4
Oct-25	3	6	6	1	1	0	0	4
Nov-25	5	22	20	1	1	0	0	3
Dec-25	1	12	11	0	0	0	0	3

147: Strengthening Cross-Border Ebola Preparedness Through WhatsApp-Coordinated Redistribution of Infection Prevention and Control Commodities Across 130 Health Facilities in Eastern Uganda.

Kwerit Charles, William Mutabaazi, John Wilberforce Mayoka, Oscar Opiyo, Ronald Khamasi, Richard Jjuuko Kyakuwa, Alexander Mugume, Leticia Namale, Patricia Nahirya Ntege, Denise J. Birungi, Dithan Kiragga

Background: Reliable access to infection prevention and control (IPC) commodities is central to epidemic preparedness, and response. However, stock visibility remains poor across many resource-constrained health systems due to incomplete inventory records, inconsistent use of digital logistics platforms, and weak routine stock monitoring. During Ebola preparedness activities in Eastern Uganda, these gaps threatened timely deployment of critical IPC commodities while increasing of commodity expiry and wastage. We describe the use of a WhatsApp coordination platform to strengthen stock visibility and facilitate real time redistribution of IPC commodities across health facilities (HF) and cross-border points of entry.

Description: Between March 2025 to date, a structured WhatsApp coordination platform was established involving pharmacists, frontline health workers, district leaders, inventory management officers and implementing partners across 130 health facilities, two major points of entry, and three smaller boarder crossing points along the Uganda-Kenya boarder. Existing digital systems, (RxSolution, eAFYA, Clinic Master, and UgandaEMR), were reviewed for 12 priority IPC commodities but did not provide complete real-time stock visibility because of delayed updates, and limited functionality. Facilities submitted standardised reports through WhatsApp on available stock, near-expiry commodities, shortages and redistribution needs. District inventory teams coordinated verification and redistribution based on reported stock levels.

Evaluation and Outcomes: Among the 130 facilities, (98/130, 75%) held IPC commodity stocks exceeding four months of stock supply that were at risk of expiry without redistribution. Commodities were successfully redistributed to two major and three smaller border points of entry and to high-volume facilities with shortages. Redistribution mobilised existing IPC commodities valued at approximately USD 12,000, offsetting nearly half of the estimated USD 25,000 procurement requirements for regional Ebola preparedness. The intervention improved stock availability at priority sites, while reducing the risk of wastage through proactive identification and redeployment of near to expiry commodities.

Lessons learned: A structured WhatsApp coordination platform demonstrated that widely available mobile communication tools can strengthen emergency supply chain responsiveness by improving real-time stock visibility, enabled rapid redistribution of near-expiry IPC commodities, and data-driven decision making. Leveraging existing stock reduced procurement needs, minimized wastage, and demonstrated that low-cost digital communication tools can enhance epidemic preparedness and last-mile supply chain resilience in resource-limited settings

Next Steps: Institutionalize routine weekly monitoring of IPC commodities using a real-time stock tracking system. Integrate IPC commodity reviews into monthly meetings to support timely redistribution, procurement planning and sustained preparedness beyond periods of active outbreak response.

65: Title: Visual Storytelling for Public Health Communication: Lessons from Baylor Foundation Uganda's Digital Engagement Strategy.

Musa Neeson Nakedde, Louisa Kiggwe, Richard Jjuuko Kyakuwa, Dithan Kiragga, Victoria Ndyanabangi, Louis Diana Anena

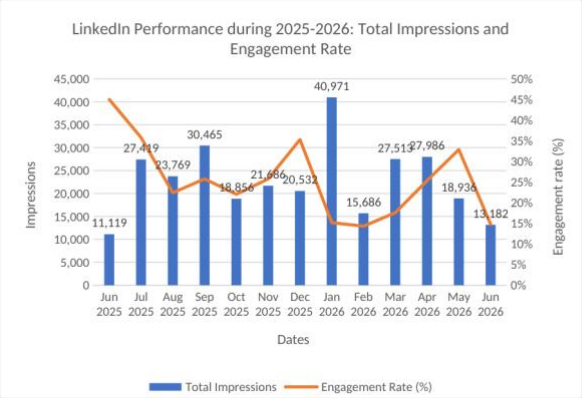
Background: Effective public health communication requires more than disseminating information; it involves translating complex health interventions into compelling narratives that engage multiple stakeholders. Visual storytelling through photography, videography, graphics, and accompanying text has emerged as a powerful tool for increasing awareness, demonstrating program impact, strengthening partnerships, and promoting public trust. This abstract assessed the performance of visual storytelling content on LinkedIn and identified themes associated with higher stakeholder engagement to inform strategic digital public health communications.

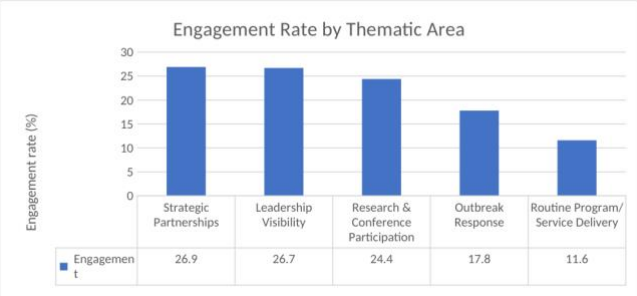
Methodology: We conducted a retrospective analysis of LinkedIn analytics for 90 posts on the Baylor Foundation Uganda's Official LinkedIn page between June 2025 and June 2026. Key performance indicators included total impressions and engagement rate. Posts were categorized by thematic area, including strategic partnerships (32), leadership visibility (5), outbreak response (22), research and conference participation (22), and routine program/service delivery updates (9). Performance trends were analyzed to identify content characteristics and thematic areas associated with higher engagement of the content published on the platform.

Results: A review of 90 LinkedIn posts from the Baylor Foundation Uganda (BFU) from June 2025 to June 2026 showed that its LinkedIn page generated a total of 285,500 impressions and an average engagement rate of 23%, which is over 10% and considered excellent. The highest engagement posts were related to strategic partnerships (26.9%), followed by leadership visibility (26.7%), research and conference participation (24.4%), outbreak response (17.8%), and routine program/service delivery updates (11.6%).

Lessons Learned: Higher impressions or reach do not always translate into high engagement, hence the need for a deeper dive into content quality and thematic relevance. An analysis of the thematic content showed that content on collaboration, leadership, and scientific dissemination, rather than routine programmatic updates, contributed significantly to strengthening digital visibility and stakeholder engagement.

Next Steps: Baylor Foundation Uganda will build on its existing strengths by expanding the use of data-driven content planning, increasing leadership- and expert-driven communications, strengthening multimedia storytelling across program areas, and routinely monitoring analytics to optimize audience reach, engagement, and the effectiveness of public health communication.





Poster Abstracts
Afternoon Poster Session

91: Advancing Adolescent-Centered HIV Care through Creative, Participatory Action Research with Adolescents Living with HIV in Botswana

Tanya Thomas, Mogomotsi Matshaba, David Thomas, Tinah Batsile, Thato Mookodi, Onkemetse Phoi, Kenneth Katse, John Farirai, Abhilash Sathyamoorthi, Roshan Galvaan, Pam Gretschel, Heather Haq

Background: Adolescents living with HIV (ALWH) have complex, multidimensional care needs shaped by developmental, social, and structural factors affecting health and care outcomes. Specifically, adolescents are in a period of vulnerability and experimentation navigating the transition to adulthood, a formative period that shapes their future trajectories. ALWH experience HIV- related stigma, emotional and psychological distress, social isolation, higher levels of anxiety, depression, suicidal symptoms, and substance abuse when compared to their peers, and also experience limits to their participation in everyday activities, which negatively affect their overall mental and physical well-being. The purpose of this research was to involve ALWH in Botswana as co-researchers to explore first-hand perspectives of their needs, supports, barriers, and solutions pertaining to their participation in everyday activities using participatory action research and creative methodologies.

Methods: This qualitative research was carried out through the Botswana-Baylor Children's Clinical Centre of Excellence (BBCCCOE) in 2025 and utilized a participatory action research (PAR) approach that was underpinned by an occupational perspective and the Occupation-based Community Development Framework. ALWH (aged 13-19 years) in Botswana were recruited to participate as co-researchers and engaged in 3-4 group sessions that encompassed of creative art activities and shared dialogue on broad topics addressing their everyday activities, barriers and supports to participation in such activities, and identification of needs and relevant solutions. Meetings were conducted in English and Setswana and were transcribed and translated to English (when needed) and then coded to identify relevant themes related to the topic of mobilizing adolescent-centric HIV care interventions.

Results: 32 ALWH were recruited into the study. The study findings here discuss two themes and various sub-themes. Theme one presents the need to consider the everyday adolescent life with sub themes: ALWH managing layered responsibilities and economic risks; ALWH navigating stigma, disclosure, and identity; risk environments and coping among ALWH; and digital spaces as opportunity and tension in the lives if ALWH. Theme two presents the areas of need and potential solutions proposed by ALWH with sub-themes highlighting the need for life skills trainings; and interventions at the contextual level.

Conclusion: The early findings from this PAR highlight the everyday experiences of ALWH in Botswana and discusses action agendas, which together can inform future development of adolescent-centric HIV care interventions in ways that position ALWH as decision-makers considering their everyday experiences and contextual forces shaping such experiences.

75: Advancing Paediatric Surgical Care in Botswana: A Health System Strengthening Initiative for Improved Access, Decentralization, Quality, and Workforce Sustainability

Abdelrahman Elnour, Andrew Dihutso, Abhilash SATHYAMOORTHI, mogomotsi matshaba

Background:

Ensuring equitable access to quality paediatric surgical care requires sustainable specialist services, effective referral systems, and investment in local workforce capacity. Paediatric surgical care in Botswana is centralized at Princess Marina Hospital (PMH), the national referral hospital, serving children requiring specialist surgical assessment and management. Within the existing collaboration between the Botswana-Baylor Children's Clinical Centre of Excellence (BBCCCOE) and the Ministry of Health (MoH), a paediatric surgery strengthening initiative was introduced in April 2024 to expand specialist capacity, improve access to essential surgical care, decentralize selected services, and support sustainable development of paediatric surgical expertise in Botswana.

Description:

The initiative integrated an additional paediatric surgeon into the paediatric surgery team at PMH, expanding the delivery of emergency and elective surgical services, specialist outpatient clinics, and multidisciplinary paediatric oncology tumour board participation. Quality improvement was supported through structured service monitoring using a paediatric surgery database to evaluate clinical activity, surgical workload, and outreach outcomes. The programme also prioritized workforce sustainability through resident training, operative mentorship, bedside teaching, and capacity building of allied healthcare providers. To reduce geographical barriers and improve access, outreach services were implemented at district facilities, including Ghanzi and Letlhakane Primary Hospitals, enabling specialist assessment and selected surgical procedures closer to children's communities.

Lessons Learned:

Between April 2024 and May 2026, 903 children were reviewed in the paediatric surgery clinic at PMH. Males accounted for 679 (75.2%) of patients, and 441 (48.8%) of children were under the age of 5 years. The most frequently managed conditions were undescended testes (113, 12.5%), umbilical hernia (37 [4.1%]), chronic constipation (35 [3.9%]), and hypospadias (32 [3.5%]). A total of 368 surgical procedures were performed, including inguinal herniotomy (48 [13.0%]), orchiopexy (43 [11.7%]), umbilical hernia repair (38 [10.3%]), and oncology-related procedures (42 [11.4%]). The decentralization component extended specialist care beyond the tertiary centre, with 53 children assessed through outreach services and 23 surgical procedures successfully completed locally as day-case operations. Beyond increasing surgical activity, the initiative strengthened multidisciplinary care pathways, enhanced paediatric oncology collaboration, and expanded training opportunities for future surgical providers.

Next Steps:

The program will continue to strengthen paediatric surgical services through expansion of outreach coverage, improved referral pathways, continuous quality monitoring, and investment in workforce development. This model demonstrates how integrating specialist care initiatives within existing health partnerships can improve access, promote decentralization, enhance quality of care, and build sustainable paediatric surgical capacity in resource-limited settings.

Table 1. Paediatric surgical service expansion (April 2024–May 2026)

Programme indicator	Outcome
Children reviewed in paediatric surgery clinic at PMH	903
Male patients	679 (75.2%)
Children <5 years	441 (48.8%)
Surgical procedures performed	368
Most common diagnosis	Undescended testes: 113 (12.5%)
Oncology-related procedures	42 (11.4%)
Children assessed through outreach platform	53
Surgical procedures completed during outreach	23

Programme indicator	Outcome
Paediatric oncology tumour board participation	Integrated multidisciplinary care

Figure 1: Conceptual framework of the MoH–BBCCCOE partnership for strengthening paediatric surgical services and building sustainable surgical capacity in Botswana.



88: Navigating uncertainty: caregiver experiences during childhood cancer diagnosis in Botswana

David Thomas, Sewelo Sosome, Ludo Molwantwa, Tanya Thomas, Thato Kaang, Andries Gontshwanetse, Heather Haq, Mogomotsi Matshaba

Background: Approximately 400,000 children are diagnosed with cancer annually, with nearly 90% residing in low- and middle-income countries (LMICs) where survival rates range from 15% to 45% compared to over 80% in high-income countries. In Botswana, delays in childhood cancer diagnosis persist despite universal access to free healthcare with relatively low out of pocket expenses. Although health system contributors to delayed diagnosis have been described, little is known about how caregivers experience and navigate the diagnostic journey. This study aims to explore caregiver experiences during childhood cancer diagnosis and identify contextual factors shaping these experiences.

Methods: This qualitative study uses narrative inquiry to center caregiver perspectives. Adult caregivers of children diagnosed with cancer receiving care through the Paediatric Haematology and Oncology Programme at Botswana-Baylor Children's Clinical Centre of Excellence in Gaborone, Botswana, were recruited through convenience sampling. A semi-structured interview guide, informed by the study objectives and relevant literature, was used to conduct individual interviews in English or Setswana. Interviews were concurrently transcribed, translated when necessary, and analyzed using a thematic-content approach until thematic saturation was attained.

Results: Preliminary analysis of interviews suggests that childhood cancer diagnosis is experienced as a prolonged period of uncertainty rather than a discrete event, with diagnostic journeys ranging from several months to five years. Caregivers described repeated healthcare encounters, prolonged wait times for specialist consultations, and, at times, conflicting information from healthcare providers, contributing to uncertainty regarding their child's condition and prognosis. Amid this uncertainty, caregivers frequently reported suppressing their own emotional needs to "be strong" for their child while prioritizing caregiving responsibilities. Financial strain, including loss of employment, dependence on extended family networks, and social obligations, further complicated healthcare decision-making. Uncertainty was also shaped by community perceptions of cancer; many caregivers initially believed cancer was a disease of older adults and associated the diagnosis with death, contributing to fear and influencing care-seeking behaviors.

Conclusion: Emerging findings suggest that childhood cancer diagnosis is experienced not as a single clinical event, but as a prolonged process of navigating health system, financial, social, and emotional uncertainty. Efforts to improve childhood cancer outcomes should extend beyond diagnostic and treatment services to include caregiver-centered psychosocial support, strengthened communication throughout the diagnostic pathway, and community education addressing misconceptions and stigma about childhood cancer. Such approaches may reduce caregiver burden, improve engagement with care, and better support families throughout the cancer journey.

139: School-Based Listening Centers: A Strategy to Strengthen Access to Mental Health Care

ELZA PINEDO BETANCOURT

Background: Limited availability of mental health services in school settings hinders the early identification and timely care of children and adolescents with psychosocial needs. In response to this challenge, the Take Care: Health for Today and the Future project established Listening Centers in educational institutions across La Guajira, Colombia, to provide early psychosocial support, identify risk factors, and strengthen life skills that promote resilience and adaptation to everyday challenges.

Methods: The study was conducted in three educational institutions in La Guajira, where three Listening Centers were established to provide psychosocial care to students, teachers, and caregivers. Access to services occurred through institutional referral, caregiver request, or self-referral. Services included initial psychosocial assessment, identification of risk and protective factors, development of individualized intervention plans, and follow-up sessions. The intervention was delivered by a psychologist and a community health promoter. A quantitative, descriptive, non-experimental study with longitudinal follow-up was conducted using data extracted from Fundación Baylor Colombia's electronic clinical records.

Results: During the first two months of implementation, 207 psychosocial consultations were provided, including 86 initial assessments (41.95%) and 121 follow-up sessions (58.05%), demonstrating continuity of care. Twenty-two diagnostic impressions were identified, with problems related to the primary support group being the most frequent (29.07%). Females represented 80.23% of service users, and sixth-grade students accounted for 50% of all consultations. Participants received between one and six follow-up sessions, and only 4.65% required referral to specialized mental health services, highlighting the Listening Centers' capacity to effectively address most psychosocial needs within the school setting.

Conclusions: Listening Centers proved to be an effective strategy for strengthening school-based psychosocial care by promoting early identification of mental health risks and addressing most psychosocial needs without requiring referral to specialized services. The high frequency of family-related concerns underscores the importance of strengthening interventions targeting students, families, and teachers to foster protective environments and improve the emotional well-being of the school community.

164: Nutritional Status, Dietary Risk Behaviours, and Socio-demographic Factors Among Tuberculosis Survivors in Eswatini: A Retrospective Cohort Analysis.

Patricia Sello, Tengetile Ntsele, Sanelisiwe Khumalo, Babongile Nkala, Debra Vambe, Alexander Kay, Andrew Dirnado

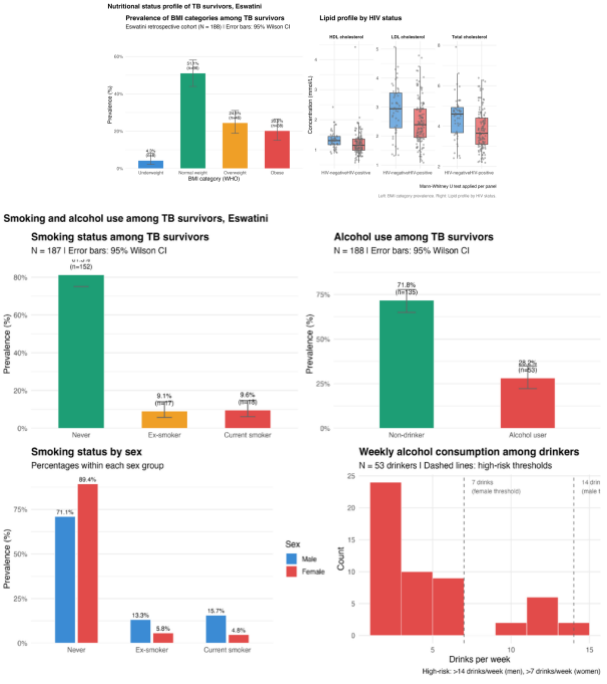
BACKGROUND: Tuberculosis (TB) survivors face a 3.7-fold increased risk of post-TB mortality due to an increase in non-communicable diseases (NCDs). Poor nutritional status, dietary risk behaviors, and adverse social determinants of health compound this vulnerability, yet remain undercharacterised in sub-Saharan African settings. This study describes the nutritional and socio-demographic risk profile of TB survivors in Eswatini, a high-burden setting for both TB and HIV.

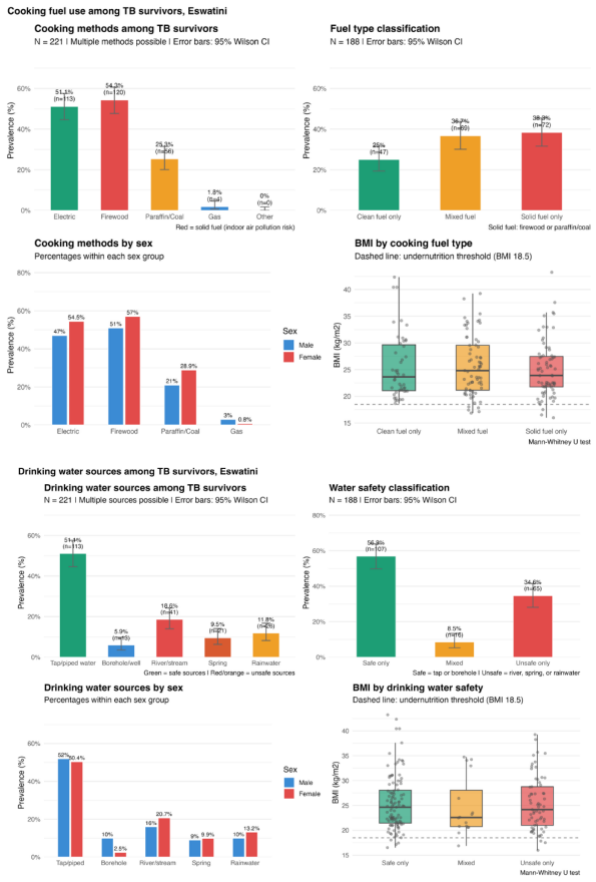
METHODS: We conducted a retrospective cohort analysis of 188 TB survivors including their Healthy Household Contacts (N=30) enrolled in Eswatini. Clinical evaluation included anthropometry and structured sociodemographic assessment. BMI was classified using WHO BMI categories (underweight <18.5, normal 18.5–24.9, overweight 25.0–29.9, obese ≥30.0 kg/m²). Dietary risk behaviors included alcohol use, smoking status, cooking fuel type, and drinking water source. Continuous variables are reported as median (IQR); categorical variables as frequencies and proportions with 95% Wilson confidence intervals.

RESULTS: Nutritional status. Mean BMI was 25.4 ± 5.5 kg/m². Normal weight was present in 51.1% (n=96), overweight in 24.5% (n=46), and obesity in 20.2% (n=38) and underweight was present in 4.3% (n=8). Dyslipidaemia was highly prevalent: low HDL was present in 44.3%, elevated LDL in 17.6%, and any dyslipidaemia in 57.4% of participants.

Dietary and Socio-demographic risk behaviours. Alcohol use was the most prevalent lifestyle risk factor identified in 29% (n=53), followed by history of smoking in 19.1% (n=35), household smoking exposure in 14.2% (n=26) and current smoking reported in 9.8% (n=18). Sex differences in alcohol use were observed (males 41.7% vs. females 17.3%; p<0.001). Participants who ever-smoked were 18.7%; smoking was significantly more common in males (29%) than females (13.6%) (p=0.006). Firewood was used as a cooking fuel by 54.3% (n=120), with any solid fuel use was reported by 38.3% (n=72). Clean fuel was reported in 25% (n=47) of the participants. Unsafe drinking water sources were used by 34.6% of participants. Safe drinking source was reported in 56.9% and others used mixed methods of safe and unsafe water sources (8.5%).

CONCLUSIONS: TB survivors in Eswatini exhibit a dual nutritional burden of undernutrition and overweight/obesity, a high prevalence of dyslipidemia, and widespread exposure to dietary and environmental risk factors including solid fuel combustion and unsafe water. These findings support integration of nutritional screening, metabolic assessment, and behavioral risk evaluation into routine post-TB care and provide the empirical basis for targeted interventions to reduce PTLD and NCD risk in this high-burden setting





160: Depression Burden Among Tuberculosis Survivors and Household Contacts: A PHQ-9 Based Mental Health Assessment

Tengetile Ntsele, Babongile Nkala, Patricia Sello, Sanelisiwe Khumalo, Debrah Vambe, Alexander Kay, Anna Mandalakas, Andrew DiNardo

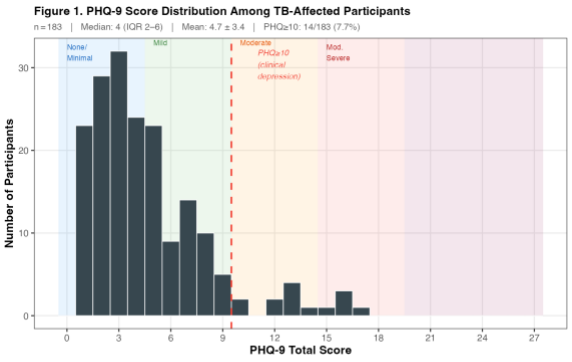
Background: Tuberculosis (TB) survivors face significant psychosocial burdens beyond the physical sequelae of the disease, yet mental health outcomes in this population remain insufficiently studied. This study aimed to assess the prevalence, severity, and predictors of depressive symptoms among TB survivors using a validated screening instrument.

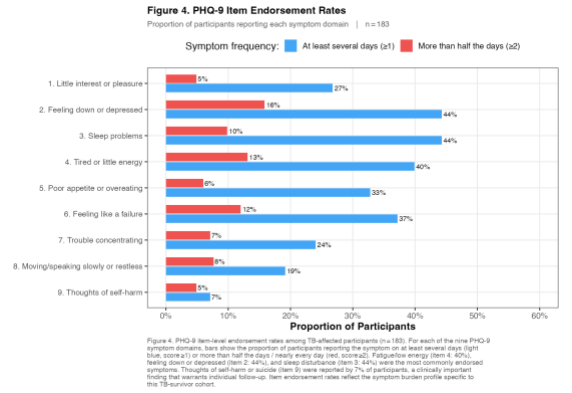
Methods: A cross-sectional assessment of depressive symptoms was conducted among 183 TB-affected participants comprising TB survivors (index cases) and their household contacts using the Patient Health Questionnaire-9 (PHQ-9). Depression severity was categorised according to PHQ-9 thresholds: none/minimal (0–4), mild (5–9), moderate (10–14), moderately severe (15–19), and severe (20–27). Clinically significant depression was defined as a PHQ-9 score ≥10. Stratified prevalence was estimated across sociodemographic and clinical subgroups, and multivariable logistic regression was performed to identify independent predictors of clinically significant depression.

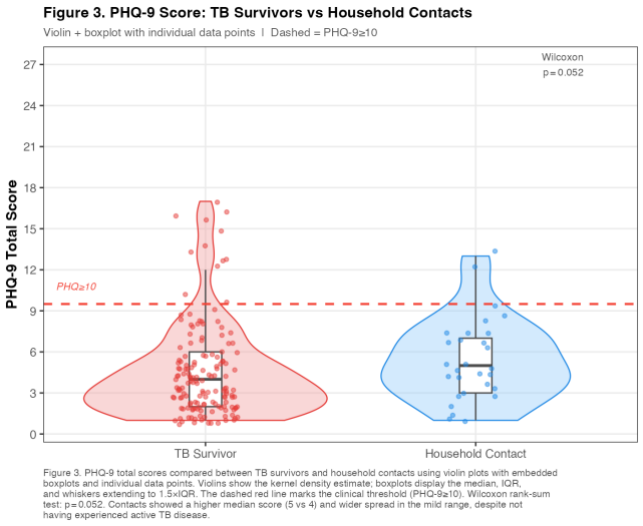
Results: The overall prevalence of clinically significant depression (PHQ-9 ≥10) was 7.7% (95% CI: 4.6%–12.4%; n = 14/183). The distribution of scores was right-skewed (median 4, IQR 2–6; mean 4.7 ± 3.4), with most participants (59.0%) in the none/minimal range and 33.3% in the mild range. No participants scored in the severe range (≥20). The most endorsed symptoms were low mood (44%), sleep disturbance (44%), fatigue (40%), and feelings of failure (37%); thoughts of self-harm were reported by 7% of participants. Females demonstrated a higher point prevalence of clinically significant depression than males (10.9% vs. 3.7%). Subgroup analyses by HIV status, TB type (DS-TB vs. MDR-TB), alcohol use, and smoking status revealed broadly similar prevalence estimates, though confidence

intervals were wide due to small event counts. In multivariable logistic regression (n = 148; 14 events), no predictor reached statistical significance; however, the presence of any comorbidity showed the largest adjusted odds ratio (aOR = 2.78, 95% CI: 0.45–17.2), while male sex appeared protective (aOR = 0.48, 95% CI: 0.10–2.34).

Conclusion: Depressive symptoms, both clinically significant and subclinical, are common among TB survivors and their household contacts in this cohort, representing a substantial yet largely undetected mental health burden within routine TB care. The presence of self-harm ideation in this population signals a safety concern that needs active screening. Although this study was underpowered to confirm individual predictors, the patterns observed are consistent with recognized vulnerabilities and warrant confirmation in larger cohorts to guide targeted interventions. These findings support embedding brief, validated mental health screening with clear referral pathways into routine TB services.







113: Impact of Community Education on Cervical Cancer Screening Uptake

Tru love Delie Khanyile

Background: Cervical cancer remains a major global public health concern and is the fourth most common cancer among women worldwide, disproportionately affecting low- and middle-income countries, particularly in sub-Saharan Africa due to high HPV and HIV prevalence. In Eswatini, cervical cancer remains one of the leading cancers among women, with screening uptake hindered by limited awareness, stigma, and misconceptions. Strengthening community education is therefore critical to improving screening uptake, early detection, and linkage to care.

Objective/Aim

To assess the impact of community awareness interventions on cervical cancer screening uptake, referral completion, and early detection of precancerous lesions.

Methods: Community education interventions were implemented through targeted outreach activities, workplace sensitization, tertiaries, strategic partnerships, collaboration with traditional and religious leaders, and engagement of community health workers. During outreaches the mobilised attendees are taken through an education session in both groups and one on one on the importance of cervical cancer screening, prevention measures and symptoms. Program monitoring data collected between January 2025 and November 2025 were analysed to assess trends in awareness coverage, cervical cancer screening uptake, referral completion, and early detection outcomes.

Results: Community awareness coverage increased from 37% of Emaswati over 18 years in January 2025 to 97% of the annual target (63,550/65,468) by November 2025. Following intensified awareness activities, cervical cancer screening uptake rose from 5.1% to 14% among women aged above 18 years, while referral completion for women requiring further assessment or treatment improved from 1% to 9.3%, demonstrating strengthened follow-up and linkage to care. This also demonstrate that the education campaigns are also making impact in that the women receiving referrals for follow up are completing them understanding the seriousness of cervical cancer. Early detection of precancerous lesions also increased, enabling timely treatment and improved health outcomes.

Conclusion: Sustained, data-driven community awareness interventions significantly contributed to improved cervical cancer screening uptake, referral completion, and continuity of care. Strengthening community engagement strategies remains a critical component of effective cervical cancer prevention programs and improved clinical outcomes for women.

Figure 1. Community campaign attendance

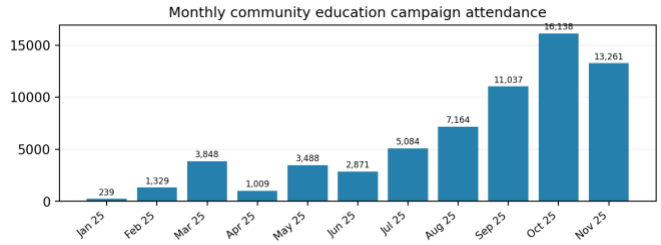
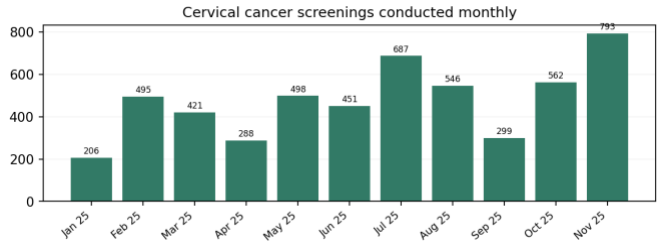


Figure 2. Monthly cervical cancer screenings



200: Exploring People's perceptions on PrEP for HIV Prevention in Berea Hospital Lesotho

Mammokana Moleli, Motlatsi Letsika

Introduction: Human Immunodeficiency Virus (HIV) remains a significant public health challenge in Lesotho despite ongoing prevention efforts. Pre-Exposure Prophylaxis (PrEP) has been recognized as an effective biomedical intervention that reduces the risk of HIV acquisition among individuals at substantial risk of infection. However, the success of PrEP programs depends not only on its availability but also on how it is perceived by potential users. Negative perceptions, misconceptions, stigma, and limited awareness may hinder PrEP acceptance and uptake. This study explored people's perceptions of PrEP for HIV prevention at Berea Hospital, Lesotho.

Methods: A qualitative descriptive design was adopted to gain an in-depth understanding of participants' views and experiences regarding PrEP. Data were collected through semi-structured interviews with 20 purposively selected participants comprising males and females aged between 18 and 49 attending Berea Hospital. The sample included both individuals receiving PrEP services and community members who were aware of PrEP but had not initiated its use. The interviews responses were analyzed using thematic analysis to identify key patterns and themes related to perceptions of PrEP. The study was guided by four thematic areas: awareness and knowledge of PrEP, perceived benefits of PrEP, Barriers to PrEP uptake and utilization, and recommendations for improving PrEP acceptance and accessibility.

Results: The findings show that females constituted majority (60%) of participants while males formed a smaller proportion (40%). Eight (40%) of the participants were aged between 25 and 34 years. The majority (50%) had attained secondary education and half of the participants were married. The study revealed mixed perceptions regarding PrEP use. Participants generally acknowledged its potential role in preventing HIV infection and promoting individual health. However, concerns about side effects, social stigma, misconceptions about PrEP use, and inadequate information were identified as factors that negatively influenced its acceptance. Positive perceptions were associated with increased awareness, trust in healthcare providers, and access to accurate information about PrEP. Participants also emphasized the need for greater community sensitization and health education to improve understanding and acceptance of the intervention.

Conclusion: The findings indicate that perceptions play a crucial role in influencing the uptake and utilization of PrEP services. Strengthening public awareness campaigns, addressing misconceptions, reducing stigma, and enhancing health education may improve the acceptance and use of PrEP among populations at risk of HIV infection. These findings provide valuable evidence for healthcare providers, policymakers, and public health practitioners seeking to strengthen HIV prevention strategies in Lesotho.

71: Triple Elimination of Mother-to-Child Transmission in Malawi: Integrating Comprehensive HIV, Syphilis, and Hepatitis B Care Using Established Community Health Worker Systems

Elizabeth Wetzel, Carrie Cox, Elijah Kavuta, Gift Kaunda, Jemimah Nyirongo, Emmanuel Navaya, Atusaye Tesiwa, Haswell Jere, Samuel Chilala, Teferi Beyene, Peter Nyasulu, Saeed Ahmed, Katherine R. Simon

Background: Longitudinal case management of mother-infant pairs (MIP) has contributed to substantial reductions in incident infant HIV infections. In January 2023, Malawi adopted triple elimination of HIV, Syphilis and Hepatitis B (HBV) within routine antenatal care (ANC). We describe the development and early implementation of a care cascade and monitoring tools for pregnant women with syphilis and/or HBV building on established community health worker (CHW) led longitudinal HIV programming at 21 Ministry of Health facilities in 5 districts in Malawi supported by Baylor Foundation Malawi Tingathe program.

Methods: We developed a training package, job aids and monitoring tools to promote triple elimination and delivered a case-based clinical training for health workers (HW) on syphilis and HBV testing and care for pregnant women, their sexual partners and babies, utilizing a longitudinal triple elimination register, and provided CHW-led follow-up. Supervisory clinical staff virtually attended a trainer of trainers and cascaded training and site-level implementation planning to facility staff. We analyzed routine program records to describe identification and care of eligible MIP and partners. Ministry guidelines defined treatment completion.

Results: During October and November 2025, among ~13,000 ANC women, HW identified 221 pregnant and breastfeeding women with syphilis and/or HBV: 102(46%) were diagnosed with syphilis only; 75(34%) HBV only; 24(11%) Syphilis and HIV; 8(4%) syphilis and HBV; 7 (3%) HBV and HIV; and 5(2%) with syphilis, HBV and HIV. All women with syphilis started treatment (139/139), 64%(89/139) completed treatment; 42%(58/139) of sexual partners were treated; 6 babies were born to mothers with syphilis and 5/6 received syphilis treatment. For women with HBV, 99%(94/95) started tenofovir-based treatment; 19%(18/95) of sexual partners had HBV testing; 22%(4/95) were diagnosed with HBV, 78%(14) were HBV negative; 6 babies were born to mothers with HBV and 3 had confirmed vaccination by 6wks. All women living with HIV (36/36) were on antiretroviral treatment.

Conclusions: Leveraging existing longitudinal CHW platforms developed for HIV provides a critical pathway to integrate syphilis and HBV services for MIPs and their partners. This intervention should be rapidly expanded and adopted to help countries move towards achievement of triple elimination goals.

53: Improving Continuity of ART Care by Reducing Missed Appointments: A Quality Improvement Initiative at Baylor Malawi Centre of Excellence, Lilongwe, Malawi

Adamson Munthali, Chifundo Chigwenembe, Emily Mwase, Hazel Lakudzala, Elizabeth Tamula, Moses Tambala, Peter Mandawala, Symon Mtambo, Jeany Matchado, Lusungu Lukhale

Purpose: Missed clinic appointments compromise antiretroviral therapy (ART) adherence, viral suppression, and retention in care. At

the Baylor Malawi Centre of Excellence, missed appointments remained persistently high, averaging 139 per month between March and May 2026. Adolescents accounted for an average of 34 missed appointments monthly, highlighting a significant retention challenge in this vulnerable population. To address this gap, a quality improvement (QI) initiative was undertaken with the aim of reducing monthly missed appointments by 50% within six months through a standardized, patient-centered approach targeting both client- and health system-level barriers.

Methods: A multidisciplinary QI team comprising clinicians, nurses, pharmacists, peer supporters, community health workers, psychosocial counselors, and social workers was established. Using a fishbone diagram and Plan-Do-Study-Act (PDSA) methodology, the team conducted a root cause analysis that identified client-level barriers, including transport costs, seasonal farming commitments, adolescent-specific challenges, literacy limitations, and behavioral factors. Health system barriers included documentation errors, absence of standardized procedures, and inconsistent provider practices.

Through multiple PDSA cycles, the team tested and refined interventions including development of Terms of Reference (TOR) to standardize management of missed appointments, introduction of a missed-appointment tracking bin, enhanced adolescent engagement strategies, improved documentation visibility, appointment scheduling aligned with school and farming calendars, and staggered medication refills. Missed-appointment data were collected monthly from the missed appointment register and electronic medical records (EMRx) and reviewed during routine QI meetings.

Fishbone diagram (Root cause analysis)

Results: Following implementation, missed appointments decreased from a baseline average of 139 per month to 73 in June 2026, representing a 48% reduction. Adolescent missed appointments decreased from a baseline average of 34 to 24, representing a 29% reduction. Implementation was associated with improved documentation completeness, strengthened accountability through TOR-guided workflows, and enhanced follow-up coordination. Seasonal travel and competing socioeconomic demands remained ongoing barriers to attendance.

Discussion: This initiative demonstrates that a multidisciplinary, data-driven QI approach can substantially improve retention in ART care through reduction of missed appointments. Key strengths included standardized clinic workflows, targeted adolescent engagement strategies, and context-specific scheduling adjustments. Because the interventions relied primarily on workflow redesign and existing clinic resources, they have strong potential for sustainability and adaptation across similar HIV treatment settings. Next steps include formalizing the TOR into a standard operating procedure, evaluating six-month outcomes, and assessing sustainability and scalability across additional ART clinics.

162: Enhancing Inventory Control, Accountability, and Operational Efficiency Through the Implementation of a Computerized Stores Management System: A Quality Improvement Initiative at Baylor Foundation Malawi

Hazel Lakudzala, Kelvin Jobo, Lucy Tawakali

Background: Efficient inventory management is essential for ensuring uninterrupted organizational operations, optimizing resource utilization, and maintaining accountability. At Baylor Foundation Malawi, office supplies were previously managed using a paper-based inventory system that was time-consuming, labor-intensive, and prone to documentation errors. The manual process limited real-time monitoring of stock levels, delayed replenishment, and made it difficult to track inventory movement and utilization. In addition, the system incurred recurring costs associated with stationery, printing, filing, and physical document storage. To address these operational challenges, Baylor Foundation Malawi implemented a computerized Stores Management System to improve inventory management processes and strengthen accountability.

Objective: To evaluate the impact of implementing a computerized Stores Management System on inventory control, accountability, procurement efficiency, operational performance, and administrative costs.

Methods: A quality improvement initiative was conducted following the implementation of a computerized Stores Management System. The electronic platform supports end-to-end inventory management, including electronic requests for office supplies, stock replenishment, procurement of new items, inventory issuance, and real-time stock monitoring. The system incorporates a structured approval workflow comprising requisition, authorization, approval, and distribution, ensuring accountability and transparency throughout the inventory management process. System utilization records, routine process observations, and user feedback were reviewed to assess changes in operational efficiency, inventory visibility, transparency, and resource management following implementation.

Results: The computerized Stores Management System significantly improved inventory control by providing real-time visibility of stock levels and movement, enabling timely replenishment and reducing the risk of stock-outs and overstocking. Electronic processing of inventory requests substantially reduced paperwork, stationery consumption, and physical document storage requirements, resulting in administrative cost savings. The automated approval workflow strengthened accountability by creating a comprehensive electronic audit trail for every inventory transaction. Users reported faster processing of requests, improved transparency, enhanced accuracy in inventory tracking, and easier retrieval of inventory records. The system also facilitated timely generation of inventory reports, supporting evidence-based procurement planning, budgeting, and management decision-making while improving overall operational efficiency.

Conclusion: Implementation of a computerized Stores Management System strengthened inventory control, accountability, procurement efficiency, and operational performance while reducing administrative costs associated with paper-based processes. This quality improvement initiative demonstrates that digital inventory management systems can enhance resource stewardship, promote transparency, and support data-driven decision-making in healthcare organizations. Similar digital solutions should be considered to improve supply chain management and operational efficiency in other resource-limited healthcare settings.

178: At Risk Yet Untargeted: Human Papillomavirus Prevalence and Precancer Detection among Young Women outside Routine Screening Age in an HIV Endemic Setting.

Mathews Katambalale, Smith Chipapa, Fraser Tembo, Chisomo Zinyemba, Benjamin Shayo, Chikondi Chiweza

Background: In Malawi, cervical cancer screening is recommended for women aged 25–49 years. Screening among women younger than 25 years is not routinely recommended; however, sexually active women under 25 years may access screening services upon request. HIV increases the risk of persistent HPV infection and development of cervical cancer. The prevalence of HIV in Malawi is 10% among women of reproductive age (15-45). A systematic review and individual participant data meta-analysis found that the predicted probability of CIN2/3 in Women Living with HIV increased from 6.0% at ages 15–19 to 32.4% at ages 20–24, while invasive cervical cancer remained uncommon before age 30. Limited programmatic evidence exists on the burden of HPV infection and

cervical precancerous lesions (PCL) among younger women accessing screening services in rural Malawi. This review describes HPV positivity and PCL detection by HIV status among women younger than 25 years.

Methods: A retrospective descriptive review was conducted using routinely collected project data from May 2025 to May 2026 across four project-supported facilities. A total of 726 younger than 25 years who came for screening through different entry points were included in the review. Those with PCL <75% were treated with thermocoagulation and those with lesions > 75% were treated with Large Loop Excision of the Transformation Zone (LETZ). Data was extracted from cervical cancer screening registers and REDCap databases. Variables included age, HIV status, HPV DNA results, Visual Inspection with Acetic Acid (VIA) findings, and treatment uptake. Data were summarized using frequencies and proportions stratified by HIV status.

Results: * A total of 726 women younger than 25 years underwent cervical cancer screening during the review period. The mean age was 22 years (SD ±2). * 45% (n=324) tested HPV-positive, 268 underwent VIA, of which 12% (n=33) were VIA-positive. 30 (91%) had PCL <75% and 3 (9%) had PCL > 75% and required treatment. * Treatment uptake for those identified with a PCL among eligible women was 89%. * HPV positivity and VIA positivity (PCL) were higher among WLHIV than HIV-negative women.

Table 1. HPV Positivity, VIA Positivity (PCL), and Treatment Uptake by HIV Status

HIV status	HPV DNA Screened	HPV Positive	VIA done	VIA Positive (PCL)	Treatment uptake
HIV Positive	105	57 (54%)	40	7 (18%)	5/7 (71%)
HIV Negative	621	267 (43%)	228	26 (11%)	24/26(92%)
Total	**726**	**324 (45%)**	**268**	**33 (12%)**	**29/33 (89%)**

Conclusion: High HPV positivity and PCL detection rates among young women, particularly those living with HIV, suggest potential missed opportunities for earlier diagnosis and treatment. These findings highlight the need to consider risk-based screening for younger women below the recommended screening age where resources allow.

210: Integration of Antenatal Care and Anti-Retroviral Services: Lessons for Improving Viral Load Coverage at a Health Centre in Salima District, Malawi

Dalitso Mughogho, Kondwani Khangamwa

Integration of Antenatal Care and Anti-Retroviral Services: Lessons for Improving Viral Load Coverage at a Health Centre in Salima District, Malawi

Dalitso Mughogho1, Kondwani Khangamwa1.
1Baylor College of Medicine Children's Foundation Malawi, Lilongwe, Malawi

Background: Prevention of mother-to-child transmission (PMTCT) of HIV remains crucial in maternal and child health programs in Malawi, where HIV prevalence among women of reproductive age remains one of the highest in Sub-Saharan Africa (10.8%) and continues to pose significant challenges. Viral load (VL) monitoring among pregnant and breastfeeding women (PBFW) is a critical component of PMTCT, as timely identification high VL enables targeted interventions to reduce transmission risk and improve maternal outcomes. However, gaps in VL coverage persist in many settings due to disjointed service delivery. Integrating antenatal care (ANC) and antiretroviral therapy (ART) services has emerged as a promising strategy to strengthen VL monitoring by restructuring service delivery, reducing missed opportunities, and improving continuity of care. In our case study from a health center in Salima District, Malawi, we assessed the adoption of a strategy that brought ANC and ART services under one integrated model.

Description: Beginning in FY25 Q3, the integrated ANC+ART model deployed trained ART nurse-midwifery providers to deliver both ANC and ART services comprehensively under one roof. Providers monitored VL milestones, ensured adherence, and facilitated timely VL collection and management of high VL cases. Lay cadre staff supported the model by triaging and screening women living with HIV (WLHIV), flagging them for integrated care.

Evaluation and Outcomes: Electronic medical records for PBFW enrolled from FY25 Q3 to FY26 Q2 were analyzed to assess VL coverage. Findings revealed progressive improvement: coverage rose from 20% in FY25 Q3 to 77% in FY26 Q2, demonstrating the impact of integrated service delivery on VL uptake

Lessons Learned: Steady Improvement is Possible with System Strengthening, VL coverage rise, shows that consistent investment in monitoring and follow-up systems can yield progressive gains and Integration of ANC and ART Services Enhances Coverage streamlining services, integration reduces missed opportunities for VL testing, ensuring that pregnant and breastfeeding women receive timely monitoring as part of routine care.

Next Steps: Further analysis is underway to explore barriers preventing a proportion of PBFW from timely VL monitoring. Scaling the integrated ANC+ART model to other facilities, alongside strengthened client tracking and comprehensive reporting, will be essential to sustain gains and advance Malawi's PMTCT goals.

173: Implementation of Human Papillomavirus Screening in Baylor Foundation Malawi Supported Health Facilities: Program Updates

Smith chipapa, Fraser Tembo, Dziwenji Mboma, Chisomo Zinyemba, Chikondi Chiweza

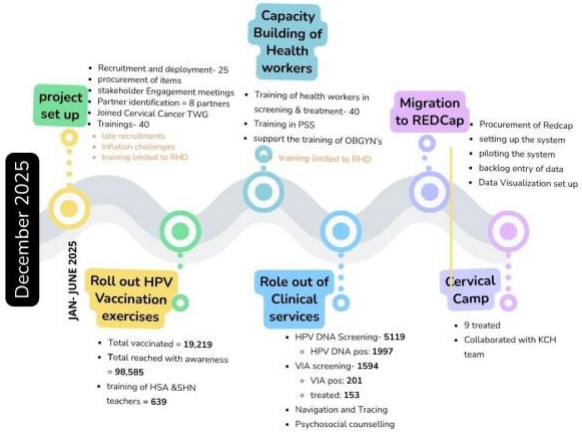
Background: Cervical cancer is the leading cause of cancer-related deaths among women in Malawi. WHO recommends screening for cervical cancer using high performance tests. Nevertheless, national uptake is limited, with only 33 facilities offering HPV DNA screening. In 2025, BFM, in collaboration with the Ministry of Health (MoH), initiated a pilot program to strengthen cervical cancer prevention by expanding access to HPV DNA screening and improving the continuum of care. The program aims to increase screening coverage, ensure timely treatment of precancerous lesions, strengthen referral systems, and improve follow-up, psychosocial support, and retention in care.

Description: The program is being implemented in Lilongwe at Area 25 Community Hospital and three surrounding health. The project was Initiated in January 2025 and is planned to run for three years, targeting 10,000 women aged 25–45 years.

Key activities included stakeholder engagement, recruitment, training of project personnel, procurement and installation of equipment and rolling out of service delivery across all sites. Psychosocial counselling services were integrated as a novel component to support patient well-being and retention in care. Additionally, active tracing and follow-up systems were established to reduce loss to follow-up. Monitoring, evaluation, and learning systems were implemented to track progress and outcomes.

Lessons Learned: * Findings from early implementation indicate high HPV positivity and lesion detection rates. There is need for expanded screening and treatment services. * Early project setup and planning significantly influence implementation timelines, with delays in procurement and coordination affecting initial rollout. * Strong collaboration with the MoH and alignment with existing national frameworks, including participation in technical working groups, were critical for successful implementation. * Procurement of widely used and MoH-approved equipment facilitated easier integration, maintenance, and sustainability. * Bulk procurement of non-perishable commodities improved efficiency and reduced operational delays. * Integration of psychosocial counselling services

emerged as a valuable and innovative approach to improving patient support and retention. * Key challenges included delays in procurement processes and limited availability of specialized personnel to manage advanced lesions.
Next Steps: * High HPV positivity and lesion detection indicate an urgent need to scale up screening and treatment services in Malawi * There is need to expand HPV DNA testing to more health facilities to improve access * Strengthen surgical capacity for managing advanced lesions * Sustain and integrate psychosocial support services to improve patient outcomes * Strengthen referral and follow-up systems to improve continuity of care * Accelerate efforts toward achieving cervical cancer elimination in Malawi by 2030



14: Operational and Economic feasibility of Integrating Hepatitis B services into an HIV clinic in Malawi: A Mixed-methods assessment.

Rankin Kachingwe, Jacob Todd, Chisomo Kutengule, Peter Mandawala, Joseph Mhango

Background:
The 2023 Malawi Ministry of Health guidelines recommend integrating hepatitis B virus (HBV) screening, contact notification, and antiviral treatment into existing HIV clinics. This approach leverages established infrastructure including medication supply chains, laboratory systems, and clinical expertise to extend HBV services efficiently. However, integration will have implications for staffing, clinic workflow, and cost. The scale of these operational and financial demands has not been systematically evaluated. This study aimed to assess the operational and economic feasibility of HBV service integration into an existing HIV clinic and to identify key implementation barriers and resource requirements.
Methods:
We conducted a mixed-methods feasibility study at the Baylor Foundation Malawi, drawing on a multidisciplinary team of clinicians, pharmacists, and laboratory specialists. Client volume projections were derived from HBV prevalence estimates and observed household contact ratios. Incremental costs were estimated for antiviral and supportive medications, rapid diagnostic test kits, and liver function and full blood count reagents. Workflow implications were evaluated through structured discussion with staff to identify potential operational bottlenecks.
Results:
Integration of HBV services is projected to add approximately 200 HBsAg-positive clients annually. Most clients would require TDF, already included in standard HIV regimens, with entecavir required for pediatric clients under 30 kg. Supportive care medications were estimated at MK 150,000 (US$86.47) per person per year, resulting in a projected annual cost of approximately MK 30,000,000 (US$17,294).
Approximately 3,600 HBsAg test kits would be required annually, at an estimated cost of MK 27,504,000 (US$15,855), with the majority allocated to household contact screening of newly enrolled clients. Workflow analysis suggested that integration would be operationally feasible within existing clinic structures, with service disruptions not expected provided annual new enrolments remain near the projected range.
Conclusions:
Integrating HBV services into the Malawi COE appears operationally feasible. While projected costs are substantial, Ministry of Health provision of key commodities, including test kits and antiviral medications, is expected to cover a substantial share of facility costs. Newly enrolled HBV clients will also utilize broader clinic services, increasing demands beyond HBV-specific projections.
Recent trends of declining HIV clinic enrolment suggest that additional HBV clients may be absorbed with limited strain on existing clinic capacity. However, client volume estimates remain uncertain due to low testing rates and a substantial burden of undiagnosed infection in the community. With appropriate planning and minor staffing adjustments, the additional operational burden is expected to be manageable.

166: EVALUATING PATIENT WAITING AND SERVICE TIMES AT BAYLOR CENTRE OF EXCELLENCE CLINIC, LILONGWE, MALAWI: AN APPLICATION OF QUEUEING MODELS

Louis Kaluso Nyasulu, Brenda Njete, Joseph Mhango

Background: Efficient patient flow is essential for delivering high-quality healthcare services, especially in high-volume HIV treatment clinics. Long waiting times have been shown to negatively affect patients' satisfaction, adherence to care, and even the overall service delivery. In this study, we applied queueing theory concepts to monitor patients' flow and the service capacity at the Baylor Centre of Excellence Clinic in Malawi by examining service times and patient throughput across key service points.
Methods: A retrospective analysis was conducted on time-and-motion data that came from 297 patient visits across 25 clinic days in 2024. An enumerator captured timestamps. Queueing theory principles were used to approximate service rates and how much the system was being used at different service points: reception, ICT/Covid19/TB screening, phlebotomy, provider consultation, psychosocial care, nutrition, and pharmacy. For each step, we pulled the mean service time from recorded start and end timestamps. We defined our service rate (μ) as the reciprocal of the average service duration and expressed it as patients per hour. We defined the arrival rate (λ) as the average daily patient load at each 8-hour clinic day. We defined utilization factors as the arrival rate divided by service rate ($\rho = \lambda/\mu$), which were computed using Markovian arrival (M) / Markovian service (M)/ single observer (I) queue structure.
Results: The clinic saw an average of 64.5 patients each day, with a corresponding estimated arrival rate of 8.06 patients per hour. Each patient spent about 144.9 minutes on average in the clinic. The Mean service times and Service rates (μ) for each service point are summarized in the table below.
Table 1
Service point Mean service time Service rate (μ) Reception 0.66 90.9 ICT screening 9.00 6.70 Pharmacy 9.60 6.20 Nutrition 16.40 3.70 Phlebotomy 27.70 2.20 Provider consultation 28.30 2.10 Psychosocial 57.60 1.00
Utilization analysis showed reception operated at only 8.9% capacity (ρ=0.09), screening hit 120.3% (ρ=1.20), pharmacy was 130.0% (ρ=1.30), nutrition services 217.8% (ρ=2.18), phlebotomy 366.4% (ρ=3.66), provider consultation ran at 383.8% (ρ=3.84) and psychosocial counselling reached 806.0% (ρ=8.06).

Conclusion: Using this approach, we identified inefficiencies in patient flow with provider consultation, phlebotomy, psychosocial counselling, and nutrition services as the constrained service points that contributed a lot to the average clinic stay of 144.9 minutes. Increasing staffing levels and streamlining workflows may improve efficiency. Future M/M/c analyses are recommended so they can better reflect multiple service providers and estimate waiting times accurately.

Table 1. Mean service times and service rates by clinic service point

Service point	Mean service time	Service rate (μ)
Reception	0.66	90.9
ICT screening	9.00	6.70
Pharmacy	9.60	6.20
Nutrition	16.40	3.70
Phlebotomy	27.70	2.20
Provider consultation	28.30	2.10
Psychosocial	57.60	1.00

40: RECRUITMENT AND CHARACTERISTICS OF A LARGE COHORT OF ADOLESCENTS-GUARDIAN PAIR IN A RANDOMIZED TRIAL OF A VIDEO INTERVENTION TO IMPROVE HIV CARE OUTCOMES AMONG ADOLESCENTS LIVING WITH HIV IN MALAWI.

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Background: Adolescents living with HIV (ALHIV) experience lower rates of viral suppression than adults, yet scalable adherence interventions for this group remain limited. The VITAL Start for Adolescents (VS4A) study is a randomized controlled trial testing a video-based package designed to strengthen information, motivation, and behavioral skills for adolescent antiretroviral therapy adherence and to enhance social support from designated treatment supporters. We describe recruitment and characteristics of ALHIV and their treatment supporters (guardians) enrolled in VS4A, establishing a foundation for future outcome analyses, including VS4A's impact on viral load suppression—the primary outcome.

Methods: Between July and October 2025, we recruited adolescent-guardian dyads at 20 health facilities in two districts in Malawi. Eligible adolescents were 10-19 years old, aware of their HIV status, and in care at any of the study health facilities. Guardians were ≥18 years old, identified as treatment supporters, and participated in the study alongside the adolescents. Dyads were randomized to the video intervention package plus the standard of care (Enhanced) or the standard of care alone (Standard). The standard of care included free HIV care and treatment, psychosocial support and ART education. Descriptive statistics were used to summarize baseline characteristics.

Results: 1100 dyads were screened, 1033 (93.9%) were eligible and 1029 (99.6%) were enrolled, with (N=509 Enhanced, N=520 Standard arm). Adolescents had a mean (SD) age of 14 (±2) years; 52% were male; 94% had some primary school education; 63% had at least one biological parent alive. Most (85%) were on a TDF/3TC/DTG, 14% on ABC/3TC+DTG and 1% on other regimens. Guardians had a mean (SD) age of 43 (±13) years; the majority (90%) were female; 66% had some primary school education; 79% were employed. Two thirds (67%) were living with HIV and all reported to be on ART. Most guardians (98%) supported one adolescent, while the remaining 2% supported more than one. Baseline demographic and clinical characteristics were similar between treatment groups.

Conclusions: This study has successfully randomized one of the largest cohorts of ALHIV-guardian dyads in Sub-Saharan Africa. These baseline data will inform analyses of the intervention's effect on viral suppression and identify subgroups for targeted adherence strategies.

27: Resistance Patterns among 153 Children, Adolescents and Young Adults Living with HIV on INSTI-based antiretroviral therapy in Five Eastern and Southern African Pediatric HIV Centres of Excellence

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Background:
Regional surveillance has demonstrated HIV drug resistance (HIVDR) to Integrase Strand Transfer Inhibitors (INSTIs) in children, adolescents, and young adults with HIV (CAYWH) at higher rates than in adults. We describe resistance patterns and associated clinical factors among CAYWH who received HIVDR genotype testing from five pediatric HIV Centres of Excellence (COEs) in Botswana, Eswatini, Malawi, Lesotho and Uganda.

Methods:
We conducted a retrospective review of CAYWH aged 0-24 years failing INSTI-based ART (≥2 VL ≥1000 copies/mL) with targeted genotyping before January 2025. Genotypes were performed on dried blood spot or plasma specimens. Categorical data were analyzed as frequencies/proportions, and continuous variables as median/interquartile range(IQR). Differences associated with INSTI resistance were determined using univariate logistic regression and expressed as odds ratios (OR). Drug resistance was defined as a Stanford HIVdb score ≥15.

Results:
Genotypic amplification was successful in 164 of 248 samples (66.1%) from 153 unique individuals; 67.7%(111) were female. Median age at INSTI initiation and genotype was 14 and 18 years, respectively. At genotype, median ART exposure was 10 years (IQR 6,14) and median INSTI exposure was 2 years (IQR 1-4). Resistance to at least one drug class was identified in 58.5%(96/164) of samples and resistance to INSTIs was detected in 34.7%(44/127) of samples sequenced for INSTI resistance (Figure 1). The most common INSTI mutations were E138K(19), G118R(14) and S147G(11). Clients on 2nd or 3rd line treatment (OR 5.14, p=0.01; OR 29.0, p<0.001), and those on AZT (OR 9.04, p<0.001) were more likely to have INSTI resistance (Table 1). CAYWH ages 0-5, 15-19 and 20-24 years old had a lower risk of INSTI resistance than children aged 5-9 years, and females also had a lower risk than males.

Conclusions:
In this cohort of CAYWH failing DTG-based ART, we demonstrated that the majority of clients with genotype results have HIVDR to at least one ARV class, with over one-third having INSTI resistance. While access to genotypes should be prioritized for all CAYWH with persistent virologic failure, our data suggest that those failing subsequent-line therapy and those on regimens containing AZT experience elevated risk for INSTI resistance.



Figure 1. HIVDR results for 164 genotypes sent for 153 CAYWH 0-24 years old on an INSTI based ART regimen by susceptibility score for commonly available antiretrovirals in Eastern and Southern Africa. Abacavir; ABC, Zidovudine; AZT, Lamivudine; 3TC, Tenofovir; TDF, Efavirenz; EFV, Etravirine; ETR, Nevirapine; NVP, Rilpivirine; RPV, Atazanavir/ritonavir; ATV/r, Darunavir/ritonavir; DRV/r, Lopinavir/ritonavir; LPV/r, Cabotegravir; CAB, Dolutegravir; DTG, Raltegravir; RAL.

	OR (95% CI)	p-value
Age at genotype (years)	0.97 (0.91, 1.03)	0.32
Age at genotype (years)		
<5	0.04 (0.00, 0.43)	0.01
5-9	(reference)	
10-14	0.42 (0.07, 2.36)	0.33
15-19	0.08 (0.02, 0.36)	0.001
20-24	0.16 (0.04, 0.67)	0.01
Sex		
Male	(reference)	
Female	0.21 (0.09, 0.45)	<0.001
How many DVL (20-999) on INSTI prior to genotype	1.14 (0.95, 1.37)	0.16
How many DVL(>1000) on INSTI prior to genotype	0.82 (0.72, 0.95)	0.01
Line of Treatment		
1st	(reference)	
2nd	5.14 (1.42, 18.57)	0.01
3rd	29.00 (5.62, 149.67)	<0.001
4th	--	--
NRTI at genotype		
TDF-3TC	(reference)	
ABC-3TC	2.58 (0.98, 6.82)	0.06
AZT-3TC	9.04 (3.00, 27.25)	<0.001
TDF-FTC	--	--
RPV	--	--
Time on ART (years)	1.01 (0.94, 1.09)	0.81
Time on INSTI (years)	1.02 (0.84, 1.24)	0.84

Table 1. This table shows the univariate logistic regression model for the outcome of INSTI resistance (defined as Stanford Score of ≥15) in CAYWH that accessed genotypes when failing an INSTI based treatment. Odd's Ratios (OR) could not be calculated for dashed rows. Integrase strand transfer

115: TB Diagnosis in Children and Adults with HIV: Poor Accuracy of Xpert on Tongue Swabs and Masks (TB GAPS Study)

Bonny Mulindwa, Alexander Kay, Abigail Seeger, Adamson Munthali, Teresa Steffy, Debrah Vambe, Lilian Komba, Durbbin Mulengwa, Subhadra Nandakumar, Joshua Doyle, Anand Date, Anna Mandalakas

Background: People with HIV (PWH), particularly children, have difficulty producing sputum for tuberculosis (TB) evaluations, often requiring sputum induction, gastric aspiration, or stool collection for TB diagnosis. Diagnostic approaches using less-invasive, on-demand specimens (e.g., exhaled breath, tongue swabs) could increase access to diagnostic testing. We evaluated the accuracy of Xpert-Ultra performed on tongue swabs and polyvinyl acetate (PVA) applied to masks (PVA-mask) among PWH.

Methods: Children (0-14 years) and adults (≥15 years) with HIV were enrolled and evaluated for TB from July 2023-December 2025 across sites in Eswatini, Lesotho, Malawi, Tanzania, and Uganda. Presumptive TB was defined by the presence of any TB symptoms, elevated C-reactive protein (≥5 mg/L), abnormal chest radiograph, or positive lateral-flow lipoarabinomannan assay (LF-LAM). Participants with presumptive TB underwent Xpert-Ultra testing on PVA strips placed within KN95 masks worn for 30 minutes and on two tongue swabs (foam and floq) as index tests. Index test results were compared to a microbiologic reference standard (MRS) of Xpert-Ultra on standard reference specimens and composite reference standards (CRS)--National Institutes of Health consensus definition in children and TB treatment initiation in adults.

Results: A total of 939 children and 1,118 adults with HIV with presumptive TB were evaluated. Compared with the MRS, sensitivity of Xpert-Ultra on PVA-mask samples was 14.3% (95% confidence interval [95%CI]: 0.4-57.9%) in children and 10% (95%CI: 1.2-31.7%) in adults (Table). Sensitivity of tongue swabs (foam or floq) was 37.5% (95%CI: 8.5-75.5%) in children and 10% (95% CI: 1.2-31.7%) in adults. When compared with CRS, sensitivity of both PVA-mask and tongue swabs was <4%. Specificity was above 95% for all tests.

Conclusions: Xpert-Ultra performed on PVA-masks and tongue swabs demonstrated poor sensitivity for TB among children and adults with HIV and is unlikely to improve existing diagnostic strategies in these populations. Few MRS confirmed cases limited precision in these point estimates for test sensitivity.

Table: Diagnostic accuracy of Xpert Ultra performed on polyvinyl acetate applied to masks and tongue swabs in children and adults with HIV. Participants were enrolled between July 2023 and December 2025 in Eswatini, Lesotho, Malawi, Tanzania, and Uganda. Participants without the test performed or with invalid results are excluded from the analysis.

Index Test	Age Group (years)	REF	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)
PVA-mask	0–14	MRS	1	38	6	827	14.3% (0.4–57.9%)	95.6% (94.0–96.9%)
Tongue-swab	0–14	MRS	3	4	5	919	37.5% (8.5–75.5%)	99.6% (98.9–99.9%)
PVA-mask	15+	MRS	2	27	18	1038	10.0% (1.2–31.7%)	97.5% (96.3–98.3%)
Tongue-swab	15+	MRS	2	3	18	1038	10.0% (1.2–31.7%)	99.7% (99.2–99.9%)
PVA-mask	0–14	NIH-CD	1	38	66	762	1.5% (0.0–8.0%)	95.2% (93.5–96.6%)
Tongue-swab	0–14	NIH-CD	3	4	73	843	3.9% (0.8–11.1%)	99.5% (98.8–99.9%)
PVA-mask	15+	TBT-I	2	27	64	992	3.0% (0.4–10.5%)	97.4% (96.2–98.2%)
Tongue-swab	15+	TBT-I	2	3	64	1037	3.0% (0.4–10.5%)	99.7% (99.2–99.9%)

Abbreviations: REF, reference standard; TP, true positive; FP, false positive; FN, false negative; TN, true negative; CI, confidence interval; NIH-CD, National Institutes of Health consensus definition for TB diagnosis in children; TBT-I, TB treatment initiated.

Summary: In a prospective multi-country study of 939 children and 1,118 adults with HIV and presumptive TB, Xpert Ultra performed on tongue swabs and polyvinyl acetate coated masks demonstrated poor sensitivity (≤37.5% against a microbiologic reference standard and <4% against composite reference standards), insufficient to supplement existing TB diagnostic strategies.

55: Performance Evaluation of Computational Tools for Predicting Human Leukocyte Antigen Class I Genotypes Using African Whole-Exome Data

Gerald Agaba Muzorah, Mogomotsi Matshaba, Adeodata R Kekitiinwa

Introduction:

Accurate Human Leucocyte Antigen (HLA) genotyping is critical for immunogenetics research, vaccine development and transplantation medicine. HLA genes encode proteins that have a central role in immune responses and are associated with organ transplant rejection and vaccine efficacy. Despite advances in sequencing technologies and computational HLA typing methods, there remains limited evidence on the performance of these tools in African populations. In Uganda and Botswana, where genetic diversity is high, data on HLA genotypes and the accuracy of computational approaches for HLA class I prediction from whole-exome sequencing (WES) data are scarce. This study aimed to evaluate the performance of computational tools for predicting HLA class I genotypes using African whole-exome sequencing data from Uganda and Botswana.

Methods: A cross-sectional study nested in the Collaborative African Genomics Network (CAfGEN), HLA genotypes were called using six computational tools on 204 whole exome samples from HIV/TB infected clients (124 from Baylor Uganda and 80 from Baylor Botswana), the study was approved by Biomedical Sciences Higher Degrees Research Ethics Committee (SBS-HDREC).

Results:

This study evaluated the technical performance of six computational tools for predicting HLA class I genotypes using African whole-exome sequencing data. Regardless of the type of tool, all six were able to predict the three HLA class I genes (HLA-A, HLA-B, and HLA-C) and resolve alleles to the second field (4-digit resolution). HLA-HD and Polysolver achieved genotype calls up to the third field (6-digit resolution), successfully calling 98% (200/204) and 79.9% (163/204) of samples, respectively. HISAT-genotype and HLA-VBSeq were able to achieve fourth-field (8-digit resolution) allele calls, identifying 90.6% (185/204) and 52.94% (108/204) of alleles, respectively. In terms of computational efficiency, Optitype demonstrated the shortest execution time at 7.37 (±1.82) minutes, while Polysolver had the longest execution time at 97.10 (±7.91) minutes.

Conclusion:

Computational prediction tools are transforming HLA genotyping from whole-exome sequencing data by providing a promising and

cost-effective alternative to conventional HLA testing methods. Their application in African genomic datasets enhances the identification of population-specific HLA diversity, which is essential for improving HIV vaccine design and advancing precision immunogenomics research. Our limitation was the delay in shipment of the molecular kits so we unable compare convention methods with the tools.

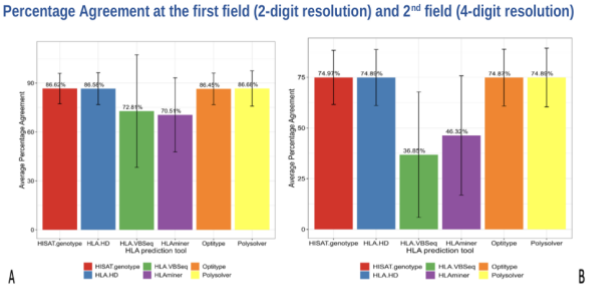
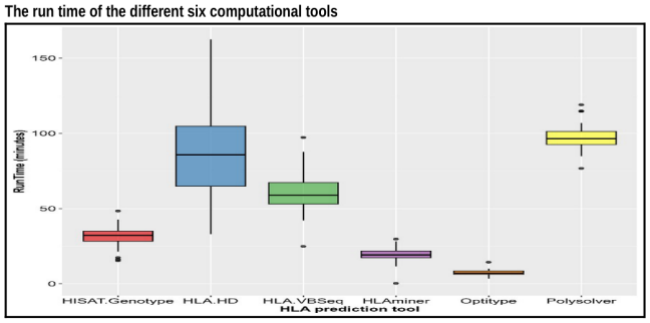


Figure 1: Agreements in terms of resolution at 2-digit (A)and 4-digit(B), Overall Polysolver had the highest percentage agreement with the rest of the tools, with average percentage agreement of 86.68% (±10.81) followed by HLA-genotype with mean agreement of 86.62% (±9.36), with HLA-VBSeq and HLAminer having the lowest mean percentage agreement values of 72.81% (±34.47) and 70.51% (±22.66± respectively.



146: Impact of Deductive Training on Sickle Cell Disease Knowledge Among Healthcare Workers in Mwanza Region, Tanzania: A Pre-Post Interventional Study

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Background:

Sickle cell disease (SCD) affects 8,000–11,000 Tanzanian newborns annually. Despite this burden, frontline healthcare worker knowledge remains critically deficient. This study aimed to evaluate the effect of a deductive training intervention on SCD knowledge among healthcare workers in Mwanza Region.

Methods:

A pre-post interventional design was employed across 57 health facilities in all eight administrative districts of Mwanza Region (2025–2026). A total of 257 healthcare workers from 17 professional cadres including Medical Officers, Clinical Officers, Nurses, Laboratory Technicians, and Pharmaceutical Technicians; completed a validated 20-item multiple-choice knowledge assessment immediately before and after a deductive training. The Wilcoxon signed-rank test was used as primary pre-post comparison given confirmed non-normality (Shapiro-Wilk, $p < .001$). Paired-samples t-tests were applied for item-level analysis; one-way ANOVA with Tukey HSD for subgroup comparisons by cadre and district; and Spearman's correlation for baseline-gain relationships. Significance threshold: $\alpha=0.05$.

Results:

Pre-training scores averaged 10.94/20 (SD = 3.86; 54.7% correct). Post-training scores rose to 16.96/20 (SD = 3.15; 84.8% correct), yielding a mean gain of 6.02 points (SD = 3.82; Cohen's d = 1.58, very large effect). The Wilcoxon test confirmed this was highly significant ($Z = -13.50$, $p < .001$, $r = .84$), with 94.2% of participants improving.

All 20 items improved significantly (all $p \leq .007$); the largest gains were in early symptom recognition (+61 pp, d = 1.16), SCD inheritance probability (+51 pp, d = 0.95), osteomyelitis bacteriology (+50 pp, d = 0.92), and preventive care for under-fives (+46 pp) — all items answered correctly by fewer than 35% at baseline. Baseline knowledge differed significantly by cadre ($F(14,242) = 5.78$, $p < .001$, $\eta^2 = .251$) and district ($F(7,249) = 5.42$, $p < .001$, $\eta^2 = .132$). Score gains also differed by cadre ($F(14,242) = 2.39$, $p = .004$, $\eta^2 = .121$) and district ($F(7,249) = 4.42$, $p < .001$, $\eta^2 = .111$), with Registered Nurses recording the greatest mean gain (M = 8.73, SD = 3.90) and Misungwi DC the highest district-level improvement (M = 9.44, SD = 3.55). A strong negative correlation between baseline score and gain ($\rho = -.672$, $p < .001$) indicated that lower-baseline participants benefited most, with baseline knowledge accounting for 45.2% of variance in learning gain.

Conclusion:

The deductive training produced large, significant, and clinically meaningful SCD knowledge gains across all cadres and districts, with greatest impact among frontline workers in underserved areas. Findings support scaled implementation across Tanzania's Lake Zone.

Table 1: Pre- and Post-Training Proportion Correct by Knowledge Item (N = 257)

Item	Topic	Pre	Post	Δ	p
Q9	Bacteria in SCD osteomyelitis	17%	67%	**+50 pp**	< .001
Q19	Girdle syndrome description	23%	66%	**+43 pp**	< .001
Q2	Early onset of SCD symptoms	28%	89%	**+61 pp**	< .001
Q16	Probability of SCD inheritance (AS×AS)	33%	84%	**+51 pp**	< .001
Q10	Prevention for children under 5	43%	89%	**+46 pp**	< .001
Q7	Infection linked to hyposplenism	47%	72%	**+25 pp**	< .001
Q4	Diagnostic test for SCD	48%	79%	**+31 pp**	< .001
Q13	Initial management of priapism	51%	80%	**+29 pp**	< .001
Q15	Drug reducing painful crisis	54%	87%	**+33 pp**	< .001
Q1	Inheritance pattern of SCD	56%	79%	**+23 pp**	< .001
Q11	Acute chest syndrome recognition	58%	94%	**+36 pp**	< .001
Q12	Splenic sequestration diagnosis	63%	89%	**+26 pp**	< .001
Q20	True statement on stroke in SCD	64%	89%	**+25 pp**	< .001
Q3	Common trigger for sickling	65%	75%	**+10 pp**	.007
Q14	Major cause of stroke in children	67%	91%	**+24 pp**	< .001
Q18	Curative option for SCD	71%	88%	**+17 pp**	< .001
Q6	Parental combination for SCD	72%	95%	**+23 pp**	< .001
Q8	Cause of chronic leg ulcers	76%	93%	**+17 pp**	< .001
Q17	First step in pain crisis	79%	95%	**+16 pp**	< .001
Q5	Drug for erythropoiesis support	81%	96%	**+15 pp**	< .001

Note. Pre and Post values represent the proportion of participants answering correctly. Δ = post minus pre percentage points. p-values are from paired-samples t-tests (two-tailed). pp = percentage points. Items are ordered by ascending pre-training score (greatest knowledge gap first).

Item	Topic	Pre	Post	Δ	p

163: From Frontline Practice to Research Evidence: Development of a Network-Wide Research Training Program

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Background: Across the Texas Children's Global Health Network (TCGHN), Foundation teams are increasingly seeking to translate frontline clinical and programmatic work into rigorous evidence to inform care and policy. Despite strong engagement with research-focused sessions at prior Network Meetings, structured, longitudinal training opportunities have been limited. We aimed to develop a scalable, cross-site curriculum using a phased, data-driven process.

Description: Approximately 216 individuals across nine TCGHN sites expressed interest in the Research Module Series (RMS). We first conducted a Network-wide interest survey to identify demand, priority topics, and co-facilitators, receiving 142 responses. Subsequently, 67 participants completed a baseline needs assessment incorporating a modified Research Competence questionnaire to assess skills, confidence, and barriers.

Survey findings demonstrated strong multidisciplinary interest and identified key barriers including time constraints, limited mentorship, and gaps in research training. While 66% (n=47) reported some prior research training, only 21 (31%) had applied for research funding, 14 (21%) had received funding, and only 10 (14.9%) had led a published manuscript, highlighting a gap between foundational knowledge and applied research practice. Priority learning areas included quantitative and qualitative data analysis, scientific writing, literature review, and study design.

These findings informed the RMS, a structured virtual curriculum aligned with the research lifecycle and mapped to the Global Competency Framework for Clinical Research to ensure coverage of core domains. Initial modules include study design, data analysis, scientific writing, and literature review.

The RMS is delivered through monthly 60–90-minute sessions with practical exercises, asynchronous resources, live language translation, and cross-site engagement. 99 individuals attended the inaugural session in May 2026. An embedded evaluation framework uses pre-, post-, and longitudinal assessments to evaluate participation and perceived competency development and impact.

Lessons Learned: A phased approach beginning with interest mapping, followed by competency assessment, enabled responsive curriculum design tailored to diverse roles and settings. Findings highlighted that while foundational knowledge gaps exist, the greater need is for applied, skills-based training integrated with mentorship. Leveraging existing virtual learning infrastructure facilitated rapid, low-cost implementation and strong initial engagement. The approach builds on existing TCGHN Communities of Practice to promote peer learning, mentorship, and scalability.

Next Steps: The RMS will continue through completion of the initial module series, with ongoing refinement based on participant feedback and evaluation data. Post-program evaluation will inform the design of the next phase, which may include expanded mentorship and project-based learning components.

192: Building quality pediatric cardiac care: A multi-site needs assessment to inform a tele-mentorship programme across district hospitals in Malawi

Treasure Mkaliainga, Morgan Sekou, Wilson Namwera, Grace Maseko, Devyani Chowdhury, Mercy Kumwenda, Amy Sanyahumbi

BACKGROUND: Pediatric cardiac disease is a critical challenge in sub-Saharan Africa, where specialist care is concentrated in tertiary centres. In Malawi, Kamuzu Central Hospital (KCH) is the hub for paediatric cardiac assessment in the central and northern region, leaving district clinicians without training, diagnostic support, or referral infrastructure to detect heart diseases. Undetected disease drives preventable mortality. ICATCH, an American Academy of Paediatrics grant program, was designed to bridge this gap through structured clinical mentorship, digital consultation, and point-of-care ultrasound (POCUS) capacity building at district level.

METHODS: Between October 2025 and March 2026, we conducted cross-sectional needs assessments at five district hospitals in Malawi: Ntchisi, Kasungu, Nkhotakota, Salima, and Mchinji. Data collection included structured surveys, equipment inventories, interviews with senior clinical staff, and review of existing referral pathways and digital communication infrastructure. Quantitative data were summarised descriptively; qualitative findings were thematically analysed.

RESULTS: Echo machines were present at all five sites, but paediatric utilisation was consistently low (fewer than 5 cases per week at four sites; fewer than one per week at Nkhotakota). ECG services were absent at all sites. Pulse oximetry and paediatric BP cuffs were absent or unavailable at three sites. No site operated under any clinical protocol, cardiac guideline, or management wall chart. Four of five sites (80%) reported zero prior paediatric cardiac-specific training; the fifth reported five staff with prior structured cardiac training, none with paediatric focus. Paediatric echocardiography was confirmed absent from the radiology training curriculum, representing a systemic educational gap. Missed diagnosis on admission was the universal cause of referral delay, with time-to-referral ranging from same-day (when a diagnosis was achieved; Nkhotakota) to seven days. WhatsApp was the primary referral communication tool at all five sites; Mchinji operated a functional POCUS clip-sharing group, providing ready infrastructure for remote echo mentorship. Local clinical champions were confirmed at three of five sites.

CONCLUSIONS: Findings revealed addressable gaps — absent cardiac protocols, universal ECG absence, basic monitoring deficits, and structural exclusion of paediatric teams from POCUS training — coexisting with high staff motivation, established echo equipment, and universal WhatsApp access. These gaps directly informed ICATCH programme design: structured mentorship visits, WhatsApp-enabled echo clip review, and DHO-level advocacy to mandate paediatric integration into existing POCUS programmes. This structural exclusion was addressed through targeted DHO engagement. ICATCH offers a replicable, low-resource model for closing the paediatric cardiac equity gap across district health systems in Malawi and sub-Saharan Africa.

26: Improving maternal retesting among pregnant women during ANC, labour, and delivery in Mbale region, Uganda: A multi-district quality improvement initiative, January to August 2025.

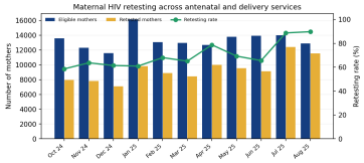
Saadick Ssentongo, Ronald Khamasi, Richard Kyakuwa JJuuko, Andrew Katawera, Sekiswa Lwanga Zimwanguyiza, Fred Nghania, Eddy Okwir, Daniel Esogu, Alexander Mugume, Patricia Nahirya Ntege, Denise Birungi, Dithan Kiragga

Purpose: According to UNAIDS 2025 estimates, maternal HIV infection acquired in late pregnancy or during labour/delivery accounts for 6% mother-to-child transmission (MTCT), with an additional 19% attributable to transmission during breastfeeding. In the Mbale region, maternal retesting was suboptimal at 61% in October-December 2024, below the national 75% target across 161 PMTCT facilities. We implemented a quality improvement (QI) intervention to increase repeat HIV testing among HIV negative pregnant women during ANC and labour and delivery.

Methods: From January to August 2025, a QI initiative was implemented in which clinicians and QI mentors from 16 districts identified root causes (RCs) of low maternal retesting using fishbone diagrams and flow charts. Major RCs identified included: inadequate knowledge among service providers on retesting eligibility, and

pregnant women not being empowered to demand services. Facilities implemented prioritised change ideas through Plan-Do-Study-Act (PDSA) cycles, including provider orientation on eligibility and timing for retesting, incorporating retesting messaging into routine health education, assigning a retesting focal person per facility, using a tracker to identify and line list eligible women at all entry points, providing job aides, and conducting monthly data reviews. Facilities submitted monthly national reports from the PMTCT registers using an Excel template for monitoring with run charts. Monthly meetings were held after each PDSA cycle to review the intervention and inform the next course of action.
Results: From December 2024 to August 2025, 86,822 eligible pregnant women were retested for HIV. Maternal retesting increased from 61% (7,096/11,558) to 90% (11,547/12867) by August 2025 and was sustained through targeted mentorship and monthly performance review. Thirty-seven women were newly diagnosed with HIV during repeat testing (0.43 per 1,000 retested) and were initiated on ART and referred for PMTCT services as per national guidelines.
Discussion: A structured, multi-district/facility QI approach was associated with rapid improvement in repeat HIV testing coverage at ANC and labour and delivery points. This low-cost package, combining provider orientation, eligibility tracking, and routine data use, is suitable for replication in similar settings to strengthen PMTCT performance

Figure 1. Maternal retesting among eligible pregnant women



30: Using virtual multidisciplinary team decisions to improve Viral Load Suppression among people living with HIV with Virologic Failure in Uganda.

Saadick Ssentongo, Richard Kyakuwa Jjuuko, Ronald Khamasi, Andrew Katawera, Lwanga Sekiswa Zimwanguyiza, Fred Nghania, Eddy Okwir, Daniel Esogu, Alexander Mugume, Denise Birungi, Dithan Kiragga.
BACKGROUND: Virtual multidisciplinary teams (MDTs) decisions could optimise Antiretroviral therapy decisions in resource-limited settings, but their impact on patient outcomes remains unknown. We evaluated viral suppression following virtual MDT decisions to switch or maintain ART in patients with virologic failure in Uganda.
Description: In this study, we included a prospective cohort of 247 adults with virologic failure (VL >1000 copies/mL) and had drug resistance genotype testing between April 2022 and July 2024 in 55 HIV clinics in Uganda. A team of trained clinicians (doctors, Mental health specialists, counsellors) discussed clients' clinical profiles and drug-resistance results at standardised monthly virtual MDTs. This was followed by a team monthly site visit by district mentors to confirm that clients had been switched to the recommended regimens. Following consensus, those eligible were switched to a new ART regimen (Switched) while some were maintained on the same regimen with adherence support. The primary outcome was suppression (<1000 copies/mL) at 6 months after the decision was taken. We used inverse probability-weighted logistic regression to estimate the effects of switch and maintenance decisions on viral load suppression.
Lessons Learned: A total of 247 PLHIV were included in the cohort analysis; 52.6% (130/247) were females, and the majority (42.5% [105/247]) were aged >35 years. The overall viral load suppression (VLS) in MDT-discussed patients was 71.6% (177/247). VLS was significantly higher in the switched group (81.9% [73/88]) than in the maintained group (65.4% [104/159]; p<0.003). After weighting, switching doubled the odds of suppression (adjusted Odds Ratio: 1.2, 95% CI: 1.02-1.41). Importantly, 31% of maintained patients achieved suppression with adherence support alone. Viral suppression in the maintained group was associated with a preferred DSD model (p=0.021) and was negatively associated with malnutrition (p=0.021). In contrast, in the switched groups, individuals who reported anxiety/fear had lower odds of suppression.
Conclusion/Next steps: Virtual MDTs' decisions led to improved viral load suppression in clients with virological failure. In addition to adherence support, it is necessary to address clients' mental health and nutritional needs during viral infections. Using a virtual platform could standardise complex ART decisions in similar settings.

68: Viral Load Suppression and Its Determinants among children and adolescents living with HIV Transitioned to a Paediatric fixed-dose Abacavir/Lamivudine/Dolutegravir Regimen (pALD) in Eastern Uganda: A Retrospective Cohort Study

SAADICK SSENTONGO, Richard Kyakuwa JJuko, Ronald Khamasi, Andrew Katawera, Lwanga Sekiswa Zimwanguyiza, Fred Nghania, Eddy Okwir, Daniel Esogu, Alexander Mugume, Patricia Nahirya Ntege, Denise Birungi, Dithan Kiragga
Background. Viral load suppression (VLS) is the cornerstone of HIV treatment and the third UNAIDS 95-95-95 target. However, children and adolescents living with HIV (CALHIV) continue to lag behind adults, with only about 86% achieving suppression, partly due to pill burden and suboptimal adherence. The first-ever paediatric fixed-dose combination of abacavir, lamivudine and dolutegravir (ABC/3TC/DTG; pALD), a dispersible tablet, was introduced in Uganda in 2024; however, real-world outcome data on its effectiveness remain scarce. This study determined viral load suppression and its determinants following transition to pALD among CALHIV in Eastern Uganda.
Methods. We conducted a retrospective cohort study using routine electronic medical record data (March 2026 extract) for CALHIV on antiretroviral therapy (ART) transitioned to the paediatric fixed-dose ABC/3TC/DTG regimen (pALD) between May 2024 and December 2025, and had received Pald for at least 6 months before viral load assessment at 86 health facilities across the Bukedi, Bugisu and Karamoja regions of Eastern Uganda. Participants were followed from the date of pALD transition until their most recent viral load assessment. VLS was defined as a viral load <1,000 copies/mL. The most recent viral load as of May 2026 was compared with the last pre-transition (before-pALD) viral load using McNemar's test for paired proportions. The factors associated with recent VLS were assessed using multivariable logistic regression, with adjusted odds ratios (aORs) and 95% confidence intervals (CIs) reported.
Results. Among 353 CALHIV transitioned to pALD, the median age was 6 (interquartile range: 4-8), and 55.2% (195/353) were female. Most participants were aged 5-9 years (61.2% [216/353]), and the median duration on ART was 4 years (IQR: 2-6). The VLS increased from 80.2% (293/353) before transition to 84.1% (297/353) following transition (McNemar, p=0.082). The VLS after transition was associated with good adherence (aOR 12.8, 95% CI 3.7–43.7, p=0.0001) and by prior suppression (aOR 7.4, 95% CI 3.8–14.4, p<0.001). VLS was lower in the hard-to-reach Karamoja region (72.3%) than in Bukedi (87.8%) and Bugisu (84.0%) (p=0.034), and this association remain significant after adjustment (Karamoja aOR 0.38, 95% CI 0.15–0.97, p=0.042).
Conclusion. CALHIV transitioned to a pALD regimen and maintained high levels of VLS, which was associated with good adherence and

prior suppression before transition, but negatively associated in the hard-to-reach Karamoja region. These findings highlight the importance of adherence support and targeted programme strengthening, particularly in hard-to-reach regions such as Karamoja

49: Real-Time Electronic Client Tracking to Accelerate Viral Load Coverage Among People Living with HIV in Three Districts of Mid-Western Uganda: A Quality Improvement Initiative

Antony Kugonza, Richard Jjuuko Kyakuwa, Patricia Ntege Nahirya, Ronald Oceng, Emmanuel Tumwiine, Hagai Lhume Baluku, Calvin Epidu, Micheal Juma, Albert Maganda, Denise Birungi, Dithan Kiragga

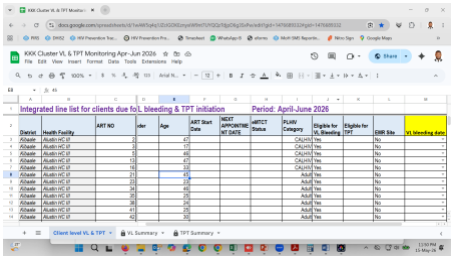
Purpose: Viral load monitoring is essential for assessing Antiretroviral treatment (ART) effectiveness and achieving optimal outcomes among people living with HIV (PLHIV). Baseline data from Kagadi, Kakumiro, and Kibaale Districts showed 89% and 76% viral load coverage (VLC) at high-volume and low-volume health facilities respectively, in comparison with the expected above 95% national target in July-September 2025. This paper describes how a quality improvement (QI) initiative was implemented at the districts of Kagadi, Kakumiro and Kibaale to improve VLC at high-volume facilities from 89% to 95% as of March 2026 using a real-time electronic client tracking tool.

Methods: A multidisciplinary QI team comprising clinicians, records officers, and District Health Teams guided implementation and performance oversight. Baseline viral load data were reviewed, and Pareto chart analysis used to identify and prioritize root causes of low coverage, including reliance on retrospective ART record reviews, limited real-time identification of clients due for testing, no client-level tracking and standardized follow-up processes. To address these gaps, a Google Sheets-based electronic tracking tool was developed to provide real-time visibility of clients due for viral load testing. Change ideas were tested and refined through Plan-Do-Study-Act (PDSA) cycles focusing on; establish client line-lists, strengthen follow-up of overdue clients, and improve workflow integration and accountability for viral load testing. The intervention tracked 9,088 PLHIV in October-December 2025 and 10,568 PLHIV in January-March 2026 across 24 high-volume facilities. Routine data was used to monitor viral load testing, while weekly virtual review meetings conducted via Microsoft Teams supported performance monitoring, peer learning, and continuous improvement .

Results: The intervention strengthened identification and follow-up of clients eligible for viral load testing across the 24 facilities. Comparative analysis demonstrated accelerated improvement of viral load coverage among high-volume health facilities from 89% at baseline (July-September 2025) to 92% (27644/30037) in (October-December 2025) and 97% (28795/29686) in (January-March 2026), while low-volume facilities improved from 76% to 77% (1600/2079) to 89% (1813/2035) over the same period.

Discussion: This QI initiative demonstrated that low-cost electronic client-level tracking can improve viral load coverage using existing facility teams and digital infrastructure, supporting sustainable and scalable improvements in HIV care. However, the intervention was implemented in high-volume facilities and relied on records officers updating the google-sheet, which may limit generalizability to lower-volume settings.

Next steps will focus on expanding the intervention to additional facilities and districts to scale up improvements in viral load monitoring and HIV care.



93: Machine Learning-Guided Risk Stratification for Optimising GeneXpert Testing Among Tuberculosis Contacts in Eastern Uganda

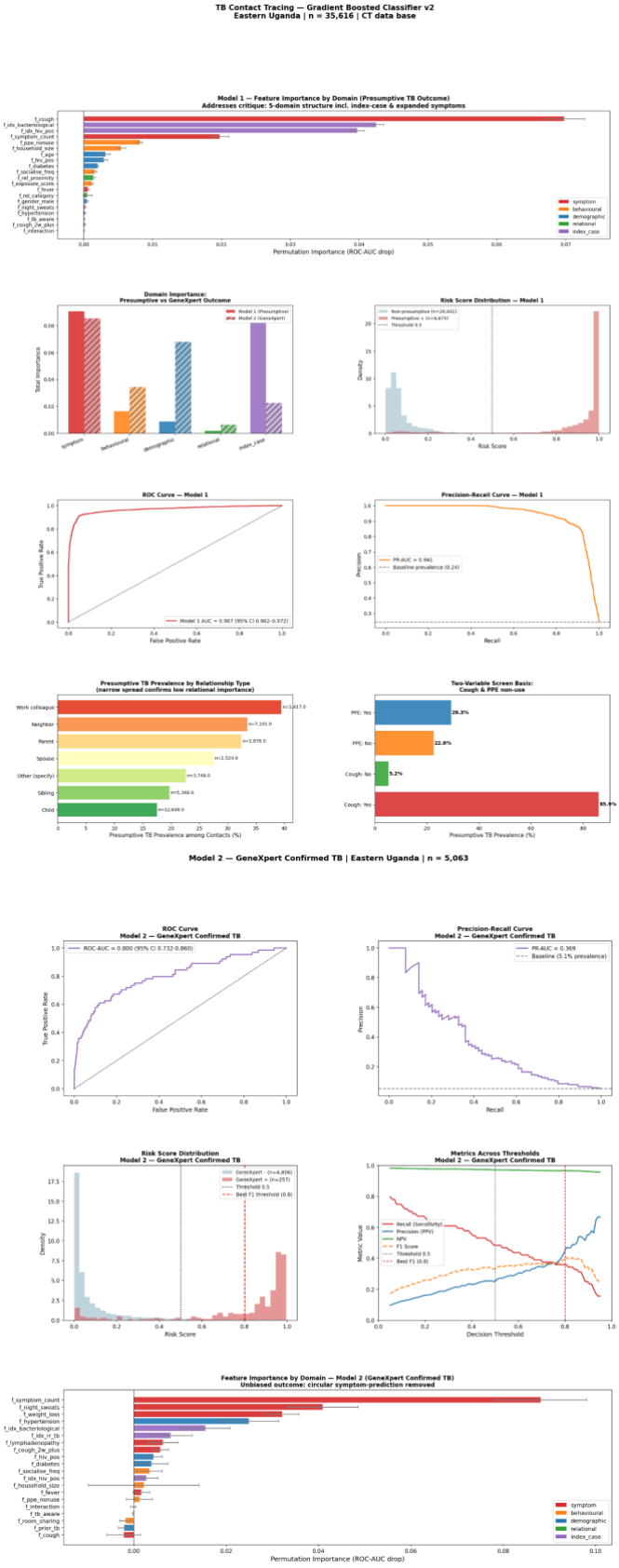
Joshua Brianwong Clark, Diana Cherotin, Lwanga Sssekiswa, Sssadick Sentongo, Richard Jjuuko, Ronald Khamasi, Patricia Nahirya, Alexander Mugume, Denise.J Birungi, Dithan Kiragga

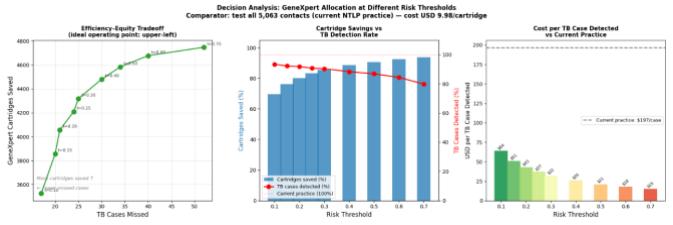
Background GeneXpert Mycobacterium tuberculosis/Rifampicin Resistance (MTB/RIF) testing is recommended for contacts of bacteriologically confirmed tuberculosis (TB) cases who meet presumptive TB criteria; however, cartridge availability remains limited in many rural facilities across Eastern Uganda. Current screening approaches rely largely on symptoms and clinical judgement, which may inadequately identify contacts at increased risk of TB disease. Machine-learning methods offer an opportunity to integrate symptom burden, exposure characteristics, and index-case infectiousness into a single risk-prediction framework to support GeneXpert prioritisation. This study assessed whether routinely collected contact-investigation data could be used to develop a predictive model for risk-based prioritisation of GeneXpert testing among TB contacts.

Methods We analysed retrospective data from 35,616 contacts recorded in a digital contact-tracing database in Eastern Uganda between January 2024 and May 2026. A histogram-based gradient boosting classifier was trained on 75% of records and evaluated on a stratified 25% holdout dataset. Two models were developed: Model 1 predicted presumptive TB status among all contacts, while Model 2 predicted GeneXpert-confirmed TB among contacts with definitive test results (n=5,063; 257 confirmed cases). Twenty-six routinely collected demographic, symptom, exposure, relationship, and index-case variables were evaluated. Model performance was assessed using receiver operating characteristic area under the curve (ROC-AUC), precision-recall AUC, negative predictive value (NPV), cross-validation, and bootstrap confidence intervals. Because GeneXpert testing was not universal, analyses of confirmed TB were restricted to tested contacts and may be subject to verification bias.

Results Model 1 achieved an ROC-AUC of 0.967 (95% CI: 0.963–0.972), PR-AUC of 0.941, recall of 91.0%, and NPV of 97.0%. Symptom burden and index-case characteristics were the most important features. Work colleagues had the highest prevalence of presumptive TB (39.5%), whereas children had the lowest (17.5%). Model 2 achieved an ROC-AUC of 0.800 (95% CI: 0.732–0.860; cross-validated ROC-AUC 0.831 ± 0.033) and an NPV of 98.1% at a 0.10 triage threshold. Symptom count, night sweats, weight loss, and index-case bacteriological confirmation were the most important features. Applying the 0.10 threshold would have reduced GeneXpert use by 70% (3,526 cartridges saved), detected 240 of 257 confirmed TB cases (93%), and reduced the cost per case detected from USD 197 to USD 64.

Conclusion Index-case infectiousness improved the identification of contacts most likely to have GeneXpert-confirmed TB. Risk-based prioritisation could reduce cartridge use and diagnostic costs while maintaining high case detection rates, thereby supporting efficient GeneXpert allocation in resource-limited settings. Prospective validation is required before implementation





121: Improving access to Tuberculosis Preventive Therapy Among Tuberculosis Contacts in Eastern Uganda Through Strengthening Health Systems.

Ssekiswa Lwanga Zimwanguyiza, Clark Joshua Brianwong, Kasi Timothy, Diana Cherotin, Ronald Khamasi, Alexander Mugume, Richard Jjuuko Kyakuwa, Dithan Kiragga

Background: Tuberculosis preventive therapy (TPT) substantially reduces the risk of developing active TB among eligible contacts. However, the October -December 2021 Local Partner Health Services Eastern report revealed 18% TPT coverage among eligible contacts in comparison with the expected 90% National target. The project team set out to improve TPT coverage among eligible contacts to 90% through a health system strengthening initiative.

Description: In FY 23, a health system bottleneck analysis was conducted using routine program data, mentorship findings and facility performance reviews to identify barriers to contact investigation and TPT initiation. Key challenges included, low contact screening rates, delayed implementation of contact tracing activities, poor planning for community contact tracing activities, incomplete patient addresses, unclear staff roles and responsibilities and documentation gaps. Low TPT access was attributed to lack of weighing scales for community peadiatric TPT dosing and the erratic supply of TPT commodities.

A package of customised local interventions was implemented progressively during year one. These included site-level mentorships emphasizing immediate contact investigation after initiating patient on TB drugs, structured pre-activity planning, mapping and engaging Village Health Teams (VHTs) for community contact tracing, pre-visit appointment scheduling and age-based estimation of weight for children when weighing scales were not available; ordered for emergency TPT commodities while strengthening facility capacity to forecast and make correct drug orders. Weekly surveillance reports were used to monitor progress and guide continuous quality improvement processes. In 2024, through a global fund support, portable weighing scales were procured to strengthen community based paediatric TPT delivery.

Evaluation and Outcomes:

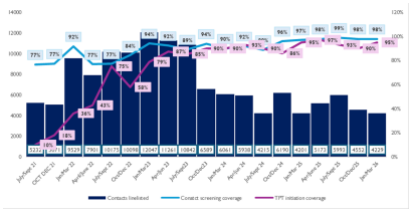
Contact screening coverage improved from 77% to above 90% in three quarters while TPT coverage reached 90% from 18% by December 2023 These have been sustained throughout the project period.

Fig 1: Improved contact screening and TPT coverage among eligible contacts in LPHS-E BFU from 77% and 18% to 90% by Dec 2023.

Lessons learnt:

Health system bottleneck analysis is key to understanding implementation gaps while involvement of community structures improves acceptability of health interventions at community-level.

Next steps: Sustaining high TPT coverage, and commodity security and continued advocacy for government to institute formally paid community health workers, away from using VHTs who are volunteers and paid on activity basis. This will ensure sustainability of integrated community health activities.



111: Strengthening Local Authority Ownership to Sustain HIV Prevention Services Amid Donor Transition in Fort Portal Region, Uganda

Henry Kalungi, Edgar Sserunkuma, Richard Jjuuko, Evans Amara Muzinduki, Irene Adulo, Ambrose Kibuuka, Henry Akankwasa, Lydia Kwaje, Benjamin Muwanika, Micheal Juma, Dithan Kiragga

Background:

Sustaining HIV prevention services, including HIV Testing services (HTS), remain critical in averting new HIV infections. In Uganda, the Ministry of Health with support from Center for Disease Control and Prevention (CDC), implements a comprehensive HIV program in Fort Portal, Mubende and Hoima (FPMH) regions through Baylor Foundation Uganda (BFU). Following donor funding shifts aligned with the America First Global Health Strategy, BFU rapidly transitioned from a predominantly implementer-led approach to an Integrated Technical Assistance (TA) Model of service delivery to strengthen local authority ownership to enhance sustainability of HIV prevention services. This abstract describes the implementation and early outcomes of the TA model across the FPMH region between July 2025 to March 2026).

Description:

Throughout FPMH regions, BFU implemented a new integrated TA model across 10 districts in four clusters covering 124 Health Facilitates (HF). The model positioned District and facility health leadership at the center of planning, budgeting, implementation oversight and performance monitoring. Multidisciplinary TA teams comprised of HIV subject matter experts who used real time data analytics for targeted and timely mentorships using a standardized TA tool to improve performance across the entire HIV cascade. Using continuous quality improvement (CQI)-oriented integrated TA, teams supported HFs analyze performance trends, identified missed opportunities, line listed clients, prioritized HF and community-based interventions, mapped target hot spots, strengthened commodities management and mentored community resource persons. The model emphasized integration of HIV prevention activities within existing district health structures to promote long-term sustainability.

Lessons learned:

Changing towards more LA ownership of implementation using the TA approach first showed a slight dive in performance for most indicators. Prompt orientation and formation of TA teams, and subsequent LA led visits to HFs for mentorships fostered both accountability and implementation ownership. Improvement in performance after the TA model introduction was noted for testing volumes and HIV case identification. High yielding HTS strategies of Index and SNS testing noted a gradual decline but remained the most significant contributions to HIV case identification.

Next Steps:

Findings illustrate how innovation of the TA approach by BFU in FPMH region has capacity to foster LA accountability and ownership of HIV program, sustaining and improving performance. It is yet another efficient strategy that builds capacity for LAs to lead their programs. BFU will continue scaling this model to all supported LAs and utilizing CQI based measures to intervene for sub optimally performing areas of implementation

Figure 1. HIV testing and case identification trends

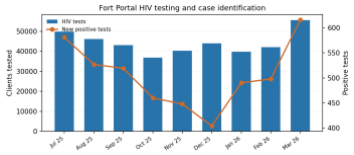
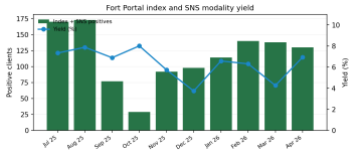


Figure 2. Index and SNS modality yield



16: Peer-Led Group Antenatal Care: Expanding Access to Maternal Services for Pregnant Adolescents and Young Women in Tororo Through Community-Led Models.

Nathan Okiror, Jane Nakawesi, Yusuf Namanya, Richard Kyakuwa Jjuuko, Fredah Akello, Patricia Nahirya Ntegge, Denise Birungi, Dithan Kiragga

Background: Adolescent girls and young women (AGYW) remain disproportionately affected by barriers to accessing antenatal care (ANC), including stigma, low autonomy, late pregnancy disclosure, transport challenges, and weak social support. In rural Tororo, these barriers contribute to delayed ANC enrolment and poor continuity of maternal services. To address this, a peer-led group antenatal care (G-ANC) model was implemented to improve early uptake and retention of ANC among pregnant AGYW by leveraging community-based peer support structures.

Description: A community-led G-ANC strategy was implemented across fifteen supported health facilities in Tororo district. Pregnant AGYW were identified through routine community outreaches, village health teams, and facility-based screening, then linked into structured peer cohorts facilitated by fifteen trained adolescent peer mothers. The model integrated health education, psychosocial support, appointment reminders, and peer accompaniment for routine ANC visits. Program performance was monitored using routine district ANC service data from April 2025 to Dec 2025, focusing on first ANC attendance (ANC1) and completion of the fourth ANC visit (ANC4).

Lessons Learnt: The intervention demonstrated substantial gains in expanding ANC access among AGYW. Across the reporting period, 15,366 pregnant AGYW were reached with first ANC services, against an annual target of 12,112, translating to a cumulative achievement of 114%. Quarterly ANC1 performance remained consistently above the target of 3029 for three consecutive quarters (129%, 117%, and 114%), indicating sustained demand generation and successful linkage to care.

Retention to continued care also improved, with 9,570 AGYW completing at least four ANC visits, representing 79% cumulative ANC4 coverage, a notable improvement in a population historically characterized by poor follow-up of below 50%. The peer-led approach strengthened continuity by reducing missed appointments.

Next steps: Peer-led group antenatal care is an effective community-driven strategy for extending maternal health services to marginalized pregnant adolescents and young women. In Tororo, the model increased early ANC enrolment and improved continuity of care by addressing structural and social barriers through peer engagement. Scaling community-led ANC models offers a practical pathway to reach underserved young mothers and strengthen equitable maternal health outcomes in high-burden settings. Through ANC, the mothers receive a continuum of care that includes

HIV testing, hence contributing to the prevention of mother-to-child transmission of HIV.

89: Assessment of Central Adiposity Among Adolescents Living with HIV in sub-Saharan Africa – Baseline data from the LATA trial.

George Patrick Akabwai, Elizabeth Chappelle, Irene Andia-Biraro, Peter Elyanu, Adeodata Kekitiinwa-Rukyalekere, Deborah Ford, Sarah Pett

Background: Central adiposity is a risk factor for diabetes mellitus, cardiovascular events and some cancers. Persons living with HIV(PLWH) have an increased risk of these events, secondary to excess inflammation not completely negated by antiretroviral therapy (ART). There are limited data on central adiposity in adolescents living with HIV(ALWH).

Methods: We present baseline (before the randomization) anthropometric data in LATA (NCT05154747), which evaluated long-acting injectable cabotegravir/rilpivirine vs. oral ART (Tenofovir/Lamivudine/Dolutegravir (TLD) among virologically suppressed ALWH aged 12-19 years enrolled in Uganda/Kenya/Zimbabwe/South Africa between June 2023- April 2024.

Standard 'high risk' definitions for central obesity were used: Waist-hipratio (WHpR) >0.9(men)/>0.85(women); waist-height ratio (WHtR)>0.5. Body-Mass-Index-for-age z-score (BAZ) >+1 SD was considered overweight. Bioelectrical Impedance (BIA) was used to measure body fat percentage (BF%).The Stunkard Figure Rating Scale (SFRS) measured body image perception with 9 silhouette figures interpreted as:1-2(=underweight), 3-4(=normal weight), 5-7(=overweight), and 8-9(=obese), completed independently by participants, and clinicians. Regression models were used to explore associations between clinician-assigned SFRS and anthropometric measures, adjusting for age, sex and site.

Results: Of 476 participants enrolled, 256(54%) were female, 474(99.6%) of Black ethnicity, median age was 16.5 years [interquartile range:14.8,18.1], 473(99.4%) were on TLD. Median WHpR among males was 0.83[0.80,0.87] with 30/220(14%) "high risk", and 0.80[0.75,0.83] and 45/256(18%) respectively among females. Median WHtR was 0.51[0.48, 0.55]; 294(62%) participants were "high risk". Median BMI-for-Age z-score (BAZ) was -0.3[-0.9,0.4]; 72(15%) participants were "overweight". In a subset (n=322), 24(7%) had "overfat/obese" BF%. BAZ was strongly correlated with BF% (r=0.66), and WC (r=0.56). WHpR and WHtR were strongly correlated with each other (r=0.82) but had weak to no correlation with BAZ (r=-0.15, r=0.01, respectively) and BF% (r=-0.21, r=0.05, respectively).There was moderate agreement between participant and clinician-assigned Stunkard scores (k= 0.45). Adjusting for age, sex and site, clinician-assigned SFRS was independently positively associated with BAZ, WC and BF% (all p<0.001).Higher WHpR and WHtR were weakly associated with lower predicted SFRS scores (p=0.011, p=0.039, respectively).

Conclusions: Among ALWH, a significant proportion (~14-18%) had central adiposity by WHpR.The SFRS was strongly associated with BAZ and BF%.SFRS may be a practical tool to assess central adiposity among ALWH. These data are a snapshot. Further work will include exploring change in central adiposity longitudinally.

Table 1: Tabulation of Stunkard scores

	Respondent	
	Participant	Clinician
Stunkard rating score		
1	5 (1%)	17 (4%)
2	35 (7%)	71 (15%)
3	113 (24%)	153 (32%)
4	185 (39%)	167 (35%)
5	110 (23%)	58 (12%)
6	24 (5%)	8 (2%)
7	3 (1%)	2 (0%)
8	1 (0%)	0 (0%)
9	0 (0%)	0 (0%)

216: Integrated Service Delivery for HIV, TB, Hepatitis B, STIs and Non-communicable Diseases in Uganda: Implementation Experience from Baylor Foundation Uganda's Clinical Center of Excellence

Jacqueline Balungi Kanywa, Elizabeth Maidl, Moses Mugerwa, Nkuwe Godfrey, Cathbert Tumusiime, Denise Birungi, Jane Senyondo Nakawesi, Albert Koma Maganda

Background: Uganda has a high burden of HIV, tuberculosis (TB), hepatitis B, sexually transmitted infections (STIs) and emerging non-communicable diseases (NCDs), requiring integrated person-centered health care for improved outcomes. We describe how Baylor College of Medicine Children's Foundation Uganda (BFU) operationalized an integrated chronic care model at its Clinical Center of Excellence (COE) in Mulago National Referral Hospital. The objective was understanding how service delivery strategies were introduced and sustained to reduce fragmentation across HIV, tuberculosis (TB), hepatitis B, sexually transmitted infections (STIs), and non-communicable diseases (NCDs), and to identify factors influencing adoption, reach, and routine delivery in a high-volume urban referral setting.

Description: We conducted a descriptive implementation review of a mature model introduced in 2006. Implementation strategies included nurse-led triage, electronic medical record prompts for multi-disease screening, same-visit clinician review, onsite and networked diagnostics, differentiated service delivery, multi-month dispensing, tele-support through virtual consultations and a 24-hour call center, and community follow-up through peer supporters and a client-led civil society organization. Program data from 2015–2025 were used to assess service reach and disease burden, while operational experience was used to identify implementation enablers, barriers, and adaptations that supported normalization of the model.

Lessons Learned: Across the review period, as shown in table 1, there were 8,364 documented incident morbidities: HIV 55% (4,605), TB 19% (1,552), hepatitis B 3% (281), syphilis 0.3% (26), cervical cancer 3% (258), and common NCDs 19.7% (1,642). Among NCDs, hypertension represented 75% (1,238), diabetes 5% (88), anxiety/depression 12% (187), and alcohol/substance use disorders 8% (129). Integrated workflows enabled clients to complete triage, screening, clinician review, sample collection, and dispensing in one visit, while community platforms reached approximately 500–2,000 clients per quarter. Sustained adoption of multi-month dispensing, virtual follow-up, and peer-supported delivery contributed to reduced transport burden and clinic congestion, while HIV adherence and viral suppression remained about 90%. Findings suggest that integrated chronic care can be institutionalized in resource-limited referral settings when implementation is supported by standard workflows, task sharing, digital decision support, and strong community linkage mechanisms. This experience provides practical implementation lessons for adoption, adaptation, and scale-up of integrated service delivery models in similar high-burden settings and supports further evaluation using formal implementation outcomes like acceptability, feasibility, and sustainability.

Next Steps: Future evaluation should measure costs, client experience, provider workload, and clinical outcomes across conditions to inform the scale-up of integrated, family- and people-centered care in similar high-burden settings.

_Table 1: Number incident diagnoses of HIV, TB, hepatitis B, STIs, and NCDs over 10 years (2015–2025)

Disease category	0-9 years		10-14 years		15-19 years		20-24 years		25+ years		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
HIV [2015-2025]	665	617	121	133	50	287	52	576	602	1,502	1,490	3,115
TB [2015-2025]	476	413	53	64	51	55	56	46	146	192	782	770
Hepatitis B [2015-2025]	13	8	7	11	11	10	28	39	78	76	137	144
STIs (syphilis) [2015-2025]	0	0	0	0	0	1	1	5	5	14	6	20
Hypertension [2022-2025]	0	0	4	1	34	24	76	40	427	632	541	697
Diabetes Mellitus [2022-2025]	0	0	0	0	0	4	4	0	22	58	26	62
MH - Anxiety/ Depression [2024-2025]	0	0	4	5	9	13	23	20	34	79	70	117
MH - Alcohol/ Substance use disorder [2024-2025]	0	0	0	0	2	1	9	2	87	28	98	31
Cervical Cancer [2020-2025]	n/a	n/a	n/a	n/a	n/a	12	na	42	n/a	204	n/a	258

176: Health Beyond Clinical Care: Addressing Caregiver Socioeconomic and Psychosocial Challenges to Improve Retention in HIV Clinical Trials at Baylor Foundation Uganda.

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Background Psychosocial and socioeconomic factors are well-established determinants of HIV care outcomes and treatment adherence. However, the support needs of participants and caregivers facing challenges such as poverty, food insecurity, and HIV disclosure barriers may remain inadequately documented and addressed in HIV clinical trials conducted in resource-limited settings. We describe our experience at Baylor Foundation Uganda, where we integrated routine caregiver support in the implementation of HIV clinical trials to identify social and economic challenges affecting study participants' clinical engagement.

Description At Baylor Foundation Uganda, caregiver support was integrated into the routine implementation of HIV clinical trials involving caregivers (all women). This involved primary caregivers receiving household visits, household mapping, scheduled appointment reminder phone calls, and clinic-based counselling sessions with their study participants. During these sessions, we identified and documented the social and economic challenges, HIV disclosure dynamics, and any other issues influencing clinical engagement and retention. We then summarised the common caregiver challenges and their potential effect on participant adherence and study trial participation.

Lessons Learned Of the 177 caregivers reviewed, 147 (83.1%) reported socioeconomic challenges, including unemployment, food insecurity, and unstable living conditions. Among these caregivers, 92% (135/147) experienced all three challenges concurrently, making combined socioeconomic hardship a key factor linked to disengagement from care. Frequent household relocations were reported by 30% of caregivers (53/177). HIV disclosure challenges were documented among 13.6% of caregivers (24/177), primarily related to fear of rejection, stigma, partner abandonment, and reduced treatment adherence was observed among participants supported by these caregivers. Consequently, 9.6% (17/177) had a history of missed scheduled clinic visits. These findings demonstrate the interconnected effects of socioeconomic vulnerability and HIV disclosure barriers on participant engagement and retention in HIV clinical trials.

Next Steps HIV clinical trials should routinely integrate caregiver psychosocial and socioeconomic assessments to identify barriers to adherence, engagement, and retention. Beyond counselling, trials should evaluate and analyse holistic support models that combine psychosocial screening, peer support, and economic empowerment to improve participant outcomes and real-world applicability.

112: Age-Specific Vulnerability Patterns Among Adolescent Girls and Young Women in Uganda: Implications for Equitable Programming

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Background: Programs serving adolescent girls and young women (AGYW) require reliable vulnerability data to target services equitably across age groups. In Uganda, vulnerability screening is stratified into 10–14, 15–19, and 20–24 years using age-specific versions of the Uganda Adolescents and Young People Risk and Vulnerability Assessment Tool (UGRVAT), which differ in domains and scoring structures. This may obscure whether observed differences reflect true age-related vulnerability or measurement artifacts. We harmonized age-specific tools across five shared domains; safe environment, HIV knowledge, HIV/reproductive health (HIV/RH) status, disability, and general risk-taking behaviour—to examine cross-sectional age-band patterns and inform equitable programming.

Methods: We conducted a cross-sectional analysis of UGRVAT screening data collected from June to December 2025 in 41 health facilities (N=3,002). Participants were grouped into three age bands (10–14, 15–19, and 20–24 years). Domains were dichotomized as vulnerable or not vulnerable. A descriptive composite score (0–4) was constructed using four comparable domains: safe environment, HIV knowledge, HIV/RH status, and disability. The risk-taking domain was analyzed separately because marked prevalence discontinuities across age bands suggested measurement differences. Age-band differences were assessed using the Kruskal–Wallis test and multivariable logistic regression adjusted for school enrollment.

Results: Median age was 20 years (range 10–24), and 12.0% (360/3,002) of participants were enrolled in school. The composite score increased from 1.93 among 10–14-year-olds to 2.46 among 15–19-year-olds, then declined to 2.16 among 20–24-year-olds ($p<0.001$). Safe-environment vulnerability peaked at 15–19 years (88.6% versus 61.5% at 10–14 years; OR 4.76, 95% CI 3.23–7.02) and declined among 20–24-year-olds (59.8%; OR 0.92 versus 10–14 years, $p=0.63$). HIV/RH vulnerability increased with age (42.7%, 81.9%, and 88.2%; OR 6.52 and 10.78 versus 10–14 years, $p<0.001$), while HIV knowledge gaps declined (84.6% to 65.4%; OR 0.50 and 0.37, $p\leq0.004$). Disability remained low and stable (2.5–4.2%).

Conclusion: Vulnerability patterns among AGYW differed by age and domain. Safety-related risks were concentrated among girls aged 15–19 years, while HIV/RH vulnerability increased into young adulthood and HIV knowledge gaps declined with age. These findings support age- and domain-sensitive targeting of services rather than a single approach for all AGYW. Discontinuities in the risk-taking domain suggest tool comparability problems rather than true epidemiological differences, underscoring the need for harmonized indicators and careful interpretation of routine screening data to strengthen equitable programming.

226: Accelerating Outbreak Preparedness and Readiness: Through Epidemic Ready Primary Health Care in Western and Eastern

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Background: Uganda remains highly vulnerable to public health emergencies due to its proximity to Congo, porous borders, population displacement, climate-related risks, and increasing international travel. Between 2021 and 2026, the country reported 833 disease outbreaks as per the MoH data base, heightening the need for a stronger frontline preparedness/readiness system. As a first point of contact with the health care system, Primary Health

Care (PHC) facilities serve a critical role in early detection, reporting, and response to epidemic threats. We describe an Epidemic Ready Primary Health Care (ERPHC) model to strengthen facility preparedness and improve early identification and notification of public health events in Uganda.
Description: Between March 2026 and June 2026, the (ERPHC) model was implemented across 38 districts and 448 PHC facilities in western and eastern Uganda. Interventions supported were: district entry and stakeholder engagement meetings, district mentor training, monthly mentorship, feedback meetings, and attaching a mentor to each PHC facility to improve preparedness efforts. Data collection tools were reviewed with support from MoH and resolve to save lives, a dashboard was developed to support data analysis and visualization. Facility preparedness was assessed across four domains: connect, detect, protect, and treat.
Evaluation and outcome: Implementation of the ERPHC model, led to significant improvement in PHC preparedness. The average preparedness score improved from 50% (251/500) in March 2026 to 74% (370/500) by June 2026. All preparedness indicators across the four domains improved, connect (67% (269/400) to 84% (336/400)), detect (62% (492/800) to 90% (716/800)), protect (48% (334/700) to 80% (560/700)), treat (52% (208/400) to 72% (289/400)). Reporting of survailance signals increased from 14 reports in (Dec 2025 to Feb 2026) to 628 reports during (March-June 2026) demonstrating event detection and nortification capacity at the facility.
Lessons Learned: Structured mentorship, routine performance feedback, standardised preparedness assessment and real time data visualisation within PHC systems strengthened frontline epidemic preparedness and the collaboration between districts, implementing partners and MOH was critical to implementation success. Persistent challenges included, inconsistent supply chains for personal protective equipment and infection prevention and control supplies, inadequate infrastructure, healthcare worker attrition,, and delayed feedback.
Next Steps: Scaling up the ERPHC model to additional districts offers an opportunity to strengthen Uganda's frontline health security and improve resilience against future epidemics.

48: Evaluating Alternative CD4 Thresholds for Cryptococcal Antigen and TB-LAM Screening in Advanced HIV Disease at Baylor Foundation Uganda: Effects on Diagnostic Yield and Resource Utilisation

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Background: The World Health Organisation (WHO) recommends Cryptococcal Antigen (CrAg) and tuberculosis lipoarabinomannan (TB-LAM) screening for people living with HIV (PLHIV) with CD4 counts <200 cells/µL to detect opportunistic infections in advanced HIV disease (AHD). However, positivity may concentrate among those with severe immunosuppression. In resource-constrained settings, efficient screening thresholds are important. We evaluated associations between CD4 categories and CrAg/TB-LAM positivity and assessed thresholds to improve diagnostic yield and screening efficiency among PLHIV undergoing AHD screening in Uganda.
Methods: We conducted a retrospective analysis of electronic medical record data from PLHIV attending Baylor Foundation Uganda clinic who underwent AHD screening between January 2023 and July 2025. Data were analysed using Excel and Stata version 19.0 (StataCorp LLC, College Station, TX, USA). Participants with documented CD4 counts and corresponding CrAg/TB-LAM results were included. CD4 counts were categorised as <50, 50–99, 100–149, 150–199, and ≥200 cells/µL. Diagnostic yield was the proportion of positive results in each CD4 category. Associations between ordered CD4 categories and CrAg and TB-LAM positivity were assessed using the Cochran–Armitage trend test (χ^2trend). Threshold optimisation analyses with CD4 cut-offs of <50, <100, <150, and <200 cells/µL estimated positive cases captured, tests reduced, and the Number Needed to Test (NNT), defined as individuals screened per case. Significance was assessed at α=0.05.
Results: CrAg positivity was 5.5% (20/361), while TB-LAM positivity was 5.8% (17/295). CrAg positivity demonstrated a significant inverse trend with increasing CD4 count, declining from 14.6% (13/89) among participants with CD4 counts <50 cells/µL to 0.0% (0/54) among those with CD4 counts ≥200 cells/µL (χ^2trend=14.22, p=0.0002) (Table 1). TB-LAM positivity also showed a significant trend across CD4 categories (χ^2trend=4.95, p=0.0260), with highest yields among participants with CD4 counts <50 cells/µL (10.1%, 8/79) and 50–99 cells/µL (9.1%, 5/55). A CD4 threshold of <100 cells/µL halved testing while capturing 70.0% (14/20) of CrAg-positive and 76.5% (13/17) of TB-LAM-positive cases. NNT improved from 15.4 to 10.6 for CrAg and from 17.1 to 10.3 for TB-LAM compared with the <200 cells/µL threshold (Table 2).
Conclusions: CrAg positivity was associated with increasing immunosuppression, demonstrating a significant inverse trend across CD4 categories. TB-LAM positivity showed a significant but less consistent trend. Lower CD4 thresholds improved screening efficiency, although some TB-LAM cases may be missed. Risk-stratified screening may enhance resource utilisation and support sustainable HIV service delivery.

Table 1. Diagnostic yield of CrAg and TB-LAM by CD4 category

CD4 Category (cells/µL)	CrAg Positive/Total	CrAg Yield (%)	TB-LAM Positive/Total	TB-LAM Yield (%)
<50	13/89	14.6	8/79	10.1
50–99	1/59	1.7	5/55	9.1
100–149	4/62	6.5	1/62	1.6
150–199	2/97	2.1	2/78	2.6
≥200	0/54	0.0	1/21	4.8
χ^2trend (P-value)		**14.22 (0.0002)**		**4.95 (0.0260)**

Table 2. CrAG and TB-LAM Threshold Optimisation and Screening Efficiency

Outcome	CD4 Threshold	Eligible	Positives Captured	% Captured	Tests Reduced (%)	NNT
CrAg	<200	307	20	100.0	Reference	15.4
	<150	210	18	90.0	31.6	11.7
	<100	148	14	70.0	51.8	10.6
	<50	89	13	65.0	71.0	6.8
TB-LAM	<200	274	16	94.1	Reference	17.1
	<150	196	14	82.4	28.5	14.0
	<100	134	13	76.5	51.1	10.3
	<50	79	8	47.1	71.2	9.9

Note: One TB-LAM-positive participant had CD4 ≥200 cells/µL and was therefore not captured by the <200 threshold.