

Virtual Center Of Excellence: Supportive, multidisciplinary case review to achieve viral load suppression for children failing optimized ART at supported health facilities in Malawi

Carre M Cox^{1,2}, Gift Kaunda¹, Anne Kantepa¹, Alick Mazenga¹, Rachael Manyeki^{1,2}, Elizabeth Wetzel^{1,2}, Teferi Beyene^{1,2}, Chrissy Chikoti¹, Sam Chilala¹, Haswel Jere¹, Felix Joshua¹, Elijah Kavuta¹, Ian Khruza¹, Robert Majoni¹, Julia Moorman^{1,2}, Emmanuel Navaya¹, Peter Nyasulu¹, Atusaye Tesiwa¹, Maureen Langa¹, Saeed Ahmed^{1,2}, Katherine R Simon^{1,2}

¹ Baylor College of Medicine Children's Foundation Malawi, Lilongwe, Malawi ² Baylor College of Medicine, Houston Texas, United States

BACKGROUND

- Virologic suppression (**VLS**) rates for children and adolescents living with HIV (**CALHIV**) have improved with optimized ART regimens yet still **lag behind adult VLS**.
- Challenges include ART dosing and administration knowledge gaps, inconsistent caregiver engagement, lack of disclosure, stigma, and long treatment histories.
- We describe VLS among CALHIV with high viral load (HVL) who received enhanced adherence counseling (EAC) through virtual COE "vCOE": a multidisciplinary decision-guided case conference.
- vCOE was designed to support care to CALHIV from 95 health facilities supported by Baylor College of Medicine Children's Foundation Malawi Tingathe Program.

METHODS

- From October 2022, CALHIV 0-19 years old with detectable viral load received EAC utilizing a job aid of supportive conversation about common ART adherence barriers.
- Community health workers (CHWs) met families and CALHIV at home or by phone to identify barriers and plan individualized solutions.
- Clinical providers virtually presented findings at vCOE to a multidisciplinary team of experienced pediatric ART providers (nurse, physician, pediatricians) to refine clinical skills and care plans.
- Consultant recommendations were reviewed with families and CHWs provided supportive follow-up
- Follow up VL and 3rd line applications timing were per national guidelines.
- The progress of each health facility's cohort was reviewed during vCOE with a dashboard utilized to identify sites needing additional support.

RESULTS

Between October 2022 and April 2024, **26% (3673/14221) of CALHIV in care were identified and flagged for vCOE.**

- EAC sessions were completed for 93% (3414/3673) and
- Of those **95% (3241/3414) had vCOE multidisciplinary discussion.**

A follow-up VL after EAC was available for 70% (2582/3673) with

- **74.7% (1930/2582) suppressed** (compared to 60% from the national data for the same period and age cohort).
- 16.6% (430/2582) HVL
- 8.5% (222/2582) results pending.

22% of children with follow-up HVL were referred to national 3rd line committee for genotype assessment.

KEY LESSONS LEARNT

- Implementation of a structured CHW-led counselling tool and vCOE identified common, relatively easy-to-address adherence barriers. **The vCOE model allowed for prompt problem-solving** for CALHIV with adherence challenges.
- Through the vCOE platform, CHWs were able to articulate common problem-solving techniques that were child and family centered.
- **VLS is achievable** for children and adolescents with HVL on optimized regimens **with guided, intentional EAC addressing common ART adherence challenges to create individualized adherence plans.**

NEXT STEPS

Coordination of available resources to address complex barriers and facilitate accessible genotyping for children who do not achieve viral load suppression remains critical.