



**BIPAI**<sup>19<sup>th</sup></sup>  
**NETWORK MEETING**  
 SUSTAINING GLOBAL PARTNERSHIPS  
 "A PASSION FOR HEALING  
 THAT TRANSCENDS LOCATIONS"



## Table of Contents

1. Increasing Primary HIV Resistance To First Line Antiretroviral Drugs Among Art Naïve Children In The Era Of Eliminating Mother To Child Transmission .....3
2. Pack Up Your Troubles And Send Them Off To Summer Camp: Adolescents Living With HIV Who Attended Camp In Mbeya Experienced No Differences Virologic Suppression, Mortality Or Lost-To-Follow Compared To HIV+ Adolescents Not Attending Camp .....4
3. Sometimes people don't hear you until you screen: Implementing tuberculosis screening for staff at the Mbeya COE.....5
4. Adherence to anti-retroviral therapy by adolescents at Maseru COE: influencing factors and social work support .....6
5. Development of a Multidisciplinary Pediatric Palliative Care Program in Mbeya Tanzania.....7
6. The prevalence of cervical dysplasia and related risk factors in HIV-infected women in Baylor Romania COE .....8
7. Peer led approach for identifying sex workers and their family members in Baylor-Uganda supported District of Rwenzori Region -Uganda.....9
8. Effective and flexible M&E systems for timely and accurate data in HIV/AIDS programming - Bridging data quality gaps .....10
9. Positivity yields for HIV testing services through various channels among children and adolescents in Lesotho .....11
10. Capacity Building Strategy, experience and early lessons in the rollout of the Uganda Health Facility-Community-Linkages Framework in Rwenzori region .....12
11. Towards improved IPT implementation in Swaziland:understanding the barriers through the theory of planned behaviour .....13
12. Psychological reactance is a novel risk factor for adolescent HIV treatment failure .....14
13. Addressing Psychosocial Needs And Care/Treatment Delivery Gaps For Adolescents Living With Hiv (Alhiv) Using Technology: The Case Of Teen Support Line (Tsl) In Malawi .....15
14. Understanding reasons for and outcomes of defaulters/lost to followup at Baylor COE .....16
15. MVCC paves the way towards achieving first unaids 90-90-90 for pediatrics.....17
16. Identification of HIV infected children and adolescents through support to private health facilities in Rwenzori region, Uganda .....18

17. Health workers' training in leadership and management practices to increase access to PMTCT services in Uganda: A pre-post A Pre/Post-Intervention Study.....	19
18. Using mid upper arm circumference cutoffs may over estimate acute malnutrition among hiv positive children aged 5-18 years in Uganda.....	20
19. Lessons from implementors: what family planning trends are we seeing amongst our HIV positive adolescents?.....	21
20. The impact of camp on adherence challenges in adolescents at Botswana Baylor children's clinical centre of excellence.....	22
21. Implementation of a life-style assessment for patients with chronic hepatitis B and C .....	23
22. Provider-initiated testing and counselling: is it still high yield? Yield of routine HIV testing in pediatric and adult inpatient wards in central and southern Malawi.....	24
23. Culturally sensitive approaches to education in exclusive breastfeeding in the indigenous Wayuu culture	25
24. Antiretroviral therapy initiation within seven days of enrolment: Outcomes and time to undetectable viral load among children at an urban HIV clinic in Uganda .....	26
25. Screening index clients attending art clinic to identify untested children at risk of hiv infection in Balaka, Malawi.....	27
26. Outcomes of Adolescents and Young Adults with Virological Failure at 10 Botswana-Baylor Children's Clinical Centre of Excellence (BCCCCOE) Outreach sites in Botswana .....	28
27. Distinctive barriers to antiretroviral therapy adherence among non-adherent adolescents living with HIV in Botswana.....	29
28. Switching from a Community-Based Testing Model (CBTM) to a Facility-Based Testing Model (FBTM) to Identify Children and Adolescents with HIV in Manzini Region, Swaziland.....	30

## 1. Increasing *Primary* HIV Resistance To First Line Antiretroviral Drugs Among Art Naïve Children In The Era Of Eliminating Mother To Child Transmission

P. Amuge<sup>1</sup>, D. Bbuye<sup>1</sup>, F. Namuli<sup>1</sup>, G. Kisitu<sup>1</sup>, A. Kekitiinwa<sup>1</sup>.

<sup>1</sup> Baylor College of Medicine Children's Foundation-Uganda COE.

### **Background:**

Uganda still grapples with a high HIV burden, however there is reduction in mother to child transmission rates. However, the exposure of HIV-exposed infants to sub-optimal ART drugs levels during the perinatal and postnatal period most likely predisposes them to primary ART resistance to first line ART regimens. Given this background risk, Uganda has not yet embraced the need for HIV resistance testing before initiation of ART, this being done for a handful of children who are found to be failing on first line or second line ART regimens in selected centres of excellence. We aimed at finding the occurrence of primary HIV resistance to first line ART regimens among ART naïve children up to 12 years attending an urban paediatric HIV clinic.

### **Methods:**

106 ART naïve children were prospectively screened, 100 were enrolled and followed-up over a period of 18 months. Variables collected included: age, sex, PMTCT exposure, viral load at ART initiation and after 6months on ART, resistance profile at initiation and after 6months on ART, as well as treatment outcomes. All participants were initiated on ART according to the national guidelines. Data was extracted from the electronic medical records and analysed. ART susceptibility was summarised as proportions.

**Results:** Out of the 100 participants enrolled, 11% had primary ART resistance mainly to Non-nucleoside reverse transcriptase inhibitors (NNRTIS such as Nevirapine and Efavirenz). After 6months on ART, 5.8% of these children developed secondary ART resistance. HIV resistance was significantly associated with high viral load (>1000copies/ml) after six months on ART.

### **Conclusion:**

Primary ART resistance to first line regimes is on the rise irrespective of perinatal ART exposure. In order to achieve 90% viral suppression by 2020; this necessitates programmatic implementation of baseline ART resistance testing for all ART naïve children and for all those failing on first line ART within the first year of initiating ART. Full ART regimens versus Nevirapine only should be recommended for HIV exposed infants as prophylaxis to prevent mother-to-child transmission.

## 2. Pack Up Your Troubles and Send Them Off To Summer Camp: Adolescents Living With HIV Who Attended Camp In Mbeya Experienced No Differences Virologic Suppression, Mortality Or Lost-To-Follow Compared To HIV+ Adolescents Not Attending Camp

Jason M. Bacha<sup>1,2,3</sup>, Boniface Makamong'oko<sup>3</sup>, Rainald Mgimba<sup>3</sup>, Moses Chodota<sup>3</sup>, Liane R. Campbell<sup>1,2,3</sup>

<sup>1</sup>Baylor International Pediatric AIDS Initiative (BIPAI) at Texas Children's Hospital, Houston, TX, USA; <sup>2</sup>Baylor College of Medicine, Houston, TX, USA; <sup>3</sup>Baylor College of Medicine Children's Foundation - Tanzania, Mbeya, Tanzania

4

### **Background:**

While camps for adolescents living with HIV (ALHIV) are generally well-received adolescents and health care providers and can have positive impact on psychosocial health, there is little literature examining the post-camp virologic treatment success and outcomes in those ALHIV who have attend camps. These abstracts examine HIV viral load results and treatment outcomes of ALHIV who attended "Salama Camp" at the Mbeya COE in Tanzania compared to ALHIV not attending camp.

### **Materials and Methods:**

Retrospective review of Salama Camp activity reports and EMR files of those Mbeya COE clients who attended Salama Camp between 2012 and 2016. Salama Camp is a 5-day overnight camp supported through a partnership with SeriousFun Network, and aimed at improving psychosocial health, life skills, self-care and adherence to ART in ALHIV. In Mbeya, ALHIV struggling with adherence and/or have multiple social challenges are prioritized to attend camp. Most recent post-camp viral load and current chart status were extracted for all campers to determine virologic suppression (defined as VL<1000 copies/mL) and treatment outcome (defined as "active," "transferred out," "died," or "lost to follow up (LTFU).") As a comparison group, viral loads and chart status outcome were extracted from age matched (12yo-18yo) HIV positive patients on ART at the COE between 2012 and 2016 who did not attend camp. Chi-square test was used to compared categorical variables.

### **Results:**

258 total HIV positive adolescents ages 12 to 18 years old attended Salama Camp in Mbeya, Tanzania, representing 39.2% (258/658) of all adolescents aged 12 to 18 years on ART at the Mbeya COE. 95.7% (247/258) of campers have a recorded post-camp VL result, of which 67.6% (167/247) had VL < 1000 copies/mL (viral suppression). Current treatment outcomes of ALHIV who attended camp were 86.4% (22/258) active in care at the COE, 7.8% (20/258) transferred out, 4.3% (11/258) died, and 1.6% (4/258) LTFU.

In age-matched ALHIV on ART at the COE who did not attend camp (n=400), 72.5% (290/400) were virologically suppressed, 83.3% (333/400) remain active in care, 8.8% (35/400) transferred out, 4.5% (18/400) died, and 3.5% (14/400) LTFU. There were no statistically significant difference in viral suppression (67.6% campers vs 72.5% non-campers, p=0.18), mortality rates (4.3% campers vs 4.5% non-campers, p=0.90), or LTFU rates (1.6% campers vs 3.5% non-campers, p=0.15) between the two groups.

### **Conclusion:**

No statistically differences in the key clinical outcomes of viral suppression, mortality or LTFU were seen in ALHIV on ART who attended camp when compared to ALHIV who did not attend camp in Mbeya, Tanzania, despite the intensive and costly camp program and efforts. In resource limited settings, such resource intense programs must be continuously re-evaluated to ensure optimal use and maximal impact of scarce resources for ALHV.

### 3. Sometimes people don't hear you until you screen: Implementing tuberculosis screening for staff at the Mbeya COE

Jason M. Bacha<sup>1,2,3</sup>, Lwijiyo. Minga<sup>3</sup>, Liane R. Campbell<sup>1,2,3</sup>, Anna Manalakas<sup>4</sup>

<sup>1</sup>Baylor International Pediatric AIDS Initiative (BIPAI) at Texas Children's Hospital, Baylor College of Medicine, Houston, TX, USA; <sup>2</sup>Baylor College of Medicine, Houston, TX, USA <sup>3</sup>Baylor College of Medicine Children's Foundation - Tanzania, Pediatrics, Mbeya, Tanzania<sup>4</sup>The Global Tuberculosis Program, Texas Children's Hospital, Global and Immigrant Health, Department of Pediatrics Baylor College of Medicine, Houston, TX, USA

#### **Background:**

Tuberculosis (TB) infection control is important for all COEs in high TB burden areas. As part of improving infection control at the Mbeya COE, a voluntary TB screening program was implemented in 2016 and available to all Baylor Mbeya COE staff. This abstract describes results of this staff TB screening initiative.

#### **Materials and Methods:**

A standard operating procedure (SOP) for TB screening of staff was developed by the Mbeya TB focal team. It involved staff sensitization and education, followed by offering any interested staff TB symptom questionnaire and tuberculin skin test (TST). Any staff with a positive TB screening questionnaire or positive TST was further evaluated by a clinician, who would decide if further TB diagnostics or TB treatment was needed. IPT was offered to any staff with LTBI (e.g. positive TST and asymptomatic) or who is HIV positive (per national guidelines). Results of the TB screening were recorded on the COEs standard TB diagnostic tracking form by a TB nurse.

#### **Results:**

58.4% (38/65) of all Mbeya COE staff chose to do voluntary TB screening. Of those screened, 21.1% (8/38) were administrative staff, 47.4% (18/38) were clinical staff, and the remaining 31.6% (12/38) were expert volunteers working at the COE. Of those screened, 57.9% (22/38) were female, 31.6% (12/38) were HIV positive, 100% (38/38) did TSTs, and 5.3% (2/38) reported TB contacts and symptoms of TB and performed sputum analysis.

A total of 50.0% (19/38) of all TSTs were reactive, including one staff who also had a positive sputum, known contact, and symptoms of TB and was thus initiated on antituberculosis therapy. The remaining 47.3% (18/38) of screened staff were found to have LTBI. There were 21 staff (56.7%, 21/37) who chose to initiate IPT including 82.3% (14/17) of those with LTBI and 66.7% (8/12) of those with HIV [NB: only 16.7% (2/12) HIV positive staff had reactive TSTs]. Rates of LTBI were highest amongst administrative staff screening for TB (100%, 8/8), followed by clinical staff (50%, 9/18), and then volunteers (11.1%, 2/12). To date, no staff taking IPT has experienced toxicity or acquired TB disease.

#### **Conclusion:**

Uptake of voluntary TB screening was well received and utilized by a majority of Mbeya COE staff. High rates of LTBI were seen in those staff undergoing TST, and IPT uptake rates for those eligible were also encouraging. TB prevention efforts and TB screening for staff will continue to be offered at the Mbeya COE, with efforts focusing on reaching more staff and addressing existing gaps.

## 4. Adherence to anti-retroviral therapy by adolescents at Maseru COE: influencing factors and social work support

Mafusi Boopa, Jill Sanders, Edith Mohapi

Baylor College of Medicine Children's Foundation - Lesotho

### **Issue:**

Adherence to long-term anti-retroviral therapy (ART) is a wide-reaching challenge among adolescents who are living with HIV (ALHIV). We wanted to better explore and describe the factors influencing ART adherence in Maseru, Lesotho, and understand the support adolescents need from social workers (SW) to improve their adherence.

### **Description:**

Adolescents between 12-19 years who were enrolled at care at Baylor College of Medicine Bristol-Myers Squibb Children's Clinical Center of Excellence – Lesotho (COE), aware of their HIV status and with adherence <95% according to pill count samples were eligible for inclusion. Qualitative data was collected using an interview guide. Analysis was performed and categorized data into themes, sub-themes, categories, and sub-categories using Tesch's (1990) framework.

### **Lessons Learned:**

Factors such as poverty, stigma and discrimination, medication-related factors, negative emotion, poor relationship between health care providers and patients, and difficult home conditions were mentioned as inhibitors of optimal ART adherence. Participants mentioned preferring individual counselling to group counselling, and suggested social workers should do regular home visits and assessments of psychosocial support. They also suggested motivational talks from peers with optimal adherence, community education from SW to combat stigma and discrimination, and implied a desire for SW to facilitate awareness of their emotional needs related to HIV and ART and their desire for emotional support from healthcare providers.

### **Next Steps:**

Additional research on adolescents and optimal adherence strategies is recommended, as this was a small sample in Maseru and cannot be generalized. Expanding the project to involve adolescents in all districts of Lesotho would be advantageous. A cohort study observing adolescents' longitudinal adherence over a number of months may help understand variations in adherence over time related to developmental needs and age-specific experiences.

## 5. Development of a Multidisciplinary Pediatric Palliative Care Program in Mbeya Tanzania

Liane Campbell<sup>1,2,3</sup>, Beatrice Malingoti,<sup>3</sup> Nazarena Myenzi<sup>3</sup>, Atukuzwe Sanga,<sup>3</sup> Asulwisye Kapesa,<sup>3</sup> Jason Bacha, <sup>1,2,3</sup>

<sup>1</sup>Baylor College of Medicine International Pediatric AIDS Initiative at Texas Children's Hospital Houston, TX, USA;

<sup>2</sup>Baylor College of Medicine, Houston, TX, USA; <sup>3</sup>Baylor College of Medicine Children's Foundation - Tanzania, Pediatrics, Mbeya, Tanzania

### **Introduction:**

A multi-disciplinary palliative care program was established in March 2014 at an outpatient pediatric HIV clinic in Mbeya, Tanzania to support children and adolescents with life-threatening illnesses.

### **Methods:**

Retrospective chart review was conducted to describe characteristics and outcomes of patients enrolled in palliative care between 1 March 2014 and 31 Dec 2016. Palliative services included consultation with a dedicated palliative care nurse, pain management, and memory making activities.

### **Results:**

99 patients were enrolled with a median age of 13 years (Range: 6 months-20 years). 69% were adolescents (ages 10-19 years). 84% were HIV positive with median CD4 of 92 cells/mm<sup>3</sup> (range: 0-1360). Common conditions in HIV positive patients included Kaposi sarcoma (35%), end organ dysfunction (10%), chronic lung disease (5%), stroke (5%), extrapulmonary TB (5%) and other (40%). Common conditions in HIV negative patients included cerebral palsy (38%), acute myeloid leukemia (13%), Kaposi sarcoma (13%), extrapulmonary TB (13%) and other (23%). 69% of all patients had severe acute malnutrition.

Of all patients, 29% died, 7% were lost to follow up, 5% transferred care and 58% survived despite their life threatening conditions. Of those who died (n=29), 83% were adolescents. 24% of patients reported pain and received effective analgesia. 56% completed memory making activities.

### **Conclusion:**

Despite resource limitations, a multidisciplinary approach to palliative care can be successfully implemented for HIV positive and negative children and adolescents. Patients with HIV still present with advanced disease and need palliative care. In this cohort, the majority of patients were adolescents, highlighting the vulnerability of this population.

## 6. The prevalence of cervical dysplasia and related risk factors in HIV-infected women in Baylor Romania COE

V. Cindea, AM. Schweitzer, C. Costandache, R. Mihai, L. Mocanu, V. Maturioi

Baylor Black Sea Foundation

### **Background:**

Romania had in 2014 the highest incidence rate of cervical cancer and the highest mortality rate due to cervical cancer in Europe. HIV-infected women are at increased risk for developing cervical cancer. Romania has no national organized screening program for early detection of cervical cancer, and also no HPV vaccination program. The aim of this study was to determine cervical dysplasia prevalence and to assess the different risk factors for Pap abnormalities in HIV-infected women.

### **Methods:**

We conducted a cross-sectional study from January 2016 to June 2017, including 134 HIV-infected women enrolled at Baylor Romania Centre of Excellence and we determined the conventional cytology – Pap smear results, HPV genotyping results, and risk factors for cervical cancer (e.g., smoking, number of sex partners, and number of births).

### **Results:**

The mean age was 32.2 years (limits 20 ÷ 64, 68% were 25-32 years old), mean ARV duration 9 years, 59 smokers (43%), 55 (44%) had an abnormal screen by Pap (ASCUS, ASC-H, LSIL, HSIL). The most frequent abnormal PAP result was ASCUS 28 cases (51%), followed by LSIL 15 cases (27%), and HSIL and ASC-H with 6 cases for each category (11% each). HPV genotyping was performed for 28 women, and the overall HPV prevalence was 64%, with a 33% high-risk HPV types. Dysplasia prevalence was higher among HIV-infected women with detectable HIV blood load ( $\geq 1000$  copies/ml) and for women who are smokers. The number of sex partners and number of births did not discriminate among groups with normal and abnormal Pap results.

### **Conclusions:**

There are peculiarities of cervical cancer in HIV-infected women, and more special screening guidelines are necessary for cervical cancer detection. Long-term outcomes research is also needed to assess which are the most cost-efficient screening modalities for cervical cancer in HIV-infected women.

### **Terms:**

ASCUS – Atypical squamous cells of undetermined significance

ASC-H – Atypical squamous cells, cannot rule out a high grade lesion

LSIL – Low-grade squamous intraepithelial lesion or CIN1

HSIL – High-grade squamous intraepithelial lesion or CIN2, 3



## 7. Peer led approach for identifying sex workers and their family members in Baylor-Uganda supported District of Rwenzori Region -Uganda.

Ssuuna Cissy, Birungi Denise, Damba David, Mugisa Emma, Kekitiinwa Adeodata

Baylor Children's Foundation - Uganda

### **Background:**

Baylor-Uganda supports district health facilities and CBO in delivering friendly services to Key populations/ priority Populations (KP/PP) however, there was need to conduct a comprehensive profiling and mapping of sex workers within each hotspot. The need was out of the few numbers of sex workers accessing KP friendly services including HTS and ART as well as behaviour change communication interventions like attending safe space meetings. Yet we needed to know their operation of work, their family members with an aim of knowing their HIV status and provide HTS services.

The objective therefore was to complete a geographic mapping of hotspots and profiling sex workers to estimate population size at each hot spot and establish HIV status of sex workers and Family members in order to design appropriate services.

### **Methods:**

Mapping and profiling tools were developed, orientation of service providers, peers identified as guides, list of hotspots generated and secondary key informants interviewed to validate the hotspots.

Using a peer led approach, we conducted a hot spot mapping and profiling of sex workers and their family members in key towns in two districts of Rwenzori region. This was proceeded by orientation of health workers and sex worker peers on use the tools. Blood samples of HIV-negative or those who did not know their HIV status were collected for HIV testing for both sex workers and family members. All those testing HIV + were initiated in care.

### **Results:**

132 hotspots were validates through interviewing 120 Key informant. Overall, 1323 sex workers were profiled whereby 289 were HIV positive whereas 3452 family members were established to be living with sex workers and of these 87 were HIV positive whereas 40 were new positives in Kasese and Kabarole districts.

### **Conclusion:**

Using a peer led approach we were able to reach sex workers and their family members at their hotspots and homes which yield more results as we knew family member HIV status in of their hotspots.

## 8. Effective and flexible M&E systems for timely and accurate data in HIV/AIDS programming - Bridging data quality gaps

David Damba<sup>1</sup>

<sup>1</sup>Baylor Children's Foundation - Uganda

### **Background:**

In the era of “last mile” HIV programming to meet the UNAIDS 90-90-90 targets, strategies to increase HIV service coverage have been widely advocated for and implemented. However less attention has been t to strengthening the M&E systems for tracking and decision making. This abstract presents evidence based M&E best practices for data quality and challenges.

### **Methods:**

Baylor Uganda is implementing three HIV/AIDS/TB projects in 266 health facilities in Uganda. M&E related interventions implemented include; onsite training, mentorship, support supervision, M&E financing, provision of data tools, computerization, leadership training and human resource support. In 2014, we implemented additional interventions: monthly onsite data review meetings, district coordination meetings and data quality improvement projects. In this study 54 sites had their M&E systems assessed before (2014) and after additional interventions (2016). We reviewed reports, registers and compared reported data versus actual count. Open-ended interviews were held with supervisors. Indicators selected to assess accuracy were: HIV positive individuals identified, started ART and 12 month ART retention. Odds ratios were estimated using SAS 9.2.

### **Results:**

Results showed a great improvement in data quality and data use for decision making as a result of the interventions. Reporting rates increased from 83% to 100% and timely reporting from 70% to 95%. The odds of facilities reporting accurately after the additional interventions were higher than before by 3.7 times (95%CI, 1.66-5.85), report completeness was higher by 2.6 times (OR=2.6, 95%CI=1.31-5.09) and consistency was two-fold better (OR=2.02, 95%CI=1.12-3.64). The average time of generating reports improved from 7-10 days to 1-3 days. Ten out of 15 supervisors indicated that they used data to make a decision. The proportion of sites that had action plans tracked and updated increased from 25% to 60%. All facilities had a dedicated person for data management, however sustainability and Irregular supply of data tools were their main challenges.

### **Conclusion:**

Scale-able and effective M&E best practices resulted in improved data quality and use for decision making. Program implementers need to plan for prioritized implementation and innovate strategies for sustainability.

## 9. Positivity yields for HIV testing services through various channels among children and adolescents in Lesotho

Carol Holtzman, Mosa Molapo Hlasoa, Limphe Seeiso, Jill Sanders, Edith Mohapi

Baylor College of Medicine Children's Foundation - Lesotho

### **Issue:**

UNAIDS estimates that there are currently 14,000 children aged 0-14 living with HIV in Lesotho. According to the Lesotho Ministry of Health, only 8,000 children are on antiretroviral therapy. Improved case-finding strategies in high-yield populations are necessary to bridge the gap in these estimates to meet UNAIDS 90-90-90 targets (90% with known status, 90% on ART, and 90% suppressed).

### **Description:**

Baylor College of Medicine Children's Foundation-Lesotho through support from CDC and USAID placed lay counsellors specifically trained in HIV testing services (HTS) to provide routine testing in all public health facilities. Lay counselors also provide HTS through the following channels: 1) general community testing within the catchment areas of the health facilities 2) weekend family tree/index testing campaigns at health facilities and 3) schools in the community.

### **Lessons Learnt:**

We analyzed routine program data for testing yield by channel for clients aged 0-19 years. From 1 July 2016 through 30 June 2017, 130,491 clients were tested at health facilities, 16,450 at general community campaigns, 13,108 at family tree/index testing campaigns, and 3,443 in schools. Highest testing yield was in routine testing at health facilities (1.3%), followed by family tree/index testing campaigns (0.5%), general community campaigns (0.4%), and schools (0.4%). HTS provided through routine testing at health facilities provided the highest yield for children and adolescents living with HIV. Yield for family tree/index testing campaigns was lower than expected.

### **Next Steps:**

Health facilities should aim for 100% provision of routine HIV testing of all clients presenting for care. Other high-impact HTS channels should be explored in order to identify children living with HIV.

## 10. Capacity Building Strategy, experience and early lessons in the rollout of the Uganda Health Facility-Community-Linkages Framework in Rwenzori region

<sup>1</sup>Emilly Katamujuna, <sup>2</sup>Joseph Mukasa, <sup>1</sup>Ronald Kasule, <sup>2</sup>David Damba, <sup>2</sup>Sandra Amodot, <sup>2</sup>Jonathan Izudi, <sup>2</sup>Adeodata Kekitiinwa

<sup>1</sup>Baylor College of Medicine Children's Foundation-Uganda, Rwenzori Region; <sup>2</sup>Baylor College of Medicine Children's Foundation-Uganda, Center of Clinical Excellence Mulago Hospital

### **Introduction:**

Uganda introduced the Facility-community linkages framework to increase bi-directional referrals between the communities and health facilities. This was hypothesized to: improve access to HIV testing services & linkage of the identified positives; optimize gains in HIV prevention, care, treatment and support; and improve community engagement. Baylor-Uganda with support from PEPFAR through the Centres for Diseases Control and Prevention (CDC) Uganda started to roll out the framework in the Rwenzori region. In this paper, we highlight novel strategies, experiences and early lessons to guide nationwide implementation.

### **Methods:**

Baylor supported a number of activities which included mapping, training and linkage of the Community Based organisations (CBOs) to health facilities providing HIV/AIDS services, establishing networks for people living with HIV (PLHIV), conducting district inception meetings, identifying and training Linkage and Facility Referral Supervisors (LAFRS) and data clerks, conducting integrated onsite mentorships and supervisions and tracking lost HIV-positive persons.

### **Results:**

25 CBOs were mapped, assessed and trained, 127 health facilities were connected to the CBOs, 281 CHWs were identified and trained, 50 PLHIV networks were established, and five district inception meetings were conducted. 118 LAFRS and 25 data clerks were trained, onsite support supervision and mentorship visits in collaboration with district, health teams and Baylor-Uganda was conducted. Over 13,000 referrals from community to facility, 1000 referrals from facility to community, and several lost HIV-positive clients were followed and linked to the health facility and 200 HIV targeted testing through index clients was reached.

### **Conclusion:**

Community-Health Facility collaboration, harnessing strengths of CBOs, establishing PLHIV networks and client-led group ART refills are some of the early lessons learnt from implementing the Community-Health Facility Framework.

## 11. Towards improved IPT implementation in Swaziland: understanding the barriers through the theory of planned behaviour

Alexander Kay<sup>†</sup>, Patricia Fuentes<sup>†</sup>, Neil Thivalapill<sup>‡</sup>, Nomathemba Dlamini<sup>†</sup>, Katherine Ngo<sup>†</sup>, Lisa V. Adams<sup>||</sup>, Donald Skinner<sup>§</sup>, Anna Mandalakas<sup>†</sup>

<sup>†</sup> Baylor College of Medicine and Texas Children's Hospital, Global Tuberculosis Program,; <sup>‡</sup> Columbia University, Institute for the Study of Human Rights; <sup>§</sup> Human Sciences Research Council of South Africa; <sup>||</sup> Dartmouth College, Geisel School of Medicine

13

### Background:

While the efficacy of Isoniazid Preventive Therapy (IPT) has been well documented, its implementation in resource-poor settings has been limited and the barriers to implementation remain poorly understood. This study sought to understand the barriers to successful IPT implementation through Azjen's Theory of Planned Behaviour (TPB) which models an individual's behaviour as a product of their attitudes, the subjective norms, and the perceived behavioural controls surrounding the behaviour.

### Methods:

56 adolescents and 59 primary caregivers of children that were prescribed IPT were interviewed on their beliefs towards IPT and their responses were modelled through the TPB, and correlated with their clinical data using Chi-squared tests, Spearman's rank-order correlation, logistic and linear regression.

### Results:

Through the lens of the TPB, the three factors influencing intention to successfully complete an IPT course for Adolescents and PCGs respectively were Attitudes to IPT ( $\beta = 0.48$ ,  $\beta = 0.41$ ), Subjective Norms ( $\beta = 0.46$ ,  $\beta = 0.24$ ), and Perceived Behavioural Controls ( $\beta = 0.53$ ,  $\beta = 0.16$ ), all of which were statistically significant. Multivariate linear regression indicated that all components of the TPB accounted for approximately 40% and 49% of the variability in intention for adolescents and primary caregivers, respectively. Further analysis of the distribution of responses underscored the fear of community-based stigma associated with taking medication, a lack of trust in CHWs in maintaining patient confidentiality, and a gap in the understanding of the side-effects of IPT. The variables of the TPB were then correlated with EMR data collected for each participant and significant relationships were found between Adherence and the Perceived Behavioural Controls ( $p = 0.014$ ), and Intentions to Take IPT ( $p = 0.037$ ). An analysis of psychosocial support history also showed significant relationships between Disclosure Counselling and Intentions to take IPT ( $p = 0.029$ ) and Teen Club and Normative Beliefs ( $p = 0.036$ ).

### Discussion:

Using the model of the TPB in conjunction with EMR data, the analysis highlighted the validity of the theory in predicting health-related behaviours and elucidated the role of stigma, fear, and confidence in self-efficacy in predicting an individual's intention to execute a successful IPT course.

## 12. Psychological reactance is a novel risk factor for adolescent HIV treatment failure

E.Lowenthal<sup>3</sup>, T.Marukutira<sup>4</sup>, J. Chapman<sup>3</sup>, O.Tshume<sup>1</sup>, M.Matshaba<sup>1,2</sup>, G. Anabwani<sup>1,2</sup>, R. Gross<sup>3</sup>

<sup>1</sup>Botswana-Baylor Children's Clinical Centre of Excellence, Gaborone, Botswana; <sup>2</sup>Baylor College of Medicine, Pediatrics, Houston, United States; <sup>3</sup>Children's Hospital of Philadelphia, Philadelphia, United States; <sup>4</sup>Burnett Institute, Melbourne, Australia

### Background:

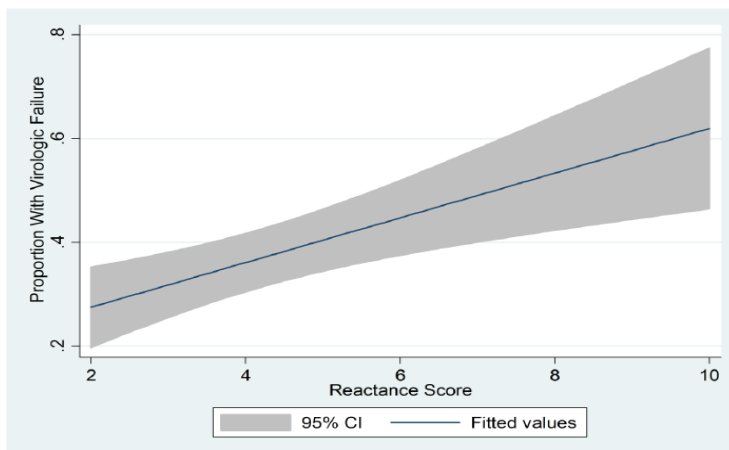
Antiretroviral (ARV) treatment failure rates and death rates among adolescents with HIV remain alarmingly high and adolescent-specific interventional approaches are desperately needed. Adolescents' high failure rates may be partially due to risk factors that are unique to or enhanced by their developmental stage. Psychological reactance is an aversive response to perceived threats to behavioural freedom that may be more common among adolescents. Reactance can be measured and can be increased or decreased through specific parenting or counselling approaches.

### Methods:

In a cohort study of HIV-infected adolescents (age 10-19 years) on ARVs in Botswana, we utilized a 2-question medication-specific reactance tool to assess a) whether having someone tell them to take their ARVs makes adolescents want to avoid taking them and b) whether the adolescents get angry when reminded to take their ARVs. Both questions were scored on a 5-point Likert scale from "definitely false" (1 point) to "definitely true" (5 points). Virologic failure was defined by an HIV viral load >400 copies/mL in the 24 months prior to reactance measurement. Adolescents were classified as "reactant" if their score on the medication-specific reactance tool was >4. Reactance scores were compared between adolescents with and without virologic failure using logistic regression.

### Results:

285 adolescents were evaluated. 106 (37.2%) had virologic failure during the follow-up period and 89 (31.2%) were classified as reactant. Reactant adolescents had a 2.4-fold (95% CI 1.5-4.1) greater odds of failure than non-reactant adolescents ( $p<0.001$ ). The risk of failure was 21% greater (95% CI 8%-34%) for each single point elevation in reactance score ( $p<0.001$ ) (see Figure).



### Conclusions:

Psychological reactance is a novel risk factor for treatment failure among HIV-infected adolescents. Reactance may be a useful interventional target for improving adolescent ARV adherence.

### 13. Addressing Psychosocial Needs And Care/Treatment Delivery Gaps For Adolescents Living With Hiv (Alhiv) Using Technology: The Case Of Teen Support Line (Tsl) In Malawi

P. Magalasi\*<sup>1</sup>, C. Katema, B. Makoza, S. Makuti<sup>1</sup>, K. Msiska<sup>1</sup>, A. Mckenney<sup>1,2</sup>, J. Lungu<sup>1</sup>, P. N. Kazembe<sup>1,2</sup>

<sup>1</sup>Baylor College of Medicine Children's Foundation Malawi; <sup>2</sup>Baylor College of Medicine Pediatrics AIDS Initiative

#### **Background:**

Though a cornerstone for improving physical and mental health outcomes, quality psychosocial services are sparse across Sub-Saharan Africa and very limited for ALHIV. Regional networks of youth-friendly-services are forming to increase access to care, however, distance to health centers and transport costs are major barriers to accessing services. The TSL bridges these service gaps giving ALHIV in Malawi 24-hour access to HIV-specific information, psychosocial support and linkage to care centers through a free cellular hotline service.

#### **Description:**

From March 2013 to March 2017, the hotline number was shared with 7194 fully disclosed ALHIV using the existing "Teen Club" network, targeted TSL launches and during full disclosure of HIV status in pediatric ART clinics across Malawi and through the Ministry of Health's "disclosure of HIV status" flip books. Call-takers provide primary psychosocial counselling, information, referrals, follow-ups, and healthcare-center linkages to callers and complete M&E forms eliciting caller details. Data were collected from the call-taker M&E forms and a retrospective review and descriptive analysis of results was done.

#### **Lessons Learned:**

A total of 2264 calls have been received during the period under review. 54% of callers were males. 52% (1168) were aged between 12-15 years and 33% (746) were 16-19 years, the remaining were 10-12 years or over 20 years. 62% of callers were in primary school and 30% in secondary school, the remaining were secondary school graduates. 49% were first-time callers. Most common call topics were: Teen club/clinic appointment information (24%), clinical/medical issues (12%), ART/medication (11%), sexual reproductive health (4%), caretakers' problems (3%) and stigma/discrimination (3%). At the call conclusion, 95% felt better about their situation and 94% indicated that they had learned something from the call. 13% of the callers were referred for depressive symptoms.

#### **Conclusions:**

ALHIV reached through our targeted activities are using the TSL as their trusted source of information and counseling. An ALHIV-specific hotline can provide psychosocial services lacking at health-centers and reduce distance as an overriding constraint in providing case-specific counseling. ALHIV-specific hotlines should be considered as an adjunct to care in countries burdened with adolescent-focused delivery gaps.

## 14. Understanding reasons for and outcomes of defaulters/lost to followup at Baylor COE

Nkulungwane Mthethwa<sup>1</sup>, Hlobisile Dube<sup>1</sup>, Senzo Motsa<sup>1</sup>, Nomfundo Dlamini<sup>1</sup>, Makhosazana Hlatshwayo<sup>1</sup>

<sup>1</sup>Baylor College of Medicine Children's Foundation, Mbabane, Swaziland

### **Background:**

Retention of patients in care is an important part of the national strategy to improve quality of life for PLHIV. Over the years, Baylor COE clinic has implemented many different interventions aimed at improving retention rates for her patients. Despite these interventions, patients still miss their scheduled appointments and some end up being lost to follow-up. We hence seek to understand the reasons behind this and outcomes after following them up in order for us to effect relevant interventions.

### **Methods:**

A dataset of all defaulting patients on Pre-ART and ART who were followed-up either telephonically or home visit between the period February-June 2016 at the Baylor COE clinic (excluding satellites) was extracted from the electronic medical record. This data was then imported into STATA which was used to perform descriptive statistics (medians, proportions).

### **Results:**

A total of 49 patients were included in the analysis. These consists of 30 (61%) females and 19 (38%) males. There were 36(73%) patients on ART and 13(26%) on Pre-ART. Median age was 22 years.

Findings show that school/work commitment is the leading reason for failure to honour appointment dates (20%). Other reasons include lack of bus fare (8%), refilled at another facility (16%), relocated (12%), self-transfer-out (10%), scared to return (6.12%), and some had abandoned home/whereabouts unknown (18%) with half of this group comprising of adolescents on ART.

A majority of patients on Pre-ART were finally declared as lost to follow-up (62%) compared to 25% on ART. Amongst those on ART 50% returned compared to 15% on Pre-ART.

### **Conclusion:**

Evidence implies that patients miss their appointments mainly due to work/school commitments. Community refills could hence be one strategy which could curb all complexities associated with travelling for clinic refills. It's also evident that adolescents are more likely to default due to deserting their homes. A strong home support system should hence be established for this group to ensure they are traceable and retained on treatment.



## 15. MVCC paves the way towards achieving first unaids 90-90-90 for pediatrics

R. Mushi<sup>1</sup>, T. Roche<sup>1</sup>, M. Mgawe<sup>1</sup>, A. Salum<sup>1</sup>, F. Swai<sup>1,2</sup>, S. Makungu<sup>1</sup>, S. Msonga<sup>1</sup>, M. Minde<sup>1</sup>, L. Mwita<sup>1</sup>.

<sup>1</sup> Baylor College of Medicine Children's Foundation-Tanzania, Mwanza, Tanzania <sup>2</sup> Bugando Medical Centre, Mwanza, Tanzania

### **Background:**

Despite the outstanding progress towards an AIDS-free generation, Tanzania continues to face challenges in meeting the UNAIDS 90-90-90 targets for pediatrics. These challenges occur at all stages along the clinical cascade: identifying HIV+ children, linkage to care and treatment, retention and adherence on treatment. Only 67% of the estimated 91,000 CLHIV in Tanzania have been identified. Baylor Tanzania embarked on a journey of educating the community in the catchment area through Most Vulnerable Children Committees (MVCCs).

### **Methods:**

We identified, trained, and supported members from the MVCC. These were tasked to educate and sensitize families and caregivers of OVCs for HIV testing, care and treatment services. MVCC were followed up monthly for ongoing support. A retrospective review of PITC monthly reports was done. Our review included statistics.

### **Results:**

Six months prior to the MVCC initiative, the total number of clients receiving PITC services at Baylor was 1163, where 810 (69.6%) of those total clients were children. Of the total clients tested, 119 (10.2%) were found to be HIV positive; 47 (5.8%) children were found to be positive. Once the MVCC initiative was started, the number of clients receiving PITC services increased to 2618, where 2004 (76.5%) of those total client were children. Of the total clients tested, 136 (5.2%) were found to be positive: 62 (3%) of the children were found to be positive. 55.1% of all newly identified clients were children all were linked to care and treatment services.

### **Conclusion:**

MVCC sensitization efforts substantially increase number of families who know their HIV status. Targeting priority groups using community members may contribute in closing the gap needed to achieve the first 90 for paediatrics.

## 16. Identification of HIV infected children and adolescents through support to private health facilities in Rwenzori region, Uganda

F. Musiime, A. Lutaaya, P. Ajuna, H. Bitimwine, A. Kekitiinwa

Baylor Children's Foundation - Uganda.

### **Background:**

The private sector has increasingly become a popular source of health care in Uganda yet HIV counseling and testing interventions are majorly supported in the public health sector. Baylor Uganda set out to provide high quality HIV counselling and testing services (HTS) at private for profit health facilities (PFPs) to increase the opportunity for identification of HIV infected children and adolescents.

### **Methods:**

In the period July – December 2016, Baylor-Uganda identified 18 PFPs in four districts in Rwenzori region Uganda where the following interventions were put in place: Free HTS for children and adolescents 2-19 years, orientation of Health workers at the PFPs on national standards for testing children including use of the national HTS eligibility tool and facilitation of referrals through phone calls to referral Antiretroviral treatment accredited sites. The PFPs were supported to report their HTS data through the national HMIS. Baseline data on paediatric and adolescent HTS from the 18 PFPs for the period before the intervention (October 2015 – March 2016) was obtained from the national HMIS and compared with data in the intervention period (July 2016- December 2016).

### **Results:**

A total of 345 children (45% female) and 1074 adolescents (57% female) received HTS between October 2015 and March 2016 compared to 2463 children (50.1% female) and 2496 adolescents (61% female) during the intervention period. Three children (33% female) and 20 adolescents (60% female) tested HIV positive between October 2015 and March 2015 compared to 34 children (71% female) and 27 adolescents (85% female) during the intervention period. This correlates to a 62% increase in the number of children and adolescents that tested HIV positive between the two periods. The positivity was 1.6% before the intervention period and 1.2% in the intervention period. Linkage into care in the intervention period was at 97% compared to 74% before the intervention period.

### **Conclusion:**

Identification of HIV positive children and adolescents more than doubled using simple innovative approaches of HTS at private for-profit health facilities. An improvement in linkage into care was also observed. The PFPs however need to be supported to provide sustained quality HTS.

## 17. Health workers' training in leadership and management practices to increase access to PMTCT services in Uganda: A pre-post A Pre/Post-Intervention Study

Conrad Musinguzi

Baylor Children's Foundation - Uganda

### **Background:**

Quality of service delivery was identified as one of the bottleneck to increased access to PMTCT services. One of the pillars of improving quality of health services is addressing leadership gaps. Due to this, health workers working in PMTCT programs were trained in leadership and management to improve quality of care. The purpose of this study was to demonstrate that strengthening health systems through leadership and management trainings increases uptake of PMTCT services.

**Methods:** Health workers in Eastern and Rwenzori regions were trained in leadership and management. At two-time periods, 12 months pre-intervention and 12 months post intervention, data from 90-Eastern and 90-Rwenzori region health facilities was extracted from the electronic HMIS national database and compared with 90- health facilities from West-Nile region which acted as the control. At facility level, percentage changes before and after were computed and paired t-tests were used test for statistical significant effect of the intervention on access to ANC, HCT and ART services.

### **Results:**

Between the two-time periods, the average number of mothers attending their first ANC rose by 13.9%  $p < 0.001$  for facilities in eastern region as compared to west Nile region, which dropped by 0.3%,  $p = 0.56$ . The average proportion of mothers attending their fourth ANC visit also rose by 16.6%  $p = 0.011$  for facilities in Rwenzori region as compared to those in west Nile region, which only rose by 0.2%. The average number of pregnant mothers who were tested as a couple also rose by 36%  $p = 0.007$  compared to those in west Nile region, which rose by 14%. The average number of mothers delivering from a health facility increased by 12.9%  $p = 0.003$  for facilities in the Rwenzori, compared to west Nile region which dropped by 4%.

### **Conclusion:**

Leadership and management training of health workers could improve the quality of service delivery hence increasing access to HIV services at facility level. There's still a need to explore other interactions that link leadership development and service delivery.

## 18. Using mid upper arm circumference cutoffs may over estimate acute malnutrition among hiv positive children aged 5-18 years in Uganda

Gabriel Ocom<sup>1</sup>, Glorious Tumweheire Enid<sup>1</sup>, Jacqueline Barugi<sup>1</sup>, David Damba<sup>1</sup>

<sup>1</sup> Baylor College of Medicine Children's Foundation-Uganda- Center of Excellence

### **Background:**

The Uganda Ministry of Health recommends use of two independent criteria for identification of severe acute malnutrition in children aged 5-18 years i.e. Mid Upper Arm Circumference (MUAC) and BMI-for-age Z-score (BAZ) based on WHO's 2006 growth standards. However, there are no clearly agreed global cut-offs for MUAC in age category 5-18 years. We assessed the level of agreement between MUAC and a WHO globally agreed BAZ classification of acute malnutrition among children and adolescents aged 5-18 years.

### **Methodology:**

We retrospectively reviewed data from 1st April 2015 and 30<sup>th</sup> June 2016 of 4693 clients receiving HIV care at Baylor-Uganda COE in Mulago. The client's anthropometric data was taken from the most recent clinic visit date. BMI-for-age Z-scores (BAZ) were generated using WHO AnthroPlus. MUAC and BAZ were categorized into presence or absence of Acute malnutrition using the age specific MUAC cutoffs (<14.5 for 5-9 years, <18.5 for 10-14 years, < 21cm for 15-18 years) and a BAZ of < -2SD respectively. MUAC and BAZ cross tabulation was performed for the general group and further for the three age categories.

### **Results:**

In total, data for 4693 clients (35.3%, 38.8% and 25.9 % in the age categories of 5-9, 10-14 and 15-18 years respectively) was examined. Overall, of the 670 (14.3%) clients classified as having acute malnutrition, 67.2% and 11.5% were identified by MUAC and BMI-for-age and not the other respectively, while both identified 143 (21.3%) clients. For the age category 10-14 years, of the 433 clients identified (64.6% of the total malnourished), 16.2% were identified by both MUAC and BAZ, 78.5% by MUAC alone and 5.3% by BAZ alone. The overall PPV and NPV were found to be 24% and 90% respectively while PPV and NPV for age category 10-14 years were 17% and 80% respectively.

### **Conclusion:**

MUAC identifies more children with acute malnutrition compared to the globally agreed standard BMI-for-Age Z-scores. This may lead to overestimation of acute malnutrition among HIV positive children aged 5-18 years. The discrepancy is higher in the age category of 10-14 years. There is need to review MUAC cutoffs for children 5-18 years.

## 19. Lessons from implementors: what family planning trends are we seeing amongst our HIV positive adolescents?

Sarah H. Perry<sup>1</sup>, Jaime Petrus<sup>1</sup>, Makhosazana Hlatshwayo<sup>2</sup>, Sandile Dlamini<sup>2</sup>

<sup>1</sup>Baylor College of Medicine, Baylor International Pediatric AIDS Initiative, Children's Foundation; <sup>2</sup>Baylor College of Medicine-Bristol Meyers Squibb Children's Center of Excellence, Swaziland

### **Background:**

Infants born to HIV infected mothers are now entering adolescence in large numbers and looking to care providers to halt and reverse the spread of HIV. The four-pronged approach to PMTCT requires an emphasis on family planning especially in countries similar to Swaziland where pregnancy rates in adolescents are as high as 16.7% (MICS, 2014). The government of Swaziland recently passed a Child Welfare Act protecting health care providers offering family planning to adolescents 12 years and older. In accordance with this act, counselling should be done in a developmentally appropriate manner during each visit with an adolescent.

### **Methods:**

This study is a retrospective chart review using the Baylor Swaziland EMR.

### **Results:**

Three-hundred thirty-three adolescent females (12-19) living with HIV are seen at Baylor Clinic in Mbabane, Swaziland. Eight percent (27) of these have been prescribed a family planning commodity offered at the clinic. Two (7%) have chosen the Implant, 11 (41%) OCP and 14 (52%) Injectable. The average age at start of method was 17.5 years, compared to average age of 17.7 among pregnant teens. Teen Pregnancy rate at Baylor Clinic- Swaziland is 3%, which is much lower than the national average (16.7%). When comparing providers: nurses versus doctors, adherence rates and caregivers at each visit in pregnant vs. non-pregnant adolescents, no statistical significance was found between the two groups. When comparing the same among those that have chosen to use an FP commodity however, clients that come with a caregiver ( $p=0.03$ ) and those with poor adherence ( $p=0.01$ ) are less likely to have taken up family planning.

### **Conclusions:**

Even in a facility designed to support HIV infected youth, advocacy must continue to improve to allow easy and reliable access to FP commodities. To decrease the rate of unplanned pregnancies and thus HIV infected infants, education should particularly focus on spending extra time with each adolescent alone. Attention must also be paid to adolescents with poor adherence as they were found to be particularly less likely to be prescribed FP; perhaps related to other more apparently pressing factors during each visit.

## 20. The impact of camp on adherence challenges in adolescents at Botswana Baylor children's clinical centre of excellence.

O. Phoi<sup>1</sup>, J. Fararai<sup>1</sup>, M. Matshaba<sup>1,2</sup>, G. Anabwani<sup>1,2</sup>

<sup>1</sup>Botswana-Baylor Clinical Centre of Excellence, Gaborone, Botswana; <sup>2</sup>Baylor College of Medicine, Houston.

### Introduction:

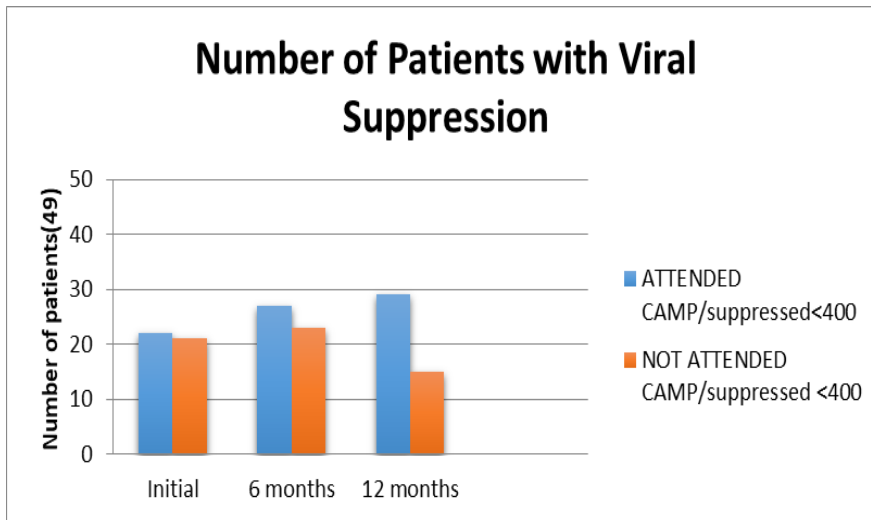
Unsurprisingly, managing a life threatening and socially stigmatized illness such as HIV is emotionally difficult, particularly for adolescents who are more innately at-risk and less prepared to deal with this magnitude of a chronic stressor. Therefore, interventions designed to enhance treatment adherence are perhaps most important during adolescence.

### Methods:

A retrospective analysis of data in the EMR from January 2016-December 2016 was done to identify adolescent patients with adherence issues. The patients were invited to participate in a Challenge Patients' Survey and Challenge Patients' Focus Group Discussions. Information thus obtained was used to design a syllabus for a special 5-day camp for adolescents. Participating adolescents were randomly selected from a pool of those identified as having adherence issues of varying complexity. Adherence was assessed post-camp and compared to that of an equal number of randomly selected patients who had not participated in the camp. Viral suppression (<400 copies/ml) was assessed in both groups 6 months and 12 months following camp.

### Results:

A total of 49 campers (20 females and 29 males; ages 15 to 24) attended adherence camp. The comparison group consisted of 49 patients (26 Females and 23 males; ages 15 to 24). For the intervention group, viral suppression increased from a baseline of 45% to 55% at 6 months and 60% at 12 months. Suppression among the control group was 43%, 47% and 31% at baseline, 6 and 12 months, respectively (see table).



### Conclusions:

The results suggest that intervention in the form of special adherence camps can improve adherence. Camp attendance may provide an opportunity for peers that are facing similar adherence challenges to openly discuss their problems, share their experiences, and provide emotional support for one another. These results may be the first to demonstrate the long-term impact of camp on adolescent participants' adherence to ART.

## 21. Implementation of a life-style assessment for patients with chronic hepatitis B and C

Ana-Maria Schweitzer, Mihaela Bogdan, Iuliana Ciocea, Daniela Calin, Georgiana Ivanov, Adelina Corduneanu

Baylor Black Sea Foundation

### **Background:**

Starting with 2015, and with support from AbbVie Foundation, Baylor Romania has initiated a Find, Link, and Treat – program for patients affected by hepatitis B and C, developing a complementary pathway for patients affected by hepatitis, helping them with healthcare system navigation and lifestyle adjustments in the context of the chronic disease.

23

### **Description and methods:**

We have identified 11 major life-style factors susceptible to affect health outcomes of patients affected by hepatitis and have included these into a comprehensive tool that assesses the following domains: nutrition, management of side effects, sexuality, diagnosis disclosure, social support, sleep and physical activities, recreational substances, healthcare system navigation, treatment, usage of alternative medicine, adherence. The questionnaire provides a personalized profile for each patient, highlighting strengths and problem areas to guide interventions.

### **Results:**

269 unduplicated patients affected by viral hepatitis were evaluated for life-style related factors (64% females, 21% rural areas, mean age 49 years, 60% hepatitis C). A cut-off of 80% indicates the need for a life-style improvement intervention (i.e. the need to improve at least one domain). Overall, 63% of all patients had scores below 80%, showing that per group the result is below optimal values, and that a group targeted intervention is needed. The main problematic areas refer to nutrition, disclosure, management of side effects and usage of alternative medicine. Gender, type of disease or living area did not discriminate among scores.

### **Conclusions:**

Our instrument has the ability to identify key problematic life-style issues for our clients. The evaluation helped us to prioritize areas for developing targeted health literacy and educational materials for the main problematic areas identified in our group (such as brochures, films, nutritional sheets etc), while other issues will be approached in individualized tailored counseling sessions.

## 22. Provider-initiated testing and counselling: is it still high yield?

### Yield of routine HIV testing in pediatric and adult inpatient wards in central and southern Malawi

K. Simon\*<sup>1,2</sup>, M. Montandon<sup>1,2</sup>, M. Kim<sup>1,2</sup>, E. Wetzel<sup>1,2</sup>, R. Sabelli<sup>1,2</sup>, T. Beyene<sup>1,2</sup>, E. Kavuta<sup>1</sup>, C. Chikoti<sup>1</sup>, K. Namachapa<sup>3</sup>, PN Kazembe<sup>1,2</sup>, S. Ahmed<sup>1,2</sup>

<sup>1</sup>Baylor College of Medicine Children's Foundation Malawi, Lilongwe, Malawi; <sup>2</sup>Baylor International Pediatric AIDS Initiative at Texas Children's Hospital, Baylor College of Medicine, Houston, United States; <sup>3</sup>Malawi Ministry of Health, Department of HIV/AIDS, Lilongwe, Malawi

#### Background:

Routine HIV testing at health facilities (known as provider-initiated testing and counseling, or PITC) is recommended at presumed high yield venues like inpatient wards. Limited recent data exist on testing yield in settings like Malawi with mature Option B+ and active HIV case finding programs. We evaluated inpatient PITC yield at three hospitals in central and southern Malawi.

#### Methods:

Data on PITC in inpatient wards (adult, pediatric, and pediatric nutritional rehabilitation units (NRU)) were collected from July-Dec 2016 (Salima) and Oct-Dec 2016 (Balaka, Mangochi) using a dedicated PITC register. Per national guidelines, patients one year of age and older underwent rapid antibody testing to determine HIV status; mothers of infants less than one year of age (or if unavailable, infants) underwent rapid testing to determine HIV exposure. Patients were offered testing if they had never been tested for HIV, tested negative >3 months ago, or had no documentation of prior testing. HIV status (known or newly ascertained) and testing outcomes for patients one year of age or older were analysed to determine ward HIV prevalence and testing yield.

**Results:** Of 7664 inpatients (3526 pediatric, 4064 adult, 74 NRU) admitted during the evaluation period, 6266 (82%) were assessed for testing eligibility. Of those assessed, 4742 (76%) did not have documented HIV status (including those never tested) or tested negative >3 months ago and were offered testing. Refusal rate was 1.6%.

	Ward prevalence Known and new HIV+ / (Total Known Status + Total Newly Tested >1yo)	Testing Yield New HIV+ / (Total Newly Tested >1yo)
NRU	25.5% (13/51)	12.5% ( 4/32)
Pediatric Inpatient	3.5% (75/2118)	1.1% (19/1799)
Adult Inpatient	23.7% (787/3327)	4.8% (102/2141)

The majority of HIV-positive inpatients knew their HIV status prior to admission (87% of HIV+ inpatients in adult wards, 75% in pediatric wards, 69% in NRU). Inpatient ward HIV prevalence was higher than national population HIV prevalence (1.6% among 0-14y and 10.6% among 15-64y) (MPHIA 2016). Yield of new HIV testing among inpatients (excluding NRU) was lower than population prevalence.

#### Conclusions:

PITC remains an important approach for HIV case finding and is critical for prompt treatment initiation, however in the setting of Option B+ and active HIV case finding, yield may be decreasing. Additional data on PITC yield in other settings and identification of novel high-yield case finding strategies are needed.



## 23. Culturally sensitive approaches to education in exclusive breastfeeding in the indigenous Wayuu culture

L. Solano, S. Attia

Baylor Children's Foundation - Colombia

### **Background:**

Despite international recommendations for six months of exclusive breastfeeding, exclusive breastfeeding in Colombia lasts on average 1.8 months. In the 172 indigenous Wayuu communities served by Children's Foundation Baylor Colombia in the northern Colombian state of La Guajira, exclusive breastfeeding lasts on average 2.6 months. The first complementary items introduced include sugar, water, cinnamon, and chamomile infusions in the first month of life with the rationale that these liquids clean the newborn's gut. Our program implemented education in exclusive breastfeeding to incorporate best practices in breastfeeding and increase duration of breastfeeding in these communities.

### **Methods:**

We convened community-based dialogues in breastfeeding practices to first understand Wayuu beliefs and traditions in breastfeeding and from whom they were transmitted. These dialogues were formed of village mothers and grandmothers where in the traditional seated circle, our Wayuu health promoters led discussions using their training in the IMCI (Integrated Management of Childhood Illness) and additional training by our Nutritionist. The central point of these discussions was the question "how do you feed your child in the first six months of life?"

Incorporating the use of a doll, we discussed eight specific themes: lactation in the first hours of life, feeding on demand, positioning the feeding infant, creating a favorable lactating environment, danger signs in the lactating mother, danger signs in the newborn, the importance of exclusive breastfeeding, and when to seek help.

After addressing these themes, each dialogue's participants came to a consensus on how to incorporate what they had shared and learned. According to their practice of oral tradition they additionally made a commitment to pass the agreed-upon information to others.

### **Results:**

Since 2016, 216 women have participated in these breastfeeding dialogues. Although previously only 2.6 months, average exclusive breastfeeding has now increased to 4.7 months. This is likely due the education received in these dialogues in addition to reinforcement given by health promoter routine evaluations in the community and well-child pediatric consultations also provided by our program. The next steps are to create a group of community health agents who will incorporate continued and more personalized education in exclusive and adequate breastfeeding practices.

## 24. Antiretroviral therapy initiation within seven days of enrolment: Outcomes and time to undetectable viral load among children at an urban HIV clinic in Uganda

Rogers Ssebunya<sup>1\*</sup>, Rhoda K. Wanyenze<sup>2</sup>, Heather Lukolyo<sup>1</sup>, Milton Mutto<sup>2</sup>, Grace Kisitu<sup>1</sup>, Pauline Amuge<sup>1</sup>, Albert Maganda<sup>1</sup>, Adeodata Kekitiinwa<sup>1</sup>

Baylor Children's Foundation - Uganda

### Introduction:

Viral suppression is a critical indicator of HIV treatment success. In the era of test-and-start, little is known about treatment outcomes and time to undetectable viral loads. This study compares treatment outcomes, median times to achieve undetectable viral loads and its predictors under different antiretroviral (ART) treatment initiation schedules (i.e. within seven days of enrolment or later).

**Methods:** A retrospective cohort of 367 patients <18 years who enrolled in care between January 2010 and December 2015 with a baseline viral load of >5000 copies/ml were followed up for 60 months. Undetectable viral load measurements were based on both Roche (<20copies/ml) and Abbot (<75copies/ml). Clinical treatment outcomes were compared using chi-squared test. Survival experiences between the two cohorts were assessed through incidence rates and Kaplan Meier curves. A cox model with competing risks was used to assess predictors for time to undetectable viral load.

**Results:** Of the 367 patients, 180 (49.1%) initiated ART within seven days from enrolment, 192 (52.3%) attained undetectable viral load of which 133 (69.3%) were children below six years and 101 (52.6%) were females. Among those who initiated ART within seven days 15 (8.3%) died and 6 (3.3%) were lost to follow-up compared to 27 (14.4%) and 16 (8.6%) respectively in the later initiators. The median time to undetectable viral load was 24.9 months (95%CI: 19.7, 28.5) among early ART initiators and 38.5 months (95%CI: 31.1, 44.5) among those initiating beyond seven days. There was a significant difference in failure estimates between those initiating within seven and those that deferred (log rank,  $p=0.001$ ). Significant predictors for time to undetectable viral load were; starting ART within seven days (SHR=2.02, 95%CI: 1.24, 3.28), baseline WHO stage I or II (SHR=1.59, 95%CI: 1.06, 2.28), inconsistent adherence on three consecutive clinic visits (SHR=0.44, 95%CI: 0.28, 0.67), and baseline weight (SRH=1.04, 95%CI: 1.01, 1.07).

**Conclusion:** Prompt initiation of ART within the first week of enrolment is associated with better treatment outcomes. Early timing, baseline WHO clinical stage and adherence rates should be major considerations while managing HIV among children.

## 25. Screening index clients attending art clinic to identify untested children at risk of hiv infection in Balaka, Malawi

T. Tembo\*<sup>1</sup>, K. Simon<sup>1,2</sup>, D. Phiri<sup>1</sup>, A. Ng'ambi<sup>1</sup>, M. Montandon<sup>1,2</sup>, N. Chitsonga<sup>3</sup>, K. Mpama<sup>1</sup>, M. Harawa<sup>1</sup>, S. Chilala<sup>1</sup>, E. Kavuta<sup>1</sup>, M. Kim<sup>1,2</sup>, P.N. Kazembe<sup>1,2</sup>, S. Ahmed<sup>1,2</sup>

<sup>1</sup>Baylor College of Medicine Children's Foundation Malawi; <sup>2</sup>Baylor College of Medicine International Pediatric AIDS Initiative United States; <sup>3</sup>Malawi Ministry of Health.

### **Background:**

Early identification and diagnosis of HIV-infected children is essential for timely access to life-saving treatment and care. Children of HIV-infected clients are at high risk of having HIV. Providing HIV testing and counseling (HTC) services to these children can improve identifying undiagnosed HIV infection cases. We assessed a screening and referral strategy to encourage HIV testing for children of adult ART clients at Balaka District Hospital in Southeastern Malawi.

### **Methods:**

An index client testing initiative was conducted from May to December 2016 at Balaka District Hospital. HIV Diagnostic Assistants (HDAs) provided health talks at the ART clinic waiting area. Participants aged  $\geq 18$  years were screened to determine the HIV status of any biological children  $< 15$  years. HIV status of each child was recorded and a family referral slip (FRS) provided to those who had untested children. A tracking form was used to record the age and status of children who returned for HTC with a FRS. HTC was conducted by trained HTC counselors according to Ministry of Health (MOH) guidelines.

### **Results:**

There were 930 index clients screened. Of these clients, 76% were female. From these 930 individuals, 1933 children were identified representing an average of 2 at-risk children for every index case. Of these children, 724 (37%) were untested and 1209 (63%) had known HIV status. Of the 1209 children with known HIV status, 150 (12%) were HIV positive, 122 (10%) were HIV-exposed and 937 (78%) were negative. Of the 724 untested children, 119 (16%) were 2-5 years, 290 (40%) were 6-10 years and 315 (44%) were 11-15 years respectively. Majority of the children who were not tested were above 6 years old (84%). Of 724 untested children, 10 (1%) reported to the health facility with a FRS. All 10-tested negative.

### **Conclusion:**

A significant proportion of biological children of adults already on ART remain untested. Although untested children were identified through this screening process and referred for testing, they did not present for HTC services. Additional efforts are required to ensure children at risk of potentially having HIV infection are identified, diagnosed and linked to care.

## 26. Outcomes of Adolescents and Young Adults with Virological Failure at 10 Botswana-Baylor Children's Clinical Centre of Excellence (BCCCOE) Outreach sites in Botswana

B. Thuto<sup>1</sup> and B. ter Haar<sup>1,2</sup>, M. Matshaba<sup>1,2</sup>, G. Anabwani<sup>1,2</sup>

<sup>1</sup> Botswana-Baylor Children's Clinical Centre of Excellence, Gaborone, Botswana; <sup>2</sup> Baylor College of Medicine International Pediatric AIDS Initiative, Texas Children's Hospital, Houston, TX, USA.

### Background:

The Botswana Baylor Children's Clinical Centre of Excellence (BCCCOE) provides HIV care and treatment for >2500 HIV-infected children, adolescents, and young adults. The BCCCOE outreach program started in 2008 serving patients throughout rural Botswana and currently visits ten outreach sites. The outreach program focuses on adolescents and young adults experiencing challenges, including long term virological failure. In June 2016 Dolutegravir, a robust drug with minimal side effects and once daily dosing, became available in Botswana as an option for those with virological failure.

### Methods:

Retrospective chart review of outreach patients aged 14 - 24 years experiencing virological failure who received adherence counseling and had regimen changed after consultation with BCCCOE outreach team. Patients identified and assessed for age, sex, initial regimen, current regimen, viral load (VL) before and after counseling and regimen change, and reason for change in regimen.

### Results:

During the period February 2017 to July 2017 54 patients with virological failure (VL 405 - >750,000 copies/mL; 28 male, mean age 18.8 years) were identified. Regimens prior to switch were Nevirapine or Efavirenz-based in 31, Aluvia-based in 18, or other in 5 patients. After review and counseling most (49/54; 91%) patients were switched to Dolutegravir-based regimens while only 5 were switched to Aluvia-based regimens. Following change in regimen, 91% of patients (49/54) achieved viral suppression (VL <400 copies/mL) within three months. Reasons cited for change in regimen: 1) Prolonged stay on failing regimens due to lack of understanding by medical personnel, 2) Poor adherence due to drug intolerance, particularly to Aluvia, 3) Need to reduce pill burden and simplify regimen due to reasons such as boarding school, lack of disclosure to partner, and history of persistently poor adherence.

### Conclusion:

Over 90% of patients experiencing virological failure at BCCCOE outreach sites achieved viral suppression within 3 months. Almost all patients switched to Dolutegravir-containing regimens, which addressed most of the barriers to adherence expressed by patients. In this cohort DTG was well liked, well tolerated, and highly effective in achieving viral suppression amongst patients with previous virological failure. In failing patients prompt intervention is essential and DTG should be considered a drug of choice when available.

## 27. Distinctive barriers to antiretroviral therapy adherence among non-adherent adolescents living with HIV in Botswana.

Yang E<sup>1</sup>, Mphele S<sup>2</sup>, Moshashane N<sup>2</sup>, Bula B<sup>2</sup>, Chapman J<sup>3</sup>, Okatch H<sup>1,4</sup>, Pettitt E<sup>5,6</sup>, Tshume O<sup>5</sup>, Marukutira T<sup>4</sup>, Anabwani G<sup>5,6</sup>, Lowenthal E<sup>3,5,7</sup>.

<sup>1</sup> Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA, <sup>2</sup> Department of Psychology, University of Botswana, Gaborone, Botswana; <sup>3</sup> Children's Hospital of Philadelphia, Philadelphia, PA, USA; <sup>4</sup> Department of Chemistry, University of Botswana, Gaborone, Botswana; <sup>5</sup> Botswana-Baylor Children's Clinical Centre of Excellence, Gaborone, Botswana; <sup>6</sup> Department of Pediatrics, Baylor College of Medicine, Houston, TX, USA; <sup>7</sup> Departments of Pediatrics and Epidemiology, University of Pennsylvania, Perelman School of Medicine, Philadelphia, PA USA

29

### **Background:**

Levels of adherence to HIV treatment are lower among adolescents compared with older and younger individuals receiving similar therapies.

### **Methods:**

We purposely sampled the most and least adherent adolescents from a 300-adolescent longitudinal HIV treatment adherence study in Gaborone, Botswana. Multiple objective and subjective measures of adherence were available and study participants were selected based on sustained patterns of either excellent or poor adherence over a one-year period. Focus group discussions (FGD) and in-depth interviews (IDI) were conducted with the adolescents and a subset of their caregivers with the goal of revealing barriers and facilitators of adherence. Focus groups were segregated by adherence classification of the participants. Following coding of transcripts, matrices were developed based on participants' adherence classifications in order to clarify differences in themes generated by individuals with different adherence characteristics.

### **Results:**

47 adolescents and 25 adults were included. The non-adherent adolescents were older than the adherent adolescents (median age 18 years (IQR 16-19) vs. 14 years (IQR 12-15 years), with median time on treatment near 10 years in both groups. Interference with daily activities, concerns about stigma and discrimination, side effects, denial of HIV status, and food insecurity arose as challenges to adherence among both those who were consistently adherent and those who were poorly-adherent to their medications. Low outcome expectancy, treatment fatigue, mental health and substance use problems, and mismatches between desired and received social support were discussed only among poorly adherent adolescents and their caregivers.

### **Conclusions:**

Challenges raised only among adolescents and caregivers in the non-adherent groups are hypothesis-generating, identifying areas that may have a greater contribution to poor outcomes than challenges faced by both adherent and non-adherent adolescents. The contribution of these factors to poor outcomes should be explored in future studies.

## 28. Switching from a Community-Based Testing Model (CBTM) to a Facility-Based Testing Model (FBTM) to Identify Children and Adolescents with HIV in Manzini Region, Swaziland

Mafulu Mundende Yves<sup>1</sup>, Thandekile Bhembe<sup>1</sup>, Xoliswa Simelane<sup>1</sup>, Zandile Nhleko<sup>1</sup>, Magnus Beneus<sup>2</sup>, Florence Anabwani-Richter<sup>1</sup>, Makhosazana Hlatshwayo<sup>1, 2</sup>

<sup>1</sup>Baylor College of Medicine-Bristol Myers Squibb Children's Clinical Centre of Excellence, Swaziland; <sup>2</sup> Baylor College of Medicine, Houston, Texas

### **Background:**

In Swaziland, at the end of 2016, an estimated 171,266 people living with HIV (PLWHIV) were receiving ART. Of these, 9501(5.6%) were children under 18 years. Even though there was an increase in the number of children aged 0-14 on ART in 2016 (58% compared to 46% in 2015), it is still far from the targeted 90%. The low HIV identification and delayed linkage to care are among the factors that impact on the paediatric response in Swaziland.

The Community-Based Testing Model (CBTM) was adopted in 2016 to increase the paediatric HIV case detection. HIV positive index case contacts received home visits to test children under 18 years. From January 1 to November 30 of 2016, 1,260 index cases were identified, 2,622 children were mapped, and 1,730(66%) were tested. Of these, 33(2%) children tested HIV positive and 13(40%) were linked to care. Partial results (up to June 2016) were presented at the 18th BIPAI network Meeting. The number of positive children identified was much lower than the resources put into reaching them, hence the switch to Facility-Based Testing Model (FBTM), elaborated below.

### **Description:**

Between December 1, 2016 and June 30, 2017, HIV positive index cases were identified in all the mapping sites of Raleigh Fitkin Memorial (RFM) Hospital (OPD, children's ward, Maternal and Child Health unit, and the ART department). Mapped index cases brought their children <18 years (index case contact) for HIV testing. They received incentives and transport re-imbursements when they came for the test.

### **Results:**

664 index cases were identified, 1,165 children and adolescents were mapped, and 882(75.7%) were tested. Of those tested, 51(5.8%) tested HIV positive, and 49(96%) positive children were successfully linked to care.

### **Conclusion:**

FBTM has proven to be a more effective means of identifying children with HIV and linking them to care and it is cost effective, particularly for resource limited settings.