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Malawi
The Warm Heart of Africa

Malawi is one of the least developed nations in the world. Despite this, the country has a rich culture and a diversity of environments, ranging from lake, to plateau, to long expansive valleys. Running along the length of the country, Lake Malawi is famous for the brightly colored cichlid fish, which are indigenous to the lake and a constant fascination among locals and visitors alike. The Malawian culture is exceptionally friendly and welcoming, helping give rise to the nick name: Warm Heart of Africa.

Malawi, formally called Nyasaland, was first colonized by migrating tribes of Bantu around the 10th century. Later, in 1891, it was colonized again by the British. In 1964, Nyasaland gained full independence and was renamed Malawi. The country is now run by a democratic, multi-party government currently led by President Joyce Banda, the first female president in Malawi and one of the pioneering women in Africa. She was named the most powerful woman in Africa by Forbes. Some of her most notable work has been her constant efforts to increase access and support to medical services for women, which has been coupled with many public campaigns and development around women's clinics.

The economy is largely agricultural, with tobacco being the major export. Much of the country still relies on subsistence farming. Market days are filled with a wide variety of fruits and vegetables, creating a colorful display.

Football (soccer) is a national pastime and pick-up games can be found on nearly every field in the country in the evenings and weekends.

Before Baylor College of Medicine was introduced to Malawi in 2006 pediatric HIV mortality was 80% by age 10 and 50% by age 2. After the introduction of ARVs and continual efforts of the physicians, clinical officers, nurses, translators, community health workers and staff, the mortality rate has dropped significantly.

Malawi is thrilled to be hosting the 15th Annual BIPAI Network Meeting. We hope you enjoy your experiences.

Greetings from the Warm Heart of Africa!

Table of Contents

ABSTRACTS ON EDUCATION AND RELATED TOPICS
ORAL PRESENTATIONS

TANZANIA

A PROGRAMME TO EDUCATE PARENTS IN PROMOTING COMMUNITY-LEVEL HIV AND CHILD HEALTH INTERVENTIONS IN TANZANIA

M. Minde*, B. Anosike, L. Campbell, T. Vu, E. Kanga, S. Shea, V. Mngongo, S. Kisiombe, J. Bisimba, J. Bradford J. Bacha, L. Tolle, L. Mwita, B. Kasambala, M. Tolle

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Abstract:
Introduction: Parental and community education is a major component of efforts to ensure a healthy childhood. In Tanzania, access to health care as well as health education at village-level are limited by poor access to public transportation, sparsely distributed health facilities and health professionals, and the time and distance required to access health care. Making child survival interventions available outside specialized centers, particularly at community-level, is a priority for efforts to achieve child health-related Millennium Development Goals.

Methods: Baylor-Tanzania staff trained expert mothers (EM) on the basics of HIV, PMTCT, care of the HIV-exposed child, proper infant feeding and general preventive child health care. Volunteer EM were identified in the Lake Zone (LZ) by existing community organization partners and village leaders, and in the Southern Highlands Zone (SHZ) by having an HIV-exposed or -infected child as a patient at the Baylor Centre in Mbeya. Mothers transfer their knowledge to others in their community during home visits, community meetings, health clinic days and at maternity centres. Mothers also provide individual mentoring about the importance of testing for HIV, PMTCT, facility deliveries, proper infant feeding and obtaining available routine child care. One-on-one mentoring also takes place, and EM perform telephone follow-up to ensure uptake of recommendations.

Results: LZ-First 21 months: 126 volunteers from 6 sites completed training+evaluation. 20,149 encounters for individual education, with 3,725 patients referred to health facilities for testing. 50% of adult HIV patient's previously untested children were HIV-positive. 80% of LTFU exposed infants located and returned to care. SHZ-First 9 months: 4011 mothers individually mentored. 12.4% HIV+. Group education for 12,583 individuals, 74% reporting following the advice received.

Conclusions: Where health care professionals are sparse, EM can optimize uptake of child-oriented HIV and other health interventions. Benefits are available for the entire community, HIV-positive and HIV-negative alike. Women are empowered to obtain healthcare and ensure that all children realize their potential for healthy childhood. Utilizing the traditional social networking of women in communities has proven an affordable and sustainable method of sensitizing the community on child health education, while empowering women as leaders and valuable sources of information in their communities.

H - 32357

UGANDA

DEMAND CREATION FOR SAFE MALE CIRCUMCISION (SMC) IN TRADITIONALLY NON-CIRCUMCISING COMMUNITIES: LESSONS FOR SCALE-UP

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Abstract:
Background: The prevalence of HIV in Uganda is 7.3% with an estimated 1.4 million people living with HIV and new annual infections at 130,000. The prevalence among males aged 15 – 49 is 6.4% but is much lower among circumcised males at 3.7% across all age groups, ethnicity, region and urban-rural residence. It is estimated that only 24.8% of Ugandan men aged 15-49 years are circumcised. Safe Male circumcision (SMC) has been recommended by the WHO as an HIV prevention method. In June 2012, Baylor-Uganda implemented SMC in Teso sub region in eastern Uganda. Teso sub region has the second lowest rates of circumcision uptake in the country with less than 4% coverage. The population of males aged 15-49 years in the region is estimated to be 708,500. The objective of this study was to assess acceptability of SMC services among non circumcising communities.

Methods: Site assessments were carried out, health workers were trained and equipment was procured. Announcements were conducted on local radio stations targeting males 14 years and older. Health education talks were conducted at health facility level reinforced with posters, fliers and banners. Talks and visits were conducted in churches, schools, prisons, and colleges to promote SMC. Outreaches to lower level health facilities were carried out. In partnership with CDC and the district Local Governments, an SMC student camp was organized. Information on circumcisions conducted was documented.

Results: Outreaches were conducted in 11 sites, static services were availed at 12 sites and one SMC camp was conducted. During the six months of the intervention, 6,858 clients were circumcised from outreaches, camps and at static health facilities. Of all the SMCs carried out, 77% were in men 18 years and older, while those 14-17 years constituted 17% (n=1,175). Only 1.9% (n=9) of the circumcised were above 45 years.

Conclusion: The acceptability of SMC in traditionally non circumcising communities requires multi-faceted mobilization approaches. Traditional communication channels such as community open discussions in places of worship, schools and other institutions; reinforced by modern mechanisms like radio and other IEC materials increases demand for SMC services.

H - 26616

OTHER EDUCATION ABSTRACTS

ANGOLA

IMPROVING SICKLE CELL CARE THROUGH EDUCATION AND TRAINING OF LOCAL HEALTH PROFESSIONALS IN ANGOLA

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Abstract:
Issues: More than 10,000 children with sickle cell anemia (SCA) born in Angola per year, but knowledge of basic aspects of sickle cell diagnosis and care are limited among health care professionals. Without any system of true primary pediatric care in Angola, children with SCA typically seek treatment for potentially life-threatening complications of SCA (e.g. fever or acute anemia) in local health centers, staffed by providers with minimal knowledge of SCA. Lack of adequate SCA awareness among healthcare providers results in increased morbidity and mortality for children with SCA.

Description: As a part of the Angolan Sickle Cell Initiative, an ongoing and growing educational effort has included training doctors and nurses in local community health centers on the basics of sickle cell diagnosis and care. The first phase of this program includes a very basic introduction to SCA focusing on adequate diagnosis and appropriate preventative and emergency care. Pre-tests and post-tests are administered to document baseline sickle cell knowledge and short-term retention of information provided during educational sessions.

Lessons Learned: The baseline knowledge of SCA among "front-line" providers in the community is extremely low. Many providers are unclear as to the difference between SCA and sickle cell trait and most are unaware of even the simplest of preventative and lifesaving treatments. These educational sessions have highlighted the fact that health care in the community, including emergency care, is most commonly provided entirely by nurses, who receive very little, if any, training in the basic aspects of SCA diagnosis and treatment. Basic educational sessions are well received and result in an increased awareness and interest in the care of children with SCA.

Next Steps: The Angola Sickle Cell Initiative plans to expand its educational component to include training of medical students, residents as well as more direct training of local physicians and nurses. Current plans include the development of a 'train the trainer' program, including the identification of interested doctors and nurses in each municipality to be trained in a specially designed sickle cell curriculum such that they become the local sickle cell educator and caregiver in their respective municipality.

LESOTHO

LEVERAGING PARTNERSHIPS TO IMPROVE PEDIATRIC HIV CARE

L. Nalwoga, K. Mahamo, E. Chaka, J. Sanders, E. Mohape

Baylor College of Medicine Children's Foundation – Lesotho

Abstract:
Issues: Care of children and adolescents living with HIV continues to present challenges to healthcare workers. Facilities need guidance and support in providing child- and adolescent-friendly services and meeting the unique needs of these patient populations.

Description: BCMCF-L has collaborated with Pediatric AIDS Treatment for Africa (PATA) since 2009 to improve child-friendly delivery of services in Lesotho. A team composed of physician, nurse, counselor and pharmacist attends annual regional pediatric HIV conferences and implements practical solutions based on conference discussions. This year, BCMCF-L partnered with PATA to host two local forums in Lesotho. The theme of the forums was "Adolescent Care and Disclosure." Participating facilities each sent a treatment team of physician, nurse, counselor, pharmacy technician and expert patient to learn and discuss relevant and practical topics regarding HIV and sexual and reproductive health. The forums included didactic teachings, discussions and small group sessions.

Lessons Learned: Hosting local forums provided an opportunity for healthcare workers from different sites and diverse cadres to speak openly regarding challenges faced in providing care to children and adolescents living with HIV. Despite strides made in recent years to train and mentor healthcare workers around the nation on pediatric HIV care and treatment, many personnel do not feel competent to manage children with HIV.
Professionals are still overwhelmed when disclosing HIV infection status to a child or adolescent.

Next Steps: BCMCF-L will participate as a treatment partner to other facilities (both locally and regionally) to share experiences and facilitate improvement in quality of care services. Within Lesotho, BCMCF-L will primarily serve as the mentoring facilities, providing training and education to others. Regionally, BCMCF-L will both provide and receive support from partnering facilities. Local health facilities were encouraged to also partner directly with PATA for additional guidance on improving child- and adolescent-friendly HIV services.

LIBERIA

CURING LIBERIA'S MEDICAL BRAIN DRAIN – ESTABLISHMENT OF A POST GRADUATE MEDICAL EDUCATION PROGRAM

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Baylor College of Medicine Children's Center of Excellence, Monrovia, Liberia

Abstract:
Issues: Liberia's healthcare workforce was severely diminished during 14-years of civil war (1989 – 2003). By 2008, it was estimated that Liberia required 842 more physicians to meet the medical needs of the country. Further, many physicians seeking to gain subspecialty training were unable to do so in Liberia, as there were no postgraduate or sub-specialty training programs. The impact of this trend on maternal and child health is daunting. By 2012, there were only two (2) pediatric subspecialists and 3 obstetrician-gynecologists in the country. In an effort to address the severe shortage of physicians and sub-specialists in Liberia, local and international efforts set out to establish a postgraduate medical education program.

Description: The Liberian postgraduate medical education program was established in 2013, to address the shortage of subspecialists and curb the alarming rate of brain drain. The program was modeled after Ghana's post-graduate program, with a goal of creating a regional system that would allow graduates to become members of the West African College of Physicians and Surgeons. The program focuses on four (4) sub-specialty areas: pediatrics, obstetrics and gynecology, surgery and internal medicine. Implementation of the program is currently scheduled for fall of 2013.

Lessons Learned: Coordination of the multiple international organizations, universities, NGO and other participants in the postgraduate program is critical to ensure that educational goals are uniform across and within each subspecialty.
There is a need for close collaboration with the regional West African College of Physicians and Surgeons. Challenges include establishing robust selection criteria, ensuring "buy-in" from the current medical education stakeholders, securing funding for the program, and ensuring sustainability.

Next steps: The postgraduate medical education program plans to accept the first four (4) candidates and officially start the program in September 2013. Applicants will take an entry exam approved by the West African College of Physicians and Surgeons and undergo an interview, as part of the application process. There are plans for multiple United States based and other foreign academic institutions involvement in the program. Plans are underway to develop a system of coordinating these various academic institutions.

MALAWI

USE OF CLINICAL PRACTICE CASES AS A MEANS OF IMPROVING PEDIATRIC HIV CARE IN MALAWI

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Baylor College of Medicine - Abbott Fund Children's Clinical Center of Excellence, Lilongwe, Malawi.

Abstract:
Issues: While children make up a notable proportion of HIV-infected patients, issues affecting this population are often neglected in national ART programs and trainings. Despite emphasis on pediatric care and HIV prevention in the 2011 Malawi PMTCT ART guidelines, providers at health facilities continue to express limited comfort with pediatric HIV care. Baylor-Malawi has experience in pediatric mentorship through MPHATSO and Tingathe programs, and focuses on mentorship of clinical staff and systems strengthening of health facilities in central Malawi. As program expansion continues to sites in the Central and Northern regions, the need for standardized teaching tools has been identified. The mentorship experience is often busy, with the bulk of the encounter spent in active mentor to mentee side-by-side patient care. At the end of the encounter, there is limited time for didactic lecture-based teaching, often the tool used to teach fundamental concepts of pediatric HIV care.

Description: A set of standardized clinical practice cases were designed with to provide consistent, concise pediatric HIV education to clinical providers. Topics include HIV Diagnosis, Presumed Severe HIV Disease, ART Eligibility, ART Side Effects, Exposed Infant Care, Opportunistic Infections, TB, Treatment Failure, and Adherence. The tool has a clinical case and questions on one side of the card, and answers with key summary points on the reverse. The mentor conducts a ten to twenty minute session at the end of a busy clinic day.

Lessons Learned: Side-by-side mentorship improves provider confidence and comfort with pediatric HIV care provision. Knowledge gaps can be addressed in a time-efficient manner by reviewing standardized clinical practice cases with mentees. Cases are interactive and brief, allowing mentors to conduct high-yield small group or individualized teaching sessions even in the setting of a busy clinic.

Next Steps: Clinical Practice Cases appear useful as a means of providing relevant and memorable pediatric HIV education to mentees. Additional resources should be developed to include malnutrition, disclosure, and non-HIV topics. Knowledge acquisition will be assessed through pre- and post-tests. Once finalized, cases will be shared with the Ministry of Health for use in countrywide mentorship.

THE DEVELOPMENT OF A GLOBAL HEALTH LEADERSHIP CURRICULUM FOR THE TEXAS CHILDREN'S HOSPITAL PEDIATRIC GLOBAL HEALTH RESIDENCY SATELITE IN MALAWI

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Baylor College of Medicine - Abbott Fund Children's Clinical Center of Excellence, Lilongwe, Malawi.

Abstract:
Issues: The field of Global Health is burgeoning and complex. A number of factors lead to its complexity including deficiencies in human and financial resources, innumerable players operating in concert (or parallel) with one another, dependency on foreign financing, and shifting priorities of donors. Global health practitioners often provide technical assistance to NGOs, governments, and multi-lateral organizations in the development of priorities, guidelines, and programing objectives. Unlike physicians in resource rich settings, global health practitioners must be leaders, teachers, and providers of healthcare. In order to be effective one must possess a basic understanding of epidemiology & biostatistics, social/market economics, and, most importantly, an ability to independently acquire & apply knowledge, outside of the boundaries of clinical medicine, in a constantly changing environment.

Description: In an attempt to address these issues we developed a multi-disciplinary global health leadership curriculum. It provides an *introduction* to concepts such as a health financing, resource management, quantification of disease burden, decision science, and epidemiology. We cover these topics through a mixed mode of instruction including lectures, case discussions, readings, and presentations. The syllabus provides information about additional resources available for further independent learning.

Lessons Learned: Initial feedback indicates a high level of interest in this type of education by TCH Global Health Residents. Our two residents have, after only three sessions, commented on how the curriculum fills a knowledge gap and are particularly keen on more instruction and practicum. This was surprising in that it requires quite a bit of a time investment on their part. The curriculum is an ambitious amount of material to cover in a relatively short period of time, as it was only fully developed by the end of March 2013. As a result we modified the curriculum so that it is more manageable to cover the core topics in the time we have remaining for this academic year.

Next Steps: There are serious concerns about the sustainability of this type of instruction given that it is lead by an individual physician. We are exploring other modes of implementation that would be more lendable to independent learning and expansion of the curriculum to other sites.

STANDARDIZING THE APPROACH TO CONDUCTING SENSITIZATION EVENTS IN ORDER TO EFFICIENTLY AND EFFECTIVELY RAISE AWARENESS WITHIN A COMMUNITY

A. C. Dave, R. A. Bauer, A. M. Bhalakia, S. Ahmed, E. Kavuta, M. Harawa, K. Kanjelo, D. Nanthuru, M. H. Kim

Baylor College of Medicine - Abbott Fund Children's Clinical Center of Excellence, Lilongwe, Malawi.

Abstract:
Issues: The Baylor-Tingathe Community Outreach Program (Tingathe) recognizes the significance of community awareness. Tingatheemploys over 150 community health workers (CHWs) in 15 sites throughout Malawi to bridge PMTCT, EID, and pediatric HIV services, as well as foster knowledgeand reduce stigma through meetings and sensitizations. Program staff identified the need for a focused goal and objective for these events;with the appropriate planning tools, CHWs, Site Supervisors (SS), and SS Assistants can effectively carry out sensitizations.

Description: Tingathe has instituted a minimum of two awareness events at each site per year to ensure education on topics relating to HIV/AIDS. Over the span of three months, the program has given two interactive presentations to 35 SS and 8 head program staff on recognizing community needs,the importance of sensitizations, as well as how toorganize these events using tools which include specific goals on how to achieve and measure sensitizations. These tools are meant to facilitate the role of SS, SS Assistants, and CHWs in developing these events. Through a participatory approach using a mock-planning exercise, staffacquainted themselves with thetools and provided feedback. This process helped to identify what field workers perceive to be major issues in their communities, barriers to implementing these events, as well as the utility of standardized tools.

Lessons Learned: In the six months prior to tool implementation, Tingathe had not received any proposals for sensitization events. Within a month since the tools were presented and distributed to the sites, five proposals have been submitted. The presentations and implementation of planning tools have made an impact on the ability of field workers to easily plan sensitization events, improving the program's awareness campaigns within the communities where we work.

Next Steps: All sites received thetools, which are edited based on the feedback of SS, SS Assistants, and CHWs, and will continue to adapt methods of measuring impact based on lessons learned.As Tingathe strives to increase and maintain community understanding of issues relating to HIV/AIDS, we hope to reduce stigma and discrimination, thus,contributing to the goals of Malawi's HIV/AIDS efforts.

STANDARD OPERATING PROCEDURES AS AN INTEGRAL COMPONENT OF STREAMLINING PROGRAM EXPANSION

R. A. Bauer, A. C. Dave, A. M. Bhalakia, S. Ahmed, E. Kavuta, M. Harawa, K. Kanjelo, D. Nanthuru, M. H. Kim

Baylor College of Medicine - Abbott Fund Children's Clinical Center of Excellence, Lilongwe, Malawi.

Abstract:
Issues: The Baylor-Tingathe Community Outreach Program (Tingathe) has expanded from a grassroots level organization in 2008 with 27community health workers (CHWs)serving three sites, to a program with over150CHWs, 15 Site Supervisors (SS), and nine SS Assistants serving 15 sites. Throughout this expansion process, we have continued to work towards best practices and improved communication between head program staff and field workers.
The objective of making standard operating procedures (SOPs)is to address both these issues and, in doing so, streamline our expansion approach.

Description: The SOP project involved identifying procedures utilized by Tingathe field workers for key routine program activities. Over the span of three months, a presentation was given to Program Managers and Coordinators, followed by two interactive presentations to 35 SS and 8head program staff. Presentations included an explanation of the need for SOPs, individual and group edits of pre-prepared SOP drafts, as well as extensive discussion to clarify procedures. Between meetings, the SS were encouraged to work with their CHW teams on-site to collaborate on necessary SOPs, with further edits and formatting completed by head program staff.

Lessons Learned: Completing SOPs for all Tingathe's main activities is still in progress. Challenges arose in the group editing sessions due to the differences in procedures between sites. In addition, further edits are being made to clarify steps and vocabulary. Optimization of the best method to collect and edit information for future SOPs will continue. This process has allowed identification of inconsistencies and gaps in program activities across sites, thus, enabling the program to execute timely changes.

Next Steps: From these meetings, a total of six SOPs were developed. These documents will be distributed and implemented within the next month at all sites. As the program continues to expand and evolve, the SOPs will exist as a framework and tool with which to grow, and will be included in a Pediatric HIV/PMTCT CHW Toolkit that is being developed. By standardizing procedures now, Tingathe can become more effective and efficient in helping the Malawi Ministry of Health successfully implement the national ART program.

PROMOTION OF PSYCHOSOCIAL SUPPORT OF PUPILS LIVING WITH HIV THROUGH TEACHER TRAININGS

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Abstract:
Issues: Pupils living with HIV face numerous challenges at schools both in the classroom and on the play ground. They are often intentionally or unintentionally stigmatized and discriminated against by their teachers and fellow pupils. As a result, many tend to absent themselves from school regularly and in the worst cases, drop out completely. With the stated goals of reducing stigma and discrimination and making the educational years as comfortable as possible for the pupil living with HIV, the Teacher
Training program was started in 2010 to equip teachers with knowledge of paediatric HIV and the challenges that pupils living with HIV face as they try to balance living with a chronic illness with continuing their education.

Description: The Teacher Training program started in 2010 with funding from the Malawi National AIDS Commission. The main goals of the program are to educate teachers on issues of paediatric HIV/AIDS, reduce stigma and discrimination in schools, equip teachers with the skill of delivering HIV/AIDS lessons, and clear the myths and misconceptions around HIV/AIDS. The Ministry of Education selected three teachers, the head teacher, and two others per participating school. 368 teachers from 148 primary and secondary schools in Lilongwe district have been trained since 2010. The training methods during the one day session include lecturing, group work, role playing, and case studies.

Lessons Learned: Three teachers per school is a small number and dissemination of this information to many more teachers is important. Furthermore, another source of stigma and discrimination is from their fellow pupils, so there is need to include pupils in the training program to have a greater and more direct impact.

Next Steps: With funding from UNICEF, the focus of the Teacher Training program will expand to become an HIV/AIDS school sensitization program targeting both teachers and students. It will be piloted in primary and secondary schools within Lilongwe district. Pre- and post-workshop assessments will be done to evaluate the impact of the program. Depending on the impact assessment results, the school sensitization workshops will be replicated in other districts throughout Malawi.

THE OUTCOME OF AN ADVOCACY LETTER WRITTEN BY CLINICAL STAFF IN MALAWI

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Abstract:
Issues: Kamuzu Central Hospital is a public referral hospital in the capital city of Lilongwe, in Malawi. It serves a catchment area for over 5 million people[1]. KCH has had stock outs of essential medications and supplies for years, with the most severe shortages occurring in late 2012. Patients have suffered death and severe morbidity due to a lack of basic supplies including antibiotics, intra-venous fluids, syringes and suturing materials. Despite multiple previous requests through the appropriate leadership within KCH and the Ministry of Health, as of January 2013, only 5% of essential medications were available in-country[2]. A group of consultant physicians a KCH reached out to Malawian President Joyce Banda with the hope that she may be able to intervene.

Description: On Monday 28, January 2013 a letter addressed to "the President and People of Malawi", signed by 15 consultant physicians, was released to the Malawian national press with international media uptake shortly thereafter. Within one week President Banda convened a meeting with physicians, cabinet ministers, and health administrators from across the country. Government officials began to openly acknowledge that the shortages were multi-factorial: devaluation of the Malawian Kwacha, drug theft, and the request by the donor community to transfer control of the Central Medical Store (which supplies government hospitals and community health centers) from a government-led organization to one that was controlled by a Board. It was revealed that the country last procured medications and supplies in 2009.

Lessons Learned: Clinician advocacy on behalf of patient care issues can be an effective means of drawing national and international attention to pressing healthcare problems. The published letter galvanized multiple stakeholders to advocate on behalf of this issue. Emergency funding for medical supplies was released within two weeks. National and international groups made large donations of money and supplies to KCH, resulting in a significant (although still inadequate) increase in drug availability by late March 2013.

Next Steps: Clinicians will continue to monitor the situation with the hope that the emergency relief will allow time to develop a sustainable system of keeping public health facilities supplied with essential medications.

TANZANIA

EFFECT OF EDUCATIONAL MATERIALS ON TUBERCULOSIS (TB) KNOWLEDGE AMONGST CHILDREN AND CAREGIVERS IN MWANZA, TANZANIA

E. Samuel, L. Plafsky, C. Gingaras, T. Roche, E. Batungi, M. Mgawe, W. Elimwira, G. Gahanga, *Mercy Minde**, M. Tolle

Baylor College of Medicine Children's Foundation - Mwanza, Tanzania.

Abstract:
Introduction: Patients in our setting lack information about HIV, common child illnesses,breastfeeding, and other matters critical to their health, including clinical outcomes. Morning health talks seem to be effective but have limitations including available time, staffing and patient/caregiver access. Printed information/education/communication (IEC) materials are a standard part of PEPFAR programming in the area of improving caregiver/patient health knowledge.

While they allow messages to be conveyed with less staff time than live educational sessions and allow larger numbers of patients/caregivers to participate in receiving knowledge, it is unclear the degree to which TB IEC materials are effective. With an eye on programme improvements, patients and caregivers attending the Baylor Children's Foundation-Tanzania Lake Zone Children's Clinical Centre of Excellence (COE) in Mwanza COE have been assessed for TB knowledge before and after receipt of a TB IEC leaflet to assess whether TB IEC leaflets appear effective in increasing TB knowledge.

Methods: 50 Clients (parents/caregivers and patients ages 13 years and above) were given a baseline TB knowledge assessment between October 15-19, 2012, then given an informational TB leaflet. At next clinic visit (through December 21, 2012), post-tests were administered. These results were recently reviewed and analyzed in STATA.

Results: Median baseline and posttest scores=83% and 92%, respectively (p=.246, power calculation suggests a minimum sample size of 115 required). Despite primary students having the lowest baseline knowledge (median 78.1%), secondary students' knowledge increased the most (83%-->92%). 48.9% of people in our study said they received baseline TB information at Baylor clinic, compared to 19.1% radio, 10.6% newspaper, 8.5% television, 4.3% posters, 4.3% other health facility, and 4.3% other sources. Increase in knowledge of night sweats as a symptom of TB was statistically-significant (77.5%-->91.8%, p=0.05), but there was no statistically-significant increase in scores involving TB transmission and prevention.

Conclusions: In the sample of patients analyzed, TB IEC leaflets show a trend towards improving overall TB knowledge; this has importance, particularly given the dearth of non-COE sources of TB information reported by our patients. Small sample size likely accounts for lack of statistical significance, but a more robust baseline knowledge assessment would also be useful. Creating different versions of TB IEC materials for different age groups may enhance impact. Future evaluations of TB IEC materials should focus on impacts on TB avoidance behavior and/or health seeking for TB symptoms, as well as on the relative benefits of IEC materials vs. health talks vs. combined educational interventions.

VEGETABLE NURSERIES- AN INTERACTIVE EDUCATION ON HEALTHY EATING IN MBEYA, TANZANIA

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Abstract:
Issues: The risk of malnutrition in HIV-infected children is increased through inappropriate feeding practices, household food insecurity, and illiteracy on the importance of balanced diet. To address this problem, Baylor Tanzania Centre of Excellence (COE) in Mbeya, Tanzania created a demonstration garden program called Vegetable Nurseries.

Description: Vegetable Nurseries is an interactive educational program for children and families attending the COE created in October 2012. It aims to increase nutritional knowledge and micronutrient intake through education and cultivation of fresh vegetables. Locally available green leafy vegetables, carrots and onions are grown in the garden. One HIV-infected adult volunteer was trained on how to create and maintain the nurseries and teach clients attending the COE. She attends 3 times a week, 8hrs a day, and her monthly allowance is 80,000Tzs ($50 USD). Health education on the importance of fresh vegetables as part of meals is given for 15 minutes at the COE waiting area by the volunteer per visit. Harvests from the garden are given as food supplement to malnourished children identified by the nutritionist and social work department as low socio-economic families.

Lessons learned: From October 2012 to January 2013, 308 families have benefited from the project. An average of 60 families per month received education on creating vegetable nurseries and eating healthy. Of those trained, 94 /308 (30.5%) of families reported starting similar gardens in their homes. Approximately 45 low-income families receive ¼ to ½ of a kilogram of vegetables per month.

Next Steps: To follow-up families longitudinally to see if their eating habits have changed or will change in time. Challenges include how to expand the program to reach more families given limited funding and staffing. The early finding that a substantial proportion of beneficiaries have started vegetable gardens of their own after exposure to the program is very encouraging.

A CLINICAL ATTACHMENT PROGRAMME IN SUPPORT OF PAEDIATRIC HIV CARE AND TREATMENT SCALE-UP IN TANZANIA

J. Bacha, M. Minde, H. Kweka, E. Samuel, B. Anosike, L. Campbell, J. Bradford, S. Shea, N. Naik, T. Masenge, L. Mwita, B. Kasambala, L. Tolle, J. Bisimba, S. Mhina, M. Tolle

Baylor College of Medicine Children's Foundation - Mbeya and Mwanza,Tanzania.

Abstract:
Introduction: In Tanzania, approximately 200,000 HIV-infected children and adolescents have yet to enrol in care, with approximately 100,000 in need of, but not yet receiving, antiretroviral treatment (ART). Clinical mentoring by providers skilled in HIV management has been identified as a cornerstone of scaling-up HIV care in Africa, especially where expertise is limited.

Methods: Baylor-Tanzania hosts two-week-long clinical attachments at the Centres of Excellence (COE) in the Southern Highlands (SHZ) and Lake Zones (LZ) for clinical staff (clinicians, nurses, nutritionists, counsellors) working at HIV Care-and-Treatment Centers (CTC), Pediatric Wards and Reproductive and Child Health (RCH) clinics in the national health system. Shadowing, side-by-side mentoring, and precepting, in addition to didactic sessions which reinforce hands-on learning, give providers the crucial high-volume immersion in paediatric HIV necessary to build skills and confidence in caring for HIV-infected children. Additionally Baylor-Tanzania conducts a pharmacy attachment programme in LZ. National guidelines on HIV testing and diagnosis, clinical staging, ART initiation/monitoring, adherence, disclosure, infant feeding counselling, malnutrition, TB, adolescent care, and monitoring and evaluation are reinforced.

Results: 206 healthcare workers trained (LZ:142 from 53 sites;SHZ:100 from 52 sites). Reach is national, with attachments to date from all regions in SHZ LZ, as well as from Dar/Zanzibar/Coast/Morogoro regions. Mean HIV-knowledge increase pre-to-post-attachment=30%. Total cost of training a participant is US$620, including transportation, accommodation, and provision of job aids for use at sites.

Conclusions: The COEs are a vital resource in Tanzania's progress towards universal access for children to HIV care and treatment, with clinical and technical-expertise features that can be leveraged to capacitate substantial numbers of decentralized providers at a reasonable cost. Feedback from participants post-attachment suggests that simultaneously attaching several participants of different cadres from a single site is important for advocacy and implementation of change. Evaluation of attachments' impact on PMTCT and paediatric HIV outcomes at CTC and RCH units is an important next step in this programme's evolution, as is advocating for and assisting the Ministry of Health and Social Welfare with the development of similar clinical attachment programmes in all consultant hospitals as part of scale-up and sustainability.

IMPORTANCE OF PARTNERSHIPS IN IMPROVING HIV CARE OF INFECTED CHILDREN AND PREGNANT WOMEN IN RURAL DISTRICTS IN UGANDA

H. N. Sekabira, A. Kekitiinwa, A. Asiimwe

Baylor College of Medicine Children’s Foundation-Uganda

Abstract:
Background: Baylor-Uganda in partnership with ChildFund Uganda and KOICA is implementing a project for Improving care of children infected and affected by HIV in Kiryandongo, Busia, Agago and Kitgum Districts. The project, implemented in 8 health facilities, utilizes community structures to bring pediatric HIV/AIDS care and prevention of mother-to-child transmission of HIV services closer to the people and link clients into care. We describe the partnership and its achievement in improving HIV care of HIV infected children and pregnant women in four rural districts in Uganda.

Methods: Baylor-Uganda trained and mentored the health professionals to provide paediatric HIV/AIDS services in addition to providing technical assistance through support supervision visits. A basic care package, basic clinical equipment, opportunistic infections (OI) drugs and laboratory supplies were provided at a one-stop centre. ChildFund trained and facilitated community resource persons to mobilize and sensitize the communities on the availability of paediatric HIV services in their areas, track and follow-up children and pregnant women in care. They also set up patient referral mechanisms in addition to providing income generating projects for orphans and vulnerable children and constructing early childhood development centres and waiting sheds.

Results: Paediatric HIV/AIDS services were strengthened in 8 health facilities due to the availability of trained health professionals, testing kits and drugs to manage opportunistic infections. Through the improved community referral and support structures, more pregnant women, positive parents, children and exposed infants have been linked to, enrolled and/or returned into care. The proportion of HIV positive women delivering under skilled labour improved from 46% to 75%. The proportion of HIV-positive mothers who knew their children’s HIV sero-status increased by over 200%. One thousand three hundred and fifteen children were refered to the health facilities; 307 HIV positive children were followed up through the community structures. Only 30% of exposed infants were tested for HIV.

Conclusion: Partnerships are the key to scaling up HIV services and should not be overlooked. Partnership structures at all levels of governance have to effectively play their roles to ensure that HIV services are improved in health facilities.

ABSTRACTS ON GLOBAL HEALTH
ORAL PRESENTATIONS

LESOTHO

IMPLEMENTING ISONIAZID PROPHYLACTIC THERAPY

J. Sanders*, T. Fritts, E. Mohapi

Baylor College of Medicine Children's Foundation – Lesotho

Abstract:
Issues: Tuberculosis (TB) continues to be a major health concern in Lesotho, particularly among people living with HIV. TB incidence in Lesotho is one of the highest in the world at 635/100,000 and 77% of patients receiving TB treatment are also infected with HIV. To help combat these overlapping epidemics, in September 2011, Lesotho Ministry of Health published *National Guidelines for the Three I's: Intensified Case Finding, Isoniazid Preventive Therapy (IPT), and Infection Control*.

Description: Due to shortages in the supply of isoniazid, implementation of IPT has been step-wise throughout the nation. BCMCF-L served as the pilot site for implementation in children and began providing IPT in April 2012. All HIV-infected persons over one year of age, without active TB, qualify for IPT. HIV-exposed or –infected infants less than one year of age qualify for IPT if there is known household TB exposure. In addition, HIV-uninfected children less than five years of age with known household TB exposure qualify for IPT. Isoniazid is provided in a dosage of 10 mg/kg/d (max 300mg) for six months. National guidelines recommend monthly monitoring for all patients receiving IPT to screen for signs/symptoms of active TB, side-effects of isoniazid, and to monitor adherence to isoniazid.

Lessons Learned: Implementation of IPT at BCMCF-L required adjustments to clinic flow due to monthly monitoring requirements. The IPT register was placed in a central location so that all clinicians could complete enrollment and monitoring data. A single clinician was appointed each day to serve those coming only for IPT review and refill. This allowed fast-tracking of those patients who were clinically stable with regards to HIV infection. Adjustments were made to documentation by clinicians to improve clarity in the pharmacy regarding refills of both isoniazid and ART.

Next Steps: Proposal has been submitted to relevant IRBs to review IPT implementation and its outcomes – number and demographics of those completing prophylaxis, defaulting, developing active TB or side effects.

MALAWI

CASE REPORT: BACILLARY ANGIOMATOSIS IN AN HIV-INFECTED CHILD

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Baylor College of Medicine - Abbott Fund Children's Clinical Center of Excellence, Lilongwe, Malawi

Abstract:
Background: Bacillary angiomatosis (BA) is caused by gram-negative organisms of the genus Bartonella. The majority of patients with BA are immunocompromised, however several immunocompetent patients have been described in the literature, including one child. There are two clinical syndromes in BA: (1) bacteremia, and (2) soft tissue infection characterized by a proliferative angiogenic response.

Methods: We report on a 12 year-old Malawian female with a large soft tissue mass on her left shoulder.

Results: She was newly diagnosed as HIV-infected with a CD4 count of 17. Blood counts were normal. The lesion started as a 3x3 cm raised soft tissue mass that was initially thought to be pyogenic granuloma. Despite antibiotic treatment, the mass aggressively increased in size, and 2 weeks later was bulging, measuring approximately 8x10x7 cm with dramatic ulceration of the skin. She also had a smaller, stable, hyperkeratotic, pedunculated lesion on the left thigh.

An incisional biopsy was performed, notable for profuse bleeding upon incision of the friable mass. Based upon the rapid increase in size, chemotherapy was started with bleomycin and vincristine (BV) to empirically treat Kaposi sarcoma (KS) while awaiting results of the biopsy. A week after BV, the mass had decreased in size by approximately 50%, seeming to indicate that she truly had KS. However, the biopsy established a diagnosis of BA. Histology revealed clusters of eosinophilic material adjacent to blood vessels, within a pyogenic granuloma-like lesion with neutrophils. Additional staining demonstrated clusters of Warthin-Starry-positive organisms. The apparent response to chemotherapy was attributable to its anti-angiogenic effects. No further chemotherapy was given and the patient was initiated on daily azithromycin for 3 months. After 1 month on azithromycin the mass had regressed by more than 80%. After the 2nd month, the mass was nearly completely resolved.

Conclusions: BA is an uncommon opportunistic illness, however it is easily treatable, even in resourcelimited settings. Overlap in clinical presentation with KS and pyogenic granuloma render BA an important consideration in patients with vascular lesions and subcutaneous nodules. This case report provides evidence that HIV-infected children with BA can experience a good outcome with proper antibiotic therapy.

SWAZILAND

KNOWLEDGE, SKILLS, AND USE OF NEONATAL RESUSCITATION IN SWAZILAND, BEFORE AND AFTER PARTICIPATION IN HELPING BABIES BREATHE TRAIN-THE-TRAINER PROGRAM

N. Salazar-Austin, S. Perry*, J. Werdenberg, R. Hoban, A. Cognata, A. Saldarriaga, A. Moten, H. N. Sarero, E. Montgomery

Baylor College of Medicine Children's Foundation – Swaziland

Abstract:
Background: Lack of effective resuscitation at birth is a major cause of avoidable newborn morbidity and mortality globally. Helping Babies Breathe (HBB) is a new evidence-based neonatal resuscitation curriculum designed for low-resource countries. Few data exist describing HBB training in real world settings.

Methods: The Swaziland Ministry of Health identified 16 local learners representing clinics and hospitals throughout Swaziland. Trainees completed a 17 question multiple-choice questionnaire (MCQ) before, immediately after and 3 months after the course. MCQ scores were compared using paired 2-tail t-testing. In addition, before and after training, bag-mask ventilation (BMV) skills were assessed using a 7 item validated checklist. Trainees also completed two post-training OSCEs (objective structured clinical exams) incorporating case-based neonatal scenarios and a qualitative survey.

Results: Local learner newborn resuscitation knowledge improved with training, increasing mean MCQ scores from 15.5/17 (SD 0.8) to 16.7/17 (SD 0.4; $p<0.001$ pre vs post). BMV scores also improved, increasing from 3.1/7 (SD 1.3) to 6.6/7 (SD 0.5, $p<0.001$ pre vs post). Post-training OSCE scores were 15.3/16 (SD 0.4) (98.4%) for stimulation and suctioning skills, and 23.1/25 (SD 1.4) (92.7%) for full resuscitation skills including BMV, both demonstrating high-quality skills and scores above the 70% pass rate. Post training, all learners reported confidence in live-saving neonatal skills and in their ability to teach those skills to others. All reported plans to train at least 5 other HCWs within 6 months. Potential challenges for future trainings included an already busy clinical schedule (43%) and lack of funding (62%). 3 months post-training, knowledge was well-retained with a mean MCQ score of 16.9/17 (SD 0.3, $p=0.17$ for post vs 3 month MCQ) for the 56% of trainees who responded.

Conclusions: HBB training was well received by Swaziland trainees and led to significantly improved neonatal resuscitation knowledge and skills in simulated newborn delivery scenarios. Follow up at 3 months showed excellent retention of knowledge. Follow up at 9 months will include a repeat MCQ to assess long-term knowledge retention, and a survey that will both quantitate the use of HBB skills by trainees in the delivery room and the teaching efforts by learners.

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OTHER ABSTRACTS ON GLOBAL HEALTH

ANGOLA

FIRST 6 MONTHS OF PROGRAM DEVELOPMENT IN SICKLE CELL NEWBORN SCREENING AND LINKAGE TO CARE IN CABINDA, ANGOLA

S. M. Labuda, K. C. Lund, C. Casas, A. F. Bungo, P. Macosso, M. R. C. Lanzi, E. M. M. Quilombo, R. Lelo Elias, G. Airewele, P. T. McGann

Baylor College of Medicine Children's Foundation - Cabinda, Angola

Abstract:
Issues: Sickle cell anemia (SCA) is a significant health problem in Angola affecting an estimated 1-2% of all newborns. In 2010, Baylor College of Medicine (BCM), collaborated with the Angolan Ministry of Health (MOH) and Chevron Corporation to create a pilot newborn screening and treatment program in Luanda, the capital city. In 2012, the program expanded to Cabinda, an exclave province in northern Angola with a population of 300,000. Prior to implementation of this program, the estimated 400 known and hundreds of other undiagnosed Cabindan children with SCA lacked access to standard preventive care measures such as prophylactic antibiotics and vaccines.

Description: In October 2012, two Global Health Corps (GHC) physicians moved to Cabinda to initiate and maintain all aspects of the program, including sample collection, laboratory processing, and clinical follow-up. The GHC has trained maternity nurses in newborn bloodspot collection and laboratory technicians in hemoglobin electrophoresis; trained nurses and physicians in the management of SCA; and initiated and coordinated follow-up care for newly diagnosed/screened and existing SCA patients.

Lessons Learned: The continued success of this program depends on the sustained contribution of the Angolan government, public health officials, physicians, nurses, and other health care workers. While the Angolan MOH has expressed commitment to the program at various leadership levels, the program continues to lack critical MOH support at the highest level and, as a result, lacks important administrative and ancillary support for the logistical operations of the program. Our program leadership must strive to strengthen relations with the Angolan government and MOH to obtain assistance for this program, which is of great benefit to Cabindans.

Next Steps: With the guidance and assistance of local health officials, the ultimate goal of the Cabindan sickle cell initiative is to incorporate the entire province into the screening program, and to conduct educational outreach to physicians, nurses, other health care workers, and the general population to improve the knowledge of SCA in the province. By improving the knowledge of SCA, we hope to foster a decentralized model of care in which existing health centers can provide basic yet lifesaving care for SCA patients.

A PROSPECTIVE PILOT NEWBORN SCREENING AND TREATMENT PROGRAM FOR SICKLE CELL ANEMIA IN THE REPUBLIC OF ANGOLA

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Baylor College of Medicine Children's Foundation - Cabinda, Angola

Abstract:
Background: Sickle cell anemia (SCA) is a significant global health problem with >300,000 affected infants born each year in sub-Saharan Africa. Up to 80--90% of all children with SCA in Africa die before five years of age, due to infection or anemia, and usually without the proper diagnosis of SCA. Early identification by newborn screening (NBS), followed by interventions such as pneumococcal immunization and prophylactic penicillin, have dramatically reduced the mortality of children with SCA in the US, but this strategy not yet been established in Africa. A novel public-private partnership involving the Republic of Angola, Chevron Corporation, and Baylor College of Medicine/Texas Children's Hospital was created to develop a pilot NBS and treatment program for SCA, focusing on capacity building and local ownership.

Methods: Dried bloodspots from newborn infants were collected from four local birthing centers in Luanda, Angola. Hemoglobin identification was performed using isoelectric focusing; samples with abnormal hemoglobin patterns were subsequently analyzed by capillary electrophoresis. Infants with abnormal FS or FSC patterns were enrolled in a newborn clinic to initiate penicillin prophylaxis and receive education, pneumococcal immunization, and insecticide-treated bed nets.

Results: A total of 23,115 infants were screened over the first 17 months of the program. Results included 77.38% infants with a normal FA hemoglobin pattern, while 21.06%, had an FAS pattern consistent with sickle cell trait and 1.55% had an FS pattern consistent with SCA. Of those identified with SCA, 179/316 (52.8%) age-eligible infants were successfully contacted for enrollment in the sickle cell clinic. After the first visit, adherence to follow-up care exceeded 95%, with only 2 deaths. The survival for all enrolled babies is 98.7%, which compares favorably to the published national infant (<age 1 year) mortality rate of 9.8%.

Conclusions: This prospective pilot program shows that newborn screening and follow-up care for SCA is feasible, accurate, and effective in a developing country like Angola, and that simple interventions can reduce mortality for affected infants. Novel partnerships with industry and academia can help expand screening and treatment efforts in sub-Saharan Africa.

LESOTHO

KNOWLEDGE, SKILLS AND USE OF NEONATAL RESUSCITATION IN LESOTHO, BEFORE AND AFTER PARTICIPATION IN HELPING BABIES BREATHE TRAIN THE TRAINER PROGRAM

E. Montgomery, J. A. Werdenberg, R. A. Hoban, A. Cognata, A. Moten, N. Perez, L. Thahane, E. Mohapi

Baylor Children's Center of Excellence - Maseru, Lesotho

Abstract:
Background: Lack of effective resuscitation at birth is a major cause of avoidable newborn harm and death globally. Helping Babies Breathe (HBB) is a new evidence-based neonatal resuscitation education curriculum specifically designed for low resource countries. The purpose of this study was to assess if a national-level training program in Lesotho would improve knowledge of key concepts of neonatal resuscitation, to identify factors associated with successful training, and to understand learners' impressions of the curriculum.

Methods: Data was gathered from 17 Basotho learners from 22 selected regions of Lesotho. Trainees completed a 16 question multiple-choice questionnaire (MCQ) before and after the course. Before and after training bag-mask ventilation (BMV) skills were assessed using a 7 item validated checklist. Trainees completed two post-training OSCEs (objective structured clinical exams) incorporating case-based neonatal scenarios, and completed a qualitative survey. Lastly, a 3-month follow up post-test assessed knowledge retention.

Results: Newborn resuscitation knowledge improved with training, increasing mean MCQ scores from 12.6/17 (SD 1.6) pre-training and 15.7/17 (SD 0.5, $p<0.001$ pre vs. post). BMV scores also improved from 3.7/7 (SD 1.4) to 6.3/7 (SD 0.8, $p<0.001$ pre vs. post). Post-training OSCE scores were 11.4/13 (SD 1.3) (87.7%) for a scenario requiring the learner to perform stimulation and suctioning on a newborn, and 16.5/18 (SD 1.2) (91.7%) for a scenario requiring full resuscitation with BMV and heart rate checks. After training, all learners reported confidence that they could save lives at birth and teach these skills to others. All reported plans to train others within 6 months. Three-month follow up post-test MCQs showed no significant difference ($p>0.1$) when compared to post-test scores from MCQs given immediately following the class.

Conclusion: HBB training was well received by Lesotho trainees and led to significantly improved neonatal resuscitation knowledge and skills in simulated newborn delivery scenarios. Three-month follow-up data indicate good retention of knowledge. Follow up at 9 months with repeat MCQs will study knowledge retention and a survey will quantitate use of HBB by the trainees in the delivery room in Lesotho, as well as scale-up teaching efforts by learners.

FUMANA TB BANENG – EXPANDING CHILDHOOD TB CASE DETECTION AND DIAGNOSIS IN LESOTHO

J. Sanders, N. Emery, T. Fritts, M. Wong, R. Ricketts, E. Mohapi

Baylor College of Medicine Children's Foundation – Lesotho

Abstract:
Issues: Despite one of the highest rates of tuberculosis (TB) in the world, pediatric cases compose only 6.3% of diagnosed cases of TB in Lesotho. Due to the paucibacilliary nature of childhood TB and limited diagnostic capabilities, only 43 pediatric cases were bacteriologically confirmed in 2011. TB is often overlooked as a cause of chronic illness in children in Lesotho. Diagnosis in children relies on passive case-finding despite a national cohort of village health workers and proven efficacy of active case-finding in highly endemic settings.

Description: In November 2012, BCMCF-L received a TB Reach grant to provide early and increased case detection of TB in children. Village health workers will perform active case-finding by visiting households of registered TB cases, screening household members, and referring those with positive screens for evaluation and treatment based on National TB Program (NTP) guidelines. They will also refer asymptomatic young children and HIV-infected persons for post-exposure prophylaxis. Local clinicians will be further trained in recognition, diagnosis and treatment of childhood TB. In addition, BCMCF-L will establish sputum induction facilities in five districts to enable collection of quality specimens for laboratory investigations. Joining improved specimen collection with improved diagnostics and active case-finding should lead to greater numbers of children and adults receiving TB treatment.

Lessons Learned: Large projects like *Fumana TB Baneng* require close collaboration and cooperation of national programs as they impact many areas of the health sector. This project is working with the NTP, Family Health (village health workers), Laboratory Services and Clinical Services (sputum induction facilities) as well as individual health facilities and healthcare workers. In its infancy, *Fumana TB Baneng* has already generated excitement among healthcare providers and the Ministry of Health.
Many are aware of the difficulties in diagnosing TB in young children and are eagerly awaiting full implementation of the project.

Next Steps: Training of health professionals and village health workers is ongoing. Active case finding has begun at BCMCF-L facilities but will be implemented in governmental health facilities as well. Ultimately, outcomes will be monitored via NTP to verify increased case detection and cure of childhood TB.

LIBERIA

REVIEW OF MATERNAL MORTALITY IN POST-CONFLICT LIBERIA, WEST AFRICA

Y.S. Butler

Global Health: Monrovia, Liberia

Abstract:
Issues: Every 60 seconds, a woman dies during childbirth or from a preventable cause of pregnancy. Sub-Saharan Africa leads the world in this phenomenon, accounting for 50% of all maternal deaths. In Liberia, this disparity is quite alarming. In 2010, approximately 770 women died during childbirth, for every 100,000 infants born alive. Despite major international focus on improving maternal health, the Millennium Development Goal -Five (MDG5) of reducing maternal mortality by three-quarters by the year 2015, will not be achieved. Given that successful interventions are region and problem specific, a review of maternal mortality in Liberia is warranted.

Description: Liberia's maternal mortality ratio of 260 maternal deaths per 100,000 live births in 1986 spiraled to an alarming 1,900 maternal deaths per 100,000 live births during the 14 -year civil war. By 2010, the upward trend of maternal deaths started a gradual decline, achieving a ratio of 770 maternal deaths per 100,000 live births by 2010. This marked an improvement in maternal mortality, but the rate was surprisingly slow, given the marked international resources and efforts to improve maternal health. A number of precipitating factors have been named in the slow recovery of maternal health. They include the lack of adequate transport, inadequate emergency obstetric care, a shortage of supplies, facilities, medications and personnel, harmful traditional practices and poor communication between patients and maternal health care providers. The Ministry of health and other stakeholders are currently focusing on various aspects of these factors in their continued efforts to decrease the number of maternal deaths in Liberia.

Lessons learned: Reduction in maternal mortality requires a problem based approach, tailored to the needs of communities at risk. A focused assessment of the capacity of communities to independently continue global health maternal mortality reduction strategies is required to identify gaps after post-conflict assistance.

Next steps: Although much of the medical causes of maternal mortality in Sub-Saharan Africa can be applied to Liberia, specific data on the causal factors leading up to a maternal death is sparse, and mostly unknown. A through review of each maternal death in hospital settings will allow identification of factors specific to Liberia resulting in maternal deaths.

STRATEGIES FOR COMBATTING NEONATAL AND UNDER 5 MORTALITY IN LIBERIA

J. L. Reece

Monrovia, Liberia

Abstract:
Issues: Liberia endured years of civil war that left their health care system fractured. Neonatal and under 5 mortality remain exceptionally high despite recent declines in each and current MDG for reducing child death will not be reached. The factors contributing to the high mortality rates include lack of skilled birth attendants, lack of trained pediatricians, delay in seeking care either due to parental non-recognition or deficit of health care providers (especially in the interior areas) and inadequate resources to provide the needed medical care.

Description: Several strategies have been implemented to tackle both our neonatal and under 5 mortality. For our neonatal mortality, we have organized combined monthly mortality meeting with our obstetrician colleagues to determine if and what interventions could have been made to prevent mortality. In the past, all children would be assessed and managed in adult emergency room but we now have a separate pediatric ER and ward for children under 5. To encourage parents to seek care earlier, a policy was adopted to provide free care to all children under 5. Other tactics include creating databases to keep track of mortality rates and causes of death monthly to assess for trends and help us better prepare and the start of an enhanced well child care clinic targeting our teenage mothers as their children have been shown to be at higher risk of death and malnutrition. Another implementation is an online network available by email for doctors working alone at district hospitals to get assistance in managing a difficult case or arranging referrals.

Lessons Learned: Education and training must go beyond the physicians and doctors in training to include nurses, midwives, physician assistants, respiratory therapists and hospital administration as well as our mothers, both in the hospital/clinic and in their communities.
However, education without the basic required medical resources will have a limited effect on improving mortality.

Next steps: With the start of Post-Graduate College, there will be more trained pediatricians and obstetricians in country as well as improvements in the available resources.

MALAWI

CERVICAL CANCER SCREENING AT BAYLOR

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Baylor College of Medicine-Abbott Fund Children's Clinical Center of Excellence, Lilongwe, Malawi

Abstract:
Issues: Cancer is a leading cause of morbidity and mortality worldwide. In 2008, globally, there were 12.7 million new cancer cases and 7.6 million cancer deaths (around 13% of all deaths) with 56% of the new cases and 63% of the cancer deaths occurring in developing countries. In eastern and southern Africa, where HIV prevalence is high, AIDS-defining cancer including Kaposi sarcoma, cervical cancer, and non-Hodgkin lymphoma are the most common. Cervical cancer is the leading cause of cancer death in females and the trend is increasing in Malawi. Early identification of cancer is especially important in HIV infected adolescents and women who are more vulnerable to rapid disease progression. If patients in Malawi present in late stage of disease, there are no treatment. Current screening programs require women to travel from distant health centers to central hospitals for treatment and few women follow-up due to issues with transport.

Description: Visual Inspection with acetic acid (VIA) and cryo-therapy is an inexpensive and reliable method for screening for cervical cancer that requires few supplies that are readily available in Malawi and other resource-limited areas. Baylor College of Medicine-Malawi will soon provide VIA screening and cryo-therapy to our adolescents and guardians willing to have the service, in corroboration with Ministry of health and World Health Organization. The goal is to strengthen quality and accessibility of cervical cancer screening to reduce mortality rates with early detection and treatment. We hope to improve follow up for abnormal screens due to same day services with cryo-therapy.

Lesson Learned: Training of staff is expensive and time-consuming. Procurement of supplies, though limited, is proving difficult. With the challenges we are facing at our center, we are concerned about reproducibility at other sites throughout Malawi. Based on a clinic inquiry, there is a possibility that the demand will be overwhelming and exceed the number of staff trained.

Next Steps: We will complete trainings for staff in mid-June and will begin booking clients soon after. If successful, we hope to expand our services to other outreach sites in Malawi. We plan to coordinate our expansion with the arrival of the HPV vaccine to Malawi, which the Ministry of Health is currently procuring.

THE TINGATHE TB PROJECT: AN INTERVENTION USING COMMUNITY HEALTH WORKERS TO IMPROVE ACTIVE TB CASE FINDING IN HIV-AFFECTED POPULATIONS

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Baylor College of Medicine - Abbott Fund Children's Clinical Center of Excellence, Lilongwe, Malawi

Abstract:
Issues: In Malawi, active HIV case-finding in TB patients is robust via a national PITC programme available at all TB facilities. However, current TB case-finding in HIV-affected populations is not as vigorous and relies on self-presentation by symptomatic patients or symptomatic recognition by clinicians. National ART guidelines outline formal TB screening at all visits, but this is not routinely done in practice. National TB guidelines call for household tracing and identification of TB patients' contacts, but this is also not routinely done.

Description: Tingathe is a community-based program that utilizes community health workers (CHWs) and clinical mentors to improve Prevention of Mother to Child Transmission (PMTCT), Early Infant Diagnosis (EID), and Pediatric HIV Care and Treatment Services. The program is currently operating in 15 sites in Malawi's Central Region. The Tingathe TB project will use CHWs in TB case-finding among the HIV-affected groups they already work with; primarily HIV-infected pregnant women, HIV-infected lactating women and their exposed infants, HIV-infected children, and secondarily these patients' families. TB case-finding will be done either through primary case-finding, integrated in current HIV clinical activities, or secondary case-finding, focused on household contact tracing. Clinical mentorship will increase clinician screening of TB in HIV-infected patients. The aim of the TB Project is to improve case finding, linkage to care, and treatment supervision among HIV-affected individuals.

Lessons Learned: The Tingathe programme has a wide breadth of experience in community-based work, HIV case-finding, ART adherence monitoring, and mentorship. The use of CHWs in PMTCT case management has resulted in improved outcomes among HIV-infected mothers and exposed babies.

Although the TB project has yet to launch, there is optimism that the TB project will yield similar results in TB case management and that it can help the National TB and ART programmes achieve its goals.

Next Steps: A formal evaluation will be conducted on the efficacy of CHWs in TB case-finding and case management in Malawi. Results from this evaluation will provide important data on whether the integrated HIV-TB approach utilizing CHWs will improve TB case identification as well as clinical outcomes in children living with HIV and TB.

OUTPATIENT THERAPEUTIC FEEDING MODEL IN HIV/AIDS CARE: THE BAYLOR-MALAWI EXPERIENCE

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Baylor College of Medicine - Abbott Fund Children's Clinical Center of Excellence, Lilongwe, Malawi

Abstract:
Issues: Malnutrition is a global menace, occurring frequently in HIV infected patients due to direct effects of the virus and opportunistic infections. Waiting for patients to present to care can lead to late diagnosis and complications. HIV-infected children are at particular risk of morbidity and mortality due to already compromised immunity, and dependence on caregivers for food supply and recognition of illnesses. Routine monitoring in ART clinic of growth parameters allows for early detection of problems, and early replacement food therapy and initiation of anti-retrovirals can make a significant difference in patient outcomes.

Description: At each clinical encounter, nutritional status is assessed by anthropomorphic measurements (weight, height, middle-upper arm circumference) and patients are assessed for oedema. Degree of malnutrition is categorized using standardized WHO charts, and qualifying children are enrolled in OTP and provided ready-to-use therapeutic feeds (RUTF). Clinicians screen for co-morbid infections such as TB and chronic diarrhea and for signs of clinical failure, and HIV-infected patients are started early on ART to hasten recovery. Patients are followed up every 1-2 weeks to ensure weight gain. This process works well with a dependable supply of RUTF.

Lessons Learned: Monitoring nutrition parameters is a useful way to follow disease progression for pre-ART patients, and to detect clinical failure for patients on ART. Recent RUTF shortages have resulted in patients who qualify for RUTF not receiving therapy. Efforts have been made to find private donors, but inconsistent government supply remains a problem that must be addressed.

Next Steps: Efforts must be made to establish a stable supply of RUTF to malnutrition programs.
Routine anthropomorphic measurements are essential, clinicians should watch for weight loss in all patients, and ART must be initiated early.

ROMANIA

DESCRIPTION OF FINDINGS OF THE VOLUNTARY COUNSELING AND TESTING PROGRAM (VCT) FOR HIV AND VIRAL HEPATITIS IN CONSTANTA COUNTY, ROMANIA DURING 2010-2012

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Baylor Black Sea Foundation, BBSF, Romania

Abstract:
Issues: Baylor Romania has been developing in Constanta and Tulcea the only Voluntary Counseling and Testing program for HIV, Hepatitis B and C in Romania for the past 3 years. Its goal is to increase the access to testing and early diagnosis to these infections diseases and also to provide through mandatory counseling sessions preventive messages for people otherwise not targeted by IEC activities.

Description: The 2 VCT testing offices from Constanta city, at the COE and at the Constanta County Hospital, operate upon Baylor standard testing and counseling procedures that include counseling before and after testing, client's risks evaluation made by the counselor as well as by the client himself/herself. The services are available, with no exception, to all community members through a system of appointments. From the approximately 17500 people tested for HIV, hepatitis B and C in Dobrogea, around 8000 were tested in Constanta city in the 2 testing offices. For all people tested, general demographic data (age, occupation, area of provenience, etc) and information about their perceived and evaluated risks have been collected so it can be used to perform an analysis in order to obtain in depth information about characteristics of the people that accessed the testing services, their risks, and their health status.

Lessons Learned: The mandatory counseling part of the VCT program represents an important 1:1 tool of education for a wide category of population because it offers the possibility for both the client and the counselor to evaluate the risks and to provide, when needed, more specific counseling. Also, it provides a comprehensive image of the reasons why people access testing, what risks are ranked high by them; it also offers an evaluation of the role of screening services in the medical system and of the important role played by various regulations in providing motivation to
regularly access testing.
Next Steps: Although VCT is the most successful Baylor Romania project that is addressed to the larger community, it still needs to be regularly evaluated in order to make the necessary changes that efficiently creates the links between the services and the other medical services that have to be accessed by clients who need specialized care after testing.

SWAZILAND

THE "BUTIMBA" TB-REACH PROJECT: A HOUSEHOLD TUBERCULOSIS CONTACT TRACING PROGRAMME IN HHOHHO, MANZINI AND SHISELWENI PROVINCES, SWAZILAND

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Bristol Myers Squibb Clinical Centre of Excellence, Swaziland

Abstract
Issues: Faced with a growing HIV epidemic, TB incidence in Swaziland is 1200/100000 persons. TB REACH was launched in January 2010 with multi-year grant support from the Canadian International Development Agency. It provides short-term, fast-track grants to projects which aim to achieve early and increased TB case detection in vulnerable populations with limited access to care. TB REACH supported 75 projects in 36 countries through the first two waves of funding. The third wave includes 37 new projects including the "Butimba" Project, launched in March 2013.

Description: The project targets household contacts of index TB patients within 7 Basic Management Units (BMUs), prioritizing paediatric contacts. The total target population is 11546 (7177 adult and 5329 child contacts). Intensified case-finding (ICF) including reverse contact tracing will be carried out in the following BMUs: Emkhuzweni Health Center, Pigg's Peak Hospital, Mbabane Government Hospital, Raleigh Fitkin Memorial Hospital, Manzini TB Center, and Hlatikhulu Government Hospital. Baylor Mbabane COE will be the referral centre for intensified case finding in HIV positive children. Tools developed to facilitate ICF and TB-Contact Tracing include the Family Mapping Tool (FMT), Household Contact Tracing Tool (HHT), and Information, Education and Communication (IEC) pamphlets to increase TB awareness. The FMT collects information on the index case and contacts. HHT will be used during home visits to collect information on the household contacts of index cases.

Lessons Learned: Access to diagnostics for children with TB remains challenging. Targeting this need, through ICF, adequate linkages to treatment and prioritizing access of children to GeneXpert technologies awarded us this grant.

Next Step: On-site training is underway. "Butimba" TB Reach is expected to be launched at the 7 BMU's from May 2013. The expected outcome entails demonstrating the feasibility of improving contact tracing via the existing health systems, improving Isoniazid preventative Therapy (IPT) coverage in eligible children under 5 years of age, and generating evidence to support the use of GeneXpert in diagnosis of TB in children. There is an urgent need to generate evidence to guide policy concerning diagnosis of childhood TB, and we have the opportunity to do so.

UGANDA

ESTABLISHING A COMMUNITY MATERNAL MORTALITY SURVEILLANCE SYSTEM: LESSONS FROM A PILOT PROJECT IN WESTERN UGANDA

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Baylor College of Medicine Children's Foundation - Uganda

Abstract:
Issues: Baylor-Uganda, Ministry of health (MOH) and its partners are implementing the Saving Mothers Giving Life Project in the districts of Kabarole, Kamwenge, Kibaale and Kyenjojo. The project aims to reduce maternal mortality (current 438/100,000 live births) by 50% within 12 months. Uganda has a weak vital registration system with most maternal deaths occurring outside health facilities. In a bid to establish maternal mortality surveillance (MMS), community structures to capture and report the deaths had to be set up. This paper describes the establishment of community MMS structures through existing MOH structures.

Program Description: The MOH Uganda established village health teams (VHTs) as the first level of health care. However, the system has been largely non-functional. In order to capture all maternal deaths in the project districts, one VHT member per village was trained and facilitated to reach designated households to collect and record information on pregnancies, their outcomes and deaths of women of reproductive age (WRA) among other data in the village register. The VHT supervisors at sub county level, the Health assistants (HAs), were trained to screen deaths of WRA and later visit homes to conduct verbal autopsy (VA) interviews using a tool adapted from World Health Organization. Medical doctors (MOs) from the districts were trained to certify and code causes of death using the ICD 10 guidelines.

To ensure quality data, Community Linkage officers together with Monitoring and Evaluation officers and District Biostatisticians were trained to supervise the VHTs and HAs.

Lessons Learned: A total of 3,948 VHTs were trained and equipped with VHT registers, protective gear, and bicycles to enable them reach the households. Twelve VA interviewer teams, 10 MOs as VA Coders and one supervisor per Health Sub-District and an additional two at district level from four districts were trained. For the period January 2011 to June 2012, approximately 1,796 deaths of WRA were identified from 474,120 households. VA Interviews for 615 pregnancy related deaths were conducted and death certification and coding done; maternal mortality ratio was 432 (Jul 2011 – Jun 2012).

Next Steps: Through this revitalized MOH structure, surveillance to measure reduction in maternal mortality by May 31, 2013 is ongoing.

STRENGTHENING EMERGENCY TRANSPORT AND REFERRAL SYSTEM TO REDUCE MATERNAL MORTALITY IN WESTERN UGANDA

J. Lubwama, P. Mwebaze, S. Mpalanyi, E. Mugaga , P. Mutebi, A. Ocitti, D. Murokora, R. Mugahi, W. Kambonesa, W Mucunguzi, A. Kekitiinwa

Baylor College of Children's Foundation -Uganda

Abstract:
Issues: Delays or failure of pregnant women to access transport to a health facility during the time of delivery has long been recognized as an important contributor to maternal death. Emergency transport is essential to reduce the delay and ensure quick referral of obstetric emergencies. In May 2012, the Baylor-Uganda Saving Mothers Giving Life Project strengthened the emergency transport and referral system in the districts of Kabarole, Kamwenge and Kyenjojo in Western Uganda with the aim of contributing to a 50% reduction in maternal mortality in these districts. We describe the establishment of a patient transport system.

Description: Following a transport needs assessment that revealed a non-functional ambulance system for patient transport in all 3 districts; contractual agreements were made between the district leaders and Baylor-Uganda to jointly maintain the patient transport system. In each district, one new ambulance was purchased, mechanical maintenance and fueling of existing ambulances and deployment of ambulance drivers to ensure a 24-hour service was done. Special-hire cars were also used to bridge up the transport gaps. In October 2012, two additional Maruti-Suzuki ambulances and 8 tri-cycle ambulances were deployed in the 3 Districts. District Ambulance management committees were set up to coordinate ambulance management and referrals.

Lessons learned: From June to December, 2012, the project transported over 3200 (13.3% of the total deliveries) pregnant mothers with obstetric emergencies to health facilities using the ambulance system. Ambulance management committees are very essential in the coordination and management of ambulance systems. Sharing of ambulance maintenance costs is a sustainable strategy for continuity of the ambulance and referral systems. Special-hire cars can work as ambulances to complement the formal ambulances. The challenges of a bad road network and long distances still contribute to delays even with a functional ambulance system. Tricycle ambulances are ineffective in transporting mothers in rural areas with poor road terrain.

Next steps: Ambulance management committee meetings will be integrated into the district work plans to contribute to the sustainability of the ambulance and referral systems. The lessons learnt will be applied in the scale up of the program in other districts in Uganda.

A PREGNANT WOMAN ON A MOTORBIKE? LESSONS FROM A LOCAL MATERNAL & NEWBORN COMMUNITY TRANSPORT VOUCHER PROGRAM IN RURAL WESTERN UGANDA

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Baylor College of Medicine Children's Foundation-Uganda

Abstract:
Issues: Uganda, like many other developing countries with high maternal and neonatal mortality rates is characterized by non-functional community referral systems for maternal and neonatal health (MNH) services. Community transportation remains a major barrier to accessing maternal and newborn health services. A US funded MNH pilot project [*Saving Mothers Giving Life*] set out to address this through a local community transport voucher system using motorcycles in rural western Uganda. We present lessons learnt.

Description: This project, in 3 rural districts aims at reducing maternal deaths by 50% in 1 year. The districts have an estimated population of 1million with a projected 50,000 pregnant women (2012). Before project, the area had high HIV prevalence (11%), low 4th Antenatal Visits (21%) and health facility deliveries (27%).The project has since supported the districts to recruit, train and retain critical staff improving staffing norm (45% to 60%). 78 Maternities were upgraded; MNH logistics & laboratory services strengthened and 2079 Village health teams trained & equipped to provide community mapping and mobilisation of pregnant women. Local Motorcycles Transport Associations were engaged to transport poor pregnant women to nearest health facility for birth through a voucher program. A poor pregnant mother purchases a "Boda for Mothers" transport voucher at 0.5$ from her village health team worker.
At onset of labour, she is transported by the motorcycle rider to the nearest health facility. The project reimburses 3.1$ for every pregnant woman transported.

Lessons Learned: During period of April 2012-March 2013, the project has demonstrated a marked increase in health facility deliveries (53.5% vs baseline of 27%) with live birth rate of 97%. About 9983/35,622 (28%) of these deliveries were transported by the motorcycle program. Additionally, there has been a 17% increase in HIV positive pregnant women on ART delivering in health facilities.

Next Steps: Whereas more qualitative evaluation is to be done over the next months, emerging results illustrate the possible willingness of communities to share transportation costs for quality health services. Community transport systems using locally available means should be considered in other programs (HIV or PMTCT) for successful programming.

ABSTRACTS ON HIV AND RELATED DISEASES
ORAL PRESENTATIONS

BOTSWANA

PREVALENCE AND PATTERNS OF GENOTYPIC RESISTANCE MUTATIONS AMONG CHILDREN FAILING FIRST AND SECOND LINE HIGHLY ACTIVE ANTI-RETROVIRAL THERAPIES (ART) AT THE BOTSWANA-BAYLOR CHILDREN'S CLINICAL CENTRE OF EXCELLENCE (COE)

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Baylor Children's Clinical Centre of Excellence, Gaborone, Botswana

Abstract:
Background: Following the national roll out of free Highly Active Anti Retroviral Therapy (ART) in Botswana in 2001, coverage reached 98% in 2012. The first line ART regimen is a backbone of two nucleoside reverse transcriptase inhibitors (NRTI) and one non-nucleoside reverse transcriptase inhibitor (NNRTI) or alternatively a boosted protease inhibitor (PI), while our second line regimen entails taking 2 NRTIs and invariably a boosted PI. The last 10 years have seen the emergence of resistance to1st and 2nd line ART, mainly caused by non-adherence to ART and exposure to single dose nevirapine as part of prevention of mother-to-child-transmission (PMTCT) of HIV. This study describes the prevalence and characteristics of genotypic resistance mutations in children under 18 years who attended the COE between 2003 and 2011.

Methods: We retrospectively reviewed the genotypic resistance assay results for all patients aged less than 18 years old, from 2003 to 2011, in the electronic medical records (EMR) at the COE. Genotypic resistance was defined as the presence of 1 or more resistance mutations known to cause resistance to 1st or 2nd line ART as shown by over two viral loads >400 copies/mL. Resistance mutations were interpreted using the Stanford University HIV Drug Resistance Database.

Results: There were 1863 children aged less than 18 years who attended the COE and a total of 1780/1863 (96%) were on HAART; 165/1780 (9.3%) had genotypic resistance tests performed for virologic failure on PI-based regimen, 136/1780 (7.6%) had mutations conferring resistance to first line ART and 5/1780 (0.3%) had mutations conferring resistance to second line ART. The most common mutations were; M184V (22%), K103N (9%) ,G190A (9%) and Y181C, T215Y,K101E, D67N (6% each).

Conclusions: Resistance to secondline ART remains low after 10 years of ART in our setting. Majority of patients with viremia on secondline therapy do not have resistance as such empiric switch is not optimal. This underscores the need to work on psychosocial support systems in order to optimize adherence. A much larger randomized controlled trial is need to characterize this phenomenon.

H - 25403

MALAWI

ACTIVE CASE FINDING: A COMPARISON OF HOME-BASED TESTING AND HEALTH CENTER BASED TESTING FOR IDENTIFYING HIV-INFECTED CHILDREN IN LILONGWE, MALAWI

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Abstract:
Background: Studies estimate that less than 10% of children overall and 20% of children of adult ART patients have been HIV-tested. Home-based HIV testing may improve early identification and enrollment into care of HIV-infected children. The objective of this study is to compare the effectiveness of home versus health center based HIV testing in identifying HIV-infected children.

Methods: The Tingathe community outreach program conducts both health center and home based HIV testing. Health center testing included both patient and provider initiated testing. Home testing included both routine door-to-door testing as well as solicited visits of family members of current ART patients. Children were generally offered testing only if the mother was infected. We evaluated testing data from March 2008 to March 2011.

Results: Of 37,984 HIV tests performed, 14,358 (37.8%) were conducted in patient homes. A total of 4501 (11.9%) new positive persons were identified, 948 (21.1%) of whom were identified through home-based testing.

Health center based testing demonstrated a significantly higher prevalence than home based testing (12.9% vs 2.9%, p<.001). However, four times more children were able to be tested through the home based strategy, resulting in roughly equivalent numbers of total children being identified (170 vs 157, p=.467).

Table 1. HIV results in health center vs. home-based HIV testing according to age and gender.

	Tested at Health Center, n N=23,625 Health Center- HIV+, n(%)	N=3553 Tested at Home, n N=14,358 Home-HIV+, n(%)	N=948 P-value *chi square
Children (18m-15y)	1310 170 (12.9)	5346 157 (2.9)	<0.001
Adult Females (>15y)	16607 2423 (14.6)	6366 574 (9.0)	<0.001
Adult Males (>15y)	5708 960 (16.8)	2646 217 (8.2)	<0.001

Conclusions: Our study demonstrates that though a higher prevalence was seen in health center based testing, the overall yield of the home versus health center testing strategies were comparable. Both strategies will likely be important for a comprehensive approach to identification and enrollment of HIV-infected children. The children identified through the home based strategy may have been found earlier in their disease course, but further studies are necessary to compare clinical characteristics and outcomes of children identified through these differing strategies.

H - 26099

HIV AND CHILDHOOD DISABILITY: A CASE-CONTROLLED STUDY AT A PAEDIATRIC ART CENTRE IN LILONGWE, MALAWI

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Baylor College of Medicine - Abbott Fund Children's Clinical Center of Excellence, Lilongwe, Malawi

Abstract:
Background: As paediatric ART is scaled-up in Southern Africa, HIV is becoming a chronic illness. Many children living with HIV are encountering disabilities. The relationship between HIV, disability and the need for rehabilitation has been neglected. We know of no published information on disability in African children living with HIV. The objectives of the study were to:

- Measure and compare the prevalence of disability in HIV-infected and uninfected children aged 2-9 years in Lilongwe, Malawi.
- Examine types of disability, associated clinical and socio-demographic factors.
- Identify needs, opportunities and barriers.

Methods: This was a case-controlled study (March-June 2012) of 296 randomly-selected HIV-infected children aged 2-9 years attending the BCOE ART clinic in Lilongwe (cases) and their HIV-uninfected siblings (controls). Disability was measured using the WHO Ten Question Screen for Disability. Socio-demographic and clinical data were collected with a questionnaire administered to the caregiver and from medical records.

Age and sex-adjusted odds ratios were generated with logistic regression to assess the relationship between case status, the presence of disability and clinical and socio-demographic factors.

Results: Of 296 case and control pairs recruited (mean ages 5.6 and 6.1 years respectively), females comprised 48% and 52% and 33% (99) versus 7% (20) screened positive for a disability (OR 8.4, 4.4-15.8) respectively. Of these 99 HIV-infected cases, 6%, 36%, 34%, 52%, 49% and 2% had a vision, hearing, physical, learning/comprehension, speech or seizure-related disability respectively. 61% had more than one disability. HIV-infected cases with a disability were more likely to be WHO stage III or IV at enrolment (71% vs. 52%, OR 2.7, 1.5-4.2), to have had TB (59% vs. 39%, OR 2.4, 1.4-3.9) and to have below-average school grades (18% vs. 2%, OR 11.1, 2.2-54.6) than those without. 67% of cases with a disability had never received any rehabilitative assessment or service. 29% of caregivers for these children report facing stigma and discrimination.

Conclusion: A high burden of disability was demonstrated in HIV-infected children. This expanding issue demands fuller evaluation in order to provide an evidence base for holistic care and rehabilitative services with a view to improved quality of life.

H - 30621

SWAZILAND

REPRODUCTIVE CHOICES AND FAMILY PLANNING FOR WOMEN LIVING WITH HIV IN SWAZILAND: IMPLEMENTING THE JADELLE IMPLANT

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Baylor College of Medicine Children's Foundation - Swaziland

Abstract:
Background: The Jadelle Implant is a long-acting progestin-only contraceptive device that lasts up to five years with reported annual pregnancy rates of 0-0.8%, similar to that of sterilization. Robinson et al. (2012) have shown that there are both decreased levels of estrogen and progesterone in women taking certain antiretroviral (ARV) drugs in addition to oral contraceptive pills. To date, there is no published data regarding the efficacy of the Jadelle Implant for women on anti-retroviral therapy.

Methods: This study is a retrospective chart review using the Baylor Swaziland electronic medical records in addition to an internal register of all women who had the Jadelle Implant placed at the clinic in Mbabane, Swaziland.

Results: Five hundred seventy women had implants placed at the Baylor Clinic between September 2010 and May 2012. Sixteen (2.8%) of these women became pregnant using the implant. Two additional women were presumed pregnant prior to implant insertion and were thus excluded from further analysis. One of the sixteen was not on ARVs at the time of pregnancy. The mean time elapsed between implant insertion and pregnancy was 16.4 months (SD 5.5). There was no significant difference between those that were pregnant and those that were not with regards to age, condom use or CD4 count. The ARV regimen at the time of pregnancy (or study conclusion) significantly affected pregnancy outcomes ($p<0.001$). Of the 208 women on Nevirapine (NVP) based regimens, none became pregnant. Of the 18 women on Lopinavir/ritonavir (LPV/r) based regimens, none became pregnant. While of the 121 women on Efavirenz (EFV) based regimens, there were fifteen pregnancies (12.4%).

Conclusions: The Jadelle Implant appears to be an effective form of contraception for women on NVP and LPV/r based ARV regimens. In women that are taking EFV, however, the implant does not appear to be effective thus considering an alternative mode of family planning in these women is strongly suggested.

TANZANIA

THE BAYLOR-MBEYA (TANZANIA) PEDIATRIC KAPOSI SARCOMA CLINIC - DESCRIPTION AND OUTCOMES

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Baylor College of Medicine Children's Foundation-Tanzania

Abstract:
Background: Tanzania's HIV-infected pediatric population is predisposed to develop Kaposi sarcoma (KS) due to the high prevalence of human herpesvirus-8 (HHV-8). To provide comprehensive care for these patients, an oncology program was developed at the Baylor Mbeya Center of Excellence (COE). Diagnosis and management are supported by specialists from the Baylor network and its partners, while chemotherapy is delivered in the Mbeya COE. This study aims to describe the baseline characteristics and outcomes of patients enrolled in the program.

Methods: Retrospective chart review. Inclusion criteria: HIV infected children diagnosed with KS between 1 March 2011 and 31 Jan 2013. Baseline data: gender, age, KS clinical presentation, WHO immunological stage, and ART status. Outcomes data: treatment outcome, chemotherapy regimen, and complications.

Results: Baseline data (n=16): 31% female (5/16); age 4-18 years (mean 10.8 years). Diagnosis by biopsy: 75% (12/16). Characteristics at time of diagnosis: 63% (10/16) skin lesions, 56% (9/16) lymphadenopathy, 31% (5/16) oral lesions, 38% (6/16) woody edema, 25% (4/16) non-woody edema, 19% (3/16) more than 20 skin lesions, 6% (1/16) presumed pulmonary. WHO severe immunosuppression: 69% (11/16). 69% (11/16) on ART at time of diagnosis, all on first line regimen. Median time on ART prior to diagnosis of KS: 11 months (1.5-75 months). 36% (4/11) virologic or immunologic evidence of treatment failure. Outcomes data among those receiving chemotherapy for 2 months or greater (n=15): 40% (6/15) achieved complete clinical remission (CCR); 33% (5/15) partial remission (PR)/stable disease, 13% (2/15) died; 7% (1/15) LTFU; 7% (1/15) relapse. For patients with CCR, median time between diagnosis and end-of-study: 10 months (3-18 months).
All patients initially treated with bleomycin and vincristine (BV). Excluding patients with woody edema, those who did not achieve CCR with BV (19%; 3/16) were given 3 drug therapy (BV+doxorubicin).
81% (13/16) patients experienced complications during chemotherapy: 38% (5/13) peripheral neuropathy, 31% (4/13) severe constipation, 23% (3/13) neutropenia, none developed sepsis.

Conclusions: Despite resource limitations, with chemotherapy and ART, good outcomes are possible outside major teaching hospital settings in Africa, with low mortality rates. Further research is needed to better characterize long-term outcomes of pediatric patients with KS.

H-32491

CHILDHOOD RHEUMATIC DISEASE IN THE CONTEXT OF HIV INFECTION: A CASE REPORT FROM MWANZA, TANZANIA

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Baylor College of Medicine Children's Foundation-Tanzania

Abstract:
Issues: Diagnosing and managing rheumatic disease in HIV-infected children and adolescents is challenging, particularly given the inherent involvement in rheumatic manifestations of and HIV's effect on the immune system. Challenges are even more distinct in settings which lack sophisticated evaluative modalities, such as specialized laboratory testing, which help in confirming rheumatic diagnoses. To our knowledge, there have been no recently reported cases of rheumatic manifestations in HIV-infected Tanzanian youth, and even fewer data to guide management and care. This report describes an HIV-infected adolescent with suspected juvenile idiopathic arthritis managed in the Baylor Children's Foundation Children's Clinical Centre of Excellence in Mwanza, Tanzania.

Description: A 15 year-old female diagnosed with HIV infection in 2008, WHO Stage III (pulmonary TB) with baseline CD4 154cells/mm^3, presents with symptoms of intermittent polyarthritis since March 2011. Patient was initially on d4T/3TC/NVP with peak CD4 of 357 cells/mm^3, changed to ABC/ddI/LPVr in September 2010 when CD4 dropped to 121 cells/mm^3, and subsequently put on TDF/FTC/LPVr in March 2012 due to drug stock-out.
Patient complained of recurrent symmetric polyarthalgia and edema of joints involving ankles, knees, wrists, and fingers. On certain episodes symptoms were associated with subjective fever and weight loss. No family history of joint disease. Physical exam corroborated patient's complaints, Patient was unresponsive to high-dose NSAID monotherapy. Symptoms improved with NSAID/steroid combination therapy; however she suffered frequent relapses if steroid was tapered or weaned. Immunologically, patient's CD4 increased to 205 cells/mm^3 from 121cells/mm^3 four months after iniation of second line ART. Despite good adherence, CD4 count started to decline and continued to 61 cells/mm^3 in January 2013. Clinically, patient was asymptomatic , with undetectable viral load. To spare steroid effects while hopefully still achieving and maintaining rheumatic control, in March 2013 patient's rheumatic management was changed to immunomodulating drugs with chloroquine methotroxate, and folic acid supplementation. After being off steroids for 4 weeks, her CD4 increased to 205 and her rheumatic symptoms remained controlled.

Lessons Learned: This is our first effort at managing rheumatic disease in an HIV-infected child with specific immunomodulating therapy. Early results are encouraging, and suggest such management may be possible in our setting.

Next Steps: In addition to trying to improve diagnostic and management options for HIV/rheumatic cases in our centre, we are currently pursuing publication of this report for the edification of the broader HIV treatment community in settings similar to ours, as well as attempting to identify and review other HIV/rheumatic cases at our centre to gain additional insight into how optimal outcomes may be obtained for these patients.

H - 32962

ISONIAZID INDUCED VITAMIN B DEFICIENCY IN A PAEDIATRIC PATIENT WITH HIV LEADING TO NEUROPATHY, RASH, AND PSYCHOSIS: A CASE REPORT FROM MWANZA, TANZANIA

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Baylor College of Medicine Children's Foundation-Tanzania

Abstract:
Issues: Vitamin B complex deficiency causes a variety of symptoms, including but not limited to dermatologic, neuropathic, and psychiatric. HIV induces a vitamin B complex deficient state, theoretically increasing the prevalence in this patient population. This is exacerbated by the fact that many HIV-infected patients are also on isoniazid (INH) which depletes pyridoxine (vitamin B6) and acts as a competitive inhibitor of niacin (vitamin B3). Children in resource limited settings are even more susceptible because of poor diets. However, there is little data, and none that we know of in Africa, which chronicles this fatal disease in HIV-infected children.

Description: A 13 year old female on nevaripine-based ARV since June 2010, with most recent CD4 of 720cells/uL, presented at our clinic in January 2013 for a 1 week history of flu-like symptoms and a well demarcated hyperpigmented rash that was symmetrically distributed over the sun-exposed portions of her body. The rash was not painful or pruritic and did not involve the malar region. Labs did not corroborate a lupus-like disease.
She was recently started on INH, in September 2012 for TB prophylaxis, therefore it was discontinued for possible drug reaction. On further examination, it was noted that the patient was having cognitive slowing, peripheral neuropathy, glossitis, and angular chelitis. Consequently, the working diagnosis of vitamin B complex deficiency was made, and the patient was started on supplementation. In early March 2013, although the patient had no prior history of psychosis, she became disoriented and had shouting episodes requiring brief hospitalization. On supplementation, as of April 2013, the patient's cognitive and psychiatric symptoms have resolved. Her rash and neuropathic symptoms have much improved.

Lessons Learned: This case illustrates how HIV-infected children may be at increased risk of vitamin B complex deficiency, especially if they are also on isoniazid. Initial symptoms are varied, vague, and can be easily overlooked or confused with other illnesses.

Next steps: Treatment and prevention for this potentially fatal disease is simple. Therefore, more research needs to be done on the prevalence of vitamin B complex deficiency in our susceptible population of HIV infected African children.

H - 32961

UGANDA

A PRELIMINARY REPORT OF HIV SERO-REVERSION AMONG INFANTS TREATED EARLY AT BAYLOR-UGANDA: IMPLICATIONS ON HIV CARE

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Baylor College of Medicine Children's Foundation - Uganda

Abstract:
Introduction: HIV sero-reversion is defined as a quantitative decrease in HIV-specific antibody to levels below measurable cutoffs for an assay. HIV sero-reversion has been reported among HIV-1 infected infants started on anti-retroviral therapy (ART) within the first months of life. Patients that sero-revert, however; retain a life-long reservoir of cells latently infected with HIV. Our objective was to determine the magnitude of HIV sero-reversion among infants attending the Baylor-Uganda run Post Natal Clinic (PNC) at Mulago National Referral Hospital.

Methods: We reviewed charts of HIV-1 positive children aged ≥18 months who had initial positive virologic tests at 6 weeks of age, received ART, and had repeat HIV-testing (antibody test) at 18 months or later. All the infants had had two positive DNA PCR tests at the time of initiation of ART and had been on ART for ≥12months. HIV antibody tests were carried out using World Health Organization (WHO) recommended HIV 1/2 rapid tests (Determine, Stat pack and Unigold) run in series. We assessed and compared the results of HIV antibody tests conducted after ART initiation to the baseline virologic (DNA PCR) results conducted at 6 weeks of age. In addition, the most recent HIV viral loads (VL) were documented.

Results: Of 68 children that were re-tested at 18 months or later, 31(45.6%) were male; median age at ART initiation was 3 months (IQR 2-5); and the median age at re-testing was 28 months (IQR: 20-37). The average duration on ART was 25 months (SD=8.7). Of the 68 children, 29 (42.6%) had a negative HIV antibody test. Twenty seven (93.1%) of the 29 had VL less than 50 copies/ml; the remainder had VL between 60-70 copies/ml. Starting ART at or before 2 months of age was not associated with a negative antibody test result (p=0.062); neither was there any association between the duration on ART (categorized as <24 months and ≥ 24 months) and re-testing results (p=0.193).

Conclusion: HIV sero-reversion is common in children. This may potentially be mistaken as cure and may lead to discontinuation of therapy. To avoid this, health education of care givers is critical.

H - 23584

OTHER ABSTRACTS ON HIV

BOTSWANA

CLINICAL UTILITY OF HIV GENOTYPIC RESISTANCE ASSAYS IN A PAEDIATRIC HIV REFERRAL CENTER IN THE DEVELOPING WORLD

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Abstract:
Background: With the expansion of access to highly-active anti-retroviral therapy (HAART) for HIV-infected children and adolescents in the developing world, virologic failure (VF) has emerged as a clinical challenge. The use of HIV genotypic resistance assays (RAs) to elucidate the etiology of VF is standard-of-care in resource-rich settings. In Botswana, RAs are available but costly (approximately US$ 625 per assay). We sought to establish the frequency with which RAs resulted in modification of pediatric HAART regimens by clinicians in a resource-limited setting.

Methods: We reviewed the electronic medical record (EMR) for all patients on HAART from January 2009 through December 2011 at the Botswana-Baylor Children's Clinical Centre of Excellence (COE) in Gaborone, Botswana. Patients aged 0-21 years at the time of the assay were included. HAART regimens were compared before and after the interpretation of the RA. Changes made in HAART regimens at any point after RA results were considered influenced by the RA if they were referenced by clinicians in the EMR. For those patients with multiple RAs, the impact of each RA was considered separately. Suspension of therapy was not considered a clinical response to an RA result.

Results: A total of 47 RAs performed on 37 patients (22 male, 15 female) were reviewed. The mean age at the time of RA was 15.5 years (range: 5.8 – 20.8). At the time of assay, 1 patient (2.1%) was receiving NNRTI-based HAART; 35 patients (74.4%) were receiving PI-based HAART; 7 patients (14.9%) were on salvage therapy (all on augmented PI-based regimens); and 3 patients (6.4%) were suspended from therapy. Only 4 assays (8.5%) prompted change in HAART regimen (number needed to test: 11.8), with an approximate associated cost per therapy-changing RA of US$ 7,340.

Conclusions: In HIV-infected children in VF, RAs can be a useful modality. However, in resource-limited settings, their cost should be carefully weighed against their clinical utility. Predictive rules to determine which patients are most likely to benefit from RAs will assist clinicians in the developing world to effectively allocating this resource.

H - 25403

HIV STATUS DISCLOSURE TRENDS AMONG PEDIATRIC PATIENTS ON ANTIRETROVIRAL THERAPY (ART) AT THE BOTSWANA-BAYLOR CHILDREN'S CLINICAL CENTRE OF EXCELLENCE

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Abstract:
Background: Disclosure of HIVstatus is an important step in the comprehensive care of children living with HIV. Children initially get to be partially disclosed to when they know basics and full disclosure only occurs when they know everything including the modes of transmission. This study describes the HIV disclosure status of all children aged 0-19 years at the COE as well as explores the association between disclosure, gender, adherence and viral load.

Methods: A retrospective review of electronic medical records (EMR) up to December 2011, using the following words: age, gender, disclosure status, adherence, nutritional status, WHO clinical stage, immunological stage, ART regimen and viral load was done. Data were analyzed using STATA version 12. Frequencies were computed and associations assessed using the chi-square test.

Results: There were a total of 2286 patients aged 0-19 years eligible for analysis; 48.25% female and 51.75% male. A total of 845 (36.96%) were fully disclosed to while 860 (37.62%) were partially disclosed to. Disclosure had not been done among 271 (11.85%) while disclosure was not documented in 310 (13.56%). Among the 0-6 year olds, none were fully disclosed to while 59 were partially disclosed to representing a 18.67% disclosure rate for this age category. The 7-11 years old had a disclosure rate of 83.25% (51; 6.23% fully disclosed and 630 and 77.02% partially disclosed). The highest disclosure rate was among the 12-19 year olds (794; 68.92% fully and 171; 14.84% partially disclosed). Full disclosure was more frequent among adolescents aged 12 years and above. There was no difference in the disclosure rates between males and females. Seventy percent (1600) of the patients had a viral load <400copies/ml while 7.74% (177) had a viral load >400copies/ml and 22.2% (509) had no documented VL result.

Conclusions: Partial or full HIV disclosure was common at the Botswana-Baylor COE with partial disclosure occurring as early as 5 years of age while full disclosure occurred from as early as 10 years of age. There was no association between disclosure status and viral load. However, non-disclosure and lack of disclosure documentation are issues that need urgent attention.

H - 25403

PREVALENCE OF ABACAVIR RELATED RASH IN CHILDREN AT THE BOTSWANA-BAYLOR CHILDREN'S CLINICAL CENTRE OF EXCELLENCE (BBCCCOE) IN GABORONE, BOTSWANA: 2009- 2011 COHORT

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Abstract:
Background: The prevalence of abacavir (ABC) related side effects, is well described in resource-rich settings, where it approaches 5% in the Caucasian population. This is postulated to be due to the association of ABC hypersensitivity with the HLA-B*5701 polymorphism. Few reports describe the incidence of ABC hypersensitivity in the developing world, where the prevalence of this gene polymorphism is unknown. This study documents the prevalence of ABC-related side effects among HIV/AIDS patients attending the Botswana-Baylor Clinic.

Methods: A retrospective chart review of HIV infected children and adults at the Botswana-Baylor COE from January 2009 to December 2011. The charts were searched for patient demographics, ABC use, ABC side effects diagnoses, treatment side effects and medication switch.

Results: Of the 169 patients on ABC during the study period, only 18 were identified as having ABC related rash giving a prevalence rate of 10.6 %. All patients were black and of African origin and 66.7% were male. 16/18 or 88.9% were on ABC/Stavudine/ Lopinavir/ ritonavir second line regimen as per national guidelines. 12/18(66.7%) were in the age group 0-10 years. Of note 11/18 (61%) had a WHO stage 3 or worse. Half had moderate or severe wasting/ stunting or underweight. Rash was more likely where WHO stage was 3 or worse.

Conclusion: The prevalence of ABC-related rash in our population was low overall but much higher than that reported in the western literature. However, given the retrospective nature of this study, a randomized controlled trial is needed to ascertain the prevalence of ABC in our population and to define the predictors or associated factors.

PULMONARY ARTERIAL HYPERTENSION IN HIV-INFECTED CHILDREN: A CASE SERIES

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Abstract:
Background: Pulmonary arterial hypertension (PAH) is common among children with congenital heart disease. HIV-related PAH is a rare but well-described phenomenon among adult patients. However, among HIV-infected children, PAH remains poorly understood. Prevalence, comorbid conditions, mortality rates, and treatment guidelines have not been established.

Methods: A retrospective review of Electronic Medical Records (EMR) for all patients aged less than 18 years, from 2006 through December 2011, at the Botswana-Baylor Children's Clinical Centre of Excellence (COE) in Gaborone, Botswana. PAH was defined as the echocardiographic combination of cor-pulmonale with pulmonary arterial dilatation.

Results: Of the 2,188 patients on anti-retroviral therapy (ART) attending the COE over the study period, a total of 3 children (0.14%) were diagnosed with PAH; the mean age at PAH diagnosis was 9.9 years (range: 6 to 15.1). All patients were male. Records were reviewed for a total of 7.3 person-years. The mean age at ART initiation was 8.9 years (range: 7 to 10.5 years). The mean CD4+ T-lymphocyte count at the time of ART initiation was 418 / 14% (range: 183 to 653 / 6% to 22%). All patients achieved undetectable (< 400 copies / mL) viral loads within 6 months of ART initiation and maintained virologic suppression for the period of review. One patient died after multiple hospitalizations with respiratory distress. Exacerbations of congestive cardiac failure requiring hospitalization were common, (mean: 2.3 hospitalizations per person annually). Pulmonary tuberculosis (PTB) and lymphocytic interstitial pneumonitis (LIP) were universal comorbidities and preceded diagnoses of pulmonary hypertension. All patients were treated with enalapril and furosemide; none received calcium channel blockers, endothelin receptor antagonists or phosphodiesterase-5 inhibitors.

Conclusions: Among children attending a pediatric HIV specialty clinic in the developing world, the prevalence of PAH was low, but one of three patients died. All three PAH patients started HAART at an advance age and stage. Early HAART initiation and control of HIV disease is important to prevent comorbidities, such as PTB and LIP, which were comorbid with PAH in this review. Exacerbations requiring hospitalization were frequent. Larger, prospective studies using pulmonary arterial wedge pressures are needed to further describe rational diagnostic and treatment approaches.

H - 25403

MALAWI

THE DILEMMA OF DISCORDANT HIV TEST RESULTS IN HIV INFECTED/EXPOSED INFANTS

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Abstract:
Issues: Baylor-Malawi enrolls an average of 37 HIV exposed infants every month. Exposed infant-mother pairs are followed-up closely in HIV Care Clinics. Despite close monitoring, some infants become infected due to poor maternal adherence to ART or late initiation of maternal ART. Infection in these infants is determined by a positive DNA-PCR test and the child is then started on ART. HIV status is then confirmed with routine HIV rapid test at 12 and 24 months for all exposed infants in order to capture false positives resulting from contamination or mix-up of samples used in DNA-PCR testing. In most cases, a child with a positive DNA PCR will have a reactive HIV rapid test at 12 and 24 months. In some cases, a child may have a negative HIV rapid test at 12 or 24 months of age whilst they had a positive DNA-PCR result earlier in life. These discordant results cause confusion for many pediatric providers and require a tiebreaker to determine if ART should be continued. Tracking and follow-up of discordant results is performed with repeat DNA-PCR as a tiebreaker. Surprisingly, a repeat DNA-PCR turns out negative in some, and positive in others. In these cases another tiebreaker is needed apart from repeating DNA-PCR.

Description: At Baylor-Malawi, 14 infants were identified in 2012, who had an initial positive DNA-PCR early in life, were started on ART and found to have negative rapid tests at 12 or 24 months. Of infants who received repeat DNA PCR tests, two had NEGATIVE repeat DNA-PCR and two had POSITIVE repeat DNA-PCR. The rest are pending at the time of writing.

Lessons Learned: Some exposed infants with a positive DNA-PCR test early in life have a negative confirmatory rapid test, and a negative tiebreaker DNA-PCR. These infants need a second tiebreaker to determine final HIV status.

Next Steps: Repeating DNA PCR can confirm HIV status in some infants with discordant test results. However, in children with persistently discordant results, additional methods of testing are needed to determine definitive HIV status apart from repeating yet another DNA-PCR, where possible a viral load could be used to break the tie.

OPSOCLONUS-MYOCLONUS-ATAXIA IN AN HIV-INFECTED PEDIATRIC PATIENT: A CASE REPORT

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Abstract:
Issues: Opsoclonus-myoclonus-ataxia (OMA) syndrome is a rare disorder consisting of chaotic conjugate saccades in all directions of gaze, along with ataxia and myoclonus. While 50% of cases occur as a paraneoplastic syndrome with neuroblastoma, other infections such as streptococcus and a variety of viruses have also been implicated.

Description: A 7 year old on AZT/3TC/NVP since November 2007, CD4= 728 in August 2011, defaulted off ART since Oct 2012 presented in December 2012 with six days of worsening gait abnormalities. He had been started on amitriptyline three days prior for presumed peripheral neuropathy with no improvement. He denied fevers, headaches, neck stiffness, vision problems, numbness, or tingling. He had never had similar episodes previously, and had not had any recent illnesses. On physical examination, he had "dancing" eye movements with ataxia and truncal titubation. The rest of the neurologic exam was normal. Amitriptyline was discontinued. As the patient was otherwise well-appearing, he was restarted on Bactrim and monitored closely with 1-2 week follow up visits. The ataxia and opsoclonus slowly resolved without intervention over the course of two months. Head CT was normal. Due to problems with adherence to Bactrim, he was not restarted on ART at the time of writing.

Lessons Learned: Less than ten cases of OMA in HIV-infected patients have been reported, and only one in a pediatric patient. Most patients were treated with IVIG or steroids. Due to the lack of IVIG in Malawi and hesitancy to provide steroids in already immunocompromised patients, the decision was made to monitor clinically. His case demonstrates that OMA may resolve spontaneously in patients with HIV; in resource-limited settings such as ours, close monitoring may be sufficient. Furthermore, most cases of HIV-associated OMA occured at the time of seroconversion or during immune reconstitution after starting ART. Our patient does not fall into those two categories, but likely had a rising viral load and falling CD4 due to defaulting off ART.

Next Steps: More needs to be learned about HIV- associated OMA and its pathophysiology. Appropriate diagnostic and treatment recommendations for patients, especially in resource-limited settings, need to be developed further.

CARDIAC DYSFUNCTION IN HIV POSITIVE MALAWIAN YOUTH

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Abstract:
Background/Hypothesis: Traditional measures of cardiac function are often normal in HIV+ children on antiretroviral therapy (ART). Previously, strain analysis showed subtle cardiac dysfunction in HIV+ youth. We hypothesized that, using speckle tracking, we would detect subtle cardiac dysfunction in this larger cohort of Malawian children.

Materials and Methods: In this prospective observational study of children aged 4-18, we recruited 241 HIV+ youth, and 95 HIV- controls. An echocardiogram and 6 minute walk test (6MWT) were performed. CD4 count and HIV viral load were performed on HIV+ subjects. Ejection fraction, strain, and strain rate were measured. Within the HIV+ group, analysis of covariance was implemented to compare means of cardiac function and performance on the 6MWT in HIV+ children on and off ART as well as HIV- children controlling for age, sex, and BMI. Regression models evaluated whether cardiac function was related to CD4 count or log viral load. T-test was used to compare function measures between those with detectable and undetectable viral loads.

Results: The HIV- subjects performed better on the 6MWT ($p = 0.001$). HIV+ on ART averaged 470m, HIV+ off ART averaged 460m, and HIV- averaged 500m. Cardiac function and strain were normal for all groups. EF and strain were not related to CD4 count or log viral load. Among HIV+ participants, children with undetectable viral loads had more negative global circumferential strain (GCS) as compared to those with detectable viral loads ($p = 0.02$).

Conclusions: HIV+ children had decreased exercise performance as compared to controls. HIV+ children did not exhibit decreased strain as compared to controls.
Detectable viral loads were associated with worse GCS, suggesting that viral suppression may delay the onset of cardiac dysfunction. Although these children do not exhibit clinical cardiac dysfunction at this time, long term evaluation is warranted.

ROMANIA

DESCRIPTION OF THE PRECIOUS CHILDREN PROGRAM AT THE ROMANIAN CLINICAL CENTER OF EXCELLENCE: 5 YEARS OF EXPERIENCE

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Abstract:
Issues: Thanks to the advances of HAART and to the establishment in 2001 of the Romanian American Children's Centre (RACC) the HIV infected children and adolescents in Constanta County grew into young adults and had to face developmentally appropriate life tasks related to career, family and parenthood. As such, starting with 2005 the first children of patients in care at the former RACC were born. BBSF has formally set a complex PMTCT program in 2008; this program is recognized by the community as the Precious Children (PC) program.

Description: The PC program is based on a partnership between several institutions (BBSF- IDHC- AMERICARES/ ABBOTT- INSTITUTE OF VIROLOGY- COUNTY ON/ GYN WARD) and it involves both the medical and the psychosocial teams lead by a case manager. It consists of two major components : pre- delivery care of the pregnant woman and post delivery care of the newborn and his family. During the past 5 years 120 children were born (90% from HIV+ mothers, 10% from couples with HIV+ father and negative mother). We will discuss the groups of mothers and children in terms of demographics, effectiveness of PMTCT and other prophylaxis interventions (TB, hepatitis, STDs, nutrition), ARV adherence, as well as current health status of children in care.

Lessons Learned: HAART is safe and effective as a PMTCT intervention for the mother and the child, but HAART alone is not enough since the medical and psychosocial characteristics of our patients raise unique challenges that can only be overruled through a team approach.

Next Steps: Although successful, the PC program needs to enhance its prevention components: family planning, TB prophylaxis, immunizations, behavioral medicine for life style changes.

SWAZILAND

REPRODUCTIVE CHOICES AND FAMILY PLANNING FOR WOMEN LIVING WITH HIV IN SWAZILAND: IMPLEMENTING THE JADELLE IMPLANT

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Abstract:
Background: The Jadelle Implant is a long-acting progestin-only contraceptive device that lasts up to five years with reported annual pregnancy rates of 0-0.8%, similar to that of sterilization. Robinson et al. (2012) have shown that there are both decreased levels of estrogen and progesterone in women taking certain antiretroviral (ARV) drugs in addition to oral contraceptive pills. To date, there is no published data regarding the efficacy of the Jadelle Implant for women on anti-retroviral therapy.

Methods: This study is a retrospective chart review using the Baylor Swaziland electronic medical records in addition to an internal register of all women who had the Jadelle Implant placed at the clinic in Mbabane, Swaziland.

Results: Five hundred seventy women had implants placed at the Baylor Clinic between September 2010 and May 2012. Sixteen (2.8%) of these women became pregnant using the implant. Two additional women were presumed pregnant prior to implant insertion and were thus excluded from further analysis. One of the sixteen was not on ARVs at the time of pregnancy. The mean time elapsed between implant insertion and pregnancy was 16.4 months (SD 5.5). There was no significant difference between those that were pregnant and those that were not with regards to age, condom use or CD4 count. The ARV regimen at the time of pregnancy (or study conclusion) significantly affected pregnancy outcomes ($p<0.001$). Of the 208 women on Nevirapine (NVP) based regimens, none became pregnant. Of the 18 women on Lopinavir/ritonavir (LPV/r) based regimens, none became pregnant. While of the 121 women on Efavirenz (EFV) based regimens, there were fifteen pregnancies (12.4%).

Conclusions: The Jadelle Implant appears to be an effective form of contraception for women on NVP and LPV/r based ARV regimens. In women that are taking EFV, however, the implant does not appear to be effective thus considering an alternative mode of family planning in these women is strongly suggested.

H – 30667

TANZANIA

FACILITY-BASED TARGETED APPROACH TO INCREASE PEDIATRIC HIV CASE IDENTIFICATION IN THE SOUTHERN HIGHLANDS ZONE, TANZANIA

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Abstract:
Introduction: Tanzania has set a pediatric target of >20% of total enrolment in CTC and on antiretroviral therapy (ART), however children represent only 8% nationwide. In the Southern Highlands Zone (SHZ), the Baylor has adopted the Know Your Child's Status (KYCS)/facility-based testing (FBT) approach targeting testing of CTC patients' children. This study evaluates FBT outcomes and cost-effectiveness as compared to conventional community testing.

Methods: Retrospective review of FBT events conducted at SHZ CTCs from November 2011 to December 2012. Data collected: age, gender, location, HIV test and DBS results and costs. Data collected was compared to similar data of local conventional community testing.

Results: 25 FBT events: 3,236 children <15 years tested. 42% male. 2.3% (76/3236) were HIV-exposed infants (HEI) <18 months of age. 3.7% (116/3160) were HIV-infected; 10.5% (8/76) of HEIs with positive DNA PCR. Overall positive (non-HEIs + HEIs) = 3.8% (124/3236). Median age of children newly HIV-infected=8 years. Average cost-per-event was $355 USD. Cost for infected/exposed-with-PCR sent was $32 USD. District location of newly diagnosed children: Mbozi 5.3%, Chunya 2.3%, Mbeya Urban 5.2%, Ileje 3.9%, Mbarali 9.5%, Kyela 5.3%, Rungwe 2.9%. 2 non-FBT events: 4509 children <15years tested. 47% male. 0.6% (28/4509) were HEIs. 0.8% (36/4473) were newly HIV infecte); 17% of HEIs (5/28) with positive DNA PCR. Overall positive (non-HEIs + HEIs)= 0.9% (41/4509). Average cost per event was $2625 USD. Cost for infected/exposed-with-PCR sent was $67 USD.

Conclusions: FBT approaches identify HIV-infected and –exposed children at rates and costs more favorable than conventional community-based testing. Future studies are needed to evaluate outcomes including rates of pediatric enrolment into and retention in care, baseline characteristics and associations of cases identified via FBT approaches and additional comparative cost analyses of FBT KYCS approaches as they go to scale.

H - 32491

THE BAYLOR - MBEYA (TANZANIA) PEDIATRIC HIV/TB CLINIC - DESCRIPTION OF FIRST SIX MONTHS

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Abstract:
Introduction: In November of 2011, the Baylor Tanzania Center of Excellence (COE) in Mbeya became an nationally-recognized pediatric TB clinic providing comprehensive TB/HIV treatment and care. This study describes baseline characteristics and outcomes of HIV/TB co-infected patients enrolled during the first 6 months of the clinic's operation.

Methods: Retrospective chart review at the COE between November 2011 and May 2012. Baseline data: gender, age, HIV status (infection/exposure), WHO clinical/immunological stage, ART status and regimen, time between TB suspicion and anti-TB therapy (ATT) initiation, and TB contact history. Outcomes data after completion of TB therapy: treatment outcome, HIV status, WHO clinical/immunologic stage, ART status and regimen, medication discontinuation due to adverse events (AEs).

Results: N=43. 44% female (19/43); age 1.7-17.6 years (mean 7.2yr). 86% (33/43) HIV-infected, 14% (6/43) HIV-exposed. WHO clinical stage IV=65% (28/43), III 35% (15/43). Of those with baseline CD4 data (n=30), 37% (11/30) severe and 30% (9/30) advanced WHO immunological stage. 44% (19/43) were on ART prior to and during TB therapy. 53% (10/19) were on EFV-based regimen, 42% (8/19) on NVP-based regimen, and 5% (1/19) on LPV/r-based regimen. Average time from initial TB suspicion to ATT initiation 10 days (median 5 days; range 1-67 days; n=29). 19% (8/43) reported a known TB contact. Outcomes data: 72% (31/43) completed treatment or cured per national definitions. 14% (6/43) died. 9% (4/43) defaulted (lost-to-follow up), and 5% (2/43) transferred. 88% (38/43) were confirmed HIV-infected and 12% (5/43) were confirmed HIV-negative. Of those with baseline and outcome CD4 data (n=19), 74% (14/19) experienced improvement in degree of WHO immunologic suppression, 21% remained the same (4/19), and 5% worsened (1/19). 97% of those HIV-infected (37/38) were on ART during TB treatment, 59% (22/37) using EFV-based regimen, 32% (22/37) using NVP-based regimen, and 8% (3/37) using LPV/r-based regimen. No patients discontinued ATT due to adverse events.

Conclusion: Integrated pediatric TB/HIV treatment is possible in our resource-constrained setting, and early outcomes appear favorable. Challenges exist in lost-to-follow up. Additional research is needed regarding TB diagnostics and comparing TB outcomes by ART regimen.

H - 32491

ANTIRETROVIRAL TREATMENT (ART) IN HIV-INFECTED CHILDREN LESS THAN AGE 24 MONTHS IN MBEYA, TANZANIA

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Baylor College of Medicine Children's Foundation - Tanzania

Abstract:
Introduction: 2010 WHO guidelines recommending all HIV-infected children < age 24 months be initiated on ART was adopted in 2012 in Tanzania. This study describes the baseline characteristics and 12 month outcomes of a cohort of HIV-infected Tanzanian infants ages 24 months or less initiated on ART.

Methods: Retrospective chart review from from Centre of Excellence (COE) in Mbeya, Tanzania. Inclusion criteria: HIV-infected children 24 months of age or less initiated on ART between March 2011-January 2012. Baseline data at ART initiation: gender, age, WHO clinical/immunological stage, breast-feeding status, PMTCT history, and ART regimen. 12-month outcomes: mortality, lost-to-follow up (LTFU), transfer, WHO clinical/immunological stage.

Results: N=53. *Baseline data:* 42% female (22/53); age range 2-23 months (median 14.4 months). WHO clinical stage: IV=49% (26/53); III=25% (13/53); II=6%(3/53); I=21%(11/53). Of 50 children's baseline CD4 data available: 36% severe (18/50); 24% advanced (12/50) WHO immunological stage. 15% (8/53) had documented exposure to NVP (PMTCT); 85% (45/53) no documented PMTCT. 19% (10/53) exclusively breastfeeding; 28% (15/53) mixed feeding; 53% (28/53) ceased breastfeeding. All initiated on NVP-based regimen: 81%(43/53) AZT+3TC backbone, 19%(10/52) d4T+3TC backbone. *12 month outcomes*: 7 (13%) died; 9 (17%) LTFU; 2 (4%) transferred out. For 36 active patients, WHO clinical stage: 89% (32/36) TI, 3% (1/36) TII, 0% TIII and 9% (3) TIV; Immunologic stage response: of initial severe immunosuppresion (n=18), 78% (14/18) improved to no immunosuppression, 6%(1/18) improved to advanced, 6%(1/18) remained severe and 11% (2/18) no follow up data; of initial advanced immunosuppression (n=12), 58% improved to no immunosuppression, 8%(1/12) improved to mild, 25%(3/12) remained advanced and 8%(1/12) no followup data. Mortality: 29% (2/7) initially severe immunologic stage and 29% (2/7) initially advanced. Median time on ART until death: 80 days (range 14-398). LTFU: 11% (1/9) initially severe immunologic stage and 22% (2/9) advanced.

Conclusions: Good 12-month outcomes are possible in our setting, though challenges exist for early infant diagnosis and retention in care. Even on ART, HIV-infected infants may experience appreciable mortality, and close follow-up is warranted. Longer-term and prospective outcomes, including effectiveness of NVP-based ART after NVP-exposure in PMTCT, are needed.

H - 32491

CHARACTERISTICS AND OUTCOME OF HIV POSITIVE CHILDREN WITH SEVERE MALNUTRITION IN THE LAKE ZONE, TANZANIA

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Abstract:
Background: Malnutrition is among one of the most severe co-morbidities of children living with HIV. Identifying characteristics of severely malnourished HIV positive children will give light on how best we can manage these patients. This study describes the characteristics and early outcomes after nutritional support of HIV positive children with severe malnutrition at the Lake Zone COE in Mwanza.

Method: This is a retrospective cohort study from the Lake Zone COE in Mwanza utilizing data from the EMR. Severely malnourished HIV positive children who were diagnosed between the period of January 2012 and September 2012 were included. The following variables were evaluated at baseline and after three months: age, CD4 count or percentage, cotrimoxazole prophylaxis, ART status, WHO stage, treatment WHO stage, co morbidity and nutritional status. Co morbidity was defined as an illness or medical condition that affects nutritional status.

Results: Data was analyzed from 40 HIV positive children diagnosed with severe malnutrition. Baseline data revealed 32.5 % (13/40) were < 5years, 42.5 %(17/40) between 5-14years and 25 %(10/40) were >14 years of age. Females were 52.5 % (21/40). 30 children (75%) were on cotrimoxazole and 31 (77.5 %) were on ART. Majority 26/40(65%) had been on ART for less than six months. For those children greater than 5 , 48.2% (19/40) had CD4 counts >350 cells/ul. For the children <5 years, 53.8 %(22/40) had a CD4 percent more than 25%. Majority 21/40 (52.5%) of children were WHO stage 4. Nine children (22.5%) had co morbidity with depression ranking high (33.3%); other conditions were JIA, chronic anemia, LIP, chronic lung diseases and KS. Analysis after three months of nutritional support (and ART for those not previously on ART) revealed 55.6% of those who were above age 5 years had CD4 counts above 350cells/ul. Likewise those at the age of 5 years and below, 76.9% had CD4% more than 25%. 75% of the children were receiving cotrimoxazole prophylaxis. Treatment WHO stage 4 was still noted in 22.5%, stage 3 in 10%, stage 2 in 10% and stage 1 in 25%.

Conclusion: Our severely malnourished cohort needs further evaluation, including stratification of outcomes by time on ART, as well as prospective longitudinal evaluation and analysis of malnutrition determinants in our population. These studies are planned. Nonetheless, our early data suggests immunologic improvement with nutritional therapy and ART, alongside expected anthropometric changes. Care needs to be taken with severely malnourished HIV-infected children, including the universal application of preventive measures such as immunizations and cotrimoxazole prophylaxis.

H – 3268

HIV-EXPOSED INFANT CARE AT A PEDIATRIC CENTER IN MWANZA, TANZANIA

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Abstract:
Introduction: The majority of HIV-infected children acquire infection vertically through mother-to-child transmission (MTCT). With implementation of WHO's 2010 PMTCT guidelines, MTCT is expected to drop significantly. However, in Tanzania MTCT remains high and HIV-exposed infants (HEI) are at risk for significant morbidity and mortality without appropriate care. Important markers of HEI care are PMTCT prophylaxis, early infant diagnosis, cotrimoxazole prophylaxis, appropriate infant feeding, and early initiation of ART in infants testing positive. Retention in care until definitive diagnosis is essential.
This study evaluated a cohort of HEI at the Baylor College of Medicine Children's Foundation- Tanzania Clinical Center of Excellence in Mwanza, Tanzania to determine if HEIs are receiving appropriate care and follow-up and to determine rate of MTCT.

Methods: Retrospective chart review of HEI enrolled into care between March 1, 2011-December 31, 2012. Inclusion criteria: infants less than 18 months of age at enrollment born to HIV-infected mothers. HEIs were excluded if their HIV-status was already known at the time of enrollment into the clinic. Baseline and outcomes data were evaluated.

Results: 242 HEI identified with the following characteristics: 122 Female, 120 Male; median age at enrollment 4.7 months (range 0–17.4 months); median age of cotrimoxazole initiation 2.1 months (range 0-15.0) for 99 patients; for 147 infants <6 months at enrollment: 60.5%(89) EBF, 18.4%(27) mixed feeding, and 16.3%(24) no breastfeeding. Nutritional status: 16.8% severe acute malnutrition, 8.8% moderate malnutrition.

Initial dried blood spot [DBS (HIV DNA PCR)] data available for 180 infants: median age-at-collection 10.5 months (range 0.9-20.7 months); results 27.2%(49/180) positive and 72.8%(131/180) negative. 6 additional patients were found to be positive on second DBS. Altogether 55 patients had positive DBS results. Presumptive diagnosis of severe HIV infection (using WHO criteria), was made in 19.0%(46). Maternal PMTCT status known: ART 34.2%(83/243), no PMTCT 32.9%(80/243), and AZT/sd-NVP prophylaxis given 13.6%(33/243). Infant PMTCT known: 46.1%(112/243) received daily NVP, 7.0%(17/243), some other combination 36.2%(88/243) no PMTCT. For infants with known maternal PMTCT status, transmission rates: maternal ART 0%, no PMTCT 20.6%, AZT/sd-NVP prophylaxis 8.3%. 90.1%(50) of positive infants were started on ART, median age at ART start 9.2 months (range 3.1-18.7). 12.4%(30) of the infants were followed until 18 months-of-age and discharged, 24.8%(60) were lost to follow up below 18 months, and 4.5%(11) died. 14%(34) of patients are in care, on ART. Currently 34.7%(84) of patients are still active in care awaiting definitive diagnosis.

Conclusions: Application of PMTCT interventions in our setting is incomplete, with marked contribution to a substantial rate of HEI becoming HIV-infected. Maternal ART's notable effect in this non-study routine care setting is promising for Tanzania's planned rollout of Option B+. Besides improved PMTCT access, areas for improvement include enrolling infants into care at an earlier age and enhancing efforts to retain them in care. The relatively common occurrence of HIV infection in infants with an initial negative DBS emphasizes the need to support appropriate infant feeding and post-natal PMTCT interventions, as well as to keep HEI in care until definitive HIV diagnosis.

HIV-INFECTED CHILDREN WITH SEVERE ACUTE MALNUTRITION (SAM) AT THE BAYLOR CENTRE OF EXCELLENCE (COE) IN MBEYA, TANZANIA

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Abstract:
Introduction: In Tanzania, 44% of the population is classified as undernourished, and Mbeya's regional rate for severe acute malnutrition (SAM) was noted as less than 1% for children under 5 years. This low rate in Mbeya region does not reflect our experience at the COE. This study aims to describe the characteristics and outcomes of HIV infected children under- 5 years diagnosed with and treated for SAM in the Mbeya COE's malnutrition programme.

Methods: Retrospective chart review. Inclusion criteria: HIV-infected children under age 5 years enrolled at the Mbeya COE from 1 March 2011—31 January 2013 diagnosed with SAM as defined by WHO criteria. Baseline data: age, gender, type of SAM, ART status, breastfeeding (BF) status. Outcomes data assessed at 6-months post-enrolment: mortality, lost-to-follow-up (LTFU), active care and time-to-recovery.

Results: Baseline data: 34% (369/1098) of all children under-5 enrolled at the COE were diagnosed with SAM, and 120 (33%) were definitively HIV-infected. 46% (55/120) females; median age at enrolment was 17 months (3—60 months). 70% (84/120) with marasmus, 18% (21/120) kwashiorkor, and 13% (15/120) mixed-type SAM. 93% (111/120) on ART, with 58% (64/111) initiated on ART before enrolling and 39% (47/111) initiated ART after enrolment into malnutrition programme. Mean time of ART initiation was 30 days for those initiated after enrolment. 19% (23/120) were BF at time of enrolment; 78% (18/23) mixed BF; 22% exclusively BF. *Outcomes data at 6 months*: LTFU = 3% (4/120), Died = 4.2% (5/120); 14.2% (17/120) cured defined as a normal WHZ score and/or MUAC, and the remaining 78% (94/120) are actively receiving care in the malnutrition program. Mean time-to-recovery was 3 months (range: 1—6.3 months).

Conclusions: SAM is a common presentation for HIV-infected children at our site. There were too few children with SAM not on ART to conclude the effect of ART's on recovery rate, but mortality rates on ART were low, underpinning its importance to this population. Long-term clinical outcomes and predictors of treatment response and mortality in HIV-positive children with SAM in our setting are of interest.

H - 32491

CHARACTERISTICS AND OUTCOMES OF HIV-EXPOSED INFANTS AT THE BAYLOR CENTRE OF EXCELLENCE (COE) IN MBEYA, TANZANIA

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Abstract:
Introduction: 2010 WHO guidelines recommending all HIV-infected children < age 24 months be initiated on ART was adopted in 2012 in Tanzania. This study describes the baseline characteristics and 12 month outcomes of a cohort of HIV-infected Tanzanian infants ages 24 months or less initiated on ART.

Methods: Retrospective chart review from from Centre of Excellence (COE) in Mbeya, Tanzania. Inclusion criteria: HIV-infected children 24 months of age or less initiated on ART between March 2011-January 2012. Baseline data at ART initiation: gender, age, WHO clinical/immunological stage, breast-feeding status, PMTCT history, and ART regimen. 12-month outcomes: mortality, lost-to-follow up (LTFU), transfer, WHO clinical/immunological stage.

Results: N=53. *Baseline data:* 42% female (22/53); age range 2-23 months (median 14.4 months). WHO clinical stage: IV=49% (26/53); III=25% (13/53); II=6%(3/53); I=21%(11/53). Of 50 children's baseline CD4 data available: 36% severe (18/50); 24% advanced (12/50) WHO immunological stage. 15% (8/53) had documented exposure to NVP (PMTCT); 85% (45/53) no documented PMTCT. 19% (10/53) exclusively breastfeeding; 28% (15/53) mixed feeding; 53% (28/53) ceased breastfeeding. All initiated on NVP-based regimen: 81%(43/53) AZT+3TC backbone, 19%(10/52) d4T+3TC backbone. *12 month outcomes*: 7 (13%) died; 9 (17%) LTFU; 2 (4%) transferred out. For 36 active patients, WHO clinical stage: 89% (32/36) TI, 3% (1/36) TII, 0% TIII and 9% (3) TIV; Immunologic stage response: of initial severe immunosuppresion (n=18), 78% (14/18) improved to no immunosuppression, 6%(1/18) improved to advanced, 6%(1/18) remained severe and 11% (2/18) no follow up data; of initial advanced immunosuppression (n=12), 58% improved to no immunosuppression, 8%(1/12) improved to mild, 25%(3/12) remained advanced and 8%(1/12) no followup data. Mortality: 29% (2/7) initially severe immunologic stage and 29% (2/7) initially advanced. Median time on ART until death: 80 days (range 14-398). LTFU: 11% (1/9) initially severe immunologic stage and 22% (2/9) advanced.
Conclusions: Good 12-month outcomes are possible in our setting, though challenges exist for early infant diagnosis and retention in care. Even on ART, HIV-infected infants may experience appreciable mortality, and close follow-up is warranted. Longer-term and prospective outcomes, including effectiveness of NVP-based ART after NVP-exposure in PMTCT, are needed.

H - 42491

ANTIRETROVIRAL TREATMENT (ART) IN CHILDREN 24 MONTHS OF AGE OR YOUNGER IN MWANZA, TANZANIA: CHARACTERISTICS AND OUTCOMES

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Abstract:
Introduction: Greatest mortality risk for HIV-infected children occurs in the first few years of life, yet early antiretroviral therapy initiation improves survival, and the World Health Organization (WHO) recommends that all HIV-infected children < 24 months of age should be initiated on ART regardless of CD4 percentage. This study describes characteristics and 12-month outcomes of patients < 24 months of age started on ART at the Baylor Children's Foundation-Tanzania Children's Clinical Centre of Excellence (COE) in Mwanza, Tanzania.

Methods: Retrospective chart review. Inclusion criteria: children<age 24 months initiated on ART from March–December 2011. Data collected: ART initiation date, age-at-initiation, ART regimen, gender, PMTCT exposure, ART adherence, mortality, and baseline/12 month CD4%, WHO T-stage, and nutritional status.

Results: 30 children's data was reviewed; 2 transfer-out were excluded. 61% male (17/28). Median age-at-initiation 13.7months (range 5.6–23 months). 93%(26/28) initiated on AZT/3TC/NVP. Median baseline CD4% 18.9 (range 7 – 33). At baseline, 68%(19/28) severe WHO immunologic classification, 14%(4/28) advanced, 7%(1/28) mild, 11%(3/28) none, 4%(1/28) with no data. Outcomes: At 12 months post-initiation, 79%(22/28) had a CD4% rise > 5. Median CD4% increase was 12.6 (range -13–30). Of 19 with severe WHO immunologic baseline stage, 47%(9/19) improved to no immunosuppresion at 12 months, 32%(6/19) to mild, 21%(4/19) to advanced, and 5%(1/19) remained severely immunosupressed. Of 4 with baseline advanced WHO immunologic stage, 50%(2/4) improved to no immunosuppresion at 12 months, 50%(2/4) to mild. 86%(24/28) had good adherence to ART, defined as >2/3rds visits with 95-105% pill counts.

Patients with good adherence had mean increase CD4% of 13.7, compared to 6.5 increase for those patients with poor adherence. Baseline WHO stage I–18%(5/28), II–4%(1/28), III–54%(15/28), IV–25%(7/28). 12 months T-stage: I–89% (25/28), II–7% (2/28), IV–4% (1/28). 39%(11/28) of patients were malnourished at baseline (by WHO W/H standard deviation criteria): Mild–36%(4/11), Moderate–18%(2/11), Severe–45%(5/11). 82%(9/11) of malnourished patients had normal nutritional status 12-month post ART initiation. Of the 5 patients with baseline severe malnutrition, 80%(4/5) improved to normal nutritional status at 12 months, 20%(1/5) remained severely malnourished. Of the 2 patients with baseline moderate malnutrition, 100%(2/2) improved to normal nutritional status at 12 months. 29%(8/28) had documented maternal or infant PMTCT. 50%(14/28) of patients lacked PMTCT documentation. There were neither deaths nor LTFU 12 months post-ART initiation.

Conclusions: Most children<age 24 months initiated on ART in our setting experienced notable clinical and immunological improvements in their first year of ART. Cohort retention was excellent, and the lack of deaths is very encouraging. While the COE is not typical of ART sites in Tanzania, a very active mentoring programme emanating from the COE seeks to allow attachees from district hospitals and health centres to develop high-quality paediatric ART management skills. This study was not powered to determine if previous PMTCT exposure affects outcomes, a variable of interest in future infant studies in our setting.

H - 32678

SECOND-LINE ANTIRETROVIRAL TREATMENT IN CHILDREN: CHARACTERISTICS AND OUTCOMES IN TANZANIA'S LAKE ZONE

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Abstract:
Introduction: While first-line ART is still scaling-up in Tanzania, failure of first-line ART in Tanzanian children is becoming increasingly more common. Yet data from paediatric patients on second-line ART in settings such as ours are scarce. This study seeks to characterize and describe outcomes from children and adolescents on second-line ART at the Baylor Children's Foundation – Tanzania Centre of Excellence (COE) in Mwanza.

Methods: Retrospective chart review. Inclusion criteria: Children on 2nd line-ART for minimum 6 months between March 2011-December 2012. Data collected: date of birth, gender, 1st/2nd-line regimens, date of 1st/2nd-line initiation, date when ART failure first suspected failure, peak CD4 prior to 2nd-line, adherence to medicines, CD4/nutrition status prior to 2nd-line and as of December 2012.

Results: A total of 41 children's data were reviewed. By December 2012, 3 were transferred to adult care, 2 died (5%), and 1 patient excluded from outcomes analysis due to lack of data. 56% male(23/41). Median age at 2nd-line initiation was 13.1years (range 3.3–18.4 yrs). Median CD4 at baseline was 74cells/uL (range 2 – 314). 2nd-line regimen initiated was ABC/3TC/LPVr for 63%(25/40) of patients, TDF/FTC/LPVr for 35%(14/40). Median duration of time from peak CD4 to change to 2nd-line was 17.9months (range 7 – 60 mo). Mean decline in absolute CD4 from peak to time-of-change to 2nd line regimen was 69% (range 22%–98%). As of December 2012, 87% of our patients (33 of 38) had CD4 rise > 50cells/uL or > 5%. Average CD4 rose by 418cells/uL (range 25 – 1616, median 411). 70%(28/40) had good adherence to 2nd-line regimen, defined as >2/3rds visits with 95-105% pill counts. 89%(24/27) of patients with good adherence would have a CD4 rise of at least 50 cells/uL or 5%, compared to only 82%(9/11) of patients with poor adherence. The 2 patients that died had poor adherence and intense psychosocial problems. Patients started on 2nd line regimen with ABC/3TC/LPVr had an average absolute CD4 rise of 494cells/uL (range 25 – 1616, median 520.5), compared to those started on TDF/FTC/LPVr who had an average rise of only 295cells/uL (range 19 – 682, median 297). 46%(19/41) patients were malnourished (by WHO W/H or BMI standard deviation criteria) at time of 2nd-line HAART initiation and as of December 2012, 68%(13/19) of the malnourished patients had been corrected to normal nutritional status. 7.5%(41/549) of all children on ARVs at our clinic were on 2nd-line regimen.

Conclusions: Most children switched to second-line ART in our setting have substantial improvement in clinical and immunological parameters. Of interest in our cohort of children on second-line ART is prospective evaluation of clinical outcomes, as well as predictors of long-term ART outcomes and virological/genotypic assessment of patients switched to second-line ART and not responding; future studies will be designed to look at these areas. Whether particular nucleoside reverse transcriptase inhibitor backbones are associated with better immunological responses when paired with lopinavir/ritonavir is also of interest.

H - 32678

PRESUMPTIVE DIAGNOSIS OF HIV INFECTION IN HIV-EXPOSED INFANTS AND CHILDREN UNDER 18 MONTHS OF AGE IN A PEDIATRIC HIV CENTRE IN TANZANIA'S LAKE ZONE

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Abstract:
Introduction: Early identification of HIV-infected infants and prompt initiation of antiretroviral therapy (ART) is crucial to morbidity/mortality reduction and long-term survival of HIV-infected infants. Yet in many resource-limited settings, including ours, definitive virological testing is either unavailable or does not yield timely results. At the Baylor Children's Foundation-Tanzania Lake Zone Centre of Excellence (COE) in Mwanza, WHO guidelines for presumptive HIV diagnosis are employed to evaluate symptomatic HIV-exposed infants and initiate ART while awaiting definitive diagnosis [DNA PCR via dried blood spot (DBS)]. This study evaluates the effectiveness of presumptive diagnosis criteria in predicting HIV-status in symptomatic HIV-exposed infants at the COE.

Methods: Retrospective chart review. Inclusion criteria: infants<18 months with presumptive HIV diagnosis made according to WHO guidelines (positive HIV rapid test+ either WHO Stage 4 condition or 2-out-of-3 of the following conditions: thrush, sepsis, severe pneumonia) between March 1, 2011-December 31, 2012. Baseline and outcomes data were evaluated.

Results: Patient characteristics:57% female(21/37), 43% male(16/37);age-at-enrollment [2.6-16.6 months(median 8.5 months)];89% of mothers alive at infant's presentation; mothers receiving no maternal-PMTCT 70%(26/37);mothers with unknown PMTCT status 8%(3/37); infants receiving no infant-PMTCT (NVP) 57%(21/37), infants with unknown PMTCT status 8%(3/7); positive rapid tests documented for 76%(28/37) of infants presumptively diagnosed; severe acute malnutrition (SAM) 86%(32/37), moderate acute malnutrition 5%(2/37);19%(7/37) exclusively breastfeeding at enrollment, 43%(16/37) mixed feeding, and 35%(13/37) not breastfeeding; 32%(12/37) on anti-TB treatment; baseline CD4 % [2%-38%(median 16%)]. Patient outcomes as of 31Jan2013: only 14%(5/37) had no documented hospitalization; 62%(23/37) of presumptively diagnosed infants alive and actively attending clinic, 19%(7/37) died and 19%(7/37) are lost to follow-up. Interval from date of presumptive diagnosis to ART initiation [0-3.5months(median 0.3months)]. Of 32 infants initiated on ART, 11 had been identified as inpatients (malnutrition ward-Bugando Hospital) and initiated ART at first visit to the COE.

DBS results: Available for 97%(36/37) of infants,76%(28/37) positive,21%(8/37) negative,3%(1/37) unknown with subsequent rapid test positive after age 18 months. Of the 8 infants with initial DBS negative, 25%(2/8) subsequently with positive DBS-hence, ultimately HIV-infected infants accurately presumptively diagnosed=84%(31/37). DBS results turn-around-time 0.4-2.5months (median1.4 months). 6 of the 7 presumptively-diagnosed infants who died had positive DBS and 1 had an initial DBS negative with second DBS=unknown results+ positive rapid test post-18 months confirming HIV infection.
Time from presentation-to-death[0.03-19.3 months(median3.6 months)], presumptive diagnosis-to-death[0.03-16.6 months(median 3.5 months)], ART initiation-to-death[0.03-16.3 months(median 2.4 months)].

Conclusions: In our setting, WHO criteria for presumptive diagnosis predicted ultimate HIV diagnosis with appreciable accuracy. This study supports the notion that initial negative DBS results in breastfeeding HIV-exposed infants must be interpreted with caution and testing algorithms followed through cessation of breastfeeding. Presence of SAM is a common indication for presumptive diagnosis in our setting; in-hospital presumptive diagnosis of HIV-exposed infants admitted with SAM facilitates early ART initiation. DBS result turn-around times noted here do not reflect the complete time for results to be communicated and acted upon; raising awareness at decentralized paediatric treatment sites of the utility of presumptive HIV diagnosis should facilitate both increased paediatric identification and better patient outcomes while EID systems strengthen.

H - 32678

KNOW YOUR CHILD'S STATUS TESTING EVENTS: A TARGETED STRATEGY FOR PAEDIATRIC HIV CASE IDENTIFICATION IN THE LAKE ZONE OF TANZANIA

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Abstract:
Introduction: Essential to successfully scaling-up paediatric HIV care and treatment is the identification of HIV-exposed and –infected children. While approximately 230,000 children are currently living with HIV in Tanzania, most have yet to be identified, and there are likely more than 100,000 children in the country in need of antiretroviral treatment not currently receiving it. General community-wide testing events have yielded low numbers of new paediatric HIV cases. As the vast majority of paediatric HIV cases are perinatally transmitted, children of HIV-infected parents enrolled in HIV Care and Treatment Centres (CTCs) in Tanzania are at higher risk of HIV infection, and targeted testing of them has potential for higher yields and better cost-effectiveness than general testing strategies. This study explores the yields and cost-effectiveness of the Baylor Children's Foundation-Tanzania's Know Your Child's Status Testing Events (KYCS) based at CTCs in the Lake Zone.

Methods: Retrospective review of all KYCS testing events at CTCs in the Lake Zone conducted between March 1, 2011-December 31, 2012. Data collected on testing day: gender, age, District of residence, test result. Additional information collected: type of center; center's Region; involvement of home-based care volunteers (HBCs) in sensitization pre-event; Baylor-sponsored community sensitization of leaders/influential people pre-event; past KYCS event conducted at site; overall costs for all KYCS-related events conducted in time period. Comparison was made to two non-CTC-based general testing events where the same data points were collected.

Results: KYCS events: 3,978 individuals tested [2,994 children;1,015 adults at 41 CTC-based events]. 108 children (3.61% of all children tested) and 120 adults (11.82% of all adults tested) were newly identified as HIV-infected and were enrolled at CTCs. 189 exposed infants (6.31% of all children tested) were identified and had DNA PCR tests sent on testing day. KYCS events cost approximately TSh4.3million. Mean cost/newly-identified HIV-infected child/HIV-exposed infant for whom DNA PCR was sent=TSh15,000 [approx.US$9]. Non-CTC-based general events: 346 individuals tested [209 children;137 adults]. 1 child (0.48% of all children tested) and 10 adults (7.3% of all adults tested) were newly identified as HIV infected. Regional KYCS results for % children either testing positive or having DNA PCR test sent were: Geita-17.98%, Kagera-7.95%, Kigoma-3.14%, Mara-10.86%, Mwanza-9.23%, Shinyanga-9.41%, and Tabora-33.33%.

Conclusions: KYCS testing events appear cost-effective in identifying HIV-infected/exposed children, and offer an additional benefit of linkage-to-care by their site-based nature. Adoption of this approach to the national scale-up strategy may help cost-effectively increase the number of children in care, a key programmatic goal. Effect of pre-event sensitization activities are of interest, although in this study no clear effect of sensitization was noted on patient turnout or testing yield; methodology yielding appropriate data particular to this question is in development. Assessing results by type of CTC (district hospital, health centre) is also of interest, and will help guide programme iterations..Given current systematic issues with DNA PCR testing at many sites (turnaround times, results notification to families, enrollment of HIV-infected infants into care), specific tracking mechanisms for DNA PCR testing during KYCS events should be implemented.

H - 32678

PRESUMPTIVE HIV DIAGNOSIS IN CHILDREN 18 MONTHS OF AGE OR LESS IN A PEDIATRIC HIV CENTRE IN MBEYA, TANZANIA

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Abstract:
Introduction: Early initiation of antiretroviral therapy (ART) is key to reducing morbidity and mortality amongst infants perinatally-infected with HIV, yet availability and effectiveness of virologic testing remains limited in many settings. This study describes the cohort of infants presumptively diagnosed with HIV at a pediatric HIV centre in Mbeya, Tanzania and evaluates the effectiveness of criteria used for presumptive diagnosis.

Methods: Retrospective chart review. Inclusion criteria: Infants </= 18 months with a presumptive HIV diagnosis made between March 2011 and January 2013. Presumptive HIV diagnosis based on positive rapid test results or known perinatal HIV exposure and WHO Stage III-IV defining condition. Baseline data and HIV rapid/virologic test results collected.

Results: Cohort = 69 patients. Age at enrolment: 1-18 mo (median = 9mo); 62% female. Positive rapid test documented: 65%. WHO clinical stage at presentation: III- 16%, IV- 84%. Common diagnoses: 77% severe acute malnutrition, 42% oral/esophageal candidiasis, 11.5% moderate acute malnutrition. Baseline CD4% range: 3-54% (median=15.5%). Virologic status: 84% positive, 9% negative, 7% DBS never sent/returned. Using our criteria for presumptive diagnosis, positive predictive value (PPV) was 91% and negative predictive value (NPV) was 87%. Time from presumptive diagnosis to ART initiation: 3 days-3mos (median=17 days). 17% died after enrolment. Time from enrolment to death: 0.1-7.7 mos (median= 2 mo). Of 12 presumptively diagnosed infants who died, 9 had +DBS and 3 died before DBS sent. Four infants who died were initiated on ART and survived a median time of 3 weeks. 26% of cohort LTFU. Time enrolled in care for those LTFU <30days -16mo (median=0.7 mo). 11.5% received some form of PMTCT; none of these died.

Conclusions: Utilizing WHO III clinical stage criteria alongside the typically applied WHO IV criteria to presumptively diagnosis HIV in HIV-exposed infants yielded with substantial accuracy a high proportion of virologically-confirmed HIV+ infants allowing early ART initiation. The importance of including moderate acute malnutrition (WHO III) into current presumptive diagnosis algorithms should be explored further. Careful attention should be provided to presumptively diagnosed infants as most HIV-infected infants LTFU experience mortality in the first few years of life without effective ART.

H - 32491

CHARACTERISTICS AND OUTCOMES OF HIV-INFECTED CHILDREN ON SECOND-LINE ANTIRETROVIRAL THERAPY IN MBEYA, TANZANIA

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Abstract:
Background: There remains a paucity of published data describing the experiences of HIV-infected sub-Saharan African children experiencing treatment failure (TF). This study aims to evaluate baseline characteristics and outcomes of HIV-infected Tanzanian children on second-line ART therapy.

Methods: Retrospective chart review from the Baylor Tanzania COE in Mbeya between March 2011-Jan 2013. Inclusion criteria=HIV-infected children on first-line ART diagnosed with TF and switched to second-line ART. Baseline data: age, gender, WHO T-stage, initial ART regimen, TF category (clinical/immunological/virological), duration of ART to TF diagnosis, duration of ART to switch to second-line ART, adherence (ADH), Viral Load (VL) and CD4 values prior-to-switch. Outcomes data: mortality, lost-to-follow up (LTFU), transfer, CD4, VL, and WHO T-stage 6 months post switch.

Results: N=49. Median age 15.7 years (3.7-20.7years); 45% female (22/49); WHO T-Stage: TIV= 16.3%(8/49); TIII=14.3%(7/49); TII=10.2%(5/49); TI=57% (29/49). Of 49 with available baseline CD4 values, median CD4=84 cells/uL (range: 6-7342); median nadir CD4 on ART=63 cells/uL(range: 6-1851). Of 35 patients with CD4 data prior to switch, 77% (27) had CD4<200. Average duration on ART to TF diagnosis=4.1yrs. Average duration of ART to switch=4.8yrs. Average duration of ART to lowest CD4 value=4 yrs. Category of TF: clinical alone=2% (1/49); immunological=34.6% (17/49); virological (>5000 copies/mL after 6 months on ART) =2%(1/49); combined=61%(30/49) with 47% diagnosed clinically & immunologically without VL. Of the ADH data available (average pill counts from last 3 visits): 55.5% with poor ADH (<95%, >105%); 27.8% with good ADH (95%-105%); 16.7% without data (pills not brought). *6-month outcomes*: 0% died; 0% LTFU; 2%(1/49) transferred. WHO T-stage: Of 15 with TIV/TIII pre-switch, post-switch T-stage=TIV 3.3%(2); TIII= 13.3%(2); TII=6.7%(1); TI=20%(3); 47%(7) without data. Median CD4 value was 434 (n=21); range 9-1239; 9.5% (2/21) had CD4<200. 10 patients had VL data available at 6 months post-switch, with 4 of these <400 copies/ML.

Conclusions: Early clinical and immunological TF outcomes were good after switch to LPV/r-based second-line ART in this cohort. Future research is needed to evaluate prospective clinical outcomes and genotypic analyses to evaluate presence of antiretroviral resistance in second-line ART patients failing to adequately respond.
H - 32491

UGANDA

STRENGTHENING MONITORING AND EVALUATION (M&E) SYSTEMS FOR IMPROVED PERFORMANCE MONITORING OF HIV/AIDS CARE AND TREATMENT SERVICES IN RURAL SETTINGS IN UGANDA

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Abstract:
Background: In the era of scaling up HIV/AIDS services, strong M&E systems that provide quality data for tracking program performance are important. Baylor-Uganda is scaling up comprehensive HIV/AIDS services in West Nile and Eastern Uganda. The M&E system was weak for reliable performance monitoring of services due to limited availability of M&E tools, inadequate skills to use the tools, un-harmonized M&E structures and inadequate data utilization for planning. One of the objectives therefore was to strengthen the district M&E systems to collect, utilize and report quality data through trainings, mentorships, financing, review meetings, computerization and supervision. We reviewed the performance of the M&E systems.

Methods: Routine Data Quality Assessments (RDQA) was conducted on quarterly basis at 7 selected facilities in Eastern Uganda. This study compared results of two RDQAs, one conducted in January 2011 reviewing October 2010 to December 2010 when the project had just started and a second one in December 2012 for the review period July to September 2012. A standard RDQA tool developed by Global Fund and its partners was used in the two assessments. The dimensions of interest were; data accuracy level, reporting performance (completeness and timeliness) and the status of underlying M&E System. The indicators for each dimension were measured using a performance score ranging between 1 (Least) to 3 (Best). HIV/ART care registers and reports were reviewed.

Results: Reporting performance improved significantly: completeness from 54% to 84% (OR 4.4, 95%CI 2.3-8.6), timeliness from 61% to 92% (OR 7.3 95%CI 5.7-9.5), accuracy of cotrimoxazole prophylaxis from 59% to 97%. Performance scores for including M&E capabilities, roles and responsibilities (1.9 to 2.2), Data reporting requirements (2.2 to 2.9), Data collection and reporting tools (2.1 to 2.5), Data management processes (1.8 to 2.3) and Linkage with national reporting system (2.8 to 3.0).

Conclusion: M&E systems in rural settings can be improved. The successful interventions need to be scaled up. More research is however needed to determine which intervention translated into improved service delivery.

H - 26616

PREVALENCE OF OPPORTUNISTIC INFECTIONS IN CHILDREN UNDERGOING ANTIRETROVIRAL THERAPY AT BAYLOR-UGANDA

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Baylor College of Medicine Children's Foundation - Uganda

Abstract:
Background: Highly active antiretroviral therapy has been reported to reduce prevalence and severity of opportunistic infections (OIs) in HIV disease. However, there is a paucity of data in African children to support this. We examined prevalence of opportunistic infections from a three year observational study in Uganda.

Methods: A total of 108 HIV infected children aged 3 months to 17 completed years were sequentially enrolled onto this prospective cohort and started on highly active antiretroviral therapy in 2006. All clinical assessment findings including the occurrence of OIs were recorded on standardized forms, viral load and CD4 assessments made at baseline, 1 month, subsequently every 3 months for the first year, and then 6 monthly until the end of the study. Data was entered into Epi Info version 3 and exported to SPSS 12.0 for analysis. Occurrence of OIs was summarized into proportions at months 6, 12 and 36 time points.

Results: Of the 108 participants enrolled 51% were female; the median age was 6 years IQR (1-10). Fifty three percent compared to 41% received EFV and NVP based regimens, while 4% and 2 % were on triple NRTIs and PI based regimens respectively. The overall adherence rate was 95% using a ≥ 95% level. Median CD4 % at baseline was 9% (IQR 4-15) and increased by 20, 22 and 20 at 6, 12 and 36 months respectively.
At baseline OIs included upper respiratory tract infections (URTI-23%), skin and scalp infections (35%), ear infections (2%), pneumonia (9%), tuberculosis (11%), oral candidiasis (11%), and Kaposi's sarcoma (3%). Subsequently prevalence of URTI, skin/ scalp and ear infections was 46%, 29% and 5% at 6months; 54%, 25%, 0% at 12 months; and 43%,1% and 0.01% at 36 months. Stage III events seen at 6 months (n=99) included pneumonia and tuberculosis (4%), oral candidiasis (3%), Kaposi sarcoma (2%) and HIV encephalopathy (2%). There were no stage III and IV events at 36 months.

Conclusion: Upper respiratory tract, skin/scalp and ear infections are the commonest OIs in HIV infected children on HAART. The prevalence of severe infections such as pneumonia and tuberculosis reduces on antiretroviral therapy.

H - 26616

SCALING UP HIV/AIDS SERVICES IN HARD-TO-REACH AREAS IN UGANDA

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Abstract:
Background: Karamoja sub-region is located in Northeastern Uganda, comprising of seven districts; is mostly semi-arid plain with harsh climate and low rainfall marked with armed conflict for cattle rustling. The region has a Human Development Index of < 0.2 (national average 0.45) and Human Poverty Index of 63.5 (national average 37.5). The population is mainly semi-nomadic with an HIV prevalence of 5.8% coupled with inadequate human resources for health. In November 2010, Baylor-Uganda signed a two-year Partnership Agreement with UNICEF to scale up paediatric and adolescent HIV/AIDS services in seven districts. We reviewed the progress after one and a half years of implementation.

Methods: Using the Health System Strengthening approach, the project was implemented in 34 health facilities; accreditation of HC IIIs to provide ART and other HIV services like HIV Counseling and Testing as well as cotrimoxazole provision was conducted. Services provided included training in provision of comprehensive HIV/AIDS services, data management, record filing and storage; supply of Health Management Information System (HMIS) tools and CD4 machines by the Ministry of Health (MoH); supply of ARV buffer stock, cotrimoxazole and laboratory supplies. Baseline and quarterly data were collected and analyzed using STATA.

Results: Results comparing patient numbers at baseline and one and half years of implementation are shown in the table:

	Baseline	After implementation
Accredited Health Facilities	7	27
Total Patients enrolled in care	3908	8372
Children in care	160	450
Total patients on ART	1215	2971
Children on ART	68	230
Children on only Cotrimoxazole	92	220

At baseline, all surveyed health facilities reported stock-out of essential paediatric drugs and 55(27%) of health workers had skills in providing comprehensive HIV/AIDS services. By September 2012, drug stock-outs had reduced by 100%; 220 health workers were trained in paediatric and comprehensive HIV/AIDS care and treatment.

Conclusion: Scale up of HIV/AIDS services in these hard to reach areas was facilitated by working with and strengthening the district systems in place. Emphasis on planning, training and budgeting for human resources for health is essential in scaling up HIV/AIDS services in hard-to-reach areas.

H - 26616

MEASLES AMONG HIV INFECTED CHILDREN ATTENDING THE PEDIATRIC HIV CLINIC AT BAYLOR – UGANDA, MULAGO

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Abstract:
Background: Measles and HIV co-infection in children is often severe and sometimes fatal. In HIV-infected children, there is rapid decay of maternal measles antibodies and low immune response to measles vaccine. Uganda registered a measles outbreak from March to June 2012 which led to increased morbidity and mortality among children. The objective of our study was to describe the measles outbreak among HIV-infected children attending Baylor-Uganda.

Methods: We conducted a retrospective chart review of patients attending Baylor-Uganda from January to June 2012. Patient data was abstracted from the Baylor-Uganda electronic medical records (EMR) on patients' age, sex, WHO stage, CD4%, and outcome of illness. We computed proportions and used logistic regression to test for associations between measles and selected patient variables.

Results: Of 4217 children (aged ≤ 14 years) seen during the study period, 135 (3.2%) were diagnosed with measles. Seven cases were reported in January; 2, 21, 51, 32 and 22 cases were seen in February, March, April, May and June respectively. Of the 135 patients, mean age was 5.4 years (SD=3.4) and 65 (48.1%) were male. Nine (6.7%), 49 (36.3%), 32 (23.7%) and 32 (23.7%) children were in WHO clinical stage I, II, III and IV respectively and 13 (9.6%) were HIV exposed. The mean CD4% at or prior to the measles episode was 28.7% (SD = 10.15). 109 (80.7%) patients were on antiretroviral therapy (ART). Children < 5 years were more likely to suffer from measles compared to those ≥ 5 years (Odds Ratio=2.09, P<0.001). There was no association between measles and either CD4 %, WHO stage or ART use. However, wasting and underweight were associated with the occurrence of measles (P<0.001 and 0.011 respectively). Four deaths (2.96%) were reported and all were among malnourished children.

Conclusion: Measles occurrence was more frequent in the <5 years old and malnourished children and was fatal among the malnourished.
H - 26616

FINANCING OF HIV PROGRAMS IN RESOURCE LIMITED SETTINGS; EXPERIENCE OF SUB-GRANTING IN 27 DISTRICTS IN UGANDA

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Abstract:
Background: Many donor-funded HIV/AIDS programs have been known to crumble when the donor pulls out. This has largely been attributed to poor sustainability plans by most projects. Since 2008, Baylor-Uganda has been implementing an HIV program through sub–granting in 27 Districts of Uganda. We describe the sub-granting experience as a sustainability approach for HIV/AIDS programs.

Methods: Sub-granting provides cash subventions to supplement the limited government Primary health Care (PHC) conditional grant. Baylor-Uganda together with the Districts and supported health facilities hold annual planning meetings to identify priority areas for HIV implementation in with Ministry of Health requirements. Funds are released on a quarterly basis to the Districts and health facilities basing on their approved work plans and budgets. The Grants Officers as well as the Monitoring and Evaluation officers routinely monitor project implementation in line with the agreed upon activities and budgets. Supported districts submit accountabilities, technical as well as financial reports on approved budgets quarterly. Accountability of the districts is reviewed and districts are annually categorized according to performance. Green represents compliant districts to the sub-granting policy and guidelines and have accounted for 75% on time, orange for those that account for 50-75% by the reporting timeline and Red represents districts and heath facilities that account for less than 50%.

Results: By 2012 all 27 districts were able to develop and implement work plans; 9 (33.33%) qualified for the green category, 11 districts (40.74%) were categorized as orange and 7 (25.92%) red. The practice of categorization has brought in positive competition amongst health facilities and districts which has improved service delivery as well as accountability. Late implementation and late submission of accountability are the major challenges,

Conclusion: Majority of the Districts and health facilities were able to develop work plans and implement as approved. Whereas sub-granting faces some challenges, it is a fundamental step towards sustainability of HIV programs in Low resource settings.

H - 26616

A CENTRALIZED CD4 TESTING NETWORK MODEL FOR EFFECTIVE AND EFFICIENT ACCELERATED SCALE UP OF HIV TREATMENT MONITORING IN UGANDA

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Abstract:
Background: Access to laboratory monitoring of HIV treatment in Uganda's rural health facilities is limited and turnaround time (TAT) for results among facilities that carry out CD4 monitoring is approximately 4 weeks. To increase access and reduce TAT, Baylor-Uganda implemented a centralized CD4 testing network model. Our study objective was to assess the effect of this model on accessibility of laboratory monitoring in rural facilities.

Methods: We retrospectively reviewed program data collected from Baylor-Uganda supported rural health facilities (HF) in Kiryandongo district, West Nile and Ruwenzori Regions of Uganda during the period March 2011 to March 2012. The model for increasing access to laboratory monitoring was implemented as follows: Blood samples from HIV-infected patients receiving treatment in rural health facilities were transported by motor bike to sample collection centers (hubs) located a few kilometers from the health facilities. From these hubs, samples were delivered by public bus to the Baylor-Uganda central laboratory in Kampala within a period of 24 hours. Samples were analyzed at the central laboratory for CD4 determination after which, results were dispatched back by bus to the hubs and finally by motor bike to the rural health facility. Data on access and TAT was collected and summarized as proportions.

Results: From March 2011 to March 2012, there was an increase in the proportion of patients receiving regular CD4 monitoring, from 59 (6.1%) out of 968 patients to 1613(62.5%) of 2579 patients seen in Kiryandongo district. In West Nile region, the increase was from 290(5.7%) of 5067 patients to 4940(53.3%) out of 9274 patients; and in Ruwenzori the increase was from zero (0%) out of 10504 patients to 8300(31.2%) of 26606 patients. The TAT for results reduced from 4 weeks to 7 days.

Conclusions: A centralized sample referral system can innovatively be employed to improve access to CD4 testing and reduce TAT for test results.

H - 26616

TRENDS OF RECOVERY FROM WASTING AMONG HIV POSITIVE CHILDREN ENROLLED INTO CARE OVER THE PAST FIVE YEARS AT BAYLOR-UGANDA

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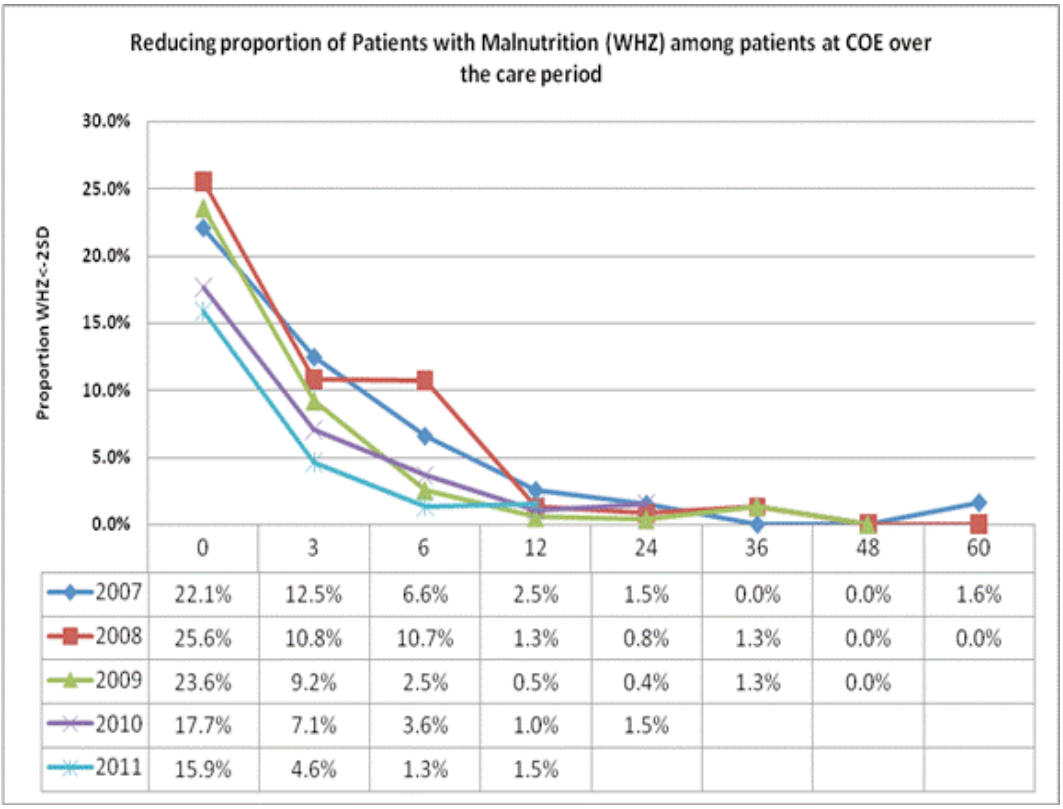
Abstract:

Background: Wasting is a common manifestation of HIV infection among children. It increases the risk of mortality associated with HIV infection among children. Data shows that wasted HIV infected children take longer durations to recover making nutrition rehabilitation resource intensive. This study investigated the patterns of recovery from wasting among HIV infected children following enrolment into care.

Methods: Longitudinal study**.** Clinical data was reviewed for HIV infected children enrolled into HIV at the Baylor-Uganda clinical centre of excellence at Mulago Hospital and followed up between September, 2007 and September 2012. Data on age, sex, height/length and weight were extracted and nutrition indices calculated based on WHO 2010 Growth standards. Children with weight-for-length, weight-for-age and length-for-age indices < -2 Z-scores were respectively classified as wasted, underweight and stunted. Data was analyzed according to yearly cohorts and graphs of proportions of malnourished children plotted over the five year duration.

Results: A total of 5600 children were included in the analysis. The median age at enrolment into care was 2 months and 52% were male. The proportion of wasting within the cohorts steadily reduced as shown in the graph below:



	0	3	6	12	24	36	48	60
2007	22.1%	12.5%	6.6%	2.5%	1.5%	0.0%	0.0%	1.6%
2008	25.6%	10.8%	10.7%	1.3%	0.8%	1.3%	0.0%	0.0%
2009	23.6%	9.2%	2.5%	0.5%	0.4%	1.3%	0.0%	
2010	17.7%	7.1%	3.6%	1.0%	1.5%			
2011	15.9%	4.6%	1.3%	1.5%				

Conclusion: The proportion of wasted children reduces by > 50% within the first 3 months of enrolment into care and it takes about 12 months for wasted children to fully recover. Therefore, pediatric HIV clinics should strengthen early identification of HIV infected children and as well Nutrition care and support for children presenting with wasting.

H - 26616

COMMUNITY HIV DATA MANAGEMENT SYSTEMS; EXPERIENCE USING VILLAGE HEALTH TEAMS SYSTEM IN FOUR DISTRICTS IN UGANDA

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Baylor College of Medicine Children's Foundation-Uganda

Abstract:
Background: Data management systems are essential in tracking HIV information for reporting and data use. However, community data management systems in low resource settings face daunting challenges of few qualified data personnel, poor documentation, and lack of reporting tools. Using Village Health Team (VHT) systems, Baylor Uganda has supported HIV data management in four districts since 2009. We describe the experience of using VHTs in community HIV data management.

Methods: Using established Ministry of Health VHT structures, VHTs including People Living with HIV/AIDS (PLHIVs) and care takers were identified and trained in data management in the 4 districts. Data collection tools were provided and on site mentorships as well as support supervision visits conducted. Data collected by VHTs was routinely validated and entered by Community Home Based Care Officers (CHBCOs) and monthly reports were submitted to the Health Facility. Monthly meetings were held by the VHTs, CHBCOs and facility staff to review data and performance.

Results: In 2009, 180 VHTs were trained in data management. Of these, 28(15.6%) dropped out of the program. 100% of the functional VHTs submitted timely reports. Out of 8640 reports submitted in a period of four years, 6652 (77%) reports were categorized as quality reports depending on completeness and how correct information was. VHT drop out and incompleteness of data were identified as major gaps.

Conclusion: Village Health Teams are effective in managing community HIV data. Routine training, mentorship and support supervision are imperative for quality data. Utilization of community data is fundamental for informing HIV policies and programs.

H - 26616

SWITCH FROM LOPINAVIR TO ATAZANAVIR CONTAINING SECOND-LINE ART IN UGANDA ADOLESCENTS AND YOUNG ADULTS

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Abstract:
Background: Atazanavir (ATV/r) has recently been introduced in resource-limited settings and while non-inferiority to Lopinavir (LPV/r) has been demonstrated, little evidence currently exists about the effectiveness of ATV/r in resource-limited settings. Compared to twice daily LPV/r dosing, substitution of a once-daily protease inhibitor (PI) such as ATV/r may reduce pill burden, improve medication adherence, subsequently causing sustained viral suppression. This study briefly describes the virologic outcomes of ATV/r among Ugandan adolescents.

Methods: A retrospective chart review was conducted at the Baylor-Uganda Clinic in Kampala. Study patients were adolescents and young adults previously on LPV/r containing regimen and switched to ATV/r at least 6 months prior to the review. Baseline viral load (VL) from time of switch to ATV/r as well as follow up viral load after 6 months on ATV/r was analyzed.

Results: Of 59 patients with available data, only 24 (41%) had an undetectable VL on their LPV/r containing regimen (average time on LPV=15 months). 20 (83%) of these patients maintained viral suppression after being switched to ATV/r. 3 (13%) patients had low level viremia (<1,000 copies/mL) and 1 (4%) patient had a VL of >1,000. Thirty five (59%) patients were viremic at the time of substitution. Of these, 8 (23%) became undetectable and 12 (39%) had a greater than 1 log decrease in VL.
In total 78% of the patients who substituted ATV/r for LPV/r maintained or had improvement in viral suppression after 6 months.

Baseline At 6 months of ATV/r Total

	No Viremia		**Viremia**					
	Total		**Low viremia**		**High viremia**			
	#	**%**	**#**	**%**	**#**	**%**	**#**	**%**
Undetectable VL (<50 copies)	20	83%	4	17%	3	13%	1	4% **24 41%**
Detectable VL	8	23%	27	77%	14	40%	13	37% **35 59%**
Low level Viremia	2	50%	2	50%	2	50%	0	0% **4 7%**
High Level Viremia	6	19%	25	81%	12	39%	13	42% **31 53%**
Total	**28**	**47%**	**31**	**53%**	**17**	**29%**	**14**	**24% 59**

Conclusion: While limited, this study demonstrates that substitution of once daily ATV/r for twice daily LPV/r in second-line treatment is an effective option in adolescents.
H - 26616

ABSTRACTS ON PSYCHOSOCIAL AND RELATED TOPICS
ORAL PRESENTATION

BOTSWANA

PSYCHOSOCIAL AND BEHAVIORAL CONCERNS OF PERINATALLY INFECTED HIV+ YOUTH IN BOTSWANA: A COMPARISON OF YOUTH AND PROVIDERS

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Abstract:
Background: With the growing use of antiretroviral medications (ARVs) worldwide, a new generation of perinatally infected HIV+ youth is aging into adulthood.Providing care relevant to the concerns of this growing population is crucial for promoting successfultransition to adult care. Objectives of the study were to prioritize and compare youth and provider-identified psychosocial and behavioral concerns among perinatally infected HIV+youth in Botswana.

Method: Two focus groupswere conducted using nominal group method; 17 youth (17-19 years; 9 female) and 16 providers (medical, mental health) participated.Participants generated, discussed, andindependently rankeda list of psychosocial and behavioral concerns for HIV+ youth. Summative scores were calculated for each itemwithin each group to create item rankings.

Results:
Provider concerns

Rank	Youth concerns
Mental health: depression, suicidal ideation (SI), anger, grieving, future outlook	1 Mental health: SI, depression, anger, loneliness, low self-esteem, worriesof death
Disclosure: within family, friends/partner,forced	2 Peers: peer pressure, bullying, lack of friends
Stigma/discrimination: school, home, self-stigma	3 School: grades, absences
Home/family - support, supervision, food security, deaths	4 Substance use:as coping, to avoid disclosure, impacting ARV efficacy
Sexual/reproductive health (SRH): contraception, STIs, empowerment	5 Disclosure: family, peers, fear of rejection
School: Grades, absences	6 Adherence/treatment: selling ARVs, risk of disclosure
Substance use: alcohol, drug use	7 Stigma & discrimination: home, by peers, self-stigma
General support: community,clinic	8 Home/Family: lack ofcommunication, overprotectiveness
Abuse/Safety: physical, sexual, emotional, abuse	9 SRH: pregnancy, fear of reinfection/infecting others
Peers: peer pressure, lacking friends	10 Abuse/Safety:impeding adherence, rape

Conclusion: Both providers and youth prioritize mental health first. Consistent with normal adolescent development, youth place greater significance on peers/peer influence and less on family. This is in contrast to providers who placed very low importance on peers. Although youth made mention of pregnancy, no youth included STIs as a concern. Youth emphasized the motivators of unhealthy behaviors (e.g. “overdrinking to feel better”,”dropping out of school due to teasing”). Provider understanding of the importance of peer relationships and routine inquiry into factors promoting unhealthy choices may increase counseling efficacy and rapport. Peer support interventions should be considered.

H - 30286

LESOTHO

CLINIC FOR PREGNANT ADOLESCENTS AND YOUNG ADULTS

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Abstract:
Issue: In Lesotho, 41% of women are pregnant or have a child by age 19. They are at a vulnerable time in life and need medical and social support. Many stop school, are stigmatized or rejected by family, and drop out of peer support groups such as Teen Club. BCMCF-L has recognized an opportunity to provide needed support within our Adolescent Clinic (14-20 years).

Description: We started a once monthly Adolescent Pregnancy Clinic with the mission of supporting, in a non-judgmental setting, women <20 years old to have healthy pregnancies, and to empower them in becoming capable parents. Clinic visits employ a multidisciplinary approach, integrating education, peer support, social work services and counseling, and physician's visit.

Lessons learned: Feedback has been overwhelmingly positive. One young woman said "**I thought I was the only one who was pregnant; now I don't feel alone, and I feel empowered."** In our first clinic we taught basic PMTCT concepts; discussed stigma of HIV and adolescent pregnancy; and fears of disclosing the pregnancy to their families. None of the pregnancies were planned, but we were pleased to find that both partners and families were supportive of the patients. Most of the women have stopped attending school, but all want to return. A challenge in establishing the clinic was initial resistance from the staff due to cultural and religious reasons. However, once begun, they recognized the need for the clinic, and we have received positive feedback from the staff as well. With increased awareness, staff members are actively seeking pregnant adolescents, leading to diagnosis of pregnancies at earlier gestational ages with increased time for health interventions.

Next Steps: Our goals are to facilitate healthy pregnancies and babies and empower adolescents to become good mothers while continuing their education. Previously, many of these young women defaulted and were lost-to-follow-up. We hope this dedicated clinic will prevent this. They will transition out of the Adolescent Clinic after delivery, but mother and baby will receive ongoing care together. We hope to continue the support group and adolescent-focused care after the baby is born in a similar multidisciplinary, integrated approach.

MALAWI

PREVALENCE OF DEPRESSION AMONGST HIV INFECTED ADOLESCENTS IN MALAWI

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Abstract:
Background: Depression is the most commonly occurring psychiatric disorder among people living with HIV and AIDS (PLWHA). Children and adolescents are particularly vulnerable to depression with estimates of prevalence as high as 28% in this population. Most studies on depression in youth come from high-income countries, with a scarcity of data regarding depression coming from the epicenter of the HIV pandemic - Southern Africa. The objective of our study was to determine the prevalence of depression among HIV infected adolescents aged 12 to 18 years in Malawi.

Materials & Methods: A cross-sectional design with a descriptive quantitative approach was used. HIV-infected adolescents presenting for routine care at Antiretroviral treatment (ART) clinics in Central and Southern Malawi were invited to participate in the study. Two depression screening instruments were used - Beck's Depression Inventory-II (BDI-II) and Children's Depression Inventory-2- short (CDI-2 Short). A clinical interview using the Children's Depression Rating Scale-Revised (CDRS-R) was used to confirm the diagnosis of depression. Chi-Square tests were used to compare the categories of depression between males and females.

Results: Out of the targeted 700 participants, 80% (562) completed the questionnaires. Of these, 93.1% (523) were on ART. Their mean age was 14.5 years. Using the **BDI-II** (cut-off of 17), 25.6% (144) were determined to be depressed, with 15.2% (85) rated to have moderate to severe depression. Suicidal symptoms were expressed in 7.2% (40) of participants with 1.1% (6) expressing severe suicidal symptoms. Using the **CDI,** 25.6% (144) were determined to be depressed.
Finally, using clinical assessment with the CDRS-R, 18.9% (106) were determined to be depressed.

Conclusion: This study demonstrates a high prevalence of depression among HIV-infected adolescents in Malawi, comparable to the findings of other prevalence studies done in other settings. Additional research investigating factors associated with depression are needed in order to inform the development of effective interventions.

Keywords: Prevalence, depression, adolescents, HIV/AIDS, ART, BDI, CDI,

H-29563

ROMANIA

COMPARISON OF ADHERENCE AND BARRIERS TO ADHERENCE OF HIV-POSITIVE WOMEN WITH CHILDREN AND WITHOUT CHILDREN ACCESSING HIV CARE AND TREATMENT IN THE CENTRE OF EXCELLENCE IN CONSTANTA, ROMANIA

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Abstract:
Background: The proportion of women living with AIDS is increasing. Young women constitute a growing share of new infections, representing about two-thirds of all new cases among people aged 15-24. Among the patients are currently in the care of the Baylor HIV Clinical Centre of Excellence (COE) in Constanta, Romania, more than half are young women, and more than 10% of them are already mothers. The transition to motherhood raises specific issues of adherence to medication due to the shift from caring from oneself to caring for the child and adjusting to a new lifestyle and new life routines. We conducted a cross-sectional study to investigate adherence and specific barriers to adherence among women with HIV with and without children, currently in the care of the Baylor HIV COE.

Methods: Women with and without children (n=97) reported on their adherence behaviors and barriers via a self-report questionnaire previously adapted and validated for this population. We collected socio-demographic data from patient files: age, gender, location, educational level, number of children in care, employment status, whether in a stable relationship or not, living independently or with the extended family.

Results: Preliminary results indicated that self-reports of adherence to medication were lower in women with children (mean=76.76) than in women without children (mean=73.95; t(95)=2.040; p=.044; Mann-Whitney U at trend level p=.066). Self-reported adherence behavior were not significantly different (e.g. t(95)= 1.382; p=.170), however women with children reported more barriers to adherence (e.g. t(95)= 2.035; p=.045; Mann-Whitney U at trend level p=.055). Several barriers were significantly correlated with adherence behaviors only in women with children:
beliefs regarding adherence-related self-efficacy, and perceptions of side effects intensity, time required and difficulty of adherence behaviors.

Conclusions: Women with children may find it more difficult to cope with the requirements of adhering to treatment and may require additional training/counseling for increasing self-efficacy, managing side effects, scheduling medication intake and addressing specific perceived difficulties of adherence.

TANZANIA

APPROACH TO AND DETERMINANTS OF CAREGIVERS´ DISCLOSURE OF HIV-STATUS TO CHILDREN AT A LARGE PAEDIATRIC HIV CENTRE IN MBEYA, TANZANIA

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Abstract:

Introduction: In all settings, disclosure of HIV status to HIV-infected youth presents a challenge. Caregiver and healthcare provider (HCP) reluctance to disclose HIV status to a child or an adolescent is often related to fear of stigmatization and discrimination, but also to lack of comfort with the disclosure process itself, including disclosure-related knowledge and proper timing of disclosure. Associated with elevated self-esteem, willingness to accept treatment and adherence to antiretroviral therapy, disclosure is important to outcomes for HIV-infected youth.

Methods: A cross-sectional study was conducted among 334 caregivers at the Baylor-Tanzania Children's Clinical Centre of Excellence in Mbeya, Tanzania (Baylor). Quantitative data were collected using a pre-tested interviewer-administered questionnaire in Swahili entered using Epi-info and analyzed using STATA version10. Qualitative data were collected from case histories and key informant interviews and analyzed using content analysis. Ethical approval was obtained.

Results: Approximately one-third of caregivers (32.6%) had disclosed HIV status to their HIV-infected children. Caregivers were more likely to have disclosed to older children (>10 years) as opposed to younger children (adjusted OR=20.5;95%CI: 7.5-56.2). Caregivers who had been educated regarding disclosure were more likely to have disclosed HIV status to their children (adjusted OR=6.1;95%CI:2.4-15.5) and those earning >99,999 TSh/monthly (62.5 USD/monthly) were more likely to have disclosed to their HIV-infected children (Adjusted OR=2.5, 95%CI: 1.3-4.9). Qualitative findings showed caregivers used a diversity of approaches to complete HIV status disclosure including direct, third-party, and event-driven approaches.

Conclusions: Child age, family income and caregivers' level of HIV disclosure knowledge are important determinants towards whether caregivers disclose HIV status to children. In contrast to the standard HCP approach at Baylor of using illustrations to help children understand their HIV status, many different approaches are taken by caregivers in disclosing; the effectiveness of various techniques on youth understanding of HIV status is of interest and may warrant future study. Consideration should be given to revising national HIV disclosure guidelines to include caregiver education by HCPs on a stepwise approach to disclosure from an early age, using age-appropriate language and concepts. Very resource-poor families should be targeted for additional support in HIV status disclosure to children.

H - 30751

UGANDA

PLACING VALUE ON VOLUNTEER TIME: A DESCRIPTION OF HOW PEOPLE LIVING WITH HIV GAIN FROM THEIR INVOLVEMENT IN HIV/AIDS RESPONSE

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Baylor College of Medicine Children’s Foundation-Uganda

Abstract:
Issues: People Living with HIV (PLHIV) play a key role as volunteers in providing a continuum of care in HIV/AIDS service delivery. Over the last 4 years, Baylor-Uganda has engaged them to provide Home Based Care to their fellow patients. The main challenge is keeping them motivated as they provide the necessary services. We examined the direct and indirect benefits of volunteering time on the life of PLHIV.

Description: HIV infected caretakers of HIV infected children accessing care from Baylor-Uganda were identified, trained and facilitated with a monthly stipend of US$ 11, and home based care kits and bicycles to provide support to patients in the community. The volunteers were supported to conduct adherence and psychosocial support; health education, mobilize households for home based HCT; follow up clinic appointment defaulters and patients that require critical laboratory follow up. Periodic review and reporting meetings for the PLHIV volunteers were conducted. During these meetings, the PLHIV present reports highlighting how they have benefited from their volunteer time and how their services have benefited the patients served. Challenges and way forward are also discussed.
These reports were reviewed to examine the anecdotal evidence for direct and or indirect benefits of volunteering to the life of volunteer.

Lessons Learned: From the volunteers’ reports, they reported that the direct benefits of their volunteer time included: bicycles received for home based care also facilitated them in domestic chores; from their monthly stipend, they formed savings and credit groups; increase in knowledge in HIV/AIDS among PLHIV; the PLHIV volunteers also gained respect and trust in their communities and have been supported to live positively. Indirect benefits included; enhanced self esteem which has resulted in taking up political leadership in their communities; and public disclosure of their HIV status greatly motivated their adherence to medication thus living as role models.
H - 26616

OTHER ABSTRACTS ON PSYCHOSOCIAL AND RELATED ISSUES

BOTSWANA

TEEN LEADERS PROGRAMME – THE CORNERSTONE OF THE BOTSWANA-BAYLOR CHILDREN'S CLINICAL CENTRE OF EXCELLENCE (COE)'S TEEN CLUB PEER PSYCHOSOCIAL SUPPORT AND EMPOWERMENT PROGRAM FOR HIV POSITIVE ADOLESCENTS

A. M. Dekker. M. Marape, B. Ntobeledzi, K. Koboto, M. Engleton, T. Ntshekisang, N. Joel, H. Syed, M. Matshaba, M. Maruhn, G. Anabwani

Baylor Children's Clinical Centre of Excellence, Gaborone, Botswana

Abstract:
Issues: The Botswana-Baylor Children's Clinical Centre of Excellence (COE)'s Teen Club is a psychosocial support program whose mission is "*to empower HIV-positive adolescents to build positive relationships, improve self-esteem and acquire life skills through peer mentorship, adult role-modeling and structured activities, ultimately leading to improved clinical and mental health outcomes as well as a healthy transition into adulthood".* Once a month approximately 150 teens meet at the COE in Gaborone for Teen Club. Themes focus on both HIV-specific and general life skills. The planning, facilitation, and implementation of Teen Club are primarily led by Teen Leaders. The aim of this paper is to describe Teen Club's Teen Leaders program, including its role in empowering HIV-positive adolescents.

Description: Teen Leaders are members of Teen Club elected by their peers to serve as leaders of Teen Club. Once elected, Teen Leaders undergo a comprehensive training program that focuses on peer education, communication, and leadership. Each month, Teen Leaders meet with Adolescent Program staff to assist with the plans for the upcoming Teen Club, providing feedback on which activities will best resonate with their peers and which aspects may have been overlooked. On the Saturday of Teen Club, Teen Leaders ensure that the day proceeds smoothly, often facilitating smaller group activities.

Lessons Learned: The Teen Club curriculum is significantly shaped by the input from Teen Leaders during Teen Club planning sessions. Content for recent Teen Club themes such as 'Transition from Paediatric-Based-Care to Adult-Based-Care,' 'Normalizing Your Life,' and 'Teamwork and Adherence' were changed based on insights from the Teen Leaders. Furthermore, Teen Leaders themselves led these Teen Clubs.

Next steps: Not only do Teen Leaders fulfill an invaluable role of representing the perspectives of their peers to allow for the most effective design and implementation of Teen Club, but Teen Leaders also develop extensive experience leading and mentoring their peers. We believe such leadership is irreplaceable in its efficacy in providing support for the HIV positive adolescents in Teen Club and has empowered the Teen Leaders with the confidence and skills to continue to serve as leaders in their respective communities.

H-25403

THE ROLE OF SCHOOLS IN THE CARE OF HIV-INFECTED CHILDREN: PERSPECTIVES OF HIV-INFECTED CHILDREN AND THEIR TEACHERS

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Baylor College of Medicine Children's Clinical Center of Excellence, Gaborone, Botswana,

Abstract:
Background: There is paucity of data on the role of schools in the care of HIV-infected African children. The aim of this study was to document the experiences and perspectives of school-aged HIV-infected children and their teachers in order to inform school-based HIV interventions in Botswana.

Methods: This was a cross-sectional survey using interviewer- and self-administered questionnaires and focus group discussions among HIV-infected children aged 6 to18 years registered at 12 HIV treatment clinics covering 90% of all children receiving Highly Active Antiretroviral Therapy (HAART) in Botswana as well as teachers from 33 primary and secondary schools.

Results: 984 children and 464 teachers participated. Of the 974(99%) children who were attending school, 79% were in primary school. 893/957 (93%) perceived their health as being generally well and 99% liked going to school. About 84% of the children reported facing problems at school, the commonest of which were: poor school grades (36.4%), frequent absenteeism (17.8%), lack of emotional support (13%), lack of friends (4.7%) and stigma (4.3%). The children suggested that extra learning support (14%), improved school meals (11.5%), protection from bullying and stigma (10.1%), more entertainment and extracurricular activities (8.6%), and teachers showing more love and patience (8.1%) could improve their school experiences. Teachers identified: poor health (38.2%), poor adherence to HAART (28.5%), lack of scholastic materials (8.1%), poor grades (7.8%), and behavioural problems (4.6%) as the main problems faced by HIV-infected children in their schools. Eighty percent of the teachers had lowered expectations of HIV-infected children in a number of domains, including: school attendance (60%), academic performance (48.3%), relations with other children (42.7%), ability to participate in physical exercise (39%), general behaviour (38.8%), ability to join school trips (37.3%), and tidiness and cleanliness (20.5%).. Teachers suggested that schools could improve care for HIV-infected children by offering: psycho-emotional (27.8%), nutritional (14.8%), and medication adherence (10.1%) support, prevention education (7.7%), protection from stigma (5.6%), and education of caregivers on caring for sick children (5.6%).

Conclusions: According to HIV-infected children and their teachers, schools in resource-limited settings need to be capacitated to enable them to better address the psycho-emotional, nutritional, and health needs of HIV-infected children.

H-23799

DEVELOPING A TRANSITION PROGRAMME: FROM PEDIATRIC TO ADULT CARE – THE BOTSWANA-BAYLOR CHILDREN'S CLINICAL CENTRE OF EXCELLENCE (COE) EXPERIENCE

M. Matshaba, E.D. Pettitt, J. Feldmann, A. Dekker, G. Thobokwe, B. Ntobeledzi, M. Sechele, L. Kuate, D. Bagale, M. Pilane T. Marukutira,D. Joel M. Marape,G. Anabwani

Baylor College of Medicine Children's Clinical Centre of Excellence, Gaborone, Botswana

Abstract:
Background: The success of the Botswana Anti-Retroviral Therapy (ART) program has resulted in the majority of perinatally HIV-infected children surviving into adolescence and young adulthood. There is a need to develop a programme to assist adolescent's development of skills, confidence and independence required to transition smoothly to adult HIV care.

Methods: In 2009 the COE transition team was formed and has evolved into multidisciplinary team of both adult and paediatric clinicians whose mandate is to spearhead the transition process. The team includes: psychologists, social workers, nurses, physicians, pharmacists, adolescents, monitoring and evaluation specialist and peer educators. The team meets monthly to develop protocols and tools, as well as discuss progress and map way forward. The programme is in its third iteration. Programme development has been achieved via focus group discussions and quality improvement (QI) methods to assess the needs and to improve on current programme. A transition themed teen club event was conducted to promote transition readiness.

Results: The inclusive nature of the Transition Team has ensured that all members own and contribute to the programme. Early buy-in and encouragement by COE the management has been instrumental for the programme development. To date, over 500 enrolled and 21 adolescents have been identified as ready for transition. The twenty one adolescents will be formally transitioned to adult care in small 'buddy teams' of 2-3. This cohort will be followed up to maximise chances of success prior to transitioning in larger numbers.

Implications: Transition in the developing world setting is still in its infancy. Having a formal transition programme is critical in ensuring successful transition to adult care. In developing such programmes, a multidisciplinary forum which meets regularly is essential. QI and service satisfaction surveys are a good way of assessing needs and relevance to practice.

H-25403

IMPACT OF PREGNANCY AND DELIVERY ON IMMUNOLOGIC AND VIROLOGIC PARAMETERS AMONG HIV-INFECTED TEEN MOTHERS ON HIGHLY ACTIVE ANTIRETROVIRAL THERAPY (ART) IN A RESOURCE LIMTED SETTING

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Baylor College of Medicine Children's Clinical Centre of Excellence, Gaborone, Botswana,

Abstract:
Background: HIV-infected adolescents generally adhere poorly to their ART. This often results in adverse immunologic and virologic outcomes. The additional burden of pregnancy and subsequently caring for a new-born baby may worsen the adolescents' ability to adhere to their ART. Data on the impact of pregnancy on virologic and immunologic outcomes among perinatally-infected HIV-positive mothers on ART in resource limited settings is sparse. The aim of this study is to explore the impact of pregnancy on immunologic and virologic outcomes among HIV-infected teenage mothers at the Botswana-Baylor Children's Clinical Centre of Excellence (COE) in Gaborone, Botswana.

Methods: We carried out a retrospective chart review of the Electronic Medical Records (EMR) of all eligible subjects at the COE. The following variables were extracted: CD4 T-lymphocyte count (<350 or ≥350 cells per ML), HIV-RNA viral load (<400 HIV RNA copies/ML or >400 HIV RNA copies/ml) six months before and three months after delivery. Teen mothers whose babies died before 3 months of age were excluded from the analysis.

Results: A total of 9 teen mothers met the inclusion criteria. The age groups of teen mothers at the time of delivery ranged from 16 to 19 years. Six of the nine mothers (67%) successfully adhered to their antiretroviral medications before and after delivery (between 95% - 105%), while one teen mother showed a drastic improvement in her adherence after delivery of her baby. Five (56%) had a CD4 count below 350 prior to delivery and 8 mothers (89%) had a CD4 count above 350, three months after delivery. Five teen mothers (56%) had a detectable viral load (>400 HIV RNA copies/mL) before delivery while 7 teen mothers (78%) had an undetectable viral load (<400 HIV RNA copies/ML) 3 months post delivery.

Conclusions: Among perinatally-infected HIV-positive teenagers who fell pregnant while on ART in a resource-limited setting, laboratory parameters (CD4 and Viral load) improved post delivery with a majority achieving an undetectable viral load. Larger, prospective studies are needed to further explore the impact of pregnancy on HIV-related laboratory parameters among HIV-infected teen mothers in resource-limited settings.

H - 25403

HOME-BASED COUNSELING AND SUPPORT OF HIV-INFECTED CHILDREN AND THEIR FAMILIES: A ONE-YEAR REVIEW OF THE BOTSWANA-BAYLOR CHILDREN'S CLINICAL CENTRE OF EXCELLENCE (COE)'S IN-REACH PROGRAM

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Baylor College of Medicine Children's Clinical Centre of Excellence, Gaborone, Botswana

Abstract:
Background: HIV-infected children and their families face many complex psychosocial challenges including adverse home environments which interfere with the patients' ability to adequately adhere to their anti-retroviral medications. Many of these problems can only be understood and adequately addressed by visiting the patients' homes. This paper describes the range of problems handled by the COE's In-Reach home-visit based team between January and December 2011 and presents an assessment of the acceptability of these interventions.

Methods: In-Reach is an intervention strategy in which a core team comprising of a nurse, social worker and an assistant, with occasional attachment of a clinical psychologist, a physician or dietician, visits challenging patients' homes to meet family members, assess the home environment and ensure that patients and caregivers have support beyond the clinic at the family and community levels.

Challenging patients are referred to In-Reach from the clinic during regular consultation and home visits are conducted from Monday to Friday with the aim of doing a comprehensive psychosocial assessment and proactively identify and addressing any obstacles to treatment success. The In-Reach team also follows up all patients identified as lost-to-follow-up with a view to bring them back into care. The team additionally performs home-based testing of HIV-exposed infants and other previously untested family members.

Results: A total of 720 home visits were conducted by the In-Reach team during the review period. Thirty seven of these (5.13%) addressed poor adherence to ART, with 6 (0.8%) presenting with virologic failure. Twenty six patients (3.61%) were visited for pre-ART counseling, while 591 (82.08%) visits were for routine assessment of COE registered patients. Only 16 patients (2.22%) were assessed for transport assistance. Thirty four (4.72%) home visits were conducted for patients identified as lost-to-follow-up. Ten (1.38%) patients' visit was categorized as "other". The In-Reach team's home visits were highly accepted and appreciated by all visited families with no reported incidents of rejection or hostility.

Conclusions: In-Reach is an innovative and highly acceptable home-visit based psychosocial support strategy that is able to reach many HIV-infected children with challenging home environments. The strategy complements clinic-based management with the aim of optimizing HIV treatment outcomes.
H-25403

LESOTHO

MAKING SERVICES ADOLESCENT FRIENDLY AT BAYLOR CHILDREN'S CLINICAL CENTER OF EXCELLENCE - LESOTHO (COE)

T. Fritts, E. Chaka, M. Rakotsoane, T. Motseki, M. Ntsasa, N. Koena, E. Mohape

Baylor College of Medicine Children's Foundation - Lesotho

Abstract:
Issues: A decade ago, there were few adolescents living with HIV in Lesotho due to a lack of treatment. Children initiated on ARVs over the past seven years at the COE and other facilities are now living into adolescence and adulthood. The majority of HIV-infected children receiving care at the COE are aged 7-16 years. To accommodate this demographic shift, focus is being given to creating services for adolescents that are "youth friendly" – accessible, acceptable, appropriate, effective and equitable.

Description: In 2012, Queen 'Mamohato Memorial Hospital (QMMH), the national referral hospital located less than 100 meters from the COE, offered clinic space to the COE. Because all patients wait together at the COE, from HIV-exposed infants to adult caregivers and pregnant women accessing prevention-of-mother-to-child-transmission services, it was decided that services for adolescents would be more acceptable if provided at a separate location. In May 2012, the Baylor Adolescent Clinic, located at QMMH, opened its doors to provide services to patients aged 14-20 years. The clinic is staffed by a dedicated team of Baylor staff members with special interest and training in adolescent health. The physicians, nurses and social workers providing care are also involved in Teen Club. Nutrition and psychology departments each serve the Adolescent Clinic weekly on one designated day. Services remain both appropriate and effective as they mirror services provided at the COE.

Lessons learned: Adolescents love having their own space for clinic. They report less stigma in telling others they are going to QMMH as compared to the COE. Strong, therapeutic relationships are built through continuity with dedicated providers. As most patients aged 14-20 years attend clinic alone, adolescent-focused education and discussions occur openly in the waiting room. It was not possible to provide this service at the COE due to mix of ages and lack of disclosure of HIV status in some children.

Next Steps: Our next step will be to work on improving the accessibility of medication refills for adolescents. QMMH outpatient clinics are only open from 7am-4pm. Many of our adolescents come for their own ARV refills, thus missing school monthly to collect ARVs.

MAKING SERVICES ADOLESCENT FRIENDLY AT BAYLOR CHILDREN'S CLINICAL CENTER OF EXCELLENCE - LESOTHO (COE)

T. Fritts, E. Chaka, M. Rakotsoane, T. Motseki, M. Ntsasa, N. Koena, E. Mohape

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WISE YOUTH: BAYLOR-LESOTHO'S YOUNG ADULT SUPPORT GROUP

T. Motseki, Maraboe Ntsasa, Ntsali Khesa, Marcia Wong, Teresa Fritts, J. Sanders, E. Mohapi

Baylor College of Medicine Children's Foundation - Lesotho

Abstract:
Issue: With the success of pediatric HIV management, we are now facing the challenging but exciting future of transitioning our adolescents into healthy, meaningful adulthoods. Many have thrived in Teen Club and Adolescent Clinic. However, they are facing challenges as they navigate an adulthood living with HIV. We have the privilege of walking alongside these young adults, many of whom have spent a significant portion of their lives in our care.

Description: We therefore started a support group with the mission of transitioning our young adults (18-24 years old) into thriving, healthy, productive adults and empowering them to make impactful contributions to their communities. Those who are pregnant or married may also participate in this group. They are a newly-formed group, meeting one Saturday a month, discussing issues of stigma and self-esteem, and have had a session on career guidance. The group is largely self-run with guidance from Baylor staff members.

Lessons learned: The members are extremely excited and find this support group to be helpful to them as young adults living with HIV. Many were involved in Teen Club as adolescents, but several others had not participated in Teen Club and several are pregnant or parents. They enjoy talking about life issues outside of HIV infection and are able to share life experiences and challenges living in their communities as a young adult living with HIV. This group expresses a sense of being more "grown-up" with increased confidence and self-esteem. They feel encouraged to improve their adherence to medication, and appreciate the peer-to-peer support and sense of not living alone with HIV. Many involved in this group also help as adult volunteers in our Teen Club.

Next steps: Our goals are to continue addressing relevant topics, such as reproductive health, disclosure, marriage, family planning, and pregnancy, as well as medically transitioning our young adults towards an adult-centered model of care. We also want to provide career and vocational guidance and skills, to assist this group as they strive towards independence, community involvement, and mentorship to our younger Teen Club members.

MALAWI

THE EFFECTS OF OPTION B + IN THE REDUCTION OF STIGMA FOR HIV + WOMEN IN MALAWI

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Baylor College of Medicine Childrenn's Clinical Center of Excellence, Lilongwe, Malawi

Abstract:
Issues: HIV has altered motherhood and breastfeeding practices in Malawi. Breastfeeding plays the most important role for a mother in Malawian culture. However, before 2011, most HIV infected women had to abruptly stop breastfeeding at six months for fear of virus transmission. This created stigma for women that did not breastfeed their children in public. Mothers would come to us frustrated as they were ostracized in their community. When they stopped breastfeeding at six months, an automatic disclosure of their status occurred.

Description: The new PMTCT guidelines in Malawi, which came out in 2010, transformed motherhood in Malawi. The Ministry of Health trained healthcare workers in communicating with mothers effectively on the new recommendations. New nurses continue to receive these trainings. The staff of the COE in Malawi embraced the new guidelines to start all pregnant and lactating mothers on ARTs as well as counseled on breastfeeding their babies until 24 months of age. Starting from 2010, COE health care staff involved in outreach activities in the central region reinforced the new guidelines. For example, a nurse will sit side by side with a nurse in a distant district, observe his/her counseling, take notes and provide feedback in how to improve option B+ adherence and infant feeding. Afterwards, a community worker will follow up with the patient and see if the nurses' recommendations have reached an effect. Another facet includes formal lectures delivered both in outreach sites and in the COE for mothers as well as for health care workers. In all of these activities, we incorporate how the prolongation of breastfeeding has reduced stigma for many HIV positive women.

Lessons Learned: We have noted a true evolution in the lives of HIV infected women in Malawi. Health care workers have readily embraced the new recommendations as option B+ has simplified adherence. They report that their patients have a greater quality of life as they fit into their communities and into the traditional role of Malawian motherhood. Breastfeeding for the first two years of life has reduced the amount of malnutrition, diarrheal diseases, and socio-psychological problems.

Next Steps: We plan to do a formal survey comparing mothers who breast fed under the old guidelines and mothers who breast feed under the new guidelines to demonstrate the effect we are anecdotally observing.

TEEN SUPPORT LINE: PROVIDING MUCH NEEDED PYSCHO-SOCIAL SUPPORT TO ADOLESCENTS LIVING WITH HIV/AIDS (ALH) IN MALAWI

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Baylor College of Medicine Children's Foundation – Abbot Fund Clinical Center of Excellence - Lilongwe, Malawi

Abstract:
Issues: Though the risk for depression and high-risk behaviors is increased among ALH, pyschosocial services are sparse across Sub-Saharan Africa. A recent (unpublished) pilot study at the BCM-CFM[1] showed a prevalence rate of depression among ALH is 20%, of which 80% were classified as minimal to mild depression. A non-published survey was conducted among our teens inquiring their opinion on pyscho-social services provided at BCM-CFM. Based on this survey, it was clear broader and more frequent psychosocial support with early intervention and timely identification of issues was imperative. The psycho-social needs were expanding beyond what monthly teen clubs could address and current support did not resolve barriers to care related to transport to/from clinic.

Description: Teen Support Line (TSL) is a toll free hotline for ALH at BCM-CFM to call or text with questions they have regarding sexual reproductive health, stigma/discrimination, disclosure, adherence, depression and suicide.
BCM-CFM formed a partnership with Malawi Telecommunications Limited (MTL) to use 4 cellular phones with one common number. 12 call takers were trained using material from the Teen Club curriculum with emphasis on the above topics. Each received a TSL manual complete with possible scenarios and suggested responses. TSL receives calls in evenings and on weekends. Calls are annyomous. Any unresolved or emergency issues are referred to either the Baylor social worker or the TSL physician. The TSL program manager reviews each call daily and the TSL social worker reviews calls weekly.

Lessons learned: Though the service is appreciated and used frequently by our teens at Baylor, the ALH really in need of a hotline service are those living outside of Lilongwe and in villages not in the vicinity of an already established teen clubs. Not all teens have consistent access to a phone and we must avoid privacy breaches when the teens borrow phones.

Next steps: Once the toll free number is established for all service providers in Malawi, we anticipate a rapid expansion to other ART clinics in Lilongwe and then throughout Malawi. We anticipate hiring more call takers, making the hotline available during additional hours, and expanding our resource network. We also hope to bring the hotline concept to other Baylor Teen Clubs in surrounding countries. Our goal is for all ALH to have access to a network of support.

TOOLS EMPLOYED FOR DEFAULTER TRACKING AT A PAEDIATRIC ART CLINIC IN LILONGWE, MALAWI

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Baylor College of Medicine Children's Foundation – Abbot Fund Clinical Center of Excellence - Lilongwe, Malawi

Abstract:
Background: Patients who are lost to follow-up (LTFU) present a distinct challenge in providing comprehensive paediatric HIV care at the COE. A defaulter is defined as a patient/client who has failed to return to the clinic for routine appointment for a period of three months, while LTFU patient/client is someone who has not returned for routine appointments for six months' period. Using a combination of phone calls and home visits social workers are able to track patients who for one reason or another default before they are LTFU.
We will describe the results of the interventions that were employed to track patients/clients who had defaulted or were lost to follow up at Malawi Baylor COE for a period of two years.
Methodology: A retrospective chart review was conducted. The social workers' records and Electronic Medical Records (EMR) were reviewed. This review mainly focused on the charts/records of enrolled patients who were booked for routine care at Malawi COE between 31st October, 2008 and 31st October, 2010.

Results: For the stated period, 12.4% (511 patients) was recorded to have been LTFU out of a total of 4112 patients ever registered. Seventeen percent of those LTFU (87/511) were on ART. Of the 511 LTFU, 54% (276) were documented to have been contacted by the social workers . For the remaining 46% (235) patients, there was no documentation to show whether contacts were made or not. Six percent (32) were successfully contacted by phone while a further 25% (125) home visits were made. Unsuccessful attempts were made to contact the 23% (119) patients through the available contact details i.e. phone and physical addresses and locator forms.

Conclusions: Of concern, for almost half of patients that were LTFU, there was no documentation of an attempt from the Baylor COE to contact them. When a contact was attempted, the home visits approach was more effective than through a phone call. A majority of the patients LTFU were not yet on ARTs. Inadequate Social Work and Community Health personnel as well as incomplete/wrong contact data or out of date phone numbers and physical address could be considered as possible factors contributing to the challenges of tracking LTFU clients/patients. It is thought that improved and accurate contact information will help bring back to care patients/ clients LTFU. It is, therefore, recommended to prioritize development or adoption and implement an improved and integrated defaulter tracking system at Malawi COE.

H-27755

SWAZILAND

DECENTRALIZING PEDIATRIC AND ADOLESCENT PSYCHOSOCIAL CARE THROUGH THE BAYLOR SWAZILAND - ICAP AGREEMENT

N. Salazar-Austin, G. Mtetwa, S. Makhanya, L. Malinga, H.N. Sarero

Baylor College of Medicine Children's Foundation—Swaziland

Abstract:
Issues: Baylor and ICAP (International Center for AIDS Care and Treatment Programs) have partnered for four years in decentralizing pediatric ART care across three regions of Swaziland. In the past we have focused on transferring nurse skills with the purpose of strengthening pediatric HIV and PMTCT services. We have also capacitated phlebotomists as pediatric blood draws had been identified as a barrier to pediatric initiations. As we refocus our goals beyond ART initiations and toward retention in care, we now focus our efforts on decentralizing the important psychosocial support we provide our pediatric and adolescent patients.

Description: Through the Baylor-Swaziland ICAP agreement, we have developed two psychosocial attachments, one for the transfer of pediatric counseling skills and a second for the transfer of programmatic teen club skills. Through both our social work and in-reach programs, we aim to transfer pre-ART, disclosure, adherence and treatment failure counseling skills to social workers, psychologists and expert clients around Swaziland.
Through the teen club attachment program, Baylor-Swaziland uses teen club as a model for the decentralized clinics and health facilities to shape their own support groups, thus decentralizing psychosocial support for HIV+ teens. We have also expanded our teen leader training to include youth from decentralized support groups to empower and mentor them to be good role models and future leaders in their communities and support groups.

Lessons Learned: A major barrier to establishing teen support groups was a lack of disclosure in decentralized clinics and health facilities. With a focus in transferring essential disclosure counseling skills first, we now plan to move forward with teen club attachments and ongoing assistance for their own teen support groups.

Next Steps: In the upcoming Baylor Swaziland-ICAP agreement, we hope to promote a Baylor-Swaziland nurse to act as a pediatric advisor to the three regional mentoring teams. A core function of this position will be to continue supporting the decentralization of pediatric and adolescent psychosocial support.

SWAZILAND IN REACH ANALYSIS: EXPANDING CARE FROM THE CLINIC TO THE HOMESTEAD

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Abstract:
Background: The Baylor College of Medicine-Bristol Meyers Squibb Children's Center of Excellence in Mbabane, Swaziland has partnered with UNICEF to expand its home visit program in order to better address the complex social needs of its patient population. The In Reach team consists of the In Reach Coordinator, Nurse and Social Worker. The aim of this study is to combine and review information obtained from the In Reach Program in Swaziland, after our first two years of implementation.

Methods: This study is a retrospective chart review using the Baylor Swaziland's electronic medical records in addition to an internal register of the In Reach Program collected by the social work department.

Results: Eight hundred ninety eight home visits (784 to pediatric patients ages 0-18 years old, and 114 to adults >18 years old) were conducted between April 2011 and March 2013. Gender distribution was split evenly. The reason for In Reach visits was primarily for adherence problems (47%) followed by routine visits to stable patients on antiretroviral (ARV) therapy (19%), treatment failure (14%), and preparation for ARV initiation (13%). Patients in all four regions of the country were visited with the majority in the Hhohho region (47%). The average household size of patients visited was 6.15. The average time patients (adults and children) had been on ARVs was 3.36 years. Of the pediatric population visited, average age was 10.9 years. Commonest primary caregiver was grandmother in 40%, mother in 29%, aunt in 8% and stepmother in 6% of cases visited. Forty seven percent of children visited were orphaned, 22% were double orphaned, and 25% were single orphaned. Seven percent of patients have required follow up visits, mainly for ongoing adherence problems (69%).

Conclusions: The In Reach Program has had contact with a large number of patients throughout the country. It has been most utilized in social situations surrounding adherence problems. Nearly half of children visited are orphaned with grandmothers being the primary care giver in the majority of cases. The In Reach program has also been widely utilized to assist in cases regarding treatment failure, and readiness for second line.

H - 30666

SECOND LINE THERAPY AND THE ADHERENCE COMMITTEE: THE SWAZILAND EXPERIENCE

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Abstract:
Issues: With a growing number of patients on long-term ART and the return of CD4 reagent to Swaziland, clinicians identified a large number of patients with immunological treatment failure. The Swaziland COE's large number of providers makes it difficult for any one provider to know the medical and social aspects of each treatment failure patient. As a result, there was a certain degree of hesitancy in deciding a patient's 2nd line readiness, thus delaying the change to appropriate ART. Consequently, there was concern for clinical failure and increased mortality.

Description: To address this problem, we created an adherence committee tasked with both following treatment failure patients and deciding upon 2nd line readiness, and developing treatment failure counseling guidelines, counseling tools and a lecture series on the identification of treatment failure. To help determine 2nd line readiness, all patients are sent for both social work and in-reach visits. Together, they aim to assess prior problems with adherence, ensure proper understanding of treatment failure, and strengthen family support in preparation for 2nd line therapy. An extensive counseling form was created for the paper chart to inform the providers of the patient and caregivers' understanding and readiness for 2nd line therapy. Finally a multidisciplinary committee of physicians, nurses, social workers, and expert clients was created to gather information and determine 2nd line readiness.

Lessons Learned: As we began to counsel about treatment failure and the need for 2nd line therapy, a number of patients subsequently defaulted and were lost to follow-up.
As a result, our counseling guidelines stressed an open, unassuming approach to the patient. We also developed a series of non-confrontational, culturally sensitive questions regarding a patient's current and prior adherence and exposure to ART.
As our nurses are an important part of patient follow-up, specific trainings in identification of clinical, immunological and virological treatment failure were held with the COE and sCOE nursing and physician provider staff.

Next Steps: We are using this model to inform MSF and the MOH on optimizing second line readiness to ideally promote better outcomes on 2nd line therapy.

TANZANIA

ADHERENCE TO ANTIRETROVIRAL TREATMENT (ART) AMONGST ADOLESCENTS ENROLLED IN TEEN CLUB IN MWANZA, TANZANIA

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Baylor College of Medicine Children's Foundation - Mwanza, Tanzania.

Abstract:
Introduction: Adherence to antiretroviral treatment (ART) is a major obstacle to good treatment outcomes for HIV-infected adolescents. At the Baylor Children's Foundation - Tanzania Lake Zone Children's Centre of Excellence (COE) in Mwanza, Tanzania, a structured peer support group - 'Teen Club' - exists to facilitate life skills development and preparation for positive adult living in HIV-infected adolescents, the majority of whom are perinatally-infected and struggle with a broad range of socioeconomic issues. Teen Club is available to all adolescents at the Centre, and a key specific skill focused upon in monthly meetings is maintaining self in care and maintaining full adherence to ART. This study compares adherence to ART amongst Teen Club members before and after Teen Club enrolment.

Methods: Retrospective chart review. Inclusion criteria: 2012 Teen Club members with data sufficient for review; exclusions were due to lack of proper adherence documentation or otherwise incomplete adherence data. Data collected: specific adherence percentages, spanning from enrolment at the COE through December 2012. Each member's average adherence based on nurse pill count from all clinic visits pre- and post-registration was calculated. These averages were then absolutely defined as good (between 95-105%) or poor (<95%, >105%).

Results: Eighty two of 170 Teen Club members as of December 2012 were included in the study. 41.5% had poor adherence before Teen Club registration, and 20.7% had poor adherence after Teen Club registration (50.1% change, p=.0007). Amongst these 82 patients, 26.8% (22/82) of the teens attended 3 or fewer monthly Teen Club sessions throughout 2012; 13.4% (11/82) attended between 4 and 6 sessions; and 59.8% (49/82) attended 7 or more. Members who attended 3 or fewer sessions went from mean 54.5% poor adherence to 36.4% poor adherence (33% change, p=.07); between 4 and 6 sessions went from average 36.4% poor adherence to 27.3% poor adherence (25% change, p=.49); and 7 or more sessions went from average 36.7% poor adherence to 12.2% poor adherence (66.8% change, p<0.0001).

Conclusions: This study suggests that enrolling and attending Teen Club may have an effect on improving ART adherence, especially amongst those who attend regularly. There are many limitations to this study, including the high proportion of excluded charts based on incomplete documentation, as well as the study's retrospective nature and inability to control for confounding factors. Nonetheless, while programmes such as Teen Club are becoming common parts of adolescent HIV programming in Africa, data on their impact are currently quite limited. This study's suggestion of positive impact on ART adherence merits further evaluation, including with a well-designed prospective cohort study, and this is now in process at the COE.
Further rigorous evaluations of Teen Club outcomes, including comparison with a control population of non-attendees, are also of interest. Qualitative impacts of Teen Club should also be assessed, as much of the benefit to structured peer support is likely in terms of improved self-esteem and changes in outlook and expectations for life.

H - 32678

AN INCOME-GENERATING PROJECT PROMOTING ADOLESCENTS´ INDEPENDENCE AND READINESS TO ENTER ADULTHOOD AND TRANSITION HIV CARE IN TANZANIA

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Baylor College of Medicine Children's Foundation – Mbeya and Mwanza, Tanzania.

Abstract:
Introduction: Although an issue globally, of particular acuity in Tanzania is HIV-positive adolescents´ struggle with a paucity of skills, challenging their ability to achieve independence. This has substantial implications for HIV-positive adolescents´ ability to become independent adults with positive mission to the community, as well as to transition to adult HIV care. Opportunities for economically-productive skills development are keenly needed by HIV-positive youth.

Methods: Alongside staff, members of Teen Club - a peer-driven life-skills development programme for HIV-infected adolescents at Baylor-Tanzania´s Mwanza and Mbeya sites - locally-adapted and implemented an income-generating project (IGP) known as Stitch-x-Stitch. Pilot-phase inclusion criteria were high-risk characteristics including difficult home situations and school non-attendance. Dedicated work space was provided by the Centres. A qualified seamstress from the community was hired to instruct practical skills development and provide ongoing mentoring. A tailored life-skills curriculum was delivered by Centre staff as part of the IGP. Teen Club members and Centre staff regularly iterate as to product line and future directions. Participants are expected to share learned skills with other adolescents during monthly Teen Club meetings.

Results: Establishing the IGP at both Centres cost US$1,300. In the IGP's pilot-phase, handcrafted goods yielding US$5,000 were produced and sold. Participants have been introduced to professionalism, financial literacy, teamwork, negotiating, communication and basic IT skills. Each participant has developed a personal educational plan to which IGP proceeds will be directed, along with direction of proceeds to further IGP development and Teen Club activities. Based on pilot results, Baylor-Tanzania has been awarded a substantial grant from the Tanzanian private sector to further expand IGP activities.

Conclusions: Successful IGPs benefitting HIV-infected youth can be developed in resource-poor settings, with myriad benefits to participants. There is private-sector interest in Tanzania in supporting such efforts. Next steps include formally evaluating the IGP's impact on adolescents´ HIV care-and-treatment outcomes, including transition to adult care, as well as on youth's longitudinal skills' retention and utilization. Additional IGPs will be developed, focusing on different youth interests and allowing a broader cross-section of youth involvement. Extension of IGPs to Baylor-Tanzania-supported rural clinical sites across Tanzania will be pursued.

H - 32678

SALAMA CAMP: INTRODUCING CAMPS FOR YOUNG HIV-INFECTED ADOLESCENTS TO TANZANIA

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Baylor College of Medicine Children's Foundation, Mbeya, Tanzania

Abstract:
Issues: Adolescents living with HIV (ALHIV) in Tanzania face stigma and lack appropriate psychosocial support, which contributes to feelings of worthlessness and hopelessness, and causes difficulties with adherence. Camp programs help address these problems by providing psychosocial support and education to ALHIV. In partnership with the SeriousFun camp network and other partners, successful camps have been held in Ethiopia, Lesotho, Malawi, Swaziland, Uganda and Botswana over many years. Baylor Tanzania partnered with SeriousFun to develop a camp program in Tanzania – the first of its kind in the country.

Description: Baylor Tanzania hosted the first Salama Camp in December 2012 in Mbalizi, Mbeya, Tanzania. Salama Camp was a 5 day overnight camp for 40 ALHIV. Selection criteria: enrolled at Baylor Mbeya clinic, aged 10-14 years, history of poor adherence, and/or difficult social status. Salama Camp's goal is to empower the most vulnerable members of Tanzania's population by building positive relationships, improving self-esteem and acquiring life skills through camp interventions.
SeriousFun provided technical support, resources and three quarters funding for the first camp. Remaining funding was through Baylor. 34 adult volunteers participated in camp, 28 of which were Tanzanian.

Lessons Learned: Salama Camp was the first successful camp for ALHIV implemented in the Southern Highland Zone. Adolescents were given the opportunity to create a peer support network and received information about living with HIV. Over 80% of participants rated all activities as "very good."
98% of campers reported they will have better adherence and learned new ways to be healthier. Challenges include large cost and time necessary, with limited number of children reached. The total cost of camp was $14,640USD, or $366 per camper. Finding and motivating local volunteers also proved difficult.

Next steps: Salama Camp plans to expand to two weeks in 2013, and we hope to be able to develop a Salama Camp in the Lake Zone, Baylor-Tanzania's other area of operation in Tanzania. Ways to reduce costs are needed to make camp more accessible and sustainable. Finding additional partners to help support camp is crucial. Volunteers are being sought after at local colleges. Baylor is developing improved monitor and evaluation tools to acquire data on the impact of camp and plans to join an ongoing Baylor/SeriousFun joint study examining camp outcomes.
H-32491

ADOLESCENT ADVOCATES: THE CREATION AND IMPLEMENTATION OF AN ADOLESCENT DEVELOPMENT PROGRAM

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Abstract:
Issues: Adolescents living with HIV (ALHIV) in Tanzania increasingly encounter challenges such as antiretroviral therapy adherence, retention in care, coping with a chronic condition, and transition to adulthood. Transitioning is particularly challenging as ALHIV often lack necessary support and guidance. To assist ALHIV attending the Baylor Mbeya COE with this transition, the Adolescent Advocate Program was developed.

Description: The program started in January 2013. Selection criteria: lack of current employment, minimum age 17 years, and previously held Teen Club membership. Eleven positions were created in five areas: Clinical (6; assisting triage, pharmacy, lab and data entry), Teen Club liaison (2 former Teen Club Leaders, assist curriculum development and facilitate events), Career Opportunities (1; job opportunity education, creating career panels), Transition Expert (1; facilitate monthly transition sessions, peer support, and lost-to-follow-up) IGP (1; developing income-generating projects, selecting teens, and overseeing programs). Adolescents received two weeks training with Baylor staff, and began assisting full-time in February 2013.

Lesson Learned: The program positively impacts the advocates though the development of life and work skills, as well as provides work experience, a crucial component for future job seeking. Feedback has been positive, and the program is well-positioned to positively impact clinic operations. Challenges include sufficient staff/time for continuing education of advocates and sourcing sustainable program funding.

Next Steps: Adolescents will continue to receive direct mentorship from Baylor staff through educational sessions on adherence, basic counseling skills, emergency triage assessment training, communication, peer education and work ethic. Rather than merely tracking process indicators such as numbers of clients served, developing specific outcome indicators for the Advocates Program is of interest to the program's nascent monitoring and evaluation development, particularly those linked to patient outcomes. Based on outcomes, iteration of the program's selection process for advocates, their work plan and their training's educational components will be required. As the program grows, guidelines for the enrolment of new advocates and transitioning current participants needs to be developed to allow maximum participation from our adolescent population. Pending program progress, opportunities for rolling-out advocates at outreach sites will be explored.

H - 32491

SPEAK OUT! TEEN CLUB PARTICIPANTS PARTNER WITH MWANZA YOUTH AND CHILDREN NETWORK AND GO LIVE ON LOCAL FORUM

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Baylor College of Medicine Children's Foundation – Mwanza, Tanzania

Abstract:
Issues: Most adolescents and especially those living with HIV struggle with obtaining self-confidence and establishing strong self-identities. Much of the stigma and discrimination that adolescents experience today comes from fear and misconceptions about HIV/AIDS due to inadequate education. Increased self-esteem and self-identity of those living positively in combination with better education of the general public has great potential to decrease stigma.

Description: In October 2012 Teen Club partnered with the local NGO Mwanza Youth and Children Network (MYCN) to help fight stigma and discrimination through education on local media forums, Metro FM and Barmedas TV, with the goal of increasing the participation of youth living with HIV/AIDS in radio and TV programs so as to join other children in fighting for their rights and development. The program was advertised at Teen Club; more than 30 teens signed up, but only 18 attended the first training session. MYCN's Young Journalists provided 5 trainings on radio programming preparation, evaluation, equipment usage, etc. An average number of 12 teens were selected for participation in Saturday's shows (4 radio and 4 TV live programs), based on skill and availability.

Lessons Learned: Although the adolescents have gained confidence in speaking on the programs, they are not yet comfortable publically disclosing their status. Only one member in the group was free and willing to disclose. Getting Baylor's teens involved with the media program dually educates the public about HIV and improves teens' self-confidence as they acquire media skills. This program can be evaluated through number of enrolled teens and assessment of how well they can communicate, interact, and present themselves; and the ability to disclose their status.

Next Steps: Increased training and practice is required for the teens to continue feeling more comfortable live on the radio and TV. Subsequent trainings should focus on confidence and identity building through open discussion of HIV/AIDS. This will encourage disclosure, making the goals of the program more attainable. Ideally, there should be a consistent group of teens appearing on the radio and TV shows, which would motivate for more potential teens to get involved.

H-32678

ADHERENCE TO ANTIRETROVIRAL TREATMENT BY REGISTERED TEEN CLUB MEMBERS VERSUS NON-MEMBERS AT THE MWANZA COE

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Baylor College of Medicine Children's Foundation – Mwanza, Tanzania,

Abstract:
Background: Adherence is a major obstacle to successful HIV care for many patients, especially adolescents.

Methods: Teen Club (TC) and non-TC data was compiled to evaluate how Teen Club affects adolescent adherence. Our cohort consists of 48 2012 TC members and 28 non-TC adolescents; exclusion was due to insufficient adherence data. For TC members, adherence ranges were collected for 3 consecutive visits pre-registration and 3 consecutive visits post-registration; for non-members, 6 consecutive visits, ending December 2012 (maximum of one data point per month; consistently chose first data point of the month). These ranges were absolutely defined as good (between 95-105%) or poor (<95%, >105%). If 2 of the 3 pre or post-registration data points were defined as good, the average was good adherence; the converse was also true.

Results: 47% (23/49) of our TC subjects had average poor adherence before TC registration, and 43% (21/49) had average poor adherence after TC registration (1% decrease, p=0.57.) 25% (7/28) of our non-TC subjects had average poor adherence during the first 3 of the 6 consecutive clinic visits, and 18% (5/28) had average poor adherence during their last 3 clinic visits of 2012 (28% decrease, p=0.34.) TC members were 2.7 times (95% CI: (0.83, 8.93), p=0.09) as likely as non-TC members to have poor adherence at the end of follow-up, after adjusting for baseline adherence. The large 95% CI shows lack of precision, probably because of the small sample size of the non-TC group.

There is also a significant effect of baseline adherence, i.e. regardless of whether teens attended TC or not, those who started out with poor adherence were 4.8 times (95% CI: (1.69, 13.76), p=0.003) as likely to have poor adherence at the end of follow-up.

Next Steps: We see that non-TC adolescents had significantly better adherence to start with and saw more improvement over time as compared to our TC members. Conventional wisdom around the impacts of Teen Clubs need careful evaluation. We should reassess our approach to TC in Mwanza, and ensure we are achieving results in important clinical outcomes amongst participants. Further evaluations of TC impacts in Mwanza are warranted. Qualitative impacts of TC particularly should be assessed, such as improved self-esteem and changes in outlook and expectations for life.

H - 32678

ANALYSIS OF ADOLESCENT BASELINE KNOWLEDGE OF ARV AND ADHERENCE

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Baylor College of Medicine Children's Foundation – Mwanza, Tanzania

Abstract:
Issues: Adherence is a big challenge for adolescents; many are failing treatment and/or switching to second line drugs. One of Teen Club's (our adolescent peer support group) aims is to promote better adherence amongst adolescent clients.

Description: In order to assess Teen Club members' understanding of ARV treatment and adherence, a baseline survey was administered during July 2012 Teen Club. The survey consisted of 20 adherence-related questions and was administered to 82 teens (46% had been of ARVs for over one year). The survey indicated that 86% knew the correct definition of ARV. 67% answered correctly that adherence is to do as you have been told. In defining non-adherence, 42% said it means not observing the time, 28% marked that it means not observing dietary instructions, 28% marked that it means missing multiple doses, and 12% said it means missing only one dose. 73% of teens answered that a twice daily dose is to be taken in the morning and evening, while 20% answered correctly that a twice daily dose is to be taken every 12 hours. Results showed that 39% reported not taking their medications properly because they forgot, 17% because they don't know how, and 15% because of side effects. 48% answered that 110% adherence is better than 100%, while 49% answered that not better. In response to the statement, "you need 60% adherence to achieve virologic success", 56% answered the question correctly. Teens answered that helpful interventions in improving adherence were: alarm clock, pill calendar, and frequent clinic visits.

Lessons Learned: Teen Club members have inadequate baseline knowledge about ARV treatment and adherence. This must be addressed at Teen Club and during clinic visits in diverse ways, in order to truly get the messages across. Results also showed that Teen Club members need advice in terms of how to improve adherence and implement interventions.

Next Steps: After analyzing the survey results, we commenced regular adherence talks at each Teen Club meeting and more HIV basics education. We will continue with these monthly, 30-minute group adherence discussions. This same survey should be administered bi-annually to assess progress.

H – 32678

BENKI YETU: A SMALL INTEREST LOAN GROUP IN SUPPORT OF DEVELOPING INCOME-GENERATING SKILLS AND OPPORTUNITIES FOR HIV-INFECTED ADOLESCENTS IN TANZANIA

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Abstract:
Issues: Many ALHIV lack education about career development, work opportunities, and financial security. Baylor-Tanzania recognized the need to empower these adolescents with financial health skills. In collaboration with the Olive Branch for Children – a local NGO that provides food, shelter, and schooling for HIV infected or affected orphans – Baylor-Tanzania developed an adolescent co-operative project called Benki Yetu ('Our Bank').

Description: Benki Yetu is a small interest loan group program formed in May 2012. Selection criteria: adolescents not enrolled in school, not working, and identified by the social worker as having a difficult social situation. 20 adolescents were chosen to work with 3 staff.
The aim is to provide financial health and personal finance to adolescents via participation in a micro crediting, co-operative, small business project. Weekly meetings include educational components and operation of the microloan program. Teens make small contributions to the bank, and then can apply for loans though loan application and business plan presentation. A maximum loan of 200,000 TZS ($125 USD) with a 10% interest rate and 20 week repayment plan is possible. The initial capital of 300,000TZS ($187.50 USD) came from Olive Branch. To date, 21 teens have participated, 30 meetings held, 7 loan applications, and 4 loans have been granted. The current balance of the bank account is over 600,000TZS ($375.00).

Lessons Learned: Three successful businesses have been started using Benki Yetu loans: a biscuit-selling business, a portable beauty salon, and a small cooking supply shop. Other loans proposed but not yet funded include: buying/re-selling bulk produce, selling breakfast foods, and firewood sales. Benki Yetu is in early stages of development and member's attendance has lacked consistency.
Challenges included timely repayment of loans, optimization of educational materials, and adolescents retention.

Next Steps: Clearly defining expectations for participants earlier will create a more successful program. Additional staff needs to be identified and trained to bolster program operations. Defaulters require debriefing as to reasons for defaulting. Support for expansion to allow larger numbers of adolescents to participate will be pursued, as will opportunities to rollout the program to outreach sites beyond Mbeya.

H - 32491

HOPING AND COPING: THE IMAGINED FUTURE FOR CHILDREN GROWING UP WITH HIV

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Abstract:
Background: Despite impressive success in scaling up pediatric HIV treatment, our understanding of the long term effects are still relatively limited. Whereas there is strong evidence suggesting high survival rates for perinatally infected children into adulthood, the quality of their future is far less certain. This paper examines how children living with HIV perceive their future and how this may shape their current experience.

Methods: We present findings from a qualitative longitudinal sub study of the ARROW clinical trial, which began in 2011, and involved 104 young people (aged 11-13 years) across Uganda and Zimbabwe. We used repeat in-depth interviews and focus group discussions to explore the lived experiences of growing up with HIV.

Results: We found out that young people place significant emphasis on their hope for a cure at some point in the future. Our data suggests that their religious faith is a supportive influence on treatment adherence, although in few cases adults' religious beliefs may negatively affect a child's adherence. Whilst their professional aspirations did not appear to be particularly influenced by their HIV status, their aspirations for their personal future lives appeared to be significantly shaped by their expectations and misunderstandings around HIV. Few believed they would marry or be able to have healthy children, illustrating the under-estimated influence of their limited knowledge and circulating myths.

Furthermore, fear for stigma encourages young people to portray themselves as 'normal' (i.e. not HIV positive) in order to cope with the pressures. This may affect their current and future behavior, which potentially threatens their capacity to adhere well to treatment, have safer sex and be open about their HIV status. Questions about how they will live with HIV in the future indicate an unmet need for social support on this issue.

Conclusion: Appearing 'normal' and keeping HIV a secret was a means of protection from the social risks associated with HIV for 'now', but suggest risks for future behavior and that their capacity to cope with HIV in the present and the future may be undermined by their compromised expectations of what it means to grow up with HIV.

H-19616