

The Botswana-Baylor Children's Clinical Centre of Excellence (COE)

*Annual
Report
2012-2013*

Gaborone
Botswana



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Letter from the Executive Director

This has been a most memorable year. We celebrated ten years of service to Botswana as we dedicated a newly constructed adolescent centre that is aptly named the ‘Baylor-Bristol-Myers Squibb *Phatsimong* Adolescent Centre’ (BBPAC) - arguably the first such centre on the African continent. The centre will serve as a national resource for the care and support of all adolescent children with an initial focus on those who are HIV infected or affected. We are very proud of this development and very grateful to Bristol-Myers Squibb, Texas Children’s Hospital, the Rotary Club of Gaborone, our own staff and a number of other local donors for making this long-cherished project a reality.

I also want to thank all our staff – both formal and voluntary – yet again for their steadfast commitment and outstanding results. As the following pages will bear witness, we have continued to achieve excellence in all key areas of our endeavour: provision of comprehensive care and treatment, health professional training and clinical research. Annualized patient mortality has remained remarkably low (<1%) despite our mostly adolescent patient population cohort while the lost to follow-up rate is less than 2%. Despite a constricted financial climate, we have maintained our capacity-building efforts through paediatric KITSO training, mentoring and outreach across the length and breadth of Botswana. Not least, we have published many abstracts and articles in national and international scientific conferences and peer reviewed journals.

None of these achievements would have been possible without the support and collaboration that we continue to enjoy with the Government of Botswana and especially the Ministry of Health, the Ministry of Education and Skills Development, and the Princess Marina Hospital. Our major supporters this past year have been the Government of Botswana, CDC-BOTUSA, NACA, Barclays Bank, BIPAI, Texas Children’s Hospital, the Rotary Club of Gaborone and the Ministry of Education and Skills Development. We owe them all a deep debt of gratitude.

This coming year, we look forward to implementing our revised 5-year strategic plan as well as new programs at the BBP-Adolescent Centre.

Gabriel M Anabwani
Executive Director

The COE at a Glance

BIPAI Botswana is headquartered in Gaborone, Botswana.

Budget BWP 18.5 Million

Patients in care 2,386

Number of staff 71

About Our Programme

The Botswana-Baylor Children's Clinical Centre of Excellence (COE) is a public-private partnership between the Government of Botswana and the Baylor College of Medicine Baylor International Paediatric AIDS Initiative (BIPAI). Since 2003, the COE has provided free-of-charge, state-of-the-art paediatric HIV care, treatment and support to children throughout Botswana. The services provided at the main clinic in Gaborone and the decentralized outreach sites across the country are based on a comprehensive approach that ensures children and their families are cared for in the most appropriate way. Currently over 4,000 Botswana children receive care, treatment and support at the COE's main clinic or at one of its outreach and mentorship sites. The clinic continues to lead the way in the field of paediatric HIV care in Africa and beyond.

Our Vision

We aim for a future where all children are living longer and healthier lives.

Our Mission

To pursue excellence in the provision of comprehensive care and treatment in clinical research and health professional training focused on HIV/AIDS, tuberculosis, malnutrition and other conditions impacting the health and well-being of children and families in Botswana and to become nothing less than the finest paediatric centre in the world.

BIPAI Vision: A healthy and fulfilled life for every HIV infected child and their family.

BIPAI Mission: To provide high quality, high impact, highly ethical pediatric and family-centered health care, health professional training, and clinical research, focussed on HIV/AIDS, tuberculosis, malaria, malnutrition and other conditions impacting the health and well-being of children and their families worldwide.



2012-2013 Care and Treatment Highlights

Overview

As the premier Paediatric Antiretroviral (ARV) centre in the country, Botswana-Baylor Children's Clinical Centre of Excellence (COE) has continued to provide unsurpassed care to children and adolescents in Botswana, building on achievements to date. As an integral part of the Government of Botswana's National ARV Programme known as MASA ('*New Dawn*'), the COE provides free, comprehensive HIV/AIDS treatment and care to all Botswana children. The clinic offers screening, adherence counselling, professional mentoring services, talks and presentations, trainings (such as teacher training, KITSO training and sputum inductions), routine clinical care, psychosocial and pharmacy services. In order to cover all affected and infected children, the COE is working with the Ministry of Health to make our services available to all children including migrant families and their children and other non-Batswana groups.

A staff complement of physicians, nurses, psychologists, social workers, volunteers and students from other learning institutions, both national and international, collaborate to ensure that the clinic continues to be the preeminent source of care, psychosocial support, learning and attachment for all, clients and workers alike. The COE continues to attract other health care providers for benchmarking Paediatric Infectious Disease Clinic (PIDC) best practices.

The COE continued its progress strengthening policy development, referral and consultation services for HIV/AIDS and TB/HIV care, with a focus on appropriate task sharing, decentralization and capacity-building. This includes providing HIV/AIDS and TB/HIV technical support at Princess Marina Hospital and consultative support at Nyangabgwe Referral Hospital, Sekgoma Memorial Hospital, Scottish Livingstone Memorial Hospital, Deborah Retief Memorial Hospital, Palapye Primary Hospital and other decentralized sites throughout Botswana. Non-paediatricians, including medical officers and ARV nurse prescribers, continue to care for an increasing

number of stable patients, and the proportion of time that COE HIV specialists allocate to mentoring is growing, including in paediatric failure management training/mentoring or challenge clinic at the COE, Tsabong, Hukuntsi, Gantsi, Mahalapye, Molepolole, Selibe Phikwe, Mochudi, Tutume, Masunga and Palapye. Referral linkages with clinics and other healthcare centres nationwide were further strengthened and adolescent services and training at the COE and supported sites continued to function well during the year. One partner, National AIDS Coordinating Agency (NACA) has secured funding for inreach/outreach project to be availed mid July 2013.

An exciting area under development is the Transition Programme, which was initiated in November 2011. The Programme is implementing a formal transition protocol necessitated by the major shift in the clinic population characteristics towards the adolescent. With the help of the Baylor College of Medicine Department of Adolescent Medicine, the COE is at the advanced stages of formalizing the Transition Programme. With funds secured through the CDC- PEPFAR, dedicated staff will be hired to ensure success of this critical step in paediatric HIV care.

The year ended on high note with the celebration of 10 years of excellent service to Botswana children. Some of our long service staff received recognition for their meritorious service. At the same time we also dedicated a new adolescent centre that ushers in a new era in HIV care in Botswana.

Figure 1: Staff long service award ceremony

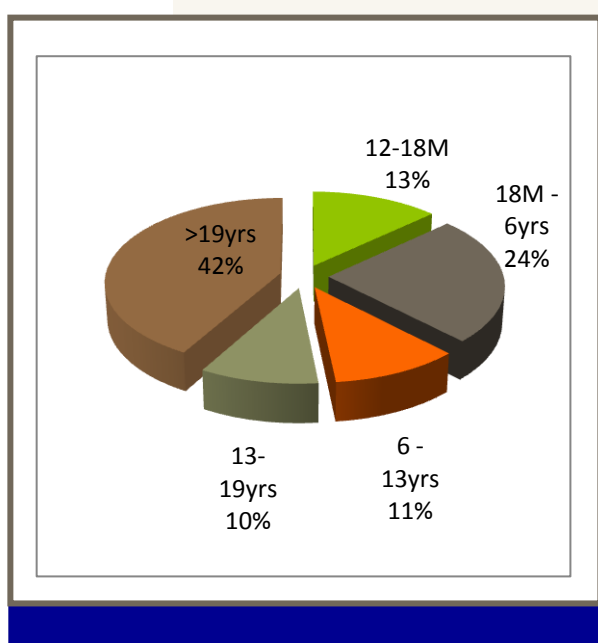


Highlights, continued

Paediatric Infectious Disease Clinic (PIDC)

PIDC continues to provide cutting edge, free care to children and adolescents in Botswana. PIDC clinical outcomes are comparable if not better than first world settings at an annualized mortality rate in the past year of less than 1%. The comparable average mortality rate in this type of population in sub-Saharan Africa is 15%, which is now beginning to decline due to increased access to care for African children. It is clear that the proportional representation of adolescents in our mortality rate is slowly increasing. Currently standing at almost 50% of all HIV-related deaths, this trend is concerning. This phenomenon has been anticipated and adolescent-friendly services have been introduced in the service menu. Adherence and retention in treatment rates remain above 90% at the COE and the loss to follow up rate is 1.8%. With the opening of the adolescent centre in 2013, we are optimistic that the clinical outcomes of our growing cohort will continue to improve.

Figure 2: Age distribution of patient at screening (Rapid tests only)

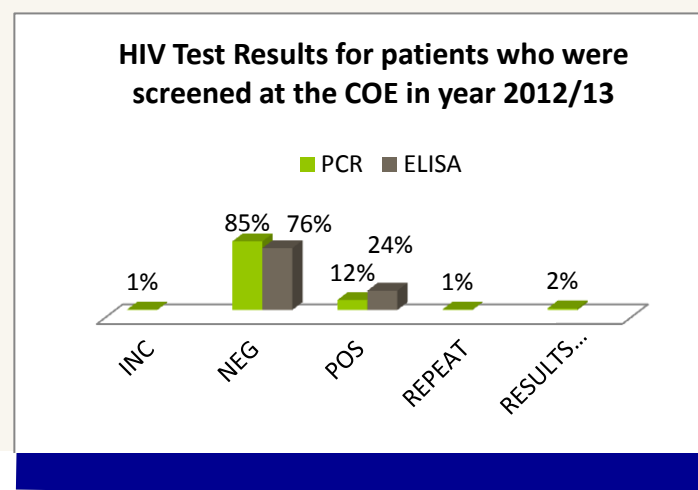


Screening Clinic

The Screening Clinic is the entry point to the COE for all clients seeking to know their HIV status. Most of the clients are referred from other health facilities such as the PMTCT programme (Prevention of Mother to Child Transmission of HIV). Four to six weeks after delivery, babies born at Princess Marina Hospital and other health organizations with maternity facilities in the greater Gaborone area are referred to the COE's Screening Clinic for DNA/PCR testing. The service is run by ARV nurse prescribers and other nursing staff with support from the physicians. The screening nurse ensures that all clients coming for testing undergo pre- and post-test counselling and are screened for conditions that might qualify for HAART.

Of note in the last year, 281 patients, compared to 302 last year, were screened for HIV at the COE between 01st July 2012 and 30th June 2013. This reduction perhaps signifies great strides in treatment and prevention of HIV infection in Botswana, as well as the increasing coverage of decentralized care, with over 200 clinics nationwide providing ARVs. 55.2% of the patients were tested using DNA/PCR and 44.8% using RAPID testing. Of the 281 who were screened for HIV, 17.4% were HIV positive and of those, 61% did the RAPID test and 39% did the DNA/PCR test. This is expected as the rapid test is done in suspected cases while PCR is a routine test for exposed babies, the majority of whom are negative. The overall number compares well to the national HIV prevalence as per BIAS III of 2008 (17.6%).

Figure 3: Test outcomes for PCR and Rapid Tests



Highlights, continued

Nurse Prescribers

The Nurse Prescriber (NP) program at the COE has seen substantial growth and currently forms the backbone of the clinic. The NP programme at the COE continues to function well. We now have 11 nurses trained and mentored in the provision of paediatric HIV/AIDS screening, care and treatment.

Our nurse prescribers continue to assume more prominent roles in the management of patients currently on ART, including complicated patients. They demonstrate the crucial potential for task-shifting/sharing to be successfully implemented in clinical care settings in Botswana, where high HIV prevalence and limited physician numbers necessitate the involvement of non-physician providers in care models if universal access to HIV/AIDS care and treatment is to become a reality. The COE is proud of its leading role in this critical regard. Currently our ARV nurse prescribers see almost half of all our stable patients at the COE. Nurses and support staff also man the sputum induction program with overview by our specialist physician.

Family Model Clinic (FMC)

Family Model Clinic (FMC) plays an integral role in the COE's holistic approach to care and treatment. Our FMC has proven to be highly successful and has attracted the attention of HIV practitioners from both Botswana and abroad, many of whom go home determined to replicate this initiative. Family units continue to be seen with a special emphasis on adult preventative care screening and management.

In the past year, the role of the FMC in the clinic has been discussed and redefined to fit into our changing landscape. Now it also provides care for the increasing number of pregnant teens and young adults who are not yet ready for successful transitioning into adult care. The entry-point to the COE remains the infected child.

Challenge Clinic

Initiated in 2008, the Challenge Clinic has been instrumental in developing Botswana's approach to the use of advanced regimens containing raltegravir and darunavir in paediatric patients who are failing second-line antiretroviral therapy with documented resistance to boosted lopinavir. During the last year, we continued to expand and refine how salvage therapy may be applied in the context of our complicated patients failing second-line ART with documented lopinavir-resistance, including the expanded use of darunavir and raltegravir for such patients, both at the BBCCOE and decentralized sites further afield. Six patients at our clinic and in Palapye (first outside Gaborone) continue to do well, all suppressed. This is the first national program in the subcontinent to treat paediatric patients with these new drugs. The COE Challenge Clinic has just 53 patients, and over 100 patients are enrolled countywide.

Figure 4: staff and volunteers at the COE Children's Christmas party



Highlights, continued

Paediatric TB / HIV Project

The COE has continued its partnership with the Botswana National TB Program (BNTP), CDC Botswana and Botswana-UPENN to improve the diagnosis of TB in Botswana children. The COE Paediatric TB Pilot Project was developed in response to the fact that bacteriological confirmation of TB remains a key obstacle to TB diagnosis in children. The project intends to conduct Sputum Induction Training, develop and distribute Information, Education and Communication materials, and develop a Paediatric Diagnostic Algorithm.

The Paediatric TB/HIV team enjoyed another successful year improving pediatric TB diagnosis in Botswana, and reached all target TB indicators for the years 2012/13. A total of 1140 HIV positive children were screened for TB at the COE and pilot sites. Out of these children, 81 were diagnosed with TB and started on treatment.

The Botswana National TB program has embraced sputum induction as a method for diagnosis, ensuring that this technique will become a nationwide standard. In the last year, COE staff conducted 12 sputum induction trainings with 146 health care workers from various disciplines at Princess Marina Hospital, Sekgoma Memorial Hospital, Nyangabgwe Referral Hospital and Letsholathebe II Memorial Hospital. Over the last five years, 874 health care workers have been trained in total. It would be informative to have an audit of the project that would inform way forward.

This year, the department completed the five-year project of distributing Information, Education and Communication (IEC) materials throughout Botswana. This information has increased awareness about pediatric TB among health care workers and the general public.

Table 1: Training statistics for sputum induction

Indicator	TARGET	TOTAL
1. Number and percent of HIV-positive patients who were screened for TB in HIV care or treatment settings	800	1140
2. Number of HIV positive patients in HIV care or treatment (pre-ART or ART) who started TB treatment	100	81
3. Number of TB patients who had an HIV test result recorded in the TB register	80	112
4. Number of HIV-positive TB patients receiving cotrimoxazole prophylaxis	80	128
5. Number of HIV-positive TB patients receiving ART	80	152
6. Number of eligible HIV-positive patients starting IPT	20	20

The TB/HIV team also celebrates the acceptance of its manuscript entitled “Pediatric TB diagnosis using sputum induction in Botswana: program description and findings” by the International Journal of Tuberculosis and Lung Disease. (See Research Section)

Figure 5: Sputum induction class of May 2013



Highlights, continued

Clinical Psychology

The COE hired its first clinical psychologist in August 2008 in order to meet the psychological needs of the patients, which were increasingly problematic due to the growing number of adolescents at that time. Following inception, the psychology department has faced massive growth (>100%) in the number of cases. While the department saw around 280 referrals in 2008/2009, there were 1,224 referrals in 2012/2013.

Table 2: Clinical psychology referral cases in the last quarter of the 2012/13 year

PRESENTING ISSUES	NO OF CASES
Adherence Issues	59
Depression	52
Educational difficulty	33
Suicide Ideation	31
Behavioral Problems	25
Anger	19
Disclosure	16
Self-stigma	14
Grief and bereavement	11
Anxiety Disorder	10
Emotional distress-Acute & Chronic stress	9
Adolescent sexual Rep Health (education)	9
Self-esteem Issue	8
Relationship problems	6
Family conflicts	6
Career Counseling	6
Rape / sexual assault	5
Emotional Abuse	4
ADHD	2
Transition (assessment)	2
Substance Abuse	2
Acute Psychosis	2
Seeking Emotional support	2
Hx of Sexual abuse	1
TOTAL	334

Diet and Nutrition

As the COE patient population increasingly shifts to adolescents, nutrition is of greater importance. Adolescence is a challenging time of rapid growth, when nutritional demands increase and good nutrition becomes critical for optimal growth and development. However, intake of healthy, stage appropriate and nutritious food is a challenge influenced by behavioural changes and trends, peer pressure, self image, convenience, access to food, and time constraints.

In order to optimize health and nutritional wellbeing of our HIV infected patients, the Nutrition program helps adolescents to choose healthier foods, and parents to be good role models. Adolescents are encouraged to eat well, read nutrition labels, keep active and eat three full meals a day. HIV-positive adolescents, in particular, also need a healthy snack in between meals. In the last year 560 client were referred for dietetic services, 30 of them adults. Of these 163 (28%) have graduated from the service.

The inclusion of a kitchenette at the new adolescent centre is a welcome development that will help promote good nutrition among our adolescent population. It will serve as a place where these children can receive the practical exposure to preparing healthier meals and snacks and get basic nutrition education.



Figure 6: Art therapy in progress

Highlights, continued

Social work

The social work department is involved in the coordination of all social welfare issues, counseling and care of patients and their caregivers. The department assesses clients' psychosocial state, strengths, challenges, opportunities, resources and financial needs, and familial, social and environmental situations. The table 3 below shows the number of cases (by type) that the department dealt with during the year.

In addition to core responsibilities, the unit played an active role in preparing for 2013 Camp Hope (selecting camp candidates and preparing the psycho-social materials), Teen Club, Teen Mothers Support Group, Young Adult Support Group and Tutoring Programme.

The most commonly requested service is supportive counseling (26%) in which patients or caregivers bring any concerning issues regarding ill-treatment at home, bullying at school, unstable home/family environment and lack of family support. This is closely followed by cases of patients requiring more adherence counseling (23%) because of poor adherence due to lack of supervision, refusal to take medication etc. We also continue to strengthen our referral system by referring some cases to other agencies such as the police, the Ministry of Education and Skills Development or the Department of Social Service.

Outreach / Clinical Mentorship

In spite of the lack of funding for outreach services, the outreach team continued to conduct monthly side-by-side mentoring at 13 sites and met with a total of 1,841 non-duplicated patients, 513 of whom are failing treatment. In addition, one-to-one mentoring was provided for 184 medical officers and nurses.

Table 3: Cases attended by Social Work Department 2012-2013

Type of cases	>18 years		<18 years		Total
	Male	Female	Male	Female	
Supportive Counseling	82	78	15	29	204
Adherence Counseling	81	68	10	24	183
Disclosure Issues	6	7	1	2	16
Juvenile delinquency /Behavioural Issues	11	7	0	4	22
Child negligence	20	15	0	0	35
Child Abuse	6	4	0	0	10
Child Placement	2	0	0	0	2
Career Counseling	1	0	0	0	1
Child custody	1	3	0	0	4
School Placement	4	2	2	2	10
Family conflicts	10	11	3	2	26
Domestic Violence	11	2	0	0	13
Marriage Counseling	0	0	0	0	0
Food and Financial Insecurity	19	20	3	2	44
Transport funding	23	15	3	2	43
Other Social Benefits	20	18	1	9	48
Stigma and Discrimination	5	2	0	0	7
Referred Cases (to other local organizations including social workers, police, Ministry of Education, Rehabilitation Centres etc).	22	32	3	5	62
Home Visits (In-reach)	18	6	2	1	27
Transition	1	2	0	1	4
Deaths	11	1	0	2	14
Total	354	293	43	85	775
	647		128		775

Ten sites continued to be reached by road and the remaining three through free flight services provided by Airborne Lifeline with the support of the US Centre for Disease Control and Prevention (CDC) and the Botswana Ministry of Health. With new funding secured from the National AIDS Coordinating Agency (NACA), we hope to reach 21 sites in the coming financial year.

In-reach / Home-based interventions

Due to lack of funding, in-reach visits were scaled down by 50% to only twice a week resulting in 166 visits which covered 54 emergency cases, 69 routine, 28 lost-to-follow-up and 15 pre-HAART assessments.

Highlights, continued

Adolescent Services Project

The COE currently provides care for a total of 999 adolescents living with HIV, aged 13 to 19. The Adolescent Services Project (ASP) has undertaken a number of key strategic actions to scale up service provision to ensure that those living with HIV thrive to become healthy and fulfilled adults.

Integration of Services

Adolescents by nature face psychosocial and healthy lifestyle difficulties under normal circumstances. HIV stigma and discrimination complicates this fragile stage of development, making increasing treatment failure and mortality a painful reality that we need to deal with. To combat this problem needs resourceful thinking and adolescent-focused services that have efficiency and thoughtfulness at the core. For this reason, the COE aims to be a 'one-stop shop' for adolescent services, in order to improve outcomes in this population. The services would cover all clinical care needs, screening for common conditions, with health education packaged into one encounter. This approach would allow screening for Tuberculosis, Cervical Cancer, Abuse (sexual, physical, and emotional), depression/suicide, drug misuse, sexuality issues, gender based violence, and sexually transmitted infections to be much more efficient. We are working at the policy level with the government to introduce this integrated concept into the national health care system.

Adolescent Transition

The transition program, designed to ensure a smooth transition from paediatric-centred care to adult services, continues to enrol more patients. The program began in November 2011 and has continued to strengthen our collaboration with government institutions, the University of Botswana School of Medicine and the Botswana-UPENN Program. In the past year, transition tools have been finalized.

Figure 7: Teen attending Camp Hope



There are now 33 patients ready for transition but we are still yet to transition patients due to delays with the adult system. With new CDC funding, we are in the process of recruiting dedicated staff in order to ensure success of the project. We are sharing our experience and tools with the wider Baylor International Paediatric AIDS Initiative Network and one clinic (ACTS Clinic) in South Africa.

Adherence Counselling and Psychosocial Services

All clients, new and existing, with poor adherence to ARVs are encouraged to attend PIDC's adherence counselling classes. PIDC conducts adherence classes daily from Monday to Friday. The centre also offers individual counselling by senior nurses and social workers. The classes are for: clients coming in for screening, clients with poor adherence, caregivers whose children are to be initiated on HAART (Highly Active Antiretroviral Therapy), and all interested parties who want to know about HIV and adherence to Antiretroviral treatment. The goal is to empower clients with knowledge and understanding derived from these classes, so that they can better supervise the treatment of children under their care and take care of themselves.

Highlights, continued

Teen Mothers Support Group

The Teen Mothers' Support Group is intended to help pregnant adolescents develop appropriate parenting skills through monthly meetings dedicated to topics such as family planning, medication adherence, feelings and emotions, sexual and reproductive health, baby care and financial literacy. There are currently 35 teen mothers enrolled.

MCP Campaign

In support of Botswana's goal of zero new HIV infections by 2016, the MCP project strives to positively change knowledge, attitudes and behaviors with respect to Multiple Concurrent Partnerships (MCP) among HIV-positive adolescents. In total, the anti-MCP messages have reached 274 teenagers through different forums, including focus group discussions, debates, Life Skills curricula sessions and activities, Life Skills Camp, distribution of informational materials and Edutainment.

Tutoring

Since the introduction of the tutoring program in 2010, 130 students have been enrolled and 45 tutors have dedicated their time to the program. The most requested subjects are mathematics, agriculture, environmental studies, and science. Caregivers report that performance at school has improved.

Camp Hope

Camp Hope is a fun-filled overnight camp for vulnerable COE patients aged 8-14. By providing the campers with a supportive environment, Camp Hope is intended to help children transition into Teen Club and adolescence, while building positive relationships, improving self esteem and teaching life skills. Camp specifically targets children in challenging psychosocial situations and those with adherence difficulties.

In June 2013, in partnership with *Seriousfun* and *Letshego Holdings Limited*, two groups of 50 campers aged 9-15 attended camp for five days. The camp staff team included 23 counselors, 9 leadership staff team members, and three Baylor staff who comprised the medical team responsible for supervising all children in taking their ARV medication. The Gaborone Teen Club Teen Leaders brought fantastic energy as facilitators, mentors and peers for the campers.

Through direct observed therapy (DOT), all the children took their medication together, instilling new adherence habits and reinforcing the message that they are not alone in their struggles. Activities included Arts and Crafts, Team-building, Performing Arts, and Science, as well as Life Skills lessons on nutrition, hygiene, self-esteem and confidence. The campers learned to express themselves, worked together as a team, and had a lot of fun.

Figure 8: Nutritional Games at Teen Club



Highlights, continued

Adolescent Centre

Construction of what became known as the Botswana Baylor – Bristol Myers Squibb *Phatsimong* Adolescent Centre began in November 2012 and was completed at the end of May 2013 at a cost of over 2.8 million Pula excluding furniture and equipment.

The Centre was officially opened by the Honourable Minister of Health, Reverend Dr. John Seakgosing on the 11th June 2013. The opening also marked the 10th Anniversary of the COE and was attended by Mr. Lamberto Andreotti, CEO of Bristol-Myers Squibb, Mr. John Damonti, President of the Bristol-Myers Squibb Foundation, Professor Paul Klotman, President and CEO of Baylor College of Medicine, Mr. Michael Mizwa, Chief Operating Officer of BIPAI, executive directors of other COEs, and other international and local dignitaries. Funding for the project came from:

- Bristol Myers Squibb (P3000000 for construction, furniture and equipment)
- COE staff (P150000)
- American Embassy (P250000 for furniture and equipment)
- Rotary Club of Gaborone (P87900 for project management)
- Lobatse Clay Works contributed 12,000 stock bricks

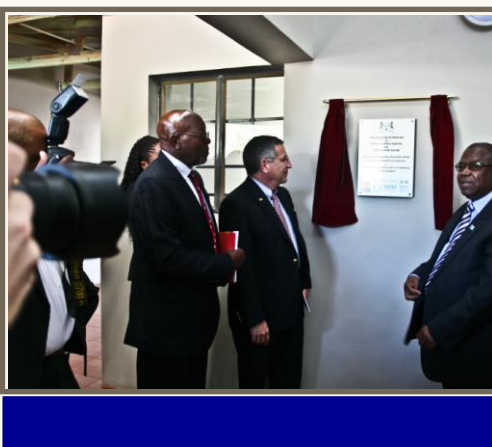


Figure 9: Official opening of the Adolescent Centre, June 2013

Teen Club

Teen Club is a psychosocial support program for HIV-positive adolescents that aims to create a safe space for the teenagers to bond with their peers, while teaching them important life skills and building self-esteem. Through a combination of structured activities, peer mentorship and adult role-modeling, Teen Club aims to empower teenagers to live happy, healthy, fulfilling lives and to encourage them to maintain good medication adherence.

Adolescent program staff members collaborate with the Teen Leaders, adolescents elected by their peers to contribute to the planning and implementation stages.

During the year 2012-2013, 878 adolescents attended Teen Club events in Francistown (84), Gaborone (412), Goodhope (23), Kasane (24), Mahalapye (48), Maun (91), Mochudi (79), Molepolole (49), Ramotswa (36), and Selebi Phikwe (32). The Mahalapye site has secured its own funding since January, and attendance since then has not been recorded.

Education

EDUCATION AND TRAINING

Education and training are major components of all COE programs. Our aim is to expand the pool of healthcare and other professionals with the necessary knowledge and skills to effectively identify, treat and care for HIV infected children. During the reporting period, training was provided at pre-service and in-service levels with financial support from the Ministry of Health, the Ministry of Education and Skills Development, and CDC-PEPFAR. The main activities were Pediatric KITSO Training; the COE Visiting Scholars program; Continuing Medical Education series (CMEs) and the national rollout of Teacher Training workshops.

Pediatric KITSO Training

Pediatric KITSO targets physicians, nurses, pharmacists, social workers and other health professionals. The course is conducted over a period of 5 days at ART sites across Botswana. Over the last year, 12 pediatric KITSO courses were delivered in target ART sites, with 358 learners attending the training. The learners were drawn mainly from government hospitals and clinics. Others were Dukwi Refugee Camp, Bokamoso Private Hospital, Botswana Defence Forces (BDF), Institutes of Health Science and University of Botswana-Medical School. The COE, with support from Ministry of Health, evaluated the performance of KITSO trained health workers in 10 health districts.

The COE Visiting Scholars Program

Over the reporting period, 134 health professionals, medical students, residents and fellows from various training programs in Botswana and around the globe visited the COE as visiting scholars. Visiting scholars spent most of their time in the COE shadowing and working alongside experienced providers. Visiting scholars were given a series of lectures (a condensed version of the week long pediatric KITSO Training). Some of them presented an article at Journal Club or helped with ongoing studies and quality improvement activities. Visiting scholars were afforded opportunities to participate in Teen Club activities, work at outreach sites alongside the outreach team, and some spent time on wards at Princess Marina Hospital.

Education in 2012/13

The COE provides one-on-one training and group educational events to hundreds of local health care workers and teachers each year.

PAEDIATRIC KITSO TRAINING

Clinicians Trained – 358

Visiting Scholars – 134

TEACHER TRAINING PROJECT

Master Trainers 40

**Guidance and Counselling Teachers (TOTs)
557/1054 schools**

Colleges of education 4/5

Number of school based workshops: 475

School Staff Training

This training targets pre-service and in-service schoolteachers with basic information on Pediatric HIV/AIDS in order to empower them to provide a supportive school environment for HIV-infected and affected children. The training is implemented in collaboration with Ministry of Education and Skills Development (MOESD) with funding from the National AIDS Coordinating Agency (NACA). The design and content of the training was informed by the results of the 2011 “Voice Survey”, a cross-sectional Psychosocial Survey of HIV-infected and affected children of school age in Botswana. To reach all 1040 schools and five teacher training colleges in 19 months, the project has adopted a cascading training-of-trainers model (TOT) and peer education model. The TOT model is used to train Guidance and Counseling Teachers to educate their fellow school teachers. So far, teachers and school managers have ranked the workshops as highly beneficial.

“This was an eye opener workshop it has equipped me with enough information to be able to assist my students. I feel greatly empowered”
-Participant

Research

Research remains at the core of the COE's continuing attempts to discover better ways to provide comprehensive, state-of-the-art care to HIV-infected children and their families.

In the 2012/2013 reporting period, several studies were conducted at the COE – some of which were recently completed and some of which are still ongoing:

1. Medical Audit of Patients Registered at the Botswana-Baylor Children's Clinical Centre of Excellence, Gaborone (ongoing)
2. The PHE Protocol – Adherence to HAART among HIV+ Adolescents (ongoing)
3. Development of a Psychological and Behavioral Risk Screening Instrument for use among Perinatally Infected HIV Positive Adolescents in Botswana (ongoing)
4. Association between food insecurity and CD4 count among HIV-positive children (ongoing)
5. The prevalence and associated variables of short stature among a cohort of HIV infected children in Botswana (completed)
6. Expanding Tuberculosis Diagnostic tools for children with HIV/AIDS in Botswana (completed)
7. Helping Babies Breathe (HBB) Training in Botswana (completed)
8. Continued Retention in Care for children at the Botswana-Baylor COE (completed)
9. The BANA 02 Trial (Completed – data analyses ongoing)
10. Botswana Vitamin D Supplementation Study in HIV/AIDS (completed)
11. Predictors of HIV RNA Suppression in Botswana Children (completed)
12. The Kgakololo Cell Phone SMS Feasibility Project (completed)

As a result of the above studies, the COE continued to generate some important research findings which resulted in several abstracts as well as publications in peer reviewed journals. During the reporting period, a total of 13 abstracts from the COE were presented at the BIPAI Network Meeting in Johannesburg, South Africa and several more were presented at international scientific conferences. In addition, the COE had a total of 7 manuscripts accepted for publication in peer reviewed journals during 2012/2013 and a few more are currently under peer review.

Lastly, the COE – in partnership with Baylor College of Medicine, University of Botswana, Baylor-Uganda COE and Makerere University, Uganda – was selected for funding of their joint protocol entitled: Collaborative African Genomics Network. The study, which seeks to investigate host genetic factors associated with variable TB/HIV disease progression among African children, is anticipated to begin around January 2014.

Journal Publications in 2011-2012

Protease Genotypes in Patients Failing Protease Inhibitor-based Antiretroviral Therapy at a Paediatric Centre in Botswana. *Pediatr Infect Dis J.* 2013 Apr 12.

Anti-tuberculosis treatment outcomes in HIV-infected adults exposed to isoniazid preventive therapy in Botswana. *Int J Tuberc Lung Dis.* 2013 Feb;17(2):178-85

Association Between Efavirenz-Based Compared with Nevirapine-Based Antiretroviral Regimens and Virologic Failure in HIV-Infected Children. *JAMA* 309(17): 1803-1809, May 2013

Evaluation of the effectiveness of an outreach clinical mentoring programme in support of paediatric HIV care scale-up in Botswana AIDS Care. 2013; 25(1):11-9.

Early Outcomes of darunavir- and/or raltegravir-based antiretroviral therapy in children with multidrug-resistant HIV at a paediatric centre in Botswana. *Journal of the International Association of Providers of AIDS Care.* 12(2):90-4, 2013 Mar-Apr.

Disclosure of HIV Status to HIV-infected Children in Areas with High HIV Prevalence. *Journal of the Paediatric Infectious Diseases Society* 2(2), April 2013.

Adaptation of a general primary care package for HIV-infected adults to an HIV centre setting in Gaborone, Botswana. *Tropical Medicine & International Health.* 18(3):328-43, 2013 Mar.

Consolidated Financials

The Botswana-Baylor Children's Clinical Centre of Excellence
(Fiscal year ending June, 2013)

INCOME	BWP
Gross Income	15,393,026
Expenses	18,638,430
Surplus (Deficit)	(3,245,404)

BALANCE SHEET

Assets	
Non-current	11,679,891
Current	28,326,342
Total	40,006,233

Financial supporters

Financial support for program this past year came from the following:

Donor	Amount (Pula)	Activity
Government Subvention	BWP 5,756,250.00	Administration of COE
CDC-PEPFAR	BWP 2,661,236.00	Treatment, Care and Support, TB
Bristol Myers Squibb	USD 300, 000.00	Construction, furniture and equipment for Adolescent Centre
Letshego Holdings	BWP 127,000.00	Camp Hope 2013
Diamond Trading Company	BWP 100,000.00	Children's Christmas Party
Debeers	BWP 25,000.00	Teen Club
Rotary Club of Gaborone	BWP 93,000.00	Professional fees for the Adolescent Centre
Seriousfun	BWP 62,252.00	Camp Hope 2013
NACA	BWP 894,571.00	MCP project



Figure 10: Gaborone Rotarians Handing over cheque for the Adolescent Centre

The COE has also received several donations from organizations and individuals including

- Broadhurst Primary School (gifts for 150 children during the 2012 Children's Christmas Party)
- Rotary Club of Gaborone (202 solar powered lights for children without electricity at home)
- Mondior Hotel, Gaborone (Bedding for patients)
- Mrs Yodit Molosi (clothes for babies, toddlers and adolescents)
- Mrs. Dorcas Kgosietsile (600 X 500ml still water) during the Children's Christmas Party

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COE Management

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Executive Director and Chairman

Olekantse Molatlhegi ACCA

Finance and Administration Manager

Mmapula Sechele MSN, RN

Nursing Manager

Mogomotsi Matshaba MB, BCh, BAO, BMedSci

Associate Director, Training and Clinical Services

Haruna B Jibril MBBS, FMCP, MSc

Director of Public Health, Ministry of Health Representative