### **BOTSWANA-BAYLOR** CHILDREN'S CLINICAL CENTRE OF EXCELLENCE





Global Health Network







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### THANK YOU



### In kind

- North Side Primary School
- Bicker Tilly Audit Firm
- Botswana Diamond Company
- Ulysses Motorcycle Club
- First National Bank
- Denish Textiles

- Maruapula Secondary School
- Re a Kgathala trust
- Lions Club
- In-kind;Jannah & Rachel (Hodges Foundation)
- Broadhurst Primary School



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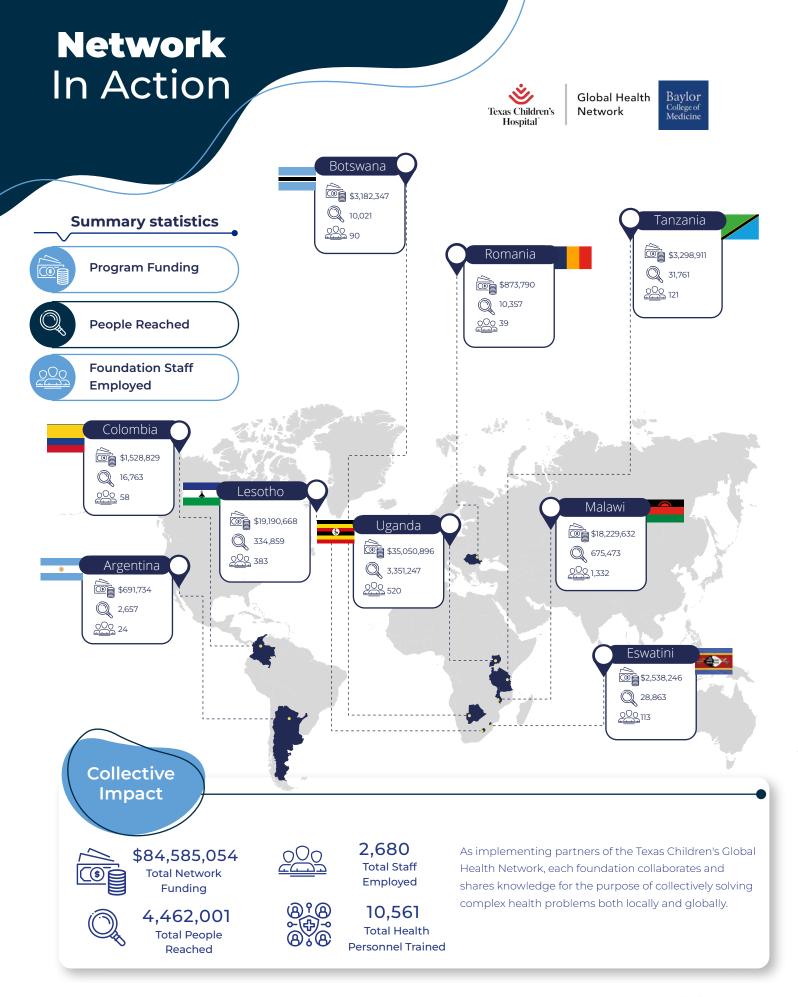
### TCH GLOBAL NETWORK

Botswana-Baylor Trust is a partner of the Texas Children's Global Health Network. The Network was created by BIPAI in 1999 to catalyse paediatric and family HIV care, treatment, and health professional training. The Network continues to be one of the largest providers of pediatric HIV care and treatment in the world. The scope of the Network has expanded with Texas Children's Hospital and Baylor College of Medicine to include tuberculosis, malnutrition, hematology and oncology, cardiology, emergency medicine, surgery and anesthesiology, and maternal health.

Texas Children's Global Health Network includes partners in Argentina, Botswana, Colombia, Eswatini, Lesotho, Malawi, Romania, Tanzania, and Uganda, which operate 11 Centers of Excellence (COE) and 9 satellites for integrated maternal and child health services across three continents, including a tuberculosis center in Eswatini and women's health Centre in Malawi.



Botswana-Baylor ED Dr Matshaba receiving donations from Mascom officials; on the left is Ms Dzene Makhwade-Seboni and right Ms. Tebogo Lebotse-Sebego





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### TRUST BACKGROUND

#### **OUR VISION**

A future where all children are living longer and healthier lives

#### **TEXAS CHILDREN'S GLOBAL HEALTH NETWORK VISION**

Public health systems empowered by our partnerships will have the tools to build healthier, happier and more prosperous communities.

#### **OUR MISSION**

To provide high-quality comprehensive family-centred health care, education, and clinical research.

#### **TEXAS CHILDREN'S GLOBAL HEALTH NETWORK MISSION**

To lead partnerships that advance healthcare equity through innovative collaboration in care, education and research globally.

### WHO WE ARE

Botswana-Baylor Children's Clinical Centre of Excellence (Botswana-Baylor Trust) is a national general care and treatment facility that provides services in Gaborone, Botswana. We serve children, adolescents, and young adults and their families from around the country. Our services include treatment for HIV and associated infections and now extend to oncology and haematology care and treatment for patients nationally. Also, we act as a major research hub contributing valuable information to the international HIV and oncology communities.

Botswana-Baylor Trust is a public-private partnership between the government of Botswana and Baylor College of Medicine International Paediatric AIDS Initiative, which was launched in June 2003. Botswana-Baylor Trust is registered under the laws of Botswana as a Trust. It is located on the campus of Princess Marina Hospital, the largest tertiary care referral hospital in Botswana. Botswana-Baylor Trust provides freeof-charge, state-of-the-art paediatric HIV, oncology, and blood disorder care, treatment, and support to children, adolescents, and their families at the main clinic in Gaborone and through decentralized outreach services across the country. Botswana-Baylor Trust is a leader in the field of paediatric HIV and cancer care in Botswana, the Southern Africa region, and beyond.

The Paediatric Haematology and Oncology (PHO) programme at Botswana Baylor Trust, supported by Global HOPE (Haematology-Oncology Paediatric Excellence) initiative, a partnership between several institutions, including the Ministry of Health & Wellness, Texas Children's Hospital, and the Botswana-Baylor Trust, has improved the care of children with cancer and blood disorders in Botswana since 2007. The PHO program at Botswana-Baylor, offering comprehensive PHO services, primarily delivers services at Princess Marina Hospital. In June 2016, the Botswana Ministry of Health formalized its partnership with Botswana-Baylor Trust and technical partners for cooperation on scientific, technical, and medical initiatives to dramatically improve paediatric cancer and haematology care throughout the country. Plans are underway for haematology and oncology services to be relocated to Sir Ketumile Masire Teaching Hospital.



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### **Executive Director** Interview Mogomotsi Matshaba, M.B.B.Ch

The 2021/22 year has been a year filled with anxiety, hope and excitement related to the growth and expansion of the Trust. We saw the President of the Republic of Botswana, His Excellency President Mokgweetsi Eric Keabetswe Masisi, visit our technical partners, Baylor College of Medicine and Texas Children's Hospital in Houston, Texas, for a second time in 3 years. This visit cemented our already strong public private partnership with the Government of Botswana and resulted in a quest to strengthen and expand service delivery in Botswana

with the addition of paediatric surgery, obstetrics and gynaecology, adult oncology, and vaccine development training. This marked significant increase in the service delivery above and beyond the original HIV-related mandate. The Government pledged more support for the partnership. Plans are underway to sign an overarching 15-year agreement to ensure uninterrupted delivery of these services. Furthermore, the visit also culminated in the signing of a memorandum of understanding between Baylor College of Medicine and the University of Botswana that will strengthen training and research collaboration between the two institutions.

We anticipate that the coming year will be filled with a flurry of activity geared towards fulfilling these commitments and aspirations. The organisation will need to grow and transform to deliver these ambitious plans. This means restructuring our organization and realigning our resources to be better suited to this new and expanded mandate. We have therefore embarked on an exercise to review our strategic framework and subsequently inform our desire to change for the better. We expect all these new envisioned services to start in the coming year, and we foresee another first, major move to transition our paediatric haematology and oncology services from Princess Marina Hospital to Sir Ketumile Masire Teaching Hospital, a first of its kind quaternary levelled institution with a different model of operation from traditional government run institutions. On the research front, we anticipate our institution, working with partners, to begin the first of its kind T-Cell COVID-19 vaccine clinical trial and other studies while assisting University of Botswana in the establishment of residencies and fellowship programmes. We choose 'to go far together' as an old adage goes.

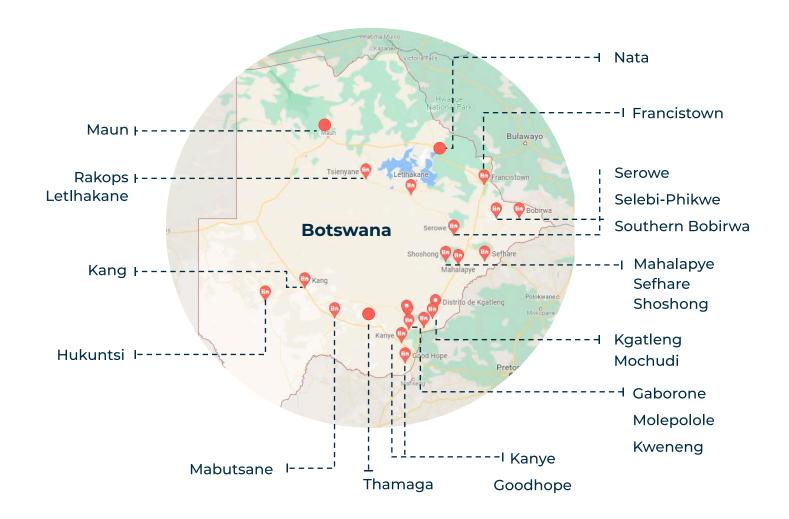
Growth at this rate will not be without challenges, especially with the current pandemic and financial climate. We are treading in unchartered waters and need to be agile and purposeful in our planning. We anticipate continued decline in the number of new HIV infected infants, a good problem to have as we have worked ourselves out of our core jobs! Expanding our service delivery is in part to deal with this problem while responding to the Government's request for more support. The unpredictable financial climate is however coupled with our current uncompetitive remuneration leading to potential risk of losing our highly trained staff, the heartbeat of the organisation. We see these challenges as pushing us to be uncomfortable and look for solutions that will grow the organisation to be poised to deliver above and beyond our mandate. We look at these challenges with renewed optimism and determination.

#### BOTSWANA

### **Botswana-Baylor** Areas of Operation

#### Themes

- Capacity building through training: Letlhakane, Rakops, Kanye, Mahalapye, Sefhare, Shoshong, Thamaga, Goodhope, Mabutsane, Kang, Hukuntsi.
- Outreach Care Services: Kanye, Molepolole, Mochudi, Goodhope, Hukuntsi, Kang, Mabutsane, Mahalapye, Sefhare, Shoshong.
- Adolescent Care Outreach: Gaborone, Kweneng East, Mahalapye, Kgatleng, Southern Bobirwa, Serowe, Selebi Phikwe, Boteti, Tutume.
- **Research:** Gaborone, Molepolole, Francistown, Maun.



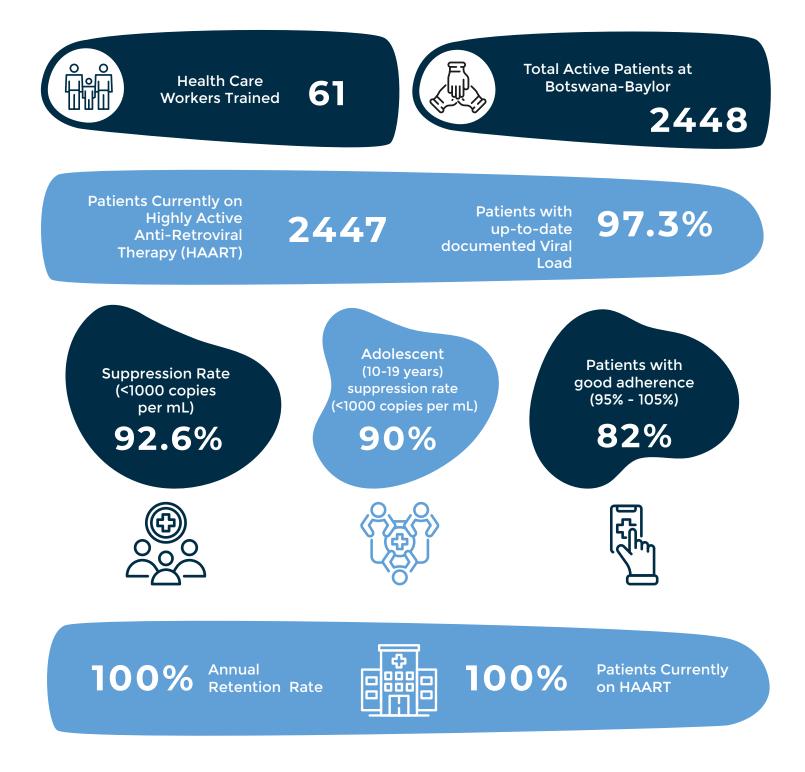


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### **Key Numbers** (HIV Programmes)



### CLINICAL PROGRAMMES

### **Paediatric Infectious** Disease Clinic (PIDC)

The COVID-19 pandemic led to new challenges that forced us to re-evaluate and make changes to our daily routine of care. A COVID-19 response plan was initiated to contain the spread of the novel virus.

The dedicated PIDC staff continue to provide unsurpassed care and treatment to all clients. The clinicians assist in mentoring and training visiting scholars, nurse prescribers and other health care workers who are attached to the clinic for a brief period.

#### Aims

- · Continue quality service delivery to our clientele even during the pandemic
- Reduce time spent by patients in the clinic, reducing congestion and the spread of infection.
- COVID-19 testing for staff and clients
- Reduce and avoid aerosol making procedures
- · Strict use of personal protective equipment and infection control measures
- Continue improving our communication with adolescents and young adults making it easier for them to open up to staff about their challenges.
- Track and reduce the number of lost-to-follow-up patients through the In-Reach project
- · Increase cervical cancer screening number in our clientele
- Strengthen the psychosocial component of our program
- · Advocate for parental involvement in the care of children, adolescents, and young adults.
- Encourage partner testing and Pre-Exposure Prophylaxis uptake



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#### Challenges faced by some of our clients due to COVID -19 Pandemic

- COVID-19 aftermath (social and financial struggles resulting in high numbers of lost to follow- up)
- Some of our clients lost their loved ones; parents, relatives, neighbours, school teachers/ workers, and their health care providers
- Unwelcome moving out of the city due to caregivers' loss of jobs or death
- Increasing numbers of mental health issues: anxiety, substance abuse and suicidal ideations
- Financial constraint for some patients which results in lack of transport money for their medical reviews
- ART adherence challenges for some patients especially adolescents and young adults
- Increasing unplanned pregnancies among adolescents and young adult patients

Total number of active clients at COE	2448
Number of HIV positive clients on Anti-Retroviral Therapy (ART)	2447
Percentage of patients with up to date documented viral load measurement	97.3%
Percentage of patients with suppressed viral load (less than 1000 copies)	92.6%
Annual retention rate	100%
Proportion patients with good adherence (average ARV adherence > 95% and < 105%)	82%
Percentage of adolescents with suppressed viral load (less than 1000 copies)	90%

#### **Screening services**

DNA PCR	Number
Total Number of infants tested for DNA HIV from 1st July 2021 to 30th June 2022	17
Total Number tested HIV negative	16
Total Number tested HIV positive	1
Total already on Highly Active Anti-Retroviral Therapy (HAART)	1
Total Number of infants tested but results still pending	0

### **Rapid HIV Test**

#### Total Rapid HIV Test Done (n=32)

Age	Negative	Positive	Started on HAART
Under 5	8	0	0
6-13	3	0	0
14-19	6	0	0
20+	12	3	3
Total	29	3	3

#### **Rapid Pregnancy Tests**

Total	74
Negative	45
Positive	29



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### Paediatric HIV/TB July 2021 to June 2022

Total Number patients with TB	10
Total Number of patients who completed Anti Tuberculosis Therapy (ATT)	6
Total Number of patients on ATT	2
Total patients who died while on ATT	2 both cases of Pulmonary TB
Total Number of patients with resistance	0
Total Number of patients admitted	Ο
Pulmonary TB	10
Extra Pulmonary	0



### **Cervical Cancer Screening**

July 2021 – June 2022

The Botswana-Baylor Trust cervical cancer screening programme began in November 2016, targeting young women and sexually active girls over the age of 15 years. Cervical cancer screening was later incorporated into the Botswana-Baylor standard clinical services package. At the time of its commencement, the national cervical cancer screening guidelines recommended screening only for women aged 30–49 years. However, the national guidelines have been updated and now recommend screening for women aged 25 and above.

During the reporting period, a total of 26 women were screened using Pap Smear and Visualization and Inspection under Acetic Acid (VIA). Of these, two women tested positive for the human papilloma virus (HPV), which causes cervical cancer.

In addition, the screening helped in identifying women with sexually transmitted infections such as genital ulcers, and candida. Appropriate and timely referrals were made to the gynaecology clinic and Princess Marina Woman's Clinic.

	<30yrs	>30yrs
VIA- Negative	18	6
VIA – Positive	1	1
Candida	1	0
PV discharge (STI)	1	0
Genital ulcer (STI)	1	0
Cervicitis	0	1





### **Psychosocial** support programmes

### **Social Work** Report 2022

The Botswana-Baylor Social work department has a key role in assisting Paediatric Infectious Disease Clinic patients, including young adults and their families affected by HIV and AIDS. During the reporting period, the social work department continued to address the numerous issues affecting children, adolescents, and young adults living with HIV and their families to 66 homes. These included adherence issues, disclosure challenges, the COVID-19 aftermath (social and financial), transportation challenges, sexual orientation issues, gender-based violence and sexual abuse, unemployment, educational needs, dysfunctional families, substance abuse, and suicidal ideations. Interventions to support our clients to address the above-mentioned problems included one-on-one sessions, family camps, caregiver training sessions, family and group therapies, leadership training, and liaison with other external stakeholders for access to support services. These interventions helped improve health outcomes, increased access to services, and retention in care.

#### Challenges to Social Work Department:

- Adolescent and young adults' migration due to work, school, and constant change of phone contacts made follow-up extremely difficult for the social work department.
- The consequences of COVID-19 included the loss of caregivers and other loved ones, resulting in psychological and social stressors for our clients and their families. This affected adherence and income loss resulting in some patients defaulting and missing medical visits.
- COVID-19 related economic hardships resulted in many patients missing medical appointments and defaulting on treatment due to transportation challenges. This was evidenced by an increase in the number of patients requesting transportation assistance. Therefore leading to writing proposal to request funding.

#### **Clinical Psychology department:**

Botswana-Baylor Psychology department continues to address and manage a variety of psychological stressors in our patients and their families. As part of quality improvement, the psychology department aims to integrate service evaluation methods into routine practice. Here we share some client feedback demonstrating the effectiveness of the support provided by the clinical psychologist, Ms. Onkemetse Phoi, to adolescents and young adults.

#### Client 1:

"The psychology department helped me a lot. I had an incident at home which left me with a lot of anxiety and depression and uncertainty of who I am. I fought with my older brother and he left me feeling terrible about myself and unloved and unwanted and undeserving of anything. My biggest fear was that because he was my guardian, I would grow up to be vicious and mean like him. Mrs. Phoi (Botswana-Baylor Clinical Psychologist) counselled me and reassured me that I am fine the way I am. Nothing was wrong with me and I am not less of a man or crippled in any way. She told me I was an adult and if there was any indication that I would be like him, it would have long shown. That was exactly what I needed to hear at the time. So, whenever my brother and I argue, Mrs. Phoi's words play in my head, reminding me that everything will be fine. In any case, I always strive for the best" 23-year-old male.

#### Client 2:

"I had a lot of problems at home after my mom passed away. I knew my life would never be the same again because Dad kept bringing different women to the house. I had difficulty accepting any of these women because I was afraid, they would take away the love of my only parent, and I thought it was unfair for him to be with someone other than my late mother. I was so protective of my father that I forgot to take care of myself. When I realised, my father was not listening to me, I became very rebellious, resulting in poor school performance and poor adherence to ART. At the same time, I was incredibly angry and depressed. The psychology department was extremely helpful in untangling all my problems and re-focusing on myself. They taught me the value of accepting my father's adult decisions. They said my depression started when my father refused to let me control him because I was a child. This broadened my thinking and altered my perspective. I started changing my behaviour, taking my medication properly, my school grades improved, and I started bonding with my stepmother. We are now a happy family, and everything is fine." 19-year-old female.

#### Client 3:

"I was going through a difficult time in my life and did not know what to do. I was pregnant, and the person who had impregnated me was denying the pregnancy; he advised me to find the person who impregnated me. Although I had previously cheated on him, I was not sexually involved with anyone else by the time I fell pregnant. I was certain he was the father of the pregnancy. Not only did the psychology department assist me in dealing with the stress I was experiencing at the time, but Mma Phoi also assisted me with relationship counselling. She invited the baby's father to one of the sessions, where we were able to talk about our problems and she assisted us in dealing with them. Now we are back together and raising our child." 25-year-old female.

#### Client 4:

"I started visiting the psychology department during my early adolescence. It was difficult at first because I was not used to telling people about my problems. Mma Phoi made the session so amazing as I became more comfortable with her over time. Now that I am a big girl, I know that if I ever have a problem, I can always reach out to her because she always has that welcoming smile and always welcomes me into her office. She has helped me in so many ways, including boosting my confidence, which has enabled me to stay on top of things, particularly in my current position as a peer counsellor. Her incredible work has really helped me because she is non-judgmental, which allows me to talk to her about anything." 26-year-old female.



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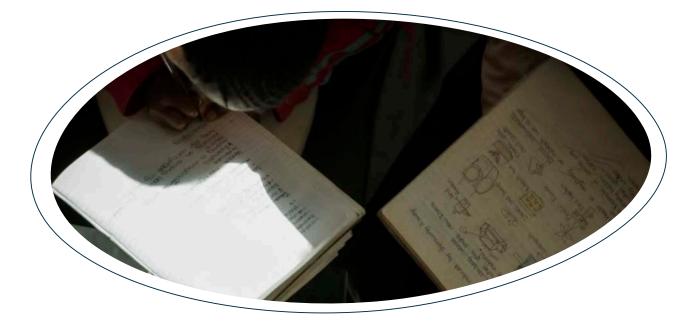
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### **ADOLESCENT** CENTRE SERVICES

### Tutoring Program

The tutoring programme was established in 2008 to support school-aged patients with learning difficulties and/or poor academic performance. Over 200 children and adolescents have received this free academic assistance over time. Botswana-Baylor Trust patients often miss school to attend clinic appointments or due to illness and hospitalisation. The academic consequences of missed lessons undoubtedly compound over time and like any school-going children, some will need tutoring for their grades to improve. Botswana-Baylor Trust clinicians, community health workers, psychologists, and social workers assess patients' academic performance during consultations and those with grades of 'C' or below are referred to the program for intervention. The COVID-19 pandemic mitigation strategies had prevented the holding of in-person tutoring sessions until June 2022. To continue providing access to tutoring services, Botswana-Baylor employed a 'low-tech' program utilising text, WhatsApp messages and phone calls to provide academic support to tutees. In June 2022, in-person tutoring was restored but limited to high priority cases. Only vaccinated learners were able to come to the Adolescent Centre to receive in-person tutoring. The low-tech program was continued for learners who lived outside Gaborone and those who were not yet eligible for a COVID-19 vaccine. Efforts to expand the tutoring program to patients with a history of cancer are ongoing.

Some of the tutoring program's challenges include a lack of funding to provide tutors and tutees with transportation allowances to the centre or to purchase airtime for those participating in the low-tech tutoring program. This often leads to less commitment from the tutors, who are volunteers.



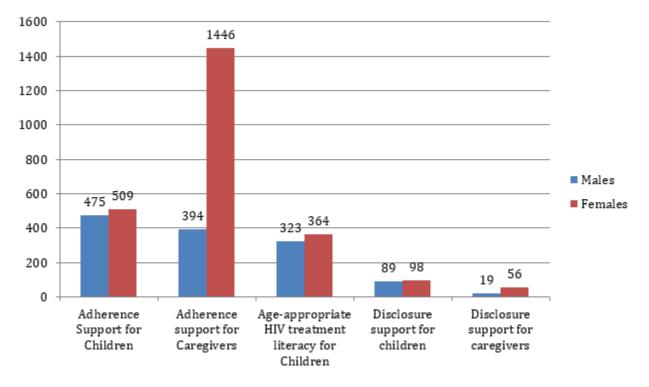
### Botswana Comprehensive Care and Support for Orphans and Vulnerable Children (OVC) Project

Botswana Baylor continued with the implementation of the Botswana Comprehensive Care and Support project in seven PEPFAR priority districts (Kweneng East, Gaborone, Mahalapye, Kgatleng, Southern, Bobirwa, Serowe with funding from USAID through Global Communities (formerly PCI). The project aims to improve the health, well-being, and safety of these children and their families through direct service delivery, referral, and networking, and through capacity building for OVC service providers. Botswana Baylor's role in this project is to provide care and support services to OVC living with HIV from birth to 17 years old and their families.

#### Table: Number of beneficiaries supported by the program by age and gender

Age range							
Gender	<]	]-4	5-9	10-14	15-17	18+	Total
Male	4	104	319	398	293	547	1665
Female	6	117	336	448	268	1902	3077
Total	10	221	655	846	561	2449	4742

Uptake of key HIV care and treatment services offered by the OVC project.





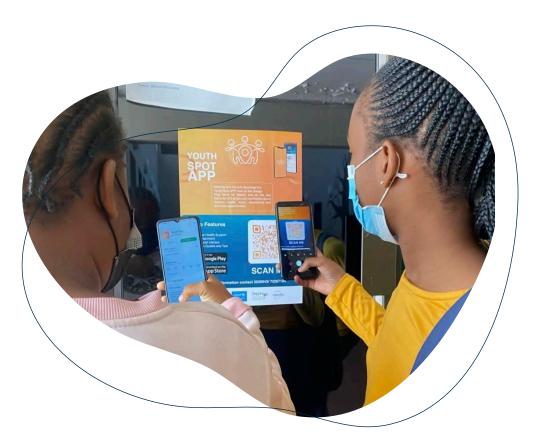
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### **Youth Spot Mobile** App Development

"Youth Spot," a mobile application that encourages healthy living, has been developed through the collective efforts of Stepping Stones International, UNICEF, Botswana-Baylor, and the Ministry of Health. The aim of Youth Spot is to facilitate the reduction of high-risk behaviour, improvement of mental health, and medication adherence for HIV and other conditions, facilitate access to psychosocial support and encourage social networking among adolescents and young people.

Botswana-Baylor staff provided technical support for the development of the content of the app. The content was on HIV/AIDS, antiretroviral therapy, mental health, nutrition, and the names of drugs used to treat common illnesses. A group of eight adolescents and young adults living with HIV participated in the mobile app development process and named the app. Currently, the application is available on the Google Play Store and is awaiting approval on the App Store. Users scan the barcode and follow the link, and/or alternatively download it from Google Play Store.

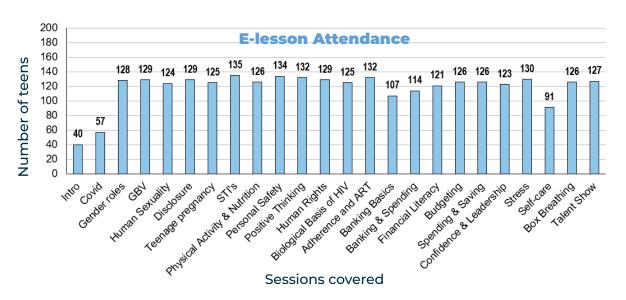


Youth at Botswana-Baylor Adolescent Centre scanning the Youth Spot App developed by Botswana-Baylor, SSI (Stepping Stones International) & UNICEF.

### Virtual Teen Club

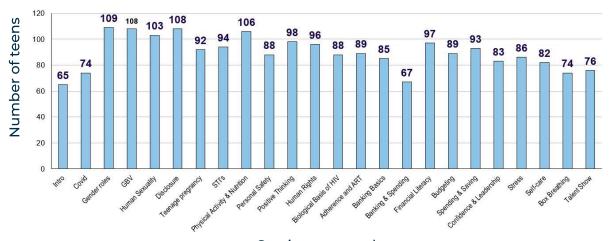
Teen Club is a monthly peer support intervention founded in 2005 for HIV-positive adolescents aged 13 to 19 years. Teen Club empowers youths to build positive relationships, improve their self-esteem, and acquire life skills through peer mentorship, adult role modelling, and structured activities. Before the COVID-19 pandemic, Teen Club sessions were conducted through in-person groups. To protect the gains made and support the continuity of services during the COVID-19 pandemic, virtual platforms were explored. As a result, UNICEF, Botswana-Baylor, and the Ministry of Health adopted the Teen Club Curriculum into the virtual model.

This model included delivering the Teen Club curriculum through audio-visual materials (artboards, scenarios, videos, and role plays), which facilitated interaction and discussions on WhatsApp among the teens, as well as five minutes of recorded content delivered to teens' cell phones. The WhatsApp discussion took place over the weekend while the delivery of pre-recorded content took place during the week. A total of 24 sessions were held between January and June 2022.



Total attendance per session for Virtual Teen Club E-lessons and the WhatsApp discussions.

#### WhatsApp Discussion Attendance



Sessions covered



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### Some of the barriers to active participation in virtual teen clubs and WhatsApp discussions were;

- Caregivers who were unsupportive to the teens. Despite continued engagement with caregivers, some teens continued to attend inconsistently or not at all.
- Phone-related problems such as lost phones, broken screens, damaged batteries, inability to use WhatsApp and network problems.
- Some teens deliberately opted not to attend.

Most teens found the WhatsApp sessions or the content and facilitators excellent, and they liked the WhatsApp discussions because they were interactive and allowed them to chat with their peers and form friendships with other adolescents living with HIV. However, majority of teens and their caregivers advocated for the return of in-person Teen Club sessions. Going forward, the COE plans to implement hybrid teen clubs with both virtual and in-person models. The UNICEF Representative – Dr Joan Matji came to the COE to hand over 200 smart phones to be used in e-Teen Clubs. UNICEF is one of the long-standing collaborators of the COE, supporting programs such as Teen Club, Youth Spot, and Health Care Worker training.



UNICEF Representative, Dr Joan Matji, handing over 200 cell phones to Botswana-Baylor Executive Director to support e-Teen Clubs

**Education** and Training

### **Botswana-Baylor Physician Outreach** and Paediatric KITSO Training Programme

The Botswana-Baylor Physician Outreach and Paediatric KITSO training program is funded by the Ministry of Health and aims to strengthen the capacity of peripheral health facilities throughout Botswana to optimize treatment and care services for HIV-infected children, adolescents, and young adults, through healthcare provider training and mentorship. The outreach team composed of a nurse prescriber and a physician visits the outreach sites once per month. During the visits, the team consults and supports patients with virological failure; attends to other patients that require specialist care in the IDCC and on the wards; and other professionals. In addition, didactic sessions that are structured around the fundamentals of paediatric and adolescent HIV treatment and care are given.

Reporting Period	Patient encounters	Suppressed VL	Not suppressed VL	Mentored HCWs
July 2021-September 2021	602	501	101	38
October 2021- December 2021	517	440	77	34
January 2022-March 2022	501	442	59	36
April 2022-June 2022	614	562	52	33
Total	2237	1945	289	141

Table: Outreach Summary Statistics July 2021- June 2022 for 14 sites

Paediatric KITSO (Knowledge, Innovation, and Training Shall Overcome) training supplements the physician outreach program. Paediatric KITSO targets physicians, nurses, pharmacists, social workers, and other health professionals. We conducted two paediatric KITSO training workshops over the past year, reaching 47 professionals drawn from Greater Gaborone and neighbouring District Health Management Teams (DHMT). With the lifting of COVID-19 restrictions on group activities, the COE plans to expand the coverage of Paediatric KITSO training to more DHMTs across Botswana.



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### Visiting Scholars

The mission of the Botswana-Baylor Trust visiting scholars' programme is to increase understanding of and to build capacity for paediatric HIV and cancer treatment and care globally. The majority of the scholars come from the University of Botswana Medical School in Gaborone and Baylor College of Medicine in Houston, Texas. The visiting scholars spend most of their time in the COE and with the Paediatric Oncology and Haematology ward at Princess Marina Hospital, shadowing and working alongside experienced clinicians and researchers. Some of the scholars spend time with the outreach teams at other ART sites. Beginning in early 2020, visiting scholar placement was temporarily suspended in accordance with COVID-19 pandemic-related policies and travel restrictions, and was re-opened in August 2021. Below are testimonies of two visiting scholars who arrived in August and October 2021.

#### Visiting Scholars' Testimonies:



Visiting scholar Dr Lorato Anderson

"I am a pediatric HIV specialist who joined the COE team as a BIPAI Global Health Corps Physician in October 2021. During my time at the COE, I provided care at several outreach clinics, participated in KITSO training, and provided Implanon services and training in the clinic. I also provided education to medical interns and residents on HIV management and pediatric primary care. I completed my time at the COE in July 2022 but will always be a part of the COE family. I really loved how everyone in the clinic is extremely passionate and dedicated to improving the lives of those infected with HIV. The whole team collaborates to do everything they can to help the patients. There is no other clinic in Botswana that provides the kind of passionate care that the team at the COE provides. The patients feel welcomed and truly cared for. Due to COVID-19 restrictions, I did not really do many activities outside of the clinic."

My name is Dr. Michael Ferm and I worked at the Botswana Baylor Children's Centre of Excellence from August 2021 through January 2022 as a resident doctor in the Baylor College of Medicine Dr. Kelly DeScioli Global Child Health Paediatric Residency Program. In this role, I had the privilege to work with the centre's staff to help provide treatment for children with HIV and hematologic/oncologic conditions. As a Paediatric Resident in the United States of America, I previously practiced under the supervision of consultant physicians.

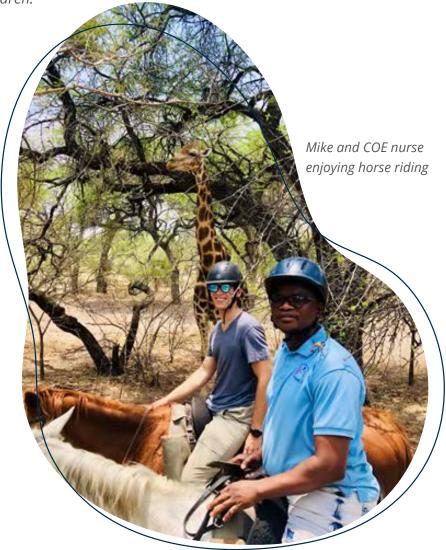
The opportunity to work in Botswana fostered additional confidence in my independent clinical decisionmaking skills as I took on the role of primary care provider at Botswana-Baylor. The length of my stay (6 months) allowed me to have great continuity with my patients and build strong relationships with the clinic staff members in ways that I had not previously had the opportunity to do on the typical one-monthlong rotations in the USA.

#### BOTSWANA

I also enjoyed working with the University of Botswana medical students and Princess Marina Hospital interns who would rotate through our clinic, helping them learn about HIV treatment and clinical management. On trips to outreach clinics, a nurse and I would travel to a smaller town or village to provide care for the children there and help keep local staff members up to date on the latest guidelines in patient care. It was on these trips that we would encounter some of our most challenging and rewarding clinical cases, as often the children living in more remote areas would have very limited resources. Together with social workers, we worked to leave no child left behind as Botswana makes strides towards elimination of HIV through universal viral load suppression.

Botswana-Baylor has a strong record of publishing clinical research, and I was invited to participate in this scholarly work as well. My continued work on these projects has kept me in touch with my co-workers in Gaborone as we work to share the findings of Botswana Baylor with the global medical community.

Although most of my time in Botswana was overshadowed by the COVID-19 pandemic, the clinic's staff members were incredibly welcoming and helped me explore Gaborone through socially distanced outdoor activities and meals. I was awed by the natural beauty of Botswana, the friendly people, and the delicious food. I owe a great debt to the Batswana for welcoming me with open arms and trusting me with their most precious resource: the health of their children.





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### PAEDIATRIC HAEMATOLOGY AND ONCOLOGY (PHO)

The Botswana-Baylor Paediatric Haematology Oncology (PHO) at Princess Marina Hospital is the only comprehensive care centre for children with PHO conditions in Botswana. The Botswana-PHO service is supported by the partnership of the Government of Botswana, the Ministry of Health, Botswana-Baylor, Princess Marina Hospital, Baylor College of Medicine, and Texas Children's Hospital. There are several key stakeholders and collaborating institutions, the largest of which is the University of Botswana. Through a dedicated team of staff, we provide inpatient and outpatient services that include diagnosis, treatment, and follow up of children with cancers such as leukaemia, brain tumours, and solid cancers, as well as palliative services and psychosocial counselling, haematology services such as bleeding disorders, unexplained anaemias, haemolytic anaemia, and sickle cell anaemia, and treatment of venous malformations such as haemangioma, among other PHO conditions. The objectives of the PHO program are focused on providing clinical excellence, capacity building, improved health outcomes, health equity, sustainability, and community involvement. The clinical services provide comprehensive evidence-based care following standardized protocols. The PHO team is involved in publishing journal articles, adjunct lecturing at the University of Botswana, and supporting the palliative care and psychosocial counselling service at Princess Marina Hospital.



# **Cumulative number of patients** according to disease type

Between July 2021 and June 2022, 62 patients received PHO services. 43 were confirmed cancer patients while 6 are still undergoing diagnostic evaluation, 10 came out to be non-cancer diagnosis, 2 died before diagnosis and 1 has haemangioma.

Туре	Last Annual Report	Jul 21 - Jun 22 report	Total as of Jun 22
Leukaemia	59	10	69
Lymphoma	26	2	28
Solid Tumour	164	31	195
Other	14	0	14
Non-PHO		19	19
Total	263	62	325

#### Cancer disease by numbers and type

#### Blood disorders by numbers and type

Туре	Last Annual Report	Jul 21 - Jun 22 Report	Total as at Jun 22)
Aplastic Anaemia	4	4	8
Haemophilia	56	6	62
SCD	17	3	20
Other Blood Disorders	178	21	199
Non-PHO	82	19	101
Total	337	53	390



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## Training and capacity building

#### Paediatric Cancer Awareness Training for Health Care Workers (HCW)



The Childhood Cancer Champions receiving their certificates at the end of the training

From September 2021, 14 healthcare workers from across Botswana travelled to Gaborone for training on childhood cancer recognition. This training program began in 2019. At first, the Botswana-Baylor PHO team visited various hospitals around the country to deliver outreach training. However, things changed with the arrival of COVID-19 pandemic. After consideration and planning, the team decided to create a Childhood Cancer Champions program, bringing HealthCare Workers (HCW) from around the country to receive a 3-day training (longer and more in-depth than previous training sessions). The Champions received lectures, listened to survivor and caregiver testimonies, and participated in group training activities. After the training, the HCWs were tasked with cascading the training to colleagues at their healthcare facilities using the knowledge and materials they gained from the training.

#### **Nursing Education**

To optimize nursing care for paediatric oncology patients, the Botswana-Baylor PHO Nurse Manager trained all new nurses assigned to the Princess Marina Hospital (PMH) Paediatric Medical Ward. The purpose of this training was to provide the nurses with the knowledge and skills they needed to provide quality care to children with cancer. Furthermore, as part of capacity building, the PHO Nurse Manager went for an exchange visit and a chemotherapy check-out at the Malawi Global HOPE program



Malawi nurse helping Botswana-Baylor PHO Nurse Manager

Palliative staff during outreach visits

**Palliative Care Services** 

The palliative care team conducted an outreach that started in Molepolole for a follow-up of one of the PHO patients who was lost to follow-up. The PHO social worker assessed the living conditions of the family and conducted a detailed needs assessment. Seen in the picture is the PHO Nurse Manager, who is also a member of the palliative care team at PMH consulting with the patient at home and checking in on health developments. In addition, the team paid a visit to Kang Clinic to share information about the palliative care patients seen in the area, their challenges, and the support they expect from the local health facilities. This was part of an effort to strengthen our collaboration with clinics, hospitals, and home-based care units in the targeted areas. In total for the period reporting the team visited 19 families.

#### **Psychosocial Services**

The Botswana-Baylor PHO social work unit continues to offer psychosocial support to caregivers and their families who have lost a child in the paediatric haematology unit at PMH. In addition, from January to June 2022, the social worker visited homes in Gaborone and nearby villages and provided counselling to eight families. As part of outreach efforts, the PHO team paid a visit to the school of one of the patients at Mogojogojo. Many of our patients are frequently absent from school, and they miss many lessons and exams due to medical appointments and hospitalizations. The team met with the school head to discuss how we could collaborate to provide comprehensive support for children affected by childhood cancer and other chronic illnesses. The school involvement is as follows: The school through their guidance and counselling department provides additional psychosocial support for palliative care patients, the National Examination Board allows patient to write examinations.



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#### **Community engagement**

### The First Lady Ms Neo Masisi officially opens a COVID-19 refurbished isolation ward at Princess Marina Hospital

On June 10, 2021, Botswana's First Lady, Ms. Neo Masisi, officially opened the refurbished Paediatric COVID-19 isolation ward at Princess Marina Hospital (PMH). The Rahim Family, whose child is a paediatric cancer survivor, generously donated BWP350,000 to refurbish the COVID-19 isolation ward. The First Lady Ms. Neo Masisi, a member of the Global HOPE International Council, applauded the Rahim family for their contribution towards improving the country's healthcare infrastructure. The First Lady noted that the noble gesture would not only provide a pleasant working environment for hospital employees, but also significantly contribute to the safety and recovery of children with COVID-19. During his official handover speech, Mr. Mohammed Rahim recounted the family's journey following their child's diagnosis with neuroblastoma, starting from PMH to eventual referral to India. The child has since finished treatment, recovered and is back in school. The ward refurbishment by the family stemmed from the good relationship the family developed with the PMH Paediatric Haematology and Oncology unit. Mr. Mohammed Rahim extended his family's gratitude to all health workers during this ceremony attended by the PHO team.



Event participants witnessing the ribbon cutting and a bed within the refurbished ward



### **Community Engagement:**

The community advisory board (CAB) has continued to hold the meetings virtually. One of the challenges is attendance as the members do this voluntarily and some hold high positions in their respective organisations. The CAB is working on completing all action items as the CAfGEN study is nearing end.



The Botswana Genomics and Informatics Society Committee, constituted by the six organization: Botswana Harvard Partnership, University of Botswana, National Veterinary Laboratory, Botswana Institute for Technology Research and Innovation, Botswana-Baylor Trust, and Botswana International University of Science & Technology



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### RESEARCH

### **Collaborative African** Genomics Network (CAFGEN)

The mission of the Collaborative African Genomic Network (CAfGEN) study, part of the H3Africa Consortium, is to create a collaborative, multidisciplinary, multi-institutional, inter-, and intra- country network of scientists, clinicians, and researchers who use genomics approaches to study gene/ pathogen interactions for HIV/AIDS, its co-morbidities, and other diseases among diverse paediatric African populations. CAfGEN is funded by the U.S. National Institutes of Health (NIH). The main implementing partners include the University of Botswana, Baylor College of Medicine Children's Foundation – Eswatini, Makerere University, Baylor College of Medicine Children's Foundation – Uganda, and Baylor College of Medicine – Houston. The Ministry of Health and Wellness and the Ministry of Science and Technology are important stakeholders in this initiative.

### Recruitment

The study aims to enrol paediatric and adolescent HIV patients (birth to 25 years). It also aims to recruit a cohort of active tuberculosis (TB) cases and household contacts. During the reporting period, the study protocol was amended to increase recruitment from 400 to 600 participants (300 long-term non-progressors and 300 rapid progressors). Another amendment was to include sequencing of DNA samples collected from five (5) participants out of the approved 200 still to be recruited, which would be pooled and analysed with other African samples by our team in collaboration with CAFGEN/H3Africa/Baylor College of Medicine and University of Cape Town collaborators. Additional informed consent form was provided, signed, and participants were given a signed copy.

By the end of June 2022, 514 participants out of 600 were enrolled (273 long-term non-progressors and 241 rapid progressors). The main challenge encountered during this period was the failure to reach the TB target of 20. Only six TB cases and five controls were recruited.



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### **Achievements:**



Dr. Gaone Retshabile during graduation Photo credit: University of Botswana

One of the important mandates of CAfGEN was training and capacity building. Five Ph.D. trainees underwent bioinformatics training from 2015-2020 in Houston, USA. The CAFGEN study, in collaboration with the University of Botswana, graduated its first Ph.D. trainee, Dr. Gaone Retshabile on the 26th of November 2021. Dr. Retshabile together with five other candidates from Botswana and Uganda were awarded the CAfGEN scholarships to pursue doctorates in genetics and bioinformatics. Dr. Retshabile spent two years training at Baylor College of Medicine in Houston, Texas, and completed the remaining years at his home institution, the University of Botswana. He was awarded a Ph.D. in Biological Sciences, making him the second trainee to graduate from the grant. He is now a faculty member at the University of Botswana.

"One of the things that I appreciated during training was the multidisciplinary nature of the training. The fact that it took place within a multinational setting was even more rewarding, as it allowed for the development of skills for working in a multicultural team and provided a teamwork perspective that will probably inform all my future collaborations. I look forward to helping train the next generation of genomics scientists." said Dr. Retshabile.

Another achievement was the formation and approval of the Botswana Genomics and Bioinformatics Society by the Registrar of Companies in December 2021.

The objectives of the society are to:

- a. Provide a platform for multi-disciplinary genomics research in Botswana
- b. Establish a Genomics research agenda for Botswana for economic and social impact
- c. Establish a genomics and bioinformatics Centre and capacity building
- d. Develop genomics and bioinformatics infrastructure to harness big data
- e. To maintain contact with other similar organizations in the region and the rest of the world for relevancy and networking.



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### ADDITIONAL PROGRAMMES/ More Highlights



Visit by Botswana President His Excellency Dr Mokgweetsi E.K. Masisi to TCH and BCM

#### President Masisi visits BCM/TCH

President Mokgweetsi Eric Keabetswe Masisi and his entourage visited Baylor College of Medicine and Texas Children's Hospital, Houston, Texas, the United States on 24th September 2021. The purpose of the visit was to acknowledge and thank the two institutions for the long-standing, transformational relationship over the last 20 or so years and explore new areas of collaboration. Areas of mutual interest include expansion of the service provided by Botswana- Baylor, direct support of the University of Botswana in developing specialist training programs as well as setting up of a human vaccine production ecosystem. The three parties have pledged to continue working together for the populations in Botswana and US. President Masisi was accompanied by Honourable Ministers of Health and Wellness, International Relations and Cooperations, Botswana Ambassador to the USA, Deputy Permanent Secretary to the President, Chief of Staff, Botswana-Baylor Executive Director, and other senior Government officials.

### USAID Regional Mission Director Visits to Botswana-Baylor

The USAID Mission Director for Southern Africa, based in Pretoria, South Africa, Andy Karas, paid a visit to Botswana-Baylor on 30, November 2021. The purpose of the visit was to discuss some of Botswana-Baylor's contributions to HIV treatment and care in Botswana and challenges related to COVID-19. In attendance from the clinic were Dr. John Farirai, Dr. Robert Kimutai, Ms. Ontibile Tshume, Ms. Grace Karugaba, and other members of staff. Dr. Farirai gave a brief presentation about the services offered by the COE. Mr. Karas congratulated Botswana-Baylor on the outstanding work and the holistic approach and acknowledged the challenges that both the PHO and HIV programs faced. At the end of the meeting, Mr. Karas was given a tour of the COE to further appreciate the facilities and services available to children, adolescents, and young adults living with HIV.



#### The UNICEF Regional Director's Visit

In November 2021, UNICEF Regional Director, Mr. Mohammed M.M. Fall visited Botswana-Baylor. He was accompanied by the UNICEF Representative, Dr. Joan Matji, and the UNICEF Deputy Representative, Juliana Lindsey, and other UNICEF officials. The purpose of the visit was to get an insight into the services offered to children, adolescents, and young people by Botswana-Baylor. The delegates were welcomed by Botswana-Baylor Executive Director Dr. Mogomotsi Matshaba who started by giving a brief presentation about the services offered by the clinic. After the introduction, Mr. Fall got an opportunity to interact with a group of young people at the Phatsimong Adolescent Centre where they discussed the challenges they are faced with, which include mental health, and unemployment.



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 Botswana-Baylor Executive Director at the ICASA Conference
Botswana-Baylor Executive Director giving a speech at the ceremony where Botswana was awarded a silver tier certificate



#### Botswana-Baylor at the ICASA (International Conference on AIDS and STIs in Africa) 2021 Conference

Botswana-Baylor Executive Director, Dr. Mogomotsi Matshaba, was invited to make a presentation titled; WHO: Towards Elimination of Mother-To-Child Transmission of HIV, syphilis, and viral Hepatitis B: African case studies and validation of 'Triple Elimination at the 21st International Conference on AIDS and STIs in Africa (ICASA). The conference was held in December 2021 in Durban, South Africa with the theme Africa's AIDS response: The race to 2030-Evidence. Scale Up. Accelerate. This invitation came after Botswana received a silver tier certification, which WHO awards to countries that have managed to accomplish three objectives: mother-to-child HIV transmission rate below 5%, antenatal care and antiretroviral treatment of more than 90% of pregnant women; and an HIV case rate of fewer than 500 per 100 000 live births.

#### 2021 Christmas party

Pictures of children attending the 2021 children's party in the company of The First Lady of the Republic of Botswana, Mrs. Neo Jane Masisi.

The 2021 Children's party was filled with fun and joy. The party attracted 150 children aged 0-12 years, who came to celebrate Christmas and receive gifts at the COE premises. To ensure social distancing and to reduce the risk of COVID-19 transmission, the party was planned so that groups of 50 children could attend on three consecutive days from November 29th to December 1st, 2021. The First Lady of the Republic of Botswana Mrs. Neo Jane Masisi, who is the UNAIDS Special Ambassador for the Empowerment and Engagement of Youth in Botswana, delivered a message of hope to the children and their caregivers. In attendance was the Princess Marina Hospital Superintendent and representatives from the National AIDS and Health Promotion Agency (NAHPA).

Children attending the 2021 children's party in the company of The First Lady of the Republic of Botswana, Mrs. Neo Jane Masisi





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#### Employee wellness activities at Botswana-Baylor – Taking Care of the Carers

Botswana-Baylor continues to promote employee wellness through a variety of activities. This program is founded on the belief that employees should have access to and be able to participate in activities that improve their bio-psycho-social and spiritual well-being. Among the staff wellness activities carried out during the reporting period were:

1. A stress management session led by a consultant psychologist for all employees in December 2021. The session was held in response to a survey that showed high stress levels among employees during the COVID-19 epidemic, which certainly affected their well-being, mental health, and productivity. The session was highly interactive, allowing employees to share their stress management challenges and experiences. The employees recommended more stress reduction sessions and activities.

2. A day-long retreat for employees was held on 08 April 2022 and a total of 66 Botswana-Baylor employees attended. The goal of the retreat was to boost morale and teamwork spirit amid the COVID-19 epidemic. The session included both lectures and physical activities aimed at increasing knowledge and skills in stress management and team building.

3. Procurement of in-house gym equipment for employees. The gym equipment was procured following an internal survey that showed that the staff preferred the availability of in-house physical exercise equipment that would be easily accessible after work. All Botswana-Baylor employees have free access to the gym equipment with a register to show utilization rates. Strict COVID-19 precautions are applied within the gym area. We are grateful to Allan Gray Philanthropy Initiative for supporting the procurement of gym equipment and sponsoring the staff retreat and stress management session.



*Employees attending the stress management session team building activity during the retreat and exercising using the gym equipment in the Adolescent Centre* 



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#### International Childhood Cancer Day (ICCD)

Every year, February 15 is designated as International Childhood Cancer Day (ICCD). Despite the constraints of COVID-19, the Botswana-Baylor PHO team was able to hold a small celebration for patients and their families. The Ladies Circle of Botswana donated toys, books, and a beautiful cake, and a mother of a patient who passed away in 2021 brought gifts for children in honour of her daughter's memory. She shared a heartfelt message with the children and parents in attendance, expressing her support and saying that she understood first-hand the challenges they were experiencing. A local artist assisted patients in making their paintings, and she also directed a joint project using handprints to signify our joint efforts in combating childhood cancer. This aligned perfectly with ICCD 2022's theme of "through your hands."



Celebration cake and a hands artwork that beneficiaries made

#### World Haemophilia Day

World Haemophilia Day is typically commemorated globally on or around April 17th. This year, Botswana-Baylor collaborated with healthcare workers and administrators in Kanye to hold a celebration event. Kanye is home to several haemophilia patients that are treated by our program. So, holding an event in their community was a crucial step towards raising public awareness of the disease, reducing stigma, and improving support for these patients and their families. Testimonies were given by the Kanye village chief, Botswana-Baylor staff, a patient, healthcare workers at the local hospital, and many more. Several "haemophilia champions," who received training in haemophilia recognition and treatment over a year ago, assisted in organizing and managing the event. The vent was attended by over 150 people and provided us with a great foundation for hosting similar commemorations in the future!



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### **TESTIMONIALS** Baylor Staff



#### **Goitseone Magocha-Accounts Assistant**

I started working for Botswana-Baylor in 2011. I work in the Finance and Administration department under Accounts, and my daily tasks include interacting with customers who are my colleagues. I work with people from different professions and backgrounds. Working for Botswana-Baylor has equipped me with extensive experience and skills and helped advance my career. I gained professional etiquette, and I learnt how to be a good team player and how to provide excellent customer service. I have grown to love what I do. I have had the opportunity to work on large and complex projects in research and programs. Because the programs are diverse, I learn something new every day. Botswana-Baylor provides opportunities for capacity building as well as academic growth. I do love working here, and working with my supervisor has been a pleasure. It is nice because I enjoy working with people. My colleagues at Botswana-Baylor are always willing to help.



#### Dr. Wendy Muzenda-Medical Officer

I started working for Botswana-Baylor in April 2020. I work in the paediatric haematology and oncology department as a medical officer. I participate in the management of patients with cancer and haematological conditions. Working for Botswana-Baylor has been great. I have learnt the significance of teamwork and patience when managing patients with chronic diseases. I like working for Botswana-Baylor as the organization has greatly improved my work skills. I have good working relations with my co-workers, and we all work as a team to provide the best possible patientcare and to maximise treatment outcomes. I also have good relationships with caregivers. The Botswana-Baylor leadership is excellent, and they constantly provide us with advice and opportunities for educational and professional advancement.



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#### The Botswana-Baylor story.

Perspectives of a patient: Baylor fought for Me

A patient reflects on how Baylor helped her overcome her struggles in life

I grew up as an only child and an orphan. In 2009, I was seriously ill, so my guardian took me to a hospital, where a nurse referred me to Botswana-Baylor. When I came here, they tested me, and they told my guardian that I was HIV positive and that I got the virus from my mother. At that time, I was young, and I had no idea of what was going on. All I knew was that I had to take pills every day. To be honest, my childhood was tough. I struggled with family issues and felt like I had no support at all. My teenage years were also difficult as I struggled to accept myself. I was always worried about my health, how other people treated me, how they looked at me, my physical appearance, and everything else. At school, they used to call me names because of extensive skin warts and because I was always absent from class due to illness. I was viewed as someone who was always sick and full of excuses. They were always asking me, "are you a human being? what is wrong with you? you are not like other people." I remember waking up some mornings and wondering why I was going to school because I was tired of all the teasing and bullying. But because I was strong, I was able to complete form three and attend senior secondary school.

Botswana-Baylor was always there to help me overcome my struggles. When I was thirteen years old, they introduced me to Teen Club, where all teenagers met to share knowledge and experiences about our lives as HIV positive young people. I remember a woman testifying that she had been on ARVs for a long time and that her husband was HIV negative, and they were doing well in their family. The woman said that an HIV-positive person can get married and start a family even if their partner is not HIV positive. That is when I started to feel hopeful that I could date and live a normal life. Now I am ready to be in a relationship. The psychologist and the social worker helped to bring peace to my family. Now I can say that I am okay with my family, okay with the community, and okay with myself.



Botswana-Baylor did it; they fought for me, for my life, and for my peace. They took me from a point where I was close to death and transformed me into the woman I am today. I am vibrant and confident because of Baylor. I am grown up and healthy because of Baylor. I came to Baylor when I had lost hope, and my guardians also had lost hope in me because I was so sick. They treated and supported me in such a way that I understood why I needed help. With their love, service, and patience, they have restored my normal life. I am not alone but with them and with my guardians. Baylor is my mental, physical, and emotional supporter; wherever I go, I am proud of Baylor. God bless Botswana-Baylor!!



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# BOTSWANA-BAYLOR CHILDREN'S CLINICAL CENTRE OF EXCELLENCE





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