



March, 2020

BHP Board Meets



Board Members at the Annual General Meeting in January 2020

The Botswana Harvard AIDS Institute Partnership (BHP) has started the year 2020 on a high note by holding Board of Members and Annual General Meeting on the 23rd of January to discuss strategic matters that shall drive the BHP mandate throughout the year. Chaired by Professor Michelle Williams, Dean of the Harvard School of Public Health, the AGM approved Audited Financials for the year ended 20th June 2019.

These together with Generally Accepted Government Auditing Standards (GAGAS), commonly referred to as the "Yellow Book" audit were unqualified as has been the case since the incorporation of the BHP, reinforcing the robustness of the BHP financial and compliance systems. The AGM was informed of another successful research and publication year with 65 BHP publications

in peer-reviewed journals including three in the New England Journal of Medicine and 45 abstracts presented at various scientific local and international journals. The Botswana Harvard HIV Reference Laboratory (BHHRL) also retained it's SADCAS ISO 15189 accreditation status.

Following the AGM, the BHP Chief Executive Officer (CEO) Dr Joseph Makhema hosted the Board of Members and Board of Directors for an appreciation dinner at Falcon Crest to express his gratitude for the members' continued support and commitment to the BHP.

"It is important that we start the year strong and I would like to thank you for your commitment to providing strategic direction for the BHP.

The AGM discussed important issues that will effectively drive our mandate going forward," said Dr Makhema.

The BHP Chief Executive said management's confidence is buoyed by the board's commitment to providing wise guidance and oversight to ensure that BHP remains resolute in its mission to fight HIV/AIDS and emerging health challenges through innovative research, education and capacity building that impacts on policy and practice. He assured the board that BHP will continue to strengthen its systems and operational efficiencies to ensure that it lives to its vision to be a world renowned center of Research Excellence whose output informs not only national but global health policies.

Speaking at the dinner, a member of the BHP Board of Members, Dr Mark Elliot, Vice Provost for international Affairs at Harvard University in the United States of America (USA) said he was thankful for the good partnership that the Botswana Government has with

Harvard University. He commended the partnership for adavancing health research to ensure that innovative solutions are being provided to the address global public health challenges.

The Professor revealed that Botswana is the first country he ever visited in Africa, and expressed appreciation not only for the good work done by the BHP for the people of Botswana in general whom he described as "very cool people." As Vice Provost for International Affairs, he took the opportunity to thank Botswana and management of the BHP for promoting Harvard University by projecting a positive image and stature of being the country's Centre of Excellence in health research.

"Thank you for making Harvard look good," he said, amid infectious laughter that spread across the room in sync with the dying scratching sound of fork and knife against the plate, ending the dinner on a light note.



Member of the BHP Board of Members and Vice Provost for International Affairs at Harvard University, Dr Mark Elliot speaking at the Appreciation Dinner.

BHP Conducts HepBZero Study



University of Botswana Deputy Vice Chancellor for Student Affairs, Professor Happy Siphambe launching the HepBZero Study at the UB Student Centre.



Principal Investigator of the HepBZero Study, Dr Motswedi Anderson giving the overview of the study.

The Botswana Harvard AIDS Institute Partnership (BHP) Post-Doctoral Fellow, Dr Motswedi Anderson on Monday 10th February 2020 launched her research project on Hepatitis B Virus titled "HepBZero: Silent No More" at the University of Botswana Student Centre. This is on a background of increasing incidence and prevalence of Hepatitis B virus infection and associated complications globally.

The main objectives of the study are:

- 1. To assess knowledge on Hepatitis B Virus (HBV) among 18-40 year adults in Botswana.
- 2. To create awareness of HBV infection in an effort to reduce morbidity and mortality due to Viral Hepatitis

The study is being conducted collaboratively between BHP and the University of Botswana's Department of

Student Welfare. Launching the Study, The University of Botswana acting Deputy Vice Chancellor (DVC) for Student Affairs, Prof Happy Siphambe said the study was a welcome development as HBV chronically infects 257 million people globally and accounts for 887 000 deaths.

Sixty (60) study participants divided into four groups of 15 members each were recruited randomly from UB, the country's leading institution of higher learning. Prof Siphambe hailed the partnership declaring that the collaborative work shall result in outcomes that will enhance knowledge on HBV transmission, pathogenesis, treatment and research amongst the student community and the country at large.

He also said the World Health Organisation (WHO) seeks to eliminate Hepatitis B virus by 2030 and reduce deaths associated with the virus by 65 per cent while also reducing new infections by 90 per cent.

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Professor Siphambe decried lack of awareness on Hepatitis B Virus status among many persons, which he said impedes the goal to eliminate the viral hepatitis, as many people present late to healthcare facilities, especially in resource limited settings leading to deaths that could otherwise have been avoided.

"What is going to be needed is upscaling of public education, research, capacitation of health care workers, increase of Hep B testing facilities and linkage to quality care. The HepBZero: Silent No More study is a welcome development in this area," said Prof. Siphambe.

Giving the overview of the study, Principal Investigator, Dr Motswedi Anderson revealed that the name HepBZero was inspired by the World Health Organization's mission to eliminate HBV by 2030 while the Silent No More part seeks to give the people a voice to speak out against HBV so that it does not continue being the silent killer that it is.

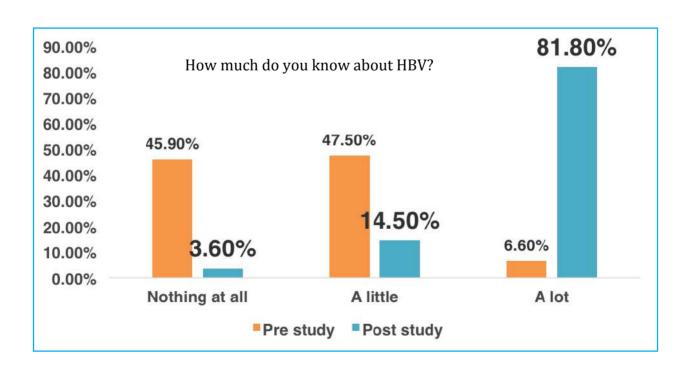
Dr Anderson said mortality due to viral hepatitis has been on the increase, killing more people than HIV and Malaria combined which calls for more efforts in addressing viral infections among communities.

HepBzero Study Results

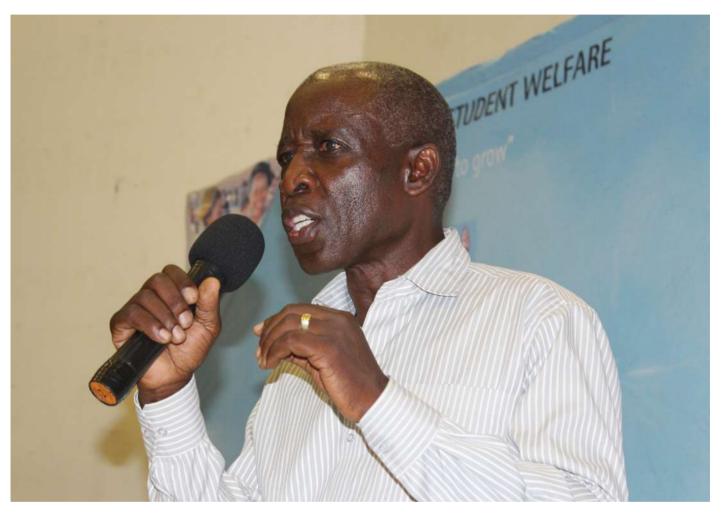
HepBzero study enrolled 60 UB students. Before the study 45.9% of students knew nothing at all about hepatitis B virus (HBV) versus 6.6% with high level knowledge about HBV. This result confirms how silent HBV has been hence the need for HBV awareness studies. Post study, 81.8% now had high levels of knowledge of HBV showing the positive impact of the study. In this study only 6% knew their HBV status. Of those who did not know their status, 95% wished to know their status and 5% were neutral about wanting to test for HBV. Pre-test and post-test assessments on the mode of transmission and pathogenesis of HBV was 27.1% versus 79.7%% respectively.

A competition for the best poster on HBV had been commissioned with TEAM ORANGE being declared the winner. The winning poster will be displayed in healthcare services. The participants also wrote messages to the community and to the Researchers. The messages to the community will be collated and also displayed at the healthcare facilities as a way of advancing HBV awareness.

The participants also suggested HBV Setswana names which will be taken for further vetting by the stakeholders. The HBV Setswana name is important as we take HBV to the people.



Mmalane urges UB students to re-think self employment



BHP Deputy CEO, Dr Mompati Mmalane

The Deputy Chief Executive Officer of the Botswana Harvard AIDS Institute Partnership (BHP) Dr Mompati Mmalane has recently urged students at the University of Botswana (UB) to develop a culture of creating their own jobs as opposed to seeking employment from the formal sector. However, he has challenged them to envision self employment beyond the usual spectrum of entrepreneurship but venture into research as a potential industry to pursue self-employment.

Dr Mmalane said this when officiating at the launch of BHP Post Doctoral Fellow, Dr Motswedi Anderson's study on Hepatitis B Virus (HBV). The study titled: "HepZero: Silent No More" engaged adults aged 18-40 years using participatory modalities to evaluate their knowledge

and perspective towards HBV.

Addressing the study participants who were all UB students, Dr Mmalane implored them to emulate Dr Anderson by applying for International Research Grants as self salary support to conduct research that is specific to Botswana in order to help generate knowledge necessary to influence national health policies. "You must do like Dr Anderson and employ yourselves by applying for grants to conduct various research projects," he said. With Botswana's unemployment rate on the increase, universities and institutions of higher learning are including Entrepreneurship in their syllabi in order to promote autonomy, independence and self-employment opportunities for its graduates.

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According to Statistics Botswana's quarter three (Q3) results of the Quarterly Multi-Topic Survey (QMTS), unemployment rate increseased by 3.1% from 17.6% to 20.7% as compared to the results of the 2015/16 annualised Botswana Multi-Topic Household Survey (BMTHS).

Because of high unemployment many graduates leave universities and colleges least confident of securing a salaried job in the formal sector. The graduates are also not prepared enough and confident of exploring entrepreneurship opportunities or opening private practice.

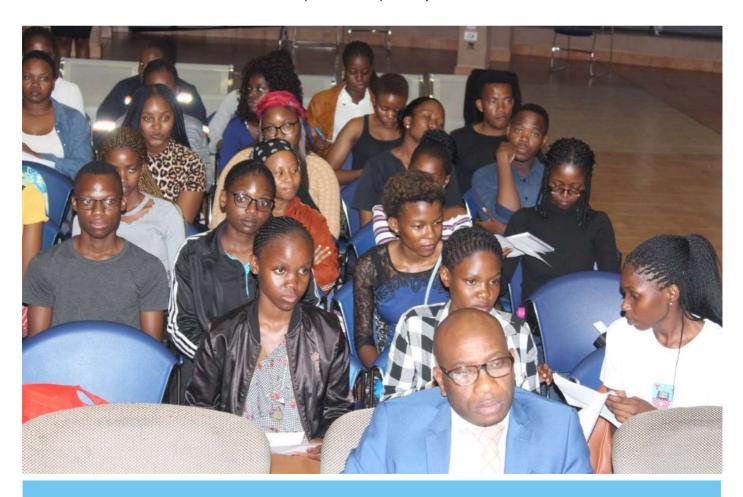
Seemingly those who dare take their chances and pursue self-employment, often do so in the usual industries or enterprises where competition to penetrate the market is as saturated as the job market itself. Many such ventures exclusively depend on Government tenders.

Dr Mmalane suggests however that taking the road least travelled could be the biblical narrow path that

would lead the nation to entrepreneurial success. He told the students to change the norm and choose research as a form of self-employment, an area which remains to this day a domain for academics in universities and scientists in research institutes. Individual University graduates and young scientists were urged to tap into the research industry and create their own career pathways.

Dr Mmalane opines "I wish too see ambitious graduates every year exit the lecture theatres of institutions of higher learning and walk into the larger world with their heads held high, confident enough to plunge themselves into the deep to pursue research for a living"

The hope for Dr Mmalane, himself a researcher is that among these graduates shall be the next generation of scientists, innovators, entrepreneurs and small business owners. Whatever field individual graduates may choose, the key should be the resolve to follow the road less travelled and carve out their own unique career pathways.



University of Botswana (UB) Students and invited guests at the launch of the HepBZero Study

BHP Strengthens Public Engagement



BHP Research Fellow and SANTHE funded PhD student, Lucy Mupfumi.

The Botswana Harvard AIDS Institute Partnership (BHP) SANTHE-funded PhD student, Lucy Mupfumi, has collaborated with Eh!woza, a media company from Cape Town to conduct a community engagement project with adolescents in Gaborone. Lucy was one of 13 doctoral and postdoctoral fellows who were awarded seed funding from the African Academy of Sciences (AAS) to carry out community and public engagement projects in their settings. According to AAS, these engagement projects are geared towards moving African Science towards people-centred approaches of conducting research that promotes societal impact of health research.

Lucy's project titled "Adolescent Advocacy Can End TB (AaCeT)" anchors on BHP's resolve to strengthen community engagement to educate the public on health research using innovative approaches for different audiences. Her proposed work seeks to increase awareness about TB among adolescents in Botswana

through participant-led production of short stories or Television Documentaries that can subsequently be shared with other high school learners.

She worked with her collaborating partners, Eh!woza, to train adolescents on story telling and video production over a 10-day period from 27th January to the 7th of February 2020. At the end of the workshop, the adolescent-produced stories were edited into one documentary that was shared with a group of high school learners to spread awareness on TB and HIV.

The media training workshop with the adolescents participants followed a stakeholder engagement meeting held on the 4th of December 2019 at Cresta President Hotel to discuss Lucy's proposal. Community and public engagement is an increasingly important area of biomedical research to allow researchers to engage with the communities in which they conduct research. This project will document the understanding, perspectives and experience of young people on HIV and TB.

Participants at the stakeholder meeting included teachers and learners from Molefhi Senior Secondary School (MSSS), Gaborone Secondary School (GSS), Maru-A-Pula School, officials form the National TB Programme at the Ministry of Health and Wellness and Save the Children Homes (SOS).

A patient activist was also in attendance and shared her personal journey with TB. A lot of interest was generated amongst both the learners and teachers on the project. In addition, all the invited guest expressed interest to return for the final meeting which was held on the 25th of March 2020 where results of the engagement activities with adolescents were shared.

Lucy's media partners, Eh!woza, is a public engagement project that forms collaboration between biomedical researchers, concept artists, anthropologist, NGO's, musicians and young people living in Khayelitsha, a township in Cape Town.

The project covers public engagement, youth education and advocacy with the ultimate aim of decreasing stigma and encouraging positive health and behaviour.

LUMBAR PUNCTURE: A dreaded life saving procedure demystified



BHP Community Advisory Board (CAB) members and members of the Media attending the LP Workshop

The mere mention of the words, Lumbar Puncture (LP) literally sends chills down one's spine, but this dreaded medical procedure is indeed a lifesaving one than the life-ending procedure it has been publicly portrayed by the society. The Botswana Harvard AIDS Institute Partnership (BHP) is spearheading a drive to engage the general public in research by hosting a series of workshops aimed at demystifying medical topics deemed controversial.

The first of this series was a meeting event on "The Lumbar Puncture" held at the BHP conference room on the 2nd of November 2019. The main objective was aimed at educating about the LP and spreading the positive message that receiving a lumbar puncture is not a death sentence but rather a lifesaving procedure that allow doctors to rapidly diagnose and treat patients with meningitis. The Lumbar puncture workshop, was organized by Dr Nabila Youssouf, Clinical Trials Manager for the AMBITION Study, the BHP Community Engagement and Communications Team, and was funded by the London School of Hygiene and Tropical

Medicine and the National Institute for Health Research. The AMBITION study led by Professor Joe Jarvis is a multi site study conducted in 5 Countries (Republic of South Africa, Malawi, Zimbabwe, Uganda and Botswana) funded by the EDCTP to investigate if a Short-course of high-dose Liposomal -Ambisome given with high dose fluconazole and flucytosine will be non-inferior to standard daily-dosed amphotericin B deoxycholate with flucytosine induction therapy for the treatment of HIV-associated cryptococcal meningitis in averting all-cause mortality.

Presenting at the workshop, Research Nurse, Katlego Tsholo explained that lumbar puncture is a procedure whereby a needle is inserted into the lumbar area of the spine and cerebro-sipinal fluid (CSF) withdrawn from the patient usually for diagnostic purposes. A video of the LP procedure was screened for the attendees to appreciate the process of the LP procedure as it was being carried out. She pointed out that LPs are now performed using smaller needles and patients receive local anaesthetic injection in advance to reduce pain and discomfort.

LP equipment including the needles, were in display for appreciation by the workshop attendees. The Research Nurse explained the two key purposes of the LP in the management of Cryptococcal Meningitis is 1) to reduce intra cranial pressure and the resultant headaches and risk of visual impairment and 2) collection of spinal CSF which is used for diagnosing Cryptococcal Meningitis (CM) which is done by testing for the presence of Cryptococcus, an opportunistic fungus in the CSF. She stressed that timely diagnosis, management of intracranial pressure and rapid treatment of infection are fundamental in the fight to reduce mortality associated with CM.

Despite the well well-known importance of performing timely lumbar punctures, they are under performed as patients often refuse to have them because of myths that LP's cause death. Patients refuse until they become extremely sick only to agree to have the procedure done at the eleventh hour when it is already too late and patients end up dying from severe CM resulting in a false association between the procedure and death.

During her presentation, she stressed the point that the aim of the educational workshop was to change the views of the community on lumbar punctures thereby helping reduce mortality associated with Cryptococcal Meningitis in Botswana.

Attendees learnt that LP is the most efficient method of relieving the symptoms of increased intra cranial

pressure associated with neurological infections and the most effective way of diagnosing CM. Nevertheless, the negative reputation of LP remains a great barrier to its implementation with many patients and their families refusing treatment.

The workshop was attended by the BHP Community Advisory Board (CAB) which is made up of people of different backgrounds including dikgosi (chiefs), community leaders and members of the clergy and other community based organizations. The workshop was also aimed at understanding why LPs acquired this negative reputation and to offer attendees objective knowledge on its risks and benefits so that they are able to go back to their communities and educate other community members.

A patient who received LPs and experienced its benefits shared his experiences with the procedure, allaying the fears that LP is life-threatening as opposed to life saving.

The workshop attendees were taken on a guided tour of the Botswana Harvard HIV Refence Laboratory (BHHRL) to further appreciate LP process from bench to bedside.

The next workshop titled "HIV Research: Searching for a cure" is already in preparation. The Community Engagement team hopes to deliver one workshop per month to help spread medical knowledge in the community and disprove harmful myths associated with medical procedures and medicine in general.







AMBITION Study Clinical Trials Manager, Dr Nabila Youssouf ; Research Nurse, Katlego Tsholo and Laboratory Scientist, Kwana Lechiile

BHP participates at the World AIDS Day Commemoration



Community Engagement Coordinator, Ernest Moseki engaging with members of the community at the BHP stall.

Held under the theme, "Communities make the difference," the World AIDS Day (WAD) 2019 Commemoration was held at Maun Stadium on December 1st where the Botswana Harvard AIDS Institute Partnership (BHP) as a key stakeholder in the fight against HIV/AIDS joined the community and other key stakeholders in the HIV response.

BHP takes part in the commemoration every year as WAD is a special day to demonstrate solidarity and support for those people living with and affected by HIV, and to remember the loved ones who have succumbed to AIDS. The day provides the nation, an opportunity to introspect on its successes and challenges during the difficult journey that the country has encountered in it's response to HIV/AIDS since 1985 when the first case of HIV infection was discovered in Botswana. WAD also offers a platform to broaden advocacy to ensure HIV/AIDS

remains high on the political agenda for policy makers empowered with positive impactful policy changes. The commemoration also offers an opportunity for stakeholders to share with the public their contribution in the fight against and ultimate goal eliminatio of HIV/ AIDS.

The 2019 theme recognizes the essential role that various communities have and continue to play in the fight against HIV/AIDS at international, national and local level.

The theme urges for greater involvement of all stakeholders including peer educators, networks of people living with or affected by HIV, key populations and vulnerable groups, counselors, community health workers and leaders, HIV treatment service providers, civil society organisations, grassroots activists as well as institutions like BHP.

The BHP team shared information with members of the public on the various research projects that BHP is undertaking in an effort to find innovative solutions to the many problems posed by HIV/AIDS and other emerging public health challenges. BHP showcased studies at the event were; Potlako and other Cancer studies, Early Infant Treatment (EIT), HPTN O84, AMBITION-cm and the Botswana Combination Prevention Project (BCPP).

A day before WAD commemoration, the BHP team attended a Candle Light Memorial service at Maun Main Kgotla held in remembrance of all the people that have lost their dear lives due to HIV/AIDS. At this service, the

Director of the National AIDS and Health Promotion Agency (NAHPA)-formerly NACA, Richard Matlhare gave the overview of the HIV/AIDS situation in Botswana.

He revealed that after the first case of HIV/AIDS in the country was identified in 1985, Government instituted Community Home Based Care Volunteer programme throughout the country. The National AIDS and Health Promotion Agency (NAHPA) was established to strengthen and mobilize multisectoral and civil Society Organisations response. Civil organisations continue to play conspicuous role since they are well positioned within communities at grassroots level.



BHP Stall at World AIDS Day in Maun



BHP Team posing for a Group Photo



Dr Kenneth Maswabi explaining to the team as they familiarised themselves with their information materials

World AIDS Day Commemoration



His Excellency President Dr Mokgweetsi Eric Keabetswe Masisi with First Lady, Neo Jane Masisi at the 2019 World AIDS Day

Botswana joined the rest of the international community to commemorate World AIDS Day on 1st December 2019 at Maun Stadium. The occasion marked the 31st commemoration of the World AIDS Day since it was officially launched by the World Health Organisation (WHO) in 1988. Delivering the Keynote Address at the event, His Excellency The President Dr Mokgweetsi Eric Keabetswe Masisi shared the news from the most recently released UNADS Global Report which gauges countries' progress towards achieving the 90-90-90 treatments targets. The good news shared by The President was that Botswana has achieved and surpassed all the 90-90-90 HIV treatments targets set by UNAIDS.

In 2014, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and partners launched the 90–90–90 targets whose aim was to diagnose 90% of all HIV-positive persons, provide antiretroviral therapy (ART) for

90% of those diagnosed, and achieve viral suppression for 90% of those treated by 2020. These 90-90-90 target is referred to by the UNAIDS as an ambitious treatment target to help end the AIDS epidemic by the year 2030.

"On the first 90, which is the percentage of people living with HIV who know their status, we are at 91 percent, on the second 90, that is those who know their HIV positive status and are on treatment, we are at 92 percent, and for those on treatment and are virally suppressed, we are at 96 percent," revealed President Masisi. Having exceeded all the three 90s targets, Masisi said the achievement should be used as motivation to now focus on the 95-95-95 HIV treatments targets.

The President noted that Botswana is among the 28 members of the Global Coalition on HIV Prevention which was established in 2017.

The coalition, the president said has set itself ambitious targets which will take the country to the attainment of zero new HIV infections and bring an end to AIDS by 2030.

Referencing the Botswana Combination Prevention Project or Ya Tsie Study, The President said, "According to a study conducted by the Botswana Harvard Institute, HIV combination prevention programs have been shown to provide high impact benefits which greatly reduce new infections and HIV mortality. Botswana is committed to offering a variety of services to its citizens in line with the 2020 UNAIDS HIV Prevention Roadmap," he said.

The Ya Tsie Study was the largest community-based HIV/ AIDS prevention study ever conducted in Botswana. It was conducted in 30 peri-urban and rural communities from 2013-2018 over a period of about five (5) years. The Primary objective was to determine whether implementation of a combination of strengthened HIV prevention methods could reduce HIV incidence within a community. The results have shown that intensive community mobilization, HIV counseling, testing

and linkage to HIV/AIDS care with early initiation of Antiretroviral Therapy (ART) and sustained HIV viral suppression while remaining on care, as well as safe male circumcision can reduce HIV incidence by 31%. The study was collaboratively conducted by BHP, Botswana Ministry of Health and Wellness (MOHW), Harvard T.H. Chan School of Public Health and Centers for Disease Control and Prevention (CDC) under PEPFAR funding.

"We have committed ourselves to strengthen response strategies to be more community-led and rights-based so that no none is left behind in the process," he said.

He stated that the focus for the HIV prevention roadmap building up to 2020 was on HIV primary prevention, the promotion as well as the provision of effective tools to prevent HIV infections.

In order to achieve these targets, the president said the emphasis is to empower communities as change agents so that they can play a crucial role in HIV treatment and care. He said the key principles to attain all 2020 targets should be based on community-led interventions through their engagement at all levels.



Minister of Health and Wellness, Dr Lemogang Kwape at the 2019 World AIDS Day

BHP Team Building

BHP treasures its workforce to support its mandate and mission. In order to promote and strengthen collective purpose, productivity, efficiency and Team spirit, BHP organized a Team Building Session for all its staff members on the 29th November 2019 at Oodi Off-Road Extreme Team Building Facilities.

The outdoor experience away from the office environment created a relaxed atmosphere that fosters friendship and encourages open discussion among staff concerning staff welfare and the attainment of the overall business objectives and goals. Team building activities that comprised of both physical and mind

games were demonstrations of the need for team effort in order to accomplish work tasks while at the same time promoting physical and mental well being.

The event was very enjoyable and successful. The activities generated a lot of enthusiasm and these will serve as a bank of material for future team building initiatives.

BHP Management is committed to enhance and promote a conducive, productive working environment that maximizes the full potential of staff while encouraging personal development and emphasis on teamwork.



Cheers and tussling during Tug of War competition.

















BHP Interns Graduate



Name: Bonolo R. Molefe

Institution:

University of Botswana

Project Title:

Prevalence of Human Pegivirus in HIV-1C Infected Pregnant Women in Botswana.

Supervisors:

Dr M. Leteane (UB) Dr S. Gaseitsiwe (BHP) N. Moraka (BHP).



Name: Kesego Motsumi

Institution:

University of Botswana

Project Title:

Comparison of Reverse Transciptase Mutations in Next Generation Sequenced Pro-Viral DNA and Population Sanger Based Sequencing Plasma in HIV-1C Individuals in Botswana

Supervisors:

Dr M. Leteane (UB) Dr S. Gaseitsiwe (BHP) P. Mokgethi (BHP)



Name: Sethunya Gotulweng

Institution:

University of Botswana

Project Title:

Molecular Characterization of Hepatitis B Virus pre-core region in HIV positive adults in Botswana.

Supervisors:

Dr T. Sebunya (UB) Dr S. Gaseitsiwe (BHP) Dr M. Anderson (BHP).

BHP Interns Graduate









Name: Godiraone Manowe

Institution:

University of Botswana

Project Title:

The Distribution of Human Papillomavirus Genotypes in HIV Infected women being screen for cervical cancer in Botswana.

Supervisors:

Dr T. Sebunya (UB) Dr S. Moyo (BHP) Dr S. Gasitsiwe (BHP) N. Moraka (BHP)

Name:

Naledi T. Gonnye

Institution:

Botswana International University of Science and Technology (BIUST)

Project Title:

Optimization and validation of a Cost -Effective HIV-1 POL Assay.

Supervisors:

Dr K. Lebani (BIUST) Dr S. Gaseitsiwe (BHP) Dr K. Seatla (BHP).

Name:

Doreen Ditshwanelo

Institution:

Botswana International University of Science and Technology (BIUST)

Project Title:

Resistance Associated mutations and polymorphisms of integrase stand transfer inhibitors(INSTIs) in Botswana.

Supervisors:

Dr K.Lebani (BIUST) Dr S. Gaseitsiwe (BHP) Dr K. Seatla (BHP)

BHP Associated Research, and Associated Investigators Publications (January to March 2020)

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