

Educational Programs

Programs for Botswana-based Learners

The BUP collaborates with UB on the Medical Education Partnership Initiative (MEPI) to strengthen medical education in Botswana through a variety of ways including:

- Providing inpatient attending support on the UB Internal Medicine and Pediatrics teaching wards
- Performing bedside teaching with Family Medicine residents
- Providing teaching on management of TB and HIV to UB SOM trainees and precepting weekly clinics in Internal Medicine and Pediatrics
- Equipping and staffing a joint UB-Penn molecular biology lab

Beginning in 2014, the BUP will also bring select UB SOM students to Penn to complete medical electives.

Programs for Penn-based Learners

The BUP sends ~150 Penn-affiliated travelers to Botswana each year to participate in a variety of programs.

Clinical Electives to Penn residents are offered in:

- Internal Medicine (PGY3, and Global Health Track in Internal Medicine for PGY2 & PGY3)
- Dermatology
- OB/GYN
- Other Specialties (Family Medicine, Radiology, Surgery, etc.)

Global Health Experiences for Penn students from:

- Dental Medicine (4 wk international externship with SDM)
- Medicine (7+ wk research opportunities for MS1s, 6+ wk dermatology elective for MS3/4s, 7+ wk clinical rotations for MS4s, and 10 wk+ internships for MPH students through SOM's Global Health Programs Office)
- Nursing (6 wk Community Nursing Clinical through SON's Office of Global Health)
- Veterinary Medicine (10+ wk vet internship)

Summer Internships for Penn Students

The BUP offers 10-week summer internships in Botswana through Penn Global's International Internship Program (IIP) to Penn students each year from various schools at Penn (College, GSE, Law, SEAS, SP2, Vet, Wharton).

About Botswana

The landlocked Botswana located in Southern Africa is approximately the size of France with a widely disbursed population of 2 million people. Botswana is an upper middle-income country, with English as an official language, a long history of good governance and democratically elected leadership. Botswana also has the 2nd highest HIV prevalence rate in the world and, like many African nations, a shortage of physicians. Botswana has both national health and education systems that have been funded by the nation's significant diamond wealth.

Philadelphia Postal and Physical Address:

Botswana-UPenn Partnership
Perelman School of Medicine of the University of Pennsylvania
502C Johnson Pav., 3610 Hamilton Walk
Philadelphia PA 19104-6073 USA

ph: +1 215.573.7527

fax: +1 215.349.5111

Gaborone Postal Address:

Botswana-UPenn Partnership
PO Box AC 157 ACH
Gaborone, Botswana

Gaborone Main Office Physical Address:

Botswana-UPenn Partnership – UB Office
Building 244G, UB Main Campus
Gaborone, Botswana

ph: +267.355.4855

fax: +267.393.2267

Gaborone Research Office Physical Address:

Botswana-UPenn Partnership – Research Office
214 Independence Avenue
Gaborone, Botswana

ph: +267.317.0933

fax: +267.317.0957

Questions?

Email Heather Calvert
hcalvert@mail.med.upenn.edu
Or visit our website
www.upenn.edu/botswana



Quilt: Tswana Hope by C. Friedman

Sharing the expertise of a world-class university with our partners in Botswana to build capacity and excellence in clinical care, education, and research.

A program of the University of Pennsylvania.

About the BUP

The overall mission of the Botswana-UPenn Partnership (BUP) is to help build capacity in healthcare in Botswana. The University of Pennsylvania (Penn) has worked in Botswana since 2001 and employs more than 100 full-time staff in country. The Partnership works with the Ministry of Health (MOH) and the University of Botswana (UB) to build local capacity—initially in response to the HIV/AIDS epidemic—but now on a broader level to provide high-quality medical care, and explore collaborations in other areas of development.



Harvey Friedman, MD

Overseen by Dr. Harvey Friedman and led in Botswana by Country Director Dr. Doreen Ramogola-Masire, Penn is taking a broad interdisciplinary approach to train healthcare personnel in Botswana, to offer experience in global health to Penn trainees, and to develop joint research programs that address issues relevant to the health and welfare of the citizens of Botswana.

Research Programs

The Penn CFAR International Core was established to promote innovative research critical to better understanding the global nature of the HIV epidemic. The Core provides leadership in developing HIV/AIDS research in Botswana, with the specific aims:

- To expand infrastructure and support in order to establish and maintain strong clinical, behavioral, and translational research programs in Botswana involving Penn and Botswana investigators.
- To train investigators from Penn and Botswana who are interested in international research.

Under the direction of Dr. Andrew Steenhoff, services provided to researchers in Botswana include:

- Feasibility Assessments
- Housing
- Supervision of Research Staff
- Storage and Shipment of Specimens
- Liaison to UB
- Regulatory Management

More than 130 BUP-affiliated papers have been published to date.

Clinical Programs

The BUP serves as technical advisors for four major clinical areas: HIV Care & Support, Adult & Pediatric TB, Women's Health, and mHealth.

HIV Care & Support Program

The HIV Care & Support is the oldest BUP program, started in 2003, to provide technical support for the national rollout of antiretroviral therapy treatment for HIV-infected citizens. The current goal of the program is to improve the quality of care received by HIV-positive individuals with co-morbid conditions and complications of chronic disease.

The three program areas of focus include:

- Providing postgraduate medical education to local healthcare workers
- Providing physician outreach to district hospitals for clinical mentoring in inpatient and outpatient settings
- Assisting the MOH with the development of national treatment guidelines for inpatient care

TB – Adult and Pediatric

Tuberculosis is a common co-infection among HIV/AIDS patients in Botswana and is one of the leading causes of death. BUP TB programs include:

- Providing mentoring for clinicians involved in management of complicated TB/HIV cases, including drug-resistant TB (DR-TB)
- Providing expert care to patients with TB/HIV and DR-TB
- Providing technical assistance to the MOH on National TB Guidelines
- Helping to implement TB contact tracing program
- Enhancing diagnosis of TB in pediatric patients by gastric aspirates



Physicians, nurses, and trainees review a pediatric chest X-ray for indications of TB.

Photo by Ryan Littman-Quinn

Women's Health

The BUP Women's Health Program was established in 2009 and is led by BUP Country Director, Doreen Ramogola-Masire, MD. Started as a pilot project using the "See & Treat" approach for cervical cancer prevention, current projects include:

- Providing cervical cancer prevention services for HIV-infected women using visual inspection after acetic acid with enhanced digital imaging
- Providing treatment of precancerous cervical lesions using cryotherapy administered by nurses and loop electrical excision procedure provided by BUP specialists
- Providing technical assistance to the MOH for other women's health issues including advising on national HIV issues, maternal mortality issues, and HPV vaccination in Botswana

Telemedicine & mHealth

Carrie Kovarik, MD, launched the BUP tele-dermatology program in 2007, which has expanded into a broad telemedicine program that seeks to circumnavigate the challenging IT infrastructure in the region and a severe shortage of healthcare workers, particularly specialists. The program uses cell phones equipped with digital cameras and other tools to transmit health information for education, diagnosis, and treatment. Current efforts include:

- Organizing and hosting a national Health Informatics Conference with local partners
- Providing support to the MOH for a national informatics strategy and in-service training
- Providing curriculum integration to UB schools
- Providing support to a live robotic tele-pathology system whereby a motorized microscope in Gaborone is used to remotely read and assess pathology slides by off-site technicians.
- Providing access to specialty care with mobile oral telemedicine, mobile cervical cancer screening, mobile tele-dermatology, and mobile tele-radiology
- Providing access to medical resources including national treatment guidelines using an SMS query system and mobile tele-mentoring



Oral telemedicine clinic.
Photo by Ryan Littman-Quinn