ACHAP

Together with our company's foundation, a U.S.-based, private foundation, and the Bill & Melinda Gates Foundation, we established the African Comprehensive HIV/AIDS Partnerships (ACHAP) in 2000 to support Botswana, a country disproportionately affected by HIV/AIDS.

The partners selected Botswana because of its HIV/AIDS disease burden—Botswana had one of the highest adult prevalence rates in the world—its viable existing healthcare infrastructure, and its strong political will and commitment to address the challenges of HIV/AIDS.

In July 2000, our company's foundation and the Gates Foundation established ACHAP with a commitment of $106.5 million. In addition, our company agreed to donate our antiretroviral (ARV) medicines STOCRIN® (efavirenz) and CRIXIVAN® (indinavir sulfate) to Botswana's national ARV treatment program for the duration of the partnership. In November 2008, we expanded our donations to include ATRIPLA® (efavirenz 600mg/emtricitabine 200mg, tenofovir disoproxil fumarate 300mg) and ISENTRESS® (raltegravir).

Initially, ACHAP's comprehensive approach included the prevention and treatment of HIV/AIDS, care and support for those infected, and mitigation of the disease's effect on the community. In 2010, our company's foundation committed an additional $30 million to support Phase II of ACHAP. Funding through our company's foundation concluded in 2014; however, we provided an extension of the grant period through May 2015.

At the outset, we sought to create a program that would leverage private-sector management expertise to help resolve social and public health issues. We hoped to create a model of care, which, if successful, could inform and encourage others in government, international organizations, foundations and the private sector who are working to address HIV/AIDS in other countries or regions.

LESSONS LEARNED **IN BOTSWANA**

- A successful national response to HIV/AIDS requires a sound policy designed to enable stakeholders to drive and guide the right course of action.
- Local, national and international partners must integrate and align all efforts with the national blueprint.
- Success depends on building local capacity and gaining agreement on a common strategy at all levels.
- It is possible to implement effective ARV therapy in the public health sector, even in a resource-limited setting.
- A sustainable solution must address both treatment and prevention.
- ACHAP is considered an important model for addressing the African HIV epidemic, and the lessons learned can help to inform positive action in other countries in the region.
- Working collaboratively and in a complementary fashion with other development partners enables the expansion and strengthening of key programs.

BEYOND **HIV TREATMENT**

While much progress had been made in Botswana during the first 10 years of ACHAP, particularly in the areas of HIV treatment and the expansion of HIV counseling and testing services, it was recognized that much more needed to be done as part of a comprehensive, sustainable and successful response to the AIDS pandemic in the country. It was widely recognized that if Botswana was to get ahead of this epidemic, the focus must be on prevention. In addition, ACHAP recognized the need to build greater capacity among local organizations, increasing the capacity of communities to provide and utilize HIV/AIDS services.

Therefore, priorities for ACHAP during Phase II evolved to include the scaling-up of prevention efforts, addressing the needs of HIV patients co-infected with tuberculosis (TB), improving the cost-effectiveness of the *Masa* antiretroviral treatment program and strengthening the capacity of local organizations to carry out a sustainable national response. The ultimate goal is for the efforts and programs ACHAP supports to become either self-sustaining or integrated into the efforts led by the government of Botswana.

EVALUATING **ACHAP'S IMPACT**

In late 2013, our company's foundation engaged **FSG**—a nonprofit strategy and evaluation consulting firm—to conduct a strategic review and assessment of ACHAP and its 15 years of support for HIV treatment, prevention and care in Botswana. The key objectives of this assessment were to (1) understand ACHAP's impact on strengthening health systems and reducing the burden of HIV/AIDS in Botswana, (2) inform the future vision and transition planning for ACHAP and (3) distill lessons learned from the partnership to share with the broader global health field. The ACHAP assessment culminated in a **public report**, prepared by FSG, that was published in October 2014.

ACHIEVEMENTS

The African Comprehensive HIV/AIDS Partnerships (ACHAP) demonstrates how public-private partnerships can make a meaningful and lasting contribution to a major public health challenge, helping to restore hope and transform the morale and prospects of an entire nation.

ACHAP has made a significant contribution to Botswana's response to the HIV/AIDS epidemic and has served as a catalyst for providing urgently needed infrastructure, equipment, human resources, training and program support for the Botswana Antiretroviral (ARV) program.

Major contributions and achievements of the program include:

- Halved the mortality rate in adults, saving more than 50,000 lives between 2002 and 2007
- Dramatically reduced mother-to-child transmission and reduced new infections among children by at least 80 percent (from around 40 percent sero-conversion to less than 5 percent)
- Contributed to significant improvements in the safety of the blood supply
- Developed sustainable treatment by supporting the recruitment of more than 200 positions, on civil service terms, to help staff the treatment program and its rollout to the clinics over the project period. Through successful absorption of these staff positions into the government establishment and with ongoing training of new staff, patient access to treatment is now available in 34 central sites and more than 560 satellite clinics countrywide. The satellite clinics are able to prescribe and dispense ARVs.
- Supported the development of the First National Strategic Framework for HIV/AIDS (2003–2009) and the Second National Strategic Framework (2010–2016)
- Increased laboratory capacity so that more than 200,000 patients could be

supported in their treatment in the public sector through a decentralized diagnostic and monitoring capacity that increased from an initial two referral centers to 14 district and primary hospitals. This enabled the laboratory network system to cope with up to 20,000 new patients per year nationally.

- Supported the introduction of provider-initiated routine HIV counseling and testing as part of routine medical care provision in addition to supporting voluntary HIV counseling and testing that is requested by clients
- Provided training, in collaboration with Harvard University and the Botswana Ministry of Health (MOH), for more than 10,000 of Botswana's healthcare workers in eight core modules on HIV/AIDS clinical care and medication adherence, largely with in-country faculty. This effort expanded on an earlier effort in which about 3,200 physicians, nurses and other healthcare professionals received hands-on, clinic-based training from international HIV/AIDS experts through the partnership's preceptorship program between 2002 and 2006.
- Successfully transitioned its treatment program technical support to the government of Botswana, a milestone reflecting just how much this program has matured over the past 15 years
- Piloted a treatment optimization program that aimed to reduce delays to antiretroviral therapy (ART) initiation by providing point-of-care CD4 testing services and enhanced community-based HIV testing. During the implementation of the project between August 2013 and August 2014, approximately 28,000 persons received HIV testing and counseling. Additionally, about 8,000 CD4 T cell counts were performed, with 14 percent of them among persons newly diagnosed with HIV infection and 17 percent among HIV-infected persons under CD4 T cell monitoring. The median time to initiation of ART among those eligible for treatment was reduced from 27 days to 22 days.
- The MOH reported that by the end of October 2014, the total number of patients on highly active antiretroviral therapy (HAART) in the country was 245,340—237,211 (97 percent) of them were adults and 8,129 (3 percent) were children. The public sector accounts for 92 percent of the coverage (226,767 patients) and the private sector for 8 percent (18,573 patients). Among the patients treated in the public sector, 63 percent were females. Based on the projected population in need of ART, close to 94 percent of the eligible adults and 88 percent of the eligible children are receiving treatment.
- Between 2009 and August 2014, ACHAP supported the circumcision of 101,680 Batswana males. ACHAP achieved 80 percent of the target established at the beginning of Phase II (127, 000) and contributed approximately 75 percent of the procedures performed in the country during the corresponding period.
- In 2010, ACHAP supported the development of a National Tuberculosis (TB) Strategy and TB/HIV policy guidelines. In 2011, ACHAP supported the review of the TB Strategy with technical assistance from the World Health Organization (WHO).
  - ACHAP provided technical and financial support to the Botswana National TB Program (BNTP) Monitoring and Evaluation unit for routine data management, and for the evaluation of the Community TB Care (CTBC) service models for efficiency, effectiveness and sustainability.
  - ACHAP also provided financial support for a study to evaluate the use of an instrument for rapid TB diagnosis (Gene Xpert) to facilitate early treatment initiation to improve TB/HIV treatment outcomes.
- ACHAP also supported the MOH to conduct the TB/HIV Knowledge, Attitude and Practice (KAP) Study (2011), the findings of which informed the development of the BNTP Advocacy, Communications and Social Mobilization (ACSM) strategy and its subsequent implementation.
  - The national TB case notification rate has decreased from 623 per 100,000 persons in 2002 to 337 per 100,000 persons in 2013. The proportion of tuberculosis patients being tested for HIV has steadily increased from 68 percent in 2008 to 95 percent in 2013. Of these patients with TB, about 63 percent are co-infected with HIV, representing a slight decline from 64 percent in 2012. The coverage of co-trimoxazole prophylactic therapy increased from 32 percent in 2008 to 92 percent in 2013, and the coverage of ART increased from 20 percent to 75 percent during the same period of time.

PERFORMANCE

The following indicators—HIV-infected population, new infections and annual deaths (adult and children), and orphans—have been substantially revised. The figures provided previously for the years 2009–2012 were based on the modeling exercise conducted by the government of Botswana (GOB) in the year 2008 and presented in the report *HIV/AIDS in Botswana: Estimated Trends and Implications Based on Surveillance and Modeling.* NACA, MOH, ACHAP; 2008. These estimates and projections were based on the entire history of HIV surveillance among women attending antenatal clinics (to establish the trends) and the results of the national survey, Botswana AIDS Impact Survey (BAIS) II (to set the level in 2004). The modeling used two programs, EPP and Spectrum.

The GOB revised the estimates and projections in developing its investment case for the HIV program and in providing current data to UNAIDS for the Global AIDS Response Progress Reporting. The current projections are based on surveillance and program data and results of the Botswana AIDS Impact Survey (BAIS) III, which was conducted in 2008, and the results from the survey conducted in 2013 (BAIS IV). The modeling uses the program "Spectrum."

The estimates for the period 2009–2014 differ considerably from the 2008 projections used previously for this report. Consequently, we are presenting definitive estimates/projections from the most recent modeling exercise, which constitute the official figures that Botswana reports to UNAIDS.

ACHAP SUMMARY	2010	2011	2012	2013	**2014**
ACHAP					
Estimated HIV+ population (total population)[1]	309,590	313,370	317,070	319,750	**321,390**
New HIV infections (adults only, ages 15+)[1]	10,530	10,370	9,840	8,850	**8,050**
Annual AIDS deaths (adults only, ages 15+)[1]	6,390	5,900	5,520	5,550	**5,760**
New HIV infections (children only, ages 0 to 14)[1]	560	390	390	320	**340**
Annual AIDS deaths (children only, ages 0 to 14)[1]	660	510	370	230	**170**
Total orphans[1]	154,214	147,285	139,934	132,540	**125,962**
Investment by our company's Foundation (US$M)	6	6	3.5	6	**5**
Total value of product donations (US$M)[2,3]	24.3	23.8	29	15.2	**9.1**
TESTING & TREATMENT					
Batswana (adults and children) receiving antiretroviral therapy (ART) by year-end[4]	161,219	178,684	201,822	229,055	**245,340**
ART coverage of eligible population (adults and children)[4,5]	>95%	>95%	>95%	90%	**~94%**
HIV+ pregnant women who received ART to reduce the risk of mother-to-child transmission[6]	92%	92%	94%	94.5%	**94.6%**

ACHAP SUMMARY (CONTINUED)	2010	2011	2012	2013	**2014**
PREVENTION					
HIV prevalence rate (ages 15 to 49)[7]	26.0%	26.0%	25.6%	24.3%	**ND**
Adjusted HIV prevalence rate among pregnant women[8]	ND*	30%	ND	ND	**ND**
HIV prevalence rate among pregnant women ages 15 to 19[8]	ND	10%	ND	ND	**ND**
Blood supply that was HIV+[9]	1.0%	1.8%	1.7%	1.0%	**1.0%**
INFRASTRUCTURE DEVELOPMENT & CAPACITY-BUILDING					
Healthcare workers trained through the ACHAP program (cumulative)[10]	7,645	8,068	16,674	17,214	**17,218**
Infectious-disease-care clinics and satellite facilities constructed to screen and treat patients with HIV/AIDS (cumulative)	35	35	35	35**	**35**

[1] Estimates from HIV/AIDS in Botswana Estimated Trends and Implications Based on Surveillance and Modeling. NACA, MOH, ACHAP; 2008.

[2] Value of our company-branded product donations is based on the company's access pricing for our antiretroviral medicines.

[3] The 2012 and 2013 figures include the value of our company-branded donations and value of purchased generic ATRIPLA.

[4] ART program data for 2014 have been officially released only through October. The 2012 figure was updated with additional data through November (data for December are not available). Figure for 2009 was changed based on data correction released on March 2010.

[5] Eligibility criteria changed in 2012 with the threshold for treatment increasing from 200 to 350 CD4 T cell/ µl.

[6] Figures based on PMTCT Program Data (they differ considerably from SPECTRUM-calculated coverage). Figure for 2013 also corrected based on the latest information shared by the program.

[7] Prevalence reported for 2009–2012 based on 2008 projections. Prevalence reported for 2013 is based on estimated prevalence in BAIS IV. Source: Botswana AIDS Impact Survey (BAIS IV), 2013 Summary Results. Statistics Botswana, NACA, MOH.

[8] Assessment originally conducted every two years; most recent government decision is to conduct it every four years. Thus, no data are available for 2012–2014.

[9] Figures have been updated based on the 2014 data from the National Blood Transfusion Service.

[10] The values for 2009 and 2010 are for the KITSO program only. The values for 2011 and 2012 have been revised to include training through the KITSO programs as well as other programs (e.g., SMC, TB).

* ND (no data available for the particular year).

** No additional facilities were constructed during the year. However, ACHAP supported the renovation of 24 targeted IDCCs with the objective of improving TB infection control. The facilities were equipped with extractor and directional (propeller) fans to improve ventilation.

It is important to note that the estimated population infected with HIV is increasing because of increased access to highly active antiretroviral therapy (HAART) for those eligible for treatment. This means that persons who are infected with HIV and who would have otherwise died are being treated and are surviving for longer periods of time. At the same time, new HIV infections are still occurring, adding to the number of people living with HIV. People on treatment increased from around 93,000 in 2007 to 245,340 by the end of October 2014. The proportion of those infected who will die from AIDS will, however, decline based on treatment availability.