

BOTUSA

A Partnership in Disease Research



In Botswana, an Isoniazid Preventive Therapy Programme nurse shares a light moment with a client.

Courtesy of BOTUSA



Margaret K. Davis

Courtesy of Margaret K. Davis, MD

Margaret K. Davis, MD, MPH, is director of BOTUSA, a partnership between Botswana's Ministry of Health and the U.S. Centers for Disease Control and Prevention.

The sub-Saharan African nation of Botswana is at the epicenter of the worldwide HIV pandemic. About 24 percent of the population between ages 15 and 49 carry the virus—one of the world's highest prevalence rates.

The 2006 *Report on the Global AIDS Epidemic*, issued by the Joint United Nations Programme on HIV/AIDS in May 2006, reported 18,000 deaths from the disease last year. Deaths of young adults in recent years have left 120,000 orphans, nearly 7 percent of Botswana's population.

AIDS is known as a fatal disease, but the actual cause of death for many victims is tuberculosis (TB), the most frequently occurring opportunistic disease that attacks the weakened immune system of HIV-positive persons. In fact, a study conducted jointly by U.S. Centers for Disease Control and Prevention (CDC) and Botswana researchers has shown that 38 percent of AIDS deaths in Botswana were actually due to TB.

The dual occurrence of TB and HIV infections is known as a co-epidemic. It is a painful burden for this landlocked nation of 1.7 million people, but the Botswana government is recognized for progressive and comprehensive policies to deal with the disease.

Since 1995, Botswana's Ministry of Health and the CDC have collaborated on programs and research to address the AIDS crisis. The partnership, called BOTUSA (pronounced bo-TOO-sah), involves more than 170 international, local, and support staff working to provide technical assistance, consultation, funding, program implementation, and research devoted to prevention, care, support, and surveillance of HIV/AIDS, tuberculosis, and related conditions.

The principal goal of BOTUSA's TB-HIV research is to expand knowledge of the relationship between epidemic tuberculosis and HIV disease in resource-constrained settings to develop better prevention strategies for TB control in Botswana and similar environments.

The major achievement of this more than 10-year-old research collaboration is a preventive therapy program. Using isoniazid, a proven TB preventive therapy, the program is attempting to prevent tuberculosis in up to 60 percent of people living with HIV. The Isoniazid Preventive Therapy (IPT) Programme, the first of its kind

to be introduced anywhere in the world, is working to put all persons in the country living with HIV/AIDS on a preventive regimen of isoniazid to keep TB at bay.

Enrollment in the IPT program has also meant that HIV-infected persons are getting better access to care and antiretroviral drugs.

Health officials hoped the isoniazid treatment would provide a better-than-60-percent protection rate and longer lasting protection against active TB, however, so CDC and the Ministry of Health are conducting a trial involving 2,000 people to determine if continuous isoniazid therapy prevents more disease than the six-month course of drug prophylaxis.

Along with the latest projects, BOTUSA has produced a significant amount of research that has contributed to the world's body of knowledge about TB in the AIDS era, including surveys of drug-resistant TB, the population's TB infection rate, and the behavior and responses of patients and clinicians living amid a co-epidemic.

BOTUSA also provides more thorough training for Botswana's urban and rural health care workers, an activity that will result in improved disease surveillance, patient screening, and care.

Botswana is also one of 15 target nations receiving assistance under the President's Emergency Plan for AIDS Relief. The United States has provided funding for purchase of antiretroviral drugs and contributed to the development and implementation of national systems for training, quality assurance, and guidelines applied to clinical delivery of antiretroviral therapy, HIV laboratory, and monitoring and evaluation of antiretroviral therapy. These contributions have strengthened the success of Botswana's national strategy against AIDS. ■