



OVERVIEW

The Overlooked Epidemic

As a Bible-toting evangelist moved from patient to patient and dispensed prayers in the women's AIDS ward at the Instituto Nacional del Tórax in Tegucigalpa, Honduras, Miriam Banks sat on her bed and flipped through an issue of *Vogue*. The magazine was stuffed with photos of impossibly glamorous models adorning stories about what to wear and where to shop. But on World AIDS Day on 1 December 2005, Banks, who had on hospital garb and a hairnet, was barely hanging on to her life. Banks, 24, lives on the island of Roatán, and her trip to the Honduran capital the month before required an airplane flight followed by a 7-hour bus ride, grueling even for the stout. Banks, who learned that she was infected with HIV 4 years earlier, arrived with tuberculosis, hypoplastic anemia, sinusitis, liver problems, and a CD4 cell count of just 33. (600 is the bottom end of normal.) But at the hospital, she had begun receiving anti-HIV drugs and was in a remarkably good mood. "The care is excellent here," she said in English, the main language of her island, to which she has since returned.

This aging hospital, one of Honduras's largest providers of HIV/AIDS care, provides a study in contrasts. So does the HIV/AIDS epidemic in Latin America and the Caribbean, which are home to diverse cultures, sexual mores, languages, patterns of drug use, ethnicities, and economic realities. "Living on the other side of the ocean, I used to look at the region as if

it's all the same, but that's definitely not true," says epidemiologist Peter Piot, who heads the Joint United Nations Programme on HIV/AIDS (UNAIDS) in Geneva, Switzerland. "When it comes to AIDS, it's just not one place."

The epidemic in Latin America and the Caribbean has largely been overshadowed by the more severe problems in sub-Saharan Africa, the vastly larger population of Asia, and the attention that more developed countries have attracted with high-profile activism, substantial investments in finding solutions, and intense media coverage. But an estimated 2 million people live with HIV/AIDS in the region—more than the United States, Canada, Western Europe, Australia, and Japan combined. Half reside in the four largest countries: Brazil, Mexico, Colombia, and Argentina. Although far less populous, Haiti, the Bahamas, Guyana, Belize, and Trinidad and Tobago have the

Changing course. Haiti's FOSREF teaches sex workers to become dance instructors.



<< **New page.** Miriam Banks (*right*) was lucky to find quality care that remains inaccessible to many throughout the region.

worst epidemics: Each has a prevalence above 2%. The virus is also moving from high-risk groups to the general population in Honduras, Guatemala, El Salvador, and Panama, where prevalences hover around 1%. "When I look at Latin America, I think Central America is the most vulnerable for the spread of HIV," says Piot.

Difficult as it is to assess the regional epidemic in Latin America and the Caribbean, HIV is aided and abetted by a few common factors: widespread poverty, massive migration, weak leadership, homophobia, tensions between church and state, and a dearth of research into patterns of transmission. Compounding the problems, HIV-infected people face pervasive stigma and discrimination, sometimes even from doctors and nurses.

As the epidemic varies, so have the responses of governments and nongovernmental organizations (NGOs). In many poor countries such as Honduras, it's difficult to find free antiretroviral drugs outside the major cities. But Haiti, which has the dual burden of being the poorest country in the region and the one with the highest HIV/AIDS prevalence, offers first-rate care in some very remote areas.

Although *machismo* leads many Latin American countries to play ostrich about homosexuality, Mexico and Peru each openly report that their epidemics are driven mainly by men who have sex with men (MSM)—including many who also have sex with women. The Caribbean, in contrast, largely has a heterosexual epidemic that's fueled by the popularity of sex workers, who do a thriving business with both locals and tourists. The church, a major cultural force throughout the region, has pressured politicians to block condom promotion in several countries. Yet in other areas, priests and nuns, working side by side with AIDS researchers and activists, run novel efforts to thwart the epidemic.

The patterns of the epidemic continue to shift. Early on, for instance, injecting drug users (IDUs) played a prominent role in HIV's spread in the Southern Cone of South America; today IDUs are a major driver along the Mexico–U.S. border and in Puerto Rico and Bermuda. Meanwhile, massive migration both within the region and back and forth to the United States means that as the epidemic matures, the defining features of spread in each country begin to blur—as do the HIV strains that are circulating.

Subtype casting

Virologist Jean Carr of the Institute of Human Virology in Baltimore, Maryland, has worked with leading investigators throughout Latin America and the Caribbean to identify the subtypes of HIV spreading in different areas. “This tells you where the virus has been and where it’s going,” says Carr.

HIV-1, the main type of the virus responsible for the AIDS epidemic, now divides into nine subtypes. Evidence strongly suggests that subtype B first entered the Americas from Africa, likely coming to Haiti and then spreading to gay men in the United States, Canada, and Western Europe. In most countries of Latin America and the Caribbean, the epidemic emerged a few years later, again in gay men with subtype B, but the picture has since become much more complex.

In the Caribbean, Carr and her co-workers identified a distinctive form of subtype B—designated “B prime”—that has spread in Haiti, the Dominican Republic, Jamaica, and Trinidad and Tobago. Typically, she says, phylogenetic analyses cannot distinguish one subtype B from another. But on these Caribbean islands, B prime is distinct from the garden-variety B found elsewhere. And each of these islands has a predominantly heterosexual epidemic. “Is there a change the virus needs to do to become heterosexually transmitted, and is this phylogenetic analysis picking it up?” asks Carr.

The garden-variety B is the main subtype in Central and much of South America. But there is much more genetic diversity in the countries of the Southern Cone—southern Brazil, Paraguay, Uruguay, Argentina, and Chile.

Subtype F, although not the major player, is prevalent in each of these countries. In Brazil, there’s increasing spread of subtype C, too, which worldwide is the most common—and some researchers contend is also linked to heterosexual spread. Brazilian researchers have shown that this C most likely came from a single introduction from Africa.

Finally, around the globe HIV continues to increase its diversity by fusing subtypes together. Researchers have discovered several B/F recombinants, although only a few of these have spread much in Brazil, Argentina, and Uruguay. Carr notes that these B/F subtypes are mainly found in heterosexuals. “The bridge almost certainly is from IDUs and sex workers, not homosexuals,” says Carr.



Proper aim. Prevention programs work with men in this overcrowded Nicaraguan prison, but many countries ignore this and other high-risk populations.

Mixed response

Across the region, increased political will, cheaper antiretroviral drugs, stronger NGOs, and the generous donations of bilateral and multilateral donors have combined to vastly improve access to treatment in recent years.

According to the World Health Organization (WHO), at the end of 2005, an estimated 315,000 people in Latin America and the Caribbean were receiving antiretroviral drugs. That’s up from 210,000 people 2 years earlier, and it represents an impressive 68% coverage; worldwide, only 20% of the people most in need receive these drugs. “You have access to antiretrovirals in many, many places in Latin America and the Caribbean,” says Brazilian epidemiologist Luiz Loures, who works with UNAIDS. “But it’s a paradox. They are far behind when it comes to prevention for highly vulnerable populations like MSM and IDUs. My conclusion is it looks easier for a government to deal with treatment than prevention.”

Throughout Latin America, MSM have significant epidemics, but in Central America

and the Andean region of South America, in particular, tailored prevention efforts are few and far between. Transvestites, the group most discriminated against, have the highest prevalence of all—up to 45% in one Lima study—and receive the fewest services. A handful of countries have creative prevention programs for sex workers; the Haitian NGO FOSREF, for example, offers professional salsa lessons to women interested in leaving the business to become dance teachers themselves. But this population is often ignored, and female sex workers have double-digit prevalence in Central America, Suriname, Guyana, and on several Caribbean islands. Last in line to receive help in avoiding HIV are prisoners and IDUs, populations that frequently overlap and that are highly vulnerable to infection.

Tomorrow’s challenge

Back at the Instituto Nacional del Tórax in Tegucigalpa, Elsa Palou, the head of infectious diseases, has witnessed firsthand the remarkable impact of potent antiretroviral drugs. Some 90% of treated patients, including Miriam Banks, responded to the therapy, and the treatment has decreased the annual mortality of AIDS cases from 43% to 9%. (Deaths mainly occurred in people who did not seek treatment until they had fewer than 50 CD4s.) But Palou is worried about the inevitable emergence of drug resistance and toxicities, “maybe in 5 years, maybe more, maybe less,” she says. Brazil, which has treated more people with anti-HIV drugs for longer than any country in the region, already has seen a dramatic increase in the number of people who need to switch from their original drugs to more expensive regimens.

The total number of infected people will also likely continue to rise, although part of that climb is because potent drugs are allowing infected people to live longer. With the exception of Haiti, no country in Latin America or the Caribbean has seen a marked drop in HIV prevalence. By 2015, according to projections from WHO and UNAIDS, the 2 million HIV-infected people in Latin America and the Caribbean today will increase to nearly 3.5 million. Currently, AIDS claims 90,000 lives per year in the region. But between now and 2015, another 1.5 million Latin Americans and Caribbean islanders, at a minimum, are projected to die from the disease.

A surge in attention to HIV/AIDS may prove these projections wrong, and Latin America and the Caribbean will surely receive a boost in 2008 when Mexico becomes the first country in the region to host the massive International AIDS Conference. Then again, it’s a tall order to contain the spread of HIV in any part of the world. But as the Spanish saying goes, *Con paciencia y saliva, el elefante se la metió a la hormiga*: With patience and saliva, the elephant can be put inside the ant.

—JON COHEN