CARIBBEAN

Nearly three quarters of the 250 000 [190 000–320 000] people living with HIV in the Caribbean are in the two countries of the island of Hispaniola: **Dominican Republic** and **Haiti**. But national adult HIV prevalence is high throughout the region: 1%–2% in **Barbados**, **Dominican Republic** and **Jamaica**, and 2%–4% in the **Bahamas**, **Haiti** and **Trinidad and Tobago**. **Cuba**, with prevalence below 0.1%, is the exception. Overall, an estimated 27 000 [20 000–41 000] people became infected with HIV in 2006 in the Caribbean. Although HIV infection levels have remained stable in the Dominican Republic and have declined in urban parts of Haiti, more localized trends suggest that both countries need to guard against possibly resurgent epidemics.

Several countries are making inroads against their epidemics, with the benefits of wider access to antiretroviral treatment; this is especially evident in the **Bahamas**, **Barbados**, **Cuba** and **Jamaica** (WHO/UNAIDS, 2006). Nevertheless, AIDS claimed 19 000 [14 000–25 000] lives in the Caribbean in 2006, making it one of the leading causes of death among adults (15–44 years).

The Caribbean's largely heterosexual epidemics occur in the context of harsh gender inequalities and are being fuelled by a thriving sex industry, which services both local and foreign clients. Sex between men, a hidden phenomenon in the generally homophobic social environments found in this region, is a smaller but important factor, and unsafe sex between men is believed to account for about one tenth of reported HIV cases in the region (Caribbean Commission on Health and Development, 2005; Inciardi, Syvertsen, Surratt, 2005).

The latest HIV data for **Haiti** estimate national adult HIV prevalence of 2.2%, with prevalence highest in the Nippes (3.8%), South (2.9%) and North (2.6%) departments (Institut Haitien de l'Enfance and ORC Macro, 2006). In Haiti's capital, Port-au-Prince, and other urban areas, HIV prevalence in pregnant women decreased by two thirds during 1993–2004, from 9.4% to 3.3%. But the trend is not evident in rural areas or among young pregnant women (24 years and younger).

Several countries are making progress in controlling their epidemics, with the benefits of wider access to antiretroviral treatment especially evident in the Bahamas, Barbados, Cuba and Jamaica.

The declining trends are most likely related to some positive behaviour changes that have become evident. For example, almost all (98%) the female sex workers surveyed in Port-au-Prince reported using condoms the last time they sold sex. In the general population, more people were either using condoms with casual partners or opting for abstinence and fidelity at the turn of the century, compared to the mid-1990s. However, HIV incidence had already begun declining around 1990, before the behaviour changes were observed. It is likely, therefore, that increased mortality and improvements in blood safety also contributed to the decline in HIV prevalence. For example, HIV prevalence among blood donors in Port-au-Prince peaked at 6%–7% in the late 1980s but then declined

considerably during the next decade, falling to 1.8% in 2004. In addition, circular migration—people moving to urban areas and then returning to rural areas to seek home-based care once they fall seriously ill—may also have contributed to the downward trends seen in urban areas such as Port-au-Prince (Gaillard et al., 2006).

There are signs that **Haiti**'s epidemic could take a turn for the worse. As noted, there is no evidence of declining HIV prevalence among pregnant women in rural areas. Indeed, condom use remains infrequent in rural areas: only 16% of women and 31% of men living in rural areas said they used a condom the last time they had casual sex (Institut Haitien de l'Enfance and ORC Macro, 2006). Especially vulnerable are impoverished women in rural areas, where economic dependence on men has been found to be one of the main risk factors for HIV infection (Louis et al., 2006). In addition, more young Haitians are becoming sexually active, they are doing so at younger ages and a minority of them use condoms during casual sex (Gaillard et al., 2006). Just over one in four (about 28%) sexually active young women (15–24 years) used a condom the last time they had sex with a casual partner, as did four in ten (about 42%) of their male counterparts (Institut Haitien de l'Enfance and ORC Macro, 2006). In Cerca-la-Source, in central Haiti, one in five out-of-school, sexually active youths (aged 14–25 years) did not know what condoms were, while one in two knew of condoms but did not use them regularly (Westerbs et al., 2006). HIV programmes appear not to be reaching young people everywhere. New data show that 4.2% of young women in the West, Nippes and North departments of Haiti were HIV-infected in 2005 (double the 2% prevalence among young men) (Ministry of Public Health and Population Haiti, 2006).

At the same time, despite being one of the poorest countries in the world, Haiti is making steady, if slow, progress in providing antiretroviral therapy to people in need, mainly because of the pioneering work of nongovernmental organizations (Cohen, 2006a). Coverage is still comparatively low—approximately 12% of people in need of treatment were receiving it in 2005 (WHO/UNAIDS, 2006). However, the effects are demonstrably positive. Among AIDS patients receiving antiretroviral therapy in Port-au-Prince, 87% of adults and 98% of children were alive after one year. Without treatment, 70% of them would have died within 12 months (Severe et al., 2005).

In the **Dominican Republic**, HIV prevalence in pregnant women has remained relatively stable overall, with national adult prevalence estimated at 1.1% [0.9%–1.3%] in 2005 (UNAIDS, 2006; Secretaria de Estado de Salud Pública y Asistencia Social de Republica Dominica, 2005a). The country's epidemic hinges to a considerable extent on HIV transmission between sex workers and their clients, with HIV prevalence in the country's estimated 100 000 female sex workers ranging from 2.5% to over 12%, depending on the locale (Cohen, 2006b). Sex tourism features increasingly in the Dominican Republic (as it does in other countries of this region), but local men still form the mainstay of the country's sex trade (Cohen, 2006b). Starting in the mid-1990s, a decline in HIV prevalence has been noted at antenatal clinics in the capital, Santo Domingo—a trend that probably reflects efforts to promote safer commercial sex in the city (Secretaria de Estado de Salud Pública y Asistencia Social de Republica Dominica, 2005b). For example, condom use increased from 75% to 94% in 12 months among sex workers who participated in a community solidarity prevention project in the capital (Kerrigan et al., 2006).

Sex between men, a hidden behavior in the Caribbean, could account for about one tenth of reported HIV cases in this region.

The highest infection levels are found in the *bateyes* (shantytowns housing sugar cane plantation workers, mostly from Haiti) (Secretaria de Estado de Salud Pública y Asistencia Social de Republica Dominica, 2005a). Prevalence as high as 12% has been found among 40–44 year-old male residents in some *bateyes* (Cohen, 2006b). It is estimated that about one quarter of *bateyes* are serviced by government health-care clinics, but the marginalization of these communities, along with language barriers and a wariness of officialdom, means the services often are not accessed (Cohen, 2006).

The balanced approach adopted in **Barbados**—emphasizing both HIV prevention and treatment—is showing encouraging results. HIV infection levels in young pregnant women

declined in the early 2000s (from 1.1% in 2000 to 0.6% in 2003) (Kumar and Singh, 2004). At the same time, the introduction of antiretroviral treatment in 2001 has led to a steep decline in AIDS death rates since the late 1990s—from 34.2 per 100 000 persons (older than 16 years) in 1997–1999 to 17.2 per 100 000 persons during 2003–2005. However, AIDS is still a significant cause of premature deaths among adults, mainly because many people still opt for treatment only after they have become severely ill (Kilaru et al., 2006). A study to assess uptake of health-care services among women diagnosed with HIV infection between 1994 and 2004 found that more than one third (37%) never attended an HIV clinic for treatment and care after learning their HIV status. As a result, mortality rates among these women were high (Kumar et al., 2006).

HIV prevalence among young pregnant women has also declined in the **Bahamas**—from 3.6% in 1996 to 3% in 2002—and infection levels have also fallen among persons seeking treatment for other sexually transmitted infections. The Bahamas has been successful in reducing mother-to-child transmission of HIV and in reducing the annual number of deaths attributable to AIDS through the provision of antiretroviral therapy (Caribbean Commission on Health and Development, 2005; Department of Public Health The Bahamas, 2004).

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Guyana's antiretroviral therapy programme, which reached more than half the persons in need by mid-2006 (WHO/UNAIDS, 2006) may yet reverse the rising trend in AIDS deaths seen there in recent years. In 2005, AIDS still ranked among the leading causes of death among 25–34-year-olds in this, the second-poorest country in the Caribbean (Guyana Presidential Commission on HIV/AIDS, 2006). HIV appears to have spread into the general population from most-at-risk populations, with national adult HIV prevalence estimated at 2.4% [1.0%–4.9%] in 2005. But HIV transmission during paid sex remains the most important risk factor for infection. Exceptionally high HIV infection levels are still being found among female sex workers: 31% in Georgetown, for example (Allen et al., 2006). Prevalence of 17% among people attending sexually transmitted infection clinics was recorded in 2005, providing further evidence that unsafe sex remains commonplace. A study to determine the role of sex between men in Guyana's epidemic has found that 21% of men who have sex with men in its Demerara-Mahaica region (in the northeast) were infected with HIV (Guyana Presidential Commission on HIV/AIDS, 2006). Little new HIV data are available for **Suriname**, where the adult national HIV prevalence was estimated to be 1.9% [1.1%–3.1%] in 2005 (UNAIDS, 2006).

National HIV adult prevalence in **Jamaica** appears to have stabilized, and was estimated at 1.5% [0.8%–2.4%] in 2005 (UNAIDS, 2006). However, about 2% of pregnant women in the St. James and Westmoreland parishes of Jamaica tested HIV-positive in 2005, and HIV infection levels are high among persons attending sexually transmitted infection clinics, exceeding 5% in the parishes of Kingston and St. Andrew, and St. James (Ministry of Health Jamaica, 2006). Sex work features prominently in Jamaica's mainly heterosexual HIV epidemic. Almost 9% of female sex workers tested HIV-positive in one recent study, which found that the older, lower-income women who used crack cocaine and operated from the street were most at risk of infection (Gebre et al., 2006). Crack cocaine use is a major risk factor for HIV infection in women in **Trinidad and Tobago**. One in five crack users were found to be HIV-infected in a study at a rehabilitation centre for female substance users (Reid, 2006).

By far the smallest epidemic in the region is in **Cuba**, where both national adult HIV prevalence and prevalence among persons seeking treatment for sexually transmitted infections was below 0.1% [<0.2%] in 2005 (UNAIDS, 2006; Ministerio de Salud de Cuba, 2006). Overall, about 80% of HIV diagnoses have been among men, with unsafe sex between men the main risk factor for HIV transmission (Ministerio de Salud de Cuba, 2006). Despite intensive efforts to control the epidemic, the number of people diagnosed with HIV has increased since 1996.

After the introduction of locally produced antiretroviral drugs in 2001, annual AIDS mortality rates fell by 72% and opportunistic infections declined by 76%, while average survival time after the diagnosis of AIDS rose from a little more than one year to five years (Perez et al., 2006).

In contrast to the rest of the region, injecting drug use is the most important risk factor for HIV transmission in **Bermuda** and **Puerto Rico**'s relatively small epidemics. Very high HIV infection levels are being found among injecting drug users in Puerto Rico. HIV incidence was 3.4% among drug users in Bayamon, 20%–25% of whom were infected with HIV (Deren et al., 2004). Injecting drug use in places of incarceration appears to be commonplace: 53% of injecting drug users who had been incarcerated said they had injected in prison (Kang et al., 2005). There is a pressing need for effective harm reduction programmes in Puerto Rico, including places of incarceration.