



CAREC SURVEILLANCE REPORT

SUPPLEMENT

Volume 23 Supplement 1 October 2003

ISSN 0376-8851

## The Caribbean HIV/AIDS Epidemic Epidemiological Status – Success Stories A Summary

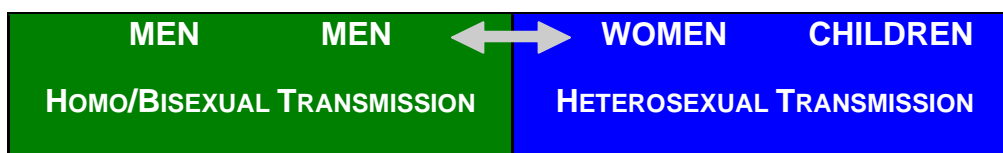
*Dr. Bilali Camara, Dr. Robert Lee, Ms. Jill Gatwood, Dr. Hans-Ulrich Wagner,  
Dr. Robert Cazal-Gamelsy, Dr. Eldonna Boisson*

### INTRODUCTION

#### The General Context

HIV/AIDS has become a major developmental problem affecting every country world-wide and the Caribbean region in particular where the epidemic is second in magnitude only to that in Sub-Saharan Africa. As the epidemic has spread throughout the Caribbean, the primary mode of sexual transmission has changed from being a homosexual one predominantly, to a mosaic of homo/bi and heterosexual epidemics (see fig. 1). The epidemic is also shifting to younger populations, in particular, young females. The major feature of the epidemic is the growing numbers of persons living with HIV/AIDS (PLWHA), and affected families, all of whom require care and support. The changing profile of the epidemic has already begun to impact dramatically, not only on the health sector, but also on the economic resources of the Region in terms of loss of human potential and productivity.

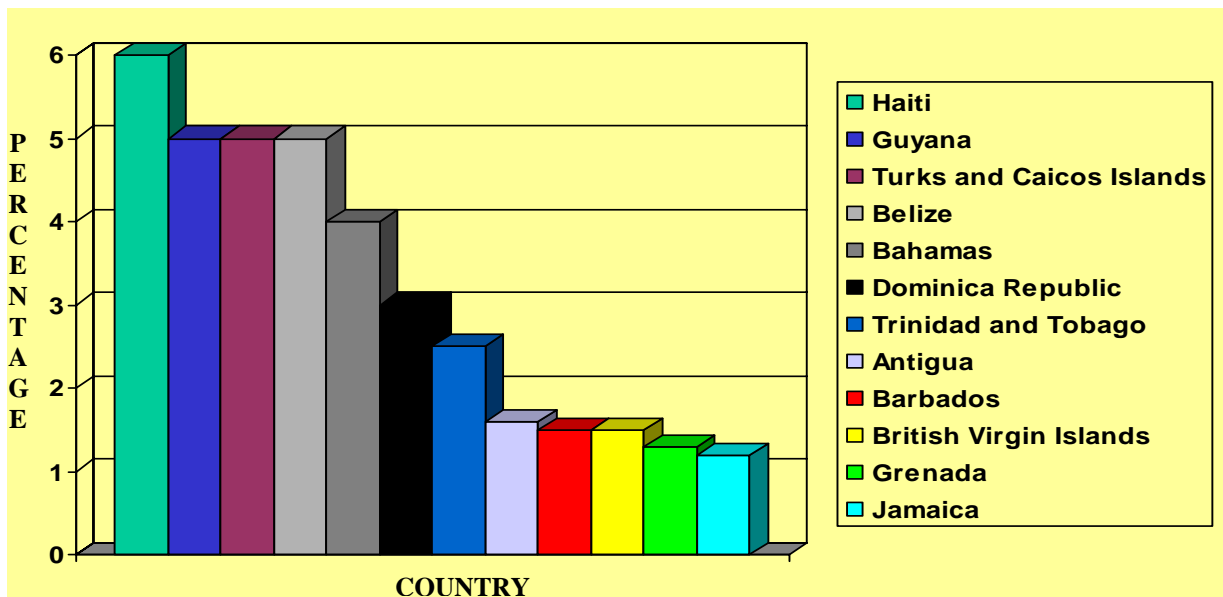
*Figure 1: Mosaic of HIV Epidemic in the Caribbean*



## Size of the Problem:

The Caribbean has the **highest incidence** of reported AIDS cases in the Americas and world wide. With half million (500,000) Caribbean people living with HIV/AIDS, the region has an adult HIV prevalence rate second only to Africa (UNAIDS-2002 and CAREC-CDC Estimates of People Living with HIV/AIDS at the end of 2001). Among the 12 territories with a generalised epidemic in the Caribbean, 10 of them are CAREC Member Countries (CMCs). The remaining two countries share the Hispaniola Island, the epicentre of the HIV epidemic in the Americas (see fig. 2).

Figure 2: Caribbean Countries with Adult Prevalence of PLWHA > 1%: 2001

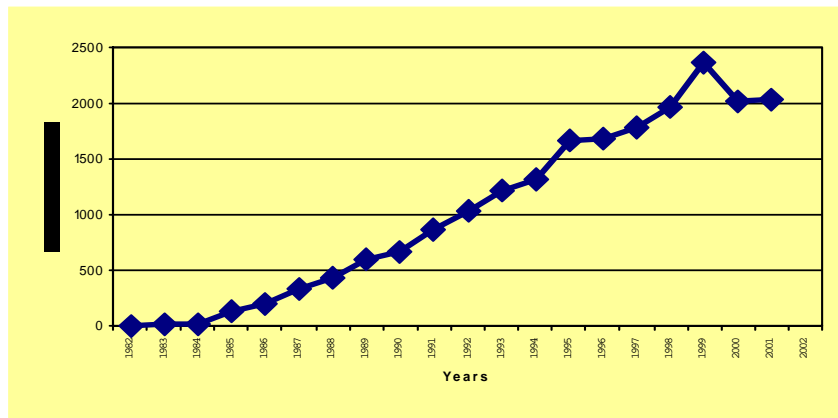


## CAREC MEMBER COUNTRIES

### AIDS SITUATION

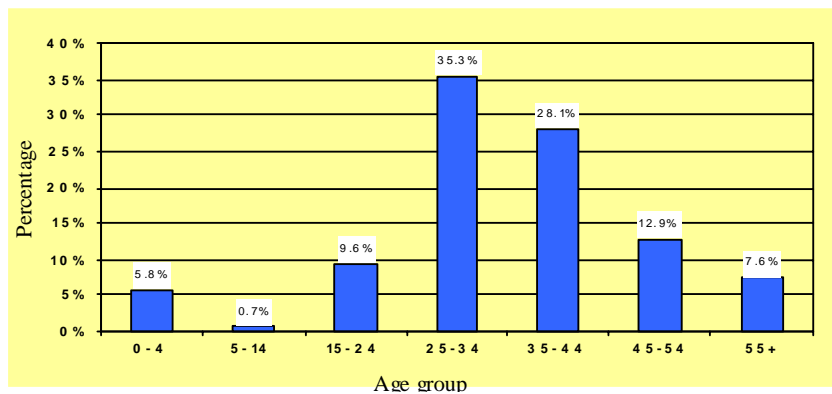
Since the 2002 CAREC Annual AIDS Report is being finalised, this analysis will focus on the situation of the epidemic from its inception in 1982 to the end of 2001. The first case of AIDS in the Region was recorded in Jamaica in 1982. Since then, to the end of 2001, a cumulative total of 20,171 AIDS cases have been reported to CAREC by 19 of its 21 member-countries (see fig 3). No reports were received from Aruba and HIV and combined HIV/AIDS data was received from the Netherland Antilles. Taking into account the level of underreporting throughout the years, it is estimated that since the inception of the epidemic, 30,000 cases of AIDS have occurred in CMCs. Considering that limitation further, for the year 2001, the annual incidence per 100,000 population is estimated at 41 in CMCs. The estimated annual incidence in CMCs was 13.6 per 100, 000 in 1991. Given this trend, the conclusion is that between 1991 and 2001, the AIDS incidence in CMCs has tripled.

Figure 3: Reported AIDS Cases in CAREC Member Countries Annual Incidence: 1982-



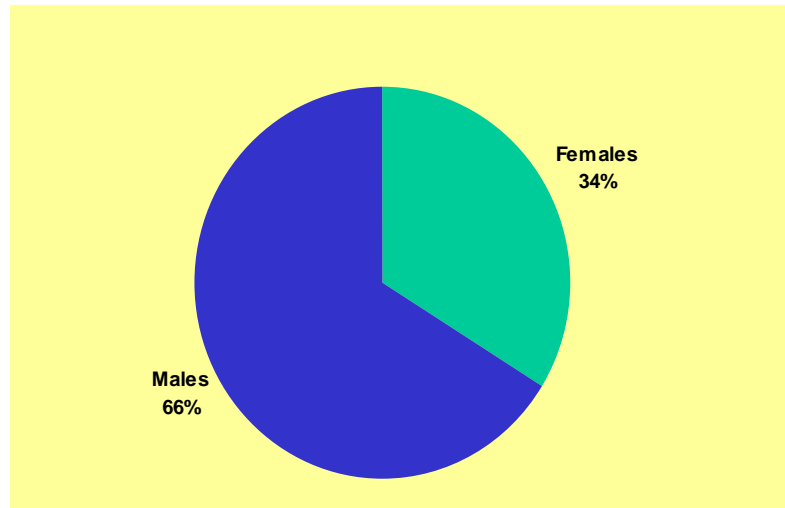
**Age Group Distribution:** The epidemic is becoming more prevalent among the younger age groups. Seventy-three per cent (73%) of cases diagnosed are between 15 and 44 years, with close to 50% of these between 25 and 34 years (see fig 4). Young people and young adults are the most vulnerable group whether in or out of school, with young women aged 15 to 19 possessing characteristics of a distinct epidemic profile. Irrespective of gender, AIDS is now the leading cause of death among the 15 to 45 year-olds in Caribbean populations.

Figure 4: Age Group Distribution of Reported AIDS Cases in CM Cs: 1982-2001



**Gender Distribution:** Among AIDS cases there is a predominance of males compared to females (sex ratio: 2:1) (see fig 5). However, young women are particularly vulnerable. In women 15 to 24 years old, annual incidence of HIV is three to six times higher than in males in that age group. In several seroprevalence surveys among pregnant women, rates among the 15-24 age group double the national average rate. CAREC estimates that during 2001, close to 1,000 infants (three per day) were infected with HIV via mother-to-child transmission (MTCT), assuming a median HIV prevalence rate of 2.5 per cent among pregnant women.

*Figure 5: Gender Distribution – Reported Adult AIDS Cases in CMCs: 1982-2001*



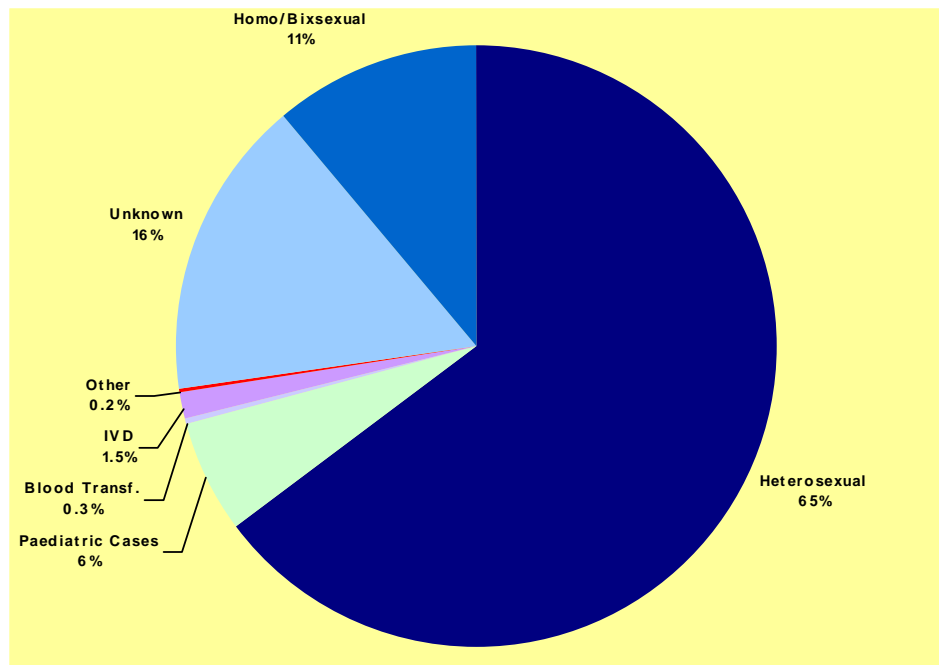
**Categories of Transmission:** The predominant mode of HIV transmission is sexual (76%), with heterosexual transmission representing 65% to the end of 2001 (see Fig 6). Trends show a dramatic and consistent increase of HIV/AIDS in women, and, concomitantly, their offspring through mother-to-child transmission (MTCT). In 2001 the male-to-female ratio was 2 to 1, up from 4 to 1 in 1985, reflecting the dramatic rise of HIV/AIDS in women. As a consequence of that high heterosexual transmission of HIV, mother-to-child transmission (MTCT) now accounts for six per cent (6%) of reported AIDS cases.

Transmission through male-to-male sex contact has been declining since the start of the epidemic, and now represents only 11% of the total reported AIDS cases. However, because of the strong social, cultural and legal discrimination against this group, under-reporting is to be expected, and suggests that the percentage is larger than recorded, indicating somehow, significantly higher levels of homo- and bi-sexual transmission. The latter group represents an important linkage between the homo and heterosexual epidemics, and requires greater attention in national and regional programming and interventions.

Transmission through intravenous drug use (IVDU) is low, ranging from zero to two percent, except in Bermuda, where IVDU represents 43% of reported AIDS cases. Rates of HIV transmission through blood and blood products have been constant at 0.35 %, from 1992 to 2001. The successful control of this mode of transmission has been as a result of the implementation of systematic screening of blood for transfusion, and the application of universal precautions by health care personnel from very early in the epidemic.

The percentage of unknown category of transmission is up to 16% of the total cumulative AIDS cases reported by CAREC Member Countries. This varies from country to country, and there are countries where this represents 40% of the AIDS cases. This could impact on the accuracy of determining risk factors associated with HIV transmission, and could mislead the planning process for better public health interventions. It is important to mention the high number of males in that unknown risk category compared to females. One explanation of this could be that some males do not disclose their risk of transmission because of the social rejection of homosexuality.

Figure 6: Category of Transmission in Reported AIDS Cases in CMCs: 1982-2001



## HIV SITUATION

The determination of the real magnitude of the HIV epidemic is understood by its prevalence in specific sub-populations. Therefore, this report will focus on key vulnerable groups which, in many instances, are the most affected, or which can help in understanding the dynamic of HIV epidemic in the general population. Overall, there is a need for new data in different groups to be used to re-characterise the epidemic in the Caribbean.

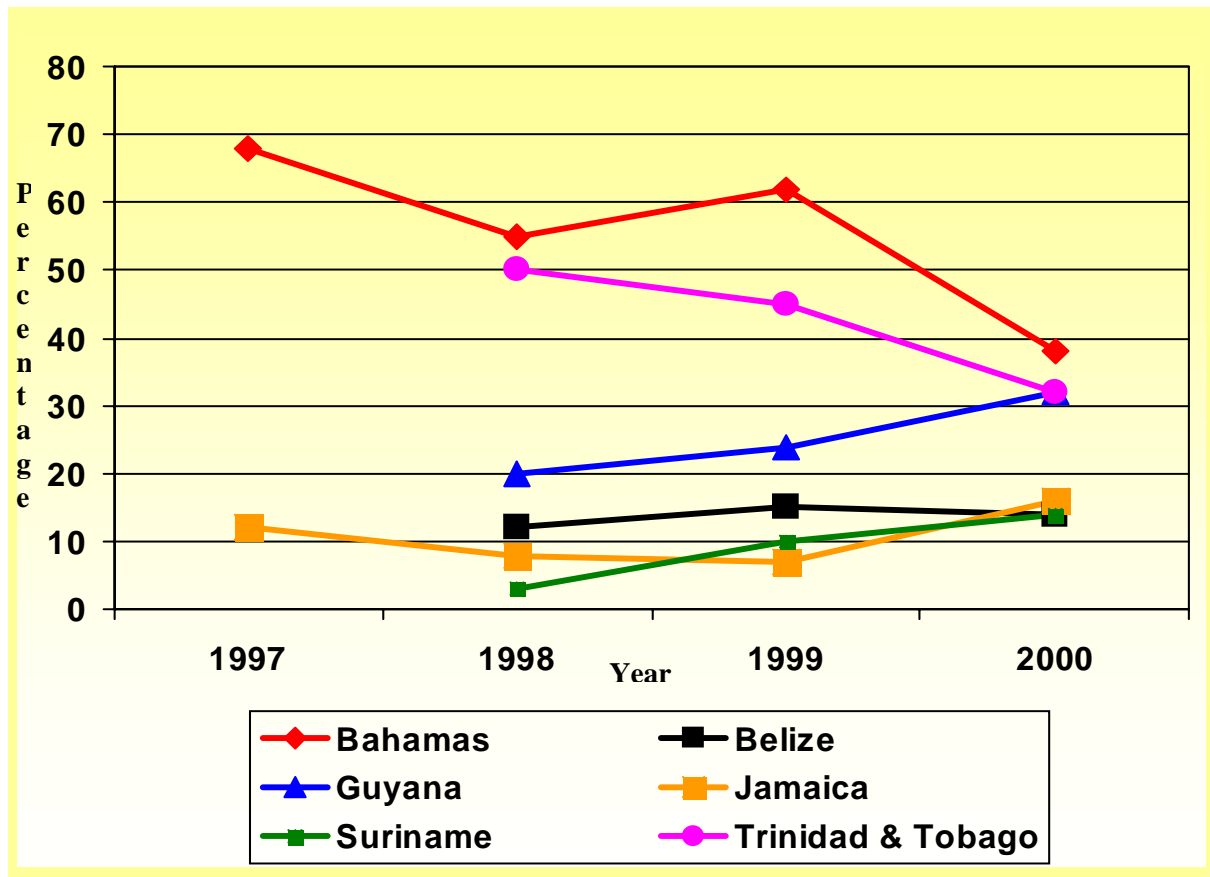
**HIV Prevalence among Men who have Sex with Men:** In Jamaica, HIV prevalence has increased dramatically from 9.6 percent in 1985 to 30.0% in 1996 (*P.Figueroa et al, 1998*). The HIV prevalence among MSM in Trinidad and Tobago was already recorded at 40.0% in 1983 (*C.Bartholomew et al, 1984*), and at 18.0% in Suriname in 1998 (*R.F. del Prado, 1998*).

**HIV Prevalence among Sex Workers:** HIV prevalence among female sex workers is high, and the burden of the disease varies between geographic areas. In Jamaica, between 1988 and 1995 a stable prevalence rate was observed (13% to 11%). In Guyana, an increasing trend was observed between 1993 and 1997 from 22% to 45% followed by a decreasing HIV point prevalence in 2000 (31%).

**HIV and Mining Population:** Male miners in Guyana are considered a high risk group. A recent study conducted by the CDC (2001) confirmed that situation by showing a 6% HIV seroprevalence rate.

**HIV Prevalence among Patients with Tuberculosis:** Throughout the years, the overall HIV seroprevalence rates among patients with tuberculosis remained very high (see fig 7). However, declining rates are being observed in the Bahamas and Trinidad and Tobago as against the situation in Jamaica, Suriname and Guyana where increasing HIV trends are observed.

FIGURE 7: HIV TRENDS AMONG TB PATIENTS: 1997 - 2000 (PERCENTAGE)



**HIV Prevalence among STI Patients:** Prevalence rates in this group remain high. It varies between countries. In Trinidad and Tobago 6% of STI patients were HIV positive in 1996. Between 1992 and 1995, in Guyana, the seroprevalence rate remained at 14%. In Jamaica, the seroprevalence rate was 7% in 1998, as was already the case in the Bahamas in 1995.

**HIV Prevalence among Pregnant Women:** HIV prevalence among this group varies from country to country. The most affected pregnant women are observed in Guyana with **7%** in 1997, The Bahamas with **3.6%** in 1995, Belize with **5%** in 2000, Jamaica and Trinidad and Tobago with seroprevalence rates of **1.2%** and **1.3%** respectively in 2001.

**HIV Prevalence among Blood Donors:** Despite the selection bias introduced by the pre-selection questionnaire used by blood bank personnel to include or exclude blood donors at risk of being HIV positive, the seroprevalence rate among this group, if interpreted consistently, can help to understand the magnitude of the HIV epidemic in a subgroup representative of the general population. In 1996, **2.5%** of donors were HIV positive in the Turks and Caicos Islands. Among that same group, the HIV seroprevalence rate was at **3.2%** in Guyana in 1997.

**HIV Subtyping and ARV Resistance Testing:** The prevalent HIV in the Caribbean has been characterised to be the HIV 1 Subtype B, the most common subtype in North America and Europe. The important dilemma is to determine the behaviour of that virus and subtype in the Caribbean where the epidemic is heterosexually transmitted in contrast with North America and Europe where it is associated with homosexual and IVDU transmission. An HIV molecular epidemiological surveillance system is very useful to ensure that the contacts between the Caribbean and other parts of the world (Africa, Brazil and India) will not result in an undocumented introduction of new strains of HIV, and to support any vaccine initiatives in the region. The value of an HIV vaccine to control a communicable disease cannot be understated.

In 1997, the two molecular epidemiological studies undertaken in the Caribbean (Jamaica and Trinidad and Tobago) showed that the Subtype B of HIV-1 is the most prevalent subtype (*Drs. C. Bartholomew and P. Figueroa*). This corresponds to the subtype generally isolated in Canada, the United States and Western Europe, and which seems to be associated with other modes of transmission (IVDU, MSM) other than heterosexual transmission which is observed in the Caribbean.

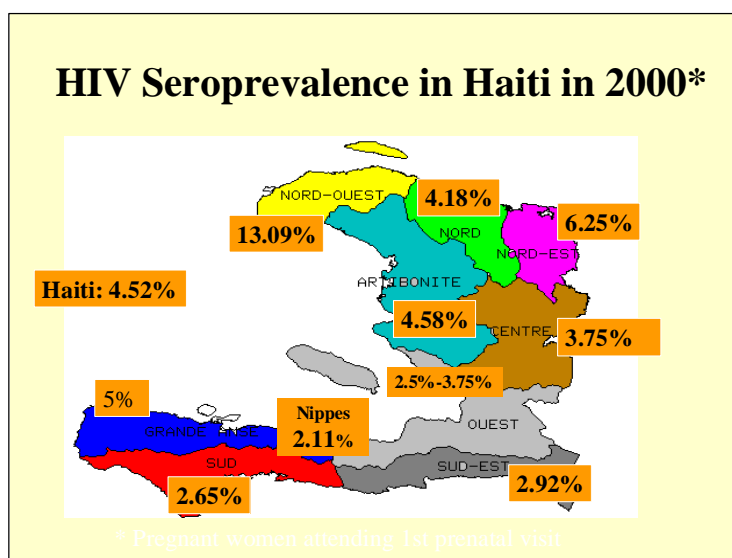
In 2002, in collaboration with the University College of London, CAREC conducted an HIV molecular survey involving 10 CMCs, and the result has shown that there are no circulating HIV resistant strains to any of the ARV drugs (NNRT, NRTI and PI), and that the Subtype B is the most predominant. However, the HIV Subtype C was isolated in St Lucia. More studies on molecular epidemiology of HIV subtypes coupled with behavioural and occupational information are needed in support of HIV vaccine development initiatives in the Caribbean.

## **THE REPUBLIC OF HAITI**

Haiti has the highest number of estimated people living with HIV/AIDS, HIV adult prevalence, AIDS mortality, and estimated number of orphans in the region. The HIV epidemic is not an isolated event. Haiti has the lowest figures in all the basic health and development indicators. The political and economic crisis and continuing embargo have just worsened the situation.

The annual reporting of AIDS cases stopped in 1992 with a cumulative number of 4,967 cases. The third round of an HIV seroprevalence study conducted in 12 sentinel sites, in 2000, observed the crude HIV prevalence rate to be around **4.5 %** among pregnant women attending prenatal clinics, ranging from **2.1%** to **13%** (see fig. 8). In 1994, when the first result of the national sentinel survey was published, this range of HIV prevalence among pregnant women was between **1.8%** and **10.5%**. It is important that this analysis, which is showing a worsening of the situation, takes into account the high maternal mortality rates observed in Haiti, thus the true magnitude of the HIV epidemic may be seriously underestimated.

**Figure 8: 2000 HIV sentinel surveillance results in Haiti**



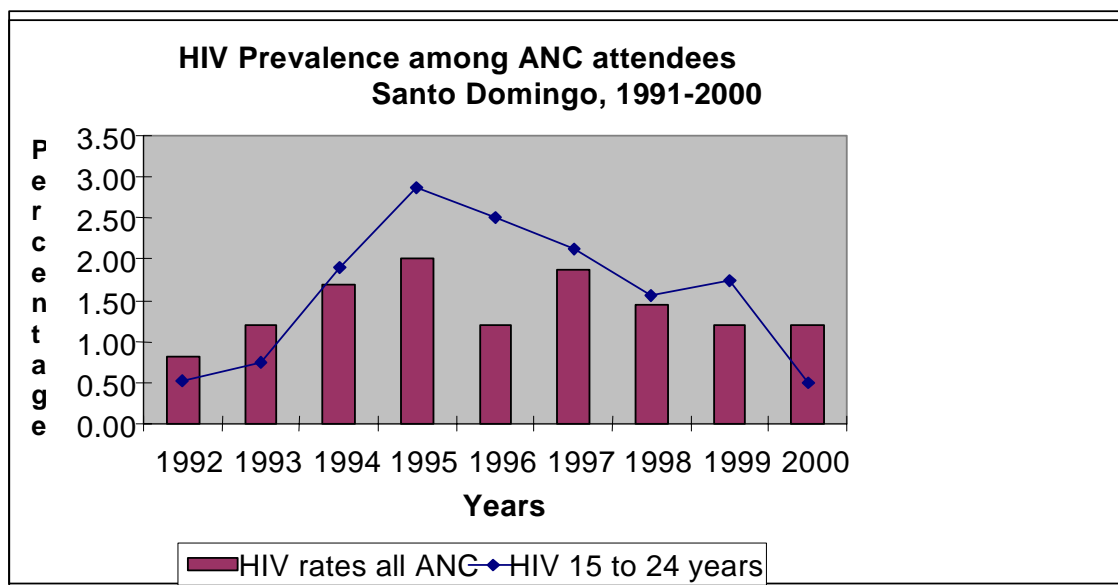
Source : Abdias Marcelin, *Charastéristiques Épidémiologiques*.  
 Ministère de la Santé Publique et de la Population, les Centres GHESKIO, et l'ÎHE

Some 250,000 people are estimated to be living with the virus, or have developed full blown AIDS at the end of 2001. Most of these infections are due to unprotected sexual contacts. HIV has spread to both urban (**6.7%**) and rural areas (**3%**) according to 1999-2000 data. The best estimates in the country based on the pregnant women prevalence rates (3.7%-4.7%) have concluded that HIV prevalence ranges between **4.9%-6.3%** in the general population.

## THE DOMINICAN REPUBLIC

While Haiti continues to be the center of attention due to the rapid and continuous worsening of the epidemic, the Dominican Republic seems to have experienced in few instances stable HIV prevalence rates due to the prevention efforts leading to the reduction of the number of sexual partners and increased condom use. The most recent data showed a stabilization of HIV prevalence in the 15 to 24 year age group in Santo Domingo from 1992 to 2000 as presented in figure 9. Still, the national HIV prevalence among pregnant women is higher than **2%**. Among female sex workers, HIV prevalence ranges from **3.5%** to **9.5%** and more than **4%** among STI patients.

**Figure 9: HIV Prevalence among ANC attenders  
Santo Domingo, 1991-2000**

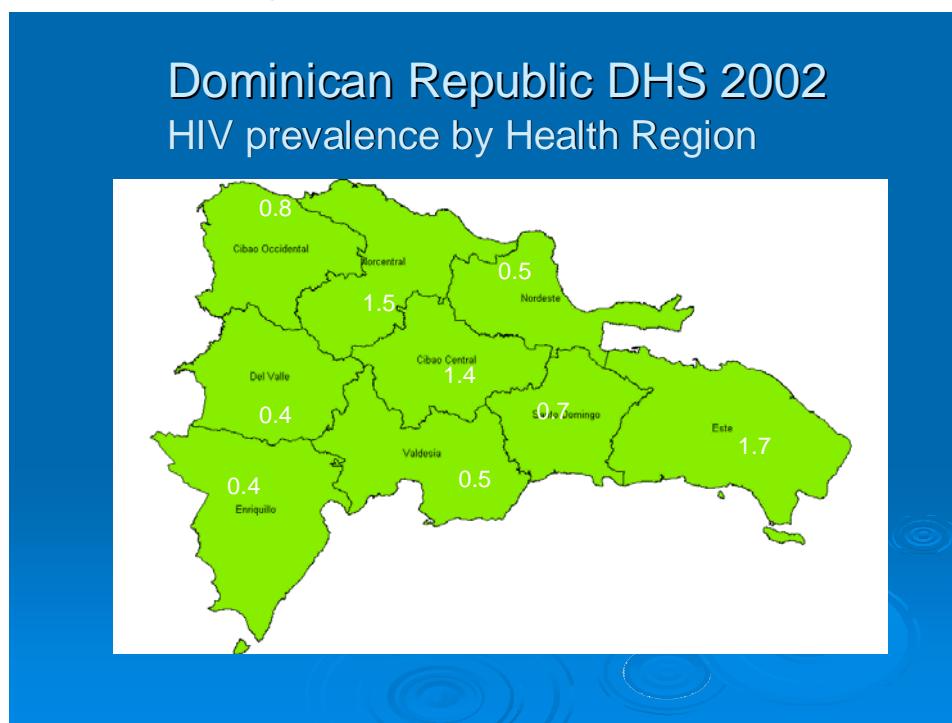


Source: National surveillance reports, Dominican Republic National AIDS Programme-COPRESIDA

However this picture presented for Santo Domingo may not reflect the evolution of HIV in other provincial cities where HIV prevalence has been higher. For example, HIV prevalence among female sex workers in 2000 range from **4.5%** in the eastern province in the tourist center of La Romana, to **12.4%** in the southern province of Bani. Also, ethnographic studies in the country have shown that there is frequent interaction between different population groups like MSM and general population. But information on HIV seroprevalence among MSM for the last several years has been inadequate.

In 2002, the Dominican Republic conducted a Demographic Health Survey with HIV saliva testing among adults 15 to 49 years old. Preliminary results showed a global HIV prevalence of 1%, without important differences between males (1.1) and females (0.9), and urban (1.2) and rural (0.9) populations (see fig. 10). HIV prevalence among the population of Bateyes (sugar cane plantations) among the 15-49 age group was **4.9%**, slightly higher in women (**5.2%**) than in men (**4.7%**). “Heterosexualisation” of the epidemic among pregnant women less than 24 years old is becoming more apparent in the DHS. At the national level data have disclosed that prevalence among women < 24 years was almost double that in men in that age group. The Bateyes population followed the same trends in the 25 to 34 year olds.

Figure 10: Dominican Republic DHS 2002

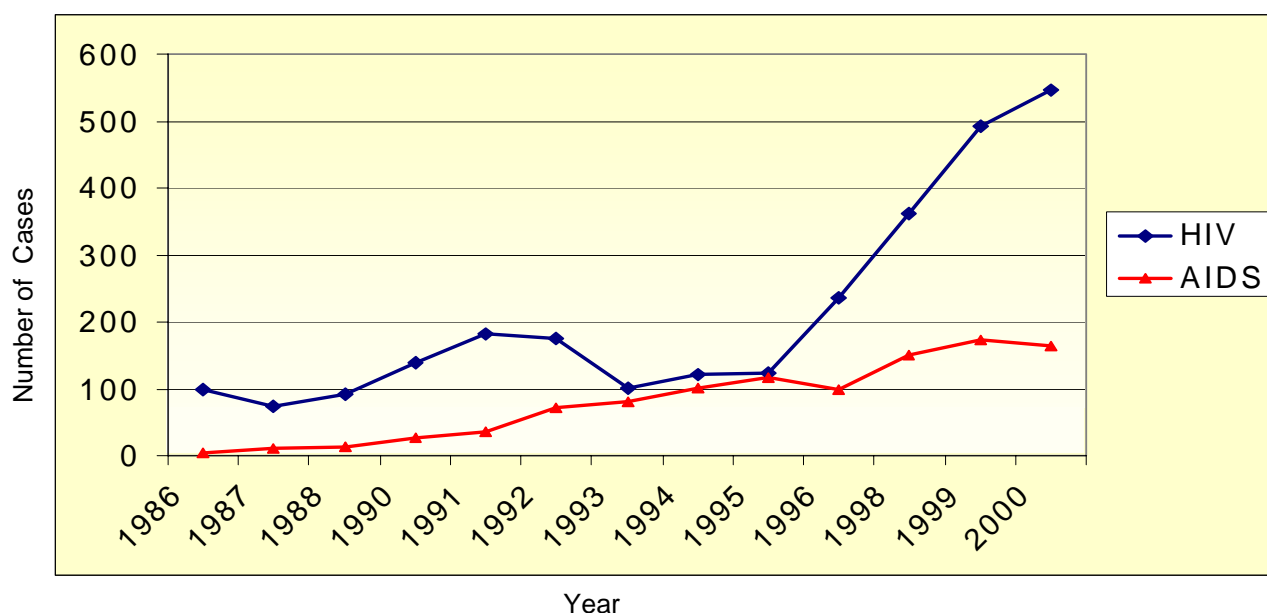


Source: DHS preliminary report 2002, Dominican Republic

## The Republic of Cuba

The HIV/AIDS epidemic in Cuba started three years later than in the English Speaking Caribbean and Haiti where the first cases were reported in 1982. At the end of 2001, the estimated number of people living with HIV/AIDS in Cuba remained low when compared with the rest of the Caribbean. The epidemic in Cuba is mainly related to male-to-male sexual contacts. The national response in Cuba has been described by many epidemiologists as a regional success story. However, despite the stable number of new AIDS cases between 1998 and 2000, the HIV trend poses a serious threat to the Cuban success story. The situation demonstrates an increasing number of new HIV infections reflecting a lack of success of primary prevention measures (see fig 11). The Cuban epidemic can be described as a growing HIV epidemic in the context of a stable AIDS epidemic, with the latter due possibly to the universal access to ARV treatment by people living with HIV/AIDS and the success achieved by the prevention of mother-to-child transmission programmes.

Figure 11: Reported HIV and AIDS Cases 1986 to 2000



Year	1986	1987	1988	1990	1991	1992	1993	1994	1995	1996	1998	1999	2000
HIV	99	75	93	140	180	175	102	122	123	235	362	493	545
AIDS	5	11	14	28	37	71	82	102	116	99	150	174	163

Source: Plan Estrategico para ITS/VIH/SIDA 2001-2006 - CUBA

## SUCCESS STORIES IN THE CARIBBEAN

<p><b>SUCCESS STORY NO 1:</b></p> <p><b>Impact of the Female Sex Workers Project in Guyana between 1997 and 2000</b></p>	<p><b>SUCCESS STORY NO 2:</b></p> <p><b>Impact of Blood Safety Initiatives in the CAREC Member Countries</b></p>
<p>45% of FSW showed their condoms to interviewers.                      "Always use" condom with clients rose by 19%.                      "Always use" condom with regular partner increased by 25%.                      Decreasing HIV seroprevalence rate from 46% to 31% among FSW.</p>	<p>In CAREC Member Countries, HIV Transmission through Blood Transfusion is under Control. <u>It needs to be sustained.</u> In 2000, Suriname achieved ZERO HIV Transmission through Blood and a drastic decline in infectious diseases trends among Blood Donors</p>

### **SUCCESS STORY NO 3:**

**The Bahamas government is implementing an expanded approach to prevention and control of HIV/AIDS under the guidance of a dedicated programme manager and with the input of a broad-based primary care team, as well as hospital staff and community-based organizations, including churches. The elements of the programme include:**

1. Ongoing mass Behavioural Change Communication/Information, Education and Communication (BCC/IEC) and targeted interventions for behaviour change
2. Promotion of condom use and voluntary counselling and testing (VCT)
3. Prevention interventions to reduce Mother to Child Transmission (MTCT): after VCT, women visiting antenatal clinics and testing HIV positive are offered AZT regardless of CD4 count levels, starting at 14 to 34 weeks of pregnancy. AZT is administered during labour, and AZT syrup is administered to the newborn for 6 weeks. Breast feeding is excluded and infant formula given.
4. Patients diagnosed with HIV are followed-up on routine basis, and patients with AIDS are included in national anti-retroviral treatment programmes with monitoring of treatment, compliance and progress
5. Care, treatment and support (food, shelter, etc) through Community Based Organizations and NGOs

### **Results**

Reduction in MTCT rate from 28% in 1998 to 12% in 1997; the number of reported AIDS cases in children dropped from 20 to 6 from 1997-1998

52% reduction in the number of reported new HIV cases between 1994 and 1999

Decrease in annual AIDS incidence by 36% from between 1997 and September 2000

Between 1996-2000, AIDS deaths dropped consistently from 288 to 105

AIDS mortality rate among infants dropped from 2.5 in 1994 to 0.5 per 1,000 live births in 1999

Figure 12: Reported AIDS Cases in the Bahamas 1985 to September 2000

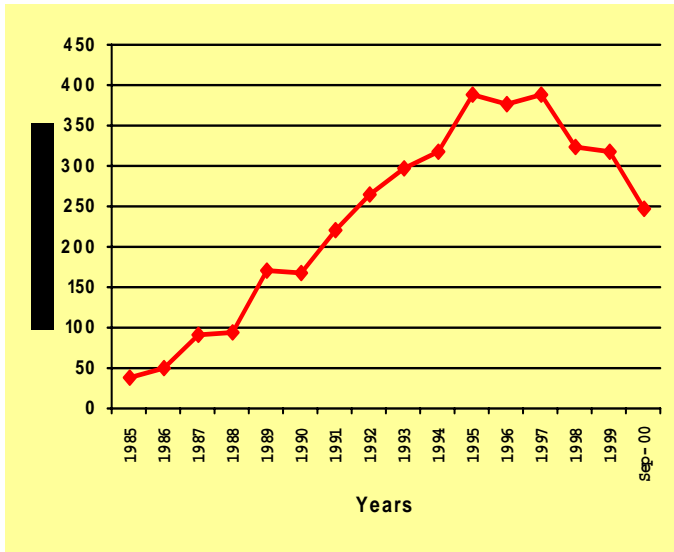


Figure 13: New HIV Infections in the Bahamas 1994 to 1999

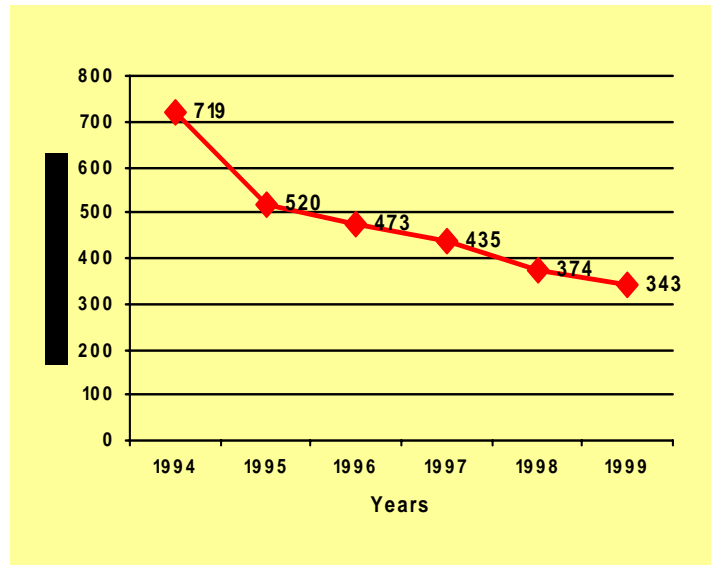


Figure 14: AIDS cases by Year, Alive or Dead in the Bahamas, 1985 to September 2000

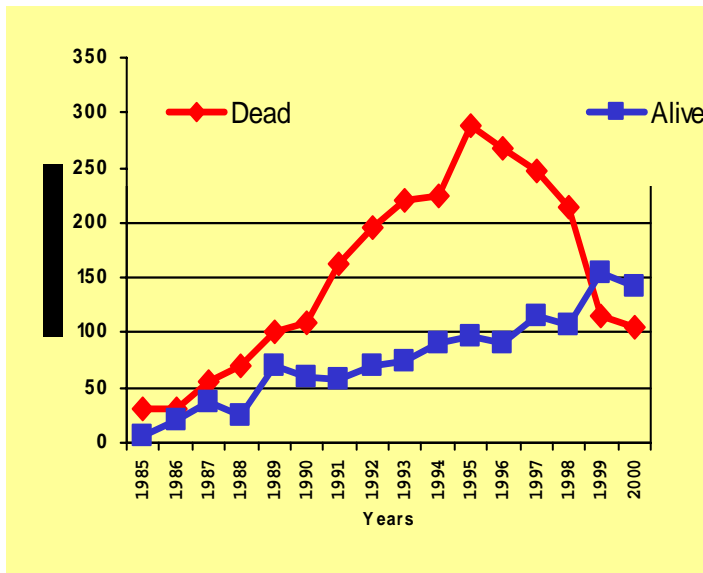
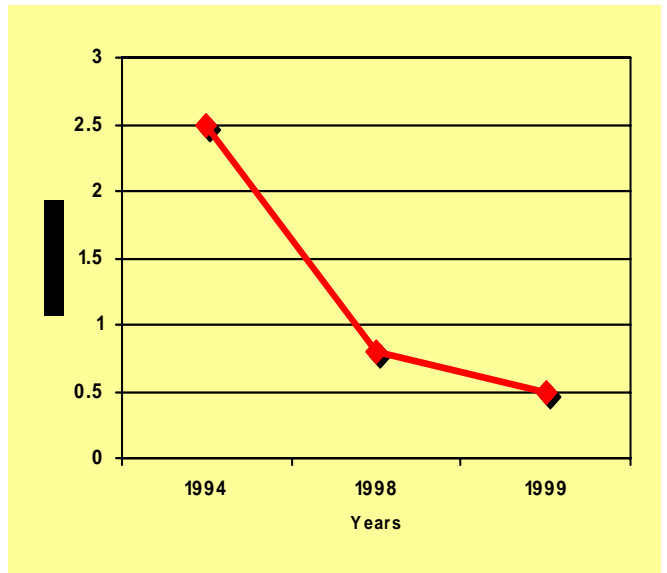


Figure 15: AIDS Deaths in Infants (0-1 year) in the Bahamas, 1994 to 1999

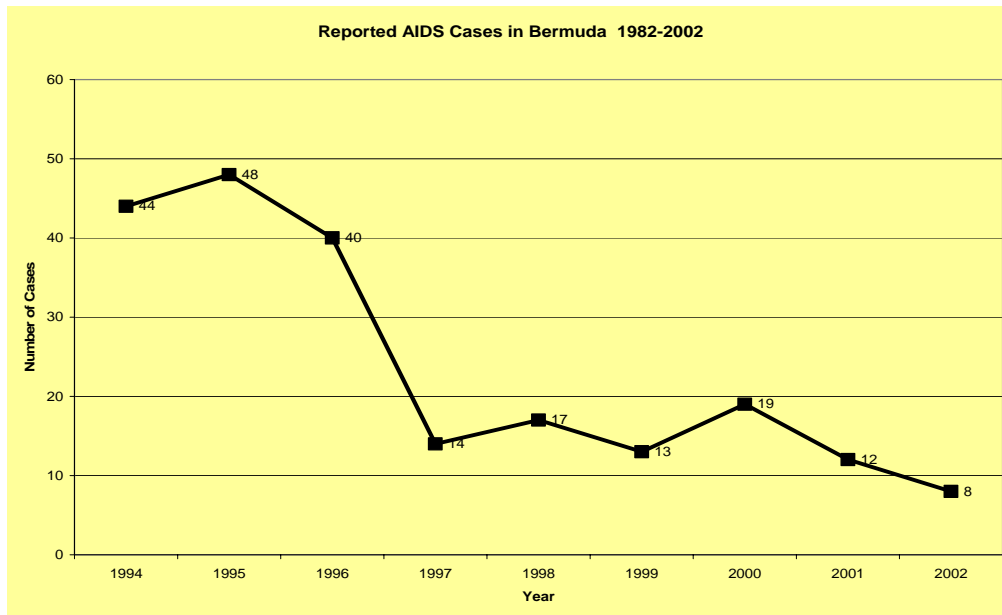


## SUCCESS STORY NO 4

### **The Introduction of HIV/AIDS Antiretroviral Treatment (HAART) made a difference in the national effort to control the HIV/AIDS epidemic in Bermuda**

**Result:** Since the implementation of an integrated public health intervention including universal access to HAART, Bermuda is observing decreasing trends in AIDS cases. This integrated public health approach includes the introduction and promotion of programmes aimed at reducing mother-to-child-transmission of HIV, the promotion of voluntary counselling and testing among couples, and health education. The universal uptake of HAART in Bermuda has yielded immediate returns, and the number of AIDS cases was reduced by 83% between 1996 and 2001 (see fig 16).

**Figure 16: Declining AIDS Incidence in Bermuda: 1994-2002**



## Conclusion

The Caribbean remains the region most affected by the HIV/AIDS epidemic in the Western Hemisphere with its epicentre in the Hispaniola Island, and its toll most significant among young people, women and children. The trend of the epidemic in the region is also showing no signs of peaking, and continues to put economic, social and human development at risk. It continues to be driven by a complex mosaic of behavioural, socio-cultural, equity and economic issues within the context of a globalised world which does not protect small and poor economies. The region possesses sufficient knowledge to reverse the tide. But it needs to act together in the spirit of Pan Caribbeanism and solidarity. Just as success was achieved in controlling Measles and eliminating wild Polio, success can be achieved in controlling the HIV/AIDS epidemic, as demonstrated in the Bahamas and Bermuda. This success can be accomplished through the commitment of all to Caribbean regional public health integration in addressing the challenge posed by the HIV/AIDS epidemic. (CAREC HIV/AIDS Strategic Plan 2001-2005)

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**Correspondence to the Editor: Eldonna Boisson  
[carec-epidemiology@carec.paho.org](mailto:carec-epidemiology@carec.paho.org)**

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**Caribbean Epidemiology Centre  
16-18 Jamaica Boulevard  
Federation Park, St. Clair  
Port of Spain  
Tel: 1-868-622-4261; Fax: 1-868-622-2792**

