A Comprehensive Response to the HIV/AIDS Epidemic in Jamaica
A Review of the Past 20 Years
JP Figueroa, J Duncan, L Byfield, K Harvey, Y Gebre, T Hylton-Kong, F Hamer, E Williams, D Carrington, AR Brathwaite

ABSTRACT
Jamaica has a well-established, comprehensive National Human Immunodeficiency Virus (HIV) programme that has slowed the HIV epidemic and mitigated its impact. Adult HIV prevalence has been stable at approximately 1.5% since 1996. HIV rates are high among those most at risk such as sex-workers (9%) and men who have sex with men [MSM] (31.8%). Risk behaviour among adults with AIDS includes multiple sexual partners (80%), a history of a sexually transmitted infection [STI] (51.1%), commercial sex (23.9%) and crack/cocaine (8.0%). Approximately 20% of all reported AIDS cases, mainly women, give no history of any of the usual risk factors for HIV infection. The national programme is based in the Ministry of Health. Since 1988, Jamaica has had a national plan to guide its HIV response. A National AIDS Committee was established in 1988 to lead the multi-sectoral response.

Prevention approaches have included information, education and communication campaigns, condom promotion, sexually transmitted infections (STI) control, targeted interventions, cultural approaches, outreach and peer education, workplace programmes and HIV counselling and testing. Concerted efforts have been made to reduce HIV stigma and discrimination. Antiretroviral therapy (ARV) was introduced for prevention of mother-to-child transmission in 2001 and a public access treatment programme introduced in 2004. A national HIV/AIDS Policy was adopted unanimously in parliament in 2005. The National Strategic plan 2007–2012 commits Jamaica to achieving universal access to HIV prevention, treatment and care. Awareness of HIV and how to prevent it is near universal though belief in myths remains strong. The condom market has increased from approximately 2.5 million in 1985 to 12 million in 2006 while condom use has grown significantly with nearly 75% of men and 65% of women reporting condom use at last sex with a non-regular partner. The proportion of women 15–24 years reporting ever having a HIV test increased from 29.8% in 2004 to 48.9% in 2008. HIV transmission from mother-to-child has declined from 25% prior to 2000 to less than 8% in 2007. As of September 2008, 4450 persons or an estimated 68.5% of persons with advanced HIV and AIDS have been placed on ARV treatment resulting in a significant decline in mortality and morbidity due to HIV.

Una Respuesta Integral a la Epidemia de VIH/SIDA en Jamaica
A Review of the Past 20 Years
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RESUMEN
Jamaica tiene un Programa Integral Nacional del Virus de la Inmunodeficiencia Humana bien establecido, gracias al cual se ha disminuido la epidemia de VIH y mitigado su impacto. La prevalencia del VIH en los adultos se ha mantenido estable en aproximadamente 1.5% desde 1996. Las tasas de VIH son altas entre aquellos que presentan un mayor riesgo, tales como las trabajadoras sexuales (9%) y los hombres que tienen sexo con otros hombres (31.8%). El comportamiento de riesgo entre los adultos con SIDA incluye parejas sexuales múltiples (80%), historia de infección por transmisión sexual (ITS) (51.1%), sexo comercial (23.9%) y crack/cocaina (8.0%). Aproximadamente el 20% de
The HIV/AIDS Epidemic in Jamaica

The adult HIV prevalence in Jamaica is estimated to be 1.6% [95% Confidence Interval 1.1%, 2.1%] (1). An estimated 27 000 persons are living with HIV of whom approximately one half are unaware of their HIV status. HIV prevalence is considerably higher among those most at risk such as sex-workers [SW] (9%) (2), men who have sex with men [MSM] (31.8%) (3), persons with sexually transmitted infections [STI] (3.6%) (4), crack/cocaine users [4.5%] (5) and prison inmates [3.3%] (6) (Table 1). Based on sentinel surveillance [Fig. 1] (4). In 2007, HIV prevalence among ANC attendees was 1.1% when persons previously known to be HIV positive were excluded. The problem is that a proper count has not been kept of the number and percentage of known HIV cases. There are approximately 30 000 ANC attendees in the public sector annually and another 20 000 pregnant women who seek antenatal care privately. HIV rates are thought to be significantly lower among pregnant women in the private sector than in the public sector. Among persons attending public STI clinics, HIV prevalence peaked at 7.1% in 1999 and declined to 3.6% in 2007 (Fig. 2).

As of December 2007, the cumulative number of persons reported with AIDS or advanced HIV (CD4 count < 350) in Jamaica was 12 520. Reported AIDS cases have increased annually to peak in 2005 at 1344 (Fig. 3). Reporting of advanced HIV cases began in July 2005 in order to take account of those persons with HIV who were being put on ARV treatment prior to developing AIDS. Total reported cases of AIDS and advanced HIV declined somewhat from 1344 in 2005 to 1186 in 2006 and 1104 in 2007. This decline must be viewed cautiously because the actual levels of case ascertainment and reporting are unknown and are likely to be incomplete. A survey conducted in 1993 found that despite relatively high levels of under-reporting among private physicians, most cases of AIDS appeared to be reported on admission to hospital (7). A more recent analysis of the HIV/AIDS tracking system found that in the pre-ART era over one-third of HIV-infected persons were first identified with advanced disease (8). Although AIDS case reporting appears to have declined somewhat in recent years,

Table 1: HIV prevalence in Jamaica

<table>
<thead>
<tr>
<th>Indicator</th>
<th>HIV Prevalence</th>
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</thead>
<tbody>
<tr>
<td>HIV prevalence among persons</td>
<td>1.5% (2005), 1.3% (2007)</td>
</tr>
<tr>
<td>aged 15–49 years</td>
<td>(ANC sentinel surveillance)</td>
</tr>
<tr>
<td>HIV prevalence among SW</td>
<td>9.0% (2005)</td>
</tr>
<tr>
<td>HIV prevalence among MSM</td>
<td>31.8% (2007)</td>
</tr>
<tr>
<td>HIV prevalence among STI clinic</td>
<td>3.8% (2004), 4.6% (2005), 3.6% (2007)</td>
</tr>
<tr>
<td>attendees in public sector</td>
<td>(STI sentinel surveillance)</td>
</tr>
<tr>
<td>HIV prevalence among inmates</td>
<td>3.3% (2006)</td>
</tr>
</tbody>
</table>

Source: National HIV/STI Control Programme, Jamaica

todos los casos de SIDA reportados, principalmente las mujeres, no reportaron historia ninguna de los factores de riesgo usualmente asociados con la infección de VIH. El Programa Nacional tiene su base en el Ministerio de Salud. Desde 1988, Jamaica ha tenido un plan nacional para guiar su respuesta al VIH. En 1988, se creó un Comité Nacional de SIDA con el propósito de dirigir la respuesta multi-sectorial. Los enfoques en relación con la prevención han incluido campañas de información, educación y comunicación, promoción del uso del condón, control de las infecciones por transmisión sexual (ITS), intervenciones dirigidas, enfoques culturales, actividades de vinculo con las comunidades (outreach) y educación entre iguales, programas en el centro de trabajo, así como aconsejamiento y pruebas de VIH. Se han concertado esfuerzos a fin de reducir el estigma y la discriminación por VIH.

En 2001, se introdujo la terapia antiretroviral (ARV) para la prevención de la transmisión de madre a hijo en 2001, y un programa de tratamiento de acceso al público fue introducido en 2004. Una Política Nacional en relación con el VIH/SIDA fue adoptada unánimemente por el Parlamento en 2005. Con el Plan Estratégico Nacional 2007–2012, Jamaica se compromete a lograr el acceso universal a la prevención, tratamiento y cuidado del VIH. La conciencia con respecto al VIH y cómo prevenirlo es casi universal, si bien la creencia en mitos relacionados con la enfermedad sigue siendo fuerte. El mercado del condón ha aumentado, de aproximadamente 2.5 millones en 1985 a 12 millones en 2006, mientras que el uso del condón ha crecido significativamente. Así, casi el 75% de los hombres y el 65% de las mujeres reportan haber hecho uso del condón la última vez que tuvieron sexo co su pareja habitual. La proporción de mujeres de 15–24 años que reportan haber tenido prueba de VIH alguna vez, aumentó de 29.8% en 2004 a 48.9% en 2008. La transmisión de VIH de madre a hijo ha disminuido de un 25% antes del año 2000 a menos de un 8% en el 2007. A partir de septiembre de 2008, una cifra de 4450 personas o un estimado de 68.5% de personas con VIH y SIDA avanzados, se han puesto bajo tratamiento ARV, con el resultado de un descenso significativo en la mortalidad y morbilidad por VIH.
the National HIV Programme has established a HIV testing database and an ARV treatment database, both of which are searched prior to compilation of annual reports. Many unreported cases of AIDS and advanced HIV are identified by reviewing these databases and ensuring a greater case ascertainment overall.

The cumulative number of deaths due to AIDS up to 2007 was 6673 or 53.3% of all reported cases. The annual
The number of AIDS deaths peaked at 692 in 2002 and declined to 320 in 2007. The significant decrease in deaths is attributable to the public access treatment programme, made possible by the Global Fund, in which an average of nearly 100 new cases of AIDS or advanced HIV have been placed on ARV treatment each month since September 2004.

Paediatric AIDS cases and deaths have also declined. Paediatric AIDS cases peaked at 83 in 2000 and declined to 33 in 2007 while deaths peaked at 45 in 2002 and declined to 9 in 2007 (Fig. 4). These encouraging trends are due to an effective programme to prevent HIV transmission from mother-to-child and a comprehensive treatment programme.
for children with HIV infection (9, 10). Seven per cent of all AIDS cases are due to vertical transmission. However, the number of AIDS cases due to vertical transmission has declined considerably in recent years and some of the paediatric cases reported are due to slow progressors that present after eight years of age (11).

In Jamaica, the HIV epidemic is primarily due to sexual transmission and this is predominantly due to heterosexual spread [Table 2] (12). Approximately a quarter of all reported cases and 42% of cases among men are classified as being of unknown sexual practice. This is due to the late reporting of many AIDS cases making it difficult to investigate them adequately. In addition, although many male cases are known to be due to sexual transmission, they are not classified as heterosexual unless same sex among men can be ruled out. Given the strong stigma against MSM in Jamaica, many men who engage in sex with other men are unwilling to admit it. Therefore, the proportion of men with AIDS classified as homo/bisexual (14%) is likely to be an underestimate of the true proportion of HIV transmission due to MSM. The high HIV prevalence among MSM [31.8%] (3) would also suggest that the proportion of AIDS cases due to MSM is higher than 14%. A more realistic figure may be approximately 20% of men with AIDS in Jamaica are among MSM.

AIDS case rates have been consistently higher among men than women in Jamaica (Fig. 5). This is likely to be due to two reasons. The sexual behaviour of heterosexual men in Jamaica is more risky than that of women with respect to multiple partners and commercial sex and HIV rates are high among MSM. While AIDS case rates among women appear to have declined marginally from 48.2 per 100 000 in 2005 to 42.6 per 100 000 in 2007, rates among men have increased from 53.3 to 57.4 per 100 000 over the same period. This trend may be due to more women than men practising safer sex and accessing HIV testing as well as the continued high rates of HIV among MSM.

Approximately 74% of all reported AIDS cases in Jamaica are in the 20 – 49-year old age group and 85% of all reported AIDS cases are individuals between 20 and 60 years old. AIDS case rates among adolescent females are nearly three times higher than among adolescent males (Fig. 6). This may be due to age mixing with young females having sexual intercourse, including transactional sex, with older men some of whom are HIV infected. AIDS case rates are slightly higher among women than men in the age group 20 – 29 years while significantly more men than women are reported with AIDS in the 30 to 60-year old age group.

### Table 2: AIDS cases in Jamaica by sexual practice 1982-2006

<table>
<thead>
<tr>
<th>Sexual practice</th>
<th>%</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Heterosexual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>86.0</td>
<td>51.6</td>
<td>30.1</td>
</tr>
<tr>
<td>Bisexual</td>
<td>8.1</td>
<td>4.8</td>
<td>2.8</td>
</tr>
<tr>
<td>Homosexual</td>
<td>5.9</td>
<td>3.6</td>
<td>2.1</td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td>40.0</td>
<td>23.4</td>
</tr>
<tr>
<td>Women</td>
<td>41.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AIDS definition includes advanced HIV disease (CD4 < 350) since July 2005

*Fig. 5: Annual AIDS case rates by sex (per 100 000 population): 1982–2007*

AIDS definition includes advanced HIV disease (CD4 < 350) since July 2005
Risk Behaviour among Adults with AIDS

Among persons reported with AIDS, approximately 80% of them give a history of having multiple sex-partners [ie more than two sexual partners in the past year] (Table 3). Half in Jamaica while recognizing that HIV is also concentrated among those most at risk.

The reported AIDS case rate for Jamaica peaked at 50.7 per 100 000 in 2005 and declined to 41.3 per 100 000 in 2007 (Fig. 7). All 14 parishes in Jamaica are affected by the HIV epidemic with a cumulative AIDS case rate of 468.2 per 100 000 population for the island. Cumulative AIDS case rates are highest in the parish of St James (1050.0 per 100 000 population) which includes Montego Bay, the tourism capital of Jamaica.

AIDS case rates are next highest in Kingston (735.0), Westmoreland (463.9) and St Ann (431.8). Cumulative AIDS case rates are relatively high along the North coast where tourism is the major form of economic activity.

Over two million tourists come to Jamaica each year and sexual encounters between tourists and Jamaicans are not unusual. Jamaica is marketed as a sex tourism destination in certain quarters and some sex-workers including beach boys, escorts and ‘rent-a-dreads’ are known to target tourists.

Factors driving the HIV Epidemic

In Jamaica, there are a number of underlying socio-economic and cultural factors that drive the HIV epidemic (15). Sexual and mating patterns are deeply ingrained in the culture as are gender roles and expectations associated with sexual practice (16, 17, 18). Most of these behaviours are derived socially and emerge more spontaneously than by rational choice (19).

Sex begins at an early age with 50% of boys initiating sex by age 16 years and 50% of girls doing so by age 17 years [Fig. 8] (20). Boys are socialised into early sex, which is seen as natural and expected, and ensures that the boy is not labelled
a homosexual or ‘mama’s boy’ (17, 18). Traditionally, girls are monitored more closely than boys with respect to sexual behaviour. However, national population based surveys indicate that the median age of first sex among girls has declined in recent years (20, 21) and more girls appear to be getting involved with transactional relationships with older men in order to meet basic needs or gain benefits for themselves (22).

Although sex begins at an early age, many young people are not adequately prepared for sex and myths remain strong. Only 38% of persons 15 – 24 years of age can correctly identify three ways of preventing sexual transmission of HIV and reject major misconceptions (4, 23). The Jamaica Adolescent Study found that only 30% of boys and 65% of girls used a contraceptive method during their first sexual intercourse (24). Among sexually active adolescents 15 – 19 years of age in 2001, 68% of males and 53% of females reported using a contraceptive method at last sex (25). Among persons aged 15 – 24 years who have had sex with a non-marital, non-cohabiting partner in the past year, 83.5% of males and 66.3% of females report using a condom at last sex with such a partner (20). While condoms are readily accessible to the general population, it is not always easy for young persons to get condoms because of the negative attitudes of many adults to adolescents having sex and the embarrassment faced by the youth (26). The content of the family life and health education in schools is not adequate to prepare young people for sex and many teachers and parents are uncomfortable talking about the subject.

**Multiple Sexual Partnerships**

Multiple sexual partnerships are common in Jamaica especially among men. The proportion of men aged 15 – 49 years reporting more than one sexual partner in the past 12 months ranges between 49% and 59% in various surveys since 1985 (20, 21, 27, 28). Among men aged 15 – 24 years, as many as 76.2% report having sexual intercourse with more than one partner in the last 12 months (20).

Despite repeated educational campaigns that include a message to ‘stick to one faithful partner’ there appears to be
little change in this sexual practice among men although a significant decline was noticed in multiple partnerships among men in national surveys conducted between 1992 and 2000 (21). Masculinity is often viewed by men in terms of how many women or ‘baby mothers’ they have. It is clear that the practice of men having an ‘outside woman’, that is one outside of his main partnership, is a deeply ingrained cultural practice (16, 18).

It is much more difficult to assess the proportion of women who have multiple sexual relationships because admitting to this is not viewed as socially acceptable and is likely to be under-reported in surveys. National population based KAP surveys indicate that between 11% – 15% of women aged 15 – 49 years report having more than one sexual partner in the past year. Among women aged 15 – 24 years, 21.4% reported having sexual intercourse with more than one partner in the last 12 months (20). However, carefully conducted focus groups suggest that 30% – 40% of women may be having multiple sexual partners in the past year (29). This is a much more realistic estimate given the high rate of men reporting multiple sexual partnerships. This practice is more common among younger than older women. Many women may enter into transactional sexual relations with a man other than their main partner for economic reasons (17).

Condom use increased significantly following educational campaigns and social marketing of condoms in response to the HIV epidemic. The condom market grew from 2.5 million condoms (20% sold) in 1985 to approximately 10 million per year (70% sold) between 1996 and 2002 (30). The total condom market declined to 8.3 million in 2004 (56% sold) and then increased annually to 12 million in 2006 [44% sold] (31). Since 1992, nearly 75% of men aged 15 – 49 years report condom use at last sex with a non-regular sex-partner. Among women, the proportion reporting condom use at last sex increased from 37% in 1992 to approximately 60% since 1996 (20, 21). Among youth 15 – 24 years, reported condom use at last sex with a non-regular partner is relatively high (Fig. 9). Despite repeated educational campaigns promoting consistent condom use, approximately one quarter of men and 40% – 50% of women do not use a condom with a non-regular sex-partner. Given the gender imbalance between men and women, it is difficult for a woman to insist on condom use in a transactional relationship if the man does not wish to do so. There is also a tendency in new relationships, after having sex a few times with a condom, to stop using the condom as a sign of mutual trust in a relationship that appears to be strengthening. This may occur even where the woman may suspect that the man has other sex-partners. She may adopt the perspective that she is now the main partner of the man and therefore should not have to use a condom with the expectation that if he does have other sex-partners he should be using a condom with them. Many older men are reluctant to use a condom because they never learnt how to use it properly when they were younger or they are concerned that they will lose their erection.

Commercial Sex

Commercial sex appears to have grown and become more diverse in Jamaica in the past two decades. There are now nightclubs with exotic dancers throughout Jamaica including in rural areas. The performance of live sex on stage, known as ‘freaky’ shows, is not unusual. Massage parlors offering sexual massages and escort services are now commonplace and are advertised in the daily newspapers. Many girls and young ladies see their good looks and ability to dance as an asset to be marketed and commercial sex, exotic dancing or sexual massage are all options especially where economic needs cannot be met through other conventional means. Some unemployed boys, especially those on the street, see sex with men who pick them up as an option for survival. There is a considerable demand, primarily from men, for commercial sex and there is a pool of unemployed women (and boys) who can make good money from it. Many female sex-workers report that they do not like the trade but it pays better than most other employment that they can do, such as domestic work, and they need the money to look after their children (19).

Commercial sex is illegal in Jamaica and periodically the police do make raids and remove sex-workers from the street. It is unusual for the police to interfere with night clubs even when it is well-known that sex-workers are operating on the premises or that live sex is taking place on stage. However, there have been raids on clubs where it is alleged that dancers from other countries are working without work permits.

Sex-workers travel widely within Jamaica and many also travel abroad. Jamaica has been cited by the United States of America, (USA) for not doing enough to prevent human trafficking. This led to the closure of a rural meeting point where club owners and exotic dancers gathered regularly in order to rotate dancers at different work sites. Increased police activity drives commercial sex underground and makes it more difficult to reach the sex-workers. The massage parlors, in particular, are difficult for field staff to
HIV prevalence among sex-workers has declined only marginally from 12% in 1989 (32) to 9% in 2005 (2). In depth interaction with sex-workers reveals that many of them are of low literacy and have limited knowledge, poor condom skills and believe in a variety of myths. While most of them do insist on condom use with clients they often make an exception for regular clients who treat them well. The proportion of men reporting condom use at last sex with a sex-worker declined from 77% in 2004 to 65% in 2008 (20, 21). Sex-workers also have a tendency not to use condoms with their regular partner or boy-friend although he frequently has multiple sex-partners. A recent survey using urine samples to test for STIs (Gen Probe) found that 65% of street prostitutes and 40% of sex-workers in night clubs had a STI [Fig. 10].

Fig. 10: Sexually transmitted infections among sex workers and patrons – Kingston PLACE RCT 2006
Reference Figueroa JP, Weir SS et al. Kingston PLACE RCT 2006. (33). Only 4% of persons 15 – 49 years admit to commercial sex in national surveys (20, 21). However, as many as 38% of persons reported giving or receiving money or a gift for sex (20) indicating that transactional sexual relationships are widespread in Jamaica. The high rates of STI found among both female (30%) and male (24%) patrons of night clubs in Kingston support this view (33).

Stigma associated with HIV/AIDS
The stigma associated with HIV/AIDS and marginalized groups is a critical factor contributing to the continued spread of HIV in Jamaica. The initial association between homosexual men and AIDS, as described in the USA, remains imprinted in the minds of most Jamaicans. This complicates the response to HIV because the stigma against homosexuality is very strong. Although overt discrimination against PLHIV is no longer common, HIV-related stigma remains strong and very few PLHIV are willing to be open or public with their status. This makes the epidemic virtually invisible in the mind of most persons who do not appreciate that they could be at risk. Heterosexual men are concerned that if they are HIV-infected, persons may believe that they are really homosexual. However, most HIV-infected women are also concerned about revealing their HIV status.

The strong stigma associated with HIV and male homosexuality in Jamaica drives the HIV epidemic underground and makes it more difficult for persons at risk to seek services including HIV testing. At the same time, it makes it more difficult for HIV programme staff to reach those most at risk especially MSM. Among MSM, there is also significant denial of risk and failure to face up to the reality of HIV and AIDS within their community. HIV prevalence among MSM has been unacceptably high (approximately 30%) for over 15 years. A recent survey of 201 MSM found HIV prevalence to be 31.8% (3). Low socio-economic status, a history of ever being homeless and being a victim of physical violence were significantly associated with HIV status (Table 4). Many of these MSM also had another STI (chlamydia 8.5%, syphilis 5.5%, gonorrhoea 2.5%).

Table 4: HIV and social vulnerability among MSM 2007

<table>
<thead>
<tr>
<th>Social Factors</th>
<th>% HIV+ve</th>
<th>% HIV-ve OR, 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever homeless</td>
<td>48.4</td>
<td>28.8</td>
</tr>
<tr>
<td>Ever in prison</td>
<td>40.5</td>
<td>29.9</td>
</tr>
<tr>
<td>Unemployed</td>
<td>32.4</td>
<td>31.1</td>
</tr>
<tr>
<td>Victim of physical violence</td>
<td>46.7</td>
<td>29.2</td>
</tr>
<tr>
<td>Low socio-economic status</td>
<td>40.0</td>
<td>23.8</td>
</tr>
<tr>
<td>Ever paid for sex</td>
<td>39.4</td>
<td>30.4</td>
</tr>
</tbody>
</table>


HIV Prevention
The prevention component of the National HIV Programme has evolved considerably over the past two decades. A safe blood supply was secured when routine HIV testing of all blood donors was introduced in December 1985, the same year a commercial HIV test kit became available. Initial education campaigns focussed on explaining what AIDS was, how it was caused by the Human Immunodeficiency Virus, how HIV was transmitted and how HIV transmission was prevented. Persons were advised to abstain from sex, stick to one faithful partner and use a condom every time. General awareness of HIV and how it was caused was virtually universal by the late 1980s and early 1990s. However, certain myths such as you can tell who has HIV by looking or that mosquitoes can cause HIV remained common. At the same time, reported condom use at last sex increased significantly and the condom market grew from 2.5 million in 1985 to 12 million in 2007 (30, 31). Condoms were promoted actively by community peer educators and through social marketing campaigns organized by both the HIV programme and the National Family Planning Board.

Control of Sexually Transmitted Infections
HIV/AIDS was recognized as a sexually transmitted disease and the national programme was defined as a HIV/AIDS/STI control programme. Considerable resources were invested in
strengthening the STI services. Sexually transmitted infection (STI) treatment facilities were expanded to ensure a STI clinic in every parish and syphilis testing was decentralized to facilitate testing with same day results and treatment for STI and ANC attendees (34, 35). Treatment of STI using syndromic management was introduced with a major training programme for practitioners in both the public and the private sector (36, 37). Sufficient supplies of STI treatment drugs were ordered and made available. The Ministry of Health increased the number of posts available for contact investigators, trained additional contact investigators locally and employed them. The surveillance and reporting of STI were improved (38). The public were educated about symptoms of STI and encouraged to seek treatment early and education programmes were introduced to persons attending public STI clinics. These measures contributed to a significant decline in infectious syphilis which peaked at 150 cases per 100 000 population in 1987 and declined to below 10 cases per 100 000 since 2000 [Fig. 11] (39, 40). Con-

In the early 1990s, it was recognized that there needed to be targeted prevention interventions focussed on sex-workers, MSM and persons attending STI clinics. Two NGOs were contracted to lead these interventions namely: the Association for the Control of Sexually Transmitted Diseases [ACOSTRAD] (targeting sex-workers) and Jamaica AIDS Support [JAS] (targeting MSM) while the Ministry of Health staff targeted STI attendees. In fact JAS also targeted sex-workers as well as provided hospice care and social support to persons with AIDS. During the early 1990s, the importance of working with youth in low income inner city communities was also recognized. This led to the training and employment of community outreach workers islandwide. A number of peer-educator programmes among youth were also initiated, including by the Jamaica Red Cross. Efforts to get the Ministry of Education involved in developing sex-education in schools in a meaningful way failed despite

genital syphilis has also declined significantly over the period from 68 cases in 1994 to 12 cases in 2004 (15, 40).

National AIDS Committee
In the early stages of the epidemic, it was recognized that there was a need to involve all sectors of society if HIV was to be effectively controlled. Towards this end, the National AIDS Committee (NAC) was established in 1988 with the mandate to mobilize all sectors of society in the fight against HIV/AIDS, to advise the government on policy and to raise funds. Within one year, the NAC had over 50 member organizations including government, non-governmental, private sector, professional, trade union, church, youth, women and community organizations. In this period, there were three different bishops attending the NAC. The government appointed a prominent businessman as chairman of the NAC and the director of the national HIV/STD programme in the Ministry of Health was the deputy chairman. Several sub-committees were established and volunteers encouraged and offering project funding to support their activities. In contrast, the Ministry of Labour introduced an education programme for Jamaicans travelling to North America for seasonal employment as migrant farm workers. HIV testing was required by the USA employers. The Joint Trade Union Confederation and the Jamaica Defence Force were among the first organizations to develop a HIV policy and programme. Both were active members of the NAC.

Many different approaches were taken to educate the nation about HIV and how to prevent it. Leaders of the national programme and the few behaviour change communication (BCC) staff gave numerous talks to different organizations and community groups as well as media interviews. There were regular mass media campaigns promoting prevention messages and condoms, and combating common myths. The community outreach workers throughout the island played an important role in reminding persons about HIV, how it spreads and how to prevent it especially with consistent condom use. It became clear that the out-

![Fig. 11: Primary and secondary syphilis Incidence by gender, Jamaica 1987–2003](image-url)
reach workers needed to place more emphasis on doing condom demonstrations and promoting condom use and negotiation skills. Regular debriefing and training sessions with these community outreach workers were essential as was close supervision which was frequently not available.

Cultural approaches
From the outset, it was recognized that social norms in relation to sexual behaviour needed to change if the HIV epidemic was to be controlled. Cultural approaches were considered to be essential towards this end, alongside the mass media campaigns and education programmes. Music, entertainment and drama were identified as important ways to reach the public. Many popular entertainers including Yellow Man, Shabba Ranks, Buju Banton, Lady Saw, Tony Rebel and, more recently, Wayne Marshall and others supported the safe sex message or did popular songs promoting condom use. The association “Artists against AIDS” was formed and Buju Banton set up a foundation to raise money for children with AIDS. The Association of Sound Systems, led by Louise Fraser-Bennett prepared a dub plate of reggae songs and DJs supporting condom use and encouraged their members to play them at dances. For many years, concerts were arranged on World AIDS Day in an effort to use music to reach people.

Drama has been seen as an important medium to get the message across. The outstanding “edutainment” group, Ashe, founded by Joseph Robinson got its start through the HIV programme. Over the years, Ashe has done hundreds of performances in schools and communities across Jamaica and abroad to educate young people about HIV. Early in the epidemic, the renowned playwright Trevor Rhone worked with the programme to produce an educational video “Safe Travel” depicting the story of a migrant farm worker who developed AIDS.

The play by Trinidadian Godfrey Sealy “One of my sons is missing” was performed in Jamaica. For several years, the annual drama competition facilitated schools performing plays with an AIDS theme. Several playwrights have integrated HIV/AIDS themes into their plays. More recently the play “Positive” about living with HIV was staged across the island. A number of community drama groups have received support from the programme to carry the HIV message. Targeted interventions among vulnerable populations often make use of animators and drama to ensure more effective communication. The annual national debating competition among schools includes a topic on HIV/AIDS.

During the first decade or so of the HIV/AIDS response in Jamaica, most of the work was conducted by a limited number of professional staff from the Ministry of health, led by Dr Peter Figueroa who was Principal Medical officer (Epidemiology), and a few NGOs like Jamaica AIDS Support [JAS] and the Jamaica Red Cross. Due to the strong stigma associated with AIDS, very few men were willing to be associated with HIV/AIDS control. While Ministers of Health have always supported the national programme and were willing to speak on AIDS most of their political colleagues and most civic leaders were unwilling to speak out. Many health professionals were fearful of being involved in HIV prevention or AIDS care in the first decade of the HIV response in Jamaica. This fear, timidity, ignorance and at times prejudice among many of our leaders limited the scope of the HIV prevention effort and fostered a tendency towards complacency and denial in the population alongside an alarmist or sensationalist manner when dealing with HIV/AIDS matters.

Given the hostile environment, it was not surprising that very few persons with AIDS would willingly reveal their status to their family or friends and certainly not publicly. Thus the AIDS epidemic was known and feared but remained in many ways invisible and abstract in the sense that it was outside the concrete experience of most people. The prevailing perception was that “HIV infection and AIDS happened to other persons like homosexuals and sex-workers and not to a normal persons like me”. In any case, many persons who were advised of their risk due to multiple partners or unprotected sex preferred not to know.

Shifting attitudes to HIV and increased resources
During the mid to late 1990s, the prevailing attitudes began to shift. An important contributor to this was an alliance established by the national programme with media managers led by Oliver Clarke of the Gleaner Company. The media generally played a constructive role in educating the Jamaican public and offered the national programme an average of 30% discount on the placement of advertisements and media campaigns. Another decisive step was the Government’s decision in 1999 to seek a World Bank loan for HIV/AIDS. The preparatory work took about 18 months and helped to crystallize the Government’s commitment to a strengthened HIV response. Although two-thirds of the US$12 million loan over five years was for health infrastructure, primarily a laboratory information system and a modern infectious waste management plant in Kingston, it facilitated a broader HIV response through financial support for five government ministries (Education, Tourism, Labour, National Security and Health) and a range of NGOs including the NAC. The submission of a successful proposal to Round three of the Global Fund for AIDS, Tuberculosis and Malaria provided the national programme with significant resources (US$23 million for five years) for HIV treatment and prevention for the first time in July 2004. Prior to the World Bank loan in 2001 and the Global Fund grant, the main external funding for the programme was from USAID (annual grants of approximately US$1 million since 1988). The national programme also benefitted from grants from the German (GTZ) and Dutch governments in the initial years as well as the UN agencies and others at different times.
In the past five years, with the additional resources, HIV prevention efforts have grown significantly. In addition to general education programmes and media campaigns, the work among vulnerable groups such as sex-workers, MSM, prison inmates and youth as well as vulnerable communities expanded. HIV coordinators and BCC staff were placed in the Health Regions which were also funded to carry out HIV work according to an agreed work plan. Scores of workshops were held to train civil servants and persons from various sectors including members of the vulnerable populations. The Jamaica network of persons living with HIV (JLN+) was supported financially and some of their members gave personal testimonies in the training workshops to help put a face to HIV.

In 2002, Jamaica introduced a programme for the training of trainers to promote voluntary counselling and HIV testing (VCT) with the technical assistance of Johns Hopkins Programme for International Education in Gynaecology and Obstetrics (JHPIEGO).

The aim was to provide HIV testing, using a rapid HIV test, with immediate results to all pregnant women, persons with STI, persons most at risk and all persons wanting to do a HIV test. Within three years, thousands of health-workers and staff from NGOs and other organizations were trained to provide counselling for persons doing HIV tests. Hospitals were encouraged to offer HIV testing on a voluntary routine opt out basis and fairs were held offering free HIV testing to promote the importance of knowing one’s HIV status. Between 2004 and 2008, the proportion of young women aged 15 – 24 years reporting ever having a HIV test increased significantly from 29.8% to 48.8%. Among male youths of the same age, the proportion reporting ever doing a HIV test increased from 13.7% to 18.9% over the same period (20).

Another important HIV prevention initiative was the introduction of the Priorities for Local AIDS Control Efforts (PLACE) methodology to Jamaica (41). This method targets sites where persons go to meet new sex-partners and introduces HIV prevention at these sites. An initial study was done in Montego Bay (42, 43) and then in Kingston where a randomized controlled trial (RCT) was conducted (44). An adaptation of the PLACE method has now been rolled out islandwide with emphasis on prevention interventions targeted at sites where the risk of HIV is greatest such as sex-workers street sites, night clubs and bars. Prevention measures are planned at three levels: environmental, group and individual including outreach HIV testing. PLACE out-reach staff use a variety of innovative interactive methods to engage persons in risk assessment, improving condom use and negotiation skills including doing condom demonstrations and promoting self-efficacy and risk reduction.

The Ministry of Education has embarked on a programme to introduce Health and Family Life Education (HFLE) in all schools. Workshops have been held with the principals and teachers and the HFLE programme is being rolled out. A HIV policy and strategic plan for the education sector have been prepared. A small HIV unit has been set up in the Ministry and a few HIV staff have been placed in the field. However, the policy and HFLE programme still fail to come to grips with the realities of sexually active school children and fail to adequately prepare the youth to practice safe sex.

The Ministry of Labour is in the process of finalizing legislation making it illegal to discriminate against persons living with HIV. They continue to have an active programme educating workers travelling abroad for seasonal work. The Ministry of Tourism has conducted HIV education programmes among the workers in hotels and the adjoining communities. The Ministry of National Security has introduced a health programme for all prison inmates that includes a medical examination, laboratory tests including HIV and syphilis, ARV treatment and HIV prevention education.

**Combating HIV stigma**

From the outset of the epidemic, the national programme worked hard to reduce the strong stigma associated with HIV. A special programme of training health staff was established in 1990 to educate them on HIV/AIDS and to encourage appropriate attitudes and behaviour. All reports of discrimination due to HIV were investigated and action taken to educate those involved and help persons affected. Many large employers and the government ministries and agencies were generally open to supporting employees with AIDS. Many small businesses were less receptive and often fired staff they thought to have AIDS. Frequently, the programme was called in to defuse a situation where members of the work force were protesting against someone with AIDS. There were horror stories of persons with AIDS being thrown out by their families or run out of their communities or children being refused entry to school. Jamaica AIDS Support and the Catholic Church in particular offered support and hospice care.

This situation has been largely transformed and overt discrimination against PLHIV is now unusual. However, the history of discrimination is sufficiently vivid that persons with HIV are reluctant to disclose their status although most people are now supportive of PLHIV. The reluctance of PLHIV to disclose their status to family, friends, neighbours and co-workers is constraining further progress in combating HIV stigma, normalizing HIV and reducing HIV spread.

A major mass media campaign against HIV stigma in 2002 showcased several prominent Jamaicans calling on people to accept PLHIV. However, a critical turning point was the “living positive” media campaign 2004 in which two courageous persons living with AIDS, Ainsley and Annesha, went public with their stories and their images were used on television and billboards “getting on with life”.

**HIV Treatment**

One of the tragedies of the HIV epidemic was the premature death of so many persons due to AIDS. At first there was no
treatment available. Then treatment became available but it was too expensive for most patients or developing countries to afford. When generic ARV drugs first became available neither the World Bank or the Global Fund supported their purchase initially due to the stance of the major pharmaceutical companies and the USA government. The advocacy of AIDS activists and many developing countries, as well as good sense, resulted in the Doha Declaration that gave countries the right to purchase generic ARV drugs to avoid national public health catastrophes.

In Jamaica, the first challenge was to establish an effective programme to prevent HIV transmission from mother-to-child during pregnancy and childbirth. A pilot programme was established in 2001–2002 that showed that it was possible using nevirapine at birth (45). However, coverage was limited. HIV testing of ANC attendees in the public sector increased from 39% in 2003 to 95% or more since 2004. Coverage of HIV pregnant women who received ARV drugs was increased to 47% in 2004 (4) through a collaborative programme between the Ministry of Health and The University of the West Indies led by Professor Celia Christie and supported by an Elizabeth Glaser Paediatric AIDS Foundation award (9, 46). Subsequently, ARV coverage was increased to 85% (4) and HIV transmission from mother-to-child has been reduced from approximately 25% prior to 2000 to 8% or less in 2007.

The Global Fund grant was the decisive factor that enabled Jamaica to establish a public access programme for ARV treatment of persons with AIDS and advanced HIV disease. Approximately 50% of the grant was devoted to treatment primarily ARV drugs, laboratory monitoring and training. From September 2004, when the public access programme began, nearly 100 persons with AIDS or advanced HIV have been put on treatment monthly. There were 4450 persons with AIDS or advanced HIV reported to be on ART or 68.5% of an estimated 6500 persons in need of ARV medication up to September 2008. This includes all children living with HIV that have been identified through the programme to prevent mother-to-child transmission. The ARV database reveals that 87.6% of all adults and children on ARV treatment in the public sector were still on treatment after 12 months (4). Death rates due to AIDS have decreased significantly since the ARV public access programme. The challenge is to get more persons at risk to be HIV tested so that persons with HIV who are unaware of their status can be placed on treatment.

With ARV treatment, the number of persons with HIV getting severe opportunistic infections has decreased significantly. However, precise data are not available.

**HIV Policy**

A National HIV/AIDS Policy was accepted unanimously by Parliament in 2005. The purpose of the policy is to:

- define the framework for an effective multi-sectoral response to the HIV/AIDS epidemic
- outline the role of social institutions and promote the involvement of all sectors of society in the national response
- affirm the rights and responsibilities of persons living with HIV, of those interacting with them, of people vulnerable to HIV infection and of healthcare providers
- provide a framework for assistance and cooperation from international, regional and national development partners
- delineate the mechanisms for effective implementation and monitoring of the policy.

The Government has also developed a number of sector policies. The Ministry of Education developed a policy for HIV/AIDS in schools and a Health and Family Life Education Policy. The Ministry of Labour developed a workplace policy and the Ministry of Tourism developed a HIV policy for the tourism sector. All these policies are supported by education and training programmes in the different sectors coordinated by a senior person designated as a HIV focal point for the respective ministry. Business places are also encouraged to develop HIV workplace policies and programmes and they are helped to do so through training and technical assistance. The International Labour Organization (ILO) has also provided support for this process.

A Parliamentary Joint Committee on HIV/AIDS was established in 2005 and it invited submissions from interested parties and held public hearings. It produced a comprehensive report with many recommendations. The new Health and Safety legislation prepared by the Ministry of Labour includes a provision against discrimination at the work place due to HIV/AIDS. The national programme has set up a committee that includes the National AIDS Committee, the Independent Jamaica Council for Human Rights and the Jamaica Network of Seropositives (JN+) to establish a system for monitoring HIV discrimination. A review of legislation has also been done and recommendations prepared. However, successive governments have made it clear that they are not prepared to repeal the Buggery Act or to decriminalize commercial sex-work.

**Health system strengthening**

The HIV programme has also contributed to strengthening the health sector including the national and regional laboratories, the laboratory information system, the surveillance and information systems, the national blood transfusion service and selected health centres. A modern infectious waste disposal plant has been established in Kingston for the South East Health Region and a system for the management of infectious waste introduced.

A range of modern laboratory equipment including FACS counters and PCR machines have been provided. Hundreds of computers have been provided to the national laboratory, the Ministry of Health, the Regional Health Authorities and Parish Health Departments as well as multimedia and other equipment. The programme has ensured a
supply of laboratory reagents, testing kits, ARV, STI, TB and Opportunistic Infection (OI) drugs as well as basic office supplies. Several vehicles have been provided to the Ministry of Health regions and a revolving fund has been established to help contact investigators and other staff to purchase cars.

Staff capacity has been strengthened at national, regional and parish levels including the employment of behaviour change communication specialists, community and peer outreach workers, HIV coordinators and administrators. Thousands of staff have been trained in HIV/AIDS prevention and care, HIV testing and counselling, STI, TB, opportunistic infections, surveillance and other related topics. Many staff have received financial support to attend courses locally and abroad including the Masters in Public Health and Masters in Communication. Capacity to develop and implement communication and behaviour change and health promotion programmes at national and regional levels has been strengthened considerably.

The capacity to mount an effective sectoral response to the HIV epidemic has been established in several government sectors including education, labour, tourism and national security. A number of NGO and other organizations have been strengthened.

Conclusion

Jamaica has established a comprehensive HIV control programme that has definitely slowed the HIV epidemic. General awareness and knowledge of HIV and how to prevent it is high and there has been significant behaviour change with respect to increased condom use especially in relation to sex with non-regular partners and commercial sex. However, the pattern of early initiation of sex, multiple partners and transactional sex has changed little. While adult HIV prevalence has been controlled at approximately 1.5% for the past decade, HIV prevalence is considerably higher among vulnerable groups especially sex-workers (9%) and MSM (31.8%). Given the strong stigma associated with homosexuality in Jamaica, it has proven challenging to establish HIV prevention programmes among MSM. A way must be found to address this challenge more effectively. Stigma associated with HIV remains strong though it is considerably reduced and outright discrimination due to HIV is now unusual. However, discrimination and hostility towards MSM remains strong and impairs an effective response to the epidemic among MSM and nationally.

Jamaica’s HIV programme has shown definite impact in reducing HIV transmission from mother-to-child (from 25% prior to 2000 to 8% or less in 2007) and in placing 68.5% of persons with advanced HIV or AIDS on ARV treatment and significantly reducing mortality and morbidity due to HIV.

The current National Strategic Plan 2007 – 2012 calls for universal access to HIV prevention, treatment and care in order to control the epidemic and reach all persons in need of treatment.

REFERENCES