

## **Monitoring and Evaluation of the HIV/AIDS/STD Control Program in Jamaica: An Analysis**

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Jamaica has had a National STD Control Program in place for over 60 years, the focus of which was to educate high-risk groups on the prevention of STDs. The first case of AIDS in Jamaica was reported in 1982 in a homosexual male who, having lived abroad, returned home to die. In 1985, AIDS was made a notifiable disease and screening of blood donors was introduced. The AIDS epidemic was defined as an HIV epidemic and the emphasis of control was put on prevention. Since HIV/AIDS is a sexually transmitted disease, its control was incorporated into the STD control program. Jamaica established a comprehensive HIV/AIDS/STD Control Program in the late 1980s. The main components of this program are policy, planning and program management, STD case management, behaviour change communication, condom promotion, surveillance, research, laboratory strengthening, training and HIV/AIDS care, counseling and support.

Monitoring and evaluation of the program components and achievements have always been a priority of the national program and much emphasis is placed on this. From its inception, the national program has incorporated monitoring and evaluation in all components of the program, and regular quarterly and annual meetings are held to discuss the strategies which have been used or intended to be used, the findings of research, HIV sentinel surveys, behavioural surveys and program achievements. Public myths and feedback as received by the Helpline and the peer educators through the face to face interactions are also discussed. The results of these discussions have been used to guide the program forward by assisting in the development of policy, program interventions, research and the development of media messages and new strategies to deliver these.

The donor agencies have facilitated development, monitoring and evaluation of the program both financially and technically and are integral participants in the quarterly and annual planning and evaluation meetings. Their participation keeps them up to date on the achievements of the program and the strategies being used for prevention. There is a good working relationship with the donor agencies and the national program in Jamaica.

The employment of individuals with specific focus on behaviour change communication, surveillance and condom promotion has facilitated the development of these components, the monitoring and evaluation of which are the best indicators of the achievements of the national program's activities. The development of a national database for HIV/AIDS cases and HIV/STD research has greatly facilitated the analysis of the HIV/AIDS epidemic which though widespread, is concentrated in certain high-risk groups.

The monitoring and evaluation of the national program has identified some weaknesses which include the sole dependence on donor funds for HIV testing in sentinel groups and the lack of qualitative studies to determine factors which affect condom use by women.

## **Introduction**

Jamaica, the third largest country in the Caribbean, has a population of approximately 2.5 million and a population density of 566.7 per square mile. Half (49.6%) of the population lives in urban areas and half (50.4%) lives in rural areas. Twenty percent of the people live in the capital, Kingston (1991 Census Data). The second major city is Montego Bay, the largest tourist resort on the island.

The first case of AIDS in Jamaica and in the English-speaking Caribbean was reported in December 1982 in a homosexual male who had been living in New York, USA and who then returned home to die [1]. Between 1982 and the end of June 1998, there were 2987 cases of AIDS reported in Jamaica with a cumulative AIDS case rate of 115 per 100,000 population. A total of 1871 (62.6%) males and 1116 (37.4%) females were reported, 1752 of whom have died, making the case fatality rate 58.7%. 35% of the cases were aged 30-39 years and 23.6% aged 20-29 years. The first paediatric AIDS case was reported in 1987. Up to the end of June 1998, there were 235 cases reported with 136 deaths – bringing the paediatric AIDS case fatality rate to 57.8%. The majority of paediatric cases were due to vertical transmission. All age groups and all categories of persons are affected by this epidemic.

The AIDS epidemic started in the homosexual population and in the male migrant farm workers who did seasonal work mainly in Belle Glades, Florida [1]. However, the epidemic quickly spread to females, and now the main mode of transmission of the HIV infection is heterosexual with a male to female AIDS case ratio of 1.7: 1. The epidemic is widespread in Jamaica, involving all parishes, but St. James and Kingston and St. Andrew have the highest rates (278.4 and 187.9 per 100,000 population respectively). These are the parishes that have the cities of Montego Bay and Kingston.

HIV sero-surveys in 1997 revealed prevalence rates of 6.7% among prisoners, 6.4% among sexually transmitted disease (STD) clinic attendees, 1% among antenatal clients, 0.4% among blood donors, 0.2% among life insurance seekers and 0.1% among USA immigrant visa applicants and military recruits [2]. In 1996, HIV prevalence rates were 10% and 20.6% among female commercial sex workers (CSWs) in Kingston and Montego Bay respectively and 30% among men who have sex with men. The HIV/AIDS epidemic in Jamaica is a concentrated epidemic, having high rates of transmission and prevalence in certain high risk groups, e.g. concentrated in certain groups e.g. men who have sex with men, commercial sex workers and STD clinic attenders.

The main intervention strategy used to control the HIV/AIDS epidemic is behaviour change communication (BCC) for the general public but specifically targeted at high-risk groups and communities. Given the fact that multiple sex partners are common in Jamaica and that abstinence is not a practical message, the thrust of the BCC message is condom use with every sex act and dual method protection i.e., condom use plus a reliable method of contraception.

## **Context of the HIV/AIDS Program**

Jamaica has had a National STD Control Program for the past 30 years with special STD clinics initially in 6 of 13 parishes. The focus was the high-risk groups such as prostitutes and sailors. In 1978 the Association for the Control of Sexually Transmitted Diseases was established with emphasis initially on the education and counseling of young persons.

By 1988, the focus had changed to commercial sex workers and STD clinic attenders using peer educators. From the outset of the AIDS epidemic, HIV infection was recognized as a STD and an integrated approach was taken. HIV/AIDS control was integrated into the National STD Control Program and the need to strengthen the STD services was recognized. The AIDS epidemic was defined as an HIV epidemic and the emphasis of control was put on HIV/AIDS/STD prevention.

A National AIDS Committee (NAC) was established in 1988 in order to advise the Minister of Health on policy issues and involve all sectors of the society in the control of the AIDS epidemic. This committee was set up as a private company and granted tax-free status by the Ministry of Finance in order to facilitate fund raising for AIDS. The Director of the National HIV/STD control Program was made deputy chairman and managing director of the NAC in order to ensure a close working relationship between the NAC and the National Program. To date there are some 60 member organizations and 5 sub-committees focussing on technical issues, education, fund raising, legal and ethical issues and counseling, care and social support.

HIV infection and AIDS were made notifiable diseases under the Public Health Act by administrative order of the Chief Medical Officer in 1985. In that same year, when the first commercial HIV screening kits became available, Jamaica began to screen all donations of blood. A national planning workshop involving all the key health leaders was held in 1987, and in 1988 a Short Term Plan for the control of the epidemic was developed. The country is now on its third medium term plan (1997-2001). The first was for 1989-1991 and the second for 1992-1996. These plans have received funding from the government of Jamaica as well as various donor agencies such as World Health Organization Global Program on AIDS, PAHO, USAID, GTZ, CIDA, UN Agencies, the Netherlands government and institutions such as NIH, CDC, FHI and CAREC. The medium term plans are in excess of J\$12 million per annum. The government spends approximately another J\$50-60 million per annum on HIV testing, treatment and hospitalization of HIV/AIDS patients. The donor agencies have supported the activities of the national program both financially and technically without too many demands or interference with the overall program. However, unreasonable requests have sometimes been made to change the deliverables in the middle of the program, but with meaningful dialogue and justification, compromises have been achieved without harm to the overall program. Generally, there has been a good working relationship with the donor agencies in Jamaica. Donors have funded some very important aspects of the program including HIV sentinel testing, behavioural surveys and annual planning and evaluation workshops.

One of the strengths of the HIV/ STD control program in Jamaica is its leadership. Dr. J. P. Figueroa, the director of the program, is very well known and respected among the health and political leadership in the country as well as among HIV/AIDS program officers in the region and other parts of the world. He has therefore been able to keep HIV/AIDS control high on the country's agenda. His research and the achievements of the National program under his leadership have facilitated the attraction and commitment of donor agencies towards improving the program. However, more visible political support of the program locally is needed as well as commitment to sustain and improve programs when donor funds expire. The program has also been seen as a vertical, centralized one since its inception, and ownership and commitment by all persons, especially the health staff in the field is less than it should be. Attempts to decentralize the program have been ongoing for the past 3 – 4 years, but only since the last year has some success been achieved. Currently all parishes have an HIV/STD control plan in place incorporating the components as recommended by the National Program. Parishes have included funds for HIV/STD control in their annual budgets. Project staff are now being transferred to government posts or plans are in place for transfers in order to ensure sustainability.

On-going research and strengthening of the STD services has helped to guide policy development, program intervention and STD case management, especially those such as syphilis and genital ulcer diseases which have been found to facilitate the spread of HIV [3]. Between 1988 and 1993, the number of parishes with public STD treatment centers increased from six to all 13 parishes. Clinicians (doctors and nurse practitioners) were trained, but there has been a problem with retaining trained staff. However, all centers currently have at least one such trained clinician, mainly the nurse practitioner as most of the doctors have left the service. In May 1993, decentralized syphilis screening was introduced on a phased basis; now all STD clinics and most antenatal clinics have this facility which allows testing, results and treatment all on the same day [4]. This has been advantageous in reducing the rate of infectious syphilis from a high of 160 per 100,000 among women 15 – 44 years in 1987 to 26 per 100,000 in 1997. Congenital syphilis also reduced from a high of 68 cases in 1994 to 30 in 1997[5]. Syndromic management of genital discharges and ulcers was introduced in the early 1980s and, following local research, a national STD case management manual [6] was prepared in 1993 and hundreds of clinicians both private and public trained in its use. STD syndromic reporting was introduced in 1995 and although the numbers of genital discharges reported each year have since been increasing, it is felt that this is not due to increased prevalence but to improved reporting.

Partner notification and contact tracing of all persons with HIV infection, AIDS and infectious syphilis is actively promoted while maintaining confidentiality of the index case. To this end, the cadre of contact investigators has been increased from 10 to 38 persons. At present an additional eight persons are being trained to fill five vacant and three new posts. All parishes have contact investigators.

## **Monitoring and Evaluation of Inputs and Outputs**

The main components of the National HIV/STD Control program are as follows:

- Policy, Planning and Program Management
- Surveillance
- Research
- Laboratory Strengthening
- STD Case Management
- Behaviour Change Communication
- Condom Promotion
- Training
- HIV/AIDS Counseling, Care and Support

Large sums of money have been spent on these components, and it is essential to evaluate the impact for effectiveness and efficiency

### **Policy, Planning and Program Management**

Three medium term plans have been developed; the first two were successfully completed. Both were generously funded. All the medium term plans have large sums of money set aside for the payment of staff, some of whom have been with the program from its inception in 1988. Attempts to incorporate some of these staff into the establishment of the government of Jamaica should have been made earlier to ensure the increased availability of funds for special areas such as research and for sustainability.

The UNAIDS theme group in Jamaica was launched in January 1995 and comprises six co-sponsors who are part of the United Nations system. These are PAHO/WHO, UNESCO, UNICEF, UNFPA, World Bank and UNDP which administers the budget. In Jamaica, membership has been extended to include bilateral groups which have had an interest in HIV/AIDS such as the Dutch and USAID. The main roles of the theme group are advocacy, community and resource mobilization, technical cooperation and human rights. Meetings are held quarterly; and the theme group works closely with the national program and the National AIDS Committee to assist with strengthening of their programs. All co-sponsor groups except the World Bank have directly supported HIV/AIDS/STD programs or have incorporated aspects of HIV/AIDS/STD awareness in their programs. Some of the activities to date include sponsoring the visits of two teams to Canada and Brazil to observe management of HIV in prisons, mobilization of resources for a project to prevent perinatal AIDS, and assistance with a project of targeted community intervention in St. James, the parish with the highest AIDS rate. The theme group has also provided assistance with the preparation of the most recent medium term plan (MTP) and funding for the annual planning and evaluation workshops. The theme group will also support the Ministry of Health in the national launch of the MTP.

There are some constraints with the make up of the theme group. There is a mismatch of financial years between the agencies and the national program, which impacts negatively on effective channeling of resources to the national program. Also, there is no coordinator who can liaise with the co-sponsors and the national program, undertake administrative duties and oversee projects. At present administration and processing costs are borne by the individual agencies, but there is no mechanism to ensure equal participation or financial contribution by the agencies. This needs to be addressed.

There is no one person responsible for monitoring and evaluation. This task is ongoing and carried out to some extent by all persons involved with the program. The senior managers in the National Program meet on a regular basis at least once per month to share what has been happening in all components of the program and plan for future activities. At these meetings, suggestions for improvement are made and discussed and experiences shared. This has been useful in helping program managers guide their area and make useful changes in strategies. Once every quarter, a senior staff meeting is held and in addition to senior managers, senior staff from central level as well as the field meet to share reports on progress/achievements of the program for the period under review. At these meetings, representatives from donor agencies and non-governmental organizations (NGOs) involved in the HIV/STD Control program also take an active part. These meetings serve to update all present on the activities being carried out by all components of the program and to facilitate discussion to guide the program forward based on achievements, constraints and lessons learned from the field. In December of each year, an Annual Planning and Evaluation Workshop is held. This is similar to the quarterly meetings but includes more representatives from the field including all Medical Officers of Health responsible for the public health of the parishes and representatives from the project monitoring section of the Ministry of Finance, NGOs, senior public health nurses and inspectors, contact investigators, BCC officers etc. Donor agencies are always present. Component heads make presentations on the objectives of their area for the year and the achievements. Discussions of the strategies used and the constraints and facilitating factors also occur. Research findings including reports on the behavioural surveys done are also usually presented. Discussions generated are often very useful in guiding the program forward for the following year and highlighting the strategies or approaches that should be used. It also helps the donors to understand the program and allocation of funds.

## **Surveillance**

This has been the method used to monitor the HIV/STD epidemic since the inception of the program and to assess the impact of the behavior change communication (BCC) program. All possible data sources and results from research are used for monitoring and evaluating the trends in STDs and the HIV and AIDS prevalence rates. This is in turn used to guide future program strategies and interventions targeted at high risk groups. There is one officer employed at the national level whose sole responsibility is surveillance. However, all contact investigators and other officers at the parish and national level are also involved in surveillance activities. A computerized program written in Paradox was developed in 1989 to document and analyze data on HIV/AIDS cases. A separate system was used for STD data, manually at first, then using Epi-Info and now a d-Base program. In 1994/1995 a new HIV/AIDS/STD database written in Access was established with overseas technical assistance. This improved the monitoring and analysis of data from the field, including the reference laboratory, and facilitated the generation of reports. This system became fully operational in January 1996. As the system is being used, adjustments or changes are made as necessary and in fact the technical assistant is presently being asked to revise the system.

## **Research**

Several studies have been conducted on HIV, HTLV-1 and other STDs, either solely by local personnel or in collaboration with research institutions or universities abroad. Funding for research has come from many sources including the collaboration centers and donor agencies. The results of the research have been used to guide policy as well as program management and interventions. Research is also used to monitor and evaluate certain components of the program such as antibiotic resistance of *Neisseria gonorrhoeae* and quality of STD case management.

### Laboratory Strengthening:

A national HIV reference laboratory was established at the National Public Health Laboratory in Kingston, and a regional HIV testing facility was established in the second city of Montego Bay with funding from GTZ. The national reference laboratory does confirmation of HIV status for most of the private laboratories in Jamaica which do screening. The laboratory also assists in training technical assistants who do syphilis screening in the field as part of the decentralized program. Laboratory services at STD clinics island wide have also been expanded and strengthened with the assistance of donor agencies and many research studies have been supported by the national laboratory.

### STD Case Management:

Research has been on going and used to continually improve the management of STD cases. To facilitate the early diagnosis and treatment of cases, STD clinic facilities have been established in all parishes and persons trained to manage such cases. An STD case management manual focussing on syndromic management was also prepared for use in Jamaica in 1993. STD syndromic reporting was introduced in 1995. The largest STD center in Kingston, the Comprehensive Health Centre, was also developed as a major STD center for research and training.

### Behaviour Change Communication (BCC):

This has been the main intervention strategy used to inform, educate and communicate STD/HIV/AIDS messages to the general public as well as special target groups considered to be at high risk of developing HIV infection. At national level there is a BCC program manager and officer as well as a training and outreach officer. Their responsibilities include developing innovative strategies and approaches to deliver the messages of the national program, and oversee the implementation at field level. These approaches include song, dance and drama.

The assistance of leading artists, play-writers, singers, dee-jays and musicians has been sought to deliver messages. Peer educators have used community walks and focus groups to deliver messages. In 1992, the Face-to-Face program was developed to target individuals and groups at risk of HIV and other STDs. It uses volunteers to educate and explore the issues behind prevention messages and target groups' resistance to change through interactive dialogue [7]. Special high-risk groups or communities are also targeted for interventions. This must continue as the impact of every case averted in these groups is much greater than that for cases averted in the general population. Behaviour change is a slow process and may be affected by other factors in the economic and social environment. Therefore the strategies and approaches used have been adjusted or changed based on feedback received by the peer educators, Face-to-Face volunteers or reports from surveys of knowledge, attitude and practice. A national HIV/AIDS/STD Helpline was also established for assisting persons in a confidential manner to access information on all STDs including HIV/AIDS and sources of treatment. Prevention is always promoted and feedback on circulating myths and practices is given to the BCC officers who use these to guide strategies. Thus monitoring and evaluation of BCC activities is ongoing. However new strategies or approaches need to be developed to deal with some high-risk groups such as the adolescents and men who have sex with men.

Mass media campaigns were conducted in 1987, 1988/1989 and 1992. In late 1987 the theme was "AIDS Kills." From September 1988 to April 1989 the media campaign was aimed at increasing awareness of HIV/AIDS and how to prevent it, and in 1992 it emphasized condom use. A question and answer column on HIV, AIDS and STDs is also maintained in a popular newspaper. A variety of methods including song and drama are used to deliver media messages. In 1994 a Jamaican woman with AIDS went on national television to tell her story. This had a tremendous impact on the public, but since her death it has been difficult to find other persons with HIV infection or AIDS to come forward and share their experiences. Surveys conducted before and after these media campaigns revealed that positive change in knowledge occurred. Knowledge of HIV/AIDS and how to prevent it is high among the general public (over 95%). It is now time to conduct another mass media campaign reminding the public about prevention strategies such as reducing multiple partnership and condom use.

#### Condom promotion:

The National program has always promoted condom use for every sex act and for dual method protection. Condom distribution has been monitored and although this has increased from 2 million in 1985 to 10 million in 1995, more detailed evaluation of condom needs and use now needs to be done. In 1997 a Condom Social Marketer was employed with the aim of improving the promotion of correct and consistent condom use and access by increasing the number of non-traditional for condoms. Persons are encouraged to purchase condoms although some are available free of cost in government health centers. The goals set by the program are to achieve consistent condom use in 90% of casual sexual encounters, 80% at last sex in persons with two or more sexual partners in the past year and 50% at last sex with the main partner. The 1996 behavioural survey revealed 77% condom use at last sex with non-regular partner for men and 73% for women. At last sex with main partner, condom use was 47% for men and 41% for women [8]. The national message of condom use in high risk situations seems to have been convincing as more people report condom use for transactional sex or sex with non-regular partners. For those not using condoms, dislike of the condom, trusting the partner, using other contraceptives or unavailability of the condom at the time of intercourse were given as the main reasons for not using one. Females were less likely to use condoms than males. More detailed qualitative evaluations need to be done to determine what are the best messages to give to improve condom use among females. A more analytical approach to condom requirements, distribution and use needs to be made to determine if there are adequate condoms available and

reaching those most in need. The demand for condoms was calculated by estimating the number of sex acts performed yearly. Although condom distribution has increased over the years, demand and sales by parish need to be assessed and compared to the number of condoms distributed to each parish to determine if the needs are being met. The condom social marketer also needs to monitor the number of outlets providing condoms for sale. The number of persons carrying condoms could also be used to assess behavioural change.

#### Training:

In the early 1990s considerable amounts of money were spent on training of hospital workers including porters and ward assistants as well as medical and nursing personnel. Private medical practitioners affiliated with the Medical Association of Jamaica were also trained. The purpose of this training was to improve the knowledge of the participants so as to improve their attitudes to and practices of managing patients with HIV and/or AIDS. An evaluation of this training revealed that health care workers had improved their knowledge but was not conclusive about positive changes in attitudes and practices. Anecdotal reports from the public through the HIV/STD Helpline as well as other sources seem to indicate a general improvement in the attitudes and practices of health care workers. However, some are still very reluctant to manage such patients and some AIDS patients or known HIV patients are still not treated with the same level of compassion and care as others. This may be because new staff members in the health care facilities had not had the same level of training as was done in the early 1990s. It would now be appropriate to do a qualitative assessment of the public's and HIV/AIDS patients' perception of how health care workers treat such patients and, if necessary, conduct additional training for the new staff. The problem of staff turnover could be dealt with by ensuring that an adequate period (one week) of orientation to the service area is given and includes the compassionate care of persons with HIV/AIDS. Also, learning by example is very important. If other staff members are seen to be compassionate with these patients, new staff will eventually do likewise. Ongoing, in-service training on total quality management should also become routine.

In 1990 a pilot school education project supported by UNESCO was conducted in 20 schools. This led to a larger HIV/STD/Sex education project supported by UNDP and executed by the Ministry of Education through the formal education system [1]. However this did not progress at a favorable rate, and in fact to date this is not an established program in the Ministry of Education. Family life education is taught in schools, but sex education is not a major component. There was some resistance by church groups and parent- teachers associations to teaching sex education in schools. It was thought that this would lead to an increase in sexual activity among the children. It is uncertain if a formal evaluation was done to determine why this program failed. If one was not conducted, it needs to be done as sex education in schools should be part of the national program to educate the youths on sexuality and empower them to make informed choices about their own sexual behaviours. Increasing their knowledge will not necessarily lead to increased sexual activity.

#### HIV/AIDS Counseling, Care and Support:

The government of Jamaica provides basic health care for persons with HIV or AIDS. Counseling, care and support are available from the various hospices, social centers and church clinics throughout the island. However, services are not accessible to all due to a limitation in the number of centers and sometimes cost. Families are encouraged to provide the care and support needed for infected persons, and this has gradually improved as families are becoming more accepting of HIV/AIDS members.



## Monitoring and Evaluation of Proximate Determinants

Population based surveys focussing on knowledge, attitude, sexual behaviour and practice were conducted in 1988, 1989, 1992, 1994 and 1996. The surveys targeted sexually active persons aged 15-49 years and gathered data on the prevention indicators representing risk behaviour as identified by the WHO Global Program on AIDS. A stratified, multi-staged design was used and dwellings were selected on a systematic sampling basis with a randomly selected starting point. A total of 1200 persons were targeted, but the sample size varied from 1124 in 1989 to 1200 in 1988. Same sex interviews were conducted using a structured questionnaire. Other surveys were conducted in 1995 and 1996 among adults in three depressed inner-city communities in Kingston where targeted community interventions were conducted. Researchers also conducted surveys in 1995 among commercial sex workers in Kingston, Montego Bay and Ocho Rios, among men who have sex with men in 1994 and 1996, and among adolescents between the ages of 14 and 16 years in 1994 and 1996 in Kingston and St. Catherine. Qualitative studies such as focus groups were also often used to complement survey data [8].

Men reporting having two or more sex partners in the past year declined from 53% in 1994 [9] to 44% in 1996 [8]. However, for women this increased from 6% in 1992 [10] to 14 % in 1996. This may indicate increased transactional sex for females or relationships based on economic reasons or under-reporting of the number of sex partners by women in 1992. More detailed qualitative studies would have to be done to determine the reasons. Sex with non-regular partners decreased from 35% in 1994 to 26% in 1996 for men and from 12% to 10% over the same period for women. Ever use of condoms or condom trials has increased from 51% in 1988 to 73% in 1996. For men it remained at 81% over 1988 to 1996. Condom use at last sex act with non-regular partners increased for both sexes, but condom use at last sex with regular partners decreased for both sexes. Generally, condom use has been increasing in all groups surveyed and especially with non -regular partners. However, males report condom use at a higher rate than females which raises questions about the validity of these responses. If they are correct, then why is there such a discrepancy in the figures? Either the males are telling us what we want to hear ( an indication of knowledge but not necessarily practice) or the females are not reporting truthfully. With whom are these males having sex, females or other males? Is homosexual or bisexual behaviour being hidden? Are the females hiding the fact that they have more partners than they admit? More qualitative studies need to be done to provide the answers. Condom use among CSWs is high, although a small but important number do not use condoms for various reasons. Some say they are threatened, and others are offered more money for not using condoms. In Montego Bay, about 30% of the HIV positive CSWs were users of crack / cocaine, and this may affect their reasoning/ negotiating skills or increase their risk taking behaviour. It is therefore important to know that economic reasons weigh more heavily than health concerns when it comes to condom use with some CSWs. Despite the high knowledge, however, both men and women in these risky situations do not always use condoms. Condom use among homosexual men increased in those practicing receptive anal sex but less so among insertive partners. Among bisexual men, only 50% reported consistent condom use with female partners. Non use of condoms was more likely in those at risk such as unemployed youth in urban areas.

While the quality of the surveys seems to have been consistent over the years, and the results are encouraging, one wonders if these surveys are not being done too often, especially since behaviour change is a slow process and may not show the desired change over a short period. It might have been more prudent to conduct the surveys every 3-4 years and use the funds saved on more interventions - for example skills training for women in order to reduce or prevent prostitution.

Skills training for persons already working in prostitution was attempted, but failed as prostitution was considered easy money and more money than remuneration for skilled work. However, the skills training could be targeted at young girls and maybe boys who may have dropped out of school or just left school with nothing else to do. This approach may in the long term help to rule out prostitution as an option for them. Also more qualitative studies such as focus groups preferably conducted by peer educators should be done to provide answers to the non use of condoms and the increase in multiple partners by women.

## **Monitoring and Evaluation of HIV and STD Epidemics**

The National Program has a full time surveillance officer employed to ensure complete reporting of AIDS cases and to monitor the HIV prevalence in certain population groups. Mandatory HIV testing is done on all blood donors. HIV testing is also done on life insurance seekers, migrant farm workers, immigrant USA visa applicants and military recruits. The national program does not mandate these, but the results are made available for monitoring the trends in these groups. Reports from the public and private laboratories doing testing are also obtained and the prevalence monitored. The total number of persons tested each year also gives an indication of the demand for the HIV test which could be a result of increasing index of suspicion by the physician or client request for testing as a baseline or due to perceived risk. Reports are obtained either passively or, more frequently, actively by going to the sites and collecting them on a quarterly basis. While the rates from the laboratories have remained steady at 8% in the public lab and 0.5-0.6% in the private labs, it has declined in blood donors from 0.43% in 1994 to 0.36% in 1997. A decline was also noted among visa applicants and farm workers. Among life insurance seekers, the rate has been steadily increasing since 1993 to 0.2% in 1997 [2]. Special surveys were also done among food service workers which revealed the highest rate of 0.7% in 1996. These groups are considered to be indicative of the general population which has an HIV seroprevalence rate of less than 1%. Among high-risk groups, the rate is higher as expected. In homosexuals it was 30% (1995), 6.4% in STD clinic attendees (1997), 10% in CSWs in Kingston (1996) and 25% in CSWs in St. James (1995). Among male prisoners tested in 1997, the rate was 6.7%. Sentinel testing is done annually on STD clinic attendees and antenatal clients from a few selected sites since 1989. The trend has been upward for both groups with antenatal clients having a rate of 1% in 1997. Testing is done at national level sites and in urban sites in only three parishes, and at three sites for STD clinic attendees. Fewer than 10 sites provide STD testing for antenatal clients. One may argue that these number and location of sites are too small and too urban to give a true country profile. Also the STD sites chosen are those that are well-established STD treatment centers in the three urban parishes, which may give a biased result (a higher rate that may not be accurate). Also funding for sentinel testing is solely from donor funds, and this is not good for sustainability. It would be ideal to do testing in more sites with a good mix of urban and rural populations to give a better picture of the HIV prevalence in the country; this may however prove to be more costly and difficult to administer from national level. It is hoped that with decentralization of the program, parishes will do their own testing following the guidelines of the national program and make the results available for analysis nationally. It is also argued that HIV prevalence trends among primigravidas give a better profile of the epidemic and a closer approximation to incidence, but again this may not be true as such persons may not necessarily be recently sexually active and hence not recently infected.

AIDS reporting is assessed as being 80-90% complete. Whereas reporting from the private sector is less than ideal, it is estimated that most AIDS patients are reported when they interface with the hospitals for which an active surveillance system is in place [11].

The HIV surveillance officer visits the hospitals on a regular basis, at least quarterly, to check discharge diagnoses, lab results and death records to ensure accurate and complete reporting. Visits are also made to hospices known to care for AIDS patients as well as social care centers for HIV/AIDS and a private doctor known to see a fair number of HIV/AIDS patients. All labs routinely send out HIV positive results with an HIV/AIDS reporting form and an envelope addressed to the National Program. This reminds and encourages the doctors to complete the form and report the case. One private lab gives the name of the doctors who received a positive result, and if they do not report the case within a reasonable time, they are encouraged to do so. Names of blood donors who test positive for HIV are also submitted to the National Program. Unless otherwise indicated by the person reporting the case, all reported HIV and AIDS cases are sent to the contact investigators in the relevant parishes for contact tracing and follow up. All data on HIV and AIDS are computerized but with access to a limited number of staff from the national program. Computerization facilitates follow up of patients and analysis of the data to monitor the magnitude and trends of the epidemic. Reports on the epidemic are disseminated on a quarterly basis and are useful in obtaining government and policy makers' commitment for the program as well as to remind the public that HIV/AIDS is still a major public health problem. The presence of an officer dedicated to HIV/AIDS surveillance greatly facilitates monitoring and evaluation of the HIV/AIDS epidemic in Jamaica.

Improvements in the updates of HIV/AIDS cases reported to the national program, especially as it relates to death reports, could be facilitated by reviewing the obituaries in the newspapers on a daily basis and cross referencing the names with those on the national database to determine if the death was reported. If not, then the report could be updated. Contact investigators could also routinely gather data on deaths from their local or regional funeral homes or morgues to update and complete death reports of known HIV/AIDS cases who may have been lost to follow up or document new cases not previously reported.

Through the routine hospital active surveillance and the monthly reporting system of the contact investigators the trends in the rate of STDs in particular infectious syphilis and congenital syphilis are monitored. Both have been declining mainly due to decentralized syphilis screening which facilitates same day results and treatment of positive cases. Research is also used to monitor the prevalence of other STDs. Prevalence of STDs were high among patients seen by private physicians, 68% first time symptoms, 19% previous diagnosis and 52% previous history of STDs [12]. Among female STD clinic attendees in Kingston with a vaginal discharge(1994) STD prevalence was 54% [13], and 27% of female family planning clinic attendees in Kingston in 1995 had an asymptomatic STD [14]. HIV incidence in a cohort of about 1000 patients recruited from an STD clinic in Kingston between November 1990 and January 1991 and followed up over a two year period was found to be 0.7 per 100 person years [15]. HIV transmission rates were higher in men than women. More persons were recruited into the cohort which is still being followed up and should facilitate a new determination of incidence. These and other research findings including reports of facility based assessments which showed marked improvement in the quality of STD service delivery in Jamaica between 1991 and 1996 [16,17] are used to guide policy and management issues related to the program.

## **Monitoring and Evaluation of AIDS Care, Support and Treatment**

Care of AIDS patients is done mainly in government hospitals, which comprise 95% of all hospital beds, and in about three or four hospices located in Kingston and St. James. Although training of health care workers was done to increase their knowledge and attitude, this is not ongoing for reinforcement and for new staff who join the service at different times. The AIDS

policy guidelines, which were written in the late 1980s / early 1990s, are now outdated and need revision and wider circulation. Although laboratory tests such as CD4 counts and the new modalities of treatment for HIV are commercially available in Jamaica, the cost is prohibitive and certainly so for the government to provide in view of the country's economic constraints and other major areas of need. Viral loads are not done in Jamaica but are available in Florida, USA. Again the cost is prohibitive for many. Despite these constraints, a basic level of care for HIV/AIDS patients is available including the provision of some preventive medication. However, an audit of patient care in the hospitals or the hospices has not been done to determine if patients are being adequately managed with the resources available.

The legal and ethical sub-committee of the National AIDS Committee has been agitating for legislation related to persons with HIV and AIDS including notification, basic human rights and avoidance of mandatory testing. However, the process has been slow and public forums are being conducted to discuss these legislative issues before a draft is prepared. In the meantime, testing is being routinely done by the Ministry of Labour, the United States Embassy and Life Insurance Companies with denial of employment, a permanent visa or insurance coverage to those found to be positive. Some companies do an HIV test as part of the pre-employment medical but most do not deny employment based on a positive result. Although the rights of persons living with HIV and AIDS need to be respected, one must not forget the rights of non-infected persons who may be put at risk e.g. through rape by infected persons who know their HIV positive status. It is hoped that the legislation will address such issues as well.

### **Review of Use and Usefulness of Prevention Indicators**

All ten WHO HIV prevention indicators have been used in Jamaica either in the behavioural surveys or in STD research including facility based assessments. They have been useful in helping to determine the trends in the proximate determinants and STD prevalence. Most of them were fairly easy to calculate using the available data.

### **Interaction Between Monitoring and Evaluation and Policy Making, Program Planning and Implementation**

Monitoring and evaluation is done by staff of the national program or by individuals or independent agencies contracted by the national program. The University of the West Indies has done very little in the way of monitoring the HIV/AIDS epidemic. This may be due to the fact that relevant research has been initiated mainly by the national program with a few collaborative efforts with the University of the West Indies as well as other universities. Also, the national program has more readily accessed donor funds for HIV/AIDS programs.

Monitoring and evaluation have always been considered to be very important to the program from its inception, and so it was incorporated as a component of the program. Monitoring and evaluation are on going and done by staff of the national program. However, from time to time, consultants conduct evaluations of components of the program. This is often useful as the evaluations are usually objective unless the evaluators are pressured to satisfy their client. Sometimes the persons contracted to do the evaluations do not have a wealth of experience and are not adequately briefed about the program and the context within which it operates. Hence their reports reflect this lack of knowledge, and recommendations are not always possible or practical.

Much attention is paid to the findings of monitoring and evaluation reports and these are taken into consideration in annual program replanning, policy setting and interventions. The response has usually been timely, because as previously described, quarterly and annual evaluation meetings are conducted with the sharing and discussion of monitoring and evaluation findings. However, monitoring and evaluation of certain components of the program such as care and counseling need to be improved or strengthened and plans need to be put in place to ensure sustainability after donor funds are withdrawn.

### **Monitoring and Evaluation of Interaction Between National Program and Donor Assistance**

Donor and international organizations have positively influenced monitoring and evaluation by providing funding to conduct research, HIV sentinel surveillance, behavioural surveys and the annual evaluation and planning workshop. There has been a good working relationship with the donor agencies in Jamaica especially USAID, PAHO, GTZ and AIDSCAP. Technical support for components of the program including the setting up of the HIV/AIDS tracking system database and various STD research has been facilitated through funding from these agencies. As a result of the findings of the monitoring and evaluation of the program and the regular dialogue with these agencies as well as their presence and active involvement in the annual evaluation and planning workshops, funding for the program has continued from 1988 without any long periods of waiting. While waiting for the last medium-term plan to be written, bridging funds were provided to ensure continuity of the program.

### **Conclusion**

The National HIV/STD control program in Jamaica has always placed much emphasis on monitoring and evaluation of the HIV/AIDS epidemic and STD control programs. It has incorporated monitoring and evaluation as part of the program from its inception with regular quarterly and annual meetings involving the major stakeholders of the program, including the donor agencies. This has been a major strength. These meetings are used to share the findings of monitoring and evaluation activities including STD research, HIV surveillance, AIDS reporting and behavioural surveys. Discussions which develop from these reports have proved useful in helping to guide the national program forward by assisting in the development of policy and program interventions and the development of media messages to address some of the weaknesses in the BCC component of the program.

Another strength is the use of an HIV surveillance officer to concentrate on the monitoring of HIV prevalence trends in certain groups and to actively ensure complete and accurate reporting of AIDS cases. The centrally located computerized database system which facilitates monitoring and analysis of HIV/AIDS cases also adds strength to the monitoring and evaluation of the program. The well respected leadership of the program and its ability to keep HIV/AIDS high on the country's agenda is also a positive influence for the program.

The commitment of the donor agencies to the program and their funding of most if not all components of the program has also been a strength. The decentralized syphilis screening as well as the recent decentralization of other components of the national program is a strength as field staff will have more ownership of the program and more input into the strategies and interventions used. The importance of HIV/AIDS/STD as a major public health concern and the need for adequate monitoring, evaluation and control will also be better appreciated.

However, program weaknesses include the sole dependence on donor agencies for some components of the monitoring and evaluation of the program, for example sentinel surveillance. Another limitation is the urban bias of HIV sentinel surveillance and the limited number of test sites. This does not give a true representation of HIV prevalence in the STD and antenatal clients in the country. The lack of detailed qualitative surveys to examine in depth the gap between knowledge and practice as it relates to condom use (low use or non use) in females is also a weakness that needs to be addressed.

The lack of legislation or updated guidelines relating to the management, care and human rights of persons with HIV or AIDS and how they relate to others is also a weakness which needs to be addressed. Once developed they should change the practice of pre-employment HIV testing.

Despite the weaknesses identified, Jamaica has a very comprehensive HIV/AIDS/STD control program, and monitoring and evaluation are considered an integral and essential part of the program and are incorporated in all components. Ongoing monitoring and evaluation is in place and implemented by program officers. External evaluations also take place from time to time. More qualitative research needs to be done to determine why females use condoms less than males and the factors which negatively affect some health care workers' attitudes toward HIV/AIDS patients.

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**TIME LINE**

<b>YEAR</b>	<b>CONTEXT</b>	<b>MONITORING/ EVALUATION</b>	<b>POLICY/ PROGRAM</b>
1930s	STD control program		
1978	ACOSTRAD		
1982	First AIDS case		
1985	AIDS notifiable	serosurveys started	screening of donated blood units
1987			integrated STD/HIV Control Program
1988	NAC established	database for AIDS first national KAP	first mass media campaign
1989	First MTP(funded)	second national KAP HIV sentinel testing	second mass media Campaign
1988-1993	STD centers increase From 6 to 13	infectious syphilis and congenital Syphilis increasing	
1991		First facility based assessment	
1992	Second MTP (funded)	STD cohort study (HIV incidence) national KAP	third mass media campaign
1993	STD case manual	HIV surveillance Officer	decentralized syphilis screening
1994		National KAP	

**TIME LINE (CONTINUED)**

<b>YEAR</b>	<b>CONTEXT</b>	<b>MONITORING/ EVALUATION</b>	<b>POLICY/ PROGRAM</b>
1995	UNAIDS theme group launched	Improved STD/HIV/ AIDS database STDs prevalent among Family planning clients	syndromic reporting of STDs
1996		National KAP Second facility Based assessment	Dual method Policy
1997	Third MTP (funded)	condom social marketer employed	Decentralized STD/HIV control program