PAN AMERICAN HEALTH ORGANIZATION

ACHR 27/89.12
Original: Spanish

XXVII MEETING OF THE ADVISORY
COMMITTEE ON HEALTH RESEARCH

Washington, D.C., United States of America
5-8 September 1989

ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) IN THE AMERICAS

CONTENTS

1. INTRODUCTION

The AIDS epidemic continues to spread throughout the world. As of 1 July 1989, a cumulative total of 167,373 cases of AIDS was reported officially to the World Health Organization's Global Program on AIDS (GPA) from 149 countries. GPA now estimates the actual cumulative number of AIDS cases to date to be more than 400,000 or more than twice the number of officially reported cases.

Transmission of the human immunodeficiency virus (HIV) continues throughout the world and WHO estimates that over 5 million people are currently infected with this virus.

2. EPIDEMIOLOGY OF AIDS IN THE AMERICAS

2.1 Regional Surveillance

Among 46 countries and territories in the Americas, there is only one, Montserrat, which has not yet reported a case of AIDS or a person infected with the AIDS virus. The virus is now present and being transmitted in all the other countries and territories of this Region. As of 15 June 1989, a total of 115,034 cases of AIDS (Fig. 1) have been reported to the Pan American Health Organization since the beginning of surveillance in 1983. North America reported the largest number of cases, i.e., 99,994. Most of these cases occured in the United States. Mexico has reported 2,351 cases, while the Latin Caribbean, composed of Cuba, Haiti and the Dominican Republic, has reported an even larger number, i.e., 2,948. The countries of the Central American Isthmus have reported 572 cases while the Caribbean countries have reported 1,377 cases. Brazil has reported 6,421 cases while the Andean area and the Southern Cone have reported 841 and 530 cases, respectively. As before, five countries, the U.S., Brazil, Canada, Haiti and Mexico, continue to contribute over 95% of all the cases in the Region (Fig. 2).

Wherever we look, the virus appears to spread in similar ways. Figure 3 plots the annual incidence of reported AIDS cases by three subregions, North America, Latin America, and the Caribbean. The only difference between these curves is the time at which they began. At the country level, the situation is identical (Figure 4). HIV was introduced in different countries at different times, but once transmission is firmly established, the epidemic curve in each country is similar. Please note that a logarithmic scale is used so that the decreasing slope does not mean that the velocity of the epidemic is diminishing.

The total number of cumulative cases by country is not particularly useful for making comparisons between countries because the total does not consider the size of the population which gives rise to the AIDS cases. Calculating the rate of reported cases for a given calendar year to the median population estimate for that year provides a better method for comparison. Table 1 reveals the rate of cases per million population for the various subregions in the Americas for the years 1986, 1987 and 1988. The table illustrates the different velocities of spread within the countries. Although there was no increase in reported cases between 1987 and 1988 for the Americas as a whole, there were significant increases in several subregions, i.e.,92% and 110% in the Southern Cone and the Central American Isthmus, respectively. The incidence rate for the Caribbean as a whole remains high, at 60.8 cases per million population in 1988 and 38.4 cases per million population for the Latin Caribbean. Yet even these averages obscure significant differences between the countries. For example, the incidence rate in Brazil reached 17.8 cases per million population in 1988 while the rate in some Caribbean countries ranged between 300 and close to 500 AIDS cases per million population.

2.2 Sexual Transmission

Initially, AIDS cases in Latin America and the Caribbean were reported among male homosexuals and bisexuals with a history of travel outside Latin America and the Caribbean. Increasingly, this pattern is changing toward heterosexual transmission. Table 2 compares the number of countries reporting heterosexual transmission as a percentage of the sexually transmitted cases for the years 1987 and 1988. The number of countries reporting purely homosexual transmission, i.e., 0% heterosexually transmitted, has fallen from 10 countries to only three countries. The number of countries reporting 26% or more of their sexually transmitted cases as heterosexually transmitted increased from 17 in 1987 to 21 in 1988. Among the 10 countries in 1988 in the unknown group, the majority are in the Caribbean where heterosexual transmission is well established. It is now clear that heterosexual transmission of HIV is increasing dramatically as more and more AIDS cases and HIV infections are being detected in women.

The extent of AIDS infection in women is reflected in Table 3 which reveals the male to female sex ratio in 1987 and 1988. The number of countries with a male to female sex ratio greater than 12 to 1 decreased dramatically from 21 in 1987 to 13 in 1988.

Thus, there are now two distinct patterns of sexual transmission in the Americas.

Figure 5 clearly contrasts the two patterns found in the Region. Pattern 1 is found in countries where the disease is transmitted by homosexual/bisexual men as shown in four representative countries, the U.S., Canada, Chile, and Bolivia. Pattern 2 is characterized by heterosexual transmission as found in the Dominican Republic, Trinidad

and Tobago, Honduras, and Bahamas. We predict that more and more countries will move from pattern 1 to pattern 2. This movement may be facilitated by the pivotal role played by female prostitutes. HIV infection rates in prostitutes continue to increase based on selected seroprevalence studies. In one country up to 49% of the prostitutes tested are now positive for the HIV virus.

As a direct consequence of this movement toward heterosexual transmission, we can expect a dramatic increase in the transmission of AIDS to children and further spread of the epidemic in the heterosexual community.

2.3 Transmission Associated with Blood and Blood Products

Transmission through blood continues to be a major problem in the Americas. Many countries do not have a safe blood supply since the basic infrastructure for transfusion services does not permit screening of 100% of the transfused blood. HIV antibody prevalence among blood donors is highly variable, as shown in Table 4.

Nevertheless, Table 5 indicates that some progress may be occurring in the protection of the blood supply. Between 1987 and 1988, the number of countries reporting 0% of their cases as being transmitted by blood increased from 17 to 24. Likewise, the number of countries with over 10% of the cases reported as being transmitted by blood decreased from 2 to 0 in 1987 and 1988, respectively. These data must be interpreted with some caution since widespread screening of blood donors is a relatively recent phenomenon. We must await further data to see if this trend continues.

The contribution of contaminated needles and syringes to the transmission of the AIDS virus among drug abusers and through inappropriately sterilized medical equipment appears to be less important for most countries in the Region.

2.4 Human Immunodeficiency Virus, Type 2

Shortly following the discovery of the human immunodeficiency virus, a second related virus, called HIV-2, was discovered to be endemic in several countries in West Africa. This new virus is transmitted in the same way as HIV-1, but appears to be somewhat less pathogenic. Nevertheless, infection with this virus can lead to the same immune deficiency caused by HIV-1.

Thus, there is worldwide concern regarding the possible spread of HIV-2. To date, in the Americas, there have been only two confirmed isolations of HIV-2, one reported by the U.S. in an ill traveller returning from West Africa and one reported by Cuba in a similar patient. There have been one unpublished and two published reports indicating the presence of HIV-2 in Brazil, but no virus has been isolated and characterized from this country.

Given the uncertainties surrounding HIV-2 and the extent of its presence in the Americas, PAHO is preparing to investigate the presence and magnitude of HIV-2 in this Region.

3. AIDS PREVENTION AND CONTROL

3.1 National Program Development

By mid-1988, all countries and territories in the Region of the Americas consolidated previous activities for AIDS prevention and control into national AIDS programs. These programs were organized according to WHO's Global Guidelines, Objectives and Strategies for AIDS Prevention and Control, with technical collaboration from PAHO. Most of the programs were short-term programs designed to initiate urgently needed activities for prevention and control. These programs received emergency funding from WHO's non-regular budgetary sources.

After securing funds, national programs initiated or strengthened activities in broad programmatic areas, such as administration, laboratory support, health promotion and surveillance. By mid-1988, efforts were already under way to develop and fund longer-term programs, especially in those countries which were completing the emergency phase. Because of the unique epidemiological situation in the Caribbean, PAHO/WHO's attention was first focused there. By December 1988, 13 Caribbean countries prepared three-year programs with technical collaboration by PAHO's Caribbean Epidemiology Center (CAREC).*

PAHO/WHO AIDS Program organized a Donors Meeting, which was held in Barbados, during which US$15.2 million were pledged towards the cost of the plans. This amount also included funding for the subregional AIDS Prevention and Control Program developed by CAREC to provide additional subregional support to the countries.

Several months later, the medium-term programs for the dependent territories of the United Kingdom were also completed and fully funded through contributions pledged by the UK Overseas Development Agency. In summary, Member Countries and CAREC received a total of $15.7 million, which is now being placed in the countries to begin their longer-term, more extensive AIDS Prevention and Control activities.

To complete the Caribbean Basin, medium term programs were also developed for Haiti and the Dominican Republic, and donors meetings were held in April, 1989 for these countries. A total of US$10.4 million dollars was raised for Haiti and $5.0 million for the Dominican Republic respectively. These monies are now being obtained from the various donors and detailed plans of action are being prepared.

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* Member Governments of the PAHO-administered Caribbean Epidemiology Center include: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Saint Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago. It also includes the Governments of the United Kingdom's territories in the Americas, i.e. Anguilla, Bermuda, British Virgin Islands, Cayman Islands, Montserrat, and Turks and Caicos Islands.

To continue the transition from emergency program to longer term program, PAHO has organized special teams of consultants in Costa Rica, Mexico, Honduras, Panama and El Salvador. Each team is composed of at least an epidemiogist/program manager, an AIDS education specialist, an AIDS laboratory expert, and an administrator to evaluate the achievements of the short-term emergency plans and to make recommendations for the formulation of longer-term plans. Evaluations reports have been received from each of these countries and are currently being reviewed, while recommendations have been forwarded to the countries for the preparation of their medium-term programs. Teams will be sent to Guatemala and Nicaragua during the period June through August.

Although great progress is being made in a very short period of time, several problem areas have been noted. All national plans generally followed the guidelines established by WHO, which call for many activities spread over many broad areas. Many of these activities must be initiated simultaneously in all areas. Thus, national AIDS programs require considerable managerial skill. Countries differ in the level of success achieved within the different program areas. Some areas are more rapidly developed than others, while in some instances activities are not even started. Thus the level of achievement and the organization of the programs varies from country to country. More must be done to integrate AIDS activities throughout the National Health Care Services.

One area which generally requires more effort involves the organizational structure of the program. Many programs are initially organized along strictly medical lines. Nevertheless, there is an increasing awareness that AIDS is not just a biomedical problem. After the initial education campaign started, some countries experienced a conservative backlash as various groups accused the Ministries of Health of promoting promiscuity. Conflict often developed with different sectors in society. In some cases, the National AIDS Commission or Committee, which had been organized along strictly medical lines, was unprepared to deal with the political and social reactions and was often not in a position to advise on policy. There is frequently a need to broaden participation in the AIDS program to include other sectors of society such as law, religion, ethics and to have community and minority group representation.

The need to systematically assess the levels of achievement by the various programs will continue, and PAHO/WHO will provide the technical collaboration for program evaluation leading to the development of strengthened national programs.

3.2 Regional Support for National Programs

PAHO continues to execute the Regional Program on AIDS in the Americas. A wide variety of regional activities has been carried out in support of the development of national AIDS prevention and control programs through six basic strategies (Table 6).

The Regional Program provides direct technical collaboration to national programs. To date, well over 50 short-term consultants have been mobilized and trained in the last six months to address particular problems in AIDS prevention and control. Special teams composed of program managers, health education specialists, laboratory experts and administrators have been sent to countries to evaluate national programs, to program the transition between short- and long-term approaches and to contribute to the development of financial strategies for funding these programs. Specific expertise has been provided to solve special problems.

The Program disseminates technical and scientific information to national AIDS prevention and control programs. Some special initiatives include the establishment of three Information/Education Communication Centers in Mexico, Brazil and PAHO's Caribbean Epidemiology Center (CAREC) to collect, evaluate and disseminate AIDS information and education materials from as many countries as possible to other Member Countries to assist them in formulating their national education efforts. Scientific information is distributed to the national programs utilizating compact disk technology. The compact disk contains the entire bibliography on AIDS from the US National Library of Medicine plus reprints of articles selected from major worldwide journals. PAHO continued to utilize innovative technology to promote AIDS education through the broadcast of the Second Pan American Teleconference on AIDS in December 1989, from Rio de Janeiro, Brazil. This Teleconference reached over 41,000 health care workers throughout the Americas and for the first time was broadcast outside the Region to Portugal, Kuwait, and five African countries.

Through the training strategy, numerous workshops on health promotion, counseling, surveillance and other areas have been organized with participation of personnel from all countries in the Americas.

Through the research strategy and the special contract with the US National Institutes of Health (National Institute of Allergy and Infectious Diseases), PAHO has established research programs on AIDS in several countries. PAHO has sought to extend its research activities beyond the biomedical sphere to include a major project on sexual behavior research.

Through the strategy of international coordination, PAHO has organized quarterly meetings attended by well over 40 representatives from various international and national agencies and institutions to coordinate support to PAHO's Member Countries for AIDS Prevention and Control.

Finally through the strategy of mobilization of resources, PAHO, with the collaboration of the GPA, has secured funding for the countries from WHO and other donors in the amount of $11.3 million since the beginning of the program. These funds have been distributed to 35 countries and PAHO's Caribbean Epidemiology Center (CAREC) during the period 1987-1989. During the period 1987-1989, 89% of these funds was distributed directly to the countries. The majority went to the

Caribbean countries (39%) while Brazil, the Central American Isthmus and the Latin Caribbean received 14%, 11% and 11%, respectively (Fig. 6). In 1988 alone, $5.4 million was secured for Regionwide AIDS prevention and control. Of the total amount, 83%, or $4.5 million (Fig. 7) was channeled directly to the countries in support of their programs. Figure 8 reveals the distribution of these funds by subregion. The Caribbean area received the largest amount (34%), followed by Central America (27%) and Brazil (19%).

4. THE PAHO/WHO GLOBAL PROGRAM ON AIDS IN THE AMERICAS

Although PAHO and its Member Countries were active in developing a wide variety of activities for the prevention and control of HIV and AIDS before the organization of the Global Program on AIDS by WHO, the formal development of the Regional program was begun in 1987. Now, 2-1/2 years later, the program is fully established and is rapidly moving toward a consolidated, systematic approach to technical collaboration with its Member Countries. Figure 6 reveals the Program's organizational structure. There are three principal units, i.e., National Program Support, Health Promotion, and Research. The program has 19 permanent staff members, including 11 professionals (of whom five are in the field) and eight General Service staff. At present there are eight vacancies in the program, including five professional and three general service posts. Four of the total vacancies are in the Research Program and impact less on the program's technical collaboration with the Member Countries.

The objectives and strategies of the Regional approach to AIDS are unchanged. Regional activities are developed to support national programs. Regional priorities continue to be direct technical collaboration with Member Countries for the ongoing development, execution and financing of the national programs. The Regional Program continues to develop innovative methods for the dissemination of technical and scientific information on the epidemiological, biological, clinical, laboratory and educational/behavioral aspects of AIDS and HIV infection.

4.1 Status Report on 1988-1989 Targets

Some of the targets for the current biennium have been achieved. As noted previously, by mid-1988 all countries and territories of the Region developed either short- or long-term programs for AIDS prevention and control. Although not all of the countries which received initial funding support from WHO's GPA were evaluated, by the end of 1988 approximately 50% of the Member Countries did receive some level of technical evaluation as their long-term programs were prepared. To date, only three, not five, subregional AIDS Information/Education Exchange Centers have been established. Evaluation of the existing subregional centers is necessary before other centers are developed prematurely. AIDS research projects have been implemented in one country with proposed projects in six additional countries in some phase of development. PAHO

expects to meet the target of having AIDS research projects in an least 12 countries by the end of 1989. With collaboration by Canada's Federal Center for AIDS, work continued on the development of a regional AIDS reference laboratory network with the preparation of the initial project for five Andean countries (Phase I of the project). Work will proceed to develop the network for Phase II countries during the summer of 1989. If sufficient financial support can be obtained, PAHO expects to meet the target of a fully operational Regional AIDS Reference Laboratory Network by the end of 1989.

Unfortunately, by the end of 1988 not all blood and blood products utilized in the public sector in all countries were screened for HIV. The percentage of blood being screened is highly variable, ranging from 30% or less in some countries to 100% in other countries. It is doubtful that we will reach the target of screening all blood and blood products utilized in all sectors in all countries in the Region by the end of 1989. Nevertheless, we believe this target is achievable by 1990.

4.2 Targets for the 1990-1991 Biennium

4.2.1 By the end of the biennium, all countries and territories of the Region will have long-term programs for AIDS prevention and control fully funded and under way;

4.2.2 By end 1990, all blood and blood products utilized in all sectors in all countries of the Region will be screened for HIV;

4.2.3 By end 1990, all countries will have national AIDS reference laboratories established and quality control programs for HIV testing implemented nationwide;

4.2.4 All national programs will strive to mobilize high level political support within governmental, nongovernmental and private organizations and interested groups in support of the activities of the national program;

4.2.5 All national programs will include development of national policies aimed to achieve a balance between individual human rights and the public health needs for AIDS prevention and control. PAHO will organize a Meeting on the legal and ethical aspects of AIDS in early 1990;

4.2.6 By mid-1990, PAHO will develop guidelines and procedures for obtaining condoms, supplies and materials for AIDS prevention and control and drugs for the management of HIV-infected individuals;

4.2.7 All countries will develop policies for integrating AIDS activities within the National Health System and services.

4.2.8 PAHO will expand its AIDS program to include country projects for sexual and educational research.

5. SUMMARY

During the coming year, PAHO will continue to provide technical collaboration for the evaluation and programming of national AIDS prevention and control programs to ensure that they achieve the major objective of stopping HIV transmission. All countries now have AIDS programs, and we must concentrate on implementing these programs through national health services in an integrated manner such that those services are strengthened through their participation in AIDS prevention and control. Simultaneously, we must secure the safety of all blood and blood products utilized by all health services in all countries of the Region.

Given the magnitude of the impact of AIDS on health care services and the future burden of caring for an increasing number of AIDS patients, it is obvious that political and financial commitment by each and every country must be maintained in order to deal with this disease. Countries will have to identify additional internal sources of revenue for AIDS prevention and control while maintaining the advances currently achieved by many other public health programs. Ongoing consideration must be given to reordering national priorities to provide for more investment in the health sector and to integrate more effectively AIDS programs with the National Health System. In summary, the AIDS epidemic continues to grow in the Americas at different velocities in different countries with no end in sight. The major concern is the rapid increase in heterosexual transmission. The consequences of the epidemic are well known and we must continue to meet them. PAHO will intensify its efforts on behalf of its Member Countries to stop the spread of AIDS.

Figure 1

AIDS SURVEILLANCE IN THE AMERICAS

Number of cases as received by June 15, 1989

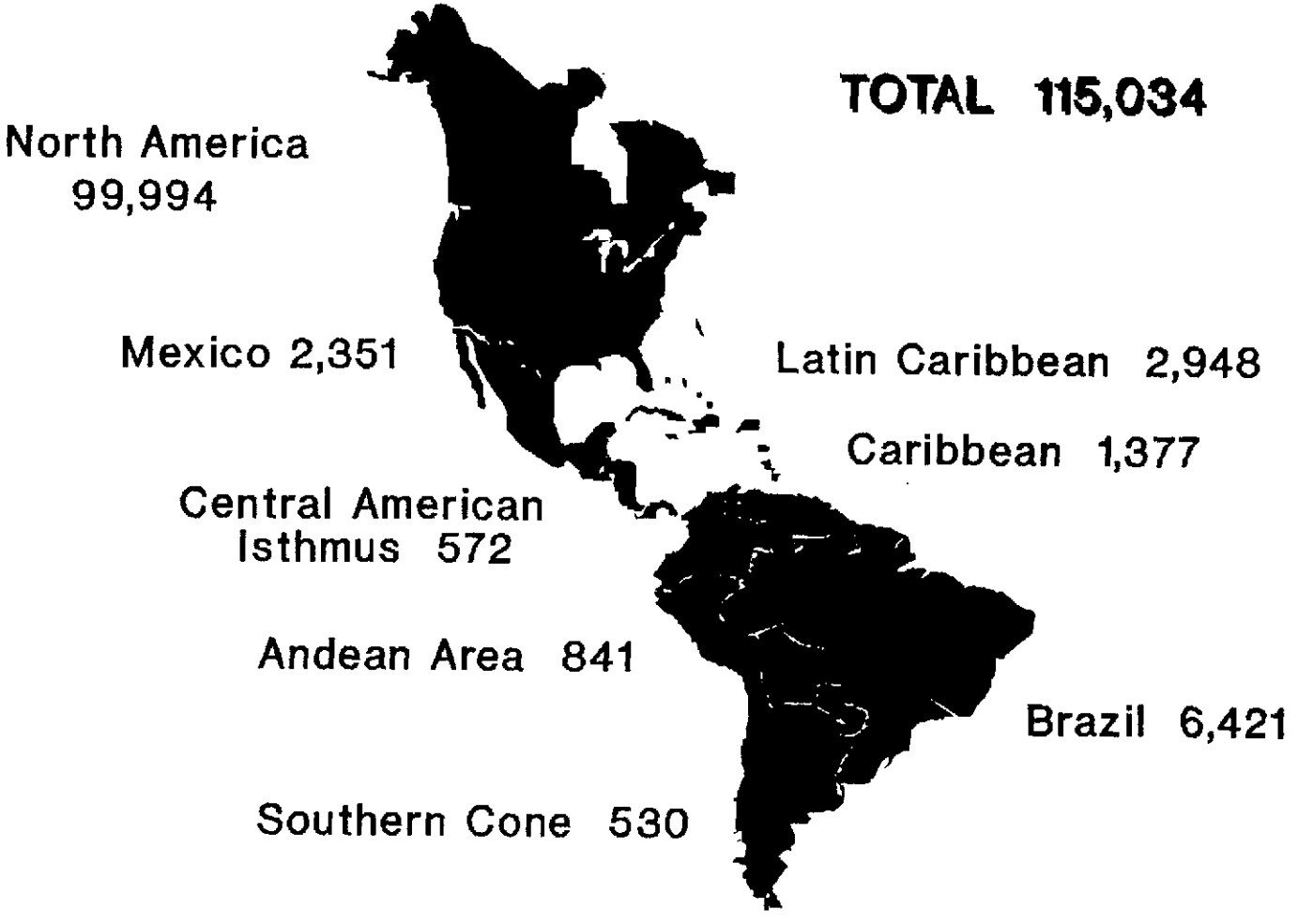

Figure 2

AIDS SURVEILLANCE IN THE AMERICAS

Cumulative number of cases by country

As received by June 15, 1989

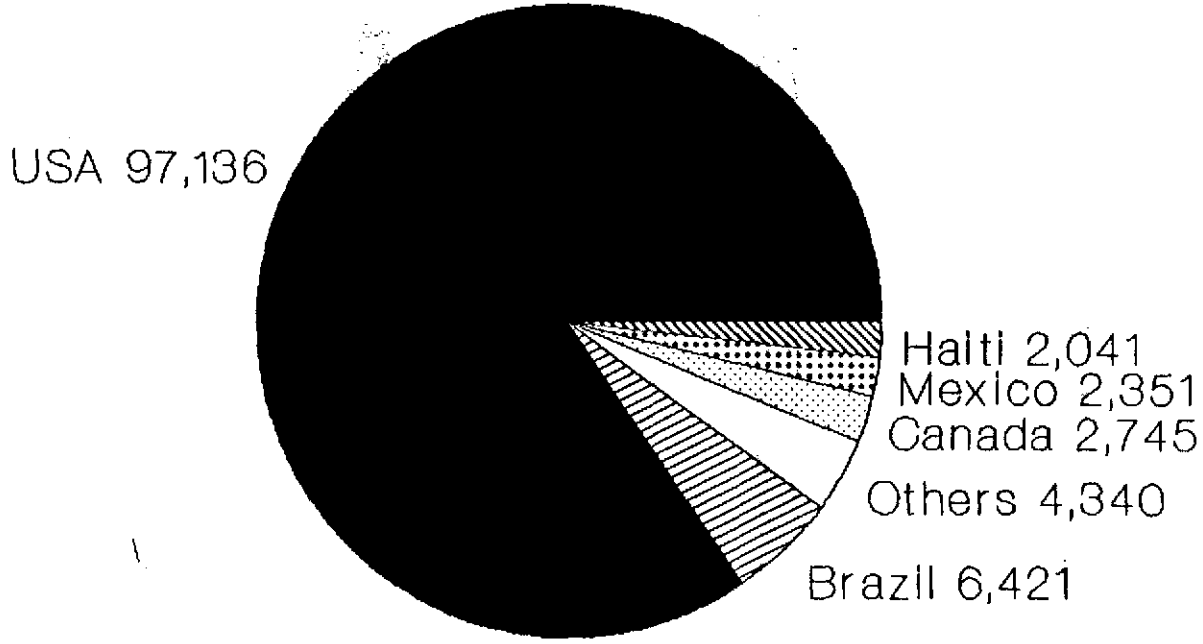

Figure 3

AIDS SURVEILLANCE IN THE AMERICAS

Cases reported by subregion

1979-1988

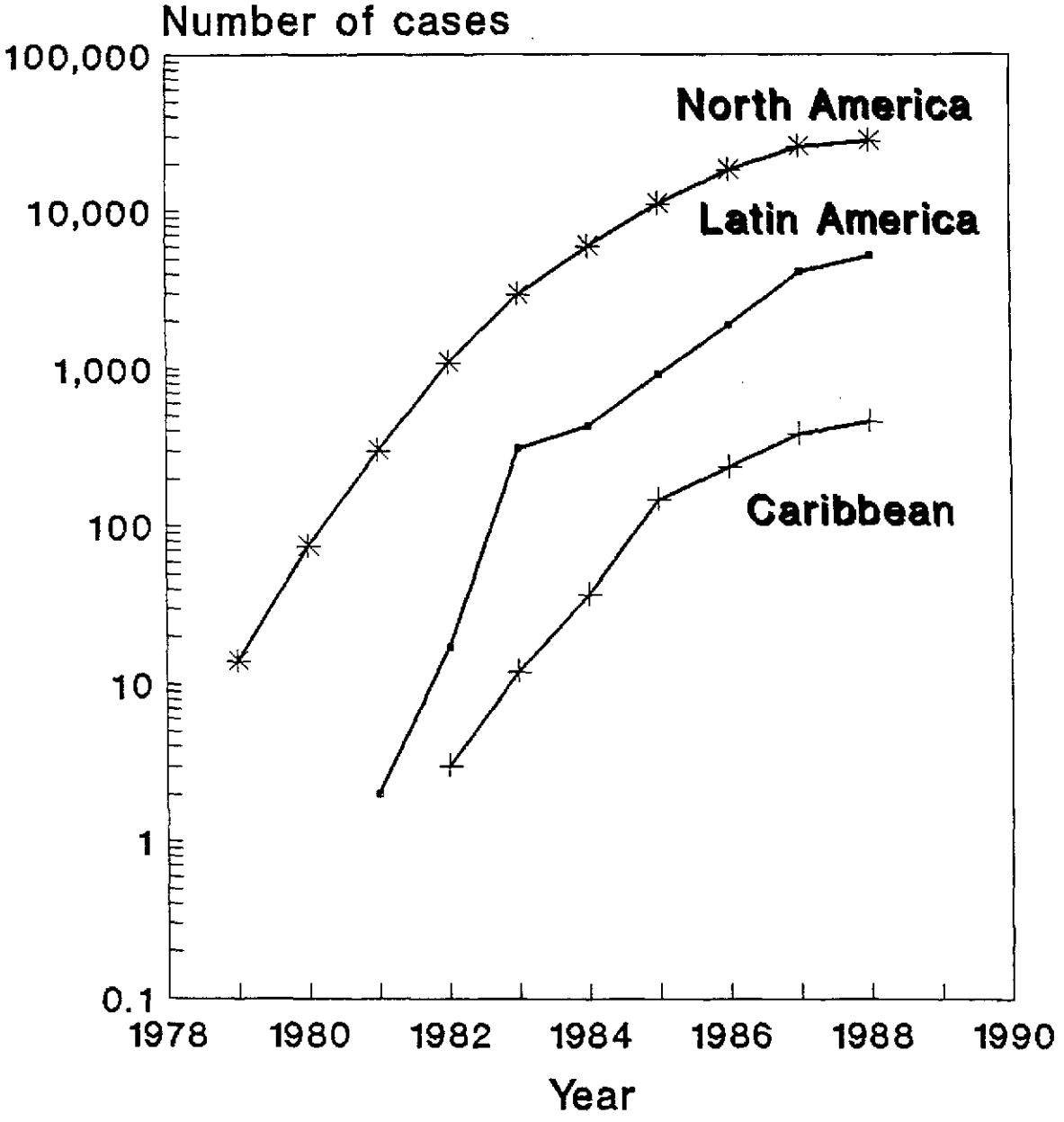

Figure 4

AIDS SURVEILLANCE IN THE AMERICAS

Cases reported for selected countries 1980-1988

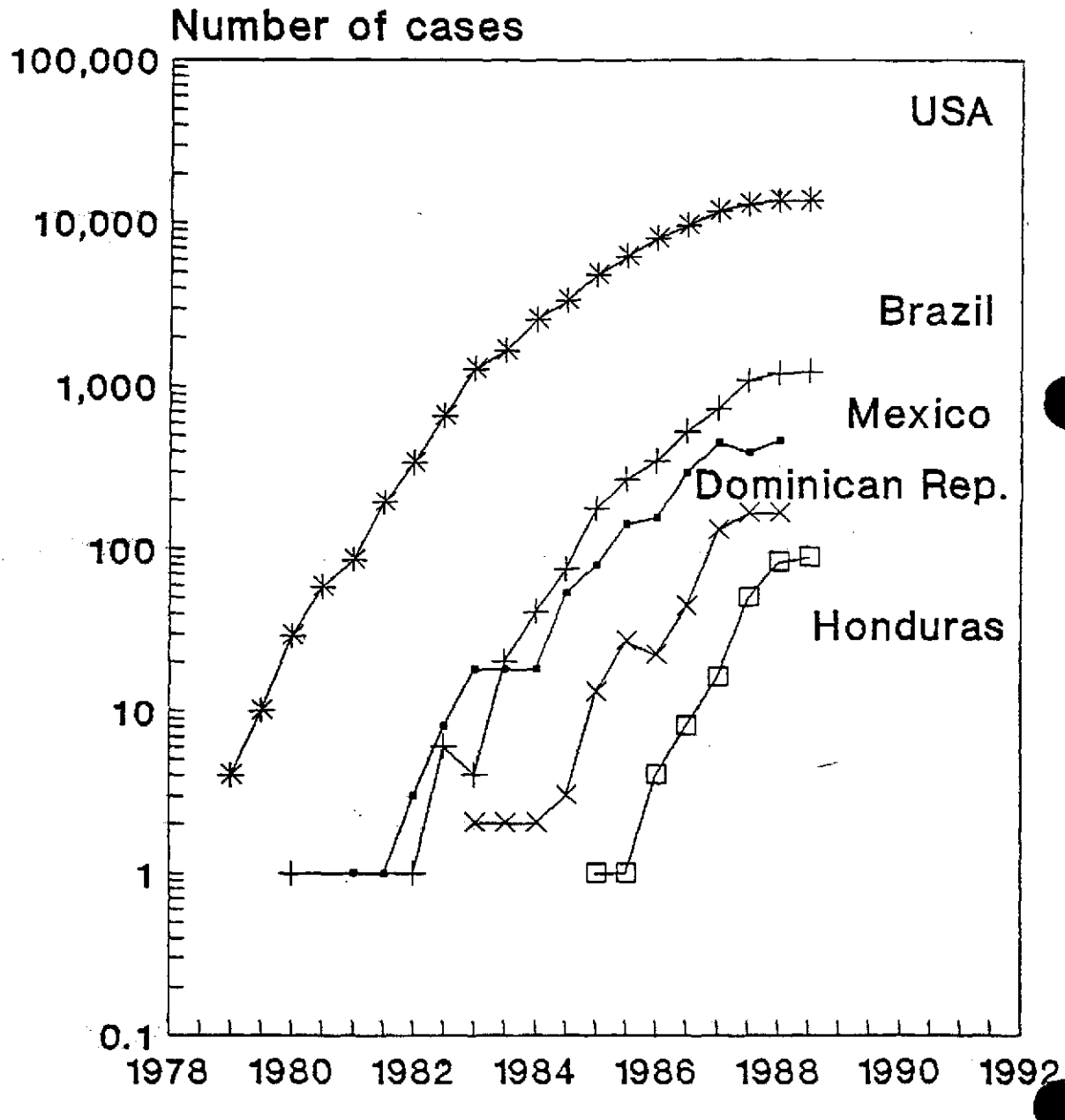

Figure 5

AIDS SURVEILLANCE IN THE AMERICAS
Bisexual/Homosexual vs Heterosexual Transmission 1987 - 1988

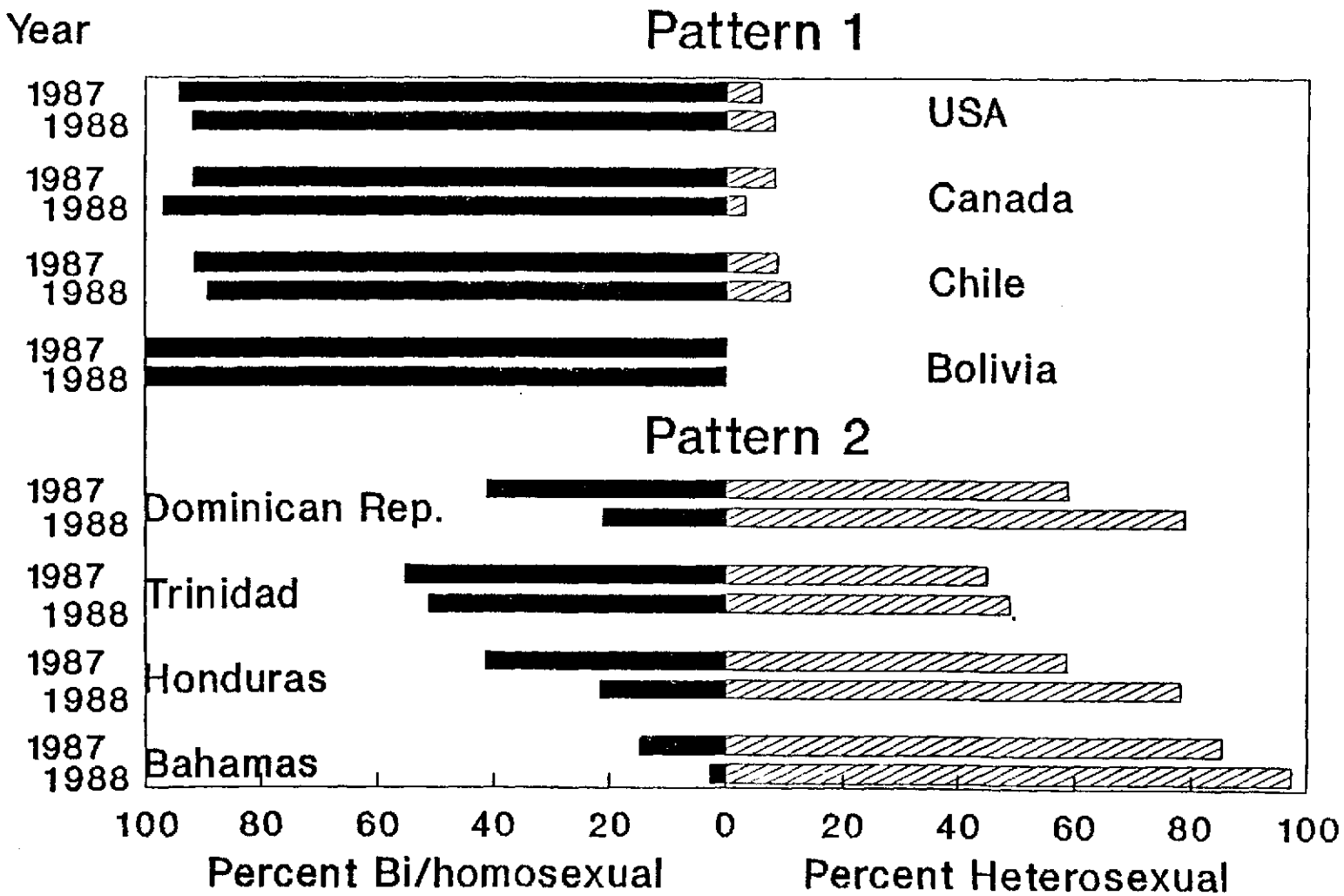

Figure 6

AIDS IN THE AMERICAS

Country funds allocated for AIDS By subregion, 1987-1989

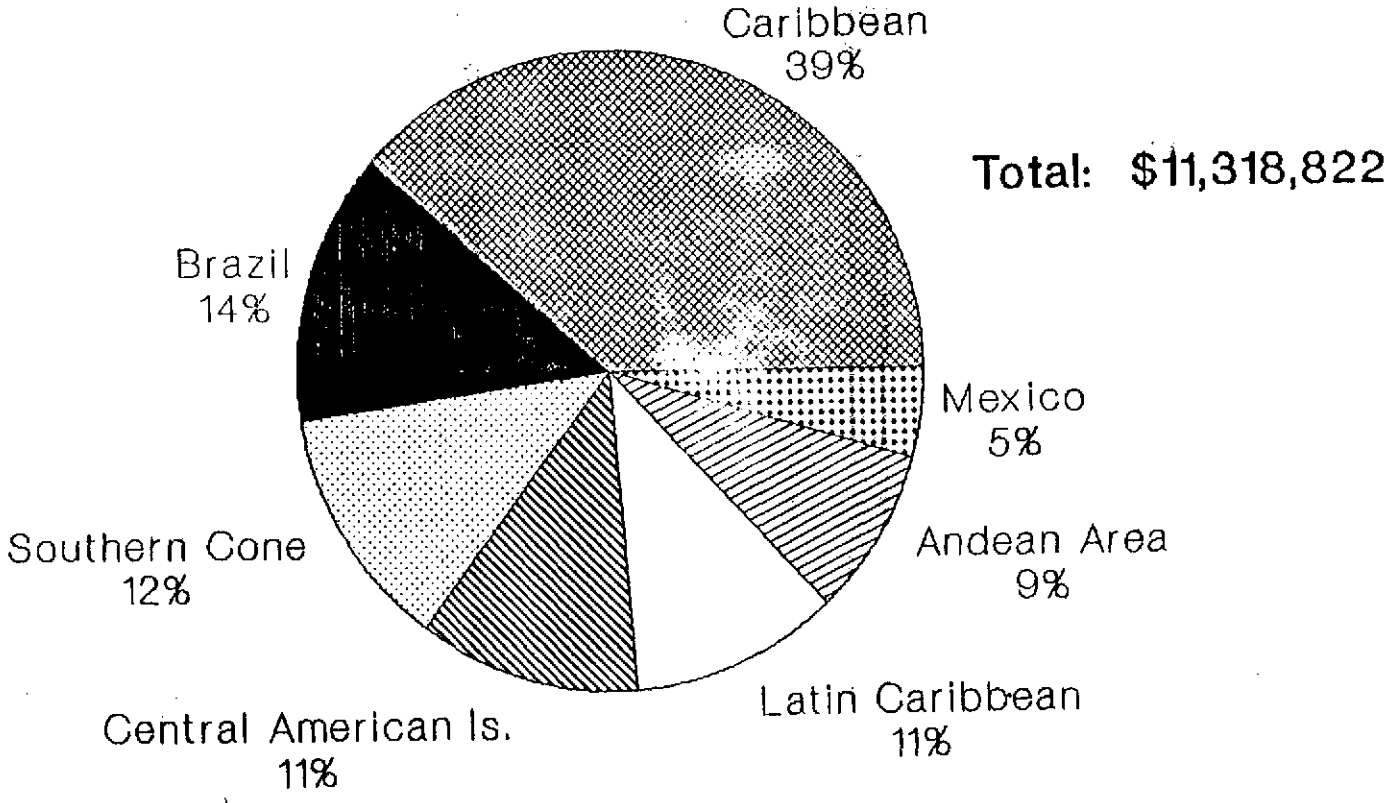

Figure 7

AIDS IN THE AMERICAS
Total funds allocated for AIDS
Regional and country funds
1988

Total: $5,429,431

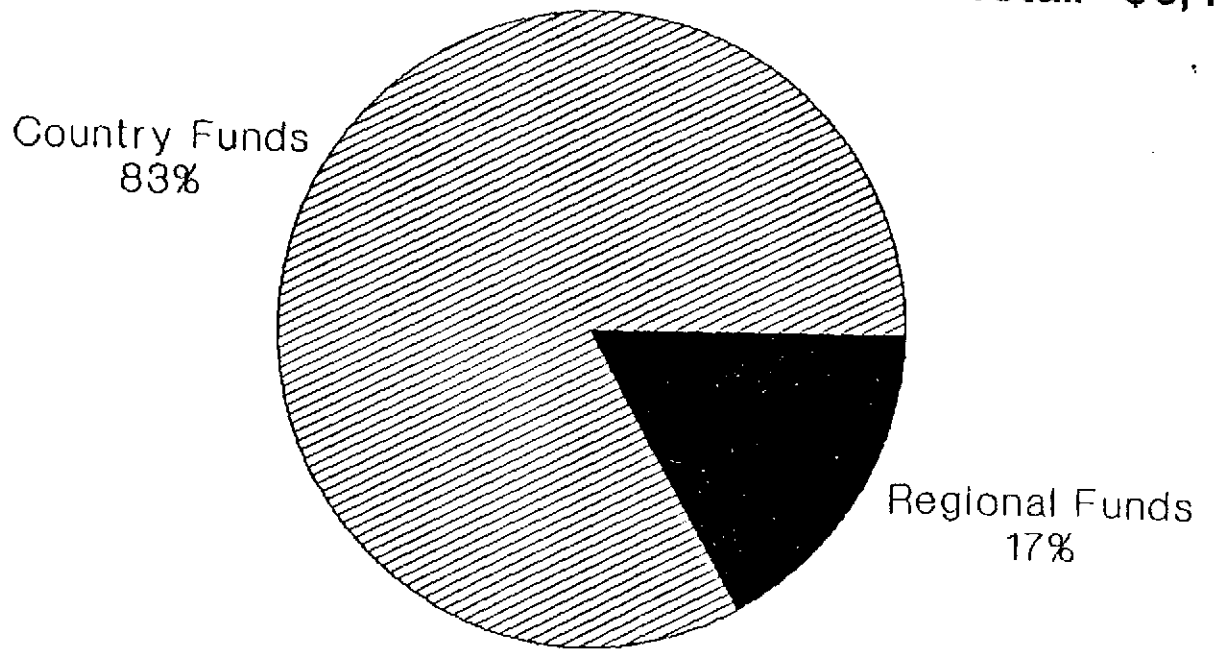

Figure 8

AIDS IN THE AMERICAS

Country funds allocated for AIDS By subregion, 1988

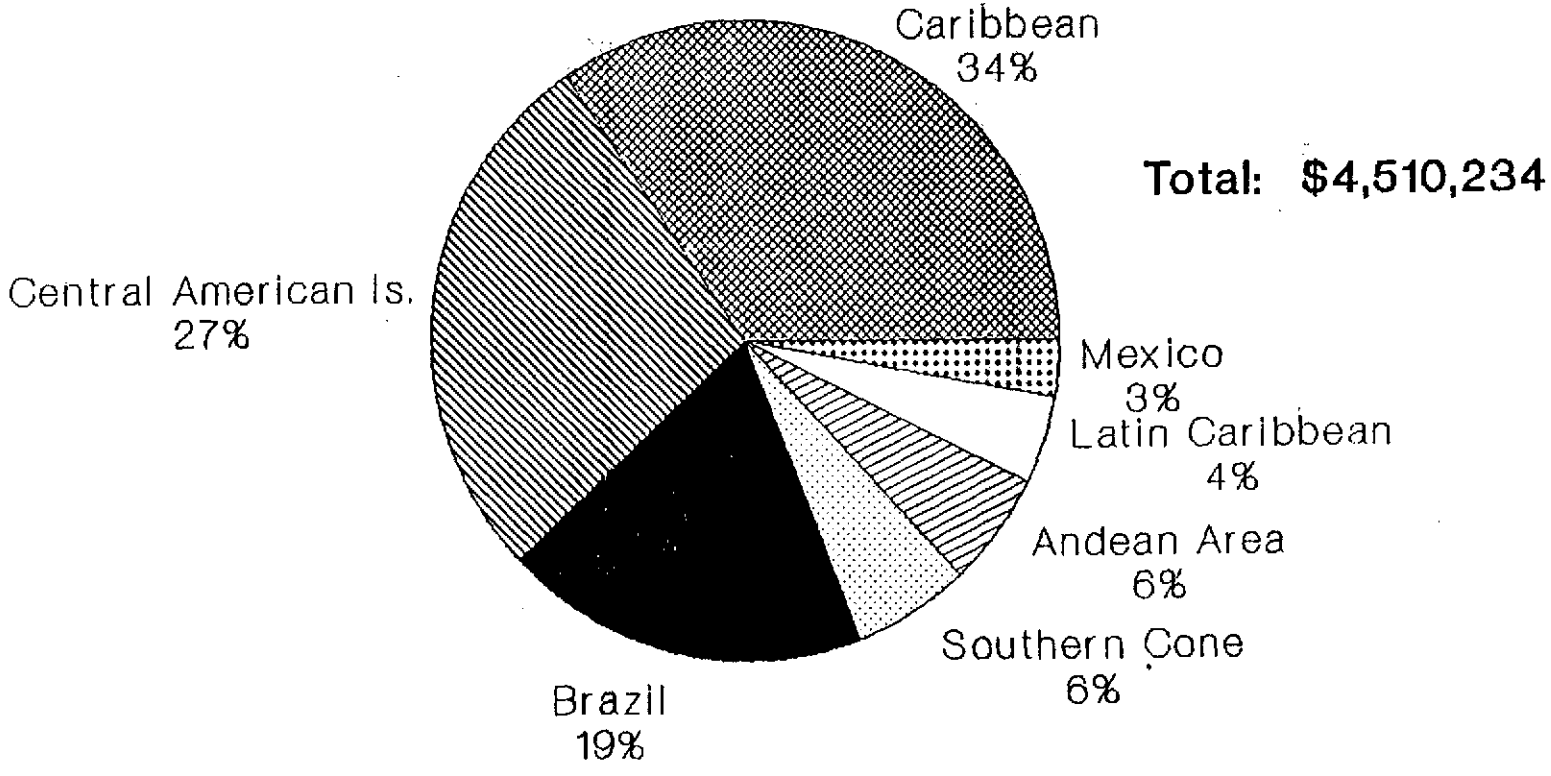

Figure 9

GLOBAL PROGRAM ON AIDS/AMERICAS ORGANIZATIONAL CHART

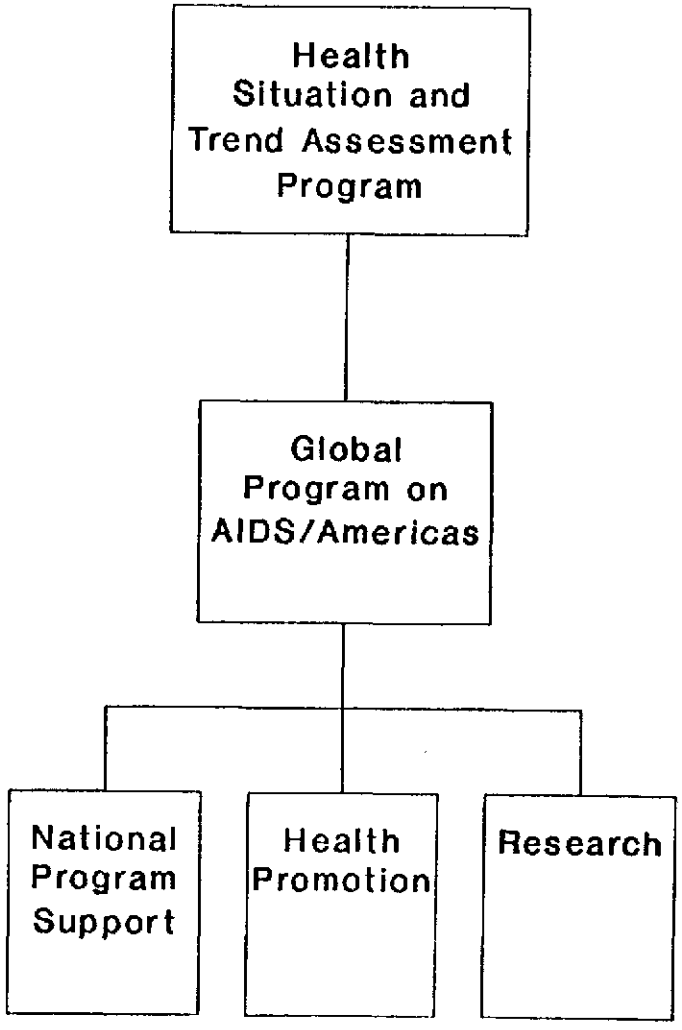

Table 1

AIDS SURVEILLANCE IN THE AMERICAS

Number of cases per million population
1986 to 1988 with % increase 1987-1988

	Cases/million			% Increase In Ratios 1987-1988
	1986	1987	1988	
TOTAL	29.4	42.6	42.4	0
LATIN AMERICA	4.6	9.3	10.3	11
Andean Area	1.4	2.8	3.9	39
Southern Cone	0.8	2.6	5.0	92
Brazil	6.3	12.6	13.7	9
Central American Isthmus	2.4	5.2	10.9	110
Mexico	5.6	9.3	6.7	-28
Latin Caribbean	13.6	34.8	38.4	10
CARIBBEAN	35.0	53.9	60.8	13
NORTH AMERICA	66.9	93.5	91.8	-2

Table 2

AIDS SURVEILLANCE IN THE AMERICAS

Number of countries reporting heterosexual transmission as A percent of sexually transmitted cases

% Heterosexually Transmitted	No. of countries and territories 1987	1988
0	10	3
1 - 25	11	12
26 - 50	3	10
51 - 75	4	4
76 - 100	10	7
Unknown	8	10
Total	46	46

Table 3

AIDS SURVEILLANCE IN THE AMERICAS

Sex Ratios -- Male:Female

Number of countries reporting sex ratios by size of ratio

1987 and 1988

SEX RATIO	No. of countries and territories 1987	1988
Less Than 3:1	11	10
3:1 to less than 6:1	4	6
6:1 to less than 9:1	2	6
9:1 to less than 12:1	0	1
Over 12:1	21	13
NA	3	7
Unknown	5	3
Total	46	46

Table 4

SEROPREVALENCE RATES FOR HIV INFECTION AMONG BLOOD DONORS
IN SOME COUNTRIES OF THE AMERICAS

Country	Number Studied	% Infected
Argentina	28,176	0.04
Brazil	11,807	0.09-7.0
Canada	1.17 million	0
CAREC*	37,713	0.61
Colombia	38,077	0.009
Costa Rica	38,000	0.11
Cuba	388,480	0.004
Dominican Republic	1,480	1.62
Guadeloupe	9,356	0.17
Jamaica	5,724	0.23
Martinique	10,109	0.20
Mexico	700,000	0.01-73
Panama	6,279	0.06
Peru	24,237	1.20
Trinidad-Tobago	6,407	0.92
U.S.A.	12.6 million	0.020
Venezuela	1,508	0.07

* Caribbean Epidemiology Center, Trinidad

Table 5

AIDS SURVEILLANCE IN THE AMERICAS

Blood Product Transmission

Number of countries reporting blood product transmission By size of percent; 1987 and 1988

% Blood Product Transmission	No. of countries and territories 1987	1988
0	17	24
1 - 5	13	10
6 - 10	6	2
Over 10	2	0
Unknown	8	10
Total	46	46

Table 6

AIDS IN THE AMERICAS

AIDS Program Strategies

1. Direct technical collaboration
2. Dissemination of information
3. Training
4. Research
5. International coordination
6. Mobilization of Resources