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ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) IN THE AMERICAS

The acquired human immunodeficiency virus (HIV) epidemic is global. It involves both the industrialized and developing countries. It constitutes an urgent and unprecedented threat to global health. The world is at the beginning of a global epidemic whose magnitude can not yet be predicted. It is clear that action taken now will have greater impact than actions taken later. Therefore, a series of immediate priority actions, along with the development of long-term strategies, is urgently needed.

National and international energies, resources, creativity and commitment will be required for regional AIDS control. Through research, through application of existing improved and technologies, and through educational programs behavioral changes, prevention and control of AIDS in the Americas is possible, although difficult and costly. To hesitate or delay invites disaster.

The Executive Committee is asked to review the current situation in the Americas, to consider the proposed PAHO approach to AIDS prevention and control in the Americas within the context of WHO's global efforts, and to recommend to the XXXII Meeting of the Directing Council a course of action for the Organization.

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ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) IN THE AMERICAS

1. Introduction

The worldwide epidemic of human immunodeficiency virus (HIV) and related retroviruses is an international health problem of extraordinary scope and unprecedented urgency. The number of reported cases of the acquired immunodeficiency syndrome (AIDS) and countries reporting AIDS have increased dramatically.

2. <u>Status of AIDS in the Americas</u>

In 1983 the Pan American Health Organization, Regional Office of the World health Organization for the Americas, initiated Region-wide surveillance against AIDS. At that time AIDS was limited almost exclusively to the United States of America and to certain high-risk population groups. Therefore, a simple reporting system based on the case definition of the Centers for Disease Control was established. The Member Countries were requested to report the total number of cases of AIDS and the number of deaths from that cause every six months. Because the purpose was to monitor the spread of the disease in the Region, no attempt was made to distinguish between the AIDS-related complex and advanced cases of the disease or to include infection by AIDS virus once it became possible to test for antibodies.

The table on page 9 shows the total number of cases and deaths due to AIDS as of 31 December 1986, by subregion and country. Mexico and Brazil are treated as separate subregions. A total of 32,560 cases and 17,910 deaths has been reported since surveillance was begun. The case fatality rate (number of deaths as a percentage of the number of cases) is 56%. This rate ranges, however, from a low of 24% in the Latin American Caribbean to a high of 61% on the Central American isthmus. In those countries where the number of cases and the number of deaths are sufficient to stabilize the rate, the latter varies from 40 to 55%.

Brazil, Canada, Haiti, and the United States of America have the largest numbers of cases and account for 31,357, or 96% of the total. Excluding North America, 2,583 cases have been reported in the other 40 countries of the Americas. Only two countries (Guyana and Nicaragua) and one overseas territory (British Virgin Islands) remain which have yet to report at least one case of AIDS.

Twenty-three per cent of the cases (604) occurred in the Latin Caribbean subregion, with Haiti accounting for 507 of them. It is a matter of concern that the non-Latin Caribbean subregion, with a population of approximately 6 million, reported 464 cases or 18% of the total, whereas Brazil, with a population of about 130 million, had 921 cases or 36% of the total reported. In other words, Brazil's population is more than 20 times that of the non-Latin Caribbean but the number of cases in Brazil was only twice as high.

Based on surveillance data and specific information from several studies, it is possible to conclude the following regarding the pattern of AIDS in the Americas:

- a) The profile of patients in the United States of America is clear and well known and there has been little deviation from that pattern since the onset of the epidemic. Sixty-six per cent of the cases are homosexual or bisexual men, and 17% are intravenous drug addicts. Eight per cent belong to both of these groups. Only 4% are men or women who contracted the disease by heterosexual contact. Most of these 1,033 cases are women who had frequent contact with bisexual men or with drug addicts. Most children contract the disease by exposure to a parent who is afflicted with AIDS or at high risk of contracting the disease.
- b) The pattern is slightly different in Canada and Brazil, where the proportion of reported cases who are homosexual or bisexual men is higher and the proportion who are intravenous drug addicts is much lower. In Brazil 15% of the cases that occur are unclassified. This proportion, however, is decreasing as the investigation of cases is intensified.
- c) In Costa Rica nearly all the initial cases were hemophiliacs who had received imported blood products. The proportion of such cases has declined recently, while the spread of the disease to other groups at risk has been confirmed by seroprevalence surveys and case-finding activities. In Argentina, on the other hand, almost all cases have been homosexual males.
- d) In the Americas AIDS is mainly a sexually-transmitted disease that continues to be concentrated in the male homosexual and bisexual population. Haiti is an exception. The best data obtained indicate that the ratio of male to female cases is 4:1, compared with 12-14:1 in the United States of America.

Reticence in reporting of cases for some areas, combined with underrecognition of AIDS and underreporting to international health authorities, has meant that the total number of reported AIDS cases represents only a fraction of the total cases to date. Excluding the United States of America and Canada, PAHO estimates the true number of cases may be 2-4 times higher than the reported number. Therefore, PAHO considers the number of countries officially reporting cases to be more indicative of the geographical extent and more relevant to an assessment of the scope of the AIDS HIV pandemic than the number of reported cases. In addition, due to the long incubation period (up to six years or longer) from HIV infection to the development of clinical disease, the number of AIDS cases provides, at best, an inaccurate, and at worst, a misleadingly optimistic view of the real extent and intensity of HIV

infection. If the mathematical models developed in the United States of America and elsewhere for estimating the number of infected persons based on the number of reported cases are valid for use throughout the Region, then PAHO estimates that between 125,000 and 250,000 persons or more are currently infected with HIV in Latin America and the Caribbean.

3. Natural History of AIDS

The fate of these HIV-infected persons remains unknown, as scientific knowledge about the natural history of AIDS infection is limited to the 5-7 year observation period which has elapsed since AIDS was first described. Three major HIV associated outcomes have already been distinguished: AIDS, AIDS-related illness, and HIV neurological disease. During a five-year period, 10-30% of HIV-infected persons can be expected to develop AIDS. An additional 20-50% will develop AIDS-related illnesses. The proportion of infected persons who will develop HIV neurological disease (particularly dementia) is unknown, but an epidemic of progressive neurological disease among HIV-infected persons must be considered a probability.

Ultimately, the large majority of infected persons may suffer a severe adverse outcome or death associated with HIV infection. For persons diagnosed as having AIDS greater than three years ago, the mortality rate is usually between 90-100%.

Further spread of HIV is certain to occur, for several reasons:

- a) Persons with HIV are presumed to be infected for life. Most will not develop any symptoms or evidence of illness for at least several years, during which time they may transmit HIV to others.
- b) HIV spreads sexually (from an infected person to his or her sexual partner), as well as through blood (transfusions, injections, skin piercing instruments) and from mother to child. This combination of modes of transmission means that virtually all segments of the world population will have some degree of exposure to HIV. In other words, once HIV is introduced into a population, spread is virtually inevitable.
- c) HIV is already disseminated throughout the Region, even though regional differences in current intensities of infection are quite important.

Finally, HIV may be the first of a series of retroviruses capable of infecting humans and producing immunosuppression. Recent recognition of additional pathogenic and immunosuppressive human retroviruses in West Africa may herald the beginning of an even larger problem than the present HIV pandemic.

4. Impact of AIDS

The personal, social and economic costs of the HIV pandemic are Uncertainties regarding prognosis, along with fears and realities of exposure and ostracism, lead HIV-infected but asymptomatic persons to experience higher levels of stress than the AIDS patients themselves. The family structure and function is threatened both by infection and the loss of mothers and fathers. The social and economic fabric is dramatically affected by the epidemic of illness and death the productive 20-50 year-olds, which is typical of epidemiology in industrialized and developing countries. The economic costs of AIDS are enormous. For example, in the United States of America, an estimated \$1.5 billion will be spent only for drug treatment of AIDS patients in 1991, and the total cost of direct medical care is estimated to reach US\$16 billion. The combined impact of the pandemic of AIDS, AIDS-related diseases and neurological disease upon health care, insurance and legal systems, economic and social development, and indeed entire cultures and populations, will be extraordinary and profound.

The depth and extent of personal and public reaction to AIDS throughout the Region has been considerable. However, this remarkable response has been generated by only 32,560 AIDS cases in this Region, and a total of approximately 40,000 cases worldwide. The potential societal stresses resulting from the occurrence of 270,000 AIDS cases in the United States of America alone by 1991 and many thousands of cases throughout the rest of the Region may be correspondingly much greater.

5. AIDS Prevention and Control

The prevention of AIDS/HIV transmission would be facilitated by an effective vaccine capable of preventing infection, or a therapeutic agent able to reduce or eliminate the infectiousness of already infected persons. However, despite rapid advances in the early phases of vaccine development, a vaccine suitable for large-scale use is highly unlikely to become available prior to the mid-1990's. In addition, a vaccine has never been made against a human retrovirus, and several retrovirologists have raised the possibility that vaccines currently under development may not be protective.

A recent clinical therapy trial among AIDS patients found that Azidothymidine (AZT) prolonged life and was associated with clinical and immunological improvement. There were, however, side effects, including bone marrow suppression requiring frequent transfusion. Longer-term benefits and risks of AZT treatment are currently unknown. AZT may nevertheless represent a first major step towards eventual development of safe and effective therapeutic agents. It is also possible that these agents could have a role in the treatment of asymptomatic HIV infected persons, acting both to prevent progression of AIDS and reducing or eliminating infectiousness.

Despite impressive technical and scientific advances, it is unlikely that either vaccine or treatment will become available to assist in controlling the pandemic of HIV infection during the next five years. Therefore, at least during this initial period prevention of transmission must be achieved through general and targeted health education interventions designed to promote and sustain changes in sexual behavior. Education programs must inform the population on how this virus is transmitted from person to person, what specific sexual behaviors increase an individual's risk of acquiring this disease, and what specific measures can prevent transmission. Complimentary interventions include guaranteeing the safety of blood and products through AIDS screening programs.

The magnitude of the HIV pandemic and its broad impact have been seriously underestimated and underappreciated. This is partly due to a certain degree of complacency brought about by a small number of reported cases of AIDS which only represent a very small fraction of a much larger number of infected but currently asymptomatic people. Nevertheless, during the second half of 1986, a major shift of perspective and opinion regarding the HIV pandemic has occurred in North American, Central American, Caribbean and South American countries.

Several countries (Brazil, Argentina, Mexico, Haiti) have developed comprehensive national AIDS prevention and control programs. Others (Panama, Costa Rica and several Caribbean countries) have initiated several measures such as blood bank screening to reduce HIV transmission. The United States Government has assigned AIDS and HIV infection the highest priority as a public health problem. Specialized agencies of the Department of Health and Human Services (e.g. Food and Drug Administration, Communicable Disease Center, National Institutes of Health) continue to provide the necessary technical leadership and financial support to state and local programs.

Canada has established a National AIDS Centre to Coordinate AIDS prevention activities, disseminate technical information, and assist provincial programs.

6. WHO Special Program on AIDS

In May 1986, the Thirty-ninth World Health Assembly approved the creation of an AIDS program within WHO (WHA39.29, Annex 1; Report to 79th Session of the Executive Board, EB79/12, Annex 2). In November 1986, the Director General of the World Health Organization announced that, in the same spirit and with the same dedication and global purpose with which WHO undertook smallpox eradication, WHO would now be committed to the more urgent, more difficult and more complex challenge of global AIDS control.

Global AIDS prevention and control will require two complementary activities:

- . Strong national AIDS prevention and control programs; and
- . International leadership, coordination and cooperation.

The WHO Special Program on AIDS (SPA) has been created as a vehicle for the World Health Organization's critical role in global AIDS prevention and control. Through the Regional Offices the program will support the development of strong national AIDS programs, provide international leadership, and assure global coordination and cooperation.

7. WHO/PAHO Special Program on AIDS

The primary objective of the WHO/PAHO Special Program on AIDS is to prevent HIV transmission. The secondary program objective is to reduce morbidity and mortality associated with HIV infections.

Program Strategies

Multiple strategies and associated activities are currently projected for 1987-1989. These provide distinct and complementary ways to advance the program objectives. The evolution of knowledge regarding HIV and techniques for preventing transmission or reducing the impact of HIV infections may require substantial realignment in strategies or activities during this or subsequent periods.

The principle strategy is to collaborate with Member Countries through direct technical assistance and financial support to develop and implement national AIDS prevention and control programs, including support for:

- Research to define the epidemiology of AIDS;
- Surveillance with appropriate laboratory support;
- Training of health care workers; and
- Implementation of prevention measures.

These prevention measures include:

- i) Prevention of sexual transmission by collaborating with Member States to develop and strengthen health promotion and education leading to sustained changes in sexual behavior.
- ii) Prevention of transmission through blood transfusion by collaborating with Member States to develop and strengthen:
 a) blood transfusion systems to ensure proper collection, screening and use of blood; and b) counseling and medical evaluation services (pre- and post-donation).

- iii) Prevention of transmission through blood products by collaborating with Member States to ensure that blood products are produced in a manner which eliminates the risk of HIV transmission.
- iv) Prevention of transmission through injections or skinpiercing instruments by collaborating with Member States to ensure the use of sterile needles, syringes, and other skin-piercing instruments.
- v) Prevention of transmission through organ and semen donation by collaborating with Member States regarding the development and implementation of policies and practices to ensure that donated organs and semen are free of HIV.
- vi) Prevention of perinatal transmission by collaborating with Member States in the development, implementation, and evaluation of interventions to reduce prenatal HIV transmission.
- vii) Prevention of transmission by HIV-infected persons through the use of a therapeutic agent by collaborating with institutions in Member States to develop, test, produce, and deliver therapeutic agents.
- viii) Prevention of HIV transmission through the development and delivery of a vaccine by collaborating with the institutions in Member States to develop, test, produce, and deliver vaccines.

Operational Aspects

The WHO/PAHO Special Program on AIDS has taken up the challenge of providing rapid emergency technical collaboration to Member Countries and at the same time establishing the conceptual, technical and organizational foundation that is needed for effective medium— and long-term AIDS prevention and control programs.

During 1987, both short-term support and technical collaboration for long-term planning will be provided to Member States. Both national and regional levels of action will be involved. Immediate support, for example, is needed to improve national educational programs designed to prevent the sexual transmission of AIDS/HIV; at the same time, PAHO will adapt and utilize generic guidelines and publicize materials to assist countries in designing national programs to prevent sexual transmission of AIDS/HIV.

Rather than establish limited goals for the program and in so doing not meet Member States needs, the global Special Program on AIDS has elected, even at the expense of strict sequential development of

activities, to accomplish as much as possible and as quickly as possible. PAHO subscribes to this approach. Given the urgency of the HIV pandemic, PAHO believes this approach to be a necessary and responsible one. Given full collaboration by Member States and the network of agencies and institutions in working relationships with PAHO, the SPA will accomplish more than otherwise can be anticipated if the traditional "business as usual" approach were to be followed. Because the HIV pandemic involves biological and social characteristics that are unprecedented, it is inevitable that some of the procedures that will be developed will be of an exploratory nature, and in retrospect some activities will be seen as having a less than optimal effect. In countries where there has already been epidemiological and political recognition of the HIV problem (e.g. Brazil, Argentina, Haiti) the WHO/PAHO Special-Program on AIDS is already providing technical assistance and financial support for the formulation of national programs. will be strengthened and broadened to assist these and other Member States already engaged in dealing with HIV.

PAHO's program will have two components: 1) technical support for national AIDS prevention and control programs; and 2) the promotion and conduct of epidemiological studies and related research. The PAHO program has already mobilized US\$898,691 from WHO's non-regular funding sources for AIDS prevention and control activities in this Region. An additional US\$5 million is being sought for AIDS research in Latin America and the Caribbean through contracts with the US National Institutes of Health. The future success of the program will now depend on the political, financial and administrative emphasis which each individual Member Country chooses to give to the program, and the mobilization of additional resources to support programs in collaboration with the Member Countries.

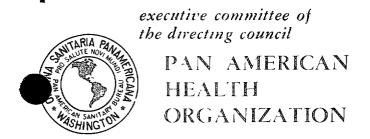
Subregion and Country	Confirmed Cases	Deaths
Latin America, Andean Group	116	80
Bolivia	1 a	1a
Colombia	30	15
Ecuador	7 ^a	4 a
Peru	9a	6 ^a
Venezuela	69	54
Latin America, Southern Cone	100	<u>57</u>
Argentina	69	37
Chile	22	14
Paraguay	1	1
Uruguay	8	5
Brazil	921	<u>497</u> b
Central American Isthmus	62	38
Costa Rica	$\overline{16}$	$\overline{11}$
El Salvador	6	3
Guatemala	15	8
Honduras	13	7
Panama	12	9c
Mexico	316	100 ^d
Latin Caribbean	604	147
Cuba	<u></u>	<u></u> a
Dominican Republic	96	35
Haiti	507 ^a	111a
Non-Latin Caribbean	464	225
Antigua and Barbuda	$\frac{464}{2}$	- 2
Bahamas	85	29
Barbados	15	9
Belize	1	0
Cayman Islands	1	1
French Antilles	92 ^e	e
French Guiana	58	41
Grenada	3	3
Guadeloupe	40	23
Jamaica	6	6
Martinique	16	10
St. Kitts and Nevis	1a	0a
Saint Lucia	_ 3a	2a
St. Vincent and the Grenadines	3 a	2 <u>a</u>
Suriname	2a	2a
Trinidad and Tobago	134	93
Turks and Caicos Islands	2	2
North America	29,977	16,766
Bermuda	48	29
Canada	926	436
United States of America	29,003 ^f	16,301 ^f
Total	32,560	17,910

 $^{^{\}rm a}$ No information received for the second half of 1986 (1 July 31 December). $^{\rm b}$ Up to 20 November 1986

c Up to 30 September 1986 d Up to 15 January 1987

e Up to 15 September 1986

f Includes 76 cases diagnosed prior to 1981. Of these, information is available on 63 deaths





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ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) IN THE AMERICAS: UPDATE

International Travel and HIV Infections

The emergence of the AIDS epidemic on a global scale has raised the issue of HIV screening of international travelers and that of travel of HIV-infected persons by public conveyance, and has highlighted the need for information for international travelers on the prevention of HIV infection.

To address these issues, WHO's Special Program on AIDS convened a consultation group who reviewed international health regulations and considered the problem from various angles: the epidemiologic context (global dimensions of HIV infections and AIDS, modes of transmission, infection, immune response, and disease); the technical context (HIV antibody test, sensitivity, specificity, and predictive value); the public health effectiveness of the screening of international travelers; the design of the screening program; the management of data concerning HIV screening of international travelers; legal and ethical considerations; the costs; and the social and political acceptability of imposing HIV screening on international travelers.

The consultation identified several detrimental consequences of screening for national AIDS control programs and proposed as alternative measures heightening awareness and promotion of risk-reducing behaviors in travelers.

In conclusion, the consultation stressed that no screening program of international travelers could <u>prevent</u> the introduction and spread of HIV infection. The diversion of resources towards HIV screening of international travelers and away from educational programs, protection of the blood supply and other measures to prevent parenteral and perinatal transmission, will be difficult to justify in view of the epidemiological, legal, economic, political, cultural and ethical factors militating

against adoption of such a policy. Any HIV screening program for international travelers would at best and at great cost retard only briefly the dissemination of HIV both globally and on a country-specific basis. It also concluded that the use of any public conveyance by persons infected with HIV did not create a risk of infection for others sharing the same conveyance and therefore there was no specific reason to limit the use of public conveyance by HIV-infected persons.

The consultation recommended that educational materials be made available to international travelers through various agencies and organizations to increase awareness of how HIV is transmitted and how it can be prevented.

AIDS IN THE AMERICAS
CASES AND DEATHS NOTIFIED BY 18 JUNE 1987

Subregion and Country	Cases	Deaths	Date of Last Report
Andean Group	154	101	
Bolivia	1	1	30 Jun. 86
Colombia	57	34	31 Mar. 87
Ecuador	18	6	31 Mar. 87
Peru	9	6	30 Jun. 86
	69		
Venezuela	09	54	31 Dec. 86
Southern Cone	124	61	
Argentina	78	33	31 Mar. 87
Chile	28	17	31 Mar. 87
Paraguay	10	6	31 Mar. 87
Uruguay	8	5	31 Dec. 86
Brazil	1 542	702	31 Mar. 87
	0.0	5.4	
Central America	93	56	20 D 06
Belize	1	0	30 Dec. 86
Costa Rica	27	15	31 Mar. 87
El Salvador	9	6	31 Mar. 87
Guatemala	22	13	31 Mar. 87
Honduras	20	11	31 Mar. 87
Panama	14	11	31 Mar. 87
Mexico	487	166	30 Apr. 87
Latin Caribbean	1 341	162	
Cuba	3	3	31 Dec. 86
Dominican Republic	200	35	31 Dec. 86
Haiti	810	124	31 Dec. 86
Puerto Rico*	374		8 Jun. 87
0.4111	1.00	202	
Caribbean	460	292	27 24 07
Antigua	2	2	31 Mar. 87
Bahamas	105	49	31 Mar. 87
Barbados	39	25	31 Mar. 87
Cayman Islands	2	2	31 Dec. 86
Dominica	3	3	31 Mar. 87
French Guiana	68	52	31 Dec. 86
Grenada	4	3	31 Mar. 87
Guadeloupe	38	22	31 Dec. 86
Guyana	2	0	31 Mar. 87
Jamaica	21	17	31 Mar. 87
Martinique	23	15	31 Mar. 87
St. Kitts-Nevis	1	0	31 Dec. 86
Saint Lucia	3	2	31 Dec. 86
St. Vincent & Grenadines	3	2	31 Dec. 86

AIDS IN THE AMERICAS
CASES AND DEATHS NOTIFIED BY 18 JUNE 1987

Subregion and Country	Cases	Deaths	Date of Last Report
Caribbean (cont.) Suriname Trinidad and Tobago Turks and Caicos US Virgin Islands*	3 134 2 7	3 93 2 -	31 Mar. 87 31 Dec. 86 31 Dec. 86 8 Jun. 87
North America Bermuda Canada United States of America	37 243 58 1 052 36 133	21 715 39 521 21 155	31 Mar. 87 1 Jun. 87 8 Jun. 87
Total	41 444	23 255	

^{*}Deaths for Puerto Rico and the US Virgin Islands are included in the United States of America