Canada's federal AIDS program is orchestrated by the Federal Center for AIDS (FCA), created in 1987. The Center is made up of six bureaus: Program Analysis and Resources, the focal point for policy and program development; AIDS Prevention and Services Program, which focuses on education, liaison with health care workers and community groups, and the psychosocial aspects of the epidemic; AIDS Epidemiology and Surveillance, which monitors trends and assesses the extent of the disease; Laboratories and Research, which provides reference services for laboratories engaged in HIV screening and diagnosis, and collaborates with national and international researchers; External Cooperation, which promotes international collaboration in AIDS research, policy, and programs; and Clinical Studies, which promotes studies on drugs and vaccines. The fight against AIDS is also assisted by the National Health Research and Development Program, provincial and territorial governments, and community-based support groups.

AIDS has been designated a top priority in Canada and, over the last six years, policy has been directed toward containing the spread of the disease, both nationally and internationally. The responsibility of addressing the problems of this emerging illness at the federal government level fell to the Laboratory Center for Disease Control (LCDC), Health and Welfare Canada, which established a reporting system in 1982. For the next four years, the national program was coordinated through the office of the Director General, LCDC. In 1986, in response to the greatly increased requirement for federal activity, a National AIDS Center was created within LCDC. At the same time, the laboratory aspects of AIDS and human immunodeficiency virus (HIV) infection were managed at LCDC through the Bureau of Microbiology. In mid-1987, however, it was evident that the problem of AIDS was sufficiently large and complex to require that the federal government response in the areas of coordination, education, and scientific activities be orchestrated by one center.

In July 1987, the Deputy Minister of the Department of National Health and Welfare announced the creation of the Federal Center for AIDS (FCA), within the Health Protection Branch.

STRUCTURE AND FUNCTIONS OF THE CENTER

The Center currently employs 40 people and has six bureaus, as outlined in Figure 1. The role of the FCA is to coordinate all federal governmental activities with respect to the promotion of public education programs and the coordination of preventive and social health activities. The FCA also promotes clinical trials of drugs and vaccines, stimulates and encourages epidemiologic studies, and works to maintain and improve national surveillance. Other important activities of the Center include coordinating research funding and community-based support groups.
support groups, providing information services, and establishing and maintaining liaison with ten provincial and two territorial governments, as well as with nongovernmental organizations. Financial support given to the World Health Organization's Global Program on AIDS (WHO-GPA), together with liaison with national organizations, completes the spectrum of the Center's activities.

**Bureau of Program Analysis and Resources.** As the HIV epidemic spreads, there is an increasing need to develop highly innovative, proactive, and comprehensive policies and programs. Such an approach demands a high level of coordination, and the Bureau of Program Analysis and Resources was established to initiate and enhance policies and programs. The Bureau continues to provide a focus for policy-related issues, and its increasing profile testifies to the need to develop sound policies for all HIV-related activities and programs. The primary functions of the Bureau are policy and program development, monitoring and assessment, and the provision of appropriate program services. Such an approach acknowledges the importance of providing an integrated framework for HIV-related policy development. The monitoring component includes the capacity to conduct in-depth reviews of the human resource and financial implications of proposed national program initiatives. In addition, the Bureau plays an important coordinating role, particularly with reference to human resources and financial planning connected with new initiatives and programs of other bureaus. Through a newly introduced Contribution Program, the Federal Center for AIDS will be better able to strengthen a wide range of programs and projects.

**Bureau of AIDS Prevention and Services Program.** The national AIDS program places a high priority on preventing AIDS and HIV infection. The Bureau of AIDS Prevention and Services Program focuses on education and awareness strategies, liaison with health care workers and community groups, and the psychosocial aspects of the problem. One priority is delivery of a national education and awareness program. In this regard, the FCA has initiated a national consultation with the education community, which will provide an opportunity

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**Figure 1. Administrative structure of the Federal Center for AIDS (FCA).**
for national education organizations, provincial and territorial ministries of education, and the federal government to formulate and implement a comprehensive strategy for AIDS education of schoolchildren and adolescents. Funds have also been provided to carry out the Canada Youth AIDS Survey. In this study, which is being conducted by Queen’s University, Kingston, Ontario, 40,000 subjects—including students in grades 7, 9, 11, and first year of university, 1,000 “dropouts,” and 700 street youths—have been interviewed. A similar survey of adults commenced in the fall of 1988. In parallel with the above activities, educational brochures covering a wide range of AIDS-related issues are being prepared. These publications will complement the guidelines that have already been developed for health care workers and other professional groups. The Bureau has close ties with nongovernmental organizations, including community groups and specific national agencies such as the Canadian Hemophilia Society, Canadian Medical Association, and Canadian Dental Association, and has conducted a wide range of activities in association with such bodies.

The educational activities of the FCA are complemented by the Canadian Public Health Association (CPHA) AIDS Education and Awareness Program, which is being supported by a Health and Welfare grant over a five-year period. The program includes a clearinghouse for AIDS information, a series of scientific symposia for health professionals, a number of public forums, and a newsletter.

In an effort to permit health care workers and other professional groups to play a greater role in preventing HIV infection, the Bureau has developed a comprehensive set of definitive guidelines. Support has also been provided for workshops and seminars for specific groups such as hospital staff, educational authorities, and police. The need to enhance programs in the psychosocial area is fully recognized. For example, an Expert Working Group in Palliative Care has produced an important report entitled “Caring Together,” which is expected to lead to a series of demonstration projects in selected cities.

Bureau of Epidemiology and Surveillance. This Bureau conducts an AIDS surveillance program designed to monitor temporal trends in reported AIDS cases and assess the extent of the disease. Numerous studies have been undertaken in this regard. A study of the risk of HIV infection in health care workers who have been exposed to HIV-infected blood or body fluids is being conducted, using a standardized data collection mechanism. A collaborative study of women attending sexually transmitted disease clinics has been completed. The Bureau is also involved in epidemiologic research with independent investigators. Priority has been placed on determining the prevalence of HIV infection in Canada. This research will include population-based estimates as well as special studies of specific groups such as injection drug users.

Dissemination of information from the Bureau is achieved via an electronic bulletin board, which provides immediate access to Canadian, U.S., and international AIDS statistics, news releases, announcements of forthcoming AIDS conferences, the Canada Diseases Weekly Report, and the U.S. Centers for Disease Control Morbidity and Mortality Weekly Report. As of 19 September 1988, there were 2,003 confirmed cases of AIDS in Canada.

Bureau of Laboratories and Research. Two divisions comprise this Bureau: retrovirology and immunology. By virtue of
being the focal point for the Center’s role as a World Health Organization Collaborating Center for AIDS, the primary activity is provision of reference services to provincially designated laboratories conducting HIV antibody screening tests. An extensive array of services is available, including immunoblotting using whole viral lysates and recombinant antigens, antigen capture neutralization assays, peptide mapping of viral isolates, virus isolation, T-cell subset analyses, quality assurance programs, and the serodiagnosis of human retroviruses, including HIV-1, HIV-2, and HTLV-I. In addition, diagnostic kits and commercially produced reagents are evaluated, and proficiency testing and quality control are offered at the national level.

The Bureau collaborates closely with national and international researchers. Current activities include AZT dose-toxicity studies, research to determine the immunogenicity and safety of a candidate HIV vaccine, evaluation of the polymerase chain reaction (PCR) test, research on the prevalence of HIV infection in selected populations, and a study to assess the validity of recombinant protein-based tests. Also, scientific support is provided for the National Immune Study of Hemophiliacs and the Vancouver Lymphadenopathy AIDS project. Many researchers have completed extended stays in the faculty to learn protocols and methods for virus isolation and to acquire techniques for the serodiagnosis of HIV infection and use of recombinant antigens as diagnostic tools. The Bureau has a strong interest in strengthening international scientific collaboration, as exemplified by its extensive input to the FCA/PAHO Workshop on HIV Screening, which took place in Canada in August 1988. The event enabled directors of national HIV screening programs in 25 countries of the Americas to exchange information and develop strategies for HIV surveillance and quality control testing.

**Bureau of External Cooperation.** The main objective of the Bureau is to enhance and support governmental liaison and national and international collaboration, particularly with reference to policy and programs. It provides the supporting substructure for the Federal/Provincial/Territorial Advisory Committee on AIDS, and coordinates special projects associated with the Committee, such as the formulation of guidelines for organ donation and tissue transplantation in light of the HIV infection crisis, and the development of a policy statement on the confidentiality of HIV antibody test results. Liaison responsibility between the FCA and the National Advisory Committee on AIDS (NAC-AIDS) rests with the Bureau. This Committee was established in 1983 to advise the Minister of National Health and Welfare regarding the implementation of medical and other strategies for the diagnosis, treatment, control, and prevention of AIDS in Canada.

A close working relationship exists with major international agencies, particularly with the WHO-GPA and PAHO, exemplified by the above-mentioned workshop on HIV screening sponsored jointly with PAHO. The Bureau also participates in and coordinates Canadian input for WHO-GPA consultations and workshops to ensure that Canada’s contribution to the global effort is adequately represented and utilized. For example, a counseling manual on hemophilia and HIV infection was developed for the WHO-GPA Hemophilia/HIV Workshop, which was held in Tokyo, Japan, in August 1988; and a workshop for short-term consultants was held in Ottawa, Canada, in October 1988, also in collaboration with the WHO-GPA. Such activities are complemented by close working relation-
ships regarding AIDS with agencies like the Canadian International Development Agency (CIDA) and the International Development Research Center (IDRC), and with embassies.

At the international level, the Bureau participates in the exchange of scientific, medical, and epidemiologic data with international and national organizations. The Bureau is also responsible for the development of policy positions on issues like HIV antibody testing and confidentiality that require collaboration and monitoring with other governments and with organizations such as WHO. Close links with Canadian universities and nongovernmental organizations (NGOs) are also maintained. For example, in September 1988, the Bureau participated in a workshop on the role of NGOs in AIDS programs in developing countries, held at McMaster University, Hamilton, Ontario. Briefings on issues surrounding HIV infection are provided for government personnel posted abroad, and the Bureau also coordinates Canadian training programs for overseas health professionals.

**Bureau of Clinical Studies.** Its function is to promote studies on drugs and vaccines, which includes improving access to new therapies, providing input for research protocols, advising the pharmaceutical industry and researchers regarding clinical trial procedures and regulatory requirements, and facilitating access to research funding. The Bureau also establishes committees to determine priorities and develop appropriate drug protocols for use at the national level. As a central information agency, it provides authoritative information to physicians, patients, the media, and the general public. Also, the Bureau initiates and coordinates multi-center collaborative studies and plays a strong role in the development of government policy on AIDS drugs.

**OTHER COMPONENTS OF CANADA’S AIDS PROGRAM**

Research continues to be a keystone of the national program. The National Health Research and Development Program (NHRDP), Health and Welfare, has conducted special competitions to stimulate and support HIV-related research in Canada. Such funding initiatives are closely coordinated with the Federal Center for AIDS and cover public health, epidemiological, clinical, biomedical, and laboratory AIDS investigations. Special training and career awards for AIDS researchers complement the program.

The national AIDS program received Can$39 million for the period 1986-1991 for research, education, community groups support, laboratories, and operational costs. On 8 June 1988, the Minister of National Health and Welfare, the Honourable Jake Epp, announced that the government’s AIDS program funding had been increased by an additional Can$129 million over a five-year period. Research is a high priority in the program, and Can$35 million of this additional funding is targeted for a wide range of research activities, including trials of new AIDS drugs, research on potential vaccines, improved diagnosis, and epidemiologic research. Innovative projects at the community level will be supported by Can$20 million in contributions aimed at enhancing programs to prevent the spread of HIV infection and to provide care in the community for persons with AIDS. Regarding health and social sector support, Can$10 million will be allocated for the training of health care and social service workers, the development of innovative service models, edu-
cational materials and guidelines for service support to volunteer organizations, and workplace initiatives. Can$6 million will be used to strengthen Canada's participation in international scientific efforts, such as the WHO-GPA.

Canada's provincial and territorial governments have played important roles in the development of AIDS control programs. Close collaboration has been a key to these activities, particularly the education and awareness components, and has encouraged a sharing of information and enhanced the impact of national and regional programs. The Federal/Provincial/Territorial Advisory Committee on AIDS acts as an important focus for the discussion of national and provincial HIV-related issues. In addition, the Committee has put together expert working groups to prepare position papers on selected topics, such as confidentiality in HIV testing and the implications of HIV infection for organ donation and tissue transplantation. The provinces and territories have also implemented a wide range of innovative educational programs and other activities, including AIDS hotlines, videos, support to community groups, AZT clinical trials, epidemiologic surveillance, and the establishment of multidisciplinary advisory committees. AIDS is a notifiable disease in all provinces and territories.

From the time AIDS was first reported in Canada, community-based AIDS groups across the country have played a crucial role in the development of AIDS programs. In addition to their advocacy role, such groups have extended their activities to include education, counseling, and support programs. Linkages with other community-based organizations have proved extremely useful and have enhanced the impact of preventive and support projects. The Canadian AIDS Society serves as the umbrella organization for 32 community-based AIDS groups.

It is generally acknowledged that AIDS control and research programs cannot be conducted in isolation if the HIV pandemic is to be overcome. Canada, as an active member of WHO and PAHO, is firmly committed to the philosophy of international cooperation. Through CIDA, Canada donated Can$5 million to the WHO-GPA in 1987 and a similar amount in 1988. Also, Canada will host the Fifth International Conference on AIDS in Montreal in June 1989. Such commitments demonstrate Canada's determination to play a significant role in the global struggle to control HIV infection.