Taking Stock:

Assessing the Adequacy of the Government of Canada Investment in the Canadian Strategy on HIV/AIDS

Prepared for the

Ministerial Council on HIV/AIDS

by

Martin Spigelman Research Associates
and The Project Group

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EXECUTIVE SUMMARY

Introduction

The HIV/AIDS epidemic is today one of the most serious threats to public health, in Canada and around the world. In 1990 the Government of Canada launched its first, three-year National AIDS Strategy with an annual budget of $37.3 million. In 1994 the government increased its financial commitment to the Strategy by 13%, to $42.2 million. The Strategy's budget has remained at that level ever since.

The Ministerial Council on HIV/AIDS initiated this study to analyze the adequacy of the federal government's investment in the Canadian Strategy. The project defined "adequacy" as the level of spending required to achieve the goals identified in the Canadian Strategy. The methodology assessed adequacy on the basis of a variety of quantitative measures drawn from Canada and from other developed countries.

Measuring Adequacy

An analysis of these measures suggests that the largely static $42.2 million investment in the Canadian Strategy is neither adequate nor appropriate.

First, the Strategy's funding has not kept pace with the epidemic's spread in Canada. In the early 1990s there were approximately 30,000 Canadians living with HIV/AIDS and in mid-1990s 35,000. Today there are 50,000, representing increases of 67% and 43% respectively. In 1990, those living with HIV/AIDS constituted a relatively homogenous group. Today this population encompasses a diverse variety of groups including some living on the very margins of Canadian society.

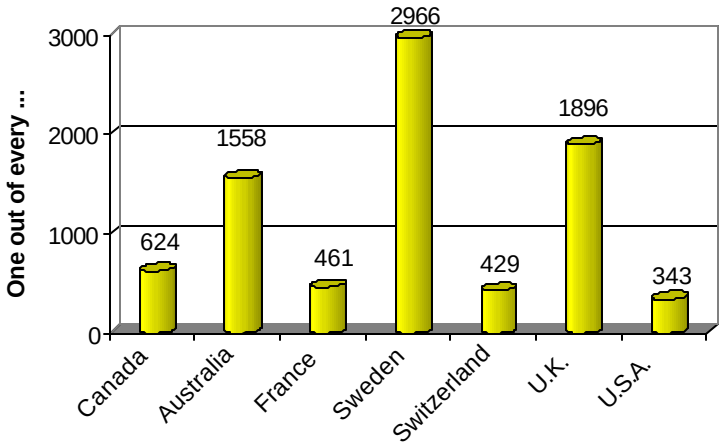
Second, over time the real value of the Canadian investment has eroded significantly because of inflation. The federal commitment is today worth less than $34 million in 1991 dollars. In reality the purchasing power of this amount may be even less given that inflation affects different sectors of the economy in different ways, and HIV/AIDS initiatives rely heavily on the highly skilled technology sector

Third, the federal investment in HIV/AIDS-related efforts has not reflected the dramatic change in the government's fiscal situation through the 1990s. By the end of the 2002/03 fiscal year, the Government of Canada will have accumulated a budget surplus of $40 billion. This surplus is reflected in many of the government's funding decisions.

Fiscal transfers to the provinces for health care, for example, will be 25% higher in 2000/01 than in 1998/99. Meanwhile the government's commitment to the Strategy on HIV/AIDS remains static at $42.2 million.

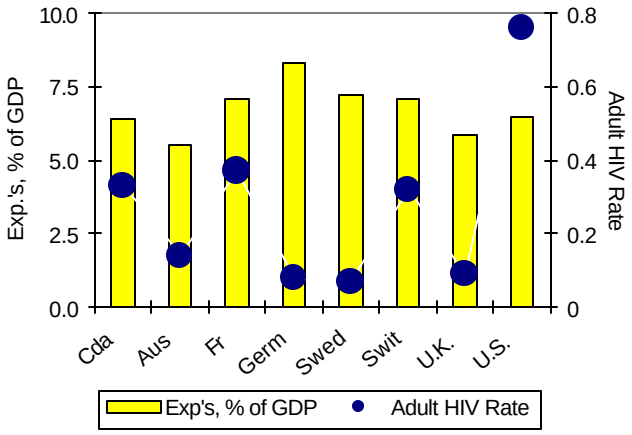
International measures provide less clear conclusions about funding adequacy. Figure 1 speaks to the success of various countries in preventing the epidemic's spread. In Canada, for example, one out of every 624 people is living with HIV/AIDS compared to one out of every 1896 in the United Kingdom and one out of every 1558 in Australia.

Figure 1, By Country, One out of every … people is living with HIV/AIDS, 1999



However there does not appear to be a clear correlation between expenditures and HIV/AIDS-related outcomes. Canada, for example, commits a higher proportion of its Gross Domestic Product (GDP) to health than does Australia but has an incidence rate more than twice that of Australia. The United States has the highest GDP per capita as well as the highest per capita spending on HIV/AIDS. Yet it also has the highest HIV/AIDS incidence and prevalence rates.

Fig. 2, Public Health Expenditures and HIV Incidence Among Adults (15-49), 1997



Some countries spend more and achieve less than does Canada. Others spend less and seem to achieve more.

It appears that factors other than expenditure levels determine a country's success in addressing the HIV/AIDS epidemic. The timing of prevention investments is one of these important factors. The United Kingdom and Australia both responded to the epidemic more quickly than did Canada and made their investments earlier. The nature and content of prevention efforts also appear to be important for achieving positive outcomes. Switzerland, the United Kingdom and Australia have all been less reticent than Canada, or the United States in particular, to adopt harm reduction strategies such as needle exchange programs.

HIV and AIDS Rates (/100,000), 1999

Country	HIV Prevalence Rate	AIDS Incidence Rate
Canada	159	2.3
Australia	66	1.1
United Kingdom	53	1.3

The international experience also speaks to the importance of addressing the social determinants of health. It is difficult to conceive of HIV/AIDS strategies being successful until societies address issues such as poverty and homelessness. These generally characterize the highest at-risk populations, in Canada and elsewhere.

Determining Adequacy

While concluding that $42.2 million is inadequate, it is difficult to determine what would be an adequate amount. Assuming that $37.2 million in 1990 and $42.2 million in 1994 were appropriate funding levels at that time, a Strategy budget of:

- $43.8 million to $45.4 million would today be adequate if the goal was simply to keep up with inflation.

- $48 million to $53 million would today be adequate if the goal was to ensure that the pattern of spending for HIV/AIDS was consistent with that in the health care sector more broadly.

- $60 million would today be adequate if the Strategy's 1994 budget was appropriate for the 35,000 people living with HIV/AIDS at that time, and $70 million would be adequate if the Strategy's 1990 budget was appropriate for the 30,000 people living with HIV/AIDS at that time.

Importantly, these incremental amounts are not only small investments by government standards but are investments that promise significant economic as well as health and social dividends. It is estimated that measures that reduce the number of new HIV infections to 1,700 per year would produce $4 billion in savings through the next five years.

The critical challenge is to develop a process, formula or framework for determining what might be an adequate budget. In the past, Strategy funding – in Canada and in many other countries as well – has been based on two pillars: historical funding levels and the range of political considerations. These are weak foundations for effective programming. What is required is a concerted effort to capitalize on what has been learned and to ensure that funds are available to incorporate this knowledge into the Canadian Strategy and its many activities. These efforts will enable government and community agencies to make informed decisions about how much is needed and about how best to allocate their resources.

The first step in this process would be to add a statement of realistic but concrete, measurable and quantifiable objectives to the Canadian Strategy on HIV/AIDS. The second step – and admittedly a difficult one – would be to determine what funding is required to reach each of those objectives. The third step would be continual monitoring and evaluation, to assess the Strategy, to identify what is working and what is not, and to compare options and alternatives. Budget adjustments, made annually, would ensure adequate amounts for the highest or most pressing priorities.

Canada is part of a world community addressing the problems and challenges posed by the HIV/AIDS pandemic. It is also one of the small number of truly fortunate countries with the resources necessary to address the epidemic in an effective manner. Doing so, however, requires commitment. The question is whether Canada – as rich and as affluent as it is – is prepared to provide adequately for very sick and suffering people, for the community networks offering them support and for the research and development that may develop either a cure or a vaccine.

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1. Introduction

Close to 50,000 Canadians are today living with HIV/AIDS and each day eleven more people become infected. Six hundred of these are young people between the ages of 10 and 24 years.[1] There are an estimated 15,000 who are infected but unaware of their situation. The epidemic has reached the saturation point among injection drug users in parts of Vancouver and has spread dramatically to other groups of people, some of whom are living on the very margins of Canadian society. Since it was first identified, HIV/AIDS has been responsible for the death of 12,000 Canadians.

Canada is not alone in its struggle with the impact of HIV/AIDS. In the United States, almost 400,000 people – a population equivalent to that of London or St. Catharines in Ontario – have died from AIDS. Worldwide, 36 million people are today living with HIV/AIDS. This year alone over three million people will become infected with HIV and another three million will die of AIDS.

In the developing world, HIV/AIDS is threatening to erode the many quality of life achievements made over the past decades. It has already significantly reduced average life expectancy in more than a dozen African countries. Close to a third of South Africa's semi-skilled and unskilled workers will be HIV-positive by 2005.[2] AIDS has orphaned ten million children and adolescents in Africa, a number that is expected to grow to 30 million in the next decade.[3]

The costs associated with the epidemic have been staggering. First there are the almost incalculable costs of the human suffering associated with the disease, for people living with HIV or AIDS, for their families and for their communities. Second there are the financial costs associated with the epidemic. In Canada, the lifetime care and treatment costs are estimated to be at least $150,000 per person while the indirect cost of their lost productivity and premature death may be as much as $600,000 per person. Use of the new anti-retroviral therapies may add $60 million annually to health care costs in Canada.[4]

[1] Canada, Health Canada. 2000. HIV/AIDS Epi Updates: 1, 7, 17.
[2] UNAIDS, AIDS Epidemic Update, December 2000. UNAIDS & WHO, 2000.
[3] See the San Francisco AIDS Foundation. www.sfaf.org.
[4] Jim Young, 2000; Terry Albert and Greg Williams, 1997. Robin Hanvelt, 1999.

1.1 Purpose and Objectives

HIV/AIDS presents an enormous public health challenge. The Government of Canada has responded to this challenge, first, by creating a National AIDS Strategy and subsequently, in 1998, a Canadian Strategy on HIV/AIDS. The Canadian Strategy has an annual budget of $42.2 million.

Many people suggest that the Strategy's budget is inadequate given its goals, given the dramatically changing nature of the epidemic, given the threat and impact of HIV/AIDS on Canadians, and given the cost of the epidemic to Canada. The Canadian AIDS Society, for example, has suggested doubling the Strategy's annual budget to $85 million. The research and Aboriginal communities have identified their inability to pursue certain projects because of inadequate funding. Community-based service providers have identified gaps in the network available for treating and caring for people living with HIV/AIDS. Others have suggested the Strategy should be more fully engaged in international efforts to address the HIV/AIDS pandemic.

In September 2000, the Ministerial Council on HIV/AIDS initiated this study. Its purpose is to analyze the adequacy of the current Government of Canada investment in the Canadian Strategy on HIV/AIDS.

1.2 Methodology

The project defined "adequacy" as the level of spending required to achieve the goals identified in the Canadian Strategy on HIV/AIDS. The methodology included efforts to assess the federal government's investment on the basis of a variety of quantitative measures, for example changes in incidence and prevalence rates or spending by countries with strategies similar to that of Canada. When comparing Canadian expenditures with those of other countries, the project considered only direct spending by the national government on efforts similar to those encompassed within the Canadian Strategy.

The project's methodology included:

- a review of both Canadian and international data. Key sources included Health Canada and the Laboratory Centre for Disease Control (LCDC),[5] the Centers for Disease Control and Prevention in Atlanta, the U.S. Budget Office, the World Health Organization (WHO), UNAIDS, the Organisation for Economic Cooperation and Development (OECD) and a range of other institutes and organizations.

- interviews with a host of individuals from Canada and other countries with similar public health goals and HIV/AIDS-related initiatives. These included representatives of AIDS service organizations, researchers, and both policy and budget analysts in government and community agencies.

- a review of the literature including studies on the spread and impact of HIV/AIDS, on public health spending, on adequacy and cost-benefit issues, and on government and community efforts to address the epidemic.

1.3 Challenges

Assessing adequacy proved to be a formidable challenge because people simply have not thought about how to measure adequacy. This characterized those responsible for policy, those involved in service delivery and those who are part of the budgeting process. It characterized key informants both in Canada and in other countries. And it characterized people in government, community agencies and research institutions alike. People more commonly focus on all that needs to be done and all they would like to do. They focus on how to obtain more funding and on ensuring that the funds they have are being used in the most appropriate and effective manner.

Furthermore, efforts to compare funding across countries were compromised by the different funding, administrative and reporting systems in place. The United Kingdom, for example, has decentralized its spending authority and there is a multitude of regional councils with responsibility for HIV/AIDS-related programs. In the United States and Australia, as in Canada, the federal system of government means a shared responsibility for health service delivery. This frustrated efforts to compare spending across jurisdictions and raised the spectre of comparing “apples to oranges.” The

[5] The LCDC is now part of the Population and Public Health Branch in Health Canada.

comparative literature published by the OECD, the World Health Organization and UNAIDS focused more on the developing world than on countries similar to Canada.

Finally the research and academic literature – on HIV/AIDS specifically and on public health policy more generally – was astonishingly unhelpful. There is considerable literature, from many countries, considering the cost-benefit of various prevention initiatives. There is considerable literature focusing on care and treatment, on appropriate strategies and interventions, on spending wisely and on spending effectively. There is virtually none that considers funding adequacy for strategies that are broad and comprehensive.

1.4 Report Organization

This report is organized in five sections. Following the Introduction, Section 2 provides background on HIV/AIDS in Canada and on the Government of Canada response to this epidemic. Section 3 considers the adequacy of current expenditures on the Canadian Strategy on HIV/AIDS using a variety of quantitative measures drawn from Canadian sources. Section 4 does the same using international measures. Section 5 offers conclusions about funding adequacy and recommendations for the future.

2. The Canadian Strategy on HIV/AIDS

In 1990 the Government of Canada launched its first, three-year National AIDS Strategy. The Strategy had an annual budget of $37.3 million to support research, surveillance and community development activities. The Strategy's second phase, 1994-1998, had an annual budget of $42.2 million and placed increased emphasis on enhancing partnerships, recognizing HIV as a chronic and progressive condition, health promotion, supportive social environments and promoting and sustaining healthy behaviour.

In 1998, Health Canada initiated an extensive consultation process involving national HIV/AIDS-related organizations, community-level AIDS service organizations, the provincial and territorial governments, other federal departments, health care providers, the private sector, researchers, at-risk population groups and people living with HIV/AIDS. These consultations shaped the new Canadian Strategy on HIV/AIDS and identified three policy directions, i.e. enhanced sustainability and integration, an

increased focus on those most at risk and increased public accountability. The Strategy has six goals:

- to prevent the spread of HIV infection in Canada;
- to find a cure [for HIV/AIDS];
- to find and provide effective vaccines, drugs and therapies;
- to ensure care, treatment and support for Canadians living with HIV/AIDS, their families, friends and caregivers;
- to minimize the adverse impact of HIV/AIDS on individuals and communities; and
- to minimize the impact of the social and economic factors that increase individual and collective risk for HIV.[6]

The Strategy did not identify measurable and quantifiable objectives against which progress could be measured. It did include, however, a commitment to evaluation and to learning from experience.

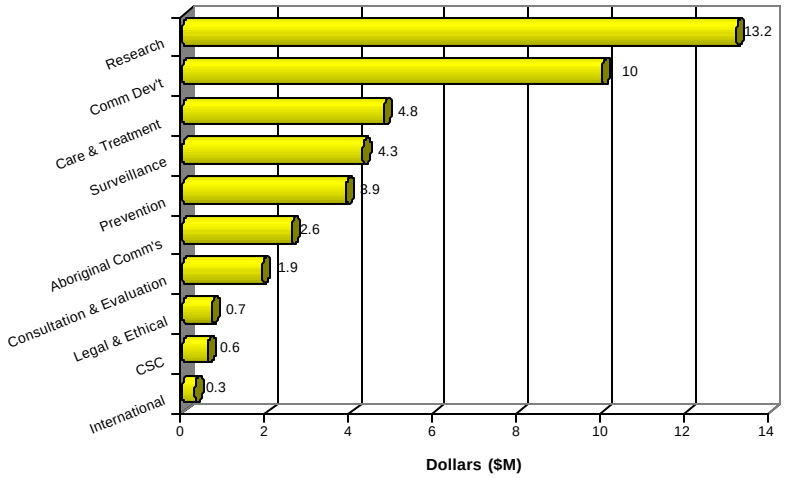
2.1 Funding

In 1998, the Government of Canada committed $42.2 million a year to the Health Canada base budget specifically for the Canadian Strategy on HIV/AIDS. Subsequently Health Canada engaged the national HIV/AIDS-related organizations in a process designed to recommend how the budget would be allocated among the Strategy's different components. This negotiating process was intense and for some, distasteful. It made the Strategy's different priorities compete for funding. And it made the different national organizations compete for a share of what they perceived as inadequate funding.

[6] Health Canada. "The Canadian Strategy on HIV/AIDS: Moving Forward Together." www.hc-sc.gc.ca/hppb/hiv_aids/

Figure 1 illustrates the allocation finally arrived at. It directed the largest portions to research (31%) and community development (24%).

Fig. 1, Canadian Strategy on HIV/AIDS ($42M), Funding Allocation 1998



The Government of Canada supplemented the Strategy's budget through the Canadian International Development Agency ($17 million), the Medical Research Council ($2 million) and the Indian and Inuit Health Branch in Health Canada ($1 million).

The provinces and territories have also committed significant amounts to HIV/AIDS-related efforts through their Medicare, drug, pharmacare and community support programs, and – in four provinces – through their own HIV/AIDS strategies. In 1997/98, for example, the government of British Columbia committed $60 million to HIV/AIDS-related services and programs. This included $25 million for anti-retroviral drugs, $11.7 million for community-based organizations and needle exchange programs, more than $20 million for acute and continuing care services and almost $3 million through its Medical Services Plan.[7]

Similarly the Government of Ontario currently spends about $50 million on its HIV/AIDS strategy – more than the amount allocated through the federal Strategy for all of Canada – in addition to the costs associated with treatment and care.

Supplementing these financial commitments are charitable contributions from a variety of socially conscious organizations. Molson Breweries Ltd., Starbucks Coffee, Levi Strauss & Co. and the Canadian Pacific Charitable Foundation have all made significant contributions to the HIV/AIDS community. In 1996, for example, private contributions to prevention and education amounted to $4.3 million.[8]

[7] BC, Ministry of Health, 1998: 25.
[8] Terry Albert and Greg Williams, 1998: 56.

One study estimates that public institutions in Canada invested over $550 million on HIV/AIDS prevention and education between 1985 and 1996. The Health Canada investment was approximately 29% of this total while the provinces and territories contributed 68% and municipalities 3%.[9]

2.2 Impact

It is difficult to assess the impact of these financial commitments. One method of doing so is to examine incidence, prevalence and mortality rates.[10] These have changed dramatically through the 1990s.

As illustrated in **Figure 2**, the annual number of AIDS-related deaths has declined from a high of 1,422 in 1995 to just over 100 in 1999. The AIDS incidence rate, shown in **Figure 3**, has also declined, to 1.5 in 1997 from 4.3 in 1995 and 4.7 in 1992. This decline may be attributed to a number of factors such as improved treatment and prophylaxis regimens that delay or prevent the onset of AIDS, an increased awareness of risk factors or even reporting delays and under-reporting. Of the total number of people with AIDS reported to the LCDC since the beginning of the epidemic, 70% (12,000) had died by the end of 1999.

Fig. 2, Annual AIDS-Related Deaths Reported in Canada, 1989-99

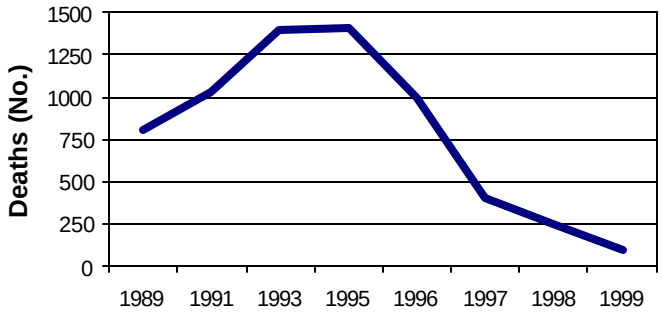
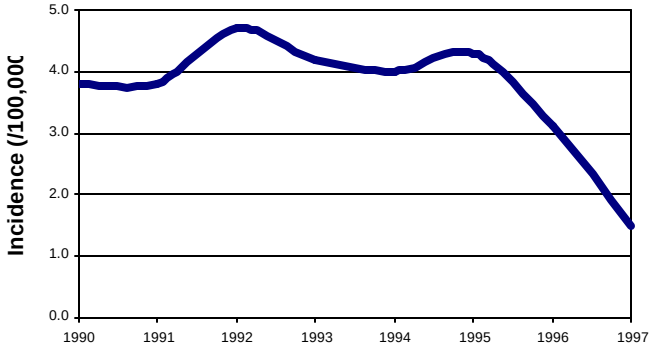


Fig. 3, AIDS Incidence Rate (per 100,000 population)



[9] Ibid., 56.

[10] *Incidence* quantifies the number of new cases of disease that develop in a population during a specified time interval. *Prevalence* quantifies the proportion of individuals in a population who have the disease at a specific instant.

Since 1997, the rate of decline in the number of AIDS cases has slowed and the curve is now levelling off. Reasons for this are not yet clear. People may be developing a resistance to the anti-retroviral drugs. Therapy almost certainly only postpones rather than prevents the development of AIDS.

HIV/AIDS remains a very significant public health risk. Health Canada reports that as many as 5,000 Canadians may be contracting HIV each year, nearly double the number reported during the period 1989-1994.[11] Today, nearly 50,000 Canadians are living with HIV/AIDS compared to approximately 35,000 in 1995 and 30,000 in 1990. This includes an estimated 12,000 to 18,000 people who are not aware of their condition or whose infected status has not been reported.

Importantly, the very nature of the HIV/AIDS epidemic in Canada is changing in profound ways. The Canadian Strategy now has to confront different epidemics and accommodate different populations all at the same time. HIV prevalence among injection drug users in parts of Vancouver is estimated at 25%, the highest rate in North America. In many ways and in spite of advances made in the past, "the HIV/AIDS epidemic is still largely in front of us … [and] society must cope with cumulating numbers of new infections each year and the related economic impacts."[12]

3. Funding Adequacy: Canadian Measures

The Canadian Strategy on HIV/AIDS includes a variety of priorities and goals. These are perhaps appropriate to the challenges of today and the future. It is not so clear, however, whether the $42 million federal investment in the Strategy is adequate given the changing nature of the epidemic, the continuing threat posed by HIV/AIDS or the Strategy's own goals. The following examines funding adequacy relative to a variety of Canadian measures.

3.1 How have funding priorities changed over time?

Table 1 on the following page presents the three phases of the federal government's response to HIV/AIDS as well as the funding allocated for each of its priorities. It shows

[11] Bureau of HIV/AIDS, STD and TB, Laboratory Centre for Disease Control, Health Canada.
[12] Terry Albert and Greg Williams, 1998: 1.

that the Strategy's annual budget increased by 13.5% from 1990/93 to 1994/98. Subsequently it remained the same in spite of inflation and in spite of the changing nature of the epidemic, the challenges posed by this change and the increasing number of people living with HIV/AIDS.

Table 1, Financial Allocations by Strategy Component, 1990-2003[13]

NAS I, 1990-93		NAS II, 1994-98		CSHA, 1998-2003	
Area	**$(m)**	**Area**	**$(m)**	**Area**	**$(m)**
Public education	14.0	Education & prevention	6.2	Prevention	3.9
Support to provincial & local initiatives	6.0	Community development and support to national NGOs	9.8	Community development and support to national NGOs	10.0
Health & social support	2.0	Care, treatment & support	5.4	Care, treatment & support	4.75
Research including epidemioligic studies	11.0	Research & epidemioligic monitoring	17.8	Research including epidemioligic monitoring	13.15
International activities	1.2			International collaboration	0.3
Program administration	3.0	Coordination & collaboration	1.5	Consultation, evaluation monitoring & reporting	1.9
Total	**$37.2**	Ministerial discretion to address emerging issues	1.5	Surveillance systems	4.3
		Total	**$42.2****	Legal, ethical & human rights	0.7
				Aboriginal communities	2.6
				Correctional Service Canada	0.6
				Total	**$42.2**

** NAS II was characterized by small annual under-expenditures. Actual program expenditures totaled $40.7 million annually.

- The 1998 funding allocation for "care, treatment and support" is 12% less than in 1994 even though the number of people living with HIV/AIDS has increased by 43%, from 35,000 in the mid-1990s to an estimated 50,000 in 1999.

- Funding for prevention declined by 37% from 1994 to 1998 in spite of the epidemic's spread into more diverse, marginalized and difficult to reach populations.

[13] Health Canada/CPRN overview, 1998/99. The comparisons are somewhat tentative given (i) organizational changes within Health Canada, (ii) definitional changes within the Strategy and (ii) new funding routes, for example through CIDA in the international sector.

- Funding for local initiatives, community development and national non-governmental organizations increased by 63% from 1990/93 to 1994/98 but then increased by only 2% for the period 1998/2003. Meanwhile the national organizations are serving an ever-larger population and attempting to meet ever-greater needs.

- Funding for research purposes increased by 62% from 1990/93 to 1994/98 but then declined by 26% for the period 1998/2003. The research community has suggested that the current funding level has been able to support only a third of the worthwhile projects being proposed. Furthermore, they say, the lack of adequate research funding is responsible for discouraging young researchers from entering the HIV/AIDS field.

- Funding for administration, coordination, collaboration, consultation, monitoring and evaluation has increased by 27% since 1994/98 but is still 37% lower than in 1990/93.

During this time, both over and under expenditures characterized the Strategy. In 1998/99, Strategy expenditures were $1.3 million less than the budget allocation. The most significant shortfalls were $400,000 for Prevention, $390,000 for Care, Treatment and Support, $1.2 million for Surveillance and $1.9 million for Research. At the same time, there were considerable over expenditures, for example in "Health Protection Support to HIV/AIDS" ($1.8 million), Strategic Management, Coordination, Evaluation and Monitoring ($400,000) and Community Development and Support to Non-Governmental Organizations ($200,000).

In 1999/2000, expenditures exceeded the budget by a small amount, i.e. less than $300,000. Research was the one area in which there was a significant under-expenditure ($1.6 million).[14]

It is not clear what these over and under-expenditures imply about funding adequacy. They may reflect need and demand, community capacity or an administrative inability to approve expenditures in a timely fashion.

[14] CSHA, Final Financial Status Reports 1998/99 and 1999/2000. June 1999 and June 16,2000. Prepared for the Ministerial Council on HIV/AIDS.

3.2 What is the impact of inflation on Strategy funding?

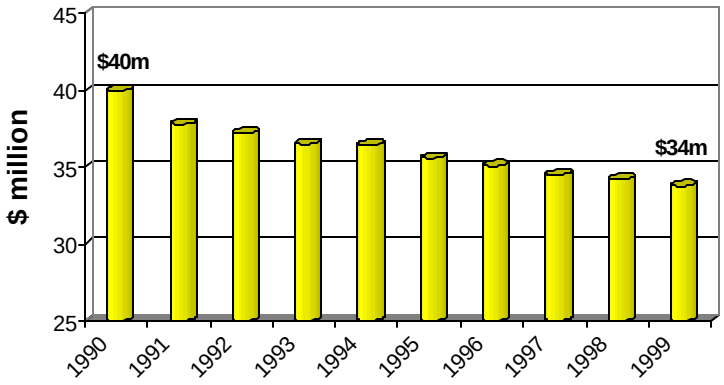
As presented in **Table 2**, inflation has been relatively low throughout the 1990s, averaging 1.84% annually.

Table 2, Consumer Price Inflation, 1991-1999[15]

	1991	1992	1993	1994	1995	1996	1997	1998	1999
Canada	5.6	1.5	1.9	0.2	2.2	1.5	1.7	1.0	1.0

Although Canada has maintained the Strategy's funding at a constant level, its real value has been significantly reduced as a result of inflation. **Figure 4** uses constant 1991 dollars and indicates that a $40 million commitment in 1991[16] is worth about $33.8 million today. In reality the purchasing power of this amount may be even less given that inflation affects different sectors of the economy in different ways. For example, the rate of inflation has likely been considerably higher in the research sector where the salaries of those with advanced technology skills have more than doubled since 1990.

Fig. 4, Impact of Inflation on Strategy Funding, 1990-99



Adjusting for inflation alone, the Strategy's 1990 base of $37.2 million would today require a budget of at least $43.8 million in order to have equal purchasing power. Similarly the 1994 base of $42.2 million would today require a budget of $45.4 million in order to have equal purchasing power.

[15] United Nations, World Economy and Social Survey 1999: 269.
[16] For the sake of clarity, the $40 million figure represents an average of the 1990/93 and 1994/98 allocations.

3.3 How does the Strategy's funding compare to the government's fiscal situation?

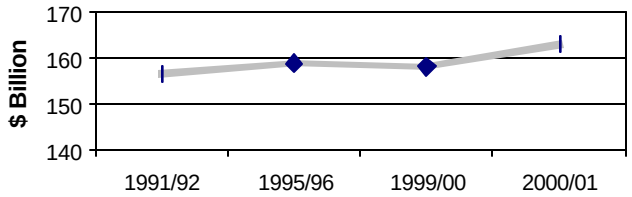
Another test of adequacy may be whether funding levels have been consistent with the government's overall financial situation.

As presented in **Table 3**, Government of Canada revenues in the 1990s increased by almost 38%, from $122 billion in 1990/91 to $168 billion in 2000/01. The Strategy's budget increased by 14% from 1990 to 1994 but then remained constant to 2000. The Strategy's budget, in other words, did not reflect the considerable growth in government revenues. However, Strategy funding compares more favourably to government spending patterns. While Strategy spending increased by 14%, government expenditures since 1990 have increased by only 4.2%.[17] This is illustrated in **Figure 5**.

Table 3, Government Revenues ($b)

	Revenues ($B)	Annual Change (%)
1991/92	$122	--
1995/96	$130	6.8
1999/00	$162	24.3
2000/01	$168	3.7

Fig. 5, Government of Canada Expenditures, 1991-2001



In 1991/92 Canada had a budget deficit of almost $35 billion and directed $37.2 million to the National AIDS Strategy. In 1994/95, it had a deficit of $37.5 billion and directed $42.2 million to the second phase of the National AIDS Strategy as it did also in 1998/99 when it had a small surplus of $2.9 billion.

In 1999/2000, the Government of Canada had a budget surplus of $12.3 billion, and a three-year surplus of $18.7 billion. It anticipates a further surplus of $23 billion in the next two fiscal years. This improvement is reflected in many of the government's funding decisions. Funding for the Canadian Health and Social Transfer in 2000/01, for example, will be $15.5 billion, 25% higher than in 1998/99. Meanwhile the

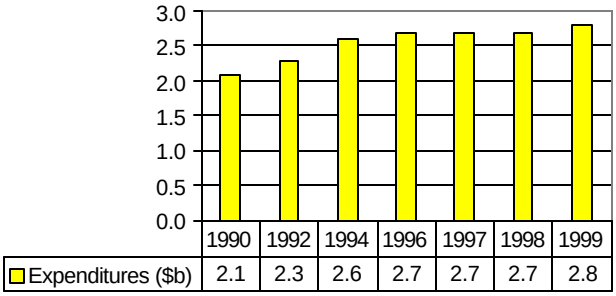
[17] L. A. Pal, 2000: 279.

government's commitment to the Canadian Strategy on HIV/AIDS remains fixed at $42.2 million.[18] To place this in context, this amount represents 0.1% of the annual cost of servicing the national debt.[19]

3.4 How does Strategy funding compare with Canadian health care spending patterns?

Figure 6 presents direct federal government expenditures on health services for population groups for whom it has responsibility (i.e., Aboriginal people, the Armed forces and veterans) as well for health research, health promotion and health protection. **Figure 7** presents the percentage change in direct health expenditures, 1990-99.[20]

Fig. 6, Direct Federal Expenditures on Health, 1990-99



If the annual change in federal direct expenditures was applied to the Strategy's 1990 base of $37.2 million, its current budget would be $53.2 million.

Fig. 7, Direct Federal Health Expenditures, % Change by Year

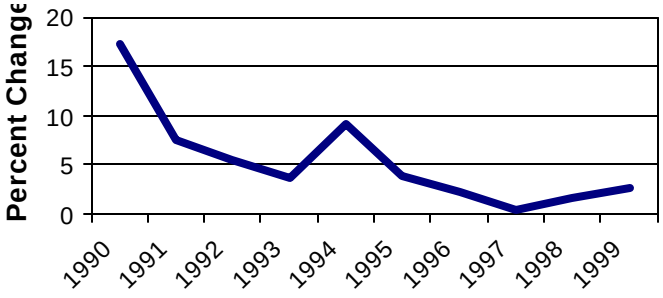
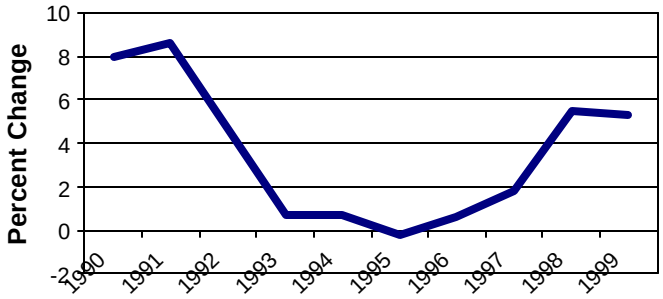


Figure 8 on the following page presents similar data for all health-related expenditures made by the provinces and territories. These expenditures include transfers from the Government of Canada.

[18] L. A. Pal, 2000: 279. Canada, Finance Canada. 2000: 3.
[19] Public Accounts of Canada, 1999. Canada. 2000. 2000-2001 Estimates.
[20] Canadian Institute for Health Information, National Health Expenditure Trends, 2000: Attachments 10 and 11. Data for 1998 and 1999 are forecasts. CIHI data will be updated in January 2001.

Both Figure 7 and Figure 8 indicate that while the rate of health spending slowed very considerably through the 1990s, there were increases in virtually every year. If the rate of increase, 1991-1999, in total provincial/territorial spending (Figure 8) were applied to Strategy's 1990 budget of $37.2 million, its current budget would be $48.7 million. If the rate of increase, 1995-1999, were applied to the Strategy's 1994 base of $42.2 million, the current budget would be $47.9 million.

Fig. 8, Gov't Sector Health Expenditures, % Change

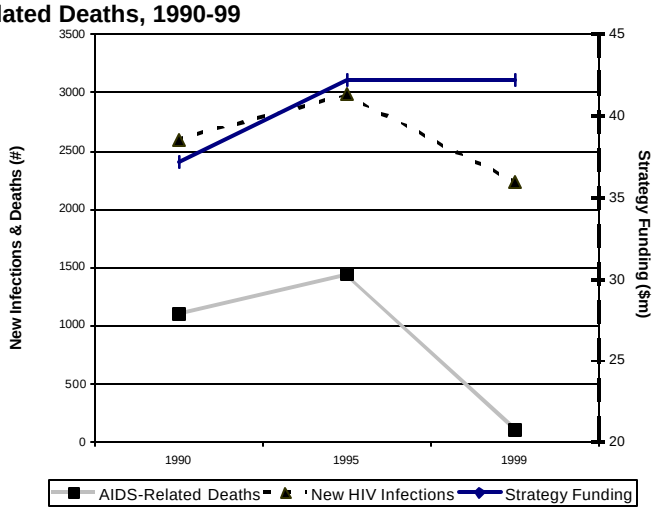


All in all, the Strategy's budget has not kept pace with the fiscal situation of the Government of Canada.

3.5 How do Strategy funding levels compare to incidence and prevalence?

Figure 9 shows that the Strategy's budget has remained constant since 1994. Meanwhile, the number of people newly infected by HIV and the number of AIDS-related deaths have declined dramatically.[21]

Fig. 9, Strategy Funding, New HIV Infections and AIDS-Related Deaths, 1990-99

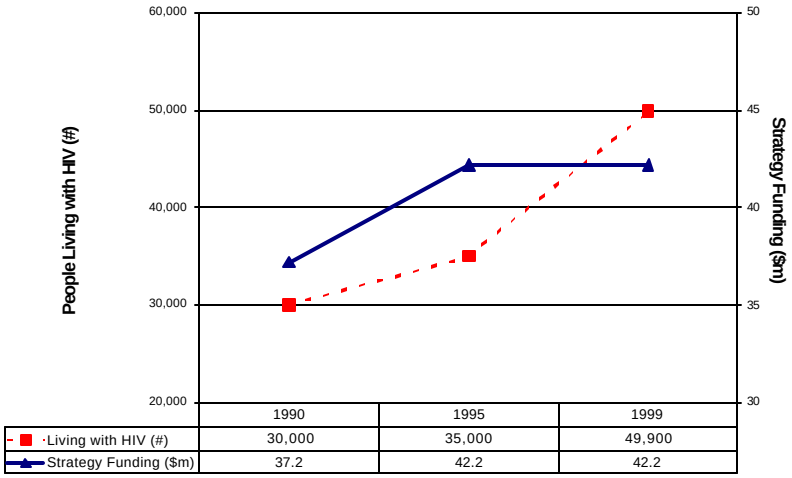


At the same time and more significantly, Strategy funding levels have not kept pace with the dramatic increase in the number of people living with HIV/AIDS. This is illustrated in **Figure 10** on the following page. In the mid-1990s, when the Strategy's budget was set at $42.2 million, there were approximately 35,000 people living with HIV/AIDS. Today there are close to 50,0000. In 1990, those living with

[21] These Figures included reported cases only rather than both reported and estimated.

HIV/AIDS constituted a relatively homogenous group. Today diverse groups are included within this population.

Fig. 10, Strategy Funding & People Living with HIV, 1990-99



The greater number of people living with HIV/AIDS has placed considerable pressure on the non-governmental organizations in the field. Yet, there have been no additional resources to address these pressures, for example:

- the Canadian AIDS Society had 90 organizations as members just three years ago and today has 123;

- in Vancouver, the BC Persons with AIDS Society is serving 40% more people now than in 1996. Meanwhile the federal government contribution to its budget was $136,000 in 1996, $120,000 in 1998 and $100,000 in 2000; and

- the Interagency Coalition on AIDS and Development, funded by Health Canada as one of its five national partners, has not had a funding increase in ten years.

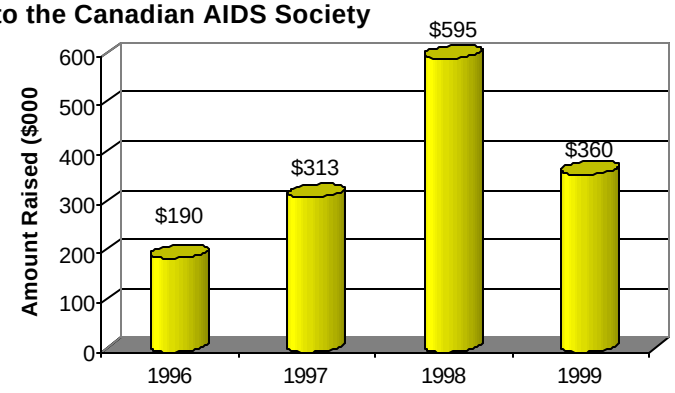
Ten years ago, these agencies had to address issues within one relatively homogeneous population. Today they have to address issues within many different populations, each with its unique cultural, social and economic needs.

3.6 Can the charitable sector make up for these financial shortcomings?

The community-based service organizations rely heavily upon volunteers to help them cope with their financial pressures. Every month, for example, an average of 420 volunteers contribute some time to the AIDS Committee of Toronto. Through the course of 1997/98, they contributed about 45,200 hours of labour, the equivalent of over $1 million.[22]

HIV/AIDS-related organizations have engaged in significant fund raising activities. **Figure 11** presents the amounts collected by the Canadian AIDS Society each year since 1996. It shows a significant increase in 1998 but then a marked decline in 1999 to more traditional levels. In 1998/99 the Canadian AIDS Society received only forty-nine contributions of $500 or more, compared with 63 in 1997/98.[23] The annual AIDS Walk, an important fund raiser for local AIDS Service Organizations, raised only $2.3 million in 1998/99 compared to $2.9 million in the previous year and $2.6 million in 1996/97.

Figure 11, Charitable Contributions ($000) to the Canadian AIDS Society



Fund raising efforts are perhaps being compromised by the public sense that HIV/AIDS is now controllable even if not curable, and by charitable givers associating HIV/AIDS with injection drug users and other marginalized populations. One author has noted that "as HIV/AIDS continues to evolve as a condition of the most vulnerable and marginalized sectors of society, it is in great danger of dropping off the public and policy map of Canada."[24] In the United States, a survey of charitable Foundations supporting AIDS-related activities indicated that some important types of programs "such as condom distribution and needle exchange programs are rarely funded." The survey also indicated Foundation funding was most often directed to the general population rather than to those who were most at risk of contracting HIV.[25]

[22] AIDS Committee of Toronto, 1998/99.
[23] Canadian AIDS Society Annual Report, 1998/99.
[24] Jim Young, 2000: 1.
[25] Dr. J. Schechtel, n.d.: 2.

In sharp contrast, in 1999 one donor established a $400,000 endowment for the Canadian Diabetes Association camp for children in Manitoba. Each year the Canadian Diabetes Association raises millions of dollars for diabetes research, education, service and advocacy. This money is supplemented by a $15 million commitment from the federal government's Canadian Diabetes Strategy.[26]

Similarly the Canadian Breast Cancer Network (CBCN) is able to count on strong public and corporate support to supplement the Government of Canada five-year commitment of $15 million for research. Its corporate contributors include the Royal Bank of Canada Charitable Foundation, Avon Canada, the In Between Dances Project, Manulife Financial, the Catherine and Maxwell Meighen Foundation, the Imperial Oil Charitable Foundation, Air Canada, Barrick Gold Corporation and the Canadian Pacific Charitable Foundation.

The CBCN has an annual budget of $9 million and commits $3 million annually to research purposes. Like the HIV/AIDS organizations, the CBCN considers this amount to be inadequate. Given expenditures of over $800 million in the United States for breast cancer research, the CBCN suggests $35 million as an appropriate federal investment.

The Canadian Cancer Society is the largest single funder of cancer research in Canada. In 1999, the Society had revenues of $102 million with almost $36 million coming from its fund-raising campaigns, $21 million from special events and $25 million from bequests. In contrast to the Canadian AIDS Society contributor profile, the Canadian Cancer Society had almost 170 sponsors who each contributed a minimum of $10,000.[27]

In 1997/98 alone, the Canadian Cancer Society directed $41 million to cancer research, an amount equivalent to entire budget of the Canadian Strategy on HIV/AIDS. Even at

[26] Canadian Diabetes Association, 1999: 7, 10. The CDA estimates that at least $9 billion is spent annually treating the two million Canadians living with diabetes. Like HIV/AIDS, diabetes is a world-wide problem: there are currently 135 million people living with diabetes and the World Health Organization expects this number to reach almost 300 million by 2025.

[27] Canadian Cancer Society, 2000. In 1997 there were 58,703 cancer deaths in Canada. Lung cancer alone accounted for 26.3% of these deaths, breast cancer 8.5%, cancer of the large intestine 8.1% and prostate cancer 6.2%. It is estimated that there will be 132,100 new cases of cancer and 65,000 deaths from cancer during the year 2000.

that level, the funding supported only 23% of the grant applications that had been recommended by expert panels of scientists, compared to 30% in the previous year.[28]

4. Funding Adequacy: International Measures

Canada is one of many countries attempting to address the HIV/AIDS epidemic. International comparisons provide some insight into the adequacy of the Government of Canada investment in the Canadian Strategy on HIV/AIDS.

Developing these comparisons, however, is fraught with challenges. Health care is delivered through different and not necessarily comparable systems in each country. Health care funding is provided through different channels. The national governments in both Canada and Australia, for example, transfer funds to the provinces and states for health care purposes. In Australia, the Commonwealth government negotiates with the States and Territories on the amount designated specifically for HIV/AIDS. Canada cannot condition its transfers since the provincial order of government has jurisdictional responsibility for health care.

Similarly, countries identify, classify and document their health and other public expenditures in different ways. These countries, and international organizations such as UNAIDS or the World Health Organization, often report their HIV/AIDS-related information in ways that make comparisons impossible. In some cases, different publications from the same organization offer contradictory data. Very often, these international organizations focus almost exclusively on trends in the developing world and do not provide information for countries such as Canada, the United States and the United Kingdom.

These factors make it difficult to compare the situation across national boundaries. Nevertheless the following examines a range of quantitative measures from a variety of countries in order to explore whether the comparisons provide some insights into funding adequacy or into the relationship between positive outcomes and expenditure levels.

[28] Canadian Cancer Society, 2000: 21.

4.1 Comparative Data from Selected Countries

Figure 12 speaks to the success of various countries in preventing the epidemic's spread. In Canada, for example, one out of every 624 people is living with HIV/AIDS compared to one out of every 1558 in Australia and one out of every 2966 in Sweden.

Figure 12, By Country, One out of every … people is living with HIV/AIDS, 1999

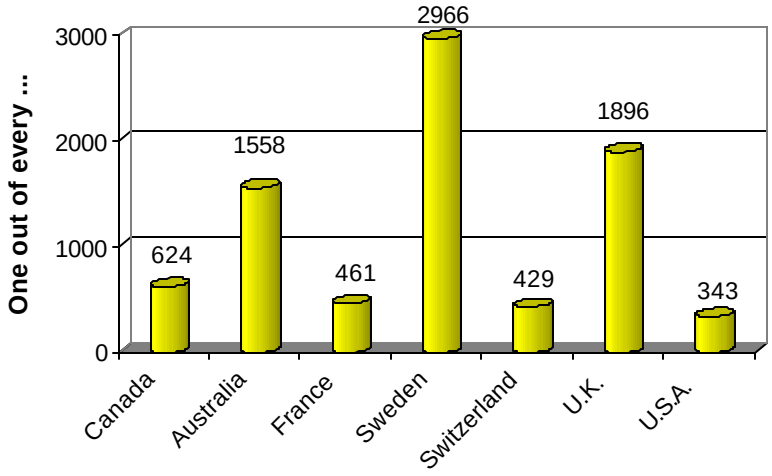


Table 4 presents the number of AIDS cases reported by year in selected countries, and the percent change from the previous year. All the countries have shown dramatic decreases year over year, and none more so than Australia. In 1999 the United States had the smallest decline while Australia followed by Switzerland had the largest.

Table 4, Number of New AIDS cases (and percent change from previous year) reported for selected countries[29]

Year	Canada No. (%)	Australia, No. (%)	France, No. (%)	Sweden, No. (%)	Switzerland, No. (%)	UK, No. (%)	U.S.A., No. (%)
1985	375	129	310	26	58	158	~13,600
1990[30]	1,422 (280)	675 (423)	4,355(1305)	131 (404)	456(686)	1,265 (701)	~51,200 (276)
1995	1,572 (11)	801 (16)	5,486 (26)	198 (51)	736(61)	1,571 (24)	73,767 (44)
1996	1,050 (-33)	654 (-19)	4,840 (-12)	156 (-21)	543 (-26)	1,854 (18)	68,808 (-7)
1997	668 (-37)	357 (-45)	2,836 (-41)	77 (-51)	565 (4)	1,379 (-26)	60,270 (-12)
1998	552 (-16)	273 (-24)	2,026 (-29)	63 (-18)	426 (-25)	964 (-30)	47,915 (-20)
1999	325 (-41)	44 (-84)	N/A	73 (16)	264 (-38)	788 (-18)	46,400 (-3)

[29] UNAIDS/WHO Epidemiological Fact Sheets on HIVAIDS and sexually transmitted infections: 2000 Update.
[30] Percent increase from 1985.

Table 5 presents HIV prevalence and AIDS incidence rates for selected countries. Germany, followed by the United Kingdom and Australia, have the lowest rates while the United States has the highest.

Table 5, Estimated HIV Prevalence and AIDS Incidence Rates, 1999[31]

Country	HIV Prevalence		AIDS Incidence	
	Number	Rate	Number	Rate
Canada	49,000	159	701	2.3
Australia	12,160	66	196	1.1
France	130,000	221	2,026	3.4
Germany	37,000	45	575	0.7
United Kingdom	31,000	53	788	1.3
United States	850,000	308	46,400	16.7

Tables 6 and **7** on the following page provide an overview on the HIV/AIDS epidemic in selected countries and the financial commitment of certain countries to addressing the epidemic.[32]

Taken together, these tables do not indicate a correlation between expenditures and HIV/AIDS-related outcomes. The United States for example, has the highest GDP per capita as well as the highest per capita spending on HIV/AIDS. Yet as indicated in this series of Tables and Figures, it also has the highest incidence and prevalence rates.

The U.S. experience speaks to the importance of addressing other social and economic factors as part of the effort to prevent the epidemic's spread and to provide appropriate care and treatment to those living with HIV/AIDS.

[31] Australia, 2000: 84.
[32] Adequately detailed expenditure information was not available for France, Sweden or the U.K. in Table 7.

Table 6, Country Comparisons[33]

Country	Total Population (m)	PLW-HIV/AIDS (#), 1999	New HIV Diagnoses (#), 1999	PLW-AIDS (#.), 1999	AIDS-Related Deaths (#), 1999[34]
Canada	31.2	50,000	2,333	16,900	400
Australia	19.2	12,000	680 (1998)	2,500	100
France	60	130,000	N/A	49,400	2,000
Sweden	8.9	3,000	N/A	1,694	<100
Switzerland	7.3	17,000	~850 (1997)	6,600	150
U.K.	58.8	31,000	2456	16,400	450
U.S.A.	274.5	800,000	42,500	717,400	20,000

Table 7, Financial Commitment

Country	HIV/AIDS Expenditures ($NC million)	Per Capita Expenditure ($NC)	Expenditure /PLWHA ($NC)	GDP per capita ($U.S.)
Canada	42.2	1.35	840	$21,061
Australia	24.0	1.25	2,000	$20,694
Switzerland	23.9	3.27	1,406	$27,100
U.S.A.	4,981	18.15	6,226	$34,100

($NC = national currency)

Table 8 and **Figure 13**[35] use the same data to present:

- public expenditures by country on health, as a percent of Gross Domestic Product (GDP); and
- the HIV incidence rate by country for adults ages 15-49 years.

As with the previous tables, the data do not indicate any correlation between spending and HIV incidence. Canada, for example, commits a higher proportion of its GDP to

[33] The data are taken from a variety of international and national sources. Expenditures include discretionary spending only and not the cost of treatment or medical and home care. Various international and national sources were used to construct these tables as there is no single document providing consistent and reliable data across countries.
[34] UNAIDS report on the Global HIV/AIDS Epidemic, June 2000.
[35] World Health Organization, 1998: 190, 214.

health than does Australia but has an incidence rate more than twice that of Australia. Canada spends less on health than does Switzerland but the incidence rates in the two countries are virtually the same. The incidence rate is by far the highest in the United States in spite of its public expenditures on health, as a percent of GDP, being slightly higher than the average for the group.

Table 8, Public Expenditures on Health as % of GDP, and HIV Incidence Rate among Adults (15-49 years), 1997

	Canada	Australia	France	Germany	Italy	Japan
Public Expenditures on Health, % of GDP	6.4	5.5	7.1	8.3	5.3	5.9
Adult HIV Rate	0.33	0.14	0.37	0.08	0.31	0.01
	N. Zealand	**Spain**	**Sweden**	**Switzerland**	**U.K.**	**U.S.**
Public Expenditures on Health, % of GDP	5.9	5.6	7.2	7.1	5.9	6.5
Adult HIV Rate	0.07	0.57	0.07	0.32	0.09	0.76

Fig. 13, Public Health Expenditures and HIV Incidence Among Adults (15-49), 1997

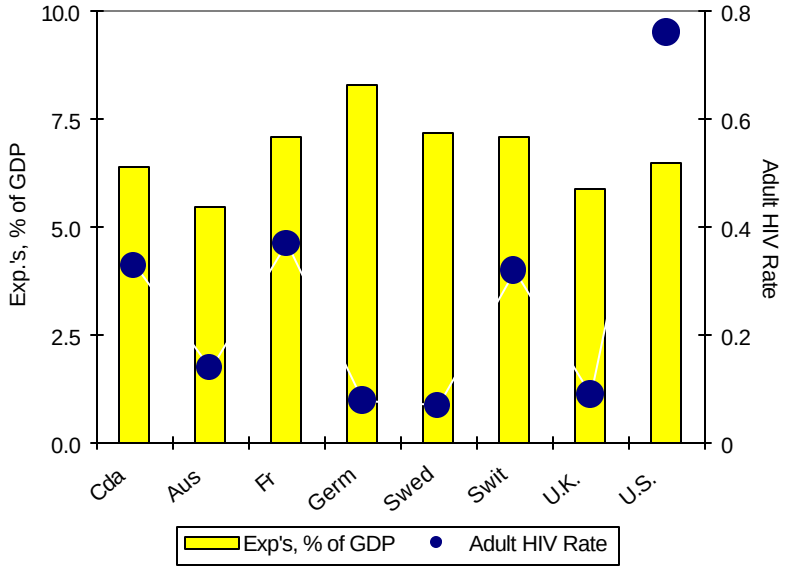


Table 9 further explores the relationship between health spending and success in preventing or addressing HIV/AIDS. The United Kingdom and France have populations that are roughly comparable in size. Yet while the United Kingdom spends 5.9% of

GDP on health and France 7.1%, the latter had approximately 130,000 people living with HIV/AIDS while the U.K. had 31,000. The United States, meanwhile, with almost five times the population of the U.K., and with a more significant commitment of public funds to health, had twenty-seven times the number of people living with HIV/AIDS.

Table 9: Expenditures on Health and Number of People Living HIV/AIDS[36]

Country	Population (m)	Public Exp's on Health, as % of GDP, 1997	People living with HIV/AIDS, 1999
Canada	30.8	6.4	49,000
Australia	18.7	5.5	12,000
France	58.9	7.1	130,000
Sweden	8.9	7.2	3,000
Switzerland	7.3	7.1	17,000
United Kingdom	58.7	5.9	31,000
United States	276.1	6.5	850,000

Clearly, spending alone does not correlate with a country's success in preventing the spread of HIV/AIDS.

4.2 Funding Priorities

Funding for the Canadian Strategy on HIV/AIDS appears to have been based on two pillars:

- first, historical funding levels. These determined the amount committed to the Canadian Strategy on HIV/AIDS both in 1990 and in 1994. That approach is by no means unique to this particular policy and program area. Instead it characterizes perhaps most of the spending areas in government.

- second, political considerations. Budgeting decisions are part of a political process with allocations for any particular undertaking ultimately being determined by the Minister of Finance for Canada and the Prime Minister. They

[36] HIV/AIDS-related data from UNAIDS, Report on the Global HIV/AIDS Epidemic, 2000. Public health expenditure data from World Health Organization, 1998: 190 and 214.

consider departmental recommendations but are influenced by what lobby groups are requesting and by what they think the public at large will accept.

Need and considerations of adequacy appear to be only a part of these pillars' foundation. Indeed there is not a clear framework or a conceptual or practical model for determining need and adequacy relative to broad strategies.

This gap is by no means unique to Canada. Key informants in other countries described similar situations. Their budgets for HIV/AIDS-related activities were determined through a largely political process and were based upon historical patterns rather than upon any clear determination of either need or adequacy. Indeed, practical politics very often appears to outweigh good public policy. In the United States for example, the Kaiser Foundation has suggested that political pressures on the federal government prevent it from funding needle exchange programs regardless of their proven effectiveness in combating HIV/AIDS.

The $42.2 million investment in the Canadian Strategy is equivalent to about $1.40 per person and about $840 per person currently living with HIV/AIDS. Both the population of Australia and its financial commitment to an HIV/AIDS strategy are about half that of Canada. Similarly its financial commitment remained largely constant throughout the 1990s at about $24 million.[37] On a per capita basis, Australia's spending is lower than that of Canada, at $1.25. At the same time, however, its financial commitment is $2,000 per person living with HIV/AIDS. That is about 50% higher than the Government of Canada commitment.

Fig. 14, Per Capita Expenditures on HIV/AIDS

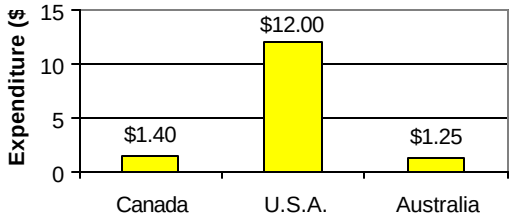
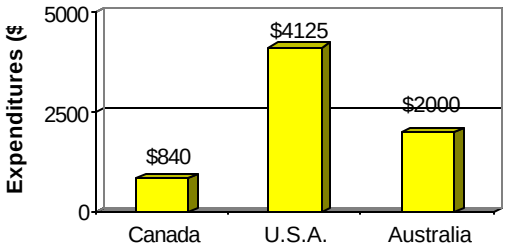


Fig. 15, Expenditures per PLWHA

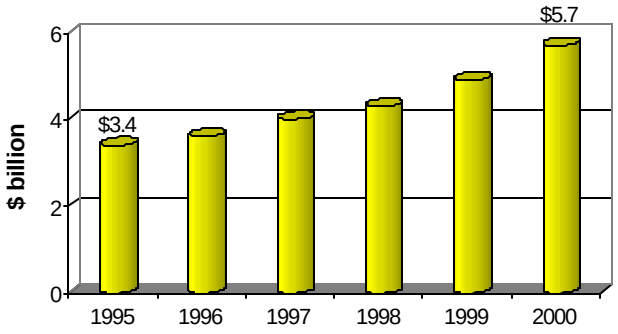


[37] This includes only direct expenditures made by the Commonwealth Government in Australia. The Commonwealth Government, however, does designate certain of its fiscal transfers to the states specifically for HIV/AIDS-related purposes.

Meanwhile, the HIV prevalence rate in Australia is 60% lower than the rate in Canada while its investment, per person living with HIV/AIDS is 52% higher. However, any effort to associate higher spending with lower incidence is compromised by the United States experience. There, higher per capita spending has not produced any similarly positive outcomes.[38]

Importantly, funding for HIV/AIDS in the United States increased steadily through the 1990s unlike in Canada, Australia or the United Kingdom.[39] In 2000, the U.S. commitment to HIV/AIDS was $5.7 billion compared to $3.4 billion in 1995. This represents an increase of almost 68%. Funding for prevention efforts alone increased by 29%, from $656 million in 1995 to $884 million in 2000. Funding for international programs increased by almost 94%, from $125 million in 1995 to $243 million in 2000. The HIV prevalence rate in the United States is 94% higher than in Canada while its investment per person living with HIV/AIDS is 640% higher.

Fig. 16, U.S. Discretionary Budget for HIV/AIDS, 1995-2000



4.3 Spending on Research

Examining different countries' investment in HIV/AIDS-related research may be one way of approaching the larger funding adequacy issue. The research field is one of the few areas in which there is clear comparative data.

The Canadian Strategy's funding commitment to research declined by 26% from 1994 ($17.8 million) to 1998 ($13.15 million). Australia meanwhile – with a Strategy budget half that of Canada – commits $12 million to research and maintained this level of funding through the better part of the 1990s. Spending on research represents almost 62% of Australia's budget compared to 31% in Canada. In Australia, the per capita

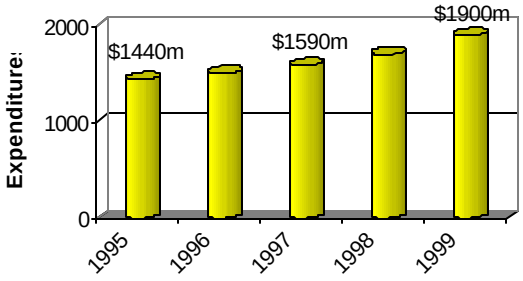
[38] Kaiser Family Foundation, Financing HIV/AIDS Care, 2000: 2.
[39] Kaiser Foundation, 1999: 14-20.

commitment to HIV/AIDS research is $0.68 while its expenditures per person living with HIV/AIDS is $785. The equivalent commitment in Canada is $0.42 and $292.

Switzerland has a population of only 7.3 million people and approximately 17,000 people living with HIV/AIDS. As in Canada, Switzerland in 1997 committed approximately 30% of its HIV/AIDS budget to research. This proportion has grown to 45% in recent years. Overall its financial commitment to research has increased by 42% since 1994.

The most striking contrast with regard to research is between Canada and the United States. In the latter, research funding has increased steadily and dramatically since 1995. In 1999, its research budget was 32% higher than in 1995. This pattern is presented in **Figure 17**. HIV/AIDS-related research is such a priority in the United States that it is the target of some criticism for receiving a disproportionate share of the total research dollars available.[40]

Fig. 17, U.S. Spending on HIV/AIDS-Related Research ($US million)



Canadian HIV Trials Network

Under the first phase of the National AIDS Strategy, the Canadian HIV Trials Network (CTN) received $3.4 million/year. Although funding for the second phase of the Strategy was increased, funding for the CTN was reduced to $2.9 million/year in spite of positive evaluations and a request for $5.8 million/year.[41] This request was endorsed by the Canadian AIDS Society, the Canadian Public Health Association, the Canadian Hemophilia Society, the Parliamentary Ad Hoc Committee on AIDS, the National Advisory Committee on AIDS and Health Canada's Expert Advisory Committee on HIV Therapies.

For the period 1998 to 2003, the Strategy allocated $3.2 million/year to the CTN, a 10% increase from 1994/98 but a 6% decrease from 1990/93. In the United States, the ACTG – the equivalent to the CTN – also enjoyed a 10% increase in this period, from

[40] Kurt Darr, 1999: 29.
[41] Canadian HIV Trials Network, 1998: 6.

$98.7 million in 1995 to $108.8 million in 1999. The U.S. clinical trials group is requesting a 5.2% increase for 2001.

The CTN itself suggests that "a minimum of $3.2 million per year is necessary" to maintain its activities[42] although additional amounts will be required as the impact of new drugs dissipates and as resistance to these new drugs increases. The funding is also required to attract young researchers to the field and to retain them in Canada. According to the Canadian Cancer Society, their presence in Canada is vital for a number of reasons:

- a vibrant research community has a significant impact on the care received by patients. Researchers are part of a global network and bring new ideas and practices to the Canadian health care field.

- new knowledge is often complex and requires a degree of expertize and specialization in order to make use of it. Researchers have to be available to advise clinicians.

- research endeavours provide patients with access to state of the art treatments, particularly when still at the clinical trials stage.[43]

4.4 Overseas Development Assistance

The Canadian Strategy recognizes that HIV/AIDS is an issue of international importance and commits a small amount of funding to support international networking and meetings. Responsibility for Canada's Overseas Development Assistance rests largely with the Canadian International Development Agency (CIDA).

Relative to GDP, Canada provides somewhat less than the average of selected countries for overseas development assistance. Data to this effect are presented in **Table 10**.

[42] Canadian HIV Trials Network, 1998: 5.
[43] Canadian Cancer Society, 2000: 6.

Table 10, Overseas Development Assistance (ODA) Relative to GDP, 1999[44]

Country	ODA ($U.S. billion)	GDP ($U.S. billion)	ODA/GDP (%)
Canada	2.1	722.3	0.29
Australia	1.4	416.2	0.34
France	6.3	1,373.0	0.46
Germany	5.6	1,864.0	0.30
Sweden	1.7	184.0	0.93
United Kingdom	3.4	1,290.0	0.27
United States	6.9	9,255.0	0.08
Average			0.38

At the same time, Canada's contribution to international, HIV/AIDS-specific initiatives has been relatively good. These data are presented in **Table 11**. Canada increased its HIV/AIDS-related development assistance by 25% in 1997 relative to 1996.

Table 11, HIV/AIDS-related Overseas Development Assistance ($U.S. million)[45]

Country	1996 Funding	1997 Funding	% Change
Canada	10.04	12.55	25.0
Australia	12.56	11.55	(8.1)
Germany	6.14	12.65	106
Japan	9.67	9.38	(3.0)
Sweden	15.75	10.74	(31.8)
Switzerland	1.75	1.6	(8.6)
U. K.	25.90	24.48	(5.5)
U.S.A.	137.51	135.19	(1.7)

Given the enormity of the challenge confronting the developing world, it is difficult to conceive of what might be an adequate contribution by a country such as Canada.

[44] United States, Central Intelligence Agency, 2000: Country Charts
[45] UNAIDS, 1999: 17.

5. Conclusions and Recommendations

HIV/AIDS is unique in many ways. It is 100% preventable although prevention depends upon being able to reach out effectively to diverse groups of people, some of whom are on the very margins of society. It creates a host of health, social and economic problems for those who are infected and presents formidable challenges to those who provide care or treatment. To date, it has been 100% fatal and, to date, researchers have not found either a vaccine or a cure. HIV poses a tremendous public health challenge in part because it has a long incubation period during which the virus may be spread. Government and community efforts to address HIV/AIDS are complicated by its transmission through intimate and sometimes illegal activities, and by the ever-changing nature of the disease and the epidemic.

HIV/AIDS is still poorly understood and consequently there is not a clear sense of what level of investment is required – or is adequate – to prevent its spread, to provide care and treatment, or to find a cure. This inability to define adequacy is by no means unique to HIV/AIDS. It also characterizes the larger debate about health care spending in Canada. Neither Canadians nor their governments have engaged in a thorough and informed discussion about what amount of spending would be adequate to achieve their public health goals. Canadians agree that health care is a priority. They do not agree on what level of investment they are willing to make in support of that priority.

Efforts to discuss adequacy are complicated by the apparent clash among growing need, competing priorities and limited resources. No matter how wealthy a nation, "there are demands and desires that will go unsatisfied."[46] No matter what resources are allocated, "they are never likely to be sufficient to keep pace with growing needs and demands. Resources are finite … whereas needs, and certainly demands and wants, are infinite."[47]

For health care generally and for the Canadian Strategy on HIV/AIDS more specifically, there is not a process, a formula or a framework for determining what might be an adequate budget. The following attempts to build a foundation for defining and determining adequacy relative to the Canadian Strategy on HIV/AIDS.

[46] Ullrich Hoffmeyer and Thomas R. McCarthy, 1994: 137.
[47] David J. Hunter, 1997: 6.

5.1 Adequacy in the International Context

The international data presented in Section 4 do not provide many insights into what would be an adequate level of spending for the Canadian Strategy on HIV/AIDS. Some countries, for example, spend more and achieve less than does Canada. Others spend less and seem to achieve more.

Some countries – unlike Canada – have increased their HIV/AIDS investment through the 1990s but others have not. The United States, for example, has enhanced its HIV/AIDS budget but continues to have incidence and prevalence rates many times those of Canada. The United Kingdom and Australia have not increased their investments and yet are enjoying considerable successes in their prevention, care and treatment efforts. Some countries have invested much more heavily in research than has Canada, but Canadian researchers continue to be international leaders in the field.

Importantly, the international experience in the developed world suggests that spending alone will not ensure success. One four-nation study of prevention investments relative to epidemiological outcomes offers a similar conclusion: international comparisons "cannot support conclusions about causal relationships between investment level and the evolution of the epidemic."[48] The study suggests that other factors seem to have a greater impact on outcomes than do funding levels.

The timing of prevention investments, for example, appears to be important. The United Kingdom and Australia both responded to the epidemic more quickly than did Canada and made their investments earlier. Their experience emphasizes the importance – indeed the vital necessity – of getting out in front of the epidemic before it takes hold in a population. Their experience and success also speaks to the importance of an effective surveillance and monitoring system that can influence policy and program decisions at every level.

The nature and content of prevention efforts also appear to be important for achieving positive outcomes. Switzerland, the United Kingdom and Australia have all been less reticent than Canada, or the United States in particular, to adopt harm reduction strategies such as needle exchange programs.

[48] Greg Williams, Robert Palmer, Barbara Legowski, Hady Abillama, Denis Chenard and Terry Albert, n.d.

These countries have also been more willing to reach out, in appropriate ways, to those groups who are most at risk of contracting or spreading HIV. As early as 1983, for example, the United Kingdom began partnering with a variety of at-risk communities. It initiated its first needle exchange programs in the period 1985-87. The outreach has led to a plethora of small service delivery organizations and perhaps to some duplication. But the incidence and prevalence data from the United Kingdom speak to the wisdom of the approach.

The international experience, particularly in the United States, also speaks to the importance of addressing the social determinants of health. It is difficult to conceive of HIV/AIDS strategies being successful until societies address issues such as poverty and homelessness. These generally characterize the at-risk populations, in Canada and elsewhere.

5.2 Adequacy in the Canadian Context

In 1990 and again in 1994 and 1998, the Government of Canada determined the Strategy's budget on the basis of historical spending patterns and political realities. There were consultations with the HIV/AIDS community but these focused on priorities and allocations within the budget established through the government's normal budget planning process. The consultations focused on how to cut up the pie not on the size of the pie itself.

In this regard, the Canadian government's approach was no different than that evident in provincial governments across Canada. And it was no different from that used by national governments in Australia, the United Kingdom and elsewhere.

In 1994 the government allocated $42.2 million for the Canadian Strategy on HIV/AIDS. Today, the budget remains at $42.2 million. If this amount was appropriate in 1994, it has to be regarded as inadequate today given:

- the impact of inflation. Inflation has significantly reduced the purchasing power of the 1994 investment, particularly in the high technology sector. That investment will purchase less than $34 million worth of effort today.

- the increasing number of people living with HIV/AIDS and their ability to live longer in spite of the disease. In 1994, there were approximately 35,000 people

living with HIV/AIDS. Today there are 50,000 and the number is growing every year.

- the epidemic's proliferation into harder to reach and more marginalized diverse populations. The at-risk population is today diverse and often homeless. A variety of strategies are required if prevention, care and treatment efforts are to be effective.

- the increased number of organizations struggling to serve these populations and to deliver services which are appropriate to the different at-risk groups. Different populations have different linguistic, cultural, social and economic needs.

- the potential for positive outcomes to emerge from the scientific and social research currently underway and from the interaction among the worldwide community of scientists.

- the devastation which the pandemic is causing in the developing world.

The federal government's static investment stands in sharp contrast to some Canadian jurisdictions that are closer to the impact of HIV/AIDS on people. British Columbia, for example, provided $750,000 to community-based AIDS Service Organizations in 1992. It increased this allocation to $1.5 million in 1994/95 and to $5.5 million in 1995/96. Today the province provides these organizations with over $11 million.

5.3 An Adequate Amount

There is no easy answer to the question of what would be an adequate budget for the Canadian Strategy on HIV/AIDS. The Strategy has a vision. It has goals and policy directions, and it encompasses a broad range of activities. But it does not have clear, precise and quantifiable objectives. Without these, neither the government nor the community can determine what funding is needed. It is necessary to know what you expect to achieve before you can determine what budget is needed or is adequate to achieve it.

Nevertheless it is possible to conclude that $42.2 million is inadequate. Assuming that $37.2 million in 1990 and $42.2 million in 1994 were appropriate funding levels, a Strategy budget of:

- $43.8 million to $45.4 million would today be adequate if the goal was simply to keep up with inflation. This amount, however, would not be adequate if the goal was to take into account the increasing number of people living with HIV/AIDS, their changing needs and the changing nature of the HIV/AIDS epidemics.

- $48 million to $53 million would today be adequate if the goal was to ensure that the pattern of spending for HIV/AIDS was consistent with that in the health care sector more broadly. This budget would allow for a very modest expansion of certain services and initiatives.

- $60 million would today be adequate if the Strategy's 1994 budget was appropriate for the 35,000 people living with HIV/AIDS at that time, and $70 million would be adequate if the Strategy's 1990 budget was appropriate for the 30,000 people living with HIV/AIDS at that time. These amounts do not take into account either inflation or the changing or more challenging nature of the epidemic today.

Some groups in the HIV/AIDS community have suggested a budget of $85 million. That would allow the Strategy to respond more fully to the needs of those living with HIV/AIDS. And it would begin to address the many spending priorities identified by contributors to this project. A budget of $85 million, for example, could:

- support efforts to get out front of the epidemic in the hope of achieving the same level of success that is evident in the United Kingdom or Australia.

- allow for the expansion of harm reduction initiatives that have proven their effectiveness.

- permit outreach to those communities that are at highest risk of HIV infection.

- improve the ability of people living with HIV or AIDS to manage their condition, in part by making affordable housing available and in part by developing the range of social and economic conditions that contribute to good population health.

- allow Aboriginal organizations – in urban and rural settings and in the North – to develop and implement strategies and programs that are appropriate to their communities.

- stabilize the non-governmental organizations serving the HIV/AIDS populations and allow them to respond more fully and more adequately to community needs.

- enable Canada to improve its HIV/AIDS surveillance system and begin to approach the achievements made by the United Kingdom and Australia in this regard.

- build momentum in the research community and convince young researchers to work on HIV/AIDS challenges rather than gravitating to other areas.

All of these amounts - $85 million, $60 million, $53 million – are "a small investment by government standards."[49] At the same time, it is an investment that promises significant economic as well as health and social dividends. For example, the $3 million federal investment in the Canadian HIV Trials Network has supported at least $18 million worth of research. With the federal contribution as seed money, the Canadian Network was able to obtain an additional $3.5 million from the provinces and $12 million from its pharmaceutical partners.[50]

It is also a small investment relative to the direct savings that will accrue to government and society through the long term. Measures that reduce the number of new HIV infections to 1,700 per year could produce $4 billion in savings through the next five years.[51] Importantly, infections averted today have a cumulative effect by disrupting the chain of viral transmission. "Prevention should be viewed as an investment that generates benefits in the future and spreads these benefits to those who might have been at risk."[52]

5.4 Building a Foundation

Additional funding for the Canadian Strategy on HIV/AIDS is important and necessary by almost any measure of adequacy. Canada is a rich and affluent nation. It can afford an investment that is appropriate to the epidemic's significance in terms of both the human suffering associated with HIV/AIDS and its social and economic impact. Canada cannot afford not to respond adequately and appropriately.

[49] BC, Report of the Provincial Health Officer, 1998: 19.
[50] Canadian HIV Trials Network, 1998: 1.
[51] Terry Albert and Greg Williams, 1997.
[52] Community Health Resource Project, 1999.

At the same time, however, more money is not a panacea. The critical challenge is to capitalize on what has been learned – about surveillance and monitoring, about prevention, care and treatment, about at-risk populations and so on – and to ensure that funds are available to incorporate this knowledge into the Canadian Strategy and its many activities. The critical task is to ensure that these funds are allocated appropriately and spent effectively. That will require efforts:

- to understand more fully what is being done in Canada, why it is being done, how well it is being done and what outcomes are being achieved;

- to learn from the success which certain countries are experiencing, for example the United Kingdom and Australia;

- to identify and understand what has gone wrong in other countries, for example the United States or France; and

- to compare alternative courses of action in terms of both their costs and their consequences.

These efforts will enable government and community agencies to make informed decisions about how much is needed and about how best to allocate their resources. The efforts will also enable these agencies to begin developing a process for determining budgets on the basis of some firm foundation relating to need and adequacy.

The first step in this process would be to add a statement of realistic but concrete, measurable and quantifiable objectives to the Canadian Strategy on HIV/AIDS. Australia's 1995 Strategy, for example, established a target of two new infections per 100,000 population by the year 2000.

The second step – and admittedly a difficult one – would be to determine what funding is required to reach each of those objectives. The Strategy's budget could then be founded upon some firm pillars rather than upon political considerations or historical patterns. This would stand in stark contrast to 1998 when the Strategy's funding process began with a global amount and then obliged people and organizations to work backwards from there. The new process should be inclusive, fully transparent and founded upon good information freely shared.

The third step would be continual monitoring and evaluation, to assess the Strategy, to identify what is working and what is not, and to compare options and alternatives. Most importantly, the purpose of the monitoring and evaluation would be to ensure that the Strategy is and remains out in front of the epidemic. Budget adjustments would allow for this by ensuring adequate amounts for the highest or most pressing priorities.

Canada is part of a world community addressing the problems and challenges posed by the HIV/AIDS pandemic. It is also one of the small number of truly fortunate countries with the resources necessary to address the epidemic in an effective manner. Doing so, however, requires commitment since spending "is not necessarily based on the country's wealth or its HIV prevalence, but on priorities set by the sources of funding."[53]

The issue, then, is one of public priorities. The question is whether Canada and other countries in the developed world – as rich and as affluent as they are – are prepared to provide adequately for very sick and suffering people, for the community networks offering them support and for the research and development that may develop either a cure or a vaccine.

[53] Rebecca Voelker, 1999: 3.

Appendix A: References

1. AIDS Committee of Toronto. 1998/90. ACT's Volunteer Statistics: Fiscal Year 1997/98.

2. AIDS Task Force of the European Commission. "The European Commission in the Global Fight against AIDS: A review of strategy, philosophy, organisation and projects 1987-1992." AIDS Task Force of the EC 1992.

3. Ainsworth, Martha. 1999. Setting Government Priorities in Preventing HIV/AIDS. World Bank. March. (www.worldbank.org/aids-econ/)

4. Albert, Terry and Williams, Greg. 1997. "The Economic Burden of HIV/AIDS in Canada – Summary of Findings and Policy Implications." Reflexion, A CPRN Publication. No. 1, November, 1-19.

5. _____. 1998. The Economic Burden of HIV/AIDS in Canada. Ottawa: Canadian Policy Research Networks, Study No. H02, 1998.

6. Australia. 1989. Commonwealth Department of Health and Aged Care. National HIV/AIDS Strategy: A Policy Information Paper.

7. _____. 1995. Valuing the Past … investing in the future. Evaluation of the National HIV/AIDS Strategy, 1993-94 to 1995-96. Department of Health and Aged Care.

8. _____. 1999. Australian National Council on AIDS and Related Diseases. 1999. Proving Partnership. Review of the Third National H/A Strategy. May.

9. _____. 2000. National Centre in HIV Epidemiology and Clinical Research. 2000. Annual Surveillance Report – HIV/AIDS, Hepatitis C and Sexually Transmissible Infections in Australia.

10. _____. 2000. National HIV/AIDS Strategy, 1999-2000 to 2003-2004. Changes and Challenges. Department of Health and Aged Care.

11. _____, Commonwealth Department of Health and Aged Care. 2000. National H/A Strategy, 1999-2000 to 2003-2004. Changes and Challenges.

12. _____, National Centre in HIV Epidemiology and Clinical Research. 2000. Annual Surveillance Report – HIV/AIDS, Hepatitis C and Sexually Transmissible Infections in Australia.

13. Australian National Council on AIDS and Related Diseases. 1998. Protecting Our Investment. 1997 Report to the Minister of Health and Family Services. February.

14. Braithwaite, Jeffrey. 1997. "Competition, Productivity and the Cult of 'More is Good' in the Australian Health Care Sector. Australian Journal of Public Administration. Vol. 56(1), March, pp. 37-44.

15. British Columbia. 1998. HIV, Hepatitis and Injection Drug Use in British Columbia – Pay Now or Pay Later? Report of the Provincial Health Officer, Dr. John S. Millar. June.

16. British Columbia. Ministry of Health and Ministry Responsible for Seniors. 1998. British Columbia's Framework for Action on HIV/AIDS. Produced in consultation with the HIV/AIDS Strategy Advisory Committee. September.

17. Canada. 1996. "AIDS Community Action Program: selected project summaries." July.

18. Canada. 1991. 1990-1991 Estimates. Part II, The Main Estimates.

19. _____. 1996. 1995-1996 Estimates. Part II, The Main Estimates.

20. _____. 1999. Public Accounts of Canada, 1999. 3 Volumes.

21. _____. 1999. Report of the Auditor General of Canada to the House of Commons. Chapter 14, National Health Surveillance: Diseases and Injuries. September.

22. _____. 1999. Report of the Auditor General of Canada to the House of Commons. Matters of Special Importance. November.

23. _____, Finance Canada. 2000. Economic Statement and Budget Update 2000.

24. _____, Health Canada. 1995. National AIDS Strategy as at Year End, 1994-95.

25. _____. 1998. Renewing Canada's Strategy on HIV and AIDS – Successes, Barriers and Lessons Learned. A Synopsis, with Participant Views, of a National Consultation and Public Policy Process. Prepared for Health Canada.

26. _____. 1998. Renewing Canada's Strategy on HIV/AIDS. Successes, Barriers and Lessons Learned. A Synopsis, with Participant Views, of a National Consultation and Public Policy Process.

27. _____, Health Canada. 2000. CSHA, 1999-2000 Year End Financial Status Report. June. Prepared for the Ministerial Council on HIV/AIDS.

28. _____, Health Canada. 2000. CSHA, 2000-2001 Financial Status Report as at June 30, 2000. June. Prepared for the Ministerial Council on HIV/AIDS.

29. _____, Health Canada. 2000. HIV/AIDS Epi Updates. Bureau of H/A, STD & TB, Laboratory Centre for Disease Control. April.

30. _____. 2000. 2000-2001 Estimates. Part I and II, The Government Expenditure Plan and Main Estimates.

31. _____. Health Canada. 1997. National Health Expenditures in Canada, 1975-1996. Fact Sheets. Policy and Consultation Branch. 1997.

32. _____. 1998. Renewing Canada's Strategy on HIV and AIDS – Successes, Barriers and Lessons Learned. A Synopsis, with Participant Views, of a National Consultation and Public Policy Process. Prepared for Health Canada.

33. _____, Health Canada. 2000. The New Canadian Strategy on HIV/AIDS. September 5.

34. _____, Health Canada. The Business Case for HIV/AIDS.

35. _____, Health Canada. Laboratory Centre for Disease Control. 2000. "HIV and AIDS among Aboriginal People in Canada." HIV/AIDS Epi Update. April.

36. _____, Health Canada. 1996. AIDS in Canada: Annual Report on AIDS in Canada. Health Protection Branch, Laboratory Centre for Disease Control, Health Canada, 1996.

37. _____, Health Canada. 2000. HIV/AIDS Epi Update, "HIV Prevalence and Incidence in Canada: 40,100 Living with HIV Infection and 4,200 New Infections Per Year." Population and Public Health Branch, Bureau of HIV/AIDS, STD and TB. www.hc-sc.gc.ca/hpb/lcdc/bah/epi/estima_e.html

38. _____, Health Canada. 2000. HIV/AIDS Epi Update, "HIV Testing Among Canadians: 15,000 Current HIV Infections May Not be Diagnosed." Population and Public Health Branch, Bureau of HIV/AIDS, STD and TB. www.hc-sc.gc.ca/hpb/lcdc/bah/epi/hivtest_e.html

39. _____, Health Canada. 2000. HIV and AIDS In Canada: Surveillance Report to June 30, 2000. Division of HIV/AIDS Epidemiology and Surveillance, Bureau of HIV/AIDS, STD and TB, Centre for Infection Disease Prevention and Control.

40. _____, Health Canada. 1999. Motion and Progress: Canada's Report on HIV/AIDS 1999. Laboratory Centre for Disease Control, Bureau of HIV/AIDS and STD, Health Canada, 1999.

41. _____, Health Canada and UNAIDS. 1999. The Dynamics and Determinants of HIV in High-Income Countries. Prepared by Roy Anderson, Geoff Garnett and Polly Weiss as part of the Dialogue on HIV/AIDS initiative. Montebello, Quebec. November.

42. _____, National Forum on Health. 1998. Making Decisions. Evidence and Information. Sainte-Foy, Quebec.

43. _____, Health Canada. 2000. CSHA, 1999-2000 Year End Financial Status Report. June. Prepared for the Ministerial Council on HIV/AIDS.

44. _____, Health Canada. Laboratory Centre for Disease Control. 2000. "Canadian Strategy on HIV/AIDS: Funding." Website: www.hc-sc.gc.ca/hppb/hiv_aids/can_strat/toolkit_99/funding.html

45. _____, Health Canada. Laboratory Centre for Disease Control. 2000. "HIV and AIDS among Aboriginal People in Canada." HIV/AIDS Epi Update. April.

46. Canadian AIDS Society. Annual Reports, 1996/97, 1997/98 and 1998/99.

47. Canadian Cancer Society. 2000. "1998/99 Annual Report Issue." Progress Against Cancer. Vol. 54(1).

48. Canadian Diabetes Association. 1999. Highlights.

49. Canadian HIV Trials Network. 1998. Backgrounder to the Contribution Agreement between the Canadian HIV Trials Network and Health Canada. February.

50. Canadian Institute for Health Information. 2000. National Health Expenditure Trends, 1975 – 1999. (www.cihi.ca)

51. Centre for AIDS Prevention Studies. 2000. "Is HIV Prevention a Good Investment?"

52. Community Health Resource Project. 1999. Modelling Prevention. (www.huckleberry.chspr.ubc.ca)

53. Darr, Kurt. 1999. "Acquired Immunodeficiency Syndrome (AIDS) Update, Part 1. Hospital Topics. Research and Perspectives on Healthcare. Vol. 77(4), Fall.

54. Davies, H.T.O, Tavakoli, M, Malek, M & Neilson, A.R. 1999. Controlling Costs: Strategic Issues in Health Care Management. Brookfield, USA. Ashgate.

55. Di Matteo, Livio & Di Matteo, Rosanna. 1998. "Evidence on the determinants of Canadian provincial government health expenditures, 1965 – 1991." Journal of Health Economics. 17, 211-228.

56. Ernberg, Gunilla. 1999. "Level and flow of national and international resources for the response to HIV/AIDS, 199697." Prepared by the Harvard School of Public Health for UNAIDS. www.unaids.org/publications/documents/economics/costeffec/una99e25.pdf)

57. Evans, Robert G. 1998. "Toward a Healthier Economics." In Barer, Morris I. et. al, Health, Health Care and Health Economics: Perspectives on Distribution. Toronto, John Wiley & Sons Ltd.

58. Feachem, Richard GA. 1995. "Valuing the Past … Investing in the Future: Evaluation of the National HIV/AIDS Strategy 1993-94 to 1995-96." Canberra: Looking Glass Press.

59. Foster, Scott, Althea Gregory, Piet Niederhausen, David Rapallo & Timothy Westmoreland. 1999. "Federal HIV/AIDS Spending: A Budget Chartbook." California: The Henry Kaiser Family Foundation, August.

60. Gill, M. John, Weber, Myron; Davidson, William and Malmquist, Lynne. 1998. The Cost of Community-Based Care for Persons with HIV/AIDS. Health Canada, HIV/AIDS Economics Research Initiative.

61. Hanvelt, Robin, Copley, Tobin, Schneider, David and Meagher, Nancy. "The Economic Costs and Resource Impacts of HIV/AIDS in British Columbia." Vancouver: Community Health Resource Project, 1999.

62. Hayes, M.T., Foster, L.T. and Foster, H.D. 1994. The Determinants of Population Health: A Critical Assessment. Victoria. University of Victoria. Western Geographical Series. Volume 29.

63. Health Canada and UNAIDS. 1999. The Dynamics and Determinants of HIV in High-Income Countries. Prepared by Roy Anderson, Geoff Garnett and Polly Weiss as part of the Dialogue on HIV/AIDS Initiative. Montebello, Quebec. November.

64. Hoffmeyer, Ullrich K. & McCarthy, Thomas R. 1994. Financing Health Care. London. Kluwer Academic Publishers. Volume 1.

65. Holtgrave, David R., Valdiserri, R.O. & West, Gary. n.d. "Quantitative Economic Evaluations of HIV-Related Prevention and Treatment Services: A Review. 16 pp. www.fplc.edu/Risk/vol5/winter/holtgrav.htm)

66. Holtgrave, DR, Pinkerton, SD, Jones, TS et. al. 1998. "Cost and cost-effectiveness of increasing access to sterile syringes and needs as an HIV prevention intervention in the United States." Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology, 18 Supplement 1: S133-8.

67. Hunter, David J. 1997. Desperately Seeking Solutions – Rationing Health Care. New York. Longman.

68. Kaiser Family Foundation. 1999. Federal HIV/AIDS Spending: A Budget Chartbook. August. (www.kff.org)

69. Kaiser Family Foundation. 2000. Briefing Series on HIV/AIDS. (www.kff.org)

70. Kaiser Family Foundation. 2000. Financing HIV/AIDS Care: A Quilt with Many Holes. October. (www.kff.org)

71. Kirp, David L & Ronald Bayer, eds. 1992. "AIDS in the Industrialized Democracies." Montreal: McGill-Queens University Press.

72. Lancet, Editorial. 1997. "From what will we die in 2020?" Lancet. Vol. 349, No. 9061, p.1263.

73. Matheson, Alex. 1998. "Governing Strategically: the New Zealand Experience." Public Administration and Development, Vol. 18, 349-63.

74. Matiation, Stefan. 1999. HIV/AIDS and Aboriginal People. Problems of Jurisdiction and Funding. A Discussion Paper. Prepared for the Canadian HIV/AIDS Legal Network and the Canadian Aboriginal AIDS Network.

75. Morreim, E. Haavi. 1991. Balancing Act – The New Medical Ethics of Medicine's New Economics. London. Kluwer Academic Publishers.

76. Murray, Christopher J.L. & Lopez, Alan D. "Mortality by cause for eight regions of the world: Global Burden of Disease Study." Lancet. Vol. 349, No. 9061, p.1269-76.

77. National Cancer Institute of Canada. 1998. Annual Report, 1997-1998.

78. Organization for Economic Cooperation and Development (OECD). 1993. OECD Health Systems: Facts and Trends, 1960-1991. Paris. Health Policy Studies No. 3, Volume 1.

79. _____. 1999. Revenue Statistics, 1965/1998. Paris.

80. _____. n.d. G-20 Country Profiles.

81. Pal, Leslie A. (ed.) 2000. How Ottawa Spends 2000-01. Past Imperfect, Future Tense. Don Mills, Ontario. Oxford University Press.

82. Public Health Laboratory Service, Communicable Disease Surveillance Centre. "CDR Weekly." Vol. 1, No. 1, 3, 6. London, PHLS 1991.

83. Public Health Laboratory Service, Communicable Disease Surveillance Centre. "CDR Weekly." Vol. 10, No. 4. London, PHLS 2000.

84. Public Health Laboratory Service AIDS Centre, Scottish Centre for Infection & Environmental Health. HIV/AIDS Quarterly Surveillance Tables: UK Data to End June 2000. No. 47:00/2, July 2000.

85. Rachlis, Michael and Kushner, Carol. 1995. Strong Medicine. How to Save Canada's Health Care System. Toronto. HarperCollins Publishers Ltd.

86. Rogers, Wendy A. 2000. "Dollars, debts and duties:" Lessons from funding Australian general practice." Health and Social Care in the Community, Vol. 8(5), 291-297.

87. Schechtel, Dr. Joshua. n.d. "A Survey of AIDS Prevention Funders: Which Programs are Funded and Why?" San Francisco, USC-SF, Centre for AIDS Prevention Studies.

88. Schwartz, F.W., Glennerster, H. & Saltman, R.B. 1996. Fixing Health Budgets: Experience from Europe and North America. New York: John Wiley & Sons.

89. Society of Management Accountants of Canada, The. 1994. The Canadian Health Care Sector.

90. Statistics Canada. 2000. Canadian Statistics – Gross Domestic Product at 1992 Prices (expenditure-based). CANSIM, matrix 6549 and Cat. 13-001-XIB.

91. Switzerland, Swiss Federal Office of Public Health. 1999. "HIV and AIDS: National Program 1999-2003." Switzerland: FOPH.

92. UNAIDS. 1999. Level and Flow of national and international resources for the response to HIV/AIDS, 1996-1997. Geneva. Harvard School of Public Health, Centre for Health and Human Rights. April.

93. _____, 2000. AIDS Epidemic Update: December 2000. Geneva: UNAIDS & WHO. (www.unaids.org/wac/2000/wad00/files/WAD_epidemic_report.htm)

94. _____, WHO. 2000. Epidemiological Fact Sheet on HIV/AIDS and sexually transmitted infections, 2000 Update: Australia, Canada, France, Sweden, Switzerland, United Kingdom."

95. _____. 2000. Costing Guidelines for HIV Prevention strategies. UNAIDS Best Practices Collection. October.

96. _____, WHO. 2000. "Report on the Global HIV/AIDS Epidemic." June. www.unaids.org.

97. United Kingdom. 2000. HM Treasury Budget Documents, 1995-2000. March.

98. _____, Department of Health. 1999. "1998 Prevalence of HIV in the United Kingdom." London.

99. United Nations. 1999. World Economy and Social Survey, 1999. New York. Department of Economic and Social Affairs

100. United States. 2000. Budget Documents

101. _____, Centers for Disease Control and Prevention. 1996. HIV/AIDS Surveillance Report, 8(no.2).

102. _____, Centers for Disease Control and Prevention. 1997 HIV/AIDS Surveillance Report, 9(no.2).

103. _____, Centers for Disease Control and Prevention. 1998. HIV/AIDS Surveillance Report, 10(no.2).

104. _____, Centers for Disease Control and Prevention. 1998. Trends in the HIV and AIDS Epidemic.

105. _____, Centers for Disease Control and Prevention. 1999. HIV/AIDS Surveillance Report, 11(no.2).

106. _____. Central Intelligence Agency. 2000. Community Profiles.

107. Voelker, Rebecca. 1999. "In a World of Darkness, Nourishing the Light." Presented to the Second International Conference on Healthcare Resource Allocation for HIV/AIDS and Other Life-Threatening Illnesses." Journal of the International Association of Physicians in AIDS Care. February. (www.iapac.org/confppidx.html)

108. Williams, Greg, Palmer, Robert, Legowski, Barbara, Abillama, Hady, Chenard, Denis & Albert, Terry. n.d. "A Comparison of Historical HIV Prevention Expenditures and Historical Epidemiology in Four OECD Countries." From the author.

109. Williams, Greg, Palmer, Robert, McMurchy, Dale, Cloutier Dr. Eden, Albert, Terry, Bast, Miriam and Rachlis, Dr. Anita. n.d. Cost Comparison of Efavirenz (EFV) and Indinavir (IDV) Combination Therapies for HIV Infection. Poster Board presentation. Williams Research. 1 page.

110. World Bank. 1999. Confronting AIDS: Public Priorities in a Global Epidemic. (www.worldbank.org/aids-econ/)

111. World Health Organization (WHO). 1998. Life in the 21st Century. A Vision for All. Geneva. Report of the Director General.

112. _____. 1998. The World Health Report, 1998. Geneva. Report of the Director General. (www.who.int/whr/1999)

113. _____. 2000. Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome (HIV/AIDS). WHO Report on Global Surveillance of Epidemic-prone Infectious Diseases, Chapter 9.

114. Young, Jim. 2000. Legacy Discussion Paper: An Overview of HIV/AIDS in Canada – Past, Present and Future. Prepared for the Canadian Strategy on HIV/AIDS Direction-Setting and Work Planning Task Group. October.

115. Zuniga, Jose. 1998. Examining the Necessity to Ration Healthcare Resources for HIV/AIDS and Other Life-Threatening Illnesses. Journal of the International Association of Physicians in AIDS Care. April. (www.iapac.org/confppidx.html)

Appendix B: Key Informants

Terry Albert
Canadian Policy Research Network

Russell Armstrong, Past Executive Director
Canadian AIDS Society

Sharon Baxter, Executive Director
Canadian AIDS Society

Karen DeKoning, President
Canadian Breast Cancer Network

Dr. Eric Goosby
Office of HIV/AIDS Policy
U.S. Department of Health and Human Services

Dr. Robin Hanvelt
Community Health Resource Project
University of British Columbia

Ross Harvey, Executive Director
BC Persons with AIDS Society

Glen Hillson, Chair
Pacific AIDS Resource Centre

David Hoe
Health Canada

Elena Kanigan, Director
BC Strategy on HIV/AIDS
Ministry of Health and Ministry Responsible for Seniors

Barbara Legowski
Health Policy Consultant

Paul Lehman, Director
Communicable Diseases and Environmental Health Division
Department of Health and Aged Care, Australia

Frank McGee, Director
Ontario AIDS Bureau

Kenneth Mews
Canadian Association for HIV Research

Michael O'Conner
Interagency Coalition on AIDS and Development

Dr. Martin O'Shaunessy
Centre for Health Evaluation and Outcome Sciences

Nick Partridge, Executive Director
Terrance Higgins Trust, United Kingdom

Gunilla Rado
Principal Administrative Officer
HIV/STD Programme
Sweden

Jean-Jacques Thorens
BAG, Switzerland

Dr. Martin T. Schechter, Director
Centre for Health Evaluation and Outcome Sciences
National Director, Canadian HIV Trials Network

Flavia Schlagel
BAG, Switzerland

Robin Sussel
Centre for Health Evaluation and Outcome Sciences

Gregory Williams
Williams Research Ltd.

Jingbo Zhang, Senior Analyst
Canadian Institute for Health Information

Art Zoccole, Executive Director
Canadian Aboriginal AIDS Network

Appendix C: Key Informant Interview Guide

1. Your role/mandate and that of your agency?

Provincial Government Representatives

2. Level of spending at the provincial level over time (*for comparison to changes in federal spending over time)* for HIV/AIDS Strategy. Distribution of this spending by purpose? Additional amount (estimate) through the provincial health system for treatment purposes including pharmaceuticals.

3. Adequacy of provincial spending? Community reaction to the spending levels? How they determined what would be an appropriate and adequate level of spending?

4. Are there jurisdictional issues given the federal and provincial expenditures and efforts in this health care field? Are the lines between federally and provincially supported areas clear?

5. Some provinces do not have their own Strategies and targeted funding. Implications for how the federal Strategy dollars are used? Equity in terms of the federal spending across the country or given the distribution of people living with HIV or AIDS?

Others, Canada and International

6. Level of charitable contributions – what is the pattern (increased/decreased)?

7. Views on the adequacy of federal spending on the Canadian Strategy on HIV/AIDS ($42 million/year)?

8. Basis or foundation for response to Question 7? What are appropriate measures for determining or assessing adequacy? Process used in 1998, by the Government of Canada, to determine the appropriate funding level for the Strategy?

9. Background, policy or discussion papers relating to funding or funding adequacy?

10. Is federal spending more or less adequate now than in the earlier phases of the Strategy and the epidemic?

11. Federal spokespeople: federal documentation on Strategy spending over time, i.e. since the mid-1980s.

12. The Strategy's funding is divided among a number of different areas: $13m for research; $10m for community development; $4.8m for care and treatment, $4.3m for surveillance; $3.9m for prevention; $2.6m for Aboriginal initiatives; $1.9m for consultation and evaluation; $0.7m for legal and ethical; $0.6 for Correctional Service of Canada; and $0.3 for international. Discussion around the process used to determine this allocation.

13. In which of these areas is funding most or least adequate? Basis for that conclusion? In which of the Strategy's areas (e.g. research, community development, Aboriginal, etc.) is more funding most needed? Priorities?

14. What could be done with more funding in any of these areas or in the Strategy as a whole?

15. What would be the outcome of more spending? Is there a finite – or adequate – amount that is needed and could be spent? Cost benefit issues and issues relating to diminishing returns. Basis for remarks?

16. How does Canada compare to other countries in terms of funding adequacy? Comparison in terms of effective measures and positive outcomes?

17. Other studies of funding levels and adequacy, in Canada or in other countries

18. Other sources to consult or individuals with whom to consult?

This report was prepared by:
Martin Spigelman Research Associates
3785 Kathleen Street
Victoria, BC V8P 3H7
Telephone: (250) 361-3663
Facsimile: (250) 361-3789
E-mail: **spigelman@aol.com**

Project Team:
Dr. Martin Spigelman
Patrick Falconer, The Project Group (Winnipeg)
Aleina Spigelman