

Diabetes: An Investment for the Future Health of Canadians

**Recommendations for the Consideration
of the
House of Commons Standing Committee on Finance
from the
Canadian Diabetes Association**

2 October 2003

Know who to turn to



**CANADIAN
DIABETES
ASSOCIATION**

**ASSOCIATION
CANADIENNE
DU DIABÈTE**

SUMMARY

Diabetes is a major public health issue today in Canada and worldwide. Already at epidemic proportions, it is estimated that by 2010 over 220 million people around the world will be living with diabetes.

Today, 2 million Canadians live with diabetes – or put another way - 1 in 13 Canadians lives with diabetes. And the numbers will increase as scientific evidence recommends earlier screening of people at high risk for diabetes. Every eight minutes, a Canadian learns that she or he has diabetes. This may be one reason that 97% of Canadians believe diabetes is a public health problem of enormous proportions (*Source: Ipsos-Reid poll, December 2002*).

Based on a recent report that outlines the costs of diabetes in America, the cost of this chronic disease to Canadian society was estimated at \$13.2 billion in 2002 – up significantly from the \$9 billion in 1998. Costs will continue to escalate to an estimated \$15.6 billion by 2010 unless action is taken.

Diabetes can cause a host of serious complications if not managed well. Heart disease, kidney disease, eye disease and amputations are just a few of the well-known complications that substantially increase Canada's health care costs.

Less well-known is the fact that infectious diseases – whether the common cold, winter flu, SARS or the West Nile virus – affect people living with a chronic disease like diabetes harder and more virulently than other Canadians.

Canadians are also aging and obesity rates are rising across our country. Both are high risk factors in diabetes. Frighteningly, the proportion of children and adolescents who are overweight has tripled in the past 30 years, and -- *fat kids become fat adults*. There has never been a more urgent time for government to act.

Diabetes creates a heavy financial burden both to the individual and to government, yet it – and the expensive complications associated with the disease - can often be prevented if action is taken early on.

The Canadian Diabetes Association therefore asks the Committee to consider recommending in their pre-budget report that priority for funding next year be **an enhanced five-year renewal of the federal National Diabetes Strategy** whose current federal funding ends 31 March 2004.

Implementing this recommendation will help to prevent diabetes from developing and prevent the complications that arise from diabetes, as well as help people living with diabetes to manage their disease efficiently. As a result, escalating health care costs will be contained – and reduced - over the long-term.

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INTRODUCTION

DIABETES IN CANADA

Nearly 2 million Canadians have diabetes today and that number continues to grow as at least 60,000 Canadians each year discover from their doctor that they have diabetes.

Yet a whole lot more Canadians need to know they are now at risk for diabetes. Recent scientific evidence has positioned our view of how to potentially prevent type-2 diabetes in high-risk individuals; diagnose diabetes earlier; and aggressively manage all types of diabetes. New risk factors identify the importance of associated risk factors, particularly cardiovascular and other associated conditions such as schizophrenia, polycystic ovary syndrome, and a lowering of age risk from 45 to 40, as factors in support of earlier screening and diagnosis.

In the past, children and youth were generally diagnosed with type-1 diabetes. A child or youth diagnosed with type-2 diabetes was unusual. This picture is rapidly changing unfortunately. High-risk Canadian children and youth are increasingly diagnosed with type-2 diabetes. Recent research in the United States predicts that 1 out of 3 American children born in 2000 will be diagnosed with diabetes in their lifetime. We anticipate similar rates for Canadian children given that the proportion of children and adolescents in Canada who are overweight has tripled in the last 30 years, and our high-risk immigrant population continues to increase. Fat kids become fat adults, and excess weight is a well-known risk factor for diabetes.

Diabetes amongst senior Canadians is at epidemic levels. One in 10 Canadians aged 65 and older lives with diabetes. (*Source: Statistics Canada, Health Reports, Winter 1997, v.9, no. 3, p. 49*) And as our baby-boom generation ages, the number of Canadians living with type-2 diabetes will inevitably increase unless action is taken to prevent where possible this progression. In Ontario, persons with diabetes aged 75 and older visit a family physician, specialist or optometrist almost twice per month on average.

First Nations, Inuit and Metis are 3 times more likely to have type-2 diabetes and they are more likely to have it earlier than other Canadians. According to the 1991 Aboriginal Peoples Survey (*the most recent survey*), the prevalence of diabetes is 8.5% among First Nations living on-reserve or in Aboriginal communities, 5.3% among First Nations living off-reserve, 5.5% among Metis and 1.9% among Inuit people. Diabetes is and will remain at epidemic levels in Aboriginal communities across Canada unless action is taken now.

77% of new Canadians are from populations known to be of high risk for type-2 diabetes, According to *Statistics Canada*. Over 57% of immigration to Canada for example, come from Asia and they – along with African and Hispanic populations - are known to be at high risk for type-2 diabetes. As Canadians from these populations age, the numbers with type-2 diabetes will also increase.

THE ECONOMIC COSTS OF DIABETES

Like a pebble thrown into a pond the impact of diabetes ripples across Canadian society - affecting family, friends, employers, business, industry, governments and the overall capacity of our health care system.

The fact is that diabetes creates a heavy financial burden both to the individual and to government, yet it – and the expensive complications associated with the disease – can often be prevented if action is taken early on.

New research strongly endorses earlier diagnosis, as well as more aggressive treatment of diabetes in order to manage the disease better, and reduce or delay the onset of complications for the individual. This aggressive treatment will mean the physician recommends a quicker move to single or multiple therapies for her or his patient. Tighter targets for blood pressure, lipids and glucose will require more testing and earlier treatment for these factors. Patients are being told to take an active role in managing their diabetes, and will know to ask their doctor for the right tests at the right time!

Canadians living with diabetes learn quickly the concept of "*pay now or pay more later*". Their commitment to vigilant care and management of their diabetes 24 hours a day, 7 days a week is the only way for them to achieve an optimal quality of life and delay or prevent traumatic complications.

Governments must respect this concept and invest now for better health outcomes for Canadians with diabetes as well as to reduce the future escalating costs – both to the individual and to society.

ECONOMIC COSTS TO SOCIETY

Based on a recent report that outlines the costs of diabetes in America, the cost of this chronic disease to Canadian society was estimated at \$13.2 billion in 2002 – up significantly from the \$9 billion in 1998. Costs will continue to escalate to an estimated \$15.6 billion by 2010 unless action is taken. (*Source: Harris, Canadian Diabetes Strategy: Time for Action, May 2003*)

Additional studies have noted that direct medical costs associated with diabetes care - before even considering complications – is estimated to be \$573 million. Complications associated with diabetes escalate the costs to society dramatically. For example, cardiovascular complications alone arising from diabetes is estimated to cost \$673 million annually. (*Source: Dawson et al, Diabetes Care 2002 Aug 25(8):1303-7*)

Other diabetes-related conditions include hypertension, stroke, amputations, erectile dysfunction, kidney disease, lower respiratory tract infection, and skin disease. In 1999/2000, the proportion of hospitalizations for these conditions was consistently higher among Canadians with diabetes than amongst those without it. It costs \$50,000 each year to provide kidney dialysis for one Canadian living with diabetes. It costs \$74,000 for a leg amputation.

Diabetes also contributes to the costs associated with infectious disease as well as chronic disease. In a recent review of the 144 probable SARS cases in Toronto, older Canadians or those with a chronic disease such as diabetes, were significantly more likely to be admitted to an intensive care unit and had a far greater risk of not surviving. (*Source: Journal of the American Medical Association, 2003; 289: 2801-2809*)

SARS reminds us that infectious disease heavily impacts those Canadians living with a chronic disease or lowered immune systems, however government investing solely in the prevention of infectious disease or the promotion of healthy living will do nothing to contain the escalating costs associated with diabetes. Diabetes requires a complementary – but different - framework to help government contain future costs.

Yet if government invests now to support the prevention of expensive complications such as kidney or liver failure, heart attacks, limb amputations and blindness amongst Canadians living with diabetes, our acute care hospital costs across Canada will be lower as a result.

CASE STUDY 1: GLENN RICHARDS is a 40-year old merchant from Outlook, Saskatchewan who has lived with type-1 diabetes since he was diagnosed at 12.

As a person with diabetes, are you able to access the assistance you need to be able to manage your diabetes well? **There's a lack of specialists in our province. There's a long waiting period before you can see a specialist. Both my daughter and I have Type 1 diabetes and we experience a high financial burden. If you have certain other diseases in Canada you can get 100% coverage. There are more and more people with diabetes in Canada, yet there is very little support for them.**

What are the obstacles, if any, that you face in being able to live well with diabetes? **Insurance coverage is more costly. We have to eat well, so there's an increased cost for our food. The major obstacle is the cost of diabetes supplies. My daughter and I each test four times a day and the cheapest that we've been able to purchase strips is 74 cents per strip. We've applied for financial assistance from the provincial government and been told that we make too much money to qualify for the government's Special Support Program. That means that my family pays about \$5,000 out of pocket for our diabetes supplies, insulin, test strips and syringes every year, medications and supplies that we need to stay alive.**

Let's have a level playing field. If my daughter and I had cystic fibrosis our costs would be covered. Why is it not the same for diabetes?

Diabetes management requires a multifaceted support that includes appropriate medications and tools and resources such as blood glucose monitoring. A full appreciation and support for all management requirements is essential.

ECONOMIC COSTS TO INDIVIDUAL CANADIANS

Good management of diabetes can help contain costs for diabetes-related conditions. And for Canadians living with diabetes, the incentive to manage their disease effectively is living well. Yet there is also a disincentive built into our economic system for a Canadian living with diabetes. Estimates show that the personal cost of managing diabetes is 5 times higher than the personal costs incurred by other Canadians each year for medical-related drugs and supplies.

A significant number of Canadians living with diabetes are not covered by an employee benefit plan or private insurance. Our *Diabetes Report Card 2001* showed that the cost and access to diabetes-related drugs and supplies under provincial health systems for a Canadian living with diabetes varies widely across our country. Depending on where they live in Canada, an individual with diabetes can face severe financial hardship when trying to manage their diabetes well.

To monitor progress and changes to diabetes management, self-blood glucose monitoring is a widely accepted practice. An individual with type-1 or type-2 diabetes will need to test several times a day to manage effectively. In type-2 diabetes, 3 or more tests a day have been associated with a statistically and significant 1% reduction in A1C levels. In people with type-2 diabetes treated with medications, testing at least once a day is associated with 0.6% lower A1C than less frequent testing. In many situations, more frequent testing may be required to provide the information needed to make behavioural or treatment adjustments required to achieve blood glucose levels.

In some provinces, drug plans pay for the blood glucose test strips. In other provinces, the Canadian living with diabetes must pay for their test strips entirely. And in other provinces, government will co-pay up to a specified amount each year, particularly for low-income Canadians.

Preferred management regimes include an aggressive approach to glucose management that includes insulin, oral medications, ketone strips, syringes, glucose testing meter, frequent visits to doctors and specialists, sharps disposal, specialized home care visits, specialized foot care, and additional medications for co-morbid conditions. For the person with type-1 diabetes, the use of an insulin pump may be desired or recommended to attain required glucose targets.

Indirect costs associated with diabetes include: premium rates on insurance and higher insurance deductibles, increased travel costs to access diabetes care and education particularly for Canadians living in rural and remote communities, additional costs for fresh food for all but particularly for Canadians living in rural and remote communities, increased child care costs for parents of a child with diabetes, and special footwear.

For Canadians living with diabetes, these additional costs associated with diabetes add up, and depending on where you live – in an urban, rural, remote or northern community – can vary significantly. If you include only medications and supplies, the range of additional costs can be from \$1,000 to \$5,000 a year, while the inclusion of indirect costs can increase that range up to \$10,000 a year.

Should an individual undertake intensive diabetes management using an insulin pump, the initial cost of the equipment is \$6,000, and on-going costs will range from \$500 to \$600 a month.

CASE STUDY 3: CHRISTINA BEYER has lived with type-1 diabetes for 8 years. She lives with her daughter outside Toronto.

As a person with diabetes, are you able to access the assistance you need to be able to manage your diabetes well?

For the most part, I am able to access my endocrinologist and diabetes supplies. I am currently using an insulin infusion pump to manage my diabetes. As a result, my supplies are very expensive. Not only do I require insulin pump supplies, but I also test my blood sugar about 8 – 10 times per day. Recently, my extended health care provider denied me full coverage. They only compensate for 4 tests per day. Because I want to manage my diabetes well, I pay the additional costs.

What are the obstacles, if any, that you face in being able to live well with diabetes?

A major obstacle for me has come from the insurance industry. I am a healthy 36-year old, with absolutely no complications from my diabetes. I am also recently legally separated and under this agreement, I am obliged to carry life insurance. The life insurance provider of my employer's benefits package has denied me coverage. Extensive research to find a company that will cover me at a fair price has proved difficult. Premiums are often quoted at approximately 300% more than an individual in good health without diabetes. I am not yet covered.

I am surprised by the lack of required education on the part of insurance companies and their underwriters. One of their detailed forms inquiring about my diabetes asked "how often do I test my urine for glucose?" Most companies today should know that testing urine for glucose on a daily basis is an outdated method of managing diabetes.

FUTURE DIRECTION: *PAY NOW...OR PAY MORE LATER*

The Canadian Diabetes Association believes that society has a choice to make for the future health of all Canadians.

Population health approaches to healthier lifestyles and good nutrition are essential to improve the health of Canadians generally, and will certainly address the need for greater chronic disease prevention of which diabetes is a model. But healthier living strategies on their own are not enough to address the diabetes epidemic today in Canada. A renewed commitment to an enhanced federal ***National Diabetes Strategy*** is required to concentrate our efforts to reach out to the 60,000 Canadians who will be diagnosed with diabetes this year.

A renewed federal National Diabetes Strategy is required to focus diabetes prevention and screening programs at those Canadians – Aboriginal, Asian, Latin American, African, overweight kids and youth - who are at high risk of developing type-2 diabetes. Earlier diagnosis and more aggressive management with multiple therapies can impact the burden of complications for both the individual and the Canadian economy. A renewed commitment to an enhanced federal National Diabetes Strategy should also coordinate existing federal and provincial strategies and programs to maximize beneficial outcomes and reduce duplication and overall costs associated with diabetes for all Canadians. All aspects of prevention – primary, secondary and tertiary – is urgently required.

A renewed commitment to an enhanced federal ***National Diabetes Strategy*** should:

- create new diabetes programs and strategies to break through cultural, linguistic and socio-economic barriers to address the needs of high risk populations,
- develop new diabetes programs and encourage research to address high risk populations including children and youth, seniors, obese individuals, and pregnant women diagnosed with type-2 diabetes,
- support the implementation of the Canadian Diabetes Association's new 2003 Clinical Practice Guidelines for the Prevention and Maintenance of Diabetes,
- expand existing Aboriginal Diabetes Initiative to address the serious epidemic across Canada,
- integrate and support diabetes primary prevention campaigns and messages with other supportive strategies, and
- sustained support for the National Diabetes Surveillance System (NDSS)

A renewed federal commitment to an enhanced ***National Diabetes Strategy*** will - in our opinion – have the potential to:

- Encourage supportive strategies to delay or prevent the diagnosis of type-2 diabetes in high-risk populations,
- Support the early diagnosis and aggressive management of diabetes with the potential to decrease complications and the financial and personal burden of diabetes for Canadians,
- Address the urgency to establish requirements of high-risk populations, in particular Aboriginal and new immigrant Canadians, and
- Establish a monitoring and tracking system that positions the “magnitude of the problem” and facilitates accountability for measurement of new programs and strategies.

Delaying the onset of diabetes, as well as delaying the complications associated with diabetes will in our view help contain future costs within Canada's public health care system, while allowing Canadians to participate more fully in our economy and thereby support our future economic growth.

Therefore the Canadian Diabetes Association asks the members of the Standing Committee of Finance to recommend that the federal government **renew their commitment to an enhanced *National Diabetes Strategy* with clearly defined program deliverables over the next five years.**

ATTACHMENT A

THE FIRST CANADIAN DIABETES STRATEGY (1999-2004)

In 1999, the federal government invested \$115 million in a 5-year Canadian Diabetes Strategy. That investment ends on March 31st, 2004.

Conscious of the human, social and economic impacts of diabetes, the federal government worked collaboratively in this long-term effort to build the foundation needed to prevent, control and combat diabetes in a coordinated way across Canada. The objective was to address the problem at two levels (1) raising Canadians' awareness of how they can prevent diabetes and its complications; and (2) supporting improved monitoring of diabetes in the population, with an eye to improving the planning and evaluation of future diabetes reduction strategies.

There were four components under the Canadian Diabetes Strategy:

- (1) Aboriginal Diabetes Initiative (\$58 million)
- (2) Prevention & Promotion (\$41.8 million)
- (3) National Diabetes Surveillance System (\$10.8 million)
- (4) National Coordination (\$4.4 million)

The federal, provincial and territorial ministries of health, national Aboriginal organizations, national and provincial/territorial non-government organizations, consumers, industry and health professionals were all partners in drafting the Blueprint for Action which confirms the need for a National Diabetes Strategy.

The Canadian Diabetes Association was a partner in a number of good projects that were funded under this strategy. We worked in collaboration with the organizing committee to plan and hold a *national symposium* to develop a National Diabetes Strategy. This national symposium was held in 3-6 May 2003 in Winnipeg with over 250 participants from across Canada. The final Blueprint for Action approved by participants will be released shortly by Health Canada.

Our Association was also the primary partners involved in two other projects funded by the Canadian Diabetes Strategy. One was entitled *Healthy Eating is in Store for You* and the second entitled the *Workplace Wellness Program*.

Examples of other projects funded under the Prevention & Promotion section of the national strategy included:

- Diabetes in Older Adults from Hispanic, Black and Asian Populations (National)
- Moving & Growing II: Preventing Diabetes through Physical Activity in Young Children (National)

- London Latin American Community Outreach for the Prevention of Diabetes (Ontario)
- Diabete chez les jeunes en milieu scolaire (Quebec)
- Healthy Eating and Active Living (HEAL) in Northern B.C. (British Columbia)
- Identification of Best Practice Models for Diabetes Prevention Programs for Ethno-cultural Communities (Nova Scotia)
- Preventing Type-2 Diabetes Among Inner City School-Aged Children (Alberta)
- Diabetes Strategy in Winnipeg for Seniors (Manitoba)

There were also 39 successful projects funded under the Aboriginal Diabetes Initiative that focused on primary prevention programs and services for Metis, off-reserve Aboriginal peoples and urban Inuit.

The National Diabetes Surveillance System has been developed and implemented including the governance, info-structure and establishment of provincial, territorial and federal partnerships, as well as capacity building and data-sharing agreements. While less direct in its apparent benefits for individual Canadians living with diabetes, surveillance is crucial for an accurate national picture of diabetes and its effects on Canadians. Health care professionals can use the information and perspectives derived from surveillance to develop effective programs that ultimately help Canadians prevent and control the disease.

Finally, the 5-year strategy brought together a broad range of diabetes stakeholders, representing a wide diversity of backgrounds and perspectives, to collaborate in the development of a true National Diabetes Strategy that would integrate and coordinate efforts across Canada. The goal was to avoid duplication and maximize limited resources by building on existing achievements and activities.

The federal government's initial investment of \$115 million in 1999 laid the foundation for a truly national diabetes strategy that would help prevent diabetes before it developed, and help prevent the costly complications after it was diagnosed. It facilitated the ability to understand the "tip of the iceberg", but we must now invest further to ensure a better future for Canadians living with – or at high risk of – diabetes.

The draft ***Blueprint for Action*** outlines the next steps in building this unique national strategy. The Canadian Diabetes Association is concerned however that without a renewal of investment in an enhanced national diabetes strategy, implementation of the plan will stall, and the initial \$115 million investment by the federal government lost.

ATTACHMENT B

WHO WE ARE

The Canadian Diabetes Association is an independently governed charitable organization focused on the needs of Canadians affected by diabetes. Started in 1953, our Association is celebrating our 50th anniversary with our professional and general members at our annual meetings in October this year. Our National Board of Directors is elected by our membership. We are present in over 150 communities across Canada. Through the hard work and dedication of thousands of volunteers, the Canadian Diabetes Association has become the leading organization in Canada dealing with diabetes and with persons affected by diabetes.

The Association is also a member of a number of national health alliances including, the Diabetes Council of Canada, the Chronic Disease Prevention Alliance, the Healthy Living Network, the Health Charities Council of Canada, and the Best Medicines Coalition. We support these alliances because we believe that by working together on areas of common interest and shared concern our voice will be heard by policy and decision-makers. We also believe we can identify areas where government action will benefit the greatest number of Canadians while potentially containing overall costs to society. A win-win situation!

WHAT IS DIABETES?

Diabetes is a serious chronic disease that impairs the body's ability to use food properly. When you consume a meal, your body converts the sugars and starches to glucose (sugar). In order to metabolize glucose properly, your body needs insulin, which is a hormone produced by the pancreas, a gland located just beneath your stomach. Insulin regulates the body's use of glucose, preventing a buildup of sugar in the bloodstream and ensuring that various tissues have sufficient glucose to function efficiently. Without insulin, glucose levels increase dramatically in the bloodstream and urine – and this is what we call diabetes.

Researchers have classified diabetes into three types: type-1, type-2 and gestational. Type-1 diabetes is caused by an autoimmune reaction where the body destroys healthy insulin producing beta cells in the pancreas. As a result, there is little or no insulin produced, and you need life-sustaining injections of insulin to live. Risk factors for type-1 diabetes include race or ethnicity and whether your mother or father has type-1 diabetes.

Type-2 diabetes is what 90% of all Canadians living with diabetes have, and in this form, the pancreas produces insulin, but for some reason your body is unable to use it effectively. Type-2 diabetes can be managed by healthy eating, losing weight and physical activity. In time, people with type-2 diabetes may require oral drugs or insulin injections. The risk factors for type-2 include age, obesity, family history, physical inactivity, and race or ethnicity.

Gestational diabetes is a temporary condition that affects 2 - 4% of pregnant women. The hormonal changes of pregnancy stress the mother's system, and in some cases, the pancreas is unable to produce sufficient insulin. Treatment includes nutritional and physical activity, and if necessary, insulin therapy. While this type of diabetes usually disappears after birth, 30 - 40% of women who have gestational diabetes will develop type-2 within 5 to 10 years.