AN ENHANCED BRITISH COLUMBIA DIABETES STRATEGY
Tackling diabetes through prevention, management & research!

Diabetes is a serious disease and it is an epidemic in British Columbia (BC). Every eight minutes, another British Columbian learns that he or she has diabetes.

Today, almost 250,000 British Columbians live with diabetes\(^1\) and an estimated 125,000 British Columbians do not know that they have diabetes.

This rapid, uncontrolled escalation of the numbers of British Columbians diagnosed with diabetes places serious pressure on our healthcare system and contributes to longer wait times and emergency room overcrowding. Family doctors, already overstretched face a real challenge in finding extra time to teach their diabetes patients how to manage their diabetes through diet, exercise and daily monitoring.

Yet the science shows clearly that diabetes is a progressive disease that increases the risk for heart attack, stroke, kidney failure, eye disease or limb amputation. The scientific evidence also shows that if diabetes is managed aggressively at diagnosis, and if people are given the tools, skills and knowledge to manage it effectively, their risk of developing the complications associated with diabetes can be reduced significantly. Unfortunately more than 50 percent of British Columbians with type 2 diabetes are not at the recommended target levels for their blood glucose and will develop two or more serious complications in their lifetime.\(^2\)

Diabetes that is out of control affects all British Columbians.

One in ten hospital admissions in our province relate to people with diabetes needing acute medical care for heart attacks, strokes and kidney failure resulting from their diabetes. While some are unavoidable, the majority could be prevented or delayed if preventative action had been taken.

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1 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada, Canadian Diabetes Association 2003
1 S. Harris, J. Ekoë, Y. Zdanowicz, S. Webster-Bogaert  Glycemic control and morbidity in the Canadian primary care setting (results of the diabetes in Canada evaluation study). Diabetes Research and Clinical Practice, Volume 70, Issue 1, Pages 90-97
2 Source: ICES  “Prevalence of Diabetes in Ontario exceeds global rate projected for 2030” March 2007, University of British Columbia
The direct health care costs to treat diabetes and its complications in BC are well documented, but the indirect costs to our economy, our tax base, our communities and to our families are also significant and difficult to calculate. We do know that diabetes costs all Canadians at least $13.2 billion a year. It is fair to assume that BC as the third largest province is impacted significantly.

It is time for all British Columbians to get serious about tackling diabetes. More than 250,000 British Columbians diagnosed with diabetes is a warning sign that must be heeded if we want our children and grandchildren to inherit a publicly funded healthcare system that meets their medical care when they need it.

Diabetes is a complicated disease. It requires multiple approaches, therapies and support programs to be tackled effectively. The person diagnosed with the disease is at the heart of diabetes care working in close partnership with her or his doctor and diabetes team to identify what therapies work best for that individual. Given that the majority of people living with type 2 diabetes take on average eight pills a day to lower their blood glucose, cholesterol and blood pressure levels, in addition to pills to protect their kidneys, it is critical for the doctor to monitor how the various medications interact with each other and with the patient. If a patient’s medication therapy creates physical discomfort on a daily basis, then it is less likely that the individual will comply fully with the prescribed treatment.

That is also why the diabetes educator is critical in the diabetes health team. By teaching the patient about the severity of their diabetes, the consequences of not managing effectively, and by giving them the skills and tools they need to self-manage, we can help prevent or delay the onset of costly complications that ultimately affect us all.

Diabetes education helps prevent or delay type 2 diabetes by encouraging British Columbians to make healthier choices, and by providing those people who are at high risk of developing type 2 diabetes or who are diagnosed with pre-diabetes with information and services to tackle the risk factors – unhealthy weight, lack of physical activity and smoking – before they develop type 2 diabetes.

The Canadian Diabetes Association continues to work with all of our partners to establish a comprehensive approach to chronic disease management. An integrated comprehensive approach that includes care,
diabetes education, access to medications, devices and supplies, and patient self-management can result in positive health outcomes for people with diabetes.

The good news is that the future looks promising given the broad support in BC for a coordinated, integrated approach to chronic disease management and prevention. The province recognizes that diabetes and other chronic diseases require a combination of policies and programs ranging from access to medical care, diabetes education, medications, supplies and devices, as well as access to healthy food and opportunities for physical activity. And there is increasingly an understanding that we need to act now if we are to address escalating health care costs, wait times for surgeries or hospital beds, and access to acute medical care and treatment.

Prevention of risk factors
As the number of baby-boomers reach retirement, the prevalence of diabetes will jump significantly! Being overweight, inactive and over 40 increases your risk of type 2 diabetes. Academic research estimates a 76.5% increase in the numbers living with diabetes in BC by 2016.\(^2\) Approximately 4 million Canadians have been diagnosed with pre-diabetes, and 50% of them will develop type 2 diabetes within ten years.

Of greater concern for the growing escalation of type 2 diabetes is the proportion of children and adolescents who are overweight or obese. The number of children in BC with unhealthy weights has significantly increased in the past 30 years, and the evidence indicates clearly that overweight children tend to become overweight adults who are at increased risk of developing type 2 diabetes.

Both type 1 and type 2 diabetes can lead to serious, long-term and costly complications, including heart disease, stroke, kidney disease, blindness, and amputation. Additionally, infectious diseases such as SARS, influenza, and pneumonia affect people living with a chronic disease such as diabetes, more virulently than others. All of these contribute to the acute care costs of caring for British Columbians living with diabetes.

But, there is some good news!
- Active living and healthy eating have been strongly linked to prevention or delay of the development of type 2 diabetes.
- Outcomes for those living with type 1 or type 2 diabetes can be improved by early diagnosis and prompt, aggressive treatment.

Good diabetes management and tight control of blood pressure and glucose levels can help delay or prevent costly complications of diabetes.

ActNow BC introduced by the province was welcomed by our Association because it promotes physical activity, healthy eating, living tobacco-free and making healthy choices. It is part of a multi-sectoral health promotion and disease prevention strategy that takes an integrated approach to reduction of risk factors common to all chronic diseases. It does not however address all the needs of those already diagnosed with diabetes, gestational diabetes or pre-diabetes.

**The Economic & Social Costs of Diabetes**

All British Columbians ultimately pay the cost of diabetes and its complications. When people do not have the programs or support they need to manage their diabetes appropriately, they are forced to resort to greater use of our publicly funded acute healthcare system.

Research by the BC Ministry of Health estimates the direct cost of providing healthcare services for people with complications related to diabetes at approximately $776 million each year. By 2016, predicted direct healthcare costs to treat patients with diabetes in BC will increase by 78% to an estimated cost of $1.38 billion. It is highly likely that the indirect costs of diabetes to BC’s GDP will increase at a similar rate.

Direct costs only include physician services, hospitalization, and medications covered under the BC Fair PharmaCare Drug Benefit Plan. Indirect costs of rehabilitation after amputation or blindness, post-hospitalization care, or diabetes education, for example, would increase dramatically the cost of diabetes and complications in BC.

Although people with diabetes comprise 6% of BC’s population, they accounted for:

- 32% of heart attacks
- 43% of heart failure cases
- 30% of strokes
- 51% of new kidney dialysis patients
- 70% of amputations

These are costly complications not only for government, but also for the individual and their family.

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For most British Columbians with diabetes, managing is a personal, emotional and financial challenge. Fair and equitable access to diabetes medications, devices and supplies for all British Columbians living with diabetes is a pre-requisite to tackling diabetes, and in particular, mitigating its potential complications.

The financial costs will vary drastically depending on an individual’s health coverage including private or workplace health benefit plans and where you live in BC. An individual living with diabetes can pay up to $5,000 annually in out-of-pocket expenses for prescription medications, devices and supplies because they do not have an extended healthcare plan. That comes to $100,000 per person over the span of 20 years, which makes it very challenging to save money for your children’s education or for your retirement!

At the same time, many people with diabetes because of limited financial resources are faced with hard choices, either choosing to pay for prescription medications or accepting that their own health is secondary to paying rent or clothing their child. For British Columbians living with diabetes, the annual personal cost for medications, devices and supplies to manage their diabetes is five times greater than the annual cost of medications for British Columbians living without diabetes or any chronic disease.

**Research in BC**

An important component of tackling diabetes in BC is research in the prevention of type 2 diabetes, diabetes management, education and cures. BC researchers have a strong tradition of bringing forward advances in diabetes care that saves lives, improves the quality of life, and saves money for our publicly funded healthcare system.

In 2007 the Canadian Diabetes Association invested over $7.2 million in research funding on projects aimed at preventing type 2 diabetes, managing type 1 or type 2 diabetes and at preventing or delaying the costly complications associated with diabetes. Last year 11 research programs in British Columbia were funded directly by the Association. Some examples of this excellent research activity includes work in the following areas: DNA vaccination against autoimmune diabetes; genetic determinants of diabetes complications in Aboriginal Canadians; specialty care for diabetes: determinants of meal tolerance in type 2 diabetes; fetal macrosomia and adolescent obesity; and many more investigator driven research projects.
The Canadian Diabetes Association is proud of our unique partnership with the provincial government and the University of British Columbia (UBC) working together to create a $9 million UBC Centre for Research in Childhood Diabetes that will make BC a world leader in childhood diabetes research. Our mutual objective is to help British Columbians prevent or defer the onset of type 2 diabetes as well as to manage their type 1 or type 2 diabetes more effectively to avoid costly complications. Our ultimate objective remains finding cures for all types of diabetes.

The Future of Diabetes Care in BC

Chronic Disease Management and Care
In 2002, the provincial government gave the Diabetes Working Group a mandate to develop a business case in support of a provincial diabetes initiative in BC that fit within the four provincial health strategies:

- Prevention & Wellness Strategy
- Primary Health Care Renewal Strategy
- Chronic Disease Management Strategy
- Diabetes Prevention & Management: A BC Framework for Action

The province supported a pilot project on using the chronic care model within a collaborative delivery system. This pilot was called the Diabetes Initiative, and the Vancouver Island Health Authority managed it. The outcomes of that pilot show that increasing the emphasis on integrated chronic disease management is a promising way forward for people living with diabetes.

There is no question that health professionals working today in chronic care teams are leaders in embracing innovation as well as the coordination and integration of healthcare delivery that may result in better health outcomes for patients with diabetes and other chronic diseases. They also encourage cross-pollination of best and promising practices in care between health professionals. Our Association believes that the research and evaluation of the introduction of the chronic care teams will ultimately show that British Columbians with diabetes benefit from better health when cared for under this model.

However within any chronic care model, British Columbians with diabetes need to take an active role in their own healthcare. To fulfill that role, they must be fully informed partners within their diabetes care team in order for them to achieve the positive health outcomes that the research suggests is attainable from this new system of healthcare.
While the traditional approach of healthcare delivery was designed to mitigate acute medical conditions, an integrated chronic care model relies on the patient to understand their disease, to know what they need to do on a daily basis to self-manage, to monitor results from testing blood glucose levels and to adapt their medication or diet and exercise accordingly, and finally to recognize when they need to seek health professional advice and care. This is a major responsibility that this new model of healthcare delivery shifts onto British Columbians and their families living with a chronic disease like diabetes.

Our Association believes that government has a responsibility to ensure that they are prepared and supported to take on this new role. Far too many people living with diabetes – 55 percent according to a recent poll – do not know what their recommended targets are for blood glucose levels. If you do not know what the levels are, how can you know whether to adjust your medications, diet or physical activity levels?

For this reason, the Canadian Diabetes Association encourages the provincial government to continue investing in the expansion and enhancement of the chronic care model piloted under the Diabetes Initiative, and to invest in diabetes education so that all British Columbians diagnosed with diabetes are taught how to manage their disease effectively. Our Association believes that 100% of all British Columbians with diabetes deserve access to diabetes education by 2010.

Secondly, the Canadian Diabetes Association encourages the provincial government to ask British Columbians living with diabetes or a chronic disease what they personally identify as barriers to self-management or participating fully within their a diabetes team or in a chronic disease management environment. People with diabetes will not only require on-going support from the health professionals on their team, but also require tools and reminders on their role in self-managing their disease, for the rest of their lives.

One key component of self-management of diabetes in particular is being able to afford and obtain the five or more medications the doctor prescribes to manage blood glucose levels and to avoid or delay the onset of diabetes-related complications. We know that 77% of doctors say that they prescribe medications for their diabetes patients based on what their drug plan formulary covers rather than what the best available clinical evidence supports.

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5 Web-based survey of 500 Canadians living with type 2 diabetes conducted by PSL Research Canada (February 2007).
recommends for treatment of diabetes\textsuperscript{6}. We also know that today if British Columbians with diabetes have the personal financial resources or a private drug plan, they could have access to all 16 of the diabetes medications that have been proved safe and effective in Canada if their doctor prescribes one of those medications. BC’s seniors and others with diabetes who rely on provincial drug plan coverage or low wage earners living with diabetes without an employer sponsored drug plan are less fortunate.

The Canadian Diabetes Association is concerned that this is another example of two-tier healthcare that is contrary to Canadian’s sense of fairness and equity as reflected in the Canada Health Act. That is why we call for increased access to diabetes medications, devices and supplies for British Columbians living with diabetes. The Canadian Diabetes Association believes that the BC government must ensure that people living with diabetes have access to the tools they need to self-manage effectively, and that includes access to education, care, safe and effective medications, devices and supplies and healthy, safe and nutritious food.

**An Enhanced British Columbia Diabetes Strategy**

In order to tackle diabetes effectively, government action is required to prevent people being diagnosed with type 2 diabetes but also required to help people already diagnosed with diabetes to prevent or delay the onset of serious complications that require acute hospital care.

Of the 358,000 admissions into BC’s acute care hospitals in 2005/2006, 35,800 - or 10\% - listed diabetes as the underlying cause for admission.\textsuperscript{7} And once in hospital, people with diabetes will stay longer than patients without diabetes.\textsuperscript{8}

Research clearly indicates that healthy eating and physical activity as well as not smoking helps prevent the onset of type 2 – even amongst those diagnosed with pre-diabetes. And the same healthy living activities also help prevent or delay the onset of diabetes complications.\textsuperscript{7}

For this reason, the Canadian Diabetes Association believes that while population health approaches, chronic disease or healthy living strategies emphasizing healthier lifestyles and good nutrition are important in the prevention of many chronic diseases including type 2 diabetes, they do not address the specific needs of British Columbians already living with type 1 diabetes.

\textsuperscript{6} Web-based survey of 500 Canadians living with type 2 diabetes conducted by PSL Research Canada (February 2007).


or type 2 diabetes – or with a diagnosis of pre-diabetes or gestational diabetes.

In our view, a comprehensive, integrated, dedicated and financially resourced diabetes strategy to support people in the effective management of their diabetes is required if we are to tackle the diabetes effectively in British Columbia.

And our Association believes that a critical component of any comprehensive, integrated diabetes strategy will be investments in research into diabetes care, management, medications and therapies, diabetes education and cures for all types of diabetes.

An Enhanced British Columbia Diabetes Strategy must integrate all the components of prevention, management and research if we are to tackle diabetes successfully in British Columbia.

**OUR RECOMMENDATIONS:**

The Canadian Diabetes Association asks that the Premier’s Conversation on Health recommend in their final report that the government of British Columbia:

1. Enhance the health outcomes of British Columbians living with diabetes in BC by providing the financial resources necessary to implement an integrated chronic care and management model province-wide.

2. Invest the financial resources necessary in an Enhanced British Columbia Diabetes Strategy that tackles diabetes both in the prevention of type 2 diabetes and in the management of diabetes to prevent or delay the onset of diabetes-related complications.

3. Maintain diabetes research investments to continue the unique partnerships that support BC as a leader in diabetes research excellence.

For further information, please contact:

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