



Diabetes

A Manitoba Strategy

*Balance is an essential factor in diabetes prevention, education, care, research and support. The front cover graphic design reflects the concept of the **medicine circle** or **medicine wheel**, an ancient and powerful symbol of healing and balance. The quadrants of the circle can be interpreted as representing the importance of balance in all aspects of human existence: spiritual, emotional, physical and intellectual.*



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What Is Diabetes?

Diabetes is a disease that results in too much sugar in the blood. It is caused either by the failure of the body to make enough insulin (Type 1), or the failure of the body to use its own insulin (Type 2).

Ten per cent of people with diabetes have Type 1. People with Type 1 diabetes must administer daily insulin injections and must carefully monitor their blood sugar levels, physical activity and food intake. People with Type 1 diabetes will die if they do not take their insulin.

Type 2 diabetes accounts for 90% of all cases of diabetes. It is managed with changes in food intake and physical activity and by regular monitoring of blood sugar. People with Type 2 diabetes may also require daily oral diabetes medication and/or insulin by injection.

Diabetes that occurs in pregnancy (gestational diabetes) is usually managed by changes in food intake and physical activity, but may also require insulin by injection. Sugar levels often return to normal after delivery of the baby, but both the mother and baby are at increased risk of developing Type 2 diabetes in the future.

Diabetes may cause both short-term and long-term health problems. Chronic high blood sugar levels affect the eyes, kidneys, nerves and blood vessels. Diabetes is a major cause of heart disease. In adults, it is also the leading cause of blindness, kidney failure and loss of limbs due to amputation.

Diabetes often disables people in their prime years. It has a profound, negative effect on the quality of life of individuals living with diabetes and their families.⁽¹⁾

Definitions of terms used in this document can be found in Appendix G.

Executive Summary

In June of 1996, Manitoba's Minister of Health declared diabetes to be both a major public health issue and an epidemic among Aboriginal people and the elderly of all populations.

Diabetes: A Manitoba Strategy is the result of a process that began at that time.

Evidence from the *Diabetes Burden of Illness Study*, conducted by the Epidemiology and Diabetes and Chronic Diseases Units of the Public Health Branch of Manitoba Health, provided the basis for strategy development.^{(2) (3)} This evidence indicated that:

- there are now more than 55,000 people in Manitoba who have been diagnosed with diabetes;
- 13% of people over 55 years and 15% of people over 65 years have been diagnosed with diabetes;
- more than 20% of Status women and 13% of Status men over the age of 25 have been diagnosed with diabetes.

Diabetes causes significant complications that impact on the lives of people with diabetes, their families and their communities:

- 25% of all heart disease and stroke hospitalizations occur in people with diabetes;

- 40% of people who begin dialysis have diabetes;
- 60% of hospitalizations for heart disease in Aboriginal people occur in those with diabetes;
- 91% of amputations in Aboriginal people occur in those with diabetes.

As well, in 1995, evidence indicated that the cost of diabetes and its complications (in adults, 15 years and older) to the health care system, was over \$193 million per year or 18% of the 1995/96 provincial health care budget.

By the spring of 1997, a unique intersectoral, collaborative Diabetes Steering Committee was established to co-ordinate the development of a diabetes strategy for Manitoba. This committee was co-chaired by Grand Chief George Muswaggon, Grand Chief Francis Flett and acting Grand Chief Sydney Garrioch of Manitoba Keewatinowi Okimakanak Inc. (MKO) and Dr. Emőke Szathmáry, President, University of Manitoba. The Committee established five working groups to address the spectrum of diabetes prevention, education, care, research and support.



The challenge to the Diabetes Steering Committee and Working Groups was to:

- **develop a strategy that will reduce the incidence and prevalence of diabetes and its complications, and**
- **provide recommendations for optimal diabetes prevention, education, care, research and support in Manitoba.**

The Committee adopted the following principles and guidelines to frame the development of a diabetes strategy for Manitoba:

- Population Health,
- Determinants of Health,
- Healthy Public Policy,
- Evidence-based Decision Making,
- Holistic Approach,
- Learning about Health,
- Community Participation, and
- Effective Diabetes Services.

For over a year, the Steering Committee and its five working groups researched, discussed, sought expert opinion, deliberated and came to a consensus on a series of recommended health goals and actions. As well, public meetings were held across the province to ensure broad, grassroots input. In total, **more than 1,000 people** contributed to the development of this Strategy.

The Strategy presents many important recommendations. Examples of some key recommendations are:

- **Prevention:** Develop community-based Diabetes Primary Prevention and Screening Programs, particularly targeting seniors and Aboriginal people.
- **Education:** Establish a Standardized Multi-level Diabetes Education Program to expand the pool of qualified diabetes educators from community to specialist levels.
- **Care:** Develop Manitoba Diabetes Care Recommendations that are consistent with the evidence-based Canadian Diabetes Association Clinical Practice Guidelines.
- **Research:** Develop a Manitoba Diabetes Surveillance System that will provide data on an ongoing basis to monitor and evaluate interventions and initiatives related to diabetes prevention, education, care, research and support.
- **Support:** Address the inequities of Access to Support Services across the province and provide a network of support services for those people with diabetes and its complications.

The Steering Committee recognizes that an enormous task is before the people of Manitoba, the policy makers, federal, provincial and Aboriginal governments, health care providers and professionals and the private sector. It is anticipated that the partnerships which evolved during the development of this Strategy will continue and be strengthened.

By working together we can alter the course of this devastating disease.

Résumé

En juin 1996, le ministre de la Santé du Manitoba a déclaré que le diabète constituait un problème majeur de santé publique et qu'il prenait des allures d'épidémie parmi les Autochtones et les personnes âgées de tous les groupes ethniques. La *Stratégie manitobaine contre le diabète* est le résultat de la consultation menée depuis lors.

L'Unité d'épidémiologie ainsi que l'Unité du diabète et des maladies chroniques de la Direction de la santé publique, de Santé Manitoba, ont étudié les problèmes de santé associés au diabète. Les résultats de la *Diabetes Burden of illness Study* ont permis de jeter les bases de la Stratégie.^{(2) (3)} Il est ainsi apparu que:

- plus de 55 000 personnes au Manitoba sont des diabétiques connus;
- 13 % des plus de 55 ans et 15 % des plus de 65 ans sont des diabétiques connus;
- plus de 20 % des Indiennes inscrites et de 13 % des Indiens inscrits âgés de plus de 25 ans sont des diabétiques connus.

Le diabète entraîne des complications importantes pour les diabétiques, leurs familles et leurs communautés:

- 25 % des personnes hospitalisées pour une maladie de coeur ou un accident cardiovasculaire sont diabétiques;
- 40 % des personnes qui débutent un traitement de dialyse souffrent de diabète;
- 60 % des personnes autochtones hospitalisées pour une maladie de coeur souffrent de diabète;
- 91 % des personnes autochtones qui subissent une amputation sont diabétiques.

D'après des données récentes, les coûts que doit absorber le système de santé pour le diabète et les complications associées au diabète (chez les adultes de 15 ans et plus) dépassent 193 millions de dollars par année ou 18 % du budget provincial de santé en 1995-1996.

Au printemps 1997, le Comité directeur intersectoriel responsable de la *Stratégie manitobaine contre le diabète* a été constitué. Il était coprésidé par le grand chef George Muswaggon, le grand chef Francis Flett et le grand chef intérimaire



Sydney Garrioch, de la société Manitoba Keewatinowi Okimakanak Inc. (MKO), et Emőke Szathmáry, Ph.D., président de l'Université du Manitoba. Chargé de coordonner l'élaboration de la Stratégie provinciale, le Comité directeur a créé cinq groupes de travail pour examiner divers aspects de la lutte contre le diabète en ce qui concerne la prévention, l'information du public, les soins pour les diabétiques, la recherche et le soutien.

Le Comité directeur et les groupes de travail ont dû relever les défis suivants:

- élaborer une stratégie qui permettra de réduire l'incidence et la prévalence du diabète, ainsi que les complications associées au diabète;
- recommander des mesures afin de favoriser une lutte optimale contre le diabète au Manitoba, notamment en ce qui concerne la prévention, l'information du public, les soins pour les diabétiques, la recherche et le soutien.

Voici les principes et les lignes directrices qui ont guidé le Comité directeur dans l'élaboration d'une stratégie de lutte contre le diabète au Manitoba:

- la santé de la population
- les déterminants de la santé
- des politiques de santé publique
- des décisions fondées sur les résultats de recherche
- une approche holistique

- l'acquisition de connaissances en matière de santé
- la participation des communautés
- des services efficaces pour les diabétiques.

Pendant plus d'un an, le Comité directeur et ses cinq groupes de travail ont délibéré, fait des recherches et obtenu l'avis d'experts. Ils sont ensuite parvenu à un consensus par rapport à une série d'objectifs et d'actions recommandés. Afin de connaître l'avis du plus grand nombre, ils ont également tenu des séances d'information publique dans toute la province. **Plus de 1 000 personnes** ont ainsi contribué à formuler la *Stratégie manitobaine contre le diabète*.

La Stratégie renferme beaucoup de recommandations importantes dont voici quelques exemples:

- **Prévention:** Établir dans les communautés des programmes de dépistage et de prévention primaire du diabète qui s'adressent plus particulièrement aux Autochtones et aux personnes âgées.
- **Information du public:** Créer un programme normalisé, à niveaux multiples, de formation en matière de diabète, afin d'augmenter le nombre d'éducateurs en diabète, depuis les experts des milieux communautaires jusqu'aux spécialistes.
- **Soins pour les diabétiques:** Formuler des recommandations pour les soins aux diabétiques répondant aux normes de pratiques cliniques que fixe l'Association canadienne du diabète d'après les résultats de recherche.

- **Recherche:** Établir le Système manitobain de surveillance du diabète qui fournira en permanence des données utiles pour suivre l'évolution de la maladie parmi la population et évaluer les mesures adoptées en matière de prévention, d'information du public, de soins pour les diabétiques, de recherche et de soutien.
- **Soutien:** Remédier aux disparités par rapport à l'accès aux services de soutien dans la province et mettre sur pied un réseau de services de soutien pour les personnes souffrant de diabète et des complications associées au diabète.

Le Comité directeur sait l'énorme tâche qui attend la population manitobaine, les décideurs, les gouvernements fédéral et provincial, les administrations autochtones, les professionnels et les fournisseurs de soins dans le domaine de la santé, ainsi que le secteur privé. On peut toutefois espérer que les liens établis pour élaborer la Stratégie seront maintenus et renforcés.

**Ensemble, nous pouvons modifier
le cours de
cette terrible maladie.**



The Challenge

In 1996, diabetes was declared a **major public health issue** in Manitoba, based on evidence from the 1992 *Diabetes Burden of Illness Study*. This population-based study identified the epidemic of Type 2 diabetes in Aboriginal people and in seniors of all populations.

After extensive community and intersectoral consultation and consensus, the Diabetes and Chronic Diseases Unit was directed by Manitoba's Ministers of Health and Northern Affairs to co-ordinate the development of a diabetes strategy for Manitoba.

Diabetes: A Manitoba Strategy is the response of **more than 1,000 Manitobans** to the challenge of providing a strategic plan that will reduce the number of cases of diabetes, reduce the devastating effects of diabetes, reduce the costs of diabetes and forge strong, long-lasting partnerships that will affect diabetes prevention, education, care, research and support in Manitoba (**Appendix C** and **Appendix I**).

The Evidence

Global Context

In 1985, the World Health Organization (WHO) estimated that 30 million people around the world had diabetes, 90% of whom had Type 2 diabetes. By 1989, this figure had risen to 50 million people. In 1991, the WHO declared that "an apparent epidemic of diabetes has occurred - or is occurring - in adult people through the world." In 1994, the International Diabetes Federation (IDF) estimated that over 100 million people had diabetes - affecting, on average, 6% of the adult population. The number of people with diabetes worldwide has more than tripled since the mid-1980s.

The global population is steadily aging and since the occurrence of Type 2 diabetes increases with age, the number of people with the condition will also rise. Diabetes is a serious and costly public health problem.⁽⁴⁾

In July of 1994, the WHO stated:

"Diabetes will continue to be a major threat to public health beyond the year 2000 and is set to increase worldwide without prevention strategies."⁽⁵⁾ (**Appendix E**)

Manitoba Context

Manitoba is a province in Western Canada with a stable population of approximately 1.1 million people. More than half of the population live in urban areas within 100 kilometres of the Canada - USA border.

The population is ethnically diverse and about 8 - 9% are First Nations people (**Appendix F**).

Manitoba was the first province in Canada to study the magnitude of the diabetes problem. *The Diabetes Burden of Illness Study* was initiated in 1992 by the Diabetes and Chronic Diseases and Epidemiology Units of Manitoba Health. This study describes the incidence and prevalence of diabetes and its complications according to age, sex, First Nations Status and Regional Health Authority (RHA). It provides evidence of the urgency to address the prevention and management of diabetes.

A summary of the major findings follows. More detailed information can be found in **Appendix A**.

Children and Diabetes

The incidence of Type 1 diabetes in Manitoba children appears to be stable.⁽⁶⁾

- Approximately 1 in 800 children under 15 years of age has Type 1 diabetes.
- There are approximately 40 children under 15 years of age newly diagnosed with Type 1 diabetes every year in Manitoba.
- In 1996, there were 425 children under the age of 18 with Type 1 diabetes in Manitoba.

Seniors and Diabetes

The prevalence of diabetes is now very high among Manitoba's growing seniors population.⁽³⁾

- More than 1% of Manitobans aged 55 and older develop diabetes each year.
- More than 13% of Manitobans over the age of 55 and 15% over the age of 65

have been diagnosed with Type 2 diabetes.

- Approximately two-thirds of persons with diabetes are age 55 and older.

Aboriginal People and Diabetes

The Diabetes Burden of Illness Study data on Aboriginal persons are limited to declared Status persons only.

Diabetes is much more common among Manitoba's Aboriginal adult population than the rest of the adult population.^{(3) (7)}

- Diabetes has been diagnosed in more than 20% of Status women and 13% of Status men.
- Most Status adults with diabetes are less than 45 years old, whereas in the general population, most adults with diabetes are over 55 years of age.
- Population projections for Status people suggest that the prevalence of diabetes will triple by the year 2016.

Aboriginal people with diabetes have very high rates of complications of the disease. For example, in the First Nations population of Manitoba, persons with diabetes account for:

- 91% of lower limb amputations,
- 60% of hospitalizations for heart disease,
- 50% of hospitalizations for stroke,
- 41% of hospital days, and
- 30% of hospitalizations.

By 1996, there were 43 Aboriginal children in Manitoba under 18 years of age with Type 2 diabetes. This is an alarming statistic, particularly when it is estimated that



the actual number of affected Aboriginal children may be three times higher.^{(6) (8)} Prior to 1980, Type 2 diabetes was not found in children. This is a new disease and has been noticed to date in Aboriginal children only, and predominantly in Aboriginal girls. This will have a serious impact on their adult health since earlier onset of disease can mean earlier onset of complications.

Diabetes and the General Population

In 1996, over 50,000 people in Manitoba had been diagnosed with diabetes.⁽³⁾

Diabetes is associated with a significant number of short-term and long-term health problems:

- Approximately 25% of all hospitalizations for heart disease and stroke occur in people with diabetes.
- People with diabetes are much more likely than those without diabetes to develop chronic and severe infections and ulcers in their feet. When foot ulcers and infections do not respond to treatment, surgery is required and this is reflected in much higher rates of amputations of the lower limbs among people with diabetes.
- People with diabetes represent an increasing proportion of those starting dialysis in Manitoba. By 1993, over 40% of people starting dialysis had diabetes.
- Diabetes is the number one cause of blindness in Manitoba.
- High blood pressure and smoking increase the risk of diabetes complications.

The Economic Costs of Diabetes

Until recently, no Canadian estimates of the costs of diabetes have been available.⁽⁹⁾ Preliminary estimates of these costs for Manitoba are now available from the Diabetes Costing Project. This project is a joint initiative of Health Canada and both the Diabetes and Chronic Diseases Unit and Epidemiology Unit of the Public Health Branch of Manitoba Health. The project estimates the direct and the excess costs of diabetes.⁽¹⁰⁾

This study takes into account inpatient hospital and day surgery services, professional medical services, personal care home services and outpatient dialysis services. In Manitoba, the Diabetes Costing Project estimates that the cost of these services for adults with diabetes is at least \$193 million per year or \$530,000 per day.⁽¹⁰⁾

The Diabetes Costing Project estimates do not include many important direct costs of caring for and supporting people with diabetes. Some costs that are excluded are Nursing Stations, Home Care, Pharmacare, Transportation, Wound Care, Diabetes Education Resources and Public Health. Indirect costs, such as the loss of earning potential, are also not included. Consequently, these results underestimate the true total cost of diabetes.

The Principles

The Manitoba Diabetes Strategy Steering Committee was guided by the direction set by Manitoba Health in *Quality Health for Manitobans: The Action Plan* (1992) and *A Planning Framework to Promote, Preserve and Protect the Health of Manitobans* (1997).^{(11) (12)}

Quality Health for Manitobans: The Action Plan presented a strategy to ensure the future of the province's health system. The concepts of healthy public policy, health determinants, community involvement and the importance of partnerships to provide a full continuum of health services were introduced.

The *Planning Framework* builds upon these concepts to promote a common understanding of Manitoba Health's approach to health planning.

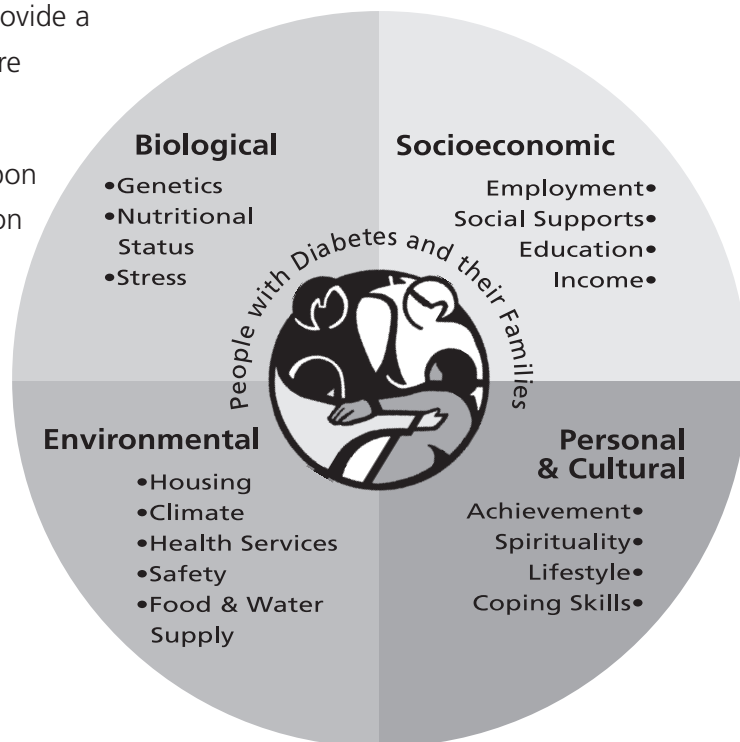
The principles, concepts and influences inherent in these documents provided the basis for the following principles adopted by the Manitoba Diabetes Strategy Steering Committee.

Population Health

Population Health describes an approach to improving health that focuses on the health of communities or populations rather than on that of individuals. It examines factors that enhance the health and well-being of the overall population.

Health Determinants

Health determinants are the factors that make and keep people healthy. The following diagram illustrates the interdependence of health determinants.





Healthy Public Policy

Healthy Public Policy is directed at improving the health of the public. This requires an intersectoral approach – one that involves the various sectors that are responsible for or affect the determinants of health.

Evidence-based Decision Making

Decisions about health interventions are supported by the best and most current available research. This includes the development of goals, indicators, benchmarks, targets and outcomes to measure the effects of interventions on the health of the population. An outcome-oriented approach will also help determine whether the results achieved are cost-effective.

Holistic Approach

A holistic approach to the health of individuals, families and communities recognizes that the whole is greater than the sum of its parts. It takes into account the physical, emotional, cultural and spiritual aspects of living.

Learning About Health

For people to participate fully in managing their health and making healthy choices, they need access to information and opportunities for learning. Consultation and access to experts is vital. In addition to information, community members need opportunities to develop the necessary skills and abilities to understand their options and make healthy

choices. Learning about health is an ongoing process.

Community Participation

Communities need to be involved in assessing and ranking needs, determining and implementing strategies and evaluating their effectiveness. This has been broadened for the *Manitoba Diabetes Strategy* to include collaboration, co-operation and partnerships among consumers, community leaders, governments, policy makers, administrators, health care professionals and providers, the private sector, researchers and non-government organizations.

Effective Diabetes Services

Health services have traditionally been the primary focus of health care. Disproportionately more dollars are spent on treatment and rehabilitation than on disease prevention and health promotion activities. The integration and co-ordination of services across a health system reduces duplication, most effectively provides for expertise and helps to ensure the most efficient use of resources.

The Special Considerations

Given the nature of the issue of diabetes in Manitoba, the Steering Committee was aware that areas of special consideration needed to be addressed. The people at risk for developing diabetes in Manitoba are a complex mix of different ages and cultural backgrounds. Special consideration had to be given to this complexity. These considerations include a community's culture and issues related to children, seniors and Aboriginal people. These special considerations were integrated into the principles and are described as follows.

Culture

Culture refers to the way of life that characterizes a given community; it is the shared practices, beliefs, values and customs that are passed down from generation to generation.⁽¹³⁾ Culture defines norms for values, beliefs and judgments about what is good, what is desirable and how individuals should behave.

Ethnicity has an important link to culture and includes common geographic origin, language and religion. An ethnic group shares common ancestry and has distinctive patterns of family life, language and values. Ethnic groups vary in the way they view health, healing, disease and its prevention.

An appreciation of cultural context is critical to understanding the behaviours and environments that govern an individual's daily life. Culture can, therefore, play a key role in the prevention, education, care, research and support of diabetes. It determines an individual's food and activity choices, and the way in which people interact with the health care system and their communities.

Health care providers are faced with the challenge of responding to the needs of culturally diverse clients. The prevalence of diabetes is higher in people from certain cultural groups, including Aboriginal, Hispanic, Black and Asian. A successful strategy for diabetes prevention, education, care, research and support depends on our understanding of the cultural context and its impact. Only then will this Strategy succeed in reaching its goals.⁽¹⁴⁾

Children

Children have unique requirements as they go through times of physical, intellectual and emotional growth. Activity and energy levels, interests and personality are variables that change with age and differ among individuals. Infancy, preschool, school, pre-adolescent and adolescent years present



unique challenges to children as they grow. Children with Type 1 diabetes must cope with a disease that requires a high level of daily care and knowledge. It affects all aspects of their day-to-day life and requires constant monitoring of their food intake, activity and blood sugar. It affects their self-image and interactions with their peers. It also affects their hopes for the future, as they face the responsibilities and fears of living with a chronic disease.

Type 1 diabetes affects approximately 425 children under 18 years of age in Manitoba.⁽⁶⁾ These children and their families require specialized care, education and support to balance their insulin, food intake and activity levels. As they grow and develop, appropriate information must be given to both the children and their parents to ensure that they maintain a primary role within their Diabetes Health Care (DHC) team. Recognition must also be given to the various care, education and support issues that arise during transition from pediatric to adult care; issues that require a specialized integrated program suited to the specific needs of this age group. Additionally, the “community” must be aware of, and sensitive to, the nature of their illness.

Type 2 diabetes, in the past, was found in adults only, the majority of whom were seniors. In the last decade however, Type 2 diabetes has emerged as a new health concern in Aboriginal children.⁽⁸⁾ The majority of these children are adolescent females. The youngest age at clinical diagnosis in

Manitoba has been 6 years. Conventional care and education strategies without drugs have been unsuccessful to date in achieving normal blood sugar levels. Complications of diabetes will appear in young adult life unless there are lifestyle changes leading to normal blood sugar levels. Prevention strategies to increase the prevalence of lean and fit children must be targeted to the pre-adolescent age group.

Seniors

Age does not always determine a person’s health status. Some people are well and fit at an older age, while others may be very unwell at middle age. Thus, it is important to know the general health status of seniors when diabetes care plans are developed.

Diabetes can be difficult to diagnose in older people. Diabetes may not cause any symptoms at onset, so seniors may have the disease for some time before diagnosis. At that point, the long-term complications of diabetes are often already present and have started to affect the health of the person.⁽¹⁵⁾

For the generally well senior with diabetes, it is appropriate to aim for blood sugar control that will reduce the development and progression of long-term complications of diabetes.⁽¹⁶⁾

However, for older persons with other health problems in addition to diabetes, it is important to avoid low blood sugars as this will complicate their health status. In this situation, the target is blood sugar control that will decrease the incidence of

both high and low blood sugars while maintaining quality of life.

Other important factors that may have a significant impact on the older person with diabetes include:

- **Financial situation:** seniors on fixed incomes may not be able to afford necessary medications, food and support services.
- **Transportation:** it may be difficult for seniors to attend appointments due to financial and/or physical limitations.
- **Emotional well-being:** isolation and depression may often be associated with aging and poor health.
- **Support:** the circle of health professional and community services and supports is generally wider for seniors with diabetes, and therefore requires extensive co-ordination.
- **Advocacy:** the frail older person with diabetes needs specific community and home care support when poor health limits the ability to care for oneself.

Aboriginal People

There is no evidence that diabetes occurred among Aboriginal people in Canada before 1940.⁽¹⁷⁾ In the last decade, diabetes and its complications have reached epidemic proportions among Aboriginal people in Manitoba. Demographic projections by the Medical Services Branch, the Assembly of Manitoba Chiefs and the Epidemiology Unit of the Public Health Branch of Manitoba Health predict that the number of First Nations people with diabetes will triple by the year 2016.⁽⁷⁾

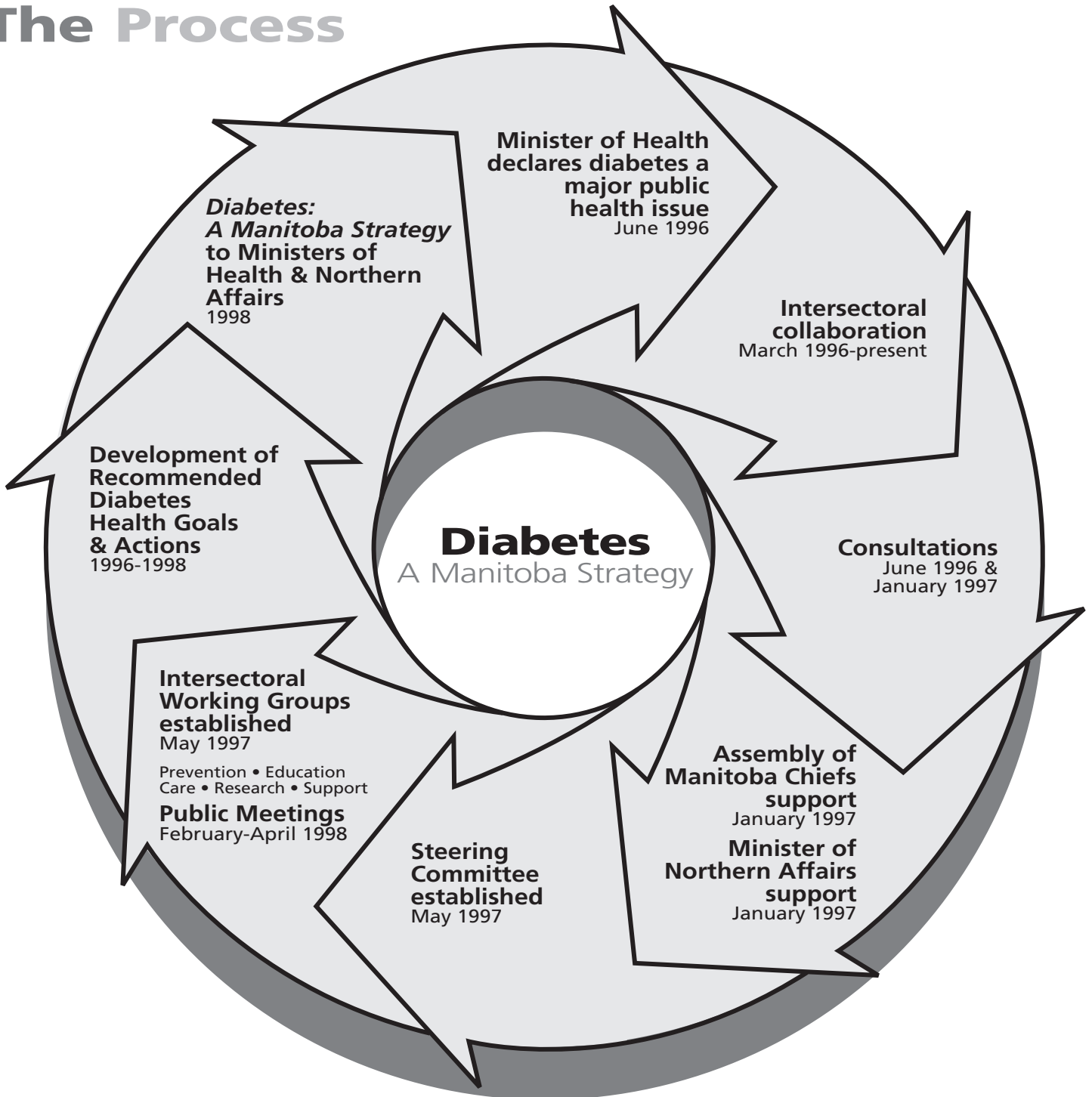
Individuals and families in First Nations communities need resources to stem this epidemic. Access to education, healthy food and recreation opportunities are examples of these resources. Many of the 62 First Nations communities of Manitoba have limited access to preventive health care services. A high percentage are remote, isolated communities in the North. There are unique considerations in providing the education, care and support necessary to enable research and to prevent diabetes in these remote communities.

Some of these considerations are:

- **Poverty:** limited funds to provide the necessities of life.
- **Inadequate food supply:** the availability and affordability of healthy food choices are limited in many communities.
- **Preventive health care services:** access may be limited.
- **Diabetes education:** may be unavailable or inconsistent.
- **Screening for early detection of diabetes and its complications:** may be unavailable or inconsistent.
- **Culture and language differences:** may make education about diabetes, its prevention and care difficult to understand.
- **Jurisdictional issues in health services:** may prevent a co-ordinated approach.
- **Loss of a traditional hunter-gatherer society:** has affected food supply and activity habits and created a dependence on the state.
- **Increasing numbers of people relocating to urban centres:** can lead to family disruption and family breakdown.



The Process



Detailed information regarding Strategy Development can be found in Appendix B.



The Recommendations

The Manitoba Diabetes Strategy Steering Committee recommends the following Diabetes Health Goals and Actions.

These goals and actions are inter-related and reflect the continuum of diabetes prevention, education, care, research and support.

The Committee recognizes that the implementation of these Diabetes Health Goals and Actions can be accomplished only through multi-level, intersectoral, inter-governmental and community partnering and collaboration.

Prevention

GOAL 1

Develop community-based **Diabetes Primary Prevention Programs**, particularly targeting seniors and Aboriginal people.

Actions

Include the following in the **Diabetes Primary Prevention Programs**:

- a) emphasize the role of individuals and families in making lifestyle and environmental changes and in serving as models of healthy living.
- b) encourage individuals and families to advocate change to the health determinants that are increasing their risk for diabetes.
- c) promote an environment that supports healthy lifestyle choices for men and women of all ages and cultures.
- d) provide opportunities and encouragement for the development of diabetes prevention skills and healthy choices.
- e) involve elders, chiefs and other community leaders as positive role models.
- f) inform individuals and families about the importance of attaining and maintaining healthy weight through regular physical activity and healthy eating habits.
- g) develop comprehensive risk factor assessment tools.
- h) include assessments for individuals and families at risk for developing diabetes.
- i) ensure availability of resources for socially relevant and effective diabetes prevention activities.
- j) provide necessary resources to optimize quality of life for groups at high risk for diabetes. This refers to children, seniors and Aboriginal people.
- k) include individually and culturally relevant, sensitive, clear, accurate and consistent content in messages.
- l) disseminate messages and tools to break

- the cycle of diabetes risk factors in families and future generations.
- m) use existing community networks to disseminate prevention messages.
 - n) encourage school boards to create an environment conducive to healthy living for students and the community. For example, healthy foods as part of a school lunch program and increased physical activity for children.
 - o) include education about healthy eating and physical activity in all school curricula.
 - p) address the impact of acculturation (example, residential schools) on the development of diabetes.

Prevention

GOAL 2

Develop comprehensive community-based Diabetes Screening Programs.

Actions

- Diabetes Screening Programs should include:
- a) community understanding, awareness and involvement.
 - b) multidisciplinary teams.
 - c) follow-up components and strategies that address case findings of both Impaired Glucose Tolerance and Diabetes.

Prevention

GOAL 3

Develop a **Manitoba Nutrition Strategy** to ensure the availability of nutritious foods and promote healthy food choices.

Actions

Include the following in the **Manitoba**

Nutrition Strategy:

- a) differential pricing, supplemented by governments, to ensure the availability of nutritious foods.
- b) supplements for individuals and families who cannot afford to buy healthy foods.
- c) establishment of programs and land for community gardens.
- d) regulation of the procurement and distribution of wild foods/game.
- e) standardized information on food labels combined with a nutrition labelling education component.

Prevention

GOAL 4

Develop a **Manitoba Physical Activity Strategy** to provide appropriate physical activity opportunities for all and to encourage individuals and families to incorporate physical activity into their daily lives.

Actions

The **Manitoba Physical Activity Strategy** must be applicable to diverse culture, heritage, abilities, experience and interests.

Include the following in the **Manitoba Physical Activity Strategy**:

- a) aim for the Federal/Provincial/Territorial Ministers' target of a 10% reduction in physical inactivity over the five-year period 1998-2003.
- b) seek and support local leadership as role models to promote healthy, active living within the community.
- c) support community action toward active transportation and physical environments



- that support active living.
- d) support families in the use of their own home and immediate neighbourhood as an active living environment.
- e) provide environments such as facilities, open spaces, trails, walking paths, cycle and canoe routes to support active living.
- f) seek alternative funding sources for cultural and sporting events to replace funding from alcohol and tobacco companies.
- g) co-ordination with other **Physical Activity Strategies**.

Prevention

GOAL 5

Provide **Tax Reduction Incentives** to individuals, families and communities practising diabetes prevention.

Actions

Tax Reduction Incentives require:

- a) federal, provincial, Aboriginal and municipal government collaboration.
- b) indicators and benchmarks to measure prevention practices and outcomes.

Prevention

GOAL 6

Develop a **Public Awareness Campaign** about the prevention of Type 2 Diabetes.

Actions

Include the following in a province-wide

Public Awareness Campaign:

- a) information about risk factors for diabetes.
- b) development of comprehensive risk factor assessment tools.

- c) information to encourage individuals to obtain personal risk assessments for diabetes.
- d) clear, accurate and consistent messages.
- e) communication and marketing strategies that include written, visual, audio and electronic means of communication.
- f) telephone hot-lines to allow Manitobans access to information, resources and service.
- g) co-ordination with other diabetes **Public Awareness Campaigns**.

Prevention

GOAL 7

Develop **Healthy Public Policies** that support healthy lifestyle choices, active living and health-enhancing environments.

Actions

All **Healthy Public Policies** should:

- a) be culturally sensitive.
- b) be age and gender specific.
- c) support individuals and families in their home and working environments.
- d) promote emotional well-being and build self-esteem in individuals, families and communities.
- e) support alcohol-free and smoke-free environments.
- f) emphasize the prevention or cessation of alcohol consumption and tobacco smoking/chewing.

Education

GOAL 1

Establish a **Standardized Multi-level Diabetes Education Program** to expand the pool of qualified diabetes educators from community to specialist levels.

Actions

A **Standardized Multi-level Diabetes Education Program** would include:

- a) **basic-level provider** - for peer educators, community educators and members of the general public. Training for this level shall be affordable and geographically accessible.
- b) **intermediate-level provider** - for health care providers with a partial commitment to education and/or care provision to people with diabetes.
- c) **advanced-level provider** - for health care providers dedicated on a full-time basis to health education and/or care provision to people with diabetes. The Canadian Diabetes Educator Certification Board standards will provide the basis for training at this level.

Education

GOAL 2

Develop a mandatory **Multi-level Certification Program** for diabetes educators.

Actions

A mandatory **Multi-level Certification Program** must be one that:

- a) is co-ordinated by a central agency, representing health care providers, consumers and the general public.

- b) is integrated into the existing certification program for diabetes educators.
- c) is funded for its initial set-up costs and ongoing program operation and evaluation costs.
- d) informs the general public and people with diabetes about the standards governing diabetes education.
- e) requires all individuals providing diabetes education to have evidence of current certification.
- f) requires all individuals currently providing education to obtain certification as soon as possible.
- g) conducts an annual review of the certification program curriculum based on existing evidence and standards of education and care.

Education

GOAL 3

Expand and enhance the community-based **Standardized Client Education Program** (Diabetes Education Resource Program).

Actions

The community-based **Standardized Client Education Program** must be one that:

- a) ensures timely access to community diabetes resources at initial diagnosis.
- b) emphasizes information about complications of diabetes at the time of initial diagnosis.
- c) utilizes certified diabetes educators at all levels - basic, intermediate and advanced.
- d) provides ongoing follow-up.
- e) uses teaching methods and language of instruction that are appropriate for the



intended audience.

- f) distributes appropriate educational material.
- g) provides education, care and support for individuals with diabetes and their families in their home communities, whenever possible.

Education

GOAL 4

Incorporate **Education About Diabetes** throughout the continuum of health care provider education.

Actions

Education About Diabetes must ensure that health care providers are aware of the scope of practice of all other health care practitioners. In addition, include the following in the program content:

- a) cultural beliefs of disease causation.
- b) health care provision in cross-cultural and northern/remote environments.
- c) the role of traditional and spiritual healing.
- d) prevention, education and the broader determinants of health as they relate to diabetes.
- e) issues related to seniors and diabetes.
- f) the provision of learning opportunities in community-based settings in both undergraduate and postgraduate education.

Education

GOAL 5

Develop a **Refresher Program** for all health care providers in the work force to update their knowledge about diabetes.

Actions

Include the following in a **Refresher Program** for health care providers:

- a) recommended standards of practice,
- b) inter/multi-disciplinary approach,
- c) burden of illness of diabetes,
- d) diabetes as a public health issue,
- e) holistic approaches, and
- f) health determinants.

Education

GOAL 6

Encourage all health professional associations in Manitoba to require **Continuing Education** about diabetes.

Actions

For **Continuing Education**:

- a) use a multidisciplinary approach for all continuing education, recognizing that the content of the material may be profession-specific.
- b) provide access to continuing education for all health care providers through itinerant programming, interactive distance education or, if necessary, by funding attendance at centralized or regional sites.

Education

GOAL 7

Include information about diabetes and chronic diseases in all **School Health Curricula**.

Actions

Link with appropriate people from Manitoba Health, Manitoba Education and Training and other agencies/associations to

ensure that information about diabetes and chronic diseases is included in all **School Health Curricula**.

Education

GOAL 8

Ensure the safety and health of students with diabetes in all school settings by utilizing the Canadian Diabetes Association **School Standards of Care** (1998).

Actions

Implement **School Standards of Care** in partnerships with:

- a) Manitoba Education and Training,
- b) school boards,
- c) teachers' associations,
- d) school trustees, and
- e) consumers.

Education

GOAL 9

Increase the **Number of Aboriginal Students** participating in, and graduating from, health care provider programs (in accordance with Recommendation 3.3.16 of the Royal Commission on Aboriginal Peoples - November 1996).

Actions

To increase the **Number of Aboriginal Students**:

- a) address the need for peer and cultural support.
- b) negotiate funding issues with partners.
- c) improve geographical access.
- d) introduce flexibility for entrance criteria.

Education

GOAL 10

Include information about diabetes and other chronic diseases in the health component of the **Teacher Certification and Training Program**.

Actions

Changing the content of the **Teacher Certification and Training Program** will require multisectoral discussions with:

- a) Manitoba Education and Training,
- b) Faculties of Education in Manitoba universities,
- c) Manitoba Health,
- d) school divisions, and
- e) consumers.

Education

GOAL 11

Develop a **Public Awareness Campaign** about the complications of diabetes.

Actions

A **Public Awareness Campaign** about the complications of diabetes must be province-wide, culturally-appropriate, age-specific and targeted to people with diabetes and their caregivers. A **Public Awareness Campaign** about diabetes complications should include:

- a) clear, accurate and consistent messages.
- b) information about the risk factors for the complications of diabetes.
- c) information to encourage individuals to obtain personal complication risk assessments.
- d) co-ordination with other diabetes **Public Awareness Campaigns**.



Education

GOAL 12

Co-ordinate an annual **Diabetes Symposium**.

Actions

The **Diabetes Symposium** should be organized in collaboration with the existing diabetes education network partners and address the latest developments in diabetes prevention, education, care, research and support.

Education

GOAL 13

Develop a **Diabetes Resource Library**.

Actions

The **Diabetes Resource Library** should:

- a) focus on educational resources and teaching tools for educators and their clients.
- b) include computer access through the Internet to ensure accessibility.

Education

GOAL 14

Develop **Healthy Public Policies** that support the concept of education as a fundamental component of diabetes prevention, care, research and support.

Actions

Focus **Healthy Public Policies** on the support of education of:

- a) the public,
- b) people with diabetes and their families,
- c) the health professions, and
- d) other policy makers.

Care

GOAL 1

Develop **Manitoba Diabetes Care**

Recommendations for the care of people with diabetes, consistent with the Canadian Diabetes Association Clinical Practice Guidelines.^{(18) (19)}

Actions

The **Manitoba Diabetes Care**

Recommendations should include:

- a) a format that is concise and practical.
- b) periodic review and update.
- c) collaboration with the College of Physicians and Surgeons of Manitoba and other appropriate regulatory bodies.
- d) tools to evaluate the implementation of the recommendations and their effectiveness.
- e) a distribution plan for all health professionals and health care providers, as well as appropriate regulatory bodies and professional organizations.
- f) information relevant to the care of:
 - I. Aboriginal people with diabetes. The unique considerations of family-centred care, language and culture must be incorporated in the recommendations.
 - II. women of child-bearing age with diabetes and women with, or at risk of developing, gestational diabetes.
 - III. children with diabetes and their families. Instruction should be made available to all members of the family. Community-based care should be emphasized for Aboriginal children.

IV. seniors with diabetes. The recommendations should promote individualized care for seniors with consideration given to individual needs, associated diseases and functional status.

Care

GOAL 2

Develop comprehensive **Diabetes Complications Screening and Care Programs**.

Actions

Diabetes Complications Screening and Care Programs should include:

- a) complication risk assessment.
- b) use of multidisciplinary teams.
- c) intervention programs for eye care, foot care, kidney function, high blood pressure and heart disease.
- d) links with other Manitoba programs: for example, the Diabetes Education Resource Program, tribal council diabetes programs, Northern Medical Unit and the Manitoba Dialysis Program.

Care

GOAL 3

Standardize the collection and communication of clinical data about people with diabetes through the development of a **Clinical Data Form**.

Actions

Standardized **Clinical Data Forms** will:

- a) contain baseline information from the initial client assessment.
- b) contain schedules for complication screening, to form the basis for reminders

to the person with diabetes and the DHC team.

- c) allow for the documentation of screening for the complications of diabetes.
- d) be available in clinical charts and to the person with diabetes.
- e) require tools to allow the transfer of essential medical information quickly and efficiently, especially reports and recommendations from specialist consultation.

Care

GOAL 4

Improve the **Co-ordination of Services** among hospitals and communities, Regional Health Authorities and other service providers.

Actions

Improve **Co-ordination of Services** between health institutions and communities by:

- a) development of communication networks as a priority in the care plan for the person with diabetes.
- b) inclusion of hospital admission and discharge planning.
- c) post-discharge follow-up as necessary (example, for children, seniors and Aboriginal people).

Care

GOAL 5

Develop the **Diabetes Health Care team** with an interdisciplinary structure and broad mandate for the education and management of diabetes and the prevention of its complications.



Actions

- a) The **Organization** of the **DHC team** is as follows:
- I. the person with diabetes and his/her family or care provider is central to the DHC team.
 - II. responsibility for diabetes care co-ordination is assigned to one individual on the DHC team.
 - III. the core DHC team will include the primary care physician, diabetes educators and/or community health educators and health care providers.
 - IV. the expanded DHC team is flexible and may include a variety of health care specialists and providers as individual needs dictate.
 - V. DHC team members should have expertise in psychosocial, economic, spiritual and cultural issues.
 - VI. if the community size does not allow for a full-time DHC team, provision on a regional basis should be considered, with every effort to provide care in the person's home community.
 - VII. the DHC team will develop alliances among business, education, volunteer, health and other sectors of the community.
 - VIII. the DHC team will utilize Regional Health Authority Diabetes Education Resource (DER) program staff who provide core services, to act as facilitators, co-ordinators and regional "experts" for DHC team development.
 - IX. DHC team members will have appropriate training, skills and the opportunities to maintain them.

- b) The **Functions** of the **DHC team** are as follows:
- I. co-ordination of comprehensive primary health care for the person with diabetes.
 - II. education about self-management of diabetes and prevention of complications.
 - III. identification of acute and chronic complications of diabetes.
 - IV. instruction in the emergency care of acute complications.
 - V. education about self-management of chronic complications.
 - VI. co-ordination of consultation with specialists as needed.
 - VII. communication and integration with community-based prevention, education and support programs, and other sectors that affect the individual's health.
 - VIII. integration of the activities of diabetes prevention, education, care, research and support as they relate to individuals with diabetes and their families.

Care

GOAL 6

Incorporate access to **Traditional Aboriginal Healing** practices and healers for Aboriginal people with diabetes and their families, if desired by the individuals concerned.

Actions

Access to **Traditional Aboriginal Healing** practices (used in conjunction with Western medical practices) requires:

- a) resolution of jurisdictional funding issues.
- b) sensitivity to community beliefs and practices.

Care

GOAL 7

Assess the validity of all **New Therapies** proposed for diabetes.

Actions

- a) Expedite the availability of those therapies shown to be valid.
- b) Develop a communication process to explain the validity of all new therapies.
- c) Develop partnerships with communities in the assessment of new therapies.
- d) Encourage opportunities for individuals and/or communities to be part of the research into new therapies.

Care

GOAL 8

Provide **Children With Diabetes and Their Families** the care necessary to optimize their quality of life.

Actions

- a) All children must have contact with a DHC team with expertise in dealing with children, at least every six months.
- b) A specialized integrated care program for young adults (aged 18-25 years) with Type 1 diabetes would assist in transition from pediatric to adult care.

- c) A variety of intersectoral and community-based care and service organizations must be integrated into the DHC team, for example: the provincial departments of Education, Justice, Family Services and the Public Trustee.

Care

GOAL 9

Provide **Seniors With Diabetes and Their Families** the care necessary to optimize their quality of life.

Actions

- a) Health care providers must be experienced in the care of elderly people.
- b) A variety of community-based care and service organizations must be integrated into the core DHC team for seniors: for example, Manitoba Family Services and the Public Trustee.
- c) Access to care, including foot and eye care, should be provided in the senior's home community, utilizing services such as the Victorian Order of Nurses (VON) and Home Care.

Care

GOAL 10

Develop **Innovative Ways of Funding** the expansion of diabetes care services.

Actions

- a) Develop intergovernmental and intersectoral partnerships to effect a co-ordinated approach.
- b) Seek partnerships with the private sector and non-government organizations.



Care

GOAL 11

Develop **Healthy Public Policies** that address standards of care, barriers in accessing care and continuity of care.

Actions

Healthy Public Policies should consider:

- a) equitable access to diabetes services in Manitoba,
- b) cost,
- c) geography,
- d) cultural and linguistic issues, and
- e) the provision of care for people with diabetes in their home communities, whenever possible.

Research

GOAL 1

Develop a **Manitoba Diabetes Surveillance System**.

Actions

The **Manitoba Diabetes Surveillance System** will:

- a) provide data to monitor and evaluate diabetes prevention, education, care, research and support in Manitoba and by each Regional Health Authority.
- b) provide data to continue the economic impact of diabetes study.

Research

GOAL 2

Develop **Indicators, Benchmarks, Outcomes and Standards** for diabetes prevention, education, care, research and support.

Actions

To develop **Indicators, Benchmarks, Outcomes and Standards**, utilize:

- a) Manitoba Diabetes Surveillance System data,
- b) Canadian Institute for Health Information data,
- c) best practice literature,
- d) census data, and
- e) Canadian Diabetes Association (CDA) standards.

Research

GOAL 3

Evaluate community-based interventions and initiatives in prevention, education, care, research and support.

Actions

This **Evaluation** shall be specific to groups at high risk for diabetes and its complications.

Research

GOAL 4

Increase the **Diabetes-Specific Funding for Research** to make it proportional to the cost of diabetes care in Manitoba (**Appendix D**).

Actions

Increasing **Diabetes-Specific Funding** will require:

- a) partnering between governments, the private sector and non-government organizations.
- b) analysis of the costs of diabetes.
- c) national comparative studies.

Research

GOAL 5

Establish a **Manitoba Centre for Diabetes Research**.

Actions

The **Manitoba Centre for Diabetes Research**:

- a) must provide an infrastructure for evaluation and research about diabetes.
- b) shall encourage Manitoba researchers to advocate special competitions by national funding agencies, to benefit diabetes research in Manitoba.
- c) shall be actively involved in national/international research networks for Type 1 and Type 2 diabetes. This includes participation in multi-centre clinical trials, collaboration on individual research projects and communication about results.
- d) shall maintain an inventory of diabetes research in Manitoba.
- e) shall seek partnerships with other Western region researchers.
- f) shall provide leadership to increase public awareness of ongoing diabetes research.

Research

GOAL 6

Develop a **Code of Ethics** for community-based diabetes research.

Actions

To develop a **Code of Ethics**, it is imperative that researchers:

- a) work with communities and people with diabetes.

- b) partner with other provincial, national and international researchers.

Research

GOAL 7

Develop **Research Skills and Experience** for health care providers.

Actions

To enhance **Research Skills and Experience**, provide:

- a) formal training at the undergraduate and postgraduate level,
- b) continuing education courses,
- c) mentorship programs with established researchers, and
- d) access to current research information and results on an ongoing basis.

Research

GOAL 8

Establish a **Manitoba Diabetes Information Warehouse**.

Actions

The **Manitoba Diabetes Information Warehouse** will:

- a) provide current, comprehensive, culturally- and community-appropriate information regarding all facets of diabetes prevention, education, care, research and support.
- b) update diabetes information regularly.
- c) meet criteria to ensure the accuracy and security of the information.



Research

GOAL 9

Produce an annual **Diabetes in Manitoba** report.

Actions

The **Diabetes in Manitoba** report will include:

- a) latest data on incidence and prevalence of diabetes and its complications by RHA, age, gender, postal code, Status and general populations.
- b) analysis of the significance of the data.
- c) demographic projections.
- d) economic impact data.

Research

GOAL 10

Inform the Public about the research process through a public campaign by researchers and non-government organizations.

Actions

Reports of research to **Inform the Public** should be distributed in a format and language that can be easily understood.

Research

GOAL 11

Develop **Healthy Public Policies** that support diabetes research in Manitoba.

Actions

Healthy Public Policies for research need to include the following components:

- a) community involvement in all aspects of research.

- b) research practices that are culturally sensitive and appropriate.

Support

GOAL 1

Develop holistic and community-based diabetes **Support Systems** that address cultural, emotional, spiritual and physical health issues and needs.

Actions

The development of community-based diabetes **Support Systems** should include:

- a) language concerns.
- b) cultural preferences, particularly with respect to food and activity.
- c) cultural sensitivity training for support workers.
- d) quality of life issues (example, community transportation and wheelchair accessibility for people living with disabilities).
- e) the establishment of community kitchens and walking programs.
- f) partnerships with schools, community centres and shopping malls.
- g) federal/provincial/Aboriginal/community partnerships.

Support

GOAL 2

Increase the number of **Community Diabetes Workers and Health Care Providers** from Aboriginal and other cultural, age and linguistic groups in which there is a disproportionate prevalence of diabetes.

Actions

Emphasize the following for **Community Diabetes Workers and Health Care Providers**:

- a) integration with other DHC team members.
- b) establishment and maintenance of standards of practice for community diabetes workers.
- c) develop training for support workers/providers for seniors with diabetes.
- d) develop training for support workers/providers for children with diabetes.
- e) develop federal/provincial/Aboriginal/community partnerships.

Support

GOAL 3

Address the inequities in **Access to Support Services** across the province.

Actions

- a) Seek financial, housing and transportation services for northern and rural residents who must relocate to urban centres for management of their diabetes and its complications.
- b) Develop diabetes support services for those individuals who are temporarily absent from their home community. This refers to First Nations individuals in particular.
- c) Establish partnerships with non-government organizations (NGOs): for example, Canadian Diabetes

Association (CDA), National Aboriginal Diabetes Association (NADA), Heart and Stroke Foundation, Canadian National Institute for the Blind (CNIB) and the Kidney Foundation of Canada.

- d) With these partners, develop a cohesive support system for individuals living with the long-term complications of diabetes, including visual impairment, lower limb amputation, kidney failure and/or heart disease.

Support

GOAL 4

Address **Jurisdictional Issues**.

Actions

- a) Continue partnerships that have been established by the *Manitoba Diabetes Strategy* process.
- b) Encourage the federal, provincial, municipal and Aboriginal governments to work together toward the common goal of preventing diabetes and improving access to diabetes services.

Support

GOAL 5

Inform **Leaders** at all levels and throughout the province, about the *Manitoba Diabetes Strategy*.

Actions

Inform **Leaders** through release of the *Manitoba Diabetes Strategy* in partnership with NGOs by various means, including public presentations, schools and local media.


Support

GOAL 6

Develop **Psychosocial Supports** for people with diabetes.

Actions

In conjunction with mental health programs, NGOs and communities, develop **Psychosocial Supports** that:

- a) build self-esteem in individuals with diabetes and their families.
- b) address the issues of living with diabetes on a daily basis.

Support

GOAL 7

Develop **Peer Counselling Support** services in all communities.

Actions

The development of **Peer Counselling Support** systems should include:

- a) people with diabetes and their families,
- b) the DHC team,
- c) health care workers,
- d) community health workers, and
- e) NGOs and other community organizations.

Support

GOAL 8

Develop **Advocacy Programs** for special-needs groups, including children, seniors and Aboriginal people.

Actions

Advocacy Programs will be developed in partnership with CDA and NADA to address specific issues (example, the cost of diabetes supplies for individuals with fixed incomes).

Support

GOAL 9

Expand **Pharmacare Programs** to increase coverage for diabetes medications and supplies.

Actions

- a) Assess new pharmacologic and non-pharmacologic technology.
- b) Provide affordable supplies for the management of diabetes.
- c) Maintain an inventory of supplies used in the care of diabetes and its complications.
- d) Ensure sufficient quantities of supplies are available to everyone with diabetes.
- e) Consider bulk contracts with manufacturers as a way to minimize costs.

Support

GOAL 10

Develop **Healthy Public Policies** that support people living with diabetes and its complications, their families and communities.

Actions

- a) Identify diabetes support needs within the community.
- b) Initiate policies that will promote the development of community support systems for people with diabetes and their families.
- c) Encourage the active participation of individuals with diabetes in the planning of community support systems.

Les recommandations

Le Comité directeur de la Stratégie manitobaine contre le diabète recommande les objectifs et les actions qui figurent ci-dessous.

Étroitement liés, ces objectifs et ces actions tiennent compte de toute la gamme des mesures de lutte contre le diabète, soit la prévention, l'information du public, les soins pour les diabétiques, la recherche et le soutien.

Le Comité directeur sait que la mise en oeuvre des objectifs et des actions proposés exige une concertation des multiples intervenants et l'établissement de partenariats intersectoriels, intergouvernementaux et communautaires.

Prévention

1^{er} objectif

Établir dans les communautés des **programmes de prévention primaire du diabète** qui s'adressent plus particulièrement aux Autochtones et aux personnes âgées.

Actions

Les **programmes de prévention primaire du diabète** devraient avoir les caractéristiques suivantes:

- a) souligner comment les individus et les familles peuvent changer leurs habitudes et leurs milieux ainsi que donner l'exemple de modes de vie sains;
- b) encourager les individus et les familles à faire des pressions pour que des changements soient apportés aux déterminants de la santé qui augmentent les risques de diabète;
- c) préconiser un contexte favorable à des modes de vie sains pour les hommes et les femmes de tous les âges et de toutes les cultures;
- d) prévoir et soutenir des activités visant à améliorer la capacité de la population de prévenir le diabète et d'adopter des modes de vie sains;
- e) prévoir la participation des anciens, des chefs et des autres leaders de la communauté pour servir de modèles en matière de santé;
- f) informer les individus et les familles quant à l'importance d'atteindre et de conserver un poids-santé grâce à l'activité physique régulière et à de bonnes habitudes alimentaires;
- g) prévoir l'élaboration d'une gamme complète de moyens d'évaluer les facteurs de risque;
- h) comporter une évaluation des individus



et des familles à risque par rapport au diabète;

- i) s'assortir des ressources nécessaires pour l'organisation d'activités de prévention du diabète qui soient efficaces et adaptées à différents groupes;
- j) inclure les ressources nécessaires pour assurer une qualité de vie optimale aux groupes à risque élevé par rapport au diabète, soit les enfants, les Autochtones et les personnes âgées;
- k) comprendre des messages clairs, exacts et cohérents qui sont adaptés aux particularités individuelles et culturelles;
- l) prévoir la diffusion de messages et l'utilisation de moyens pour briser le cycle de transmission du risque de diabète à l'intérieur des familles et pour préserver les générations à venir;
- m) transmettre les messages de prévention au moyen des réseaux communautaires existants;
- n) encourager les commissions scolaires à créer des milieux propices à des modes de vie sains pour les élèves et la communauté, par exemple en préconisant la consommation d'aliments nutritifs dans le cadre d'un programme de dîners à l'école et en offrant davantage d'activité physique aux enfants;
- o) préconiser l'intégration de renseignements sur l'activité physique et une bonne alimentation dans tous les programmes d'études;
- p) traiter de l'impact de l'acculturation (par exemple les écoles résidentielles) en ce qui concerne l'apparition du diabète.

Prévention

2^e objectif

Élaborer dans les communautés une gamme complète de **programmes de dépistage du diabète**.

Actions

Les **programmes de dépistage du diabète** devraient comprendre les éléments suivants:

- a) la sensibilisation et la participation de la communauté;
- b) des équipes multidisciplinaires;
- c) des stratégies et des procédures de suivi conformes aux observations notées dans les cas de diabète et d'intolérance au glucose.

Prévention

3^e objectif

Élaborer une **stratégie manitobaine de nutrition** visant à assurer la possibilité d'obtenir des aliments nutritifs et à favoriser l'adoption de bonnes habitudes alimentaires.

Actions

La **Stratégie manitobaine de nutrition** devrait comprendre les éléments suivants:

- a) des prix variables, avec l'aide des gouvernements, afin d'assurer la possibilité d'obtenir des aliments nutritifs;
- b) des suppléments alimentaires pour les personnes et les familles qui n'ont pas les moyens d'acheter des aliments sains;
- c) l'affectation de terrains et l'établissement de programmes pour l'organisation de jardins communautaires;

- d) la réglementation de l'approvisionnement en gibier et en plantes sauvages;
- e) la normalisation des informations inscrites sur les étiquettes des produits alimentaires et la diffusion de renseignements à ce sujet.

Prévention

4^e objectif

Élaborer une **stratégie manitobaine d'activité physique** pour offrir à toute la population des activités physiques adéquates et encourager les individus et les familles à faire de l'exercice chaque jour.

Actions

La **Stratégie manitobaine d'activité physique** doit convenir à des personnes dont la culture, l'origine ethnique, les capacités, l'expérience et les intérêts varient.

La **Stratégie** devrait notamment:

- a) viser, pour la période de 1998 à 2003, une réduction de 10 % de l'inactivité physique, soit la cible adoptée par les ministres fédéral, provinciaux et territoriaux;
- b) trouver et soutenir des leaders locaux qui serviront de modèles pour promouvoir des modes de vie sains et actifs dans leurs communautés;
- c) appuyer des actions communautaires visant à offrir des moyens de transport actifs et des milieux propices à une vie active;
- d) aider les familles à faire de leurs foyers et de leurs quartiers des milieux de vie actifs;
- e) créer un contexte favorable à l'activité

physique par divers moyens tels des installations, des espaces verts, des sentiers pour la marche et pour la randonnée, des pistes cyclables et des circuits de canot;

- f) prévoir la recherche d'autres sources de financement pour les spectacles culturels et sportifs afin de remplacer la commandite des compagnies d'alcool et de tabac;
- g) faire l'objet d'une coordination avec d'autres **stratégies d'activité physique**.

Prévention

5^e objectif

Offrir des **réductions d'impôt** aux individus, aux familles et aux communautés qui adoptent des mesures de prévention du diabète.

Actions

Pour offrir des **réductions d'impôt**, il faut:

- a) la collaboration des gouvernements fédéral et provincial, ainsi que des administrations municipales et autochtones;
- b) des indicateurs et des points de repère pour évaluer les pratiques de prévention et les résultats obtenus.

Prévention

6^e objectif

Élaborer une **campagne d'information publique** sur la prévention du diabète de type 2.

Actions

La **campagne d'information publique** menée dans toute la province doit



- comporter les éléments suivants:
- a) des renseignements au sujet des facteurs de risque associés au diabète;
 - b) l'élaboration d'une gamme complète de moyens d'évaluer les facteurs de risque;
 - c) des renseignements pour encourager les individus à faire évaluer leurs risques de devenir diabétiques;
 - d) des messages clairs, exacts et cohérents;
 - e) des stratégies de communication et de ciblage qui prévoient l'utilisation de matériel imprimé ainsi que de moyens audiovisuels et électroniques;
 - f) des numéros d'urgence que la population manitobaine pourra composer pour obtenir des renseignements sur les ressources et les services;
 - g) une coordination avec les autres **campagnes d'information publique** sur le diabète.

Prévention

7^e objectif

Adopter des **politiques de santé publique** qui appuient des modes de vie sains et actifs, de même que des milieux propices à la santé.

Actions

Toutes les **politiques de santé publique** devraient:

- a) tenir compte des réalités culturelles;
- b) être adaptées aux personnes des deux sexes et de différents groupes d'âge;
- c) offrir un appui aux individus et aux familles dans leurs foyers et leurs milieux de travail;

- d) promouvoir le bien-être émotionnel et raviver le sentiment de fierté des individus, des familles et des communautés;
- e) soutenir l'établissement de milieux sans alcool et sans fumée;
- f) prévenir ou faire cesser la consommation d'alcool et de produits du tabac.

Information du public

1^{er} objectif

Établir un **programme normalisé, à niveaux multiples, de formation en matière de diabète**, afin d'augmenter le nombre d'éducateurs en diabète, depuis les experts des milieux communautaires jusqu'aux spécialistes.

Actions

Un **programme normalisé, à niveaux multiples, de formation en matière de diabète** devrait comporter:

- a) un **niveau fondamental** - pour les diabétiques qui s'occupent d'éducation en matière de diabète, les travailleurs de santé communautaire et le public; ce niveau devrait être offert à un prix abordable dans des endroits accessibles;
- b) un **niveau intermédiaire** - pour les fournisseurs de soins de santé qui s'occupent à temps partiel de l'éducation ou des soins pour les diabétiques;
- c) un **niveau avancé** - pour les fournisseurs de soins de santé qui s'occupent à temps plein de l'éducation ou des soins pour les diabétiques; ce niveau devrait répondre aux normes du *Canadian Diabetes Educator Certification Board*.

Information du public

2^e objectif

Élaborer un **programme d'agrément à niveaux multiples** qui soit obligatoire pour les éducateurs en diabète.

Actions

Un **programme d'agrément à niveaux multiples** qui est obligatoire doit:

- a) être coordonné par un organisme central représentant les fournisseurs de soins de santé, les consommateurs et le public;
- b) faire partie du programme d'agrément en place pour les éducateurs en diabète;
- c) bénéficier de fonds pour couvrir les frais de démarrage, de même que les frais courants de fonctionnement et d'évaluation;
- d) renseigner le public et les diabétiques sur les normes relatives à l'éducation en matière de diabète;
- e) exiger que toutes les personnes qui s'occupent d'éducation en matière de diabète soient agréées;
- f) exiger que toutes les personnes qui s'occupent d'éducation en matière de diabète se soumettent le plus tôt possible au processus d'agrément;
- g) faire l'objet d'une révision annuelle à la lumière des résultats de recherche, ainsi que des normes en matière d'éducation et de soins.

Information du public

3^e objectif

Élargir et améliorer le **Programme normalisé d'éducation de la clientèle**

offert dans la communauté (Programme d'éducation en matière de diabète).

Actions

Le **Programme normalisé d'éducation de la clientèle** offert dans la communauté doit:

- a) assurer l'accès rapide à des ressources communautaires dès le premier diagnostic de diabète;
- b) mettre l'accent, dès le premier diagnostic, sur les complications associées au diabète;
- c) faire appel à des éducateurs en diabète agréés aux niveaux fondamental, intermédiaire et avancé;
- d) comprendre des services de suivi;
- e) être dispensé selon des méthodes et dans un langage qui conviennent à la clientèle cible;
- f) comporter du matériel informatif adapté à la clientèle;
- g) offrir aux diabétiques et à leurs familles des renseignements, des soins et du soutien dans leur communauté, si possible.

Information du public

4^e objectif

Intégrer des **informations au sujet du diabète** dans l'ensemble du programme d'éducation des fournisseurs de soins de santé.

Actions

Les **informations au sujet du diabète** doivent faire en sorte que les fournisseurs de soins de santé connaissent le champ d'action de tous les autres praticiens dans le domaine de la santé. Il faut aussi prévoir



dans le programme des informations sur:

- a) les convictions des différentes communautés culturelles quant aux causes des maladies;
- b) la prestation de soins de santé dans les milieux multiculturels et les communautés isolées et du Nord;
- c) la place des approches traditionnelles et spirituelles de guérison;
- d) le rôle de la prévention, de la sensibilisation et des déterminants plus larges de la santé relativement au diabète;
- e) le diabète chez les personnes âgées;
- f) les possibilités d'apprentissage dans les communautés pour les étudiants des premier et deuxième cycles.

Information du public

5^e objectif

Élaborer un **programme de recyclage** qui permettra à tous les fournisseurs de soins de santé en poste de mettre à jour leurs connaissances à propos du diabète.

Actions

Le **programme de recyclage** à l'intention des fournisseurs de soins de santé devrait porter notamment sur:

- a) les normes recommandées pour l'exercice de la profession;
- b) les approches multidisciplinaire et interdisciplinaire;
- c) les problèmes de santé associés au diabète;
- d) le diabète en tant que problème de santé publique;
- e) les approches holistiques;
- f) les déterminants de la santé.

Information du public

6^e objectif

Encourager toutes les associations des professionnels de la santé au Manitoba à exiger une **formation permanente** à propos du diabète.

Actions

En ce qui concerne la **formation permanente**, il faut:

- a) adopter une approche multidisciplinaire dans tous les cours, mais reconnaître que le contenu pourra varier selon les professions;
- b) favoriser l'accès de tous les fournisseurs de soins de santé par des programmes itinérants, l'éducation interactive à distance ou, au besoin, des fonds pour se rendre dans un établissement central ou régional.

Information du public

7^e objectif

Intégrer des renseignements sur le diabète et les maladies chroniques dans tous les **programmes scolaires de santé**.

Action

Établir des liens entre les personnes compétentes de Santé Manitoba, d'Éducation et Formation professionnelle Manitoba, ainsi que d'autres associations ou organismes pertinents pour s'assurer que des renseignements sur le diabète et les maladies chroniques soient intégrés dans tous les **programmes scolaires de santé**.

Information du public

8^e objectif

Veiller à assurer la santé et la sécurité des élèves diabétiques dans toutes les écoles en appliquant les **normes de soins en milieu scolaire** (1998) de l'Association canadienne du diabète.

Actions

Appliquer les **normes de soins en milieu scolaire** avec la collaboration:

- a) d'Éducation et Formation professionnelle Manitoba;
- b) des divisions scolaires;
- c) des associations de la profession enseignante;
- d) des administrateurs scolaires;
- e) des consommateurs.

Information du public

9^e objectif

Augmenter le **nombre d'étudiants autochtones** qui suivent les programmes de formation destinés aux fournisseurs de soins de santé et obtiennent un diplôme (conformément à la recommandation 3.3.16 de la Commission royale sur les peuples autochtones - novembre 1996).

Actions

Pour parvenir à augmenter le **nombre d'étudiants autochtones**, il faut:

- a) veiller à leur offrir le soutien nécessaire de leurs pairs et de leurs communautés culturelles;
- b) mener des négociations avec les partenaires par rapport aux questions de financement;
- c) améliorer l'accès à la formation

indépendamment de la situation géographique;

- d) assouplir les critères d'admission.

Information du public

10^e objectif

Intégrer des renseignements sur le diabète et les autres maladies chroniques dans le volet santé du **Programme de formation et de reconnaissance professionnelle des enseignants**.

Actions

Pour modifier le contenu du **Programme de formation et de reconnaissance professionnelle des enseignants**, il faudra tenir des discussions multisectorielles avec:

- a) Éducation et Formation professionnelle Manitoba;
- b) les facultés d'éducation des universités manitobaines;
- c) Santé Manitoba;
- d) les divisions scolaires;
- e) les consommateurs.

Information du public

11^e objectif

Concevoir et mener une **campagne d'information publique** à propos des complications associées au diabète.

Actions

La **campagne d'information publique** à propos des complications associées au diabète doit s'adresser aux diabétiques et aux personnes qui leur donnent des soins, et convenir à différentes communautés culturelles et à divers groupes d'âge. Menée dans toute la province, cette **campagne** devrait prévoir:



- a) des messages clairs, exacts et cohérents;
- b) des renseignements sur les facteurs de risque en ce qui concerne les complications associées au diabète;
- c) des messages pour encourager les diabétiques à faire évaluer leurs risques de complication;
- d) une coordination avec les autres **campagnes d'information publique** sur le diabète.

Information du public

12^e objectif

Coordonner chaque année l'organisation d'un colloque sur le diabète.

Action

Le colloque sur le diabète devrait être organisé en collaboration avec les partenaires du réseau des éducateurs en diabète et traiter des nouveautés relativement à la prévention, à l'information du public, aux soins pour les diabétiques, à la recherche et au soutien.

Information du public

13^e objectif

Établir un **centre de documentation sur le diabète**.

Actions

Le **centre de documentation sur le diabète** devrait:

- a) réunir surtout du matériel informatif et pédagogique pour les éducateurs en diabète et leur clientèle;
- b) être informatisé de manière à permettre un accès facile par Internet.

Information du public

14^e objectif

Élaborer des **politiques de santé publique** qui font de l'éducation un élément essentiel de la prévention, des soins pour les diabétiques, de la recherche et du soutien.

Actions

Les **politiques de santé publique** doivent soutenir des programmes d'éducation pour:

- a) le public;
- b) les diabétiques et leurs familles;
- c) les membres des professions de la santé;
- d) les autres décideurs.

Soins pour les diabétiques

1^{er} objectif

Formuler des **recommandations pour les soins aux diabétiques du Manitoba** conformes aux directives de l'Association canadienne du diabète en matière de pratiques cliniques.^{(18) (19)}

Actions

Les **recommandations pour les soins aux diabétiques du Manitoba** devraient:

- a) être rédigées de façon concise et présentées dans un format pratique;
- b) faire l'objet d'une mise à jour périodique;
- c) être formulées en collaboration avec le Collège des médecins et chirurgiens du Manitoba et d'autres organismes compétents de réglementation;
- d) prévoir des moyens d'évaluer la mise en oeuvre et l'efficacité des actions recommandées;
- e) comprendre un plan de diffusion pour tous les professionnels et les fournisseurs de soins dans le domaine de la santé,

- ainsi que les organisations professionnelles et les organismes de réglementation concernés;
- f) fournir des renseignements utiles pour:
- I. les Autochtones diabétiques - les recommandations doivent tenir compte des considérations linguistiques et culturelles, ainsi que du rôle central de la famille dans la prestation des soins;
 - II. les femmes diabétiques en âge de procréer et les femmes qui souffrent ou risquent de souffrir de diabète sucré durant la grossesse;
 - III. les enfants diabétiques et leurs familles - il faut s'assurer d'informer tous les membres de la famille et, pour les enfants autochtones, de mettre l'accent sur le rôle de la communauté dans la prestation des soins;
 - IV. les personnes âgées diabétiques - les recommandations doivent promouvoir des soins individualisés qui tiennent compte des préférences, de la capacité fonctionnelle et des maladies associées au diabète.

Soins pour les diabétiques

2^e objectif

Élaborer une gamme complète de programmes de dépistage et de soins des complications associées au diabète.

Actions

Les programmes de dépistage et de soins des complications associées au diabète devraient comporter:

- a) une évaluation des risques de complication;
- b) des équipes multidisciplinaires;

- c) des programmes d'intervention par rapport à l'hypertension, aux soins des yeux et des pieds, aux fonctions rénales et aux maladies du coeur;
- d) des liens avec d'autres programmes manitobains, par exemple ceux des conseils de tribu et de l'Unité médicale du Nord, ainsi que le Programme manitobain de dialyse et le Programme d'éducation en matière de diabète.

Soins pour les diabétiques

3^e objectif

Uniformiser les méthodes de collecte et de diffusion des données cliniques à propos des diabétiques en mettant au point un **formulaire de renseignements cliniques**.

Actions

Le **Formulaire de renseignements cliniques** devra:

- a) contenir les données de base recueillies au moment du premier diagnostic du client;
- b) comprendre un calendrier pour le dépistage des complications qui servira d'aide-mémoire pour la personne diabétique et l'équipe de soins;
- c) faire état des tests subis pour dépister les complications associées au diabète;
- d) être conservé dans les dossiers cliniques et mis à la disposition de la personne diabétique;
- e) s'assortir de moyens d'assurer un transfert rapide et efficace des informations médicales essentielles, en particulier les rapports et les recommandations des spécialistes consultés.



Soins pour les diabétiques

4^e objectif

Améliorer la **coordination des services** entre les hôpitaux et les communautés, les offices régionaux de la santé et les autres fournisseurs de services.

Actions

Pour améliorer la **coordination des services** entre les établissements de santé et les communautés, il faut:

- a) faire de l'établissement de liens de communication une priorité dans le plan de soins de la personne diabétique;
- b) planifier l'admission à l'hôpital et la sortie de l'hôpital;
- c) assurer des soins de suivi après la sortie de l'hôpital, au besoin (par exemple pour les enfants, les personnes âgées et les Autochtones).

Soins pour les diabétiques

5^e objectif

Mettre sur pied une **équipe de soins pour les diabétiques**, interdisciplinaire, qui soit chargée d'un mandat large par rapport à la diffusion de renseignements sur le contrôle du diabète et la prévention des complications.

Actions

- a) La **mise sur pied de l'équipe de soins pour les diabétiques** se fera comme suit:
 - I. les diabétiques et leurs familles ou fournisseurs de soins y joueront un rôle central;
 - II. la coordination des soins sera confiée à un membre de l'équipe;
 - III. l'équipe de base sera constituée du

médecin traitant, des éducateurs en diabète, des travailleurs de santé communautaire et des fournisseurs de soins de santé;

- IV. l'équipe élargie sera flexible et pourra comprendre divers spécialistes et fournisseurs de soins de santé, selon les besoins individuels des diabétiques;
 - V. les membres de l'équipe devraient posséder de l'expérience par rapport aux questions psychosociales, économiques, spirituelles et culturelles;
 - VI. s'il est impossible d'avoir une équipe à temps plein en raison de la taille de la communauté, on pourra organiser une équipe à l'échelle régionale et on devra s'efforcer d'offrir les soins dans la communauté où réside la personne diabétique;
 - VII. l'équipe établira des alliances avec les milieux des affaires, de l'éducation et de la santé, les organismes bénévoles et d'autres intervenants de la communauté;
 - VIII. pour l'aider à se constituer, l'équipe fera appel au personnel du Programme d'éducation en matière de diabète, qui assure les services essentiels au sein des offices régionaux de la santé, pour jouer les rôles d'animateurs, de coordonnateurs et d'«experts» régionaux;
 - IX. les membres de l'équipe devront acquérir la formation et les compétences nécessaires et avoir la possibilité de se tenir à jour.
- b) Les **fonctions de l'équipe de soins pour les diabétiques** sont les suivantes:

- I. coordonner une gamme complète de soins primaires pour les diabétiques;
- II. donner de l'information sur l'autocontrôle du diabète et la prévention des complications;
- III. assurer le dépistage des complications aiguës et chroniques associées au diabète;
- IV. enseigner les soins d'urgence à prodiguer dans les cas de complications aiguës;
- V. enseigner aux diabétiques les méthodes d'autocontrôle des complications chroniques associées au diabète;
- VI. coordonner les consultations avec les spécialistes, au besoin;
- VII. communiquer avec les responsables des programmes communautaires de prévention, de soutien, d'information du public et autres qui ont une incidence sur la santé individuelle afin d'assurer la concertation des interventions;
- VIII. veiller à l'intégration des activités de prévention, d'information du public, de soins, de recherche et de soutien pour les diabétiques et leurs familles.

Soins pour les diabétiques

6^e objectif

Prévoir l'accès aux guérisseurs et aux **pratiques de guérison traditionnelles autochtones** pour les Autochtones diabétiques et leurs familles, si tel est leur désir.

Actions

Pour assurer l'accès aux **pratiques de guérison traditionnelles autochtones**, qui

seront combinées à celles de la médecine occidentale, il faut:

- a) résoudre les questions de compétences en matière de financement;
- b) être sensible aux convictions et aux pratiques des communautés.

Soins pour les diabétiques

7^e objectif

Évaluer la validité de tous les **nouveaux traitements** proposés pour le diabète.

Actions

- a) Accélérer l'application des traitements qui ont fait leurs preuves.
- b) Élaborer une stratégie de communication pour expliquer la valeur de tout nouveau traitement.
- c) Établir des partenariats avec les communautés relativement à l'évaluation des nouveaux traitements.
- d) Donner l'occasion aux diabétiques et aux communautés de prendre part à la recherche de nouveaux traitements.

Soins pour les diabétiques

8^e objectif

Fournir aux **enfants diabétiques et à leurs familles** les soins nécessaires pour leur assurer une qualité de vie optimale.

Actions

- a) Tous les enfants doivent être en contact, au moins tous les six mois, avec une équipe de soins pour les diabétiques qui possède de l'expérience dans le traitement des enfants.
- b) L'établissement d'un programme spécialisé de soins intégrés pour les jeunes adultes (de 18 à 25 ans) souffrant de



diabète de type 1 faciliterait la transition des soins pédiatriques aux soins pour adultes.

- c) Il faut intégrer à l'équipe de soins pour les diabétiques divers organismes intersectoriels et communautaires offrant des soins et des services, par exemple les ministères provinciaux de l'Éducation et de la Formation professionnelle, de la Justice et des Services à la famille, ainsi que le curateur public.

Soins pour les diabétiques

9^e objectif

Fournir aux personnes âgées diabétiques et à leurs familles les soins nécessaires pour leur assurer une qualité de vie optimale.

Actions

- a) Les fournisseurs de soins de santé doivent posséder de l'expérience dans les soins aux personnes âgées.
- b) Il faut intégrer à l'équipe de soins pour les personnes âgées diabétiques divers organismes communautaires offrant des soins et des services, par exemple Services à la famille Manitoba, ainsi que le curateur public.
- c) Les divers soins offerts, y compris ceux des pieds et des yeux, devraient être dispensés dans les communautés où vivent les personnes âgées par l'intermédiaire des Infirmières de l'Ordre de Victoria et des programmes de soins à domicile.

Soins pour les diabétiques

10^e objectif

Trouver des moyens de financement

novateurs pour assurer l'expansion des services de soins pour les diabétiques.

Actions

- a) Établir des partenariats intersectoriels et intergouvernementaux afin d'en arriver à une approche concertée.
- b) Chercher à établir des partenariats avec le secteur privé et les organisations non gouvernementales.

Soins pour les diabétiques

11^e objectif

Élaborer des politiques de santé publique qui traitent des normes, des obstacles et de la continuité en matière de soins.

Actions

Les politiques de santé publique devraient tenir compte des éléments suivants:

- a) l'accès équitable aux services pour les diabétiques du Manitoba;
- b) les coûts;
- c) la situation géographique;
- d) les questions culturelles et linguistiques;
- e) la prestation de soins aux diabétiques dans leurs communautés, si possible.

Recherche

1^{er} objectif

Établir un système manitobain de surveillance du diabète.

Actions

Le Système manitobain de surveillance du diabète permettra:

- a) d'obtenir des données sur le diabète, ventilées selon chaque office régional de la santé, pour suivre les progrès marqués au Manitoba en ce qui concerne la

prévention, l'information du public, les soins pour les diabétiques, la recherche et le soutien;

- b) d'obtenir des données afin de poursuivre l'étude des incidences économiques du diabète.

Recherche

2^e objectif

Élaborer des indicateurs, des points de repère, des résultats à atteindre et des normes relativement à la prévention, à l'information du public, aux soins pour les diabétiques, à la recherche et au soutien.

Actions

Pour élaborer les indicateurs, les points de repère, les résultats à atteindre et les normes, il faudra avoir recours:

- a) aux données du Système manitobain de surveillance du diabète;
- b) aux données de l'Institut canadien d'information sur la santé;
- c) aux écrits sur les meilleures pratiques;
- d) aux données de recensement;
- e) aux normes de l'Association canadienne du diabète.

Recherche

3^e objectif

Évaluer les interventions et les projets des communautés en ce qui concerne la prévention, l'information du public, les soins pour les diabétiques, la recherche et le soutien.

Action

L'évaluation devra viser particulièrement les groupes à risque élevé par rapport au diabète et aux complications associées au diabète.

Recherche

4^e objectif

Augmenter le financement consacré à la recherche sur le diabète de sorte qu'il soit proportionnel aux coûts des soins liés au diabète au Manitoba.

Actions

Pour augmenter le financement consacré à la recherche sur le diabète, il faudra:

- a) des partenariats entre les gouvernements, le secteur privé et les organisations non gouvernementales;
- b) une analyse des coûts occasionnés par le diabète;
- c) des études comparatives nationales.

Recherche

5^e objectif

Établir un centre manitobain de recherche sur le diabète.

Actions

Le Centre manitobain de recherche sur le diabète doit:

- a) servir d'infrastructure pour l'évaluation et la recherche en matière de diabète;
- b) encourager les chercheurs du Manitoba à réclamer auprès des organismes nationaux de financement des concours spéciaux dont pourrait bénéficier la recherche sur le diabète dans la province;
- c) prendre une part active aux réseaux nationaux et internationaux de recherche sur le diabète de types 1 et 2 en participant à des essais cliniques décentralisés, en collaborant à des projets individuels de recherche et en assurant la diffusion des résultats;



- d) conserver un inventaire des travaux de recherche sur le diabète menés au Manitoba;
- e) s'efforcer d'établir des partenariats avec d'autres chercheurs de l'Ouest;
- f) jouer un rôle de chef de file pour sensibiliser davantage le public aux travaux de recherche en cours sur le diabète.

Recherche

6^e objectif

Élaborer un **code d'éthique** pour la recherche sur le diabète menée dans les communautés.

Actions

Pour élaborer le **Code d'éthique**, les chercheurs doivent:

- a) travailler avec les communautés et les diabétiques;
- b) collaborer avec d'autres chercheurs à l'échelle provinciale, nationale et internationale.

Recherche

7^e objectif

Permettre aux fournisseurs de soins de santé d'acquérir davantage **d'expérience et de capacités de recherche**.

Actions

Pour que les fournisseurs de soins de santé puissent acquérir davantage **d'expérience et de capacités de recherche**, il faut prévoir:

- a) une formation universitaire aux premier et deuxième cycles;
- b) des cours d'éducation permanente;
- c) des programmes de mentorat avec des chercheurs reconnus;
- d) l'accès à des informations à jour sur les

recherches en cours et sur les résultats de recherche.

Recherche

8^e objectif

Établir un **centre manitobain d'information sur le diabète**.

Actions

Le **Centre manitobain d'information sur le diabète** devra:

- a) offrir des informations complètes, à jour et adaptées aux diverses cultures et communautés, sur tous les aspects du diabète, soit la prévention, l'information du public, les soins pour les diabétiques, la recherche et le soutien;
- b) mettre régulièrement à jour les informations au sujet du diabète;
- c) respecter les critères en vigueur quant à l'exactitude et à la sécurité des informations.

Recherche

9^e objectif

Publier chaque année un rapport intitulé **Le diabète au Manitoba**.

Actions

Le rapport **Le diabète au Manitoba** devra comprendre:

- a) les derniers chiffres concernant l'incidence et la prévalence du diabète et des complications associées au diabète, lesquels seraient ventilés selon les catégories âge, sexe, code postal, offices régionaux de la santé, Indiens inscrits et population générale;
- b) une analyse des données en question;
- c) des projections démographiques;

- d) des renseignements sur les incidences économiques du diabète.

Recherche

10^e objectif

Informer le public au sujet du processus de recherche au moyen d'une vaste campagne publique menée par les chercheurs et les organisations non gouvernementales.

Actions

Les rapports de recherche **à l'intention du public** devraient être rédigés dans un langage simple et présentés sous une forme facile à consulter.

Recherche

11^e objectif

Élaborer des **politiques de santé publique** qui soutiennent la recherche sur le diabète au Manitoba.

Actions

Des **politiques de santé publique** favorables à la recherche doivent prévoir les éléments suivants:

- la participation des communautés à tous les aspects de la recherche;
- des pratiques de recherche adaptées aux particularités culturelles.

Soutien

1^{er} objectif

Mettre sur pied dans les communautés des **réseaux de soutien** holistique qui se préoccupent des besoins des diabétiques sur les plans culturel, émotionnel, spirituel et physique.

Actions

Les **réseaux de soutien** établis dans les communautés devraient tenir compte des

éléments suivants:

- les questions linguistiques;
- les préférences culturelles en ce qui concerne notamment l'alimentation et l'activité;
- une sensibilisation aux diverses cultures pour les personnes qui composent les réseaux de soutien;
- les questions relatives à la qualité de vie, par exemple l'accès pour les fauteuils roulants et le transport communautaire pour les personnes handicapées;
- l'établissement de cuisines collectives et de programmes de marche;
- des partenariats avec les écoles, les centres communautaires et les centres commerciaux;
- des partenariats avec les gouvernements fédéral et provincial, les administrations autochtones et les communautés.

Soutien

2^e objectif

Augmenter, parmi les **travailleurs de santé communautaire qui s'occupent d'éducation en matière de diabète et les fournisseurs de soins de santé**, le nombre de personnes d'origine autochtone ainsi que des groupes d'âge et des autres communautés culturelles et linguistiques à l'intérieur desquels la prévalence du diabète est disproportionnée.

Actions

En ce qui concerne les **travailleurs de santé communautaire qui s'occupent d'éducation en matière de diabète et les fournisseurs de soins de santé**, il faudra:

- insister sur la nécessité de se concerter avec les autres membres de l'équipe de soins pour les diabétiques;
- formuler des normes de pratique pour les



- travailleurs de santé communautaire qui s'occupent d'éducation en matière de diabète;
- c) offrir de l'éducation adaptée aux besoins des personnes chargées du soutien aux personnes âgées diabétiques;
 - d) offrir de l'éducation adaptée aux besoins des personnes chargées du soutien aux enfants diabétiques;
 - e) établir des partenariats avec les gouvernements fédéral et provincial, les administrations autochtones et les communautés.

Soutien

3^e objectif

Remédier aux iniquités relativement à l'**accès aux services de soutien** dans l'ensemble de la province.

Actions

- a) Chercher à obtenir des services financiers, de logement et de transport pour les personnes des régions rurales et du Nord qui doivent déménager dans les centres urbains pour contrôler leur diabète et les complications associées au diabète.
- b) Mettre sur pied des services de soutien pour les diabétiques qui doivent quitter temporairement leur communauté, en particulier les membres des Premières nations.
- c) Établir des partenariats avec des organisations non gouvernementales, par exemple l'Association canadienne du diabète, la *National Aboriginal Diabetes Association*, la Fondation des maladies du cœur du Canada, l'Institut national canadien pour les aveugles et la Fondation canadienne du rein.
- d) Élaborer avec ces partenaires un réseau de services de soutien cohérent pour les

personnes qui souffrent de complications à long terme associées au diabète, y compris les déficiences visuelles, l'insuffisance rénale, l'amputation des membres inférieurs et les maladies du cœur.

Soutien

4^e objectif

Régler les **questions relatives aux domaines de compétence**.

Actions

- a) Maintenir les partenariats qui ont été établis durant le processus d'élaboration de la *Stratégie manitobaine contre le diabète*.
- b) Encourager les gouvernements fédéral et provincial, ainsi que les administrations municipales et autochtones à collaborer pour atteindre l'objectif commun de la prévention du diabète et de l'amélioration de l'accès aux services.

Soutien

5^e objectif

Informers les **leaders** à tous les paliers et dans toute la province à propos de la *Stratégie manitobaine contre le diabète*.

Action

Informers les leaders en rendant publique la *Stratégie manitobaine contre le diabète*, en collaboration avec les organisations non gouvernementales, par divers moyens dont des séances d'information publique, des exposés dans les écoles et des annonces dans les médias locaux.

Soutien

6^e objectif

Mettre en place des **formes de soutien psychosocial** pour les personnes diabétiques.

Actions

En collaboration avec les programmes de santé mentale, les organisations non gouvernementales et les communautés, mettre en place des **formes de soutien psychosocial** qui:

- a) renforcent l'estime de soi chez les personnes diabétiques et leurs familles;
- b) reconnaissent les difficultés quotidiennes causées par le diabète.

Soutien

7^e objectif

Établir des **services de counseling par les pairs** dans toutes les communautés.

Actions

La mise sur pied de **services de counseling par les pairs** devrait se faire avec la participation:

- a) des personnes diabétiques et de leurs familles;
- b) de l'équipe de soins pour les diabétiques;
- c) des fournisseurs de soins de santé;
- d) des travailleurs de santé communautaire;
- e) des organisations non gouvernementales et d'autres organismes communautaires.

Soutien

8^e objectif

Établir des **programmes de défense** des groupes qui ont des besoins particuliers, notamment les enfants, les Autochtones et les personnes âgées.

Action

Les **programmes de défense** seront établis en collaboration avec l'Association canadienne du diabète et la *National Aboriginal Diabetes Association* afin de s'occuper de problèmes précis comme le coût du matériel nécessaire au contrôle du diabète pour les personnes à revenu fixe.

Soutien

9^e objectif

Étendre la couverture des **programmes d'assurance-médicaments** par rapport aux médicaments et au matériel nécessaires pour les diabétiques.

Actions

- a) Évaluer les nouveaux traitements pharmaceutiques et autres.
- b) Offrir à prix abordable le matériel utilisé pour le contrôle du diabète.
- c) Conserver un inventaire du matériel utilisé pour le traitement du diabète et des complications associées au diabète.
- d) Veiller à ce que chaque personne diabétique ait le matériel nécessaire en quantité suffisante.
- e) Envisager la signature de contrats d'achat en gros avec des manufacturiers pour réduire les coûts au minimum.

Soutien

10^e objectif

Élaborer des **politiques de santé publique** qui offrent un appui aux personnes souffrant de diabète et de complications associées au diabète, ainsi qu'à leurs familles et à leurs communautés.

Actions

- a) Déterminer les besoins des communautés en ce qui concerne le soutien par rapport au diabète.
- b) Instaurer des politiques qui faciliteront la mise en place de réseaux de soutien communautaires pour les personnes diabétiques et leurs familles.
- c) Encourager la participation active des diabétiques à la planification des réseaux de soutien communautaires.



Epidemiology

Diabetes is an increasingly important health problem in Manitoba.⁽²⁰⁾ Every year, more than 4,000 Manitobans are diagnosed with diabetes (**Figure 1**). As a result, the number of persons living with diabetes has increased substantially in the past several years.

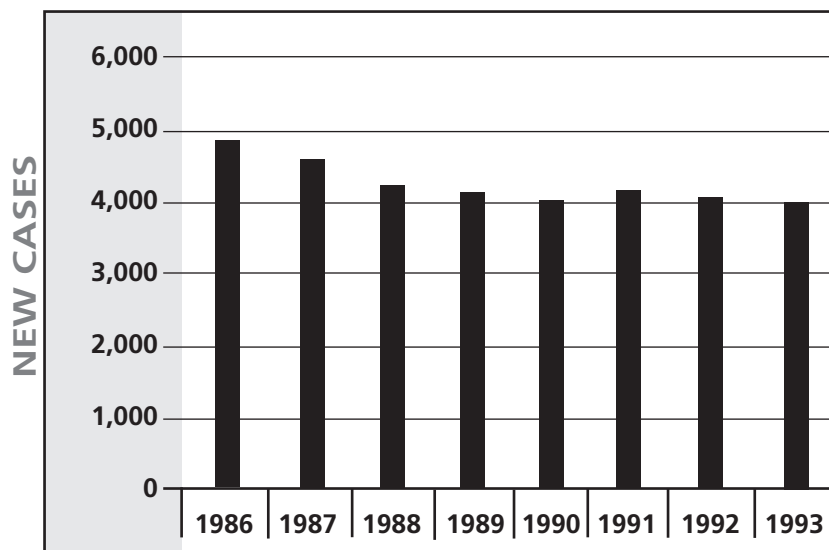


Figure 1. Number of new cases of diabetes among adults (aged 25 and older) in each year, Manitoba 1986-93.

Between 1986 and 1993, the number of adults (age 25 and older) with clinically diagnosed diabetes increased by almost 60% (**Figure 2**). By 1993, there were almost 45,000 Manitoba adults who had been diagnosed with diabetes. It is estimated that there are now over 55,000 adults with clinically diagnosed diabetes in Manitoba.

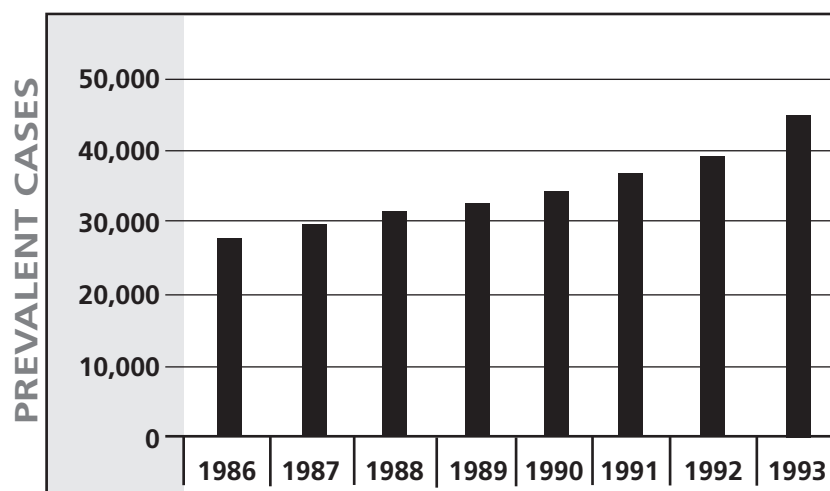
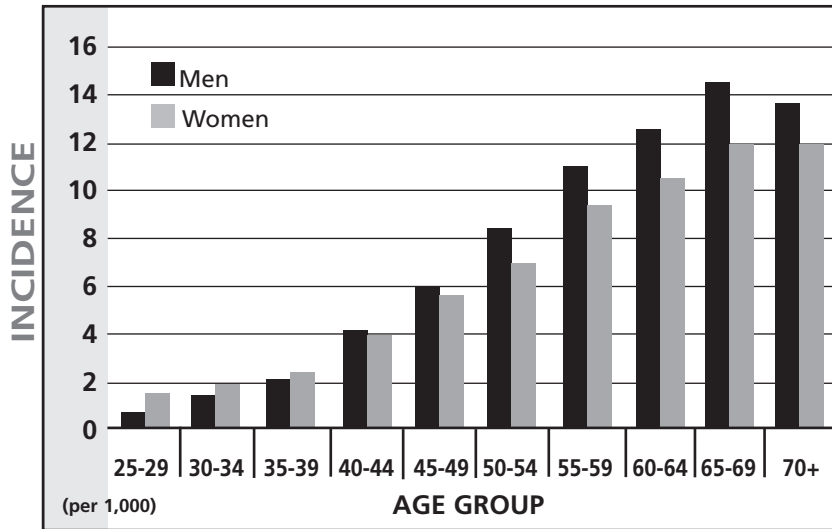
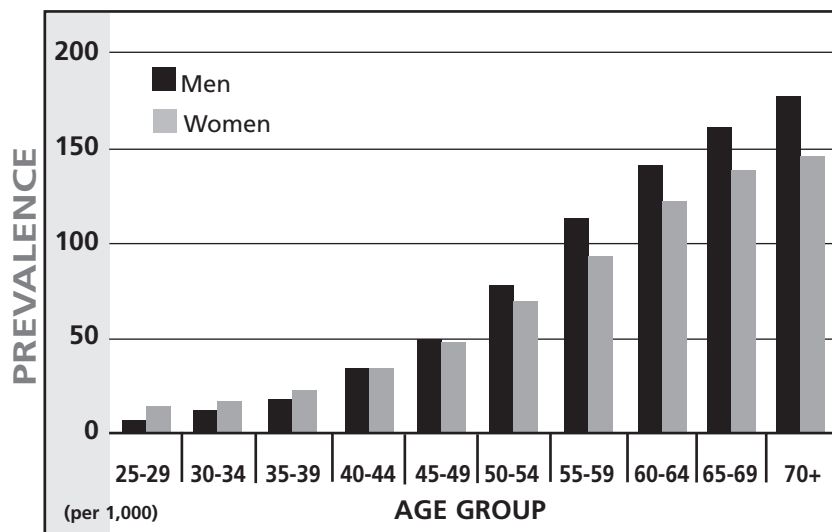


Figure 2. Number of prevalent cases of diabetes among adults (aged 25 and older) in each year, Manitoba 1986-93.



The incidence of new cases of diabetes per year increases with age among both men and women (**Figure 3**). More than 1% of Manitobans age 55 and older develop diabetes each year.

Figure 3. Number of new cases of diabetes (per 1,000 population) in each age group of adult men and women, Manitoba 1989-93.

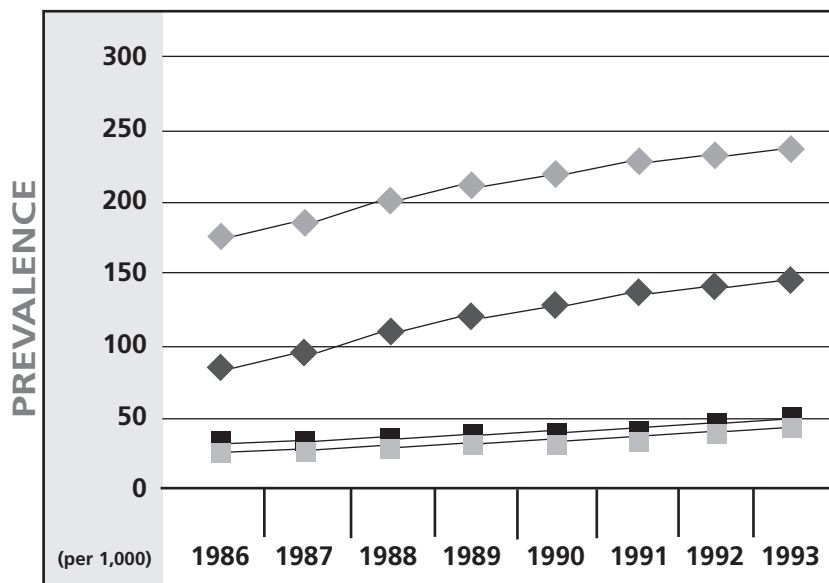


As a result, the prevalence of accumulated cases of diabetes is now very high among Manitoba's growing elderly population (**Figure 4**). More than 13% of Manitobans over the age of 55 and 15% over the age of 65 have been diagnosed with diabetes.

Figure 4. Number of prevalent cases of diabetes (per 1,000 population) in each age group of adult men and women, Manitoba 1994.



Diabetes is much more common among Manitoba's Aboriginal population than it is in the rest of the population. For example, the prevalence of diabetes (after adjusting for differences in population age structures) is almost five-fold higher in Status women than women in the general population (**Figure 5**). Among men, the prevalence is approximately three-fold higher in Status populations than in general populations.



◆ Status Females ◆ Status Males ■ Other Males ■ Other Females

Figure 5. Number of prevalent cases of diabetes (per 1,000 population) adjusted for age, in adult men and women in Status and general populations, Manitoba 1986-93.

Differences in the prevalence of diabetes between Status and general populations are seen in all age groups (**Figure 6**). However, these differences are most pronounced in younger age groups.

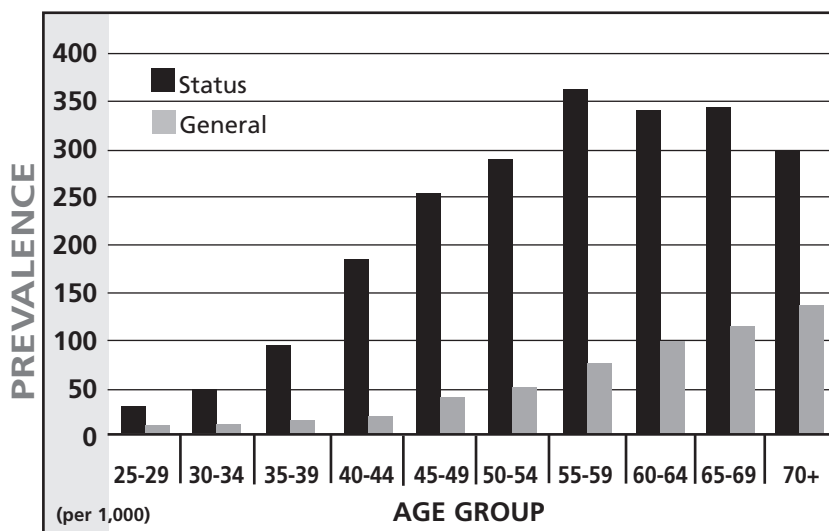


Figure 6. Number of prevalent cases of diabetes (per 1,000 population), in adults in Status and general populations in each age group, Manitoba 1994.

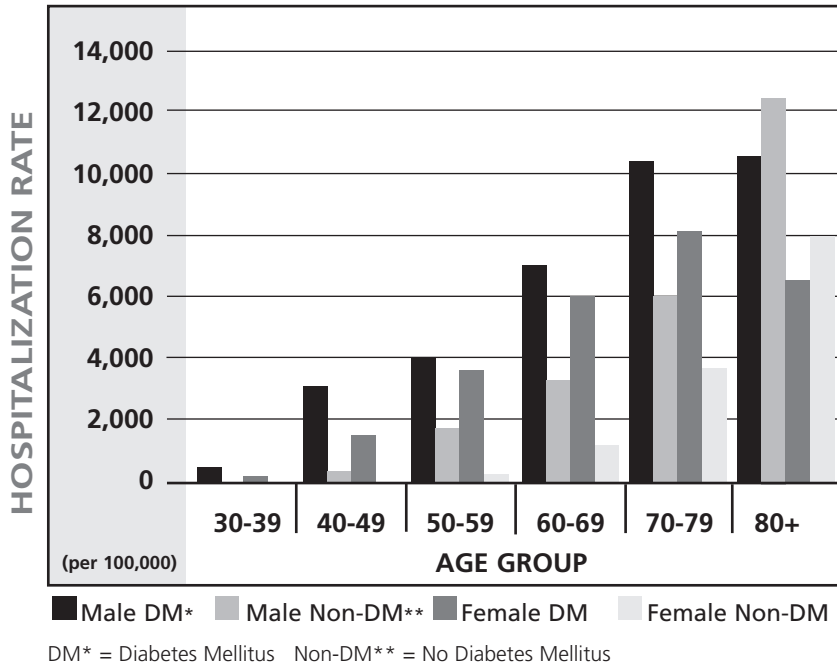


Figure 7. Rate of hospitalization for heart disease (per 100,000 population) in males and females with and without diabetes in each age group, Manitoba 1991.

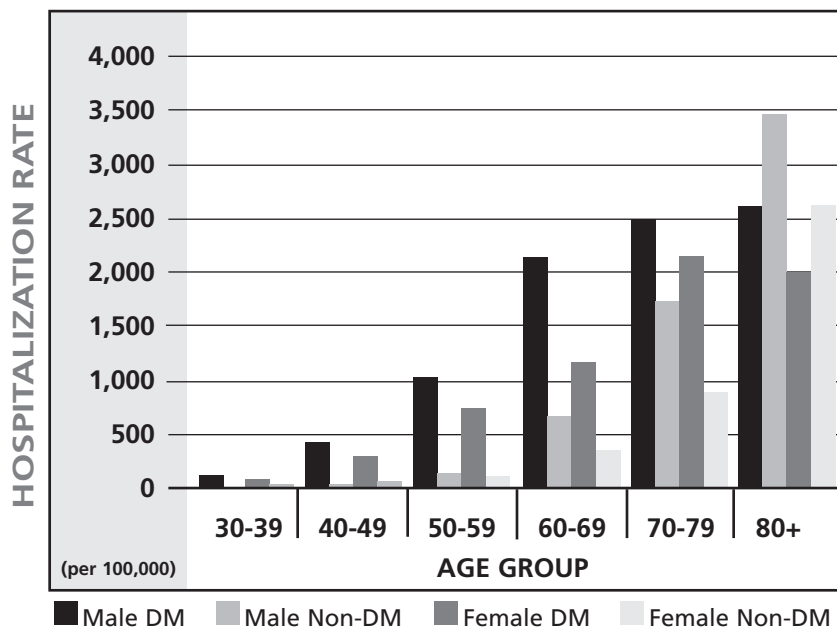


Figure 8. Rate of hospitalization for stroke (per 100,000 population) in males and females with and without diabetes in each age group, Manitoba 1991.

Persons with diabetes are at a much higher risk for many other medical conditions. For example, persons with diabetes are much more likely to develop heart disease and stroke than persons without diabetes (Figures 7 and 8). These differences are most striking among those persons less than 70 years of age.

Approximately 25% of all hospitalizations due to these conditions in Manitoba occur among persons who have diabetes (Figures 9 and 10).

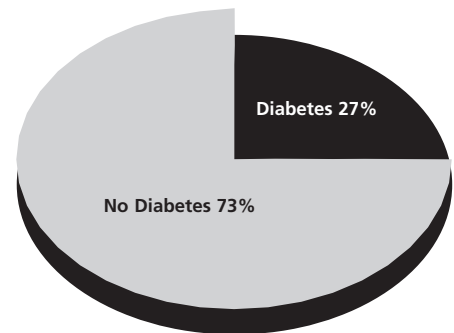


Figure 9. Percentage of people with diabetes among those hospitalized for heart disease, Manitoba 1991.

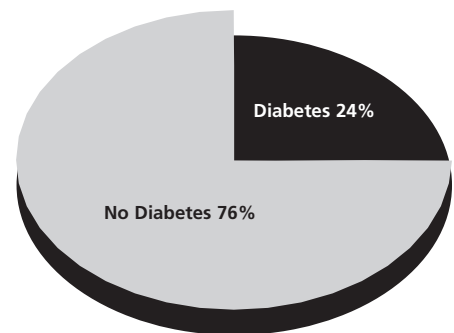


Figure 10. Percentage of people with diabetes among those hospitalized for stroke, Manitoba 1991.



Diabetes can also cause nerve and circulation problems in the extremities, particularly in the legs and feet. Therefore, persons with diabetes are much more likely to develop chronic and severe infections and ulcers in their feet than are persons without diabetes. This is reflected in much higher rates of amputation of the lower limbs among persons with diabetes (**Figure 11**).

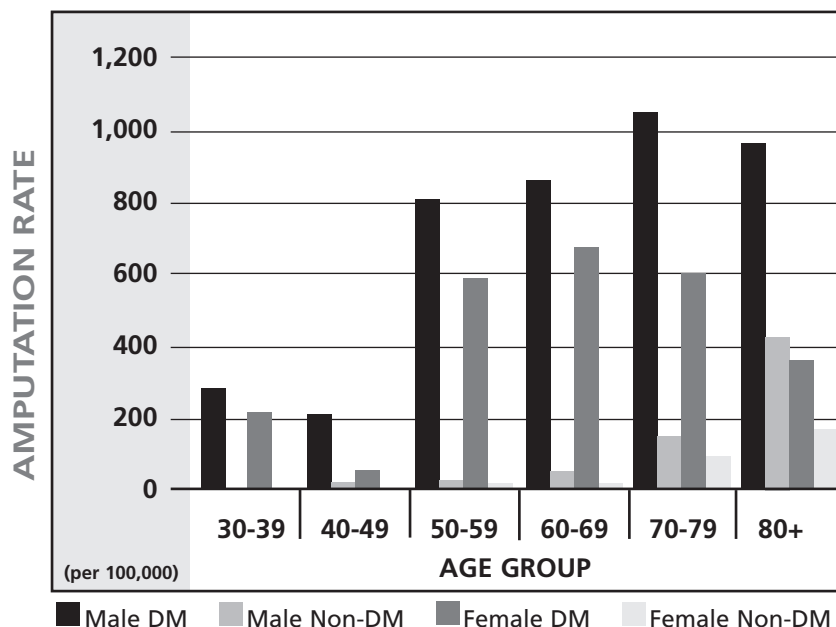


Figure 11. New cases of lower limb amputations (per 100,000 population), in males and females with and without diabetes in each age group, Manitoba 1991.

Persons with diabetes are also at much greater risk for the development of kidney disease. Often, this progresses to the point of requiring kidney dialysis. Persons with diabetes represent an increasing proportion of new persons beginning dialysis in Manitoba (**Figure 12**). By 1993, over 40% of persons who began dialysis had diabetes.

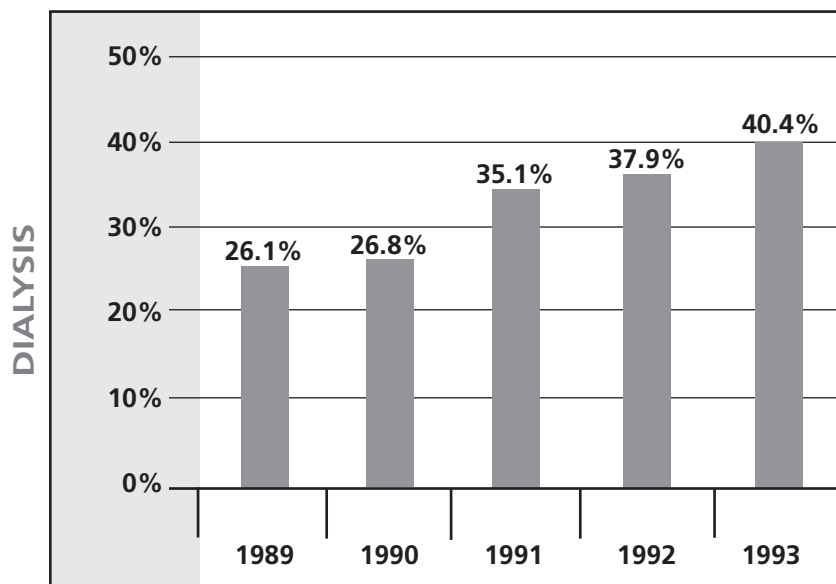


Figure 12. Proportion of persons beginning dialysis who had diabetes, Manitoba 1989-93.

Selected Health Services	Health Care Costs for Adults with Diabetes (cost in millions)	Health Care Costs for Adults without Diabetes (cost in millions)
Hospital Services	\$104	\$403
Personal Care Home Services	\$52	\$243
Professional Services	\$30	\$214
Dialysis	\$7	\$7
Total	\$193	\$867

Table 1. Estimated health care costs for selected health services in adults (15 years and older), with and without diabetes, Manitoba 1995-96.

Selected Health Services	General Population		Status Population	
	No Diabetes	Diabetes	No Diabetes	Diabetes
Hospital Services	\$479	\$1,196	\$893	\$2,362
Personal Care Home Services	\$251	\$340	\$156	\$195
Professional Services	\$271	\$519	\$267	\$606
Dialysis	\$10	\$114	\$43	\$493
Total	\$1,011	\$2,169	\$1,359	\$3,656

Table 2. Per capita expenditures (standardized to the Status population) for selected health services, Manitoba 1995-96.

Economic Costs of Diabetes

Because of the high prevalence of diabetes and its related medical conditions and complications, there are substantial economic costs related to diabetes. In Manitoba, the costs for adults (15 years and older) with diabetes for inpatient hospital services, professional medical services (example, physician fees), dialysis services and personal care home services are estimated to be \$193 million annually (**Table 1**). This represents approximately 18% of health care spending on adults for these services in Manitoba during one year.⁽¹⁰⁾

After standardizing for age, the annual per capita cost for these services is roughly twice as much for adults with diabetes in the general population (\$2,169 per year) (**Table 2**). In Status populations, the per capita cost for these services among adults with diabetes is almost three times as high (\$3,656 per year) as for persons without diabetes (**Table 2**).⁽¹⁰⁾

It should be noted that these costs neither include other directly related health care costs such as drugs, home care, public health services, nor do they include the indirect costs such as disability and lost productivity.⁽¹⁰⁾



Strategy Development

In 1996, diabetes was recognized as a major public health issue in Manitoba. As a result, the Diabetes and Chronic Diseases Unit was asked to co-ordinate the development of a provincial diabetes strategy for Manitoba. The goal of the strategy was to formulate a plan of action to reduce the incidence and prevalence of diabetes and its complications.

The *Manitoba Diabetes Strategy* was developed in three stages:

- initial intersectoral consultations,
- Steering Committee and Working Group meetings to reach consensus on recommendations, and
- public meetings across the province.

The consultation process started among many government departments, the University of Manitoba, Aboriginal people, the Canadian Diabetes Association and other non-government organizations. In order to foster partnerships and community-centred solutions, the consultation was broadened to include additional groups with a vested interest in the goal and process of this strategy.

Initial intersectoral consultations began with the Diabetes Symposium on June 25, 1996,

which was attended by 127 individuals from government, non-government and corporate sectors, hospitals, community clinics, Regional Health Authorities and Aboriginal communities. Diabetes issues and actions were identified in five areas: prevention, education, care, research and support.⁽²¹⁾



Consultation with the Aboriginal community continued on January 31, 1997. Sixty-one people from First Nations and Metis communities, government and non-government sectors attended. This session focused on diabetes issues in Aboriginal communities and the actions needed in the areas of prevention, education, care, research and support.⁽²²⁾

The Steering Committee and Working Groups were formed in May of 1997. The 12 members of the Steering Committee included individuals from Aboriginal communities, the University of Manitoba, government and non-government sectors. The Steering Committee and each of the five Working Groups were co-chaired by two members (**Appendix I**).

The Working Groups convened during the fall, winter and spring of 1997/98 to develop recommendations from the issues identified in the initial consultations. The membership of the Working Groups included:

- representation from professional, government and non-government sectors;
- representation from rural, urban and northern parts of Manitoba;
- representation from Aboriginal and non-Aboriginal people;
- representation from each Tribal Council and other Aboriginal organizations;
- people with diabetes and their families; and

- representation from the seniors population.

Sixteen public meetings were held in locations across the province during the spring of 1998 (**Appendix C**). These meetings informed the public about the *Manitoba Diabetes Strategy* and served as a forum to receive opinions and contributions.



Report of the Prevention Working Group

Background

Primary prevention refers to preventing disease and maintaining health through personal and community-wide efforts. This activity may target an entire population, such as all Manitobans, with efforts to improve nutritional status, physical fitness, emotional well-being and economic status. Other efforts may be more specific and target groups at high risk for disease because of their age, culture or genetic characteristics. A comprehensive strategy for primary prevention of Type 2 diabetes includes both general population and high-risk group approaches. At this time, Type 1 diabetes cannot be prevented although there are international efforts under way in this area of research.

There is increasing evidence that Type 2 diabetes is a consequence of lifestyle factors and the environment in which we live, work and play. Primary prevention efforts seek to modify these factors in order to reduce the incidence of diabetes.

Risk factors for Type 2 diabetes have been shown through research studies to include inappropriate food choices, physical inactivity, stress, alcohol and tobacco use. These factors have been linked to people's behaviour and lifestyle and their physical, social and psychological environments.

Prevention of Type 2 diabetes involves change. It is essential that individuals and

communities embrace and participate in prevention programs, in order to make them effective in reducing the incidence of diabetes.

The Prevention Working Group integrated seven themes into the development of their recommendations:

Participation

Participation refers to the social process of taking part voluntarily in either formal or informal activities, programs or discussions to bring about a planned change or improvement in community life, services and resources. It is the highest priority in the prevention of diabetes. Without the participation of individuals, families and communities, the prevention process and programs cannot succeed.

Determinants of Health

Determinants of health include income, social support networks, education, employment and working conditions, safe and clean environments, biology and genetic make-up, personal health practices and coping skills, childhood development and health services.

Early Detection

Early detection activities seek to identify individuals and population sub-groups at increased risk for diabetes because of age, gender, culture or genetics. Early detection will allow earlier treatment and delay or prevention of chronic complications.

Nutrition

Healthy eating, as recommended by Canada's Food Guide, may reduce the risk of developing Type 2 diabetes and other chronic diseases, such as heart disease and cancer. Research is beginning to show that eating lower fat, higher fibre foods and maintaining a healthy body weight reduces the risk for Type 2 diabetes. Recent population surveys indicate that Manitobans may be at higher risk for Type 2 diabetes due to high dietary fat intakes and increased body weights.⁽²³⁾

Physical Activity

Considerable evidence supports a relationship between physical inactivity and diabetes.⁽²⁴⁾ Early suggestions of a relationship emerged from the observations that societies that had discontinued their traditional lifestyles experienced major increases in the prevalence of diabetes.⁽²⁵⁾ The epidemiologic literature strongly supports a protective effect of physical activity on the likelihood of developing diabetes in the populations studied.⁽²⁶⁾

Emotional Well-Being and Stress

Stressful work, home and social environments expose individuals to increased risk for diabetes. Stress reduction provides emotional stability and well-being, and reduces the risk for diabetes.

Tobacco and Alcohol

Evidence links cigarette smoking and alcohol use to diabetes. Follow-up data from a health professional study showed that men

who smoked more than 25 cigarettes per day had a 94% higher relative risk for diabetes compared to non-smokers.⁽²⁷⁾

Based on a strong association between increasing weight and risk for Type 2 diabetes, it is important to limit alcohol intake due to its influence on both body weight and insulin sensitivity.

Report of the Education Working Group

Background

"Education is a fundamental component of the treatment of diabetes. Patient and professional education allow the proper implementation of general dietary and therapeutic procedures. This promotes the final goals of treatment: the day-to-day well-being of the person with diabetes and the preservation of life with the least risk of developing long-term problems.

It is the right of every person with diabetes to be fully informed on the nature and management of the disorder; and it is the obligation of communities and of the nations, to supply the means for the achievement of this right."⁽²⁸⁾

The San Jose Declaration

The purpose of diabetes education is to provide knowledge and increase awareness of the behaviours and skills necessary to reduce the incidence and prevalence of diabetes and its complications, and to improve the quality of life of people living with diabetes. Education programs must be comprehensive and reach not only people with



diabetes and their families, but also the general public, health care providers, funders and policy makers.

Diabetes education has been identified as a “core health service” in Manitoba.⁽²⁹⁾ In 1985, Manitoba Health established the Diabetes Education Resource (DER) program to provide client education and follow-up services; health professional education; public education; and primary prevention services through 12 separate community-based centres throughout the province. Each DER is staffed by a nurse and dietitian team with a social worker also included in the Children and Adolescent Resource team.

The Education Working Group highlighted the necessity of appropriate fiscal and human resources to develop a sustained and co-ordinated diabetes education program. An Inventory of Diabetes Education Activities in Manitoba was developed by the Group and is available from the Diabetes and Chronic Diseases Unit of Manitoba Health.⁽³⁰⁾

The Education Working Group integrated four themes into the development of their recommendations:

Education of the General Public

The general public has not previously been the focus of diabetes education. There is a need to inform the public that Type 2 diabetes is a preventable disease, that promoting healthy habits is important and that diabetes carries with it a substantial burden on individuals, their families and

caregivers. It is important to foster attitudes and support for healthy habits at the community level. Myths and misperceptions about diabetes must be dispelled while accurate information is disseminated. Radio, television and health fairs are effective avenues to raise awareness and distribute accurate information.

The childhood education system is an important part of the diabetes strategy. Standards of care in the classroom for children with Type 1 diabetes are needed. Daycares and schools can include the promotion of healthy lifestyles and the prevention of Type 2 diabetes in their curricula and provide daily opportunities for physical activity.

Education of People with Diabetes and Their Families

Diabetes self-management education is the process of providing persons with diabetes the knowledge and skills needed to cope with this disease on a day-to-day basis.⁽³¹⁾

Family members and other caregivers also need to understand diabetes and its management. The education program must, therefore, be designed to educate individuals and their families, with consideration for their culture, age, language, literacy level and the location of their home community. Attention to all of these factors presents a challenge to educators and health care providers.

Diabetes education must be integrated into the care plan. The DHC team includes a

dietitian, nurse, family physician and the person affected by diabetes (including friends, family and caregivers as appropriate). The team may also include an endocrinologist, culturally-specific diabetes educator, social worker, podiatrist, dentist, physiotherapist, pharmacist, psychologist, traditional or spiritual healers and medical specialists. The person with diabetes is at the centre of the DHC team, with the resource people guiding them and answering their questions.

Education of Health Care Providers

Diabetes self-management instruction is usually done by members of the DHC team. Their expertise in diabetes varies depending on their background education, continuing education opportunities, communication with interdisciplinary team members and their experience.

Diabetes educators are health care providers who have mastered the core knowledge and skills in biological and social sciences, communication, counselling and education, and who have experience working with people with diabetes. Successful multi-level certification programs exist, and could serve as a model for education of diabetes care providers.

Undergraduate and postgraduate education often forms the initial core of a health care provider's knowledge base and practice patterns. Continuing education opportunities must be available to

practicing health care providers to ensure their utilization of the *1998 Clinical Practice Guidelines* developed by the Canadian Diabetes Association and the Manitoba Diabetes Care Recommendations.^{(18) (19)}

It is essential that health care providers have the opportunity to learn relevant, up-to-date information and learn to function within an interdisciplinary team. Barriers to care and education may be eliminated through efforts to recruit health care providers and community diabetes workers from the same age and cultural background as the people they are helping.

Standards for Diabetes Education in Canada were published in 1995 by the Diabetes Educator Section of the Canadian Diabetes Association.⁽³²⁾ In 1998, the CDA will begin to offer Recognition/Quality Assurance status for diabetes education programs that meet these standards.

Education of Health Care Funders and Policy Makers

Education for funders and policy makers who provide leadership and accountability is critical to implementation of the Strategy recommendations and the quality of the resulting programs. They must be informed about the broad determinants of health and the specific ways in which they can help to stem the diabetes epidemic. Funding agencies and policy makers must be aware of the current and projected economic impact of diabetes, its incidence and prevalence, and its distribution in Manitoba.



Report of the Care Working Group

Background

“Diabetes care hinges on the daily commitment of the person with diabetes to self-management, balancing appropriate lifestyle choices and pharmacologic therapy.”⁽¹⁸⁾

1998 clinical practice guidelines for the management of diabetes in Canada

Diabetes care extends beyond the usual parameters of treatment, therapy or management. A fundamental principle underlying this section is that diabetes care be holistic and include all aspects of the physical, emotional and spiritual care of both the person with diabetes and his or her family. Care for the person with diabetes should also provide the ability to achieve a quality of life that is desirable for the person involved. Therefore, it is essential that the individual with diabetes be at the centre of his or her DHC team and actively participate in all decisions.⁽³³⁾

Comprehensive care is fundamental to the prevention and/or delay of both the short-term and long-term complications of diabetes.

Short-term or acute complications of diabetes are the life-threatening metabolic disturbances that can result from high blood sugars (diabetic ketoacidosis in Type 1 diabetes and hyperglycemic, hyperosmolar states in Type 2 diabetes) or low blood

sugars (decreased level of consciousness or seizures).⁽¹⁾

The long-term or chronic complications of diabetes are described as follows:⁽¹⁾

Microvascular (small blood vessels) involving:

- the eyes (retinopathy) - affecting eyesight and potentially resulting in blindness.
- the kidneys (nephropathy) - affecting kidney function and potentially requiring dialysis.
- the nerves (neuropathy) - affecting sensation, especially in the hands and feet.

Macrovascular (large blood vessels) involving:

- the heart (coronary artery disease) - causing heart attacks.
- the brain (cerebrovascular disease) - causing strokes.
- the legs and feet (peripheral vascular disease) - affecting circulation and potentially resulting in lower limb amputation.

The Care Working Group integrated three themes into the development of their recommendations:

Standards of Care

The *Diabetes Control and Complications Trial* (DCCT) has clearly shown that comprehensive diabetes care that optimizes blood sugar control can prevent or delay the onset and progression of the complications for Type 1 diabetes ⁽³⁴⁾. Consistent diabetes care with optimal blood

glucose control over a nine-year period reduced the risk for the development of retinopathy by 76%, nephropathy by 54% and neuropathy by 60%.

The recent release of the *United Kingdom Prospective Diabetes Study* (UKPDS) results in September of 1998 have also conclusively shown that optimal control of blood glucose in Type 2 diabetes significantly reduces (by 25%) the chances of developing eye damage and kidney damage.^{(35) (36)} The results of the blood pressure component of the study showed that lowering blood pressure in people with Type 2 diabetes reduced the risk of heart failure, stroke and death from diabetes.^{(37) (38) (39)} The UKPDS was a landmark study carried out at 23 research centers with more than 5,000 participants in the United Kingdom, to determine if lowering blood glucose and blood pressure would result in health improvements for persons with Type 2 diabetes.

Arising from these studies has been a call for the development of comprehensive standards of diabetes care. In 1992, the CDA published the first Canadian *Clinical Practice Guidelines for Treatment of Diabetes Mellitus*.⁽⁴⁰⁾ Since then, there have been further developments in the care of diabetes. In 1998, the CDA revised these guidelines using clinical evidence as support for each recommendation. The *1998 Clinical Practice Guidelines* are based on the best possible research evidence available at the time of publication.⁽¹⁸⁾

In Manitoba, these evidenced-based clinical practice guidelines are being adapted for province-wide implementation. Additional material is being added that will provide details of diabetes care in areas such as pharmacologic treatment and foot care. The goal of the *Manitoba Diabetes Care Recommendations* is to provide standardization of care and education throughout the province.⁽¹⁹⁾

The Care Working Group also recognized that specific strategies to ensure access to screening for diabetic eye, kidney, foot and heart disease must be developed and co-ordinated to meet the standards of the *1998 Clinical Practice Guidelines*.

Access to Care

Access to diabetes care is not equitable throughout the province. This inequity was recognized at the Diabetes Symposium (1996) and reiterated during the consultations and public meetings that followed. Barriers to equitable access include:

- geographic location,
- costs,
- cultural issues,
- linguistic issues,
- physical infirmity, and
- lack of awareness by health care providers.

The DHC team shares in the complete care of individuals with diabetes and works to minimize barriers to care.



Continuity of Care

Continuity of care refers to care throughout a person's lifetime, longitudinal care through the years, as well as all aspects of care at a specific point in a person's life. Communication among the various members of the DHC team is essential to continuity of care. The Care Working Group developed recommendations about communication networks throughout the province and among the various members of the expanded DHC team.

Report of the Research Working Group

Background

Research is vital to understanding the nature of diabetes, reducing the burden of the disease and its complications, improving the quality of life of Manitobans with diabetes and reducing its economic and social costs. The ultimate success of our battle against diabetes lies with research at all levels. The promotion and support of research activities must be a priority of this Strategy.

Research is complex, costly and not always sufficiently understood by the general public.

There are three types of diabetes research:

- **Basic:** Refers to laboratory studies, animal studies, studies at the cellular and molecular levels and studies on metabolism and physiology.
- **Clinical:** Refers to studies on patients relating to diagnosis, prevention, treatment and outcomes of the disease.

- **Community:** Refers to studies on populations, epidemiological studies, health services research, and social, cultural and behavioural studies.

Many research projects are multi-faceted and cross-over exists between categories. The three types of research are inter-related and all are needed. Given the different funding sources for basic and clinical research, they should not be considered to be in competition with one another.

An inventory of current and published research (**Appendix D**) was established and reviewed. This reveals that diabetes research of all types is active in Manitoba.

The Research Working Group integrated four themes into the development of their recommendations:

Research Funding

It is not easy to determine the total amount of research funding for diabetes received by Manitoba researchers. There is no central registry of projects, multiple funding sources exist and diabetes is often included in the research of other diseases. Some research projects have no designated funding source other than the salaries of the academic or government scientists involved in the research.

The University of Manitoba accounts for the vast majority of diabetes-related research funds in the province. One measure of the magnitude of research funding support is the number and size of research grants administered by the University of Manitoba

FUNDING SOURCE	AMOUNT AWARDED
Medical Research Council	\$1,224,530
Canadian Diabetes Association	\$ 573,313
National Health Research Development Program (NHRDP) - Health Canada	\$ 300,710
Industry	\$ 153,693
Juvenile Diabetes Foundation	\$ 149,305
Manitoba Health Research Council	\$ 75,745
Canadian Kidney Foundation	\$ 43,000
Children's Hospital/Health Sciences Centre Foundations	\$ 35,000
Manitoba Medical Services Foundation	\$ 30,000
Total	\$2,585,296

Table 3. Research funds awarded to the University of Manitoba by various agencies during 1989-97.

Office of Research Administration. **Table 3** summarizes the funds awarded to the University of Manitoba by various agencies during the period 1989-1997. Excluded are some grants from private industry to clinical researchers in the teaching hospitals, grants to community organizations in projects where University of Manitoba researchers are actively involved and personal awards.

Of particular note is that of the \$11 million applied for, during 1989-1997, only \$2.6 million was awarded.

The vast majority of diabetes-related research at the University of Manitoba is carried out in the Faculty of Medicine but other faculties involved have included Dentistry, Nursing, Human Ecology and Physical Education.

Information on industry grants is incomplete and not easily obtained. Grants are usually awarded by pharmaceutical companies to clinicians on a per-patient-recruited basis. These funds are often administered through the hospital rather than the University, so there is no centralized accounting for these grants. They are usually set up as a "special account" in the host department. These studies must obtain ethics approval from the institutional review committees. It is estimated that approximately \$500,000 annually is received by researchers in this way.

At the national level, the National Health Research Development Program (NHRDP) of Health Canada operated a one-time only special competition on diabetes in



Aboriginal peoples in the early 1990s, from which two projects in Manitoba were funded.

Collaboration and Networks

Diabetes researchers can not and should not work in isolation. Most diabetes researchers are already part of an informal network of colleagues and collaborators, nationally and internationally.

Within the province, examples of the formal linkages between researchers include the following:

- The Faculty of Medicine (University of Manitoba) has a multidisciplinary Diabetes Research Group. This is one of 20 research groups formally recognized by the Faculty in its structural reorganization.
- The Manitoba Health Epidemiology and Diabetes Units co-ordinate a collaborative project team on diabetes consisting of university and government scientists and Diabetes Unit program staff.
- Health Canada is currently considering a proposal for a Centre for Innovation in Aboriginal Diabetes Care, Education and Research to be based in Peguis First Nation. This National Centre would consolidate and promote community-based research on diabetes interventions in the Aboriginal population of Manitoba.

While the majority of diabetes researchers are university-based academic researchers, it should be recognized that research is not the exclusive preserve of this group. There are limited opportunities for practice-based

research by health professionals not affiliated with the university. This gap in applied research by front-line health care providers needs to be addressed.

A Provincial Centre for Diabetes Research (modeled, for example, on the Centre on Aging at the University of Manitoba) would provide dedicated and long-term infrastructure support for research, thereby increasing its funding. It would attract financial contributions by industry and government and encourage the recruitment of high-calibre researchers to the university. It would serve as a resource for communities in project design and provide research training. It could also play a role in province-wide recruitment of participants in clinical trials, public education and the dissemination of research findings, and improve research accountability in the province.

Community-Based Diabetes Research and Ethics

Research should involve the full participation of communities, not only with community members consenting as research subjects, but also involving them in deciding on priorities and playing an active role in designing and executing the projects. The result would be a move away from the traditional model of research *on* communities towards research *for* communities and ultimately, research *by* communities. The community would be left with specific gains beyond contributing to an increase in the knowledge base.

There is discussion nationally of the need for specific ethical guidelines for research involving the Aboriginal population. Several models exist, for example, the one developed by the Kahnawake Diabetes Education Project in Quebec.⁽⁴¹⁾

Existing guidelines and structures for ethical approval developed for basic biomedical and clinical research are not entirely suitable or appropriate for community-based research. The basic ethical principles of autonomy, beneficence, non-maleficence and justice apply. However, there are usually additional requirements such as the need for collective consent, ownership of data, negative publicity and other issues for which a clear consensus does not currently exist.

The scientific merit of community-based research must be ensured. The peer review process seeks to ensure the quality of research design and analysis. Communities also have a role to play in the review process. The NHRDP Special Competition on diabetes in the Aboriginal population introduced a model of dual review of both scientific merit and community relevance within the same review committee.

Research Dissemination

Research results must be disseminated in order to be useful. The general public is often bewildered by the proliferation of research studies, which may contain contradictory results and confusing implications. There is no central source of

research findings for the public to access and evaluate. There is also a need to improve understanding of the research process and scientific method. This concern is jointly shared by the Education Working Group.

The media do not always provide accurate accounts of research and researchers are not always proficient in explaining their work in comprehensible language. Scientists must make an effort to report their work clearly and carefully to the popular media.

Report of the Support Working Group

Background

“Support” means to assist individuals with diabetes, their families and their care providers to build a foundation that will ensure quality of life within their own communities.

The underlying principle is that support should be provided in a holistic manner. Provision of support must recognize the person’s physical, emotional and spiritual well-being. This includes:

- co-ordination of and access to services in the individual’s community, to the greatest possible extent;
- the practical issues of financial and language barriers;
- wellness promotion and prevention of disease; and
- providing culturally sensitive and appropriate support.



The Support Working Group integrated three themes into the development of their recommendations:

Support for Individuals with Diabetes and Their Families

Support for people with diabetes should be broad in its range. It should include support for individuals newly diagnosed with diabetes and those coping with lifestyle changes for themselves and their families. It should also include support for individuals who are coping with the long-term complications of diabetes.

Advocacy is an important component of support for people with diabetes. The interests of people with diabetes must be brought to the attention of governments, non-government agencies, the health care community and workplaces. People with diabetes should be included in health care planning when it involves diabetes and health care delivery in their community.^{(18) (42)}

Support for Health Care Providers

A variety of health care or health service providers in the community are helping people with diabetes on a daily basis. These people need to be supported by adequate training, access to resources and attention to the balance of physical and mental well-being in their jobs.

Support for Communities

Community commitment is required to provide an environment that facilitates diabetes care. Both physical and human resources are needed to develop this supportive environment.

Community development requires community input and ownership. The community must feel responsible for its programs and resources. The long-term success of these initiatives depends on this.

“Community involvement recognizes the community as expert: a community knows itself best and is in the best position to identify its own problems and to suggest solutions.”⁽⁴³⁾



Public Meetings

Public meetings, to solicit input directly from the public, were convened across the province during the spring of 1998 as an integral component of the Strategy. A Steering Committee and Secretariat member were present to provide background to the *Manitoba Diabetes Strategy* and identify the purpose of the public meeting. The format for each meeting varied depending upon the site and the number of participants. Participants were asked to provide input regarding their issues, concerns and possible actions related to diabetes prevention, education, care, research and support.

The following community consultation sites were convened by the Steering Committee:

Arborg

Town of Arborg Board Room

Brandon

Canadian Diabetes Association offices

Dauphin

Thunders Restaurant

Nelson House

Nelson House Arena Meeting Room

Pine Falls

Manitou Lodge

Portage La Prairie

Westward Village Inn

Sioux Valley First Nation

Sioux Valley Community Building

St. Theresa Point

St. Theresa Point Band Office

Steinbach

Bethesda Personal Care Home

The Pas

Cree Nation Tribal Health Centre

The Pas

Kikiwak Inn

Thompson

Keewatin Tribal Council Board Room

Thompson

Lions Centre

Winnipeg

Franco-Manitoban Cultural Centre

Winnipeg

Freight House

Winnipeg

Lions Place

The following sites were scheduled for the consultation process, but meetings were not held due to travel weather conditions, or other logistical issues:

Churchill
Lac Brochet
Souris.

The following is an aggregate report summarizing input received from participants at the public meetings, relative to diabetes prevention, education, care, research and support. Three hundred and four people attended the sessions: 231 members of the general public and 73 health professionals. Site-specific records have been retained by the Strategy Steering Committee.

Prevention

There was general recognition of the need for prevention, heightened by the knowledge that diabetes was increasingly a cause of death among family, friends and community members. Concerns regarding the increased rate of diabetes in children of First Nations communities was emphasized. It was stated that governments need to identify prevention as a priority. The determinants of health were also identified as important components of a diabetes prevention strategy. Incentive programs were recommended for the promotion of preventive measures.

The most frequent recommendation in northern and First Nations communities was the need to ensure the availability and affordability of appropriate foods. First Nations communities made frequent reference to the importance of traditional foods in the prevention of diabetes and the need to examine hunting regulations and the impact of such regulations on the availability of traditional foods. The development of community gardens was

identified as an important initiative. School health programs were frequently identified as needing more emphasis on nutrition.

There was a frequent recommendation that improved labeling of food products could contribute to healthy eating by identifying appropriate food choices. Similarly, it was recommended that restaurants should play a role in identifying healthy food alternatives. Standards for school lunch programs were recommended in urban and rural settings. Improved food choices in public arenas received comment in one northern setting.

The limited availability of recreational facilities was identified in rural and First Nations communities. Physical education programming in schools was identified as needing attention in the context of prevention programming. Daily physical activity in schools was advocated.

Education

The need for more education of the general public was a frequent recommendation. There was concern expressed in both rural and First Nations consultations that individuals tend to develop a fatalistic approach once diabetes is diagnosed. Education was seen as a mechanism for generating hope and improved self-care. There was a strong presentation regarding the need for attention to literacy levels in the development of a public education program. Rural communities emphasized the value of “wellness fairs” for public



education, in addition to the usual media methods of education. The need for general public education in traditional languages was advocated by Aboriginal peoples. In all sectors of the province, the school health curricula was identified as needing increased emphasis on diabetes.

Education of health professionals was a central issue in all public meetings. It was clearly stated that health professionals need current information. Specifically, there was dismay expressed regarding the knowledge base of general and family practitioners. Enhanced education for physicians was recommended at a majority of public meetings. The important role of family physicians in diabetes care was stressed.

The need for increased emphasis on diabetes in nursing education programs was identified in one consultation. Community Health Representatives (CHRs) were also identified as needing additional training to meet the education needs of First Nations community members. Pharmacists were identified as important in the education of individuals with diabetes, providing that pharmacists had increased education specific to diabetes. The importance of teamwork was stressed, with a specific need identified for greater communication and co-operation between physicians and nurses who are involved in providing care to the same clients. Access to education for rural health workers was stressed in one consultation.

It was recommended that people living with diabetes should receive specific education about the current standards of diabetes care.

Issues regarding traditional healing were addressed in First Nations consultations. The role of elders and traditional healers was seen as an important part of diabetes care. It was recommended that health professionals receive education about traditional healing to promote an interface between Western and traditional approaches to diabetes care.

There was a recommendation that education must also be available in French for individuals with diabetes and their families.

Care

Issues of access to care were essentially universal in public consultations and no less a concern in urban areas than rural and northern. General concerns included funding for travel from rural and northern areas. In urban centres, access was identified as a concern for seniors, individuals with disabilities and individuals confined to home. Jurisdictional issues were identified as barriers to access in two communities. Access to pharmacy services was identified in one community consultation.

There were rural and northern concerns about the availability of health professionals in communities. The need for recruitment and retention strategies was implied.

Poor access to specialty services for both screening and treatment of complications was frequently identified in northern and rural settings, with the exception of western areas of the province where availability of ophthalmology and optometry was commended.

There was almost universal demand for the development of diabetes screening programs. The need for timely screening of diabetes complications and improved identification of gestational diabetes was emphasized.

The cost of diabetes care supplies was seen as a barrier to optimal self-care in a majority of public meetings. Recommendations included review of taxation allowances for medical expense claims and a need to review Pharmacare costs.

Waiting periods for care were identified as a contributing factor to the loss of interest in self-care.

The importance of Diabetes Education Resource (DER) teams in providing education and supporting diabetes care was stressed in a significant number of consultations. The role of Regional Health Authorities (RHAs) in supporting and enhancing the DER program was identified. There was an identified need to provide DER services on reserves. It was recommended that social workers become part of the DER team.

It was recommended that nurses should have an increased role in the provision of

care to people with diabetes through an increased scope of practice. The role of traditional healers was recommended as requiring greater interface with Western medical care programs. It was also recommended that traditional foods be incorporated into treatment regimens.

The importance of client participation in care strategies was stressed in one consultation.

There were two recommendations that there should be greater public awareness of the standards of care.

Research

Issues regarding research were less frequently expressed than other elements of this Strategy. It was advocated that the scope of research needs to be broadened beyond that funded by pharmaceutical companies. There was a recommendation to increase the focus on research related to Type 2 diabetes. Formal research specific to the use of traditional herbs was suggested.

There was an expression of interest by rural communities to participate in research. The direct community benefits from research participation was highlighted by one rural First Nations community. Rural residents expressed an interest in participation as research subjects and felt they were excluded by their place of residence.

There was a stated desire to receive more information about funding levels for research in Manitoba and current research



activities. Media communication of research results was discussed in one consultation; it was felt that the media need to be more realistic in suggesting that a cure for diabetes is “imminent.”

There was an expressed need to attract more diabetes researchers to Manitoba.

Support

There was almost universal expression of the importance of support groups for individuals living with diabetes, in rural, urban and First Nations consultations. There was equal importance given, in a cross-section of public meetings, to the role of support programs in enhancing self-esteem. First Nations consultations specifically identified the importance of support groups in enhancing cultural identity. There was a stated need to return to the historical cultural pattern of “community caring.”

Issues of access to support groups generated comment in a number of public meetings. It was stated that access must be free of financial barriers. Access was viewed as being limited by the general lack of awareness of support programs among health professionals.

Availability of support programs was discussed. The scarcity of support groups in Winnipeg was identified as a concern and echoed in rural areas. It was recommended that there be improved supports for adolescents as they move into adulthood. It was also recommended that Manitoba

Health and the CDA need to co-ordinate efforts in establishing support groups for both Type 1 and Type 2 diabetes.

Workplace discrimination against people living with diabetes was identified as a concern that needs to be addressed.

The **Juvenile Diabetes Foundation (JDF)** requested an opportunity to meet with representatives of the Strategy Steering Committee in Winnipeg. As the meeting was specific to Type 1 diabetes, a summary of the consultation is reported separately from the other community consultations. The principal concerns, issues and possible actions were as follows:

Regarding **education**, it was recommended that children are invaluable in educating peers and the public regarding their illness and that this concept “could be a powerful educational tool.” There was a concern regarding the interface between families and the public education system. It was clearly articulated that educators must receive more education about diabetes. It was suggested that compulsory health education of teachers should be considered by boards of education. There were anecdotes of the difficulties faced in convincing school boards and school administrators of this issue. Standards of care in schools for children with Type 1 diabetes were identified as a concern.

Regarding **research**, it was stated that there needs to be a clear delineation in research strategies to reflect the difference between Type 1 and Type 2 diabetes. The level of provincial government funding was questioned. It was stated that the level of health care research funding should be maintained even without a critical mass of researchers in Manitoba; in other words, provincial government funding should be transferred to neighboring provinces where there is research expertise. There were specific concerns regarding the ethics of funding; anecdotal evidence suggested that funding dedicated to diabetes research was being applied to initiatives in other chronic diseases. Reallocation of funding from care to research was thought to be an issue for consideration, given the large amounts spent on care versus small amounts on research.

Regarding **support**, it was emphatically stated that there was a need for greater recognition of the emotional and financial burden imposed upon children and their families by this life-long illness.

General comments included the need to identify who would become accountable for the implementation of the Strategy; concerns were expressed that the Strategy recommendations would fail to be implemented. The JDF expressed a commitment to become involved in assuring the implementation of the recommendations. There was optimism expressed that a cure for Type 1, whether

imminent or remote, would have an impact on the focus and cost of the *Manitoba Diabetes Strategy*. Concern was expressed regarding the integration of Type 1 and Type 2 diabetes in a single provincial Strategy; it was felt that failure to clearly differentiate Type 1 and Type 2 diabetes issues and actions could become a disservice to the concerns of both diseases.



Research Inventory

During a one-day collaborative workshop hosted by the Research Working Group in November of 1997, participants presented and reviewed many examples of recent and ongoing diabetes research in Manitoba.

Basic science research topics from the Faculty of Medicine, University of Manitoba include:

- angiotensin receptors in diabetes
- cholesterol ester transfer protein in diabetes
- development of IGF-1 receptor fusion proteins to modulate autoimmunity in diabetes
- diabetes cardiomyopathy
- diabetes in IGF-BP in transgenic mice
- insulin-like growth factors
- insulin receptor signaling
- islet cell allograft rejection
- isolation of pancreatic beta-cell precursors
- modulation of the immune system in pre-diabetic BB rats
- molecular methods to predict outcomes in diabetic pregnancies
- role of hepatic vagal stimulation in glucose metabolism.

Clinical research topics from the Faculty of Medicine, University of Manitoba include:

- bacteriuria in women with Type 2 diabetes
- efficacy of lispro insulin in Type 1 and Type 2 diabetes
- efficacy of nerve growth factor in diabetic neuropathy
- prevention of Type 2 diabetes with acarbose
- efficacy of troglitazone and miglitol in Type 2 diabetes
- relationship between leptin and IGF-1 in diabetes
- risk factors for end-stage-renal disease that include data on etiology (including diabetes and other causes), age of onset, clinical course and outcome
- role of amylin in diabetic control
- role of IGF-1 in glucose homeostasis
- screening and prevention of Type 1 diabetes in family members
- Type 2 diabetes in Aboriginal youth.

Research topics from the Department of Foods and Nutrition, Faculty of Human Ecology, University of Manitoba include:

- impact of diabetes on bone health in Aboriginal people

- lean body mass in adolescents with Type 1 diabetes
- role of flax seed in glycemic control
- role of zinc in insulin resistance.

Community research topics within Manitoba include:

- the *Diabetes Burden of Illness Study* conducted by Manitoba Health which has produced incidence and prevalence data on diabetes for the Manitoba population (adults/children and First Nation/others), associated complications and diabetes during pregnancy. The Medical Services Branch of Health Canada has utilized this data and estimated the projected growth of diabetes in the Aboriginal population to the year 2016, information which is vital to the planning of health and social services.
- the Sioux Valley Dakota First Nation diabetes primary prevention project.
- the St Theresa Point Diabetes School Screening Project.

Thus it can be seen that diabetes research, whether basic science, clinical or community-based, is very active in Manitoba. Another method of measuring the output of diabetes researchers is the number of publications in the scientific literature. A MEDLINE search using the string **diabetes and Manitoba** was done, yielding a total of 110 publications between 1987 and 1997. Of these, 70% were basic, 12% clinical and 18% community-based diabetes research. This search captured all papers in which the two words appeared.

Papers where diabetes appeared in the title, abstract or medical subject headings were included. Papers in which Manitoba appeared in the author's address were included. Papers in which Manitoba appeared in the abstract but not in the address were considered to be written by non-Manitoba authors about diabetes in Manitoba and thus were excluded. Only original papers and reviews were included; letters and comments were excluded. Furthermore, there are other health sciences bibliographic databases besides MEDLINE that may yield further papers by Manitoba authors.

The breakdown by department/institute of the 110 citations is as follows:

- Cardiovascular Sciences (29)
- Pathology (20)
- Internal Medicine (18)
- Community Health Sciences (13)
- Anatomy (8)
- Pediatrics (6)
- Clinical Chemistry (4)
- Pharmacology (3)
- Physiology, Obstetrics & Gynecology, Manitoba Health Epidemiology Unit (2 each)
- Biochemistry, Physical Education and Surgery (1 each).

Only one department/institution per paper is listed by MEDLINE. Many authors have appointments in more than one department and the affiliation of non-first authors is not provided.



Other Diabetes Initiatives

International

There have been many international efforts to reduce the impact of diabetes. The International Diabetes Federation (IDF), the World Health Organization (WHO) and the Pan American Health Organization (PAHO) have been on the forefront of this movement by bringing governments, non-government organizations, people with diabetes and health professionals together.

The St. Vincent initiative of 1989 forged a unique partnership among representatives of government health departments, patient organizations for all European countries, WHO and IDF. The *St. Vincent Declaration* identified diabetes as a major and growing European health problem, a problem at all ages and in all countries.⁽⁴⁴⁾

The general goals established by the St. Vincent initiative were for sustained improvement in health experience and a life approaching normal expectation in quality and quantity. It also called for the intensification of research efforts to seek new avenues for prevention and cure of diabetes. The goals of the St. Vincent initiative and European Action Programme have been endorsed by all 50 member

states of the WHO, Regional Office for Europe.

In December of 1996, the WHO held a meeting to reconsider the classification and diagnosis of diabetes and its complications.⁽⁴⁵⁾ The prevalence of diabetes has now been adopted by the WHO as a basic health indicator, along with measures such as life expectancy, infant mortality rate, immunization coverage and reported cases of selected infectious disease.

In accordance with the spirit of the *St Vincent Declaration*, a partnership was developed among the stakeholders of diabetes care in the Americas, with the adoption of the *Declaration of the Americas on Diabetes* in 1996.⁽⁴⁶⁾ The Declaration sets out action strategies to address diabetes prevention and improved care in the Americas.

The United States and Australia have developed population-based diabetes initiatives. Indian Health Services, the National Institute of Diabetes, Digestive and Kidney Diseases (NIDDK), the National Institute on Aging and the Centers for Disease Control and Prevention are all

funded by the United States, Federal Department of Health and Human Services. In Australia, a *National Action Plan - Diabetes to the Year 2000 and Beyond* proposes nine goals and 75 strategies for the prevention and control of Type 2 diabetes.⁽⁴⁷⁾

The Juvenile Diabetes Foundation supports research to find a cure for juvenile diabetes and its complications.⁽⁴⁸⁾ This international organization was founded in 1970 by parents of children with diabetes. In 1996, 348 research grants were awarded to scientists in 15 countries on four continents, including three Canadian provinces.

National

In Canada, the focus remains on diabetes as a clinical entity. Most research and programs are based on individual health as opposed to population health. Some Health Canada population-based initiatives include:

- The National Aboriginal Diabetes Strategy Discussion Paper, co-ordinated by the Medical Services Branch of Health Canada.
- The National Diabetes Surveillance System, co-ordinated by the Laboratory Centre for Disease Control and the Diabetes Council of Canada.
- The Health Promotion and Programs Branch, which provides national leadership in policy development, health research and system enhancement to preserve and improve the health and well-being of Canadians, co-ordinates the Diabetes Council of Canada.⁽⁴⁹⁾

The Canadian Diabetes Association (CDA), a non-government organization, promotes the health of Canadians through research, education, service and advocacy.⁽⁵⁰⁾

- The CDA is Canada's largest non-government source of funding for diabetes research.
- Educational resources for people with diabetes range from the Type 2 Starter Kit and revised Good Health Eating Guide to an Internet site.
- Services provided include sponsorship of a camp for children with diabetes, resource centres, development of standards for peer support groups and co-ordination of a travel insurance program.
- In 1996, CDA advocacy efforts focused on human rights, fighting blanket discrimination of people with diabetes, ensuring access to care and services and employment issues.
- The professional section of the CDA, comprising the Diabetes Educator Section and the Clinical and Scientific Section, are committed to excellence in diabetes research, clinical care and education. Recent initiatives include the revision of the Canadian *Clinical Practice Guidelines* and the *Nutrition Recommendations for Diabetes*.

The Canadian Diabetes Advisory Board sponsored a workshop in October of 1994 to develop strategies to address the issues related to diabetes in Canada.



Representatives from diabetes care, education, research and advocacy participated in this partnership venture by submitting recommendations for action related to epidemiological and socioeconomic issues, diabetes care, diabetes research, health care policy and diabetes advocacy.⁽⁴²⁾ These five reports form the basis of *Diabetes in Canada: Strategies Towards 2000*.

Most recently, the CDA hosted a National Forum on Diabetes in May of 1998. More than 170 key stakeholders, including consumers, healthcare professionals, business leaders and government representatives, from across Canada met to address the issue of diabetes. The delegates came together to identify priorities, develop action plans and discuss strategies to build an effective and efficient national model of diabetes care in Canada.⁽⁵⁰⁾

Aboriginal

Diabetes has been recognized as an emerging health problem among Aboriginal people in Canada. Some national and international initiatives to address this issue include:

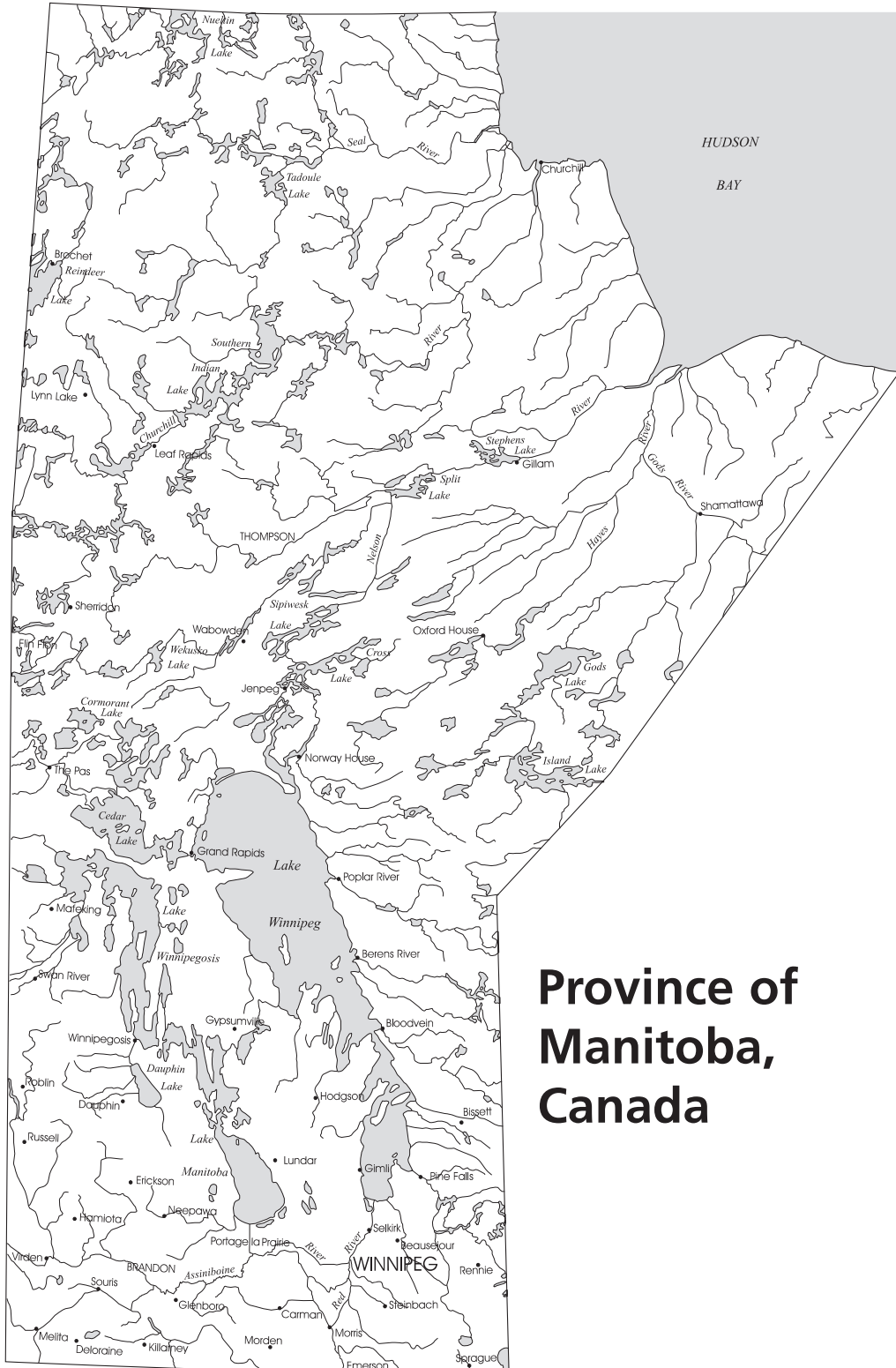
- Duncan Declaration on Standards of Care and Education for Native People with Diabetes, British Columbia, 1989.⁽⁵¹⁾
- First International Conference on Diabetes and Native Peoples: International Issues in Education, Treatment and Prevention, November 7-10, 1990, Minneapolis, Minnesota.

- National Framework for the Prevention and Care of Diabetes in First Nations in Canada initiated by the National Diabetes Focus Group in 1993.⁽⁵²⁾
- Second International Conference on Diabetes and Native People: Socio-Cultural Approaches in Diabetes Care for Native Peoples, May 19-21, 1993, Honolulu, Hawaii.
- The declaration of 1995 as the Year of First Nations and Diabetes, by the Assembly of First Nations.
- 3rd International Conference on Diabetes and Indigenous Peoples: Theory, Reality, Hope, May 26-30, 1995, Winnipeg, Canada.
- The National Aboriginal Diabetes Association was established in 1995 after the 3rd International Conference on Diabetes and Indigenous Peoples in Winnipeg, Manitoba.
- 4th International Conference on Diabetes and Indigenous Peoples: Strengths, Opportunities and Challenges, October 8-11, 1997, San Diego, California.
- The National Aboriginal Diabetes Strategy Discussion Paper, co-ordinated by the Medical Services Branch of Health Canada.

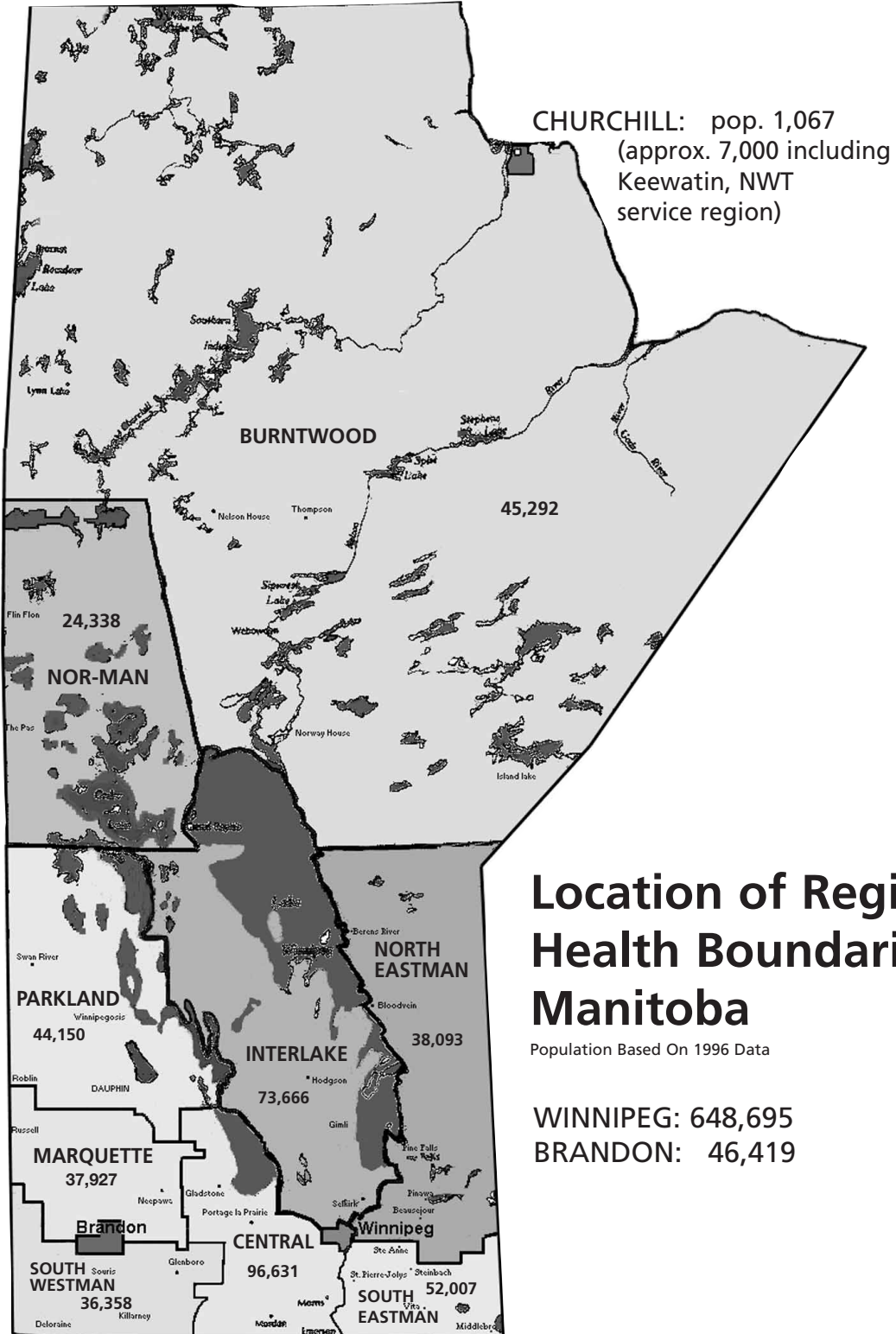
Provincial

Three provincial governments other than Manitoba currently have major diabetes initiatives:

- **Saskatchewan:** Saskatchewan Diabetes Working Committee Recommendations are expected in 1999 from working groups examining Aboriginal issues, primary prevention, analysis of the current health system, database development and epidemiology, and secondary prevention and treatment.
- **Ontario:** The Diabetes Complications Prevention Strategy aims to significantly reduce the major complications resulting from diabetes. The Northern Diabetes Health Network (NDHN) funds 36 diabetes education and treatment programs across northern Ontario. The Southern Aboriginal Diabetes Initiative is a service developed to improve quality of care to Aboriginal people living with diabetes in southern Ontario.⁽⁵³⁾
- **Nova Scotia:** The Diabetes Care Program of Nova Scotia (DCPNS) was established in 1991 and is funded by the Nova Scotia Department of Health. The mission of the DCPNS is to improve the quality of life of Nova Scotians affected by diabetes, by bringing them the best quality of care possible. The staff in all Nova Scotia diabetes education centers voluntarily participate in DCPNS initiatives and projects.⁽⁵⁴⁾



Province of Manitoba, Canada



Location of Regional Health Boundaries in Manitoba

Population Based On 1996 Data

WINNIPEG: 648,695
BRANDON: 46,419

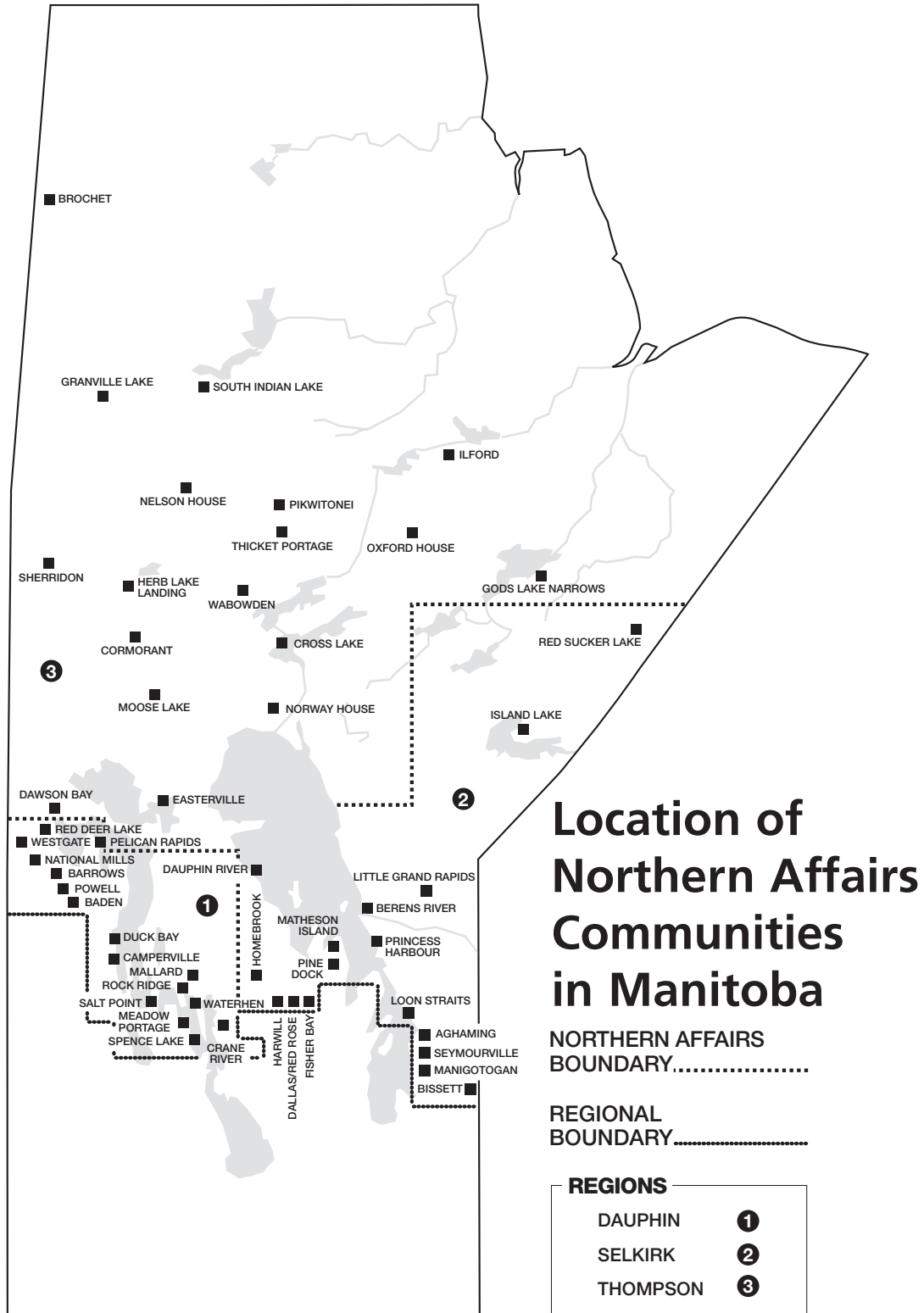


Location of First Nations Communities in Manitoba

LEGEND

- Community Accessible by All-Weather Road and/or Rail..... ●
- Community Inaccessible by All-Weather Road and/or Rail..... ○
- Non-Aboriginal Communities..... ■
- Community and Band Name..... Swan Lake
- First Nation Name When Different From Community Name..... (Pukatawagan)

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Glossary

ABORIGINAL: Being of the earliest people: indigenous. Refers to all Aboriginal groups including Status, Non-Status First Nation people, Metis and Inuit.

ACCESS TO CARE: The means of obtaining diabetes health care services.

ACTIVE TRANSPORTATION: Those activities which support the achievement of individual exercise levels (i.e., walking, cycling and jogging).

BENCHMARKS: A standard point of reference from which we can measure the effectiveness of interventions.

CDA: Canadian Diabetes Association.

CHR: Community Health Representative.

CHW: Community Health Worker.

CNIB: Canadian National Institute for the Blind.

COMMUNITY: An interactive group of people (who may live in a geographical location) who co-operate in common activities and/or solve mutual concerns.

COMMUNITY DEVELOPMENT: The process of involving a community in the identification and reinforcement of those aspects of everyday life, culture and political activity which are conducive to health.⁽⁵⁵⁾

COMMUNITY HEALTH CENTRE: An organization that provides health and social services on an ambulatory and outreach basis using multi-disciplinary teams of health care providers and volunteers.

COMMUNITY INVOLVEMENT: The process by which members of the community develop the capacity to assume greater responsibility for assessing their own health needs and problems, for planning and deciding on solutions for creating and maintaining organizations in support of these goals, targets and programs on an ongoing basis.⁽⁵⁵⁾

COMMUNITY MOBILIZATION: The process of achieving community change by participation of a wide spectrum of people at the local community level in

goal determination and action. It involves community ownership of decision-making and resources as these pertain to its own betterment.

COMMUNITY WORKER: An individual who is familiar with the development of a community and preferably resides within it, who assists in mobilizing a community towards its health potential. (Other terms to denote essentially the same role include Community Health Worker, Community Health Representative and Community Outreach Worker).

CONTINUITY OF CARE: Uninterrupted delivery of health care services; reflects all aspects of a person's care.

CULTURE: The beliefs, customs, arts and institutions of a society at a given time.

DCCT: Diabetes Control and Complications Trial.

DER: Diabetes Education Resource.

DER-CA: Diabetes Education Resource For Children and Adolescents.

DETERMINANTS OF HEALTH: Factors such as socio-economic status, productivity and wealth, the health service system, environmental conditions and genetic endowment that impact on the health of individuals, families and communities.

DIALYSIS: The process used to take over the body's kidney function in the presence of kidney (or renal) failure. This process is performed externally, either through the blood (hemodialysis) or through the delicate linings inside the abdomen (peritoneal dialysis). Dialysis removes unwanted and toxic substances from the body while saving wanted substances.

DIRECT COSTS: In the context of the Diabetes Burden of Illness Study, those costs paid by Manitoba Health for provision of health care services in specific programs. Not all programs provided by Manitoba Health were included in these analyses.

DHC: Diabetes Health Care.

DM: Diabetes Mellitus.

EMPOWERMENT: The process of achieving autonomy through the development and use of skills to promote and maintain health for individuals, families and communities.

EPIDEMIC: Affecting or tending to affect many individuals within a population, community or region at the same time.

EPIDEMIOLOGY: The study of the distribution and determinants of health-related states or events in specified populations and the application of this study to the control of health problems.

EXCESS COSTS: A measure of the difference in costs between one group of individuals as compared with other groups. The term “excess” is specifically not intended to have a normative reading - that is, the use of the term “excess costs” does not imply that any cost differences are “excessive” or otherwise inappropriate.

FIRST NATIONS: Status Indian communities with a land base.

HOLISTIC: An approach to health in which the whole is greater than the sum of its parts, whether the whole is an individual, a family or community. It includes physical, emotional, mental and spiritual health.

IDDM: Insulin Dependent Diabetes Mellitus. Now called Type 1 Diabetes.

IDF: International Diabetes Federation.

INCIDENCE: The number of new cases of a disease in a defined population, within a specified period of time. The term “incidence” is sometimes used to denote incidence rate.

INDICATORS: A variable, subject to direct measurement, that reflects the state of health (health indicator) of persons in a population.

INDIRECT COSTS: The resource implications of a medical condition, ranging from loss of income to costs associated with building and maintaining facilities.

JDF: Juvenile Diabetes Foundation.

LITERACY LEVEL: The state at which an individual has the ability to read and write.

LCDC: Laboratory Centres for Disease Control.

METIS: A person of mixed white and Aboriginal ancestry who lacks Status under the Indian Act.

MORBIDITY: Any departure, subjective or objective, from a state of physical or mental well-being.

MORTALITY RATE: (Or Death Rate) An estimate of the proportion of a population that dies during a specified period.

MSB: Medical Services Branch of Health Canada.

MSD: Manitoba Society for Disabilities.

NADA: National Aboriginal Diabetes Association.

NATIVE: An original or indigenous inhabitant of a region as distinguished from an immigrant, explorer, colonist or European pioneer settler.

NDHN: Northern Diabetes Health Network (Ontario).

NGO: Non-government Organization.

NHRDP: National Health Research Development Program (of Health Canada).

NIDDK: National Institute of Diabetes, Digestive and Kidney Diseases.

NIDDM: Non-Insulin Dependent Diabetes Mellitus. Now called Type 2 Diabetes.

NON-STATUS POPULATION: The population of individuals who have not self-declared themselves as “Status” to Manitoba Health or who are dependent children of a household head who has not self-declared them as “Status.”

OUTCOME: A result; a visible effect, change or result that occurs following an action.

PAHO: Pan American Health Organization.

PREVALENCE: The number of instances of a given disease in a given population at a designated time. The term prevalence is sometimes used to denote prevalence rate.



PRIMARY HEALTH CARE: Essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination.⁽⁵⁵⁾

RHA: Regional Health Authority.

SOI: Solicitation of Interest.

STANDARDS: Applies to any definite rule, principle or measure established by authority.

STATUS POPULATION: The population of individuals who have been determined by Manitoba Health to be registered under, or eligible for registration under, "The Indian Act of Canada" (R.S.,c.I-6, s.1). Manitoba Health makes this determination for adults based on self-report of an individual (typically at the time when Manitoba Health numbers are issued). In the case of dependent children, this determination is automatically made for any children in a household when the household-head has made a declaration of entitlement under "The Indian Act" for themselves, or their children. The description "status" has been adopted to denote this population, although this specific phrase is not defined by "The Indian Act."

TYPE 1 DIABETES: A disease of the immune system that causes destruction of the cells that produce insulin. Occurs most often in children, previously called Juvenile Diabetes and Insulin-Dependent diabetes. Uniformly fatal without insulin therapy.

TYPE 2 DIABETES: A disease where the body becomes resistant to insulin. Occurs most often in adults, previously called Maturity-Onset Diabetes and Non-Insulin-Dependent Diabetes. This form of diabetes can be controlled with a combination of lifestyle changes, pills and/or insulin.

UKPDS: United Kingdom Prospective Diabetes Study.

WHO: World Health Organization.



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