National Diabetes Strategy

2000–2004

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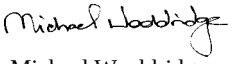
Contents

Australian Diabetes Declaration

Diabetes is a National Health Priority in Australia and Australian Health Ministers endorse the National Diabetes Strategy 2000-2004. The Strategy aims to contribute to the improvement of the general level of Australia's health by reducing the personal and public burden of diabetes in Australia. This will be progressed through ensuring access to effective, efficient, evidence-based and economically viable services and programs for diabetes prevention and care for all people living in Australia.



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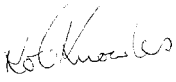

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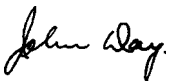

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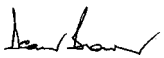

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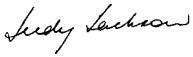

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Introduction

In recognition of the impact that diabetes has on the Australian community, the Australian Health Ministers agreed in 1996 that diabetes mellitus would become one of the five National Health Priority Areas. The significance of this decision is that it focuses public attention and health policy on diabetes as a condition associated with a large burden of illness in Australia.

Complementing this decision the Commonwealth Government announced funding of $7.7 million over three years for activities that would improve the awareness and the management of diabetes in Australia. Significant projects funded included a Community Awareness Diabetes Strategy (CADS), the establishment of a National Diabetes Register and the consultancy that led to the publication of the 'National Diabetes Strategy and Implementation Plan' report.

Health Ministers agree that in order to continue the momentum in improving the prevention and management of diabetes in Australia, it is important to put in place a National Diabetes Strategy. Such a strategy will assist Governments and service providers in identifying key areas for action aimed at improving the health of Australians with, or at risk of, diabetes. The aims of the National Diabetes Strategy are to:

- ensure appropriate attention is given to primary prevention, including risk reduction, effective high quality management of diabetes and research;
- establish an effective partnership between governments, health care professionals, non-government organisations, consumers and carers;
- build on experience and successes to date.

Scope of the National Diabetes Strategy

Two seminal reports form the base for the National Diabetes Strategy. The first, the National Diabetes Strategy and Implementation Plan report provides a comprehensive plan of action for diabetes, including Type1 (insulin-dependent diabetes), Type 2 (non-insulin dependent diabetes), and gestational diabetes mellitus (GDM). The second document is the 1998 Report to Health Ministers on Diabetes Mellitus. These two reports

complement each other by identifying current national action on prevention, early detection and management as well as detailing priority areas for improved service delivery.

Extensive consultation was undertaken in the development of these reports. The National Diabetes Strategy is based on the results of these consultations and uses the two reports as a platform. From the National Diabetes Strategy, the Commonwealth, State and Territory governments can identify priorities and agree on an approach to diabetes prevention, early detection, management and treatment, in partnership with peak organisations and service providers.

For more detailed information on the current provision of services to people with or at risk of diabetes the reader is referred to the above reports.

This document provides key information on the epidemiology of diabetes, its costs and major issues that need to be addressed. It also outlines the mission, principles and goals of the Strategy, and provides a strategic framework, which links proposed activities and performance measures to each goal.

The National Diabetes Strategy covers the full range of elements of diabetes prevention and management including:

- research to achieve a cure for Type 1, Type 2 and gestational diabetes;
- adoption of a Public Health approach to diabetes through the implementation of primary prevention strategies to reduce the number of people at risk of diabetes;
- effective case finding of people with diabetes;
- management of people with diabetes; and
- prevention and reduction of complications arising from diabetes.

The States and Territories and the Commonwealth, together, are responsible for progressing the National Diabetes Strategy. This collaboration by governments is inclusive of non-government and professional organisations involved in the prevention and management of people at risk of or with diabetes and is critical to achieving the results proposed in this Strategy.

Diabetes facts

Diabetes is a common, chronic and costly condition that incurs an enormous personal and public health burden. If undetected or poorly controlled, it can result in debilitating long term health problems such as blindness, kidney failure, neuropathy, amputation, heart attack, stroke and erectile dysfunction. The effects of the condition are disproportionately prevalent in particular Australian population groups especially in some Indigenous communities (who suffer the fourth highest prevalence of Type 2 diabetes in the world), and some migrant groups.

Type 1 diabetes, or insulin dependent diabetes mellitus is caused by an autoimmune process which destroys pancreatic islet beta cells resulting in the loss of insulin production. Approximately one half of all new onset Type 1 cases are in young adults. Type 1 diabetes accounts for approximately 10 per cent of people diagnosed with diabetes. Onset of Type 1 diabetes cannot be prevented and there is no cure.

Type 2 diabetes, or non-insulin dependent diabetes mellitus accounts for about 85 to 90 per cent of all diabetes in developed countries. Diagnosis normally occurs after the age of 40 years. Type 2 diabetes can be asymptomatic for many years and is often, but not always, associated with obesity, inactivity and poor diet. Type 2 diabetes is strongly familial and research indicates that lifestyle is a major contributing factor. The prevalence of Type 2 diabetes is increasing dramatically.

Gestational diabetes mellitus (GDM) emerges during pregnancy and remits after birth. It occurs in about 4-6 per cent of pregnancies in Western nations and significantly increases risk of perinatal morbidity and mortality. Careful control of blood glucose levels is required during pregnancy to avoid maternal and fetal adverse outcomes. GDM also substantially increases the lifetime risk for developing Type 2 diabetes.

The long awaited United Kingdom Prospective Diabetes Study (UK PDS) has provided important evidence on which to base the treatment and management of Type 2 diabetes and the Diabetes Control and Complications Trial (DCCT) provided equivalent evidence for the management of Type 1 diabetes. In particular the clinical control of blood glucose levels and hypertension significantly improves clinical outcomes and reduces diabetes-related complications.

Neither the UKPDS nor the DCCT address the role of lipid lowering therapy in the management of diabetes. Evidence for the role of treating lipid disorders must await further research.

The burden of diabetes

It is estimated that 700,000 people had diabetes in 1995 about half of whom were not aware that they had the condition. This figure is projected to rise to 770,000 by 2000 and 950,000 by 2010. McCarty et al (*The Rise and Rise of Diabetes*, 1996) estimated that in 1995 the direct annual health care costs for diabetes in Australia may have been as high as $1.4 billion and may reach $2.3 billion by 2010. The indirect and social and personal costs are incalculable. Unless effective prevention strategies are put into place, the incidence of diabetes will continue to rise.

Issues

There are a number of issues that need to be addressed. These include:

- programs to prevent or delay the development of diabetes;
- early detection of people with diabetes;
- national programs for improving quality of diabetes care,
- prevention programs for diabetes vision impairment, end stage renal disease, foot disease and cardiovascular disease;
- the high prevalence of diabetes in the indigenous population and other ethnic groups;
- diabetes related research;
- improved patient management and recall systems;
- increased access to good nutrition and opportunities for exercise where needed; and
- improved information to monitor the incidence and prevalence of diabetes.

Opportunities

There are certain aspects of the current way diabetes services are arranged which will make it easier for progress to be made in addressing these issues including:

- well-defined evidence-based processes for delivering diabetes care;

- measurement of treatment related outcomes (DCCT, UKPDS);
- input from community;
- a range of health professionals who, with adequate training, can collaborate in population based diabetes programs and most aspects of effective routine diabetes care;
- the availability of low-tech and inexpensive equipment for diagnosis;
- a coordinated network of primary physicians through Divisions of General Practice;
- a system of interdisciplinary Diabetes Centres exists which can be accessed free of charge to the consumer; and
- all Australians are covered by universal health insurance for access to public health services.

Linkages

Diabetes fits within the Chronic Non-Communicable Diseases framework, having a number of common elements with other conditions in this category. These commonalities include interventions in prevention, delay, early detection and screening, treatment and management, and rehabilitation and palliation. Lessons learned in the different intervention modes for these diseases may be of value for the National Diabetes Strategy.

In addition, the prevention of Type 2 diabetes requires action in the areas of food, nutrition, exercise and obesity. It is essential that links be made with the nutrition strategy, Active Australia and the proposed primary prevention strategy. The messages of these strategies and their appropriate, effective development are key to the progress of diabetes prevention and delay. The implementation of the National Diabetes Strategy will see further forging of links with the work under these strategies rather than duplicating their work with diabetes-specific messages. It will be important to ensure that linkages are forged across the whole health system including the acute sector, community care and long term residential care. Health care professionals in all sectors need to network with each other and refer to appropriate settings as required.

Mission

The mission of the National Diabetes Strategy is to contribute to the improvement of the general level of health in Australia by reducing the personal and public burden of diabetes in Australia. This will be progressed through research and ensuring equitable access to effective, efficient, evidence-based and economically viable services and programs for diabetes prevention and care for all people living in Australia.

Principles

In accord with the mission statement the following principles provide the foundation for the National Diabetes Strategy.

1. **People with or at risk of diabetes are the focus of the National Diabetes Strategy.**

The effectiveness of the National Diabetes Strategy will be measured by its impact on improving the health status of people with, or at risk of, diabetes in the Australian community. As the focus of the Strategy, people with, or at risk of diabetes, should be partners in the development of diabetes policy and diabetes management. This includes promoting self-management and primary prevention programs such as nutrition and physical activity.

Specific attention should be paid to those sub-groups in the population identified as high risk, in particular the Indigenous people for whom diabetes occurs at a rate of at least two to four times that of non-Indigenous people. Diabetes is rapidly becoming the single greatest contributor to morbidity and mortality in Aboriginal and Torres Strait Islander populations.

2. **The provision of high quality, effective, efficient service delivery for people with, or at risk of, diabetes can prevent or delay the onset of complications and reduce the rate of premature mortality.**

The National Diabetes Strategy covers the interventions of primary prevention, delay, early detection, and management and secondary prevention of diabetes complications. The effective implementation of these interventions all have a role in preventing or delaying morbidity and reducing premature mortality. Appropriate resourcing needs to support the interventions according to their capacity to prevent or alleviate the complications of diabetes.

Governments, community organisations, the medical and scientific communities, people with diabetes and their carers need to ensure the effective coordination of services in order to prevent diabetes and minimise the social and personal impact of the condition.

3. **A high quality, integrated workforce is required for the prevention, early detection and management of diabetes.**

The workforce involved in diabetes is a critical element to the success of the National Diabetes Strategy. Professionals specialising in diabetes care must be aware of the latest prevention and management practices. Professionals in the workforce in generalist or related fields require knowledge of diabetes to provide appropriate advice and referral where needed. Community input is also vital for this process of increasing professional knowledge of diabetes.

4. **Information systems need to be in place and accessible to effectively plan and monitor services for the prevention and management of diabetes, complications and risk factors.**

The development of services is made very difficult without an understanding of the incidence, prevalence and changing trends related to diabetes. This information is relevant for regional, state and national decision making. As a condition that needs to be regularly reviewed, effective recall and reminder systems also play a critical part in the management of diabetes. In the absence of a cure, collecting data to manage diabetes to minimise or prevent complications is vital.

5. **High quality research and development is required for the prevention and early detection of diabetes and to improve the treatment and care for people with or at risk of diabetes.**

At this time there are no proven preventative measures for Type 1 diabetes, and the evidence suggests that while preventative measures delay the onset of Type 2 diabetes, it is not necessarily delayed permanently. In addition, people with diabetes are at greater risk from a number of secondary conditions including cardiovascular disease, end stage renal disease, retinopathy and foot disease. Research has a significant role to play in making progress to finding a cure for diabetes as well as improving the management of people with diabetes and preventing diabetes complications.

Goals

The goals listed below cover the continuum of diabetes care and the structure which underpins diabetes care.

Goal 1 Improve the capacity of the health system to deliver, manage and monitor services for the prevention of diabetes and the care of people with or at risk of diabetes.

Goal 2 Prevent or delay the development of Type 2 diabetes.

Goal 3 Improve health related quality of life and reduce complications and premature mortality in people with Type 1 and Type 2 diabetes.

Goal 4 Achieve long term maternal and child outcomes for gestational diabetes and for women with pre-existing diabetes equivalent to those of non-diabetic pregnancies.

Goal 5 Advance knowledge and understanding about the prevention, delay, early detection, care and cure of Type 1, Type 2 and gestational diabetes.

Framework for action

The framework provides more detailed descriptions of each goal, activities that are expected to be undertaken during the next five years and measures of progress against each goal. The activities proposed are based on the findings of the reports cited above and may relate to more than one goal.

As this is a five year strategic plan, specific detail on the timing of activities is not provided. A working version of the framework will be developed and maintained by the Commonwealth–States Diabetes Forum during the life of the Strategy and used as the basis for reporting on progress of the Strategy to Ministers. Performance indicators will be developed in consultation with the whole diabetes community and will also relate to indicators developed for the National Health Priorities Areas initiative.

The measures of progress are not only those that can be measured quantitatively, however indicators will be sought for the Australian Institute of Health and Welfare (AIHW) to develop and report against as part of the role of monitoring diabetes.

Finally, particular mention should be made of the place of a number of the sub-populations within Australia which are most adversely affected by diabetes. The Aboriginal and Torres Strait Islander population and some other parts of the community, especially those with a culturally and linguistically diverse background, have much higher rates of diabetes than the general population. While no separate goal has been proposed in the Strategy for these groups, specific activities will be developed for each goal to address the need of at-risk populations. In many cases these activities will require a different approach or strategy than the broader general population. Measures of success of this Strategy will include the measurement of the impact of these activities in reducing the incidence of diabetes, on improving management of diabetes and reducing the incidence of diabetes complications for each of these communities.

A commitment is made by Commonwealth and State and Territory governments to improve the outcomes for people with, or at risk of, diabetes by working together to achieve greater consistency through a sharing of knowledge and resources.

Goal 1 Improve the capacity of the health system to deliver, manage and monitor services for the prevention of diabetes and the care of people with, and at risk of, diabetes.

Services to people with diabetes have changed significantly over the past 10-20 years. Greater emphasis is now placed on ambulatory care in the community rather than within hospitals, and increased knowledge has improved the capacity to prevent or delay diabetes and its complications. However, the Australian health system is complex with different levels of government, private practitioners, peak bodies and private industry all having an important role to play.

Mechanisms need to be in place to ensure that a coordinated approach to diabetes is undertaken in Australia and meet the needs of individual sectors. Most governments already have diabetes taskforces or committees that provide advice to Ministers on action to be taken in jurisdictions. In addition the Commonwealth–States Diabetes Forum has been established to provide a national forum at which national direction can be discussed and taken to the separate jurisdictions for decision. The Forum and individual taskforces will provide Ministers with wide ranging advice but with particular attention to:

- continued development and reporting on diabetes indicators;

- best practice models for service delivery;
- quality of care;
- the establishment of linkages and partnerships between the different stakeholders in the diabetes sector; and
- the cost of diabetes in Australia and alternative methods of funding for diabetes prevention and management.

Progress towards this goal will be measured by:

- commitment of the different stakeholders to the National Diabetes Strategy;
- development and implementation of effective care practices;
- development and transfer of best practice;
- quality of care measures developed and monitoring commenced; and
- use of alternative funding models that facilitate access to best practice care.

Goal 2 Prevent or delay the development of Type 2 diabetes.

The most effective strategy to deal with diabetes and its serious complications is to prevent people developing it. Many Australians though, do not regard diabetes as a serious condition, nor are they willing to consider changing their lifestyle to avoid diabetes. An increased effort is required to influence people to change lifestyle behaviour. Since diabetes shares with a number of other disease groups the same risks of obesity, diet, lack of exercise, hypertension and smoking, it is important to ensure that resources are pooled or common approaches recognised so that messages on primary prevention are consistent and effective.

A "whole of government" health promotion approach that supports public policy aimed to increase public levels of physical activity and opportunities for an active lifestyle, needs to be further investigated. This might include incentives for use of public transport, development of bicycle paths and other things.

Primary prevention should go further than media campaigns. Any message provided to the community must be backed up with advice and lifestyle counselling by health professionals. An important aspect of this goal is the provision of suitable education materials and training for health workers.

Specific activities under this goal include:

- establishing linkages with other relevant national health priority areas and the proposed primary prevention strategy and review of outcomes of existing state and national primary prevention strategies;
- implementing the Community Awareness Diabetes Strategy, including the development of messages for different sectors of the community;
- further development of guidelines and information for health professionals and consumers on diabetes its causes and prevention; and
- supporting general practitioners and other health workers to be able to provide lifestyle counselling.

Progress against this goal will be measured by:

- cooperative work undertaken on primary prevention;
- increased community awareness of the seriousness of diabetes;
- initiatives toward a whole of government approach to healthy lifestyle opportunities;
- access by health professionals and consumers to National Health and Medical Research Council (NHMRC) endorsed guidelines; and
- increased lifestyle counselling by general practitioners and health workers.

Goal 3 Improve health related quality of life and reduce complications and premature mortality in people with Type 1 and Type 2 diabetes.

Just as prevention or delay of diabetes is important to reduce the incidence of diabetes, the early diagnosis and effective management of diabetes is critical to improving the health related quality of life of people with diabetes. Studies have shown that effective management of diabetes does reduce the risk and magnitude of complications and mortality.

Specific complications of diabetes that can be delayed or progress slowed include diabetic retinopathy, end stage renal disease, foot disease and cardiovascular disease. Management should be based on providing people with information to make them aware of the benefits of well controlled diabetes. Recall systems for people with diabetes and the importance of periodic review should be encouraged. Frail older people with diabetes receiving community support or living in aged care facilities may not be

able to monitor their own blood glucose levels. Therefore it is important to ensure that adequate education and training is provided to staff responsible for community services and aged care facilities.

Specific activities to progress this goal include:

- development and dissemination of NHMRC approved guidelines for general practitioners, health workers and consumers on testing for diabetes and its management. For example regular monitoring of HbA1c levels as both a care practice and national collection of these data to identify changes in trends and complications and care practices;
- provision of evidence-based, coordinated services to prevent the development or progression of diabetes complications;
- development and establishment of appropriate recall systems, including for women with past gestational diabetes; and
- development of programs to reduce the incidence and severity of complications eg vision, foot, end stage renal failure and cardiovascular disease.

Progress towards this goal will be measured by:

- access to and use of care defined under best practice guidelines;
- reduced number of people with undiagnosed diabetes;
- implementation of recall systems;
- reduced rate of people with new diabetes complications;
- reduced rate of people with end stage complications; and
- data collections to inform progress of goal.

Goal 4 Achieve maternal and child outcomes for women with gestational diabetes and for women with pre-existing diabetes equivalent to those of non-diabetic pregnancies.

In women with pre-existing diabetes the occurrence rate of maternal and fetal complications has been shown to be related to the level of metabolic control, with spontaneous abortions at double the rate and congenital abnormalities at two to five times the rate of the general population. Both pre-existing diabetes and gestational diabetes confer an increased risk of diabetes in the child and gestational diabetes indicates an increased risk of diabetes in the mother.

Specific activities to progress this goal include:

- enhancing the provision of pregnancy diabetes detection, pre-conception counselling and diabetes management;
- enhancement of post natal recall;
- raising awareness of the risks associated with pregnancy for women with diabetes and increased rate of women at risk tested for gestational diabetes;
- development of NHMRC approved guidelines for the testing for and management of women with gestational diabetes; and
- development of appropriate input on pre-existing and gestational diabetes to diabetes data set.

Progress towards this goal will be measured by:

- availability of NHMRC approved guidelines;
- increased rate of women with diabetes in the childbearing age group receiving pregnancy counselling prior to conception;
- increased rate of women at risk tested for gestational diabetes; and
- rates of maternal and foetal outcomes.

Goal 5 Advance knowledge and understanding about the prevention, cure and care of Type 1 and Type 2 and gestational diabetes.

At this time there is no known cure for diabetes. However, research into the cause of diabetes, best practice and predisposing factors have enhanced our capacity to prevent or delay diabetes and care for people with diabetes. Continued research effort is needed to ensure progress is made towards a cure as well as further improving our understanding of diabetes, its effects and the effectiveness of different forms of prevention and management. It is also important to ensure that such research effort recognises the need to address these issues for Type 1, Type 2 and gestational diabetes as separate entities, while also looking for common threads. Gestational diabetes, if unrecognised, increases the risk of complicated delivery and increased perinatal morbidities and mortality.

Specific areas of activity include:

- develop and evaluate effective prevention and management strategies;

- establish research priorities within diabetes;
- encourage increased levels for funding of research into the cure for diabetes;
- conduct further research into methods for identifying people at risk of Type 2 diabetes and preventing its onset;
- establish a diabetes register for insulin treated diabetes and explore feasibility of extending to non-insulin treated diabetes;
- undertake further studies on the prevalence of diabetes in Australia; and
- conduct cost modelling exercises, which assess the impact of health care interventions on diabetes.

Progress against this goal will be measured by:

- an agreed research agenda;
- enhanced funding for diabetes research in Australia;
- evaluation of the contribution to research and knowledge by the diabetes register;
- improved measures of the prevalence of diabetes in Australia; and
- the development and use of an effective priority setting model to help guide resource allocation decisions.

Evaluation of the Strategy

A final evaluation of the National Diabetes Strategy 2000-2004 will be considered by Ministers as part of the decision process on a further National Diabetes Strategy. It is noted though, that evaluation of a strategy for a health area as complex and intricate as diabetes requires an approach that will cover a range of indicators, including process, output and outcome, and the use of qualitative and quantitative measures. Evaluation will also only reach its full potential if it is based on measures put in place before or soon after the commencement of initiatives outlined under the Strategy.

However, evaluation should also have an iterative aspect to it. To this end, initiatives will be evaluated during the life of the strategy. Using this evaluation, the Commonwealth–States Diabetes Forum, in consultation

with Commonwealth and State diabetes taskforces, will provide recommendations on the continuance or amendment of initiatives.

A task of the Commonwealth–State Diabetes Forum will be to establish, in consultation with Commonwealth and State diabetes taskforces, an evaluation plan for the strategy during 1999-2000. This will ensure the development of appropriate indicators and measures during the life of the Strategy, which will facilitate the evaluation of the Strategy and progress on diabetes in Australia. Such an evaluation will review the progress against each activity detailed in the Strategy. Secondly, progress of the Strategy should also be considered in the light of reporting on the Diabetes Indicators endorsed by the National Health Priority Committee.

Finally, while some progress on prevention and management of diabetes should be expected in the short term, significant gains in health outcomes will only come with continuous work in this area over an extended period of time. While some activities will reap short-term gains as seen in the establishment of recall mechanisms and production of evidence-based guidelines, other activities will only reap benefits in the long term. Improved management of people with diabetes will improve the well-being of people immediately, but will only see changes in the incidence in diabetes complications over a period of some years. Improved primary prevention strategies to reduce the incidence of preventable risk factors such as the risk factors of obesity, lack of exercise and poor nutrition may require periods of ten to twenty years to reap benefits in reduced numbers of people developing diabetes, diabetes complications and reduced mortality rates due to diabetes.

Glossary of some terms and acronyms

AIHW	Australian Institute of Health and Welfare
CADS	Community Awareness Diabetes Strategy
Diabetes Mellitus	diabetes
GDM	gestational diabetes
HbA1c	glycohaemoglobin
NHMRC	National Health and Medical Research Council
NHPA	National Health Priority Areas
Type 1 diabetes	insulin dependent diabetes
Type 2 diabetes	non-insulin dependent diabetes
NDS	National Diabetes Strategy
DCCT	Diabetes Control and Complications Trial
UK PDS	United Kingdom Prospective Diabetes Study

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