



**FEDERAL
ELECTION
2013**



A National Diabetes Strategy and Action Plan



**Prevention
Prevention
Prevention**

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President, International Diabetes Federation

Foreward from Sir Michael Hirst

Australia has been an international leader in the diabetes arena, both in research and patient care, over many decades. This has many elements including:

- Being the first nation to introduce universal, government supported assistance for self monitoring of blood glucose and self management through the National Diabetes Services Scheme
- Australian diabetes researchers have been at the forefront in many aspects of research including public health and epidemiology, basic research including causation of type 1 and type 2 diabetes, islet cell transplantation and translating research into improved treatment of diabetes
- Making a major contribution to the International Diabetes Federation through work of past President, Professor Martin Silink AM of Sydney, and many others in leadership roles.

This framework for a new National Diabetes Strategy and Action Plan is strongly aligned with the International Diabetes Federation and global priorities for diabetes prevention and management.

I commend this National Diabetes Strategy and Action Plan and strongly encourage the incoming Australian Government after the 2013 Federal Election to move quickly to develop and implement this framework and continue Australia's leadership in addressing the global pandemic of diabetes.

Purpose of this new National Diabetes Strategy and Action Plan

The purpose of this document is to provide the incoming Australian government, after the 2013 federal election, with a clear framework for a new national strategy for diabetes and a five year action plan. This plan should be resourced and supported through:

- Government and non-government funding including federal, state and territory governments, private health insurers, and employment/workplace health funders
- A governance framework which ensures measurement and monitoring of performance, and accountability and reporting to the community together with ongoing leadership.

Diabetes Australia acknowledges the writing group:

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Diabetes – the growing prevalence and impact

Diabetes is the major global threat to human health and productivity in the 21st century.

Diabetes will become the No 1 burden of disease in Australia in the next five years.

At least 1.5 million Australians have diabetes. This includes all types of diagnosed diabetes as well as silent, undiagnosed type 2 diabetes¹. 280 Australians develop diabetes every day². Approximately 100,000 Australians have developed diabetes in the past year.

Diabetes is the fastest growing chronic disease in Australia and all types of diabetes are increasing in prevalence; type 1 diabetes is increasing; type 2 diabetes is increasing; gestational diabetes is increasing.

For every person diagnosed with diabetes there is usually a family member or carer who also “lives with diabetes” every day in a support role.

Figure 1 shows the leading causes of burden of disease in Australia³. Only two conditions are increasing, diabetes and dementia. It is forecast that diabetes will be the highest contributor to the disease burden in Australia by 2017. Diabetes is also a significant contributor to the projected increase in dementia.

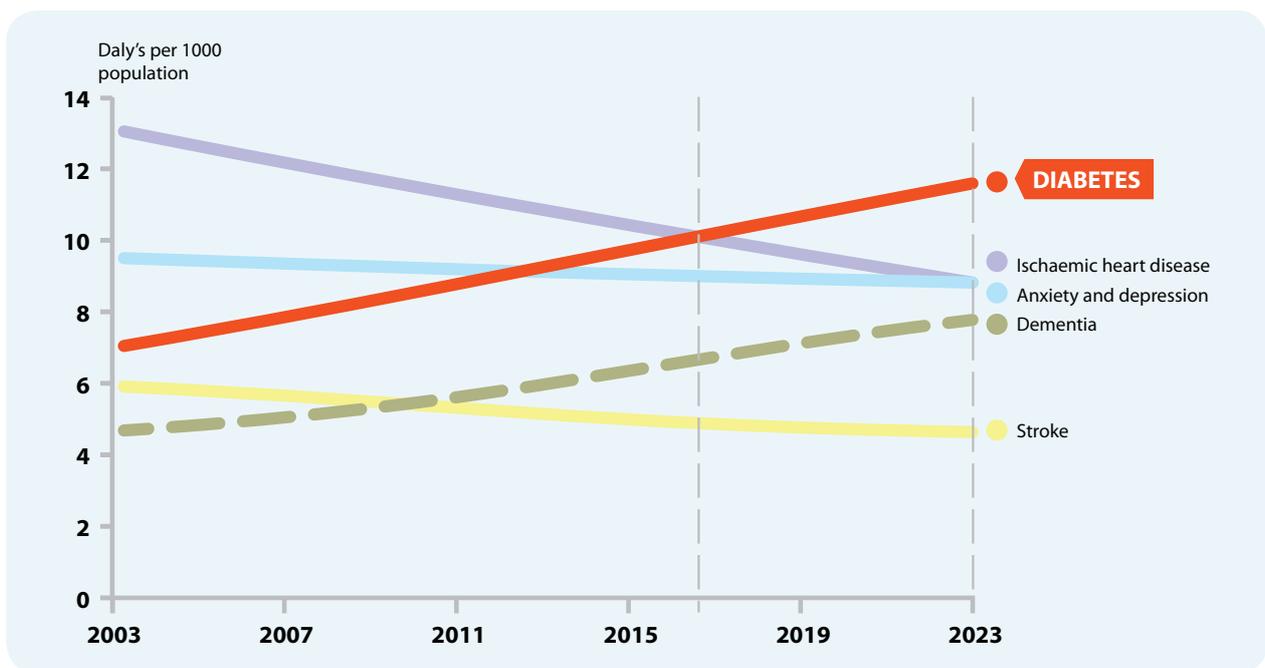


Figure 1: Trends in leading causes of burden of disease (Australian Institute of Health and Welfare, 2010)

Pre-diabetes and Prevention

At least 2 million Australians have pre-diabetes and are at high risk of developing type 2 diabetes⁴. Strong evidence shows that type 2 diabetes can be prevented in up to 58% of cases in the high risk (pre-diabetes) population^{5,6,7}.

There is not just one simple solution. Multiple strategies with significant resources and sustained effort for many years are needed. Short term pilot projects will not be enough. Success is most likely if we combine a large scale national high risk prevention program with whole of population strategies and do both.

Seriousness and Impact

Diabetes is a serious and complex metabolic condition. The seriousness of diabetes is often underestimated. There is no such thing as “mild” diabetes.

All types of diabetes are serious and can lead to complications if the diabetes is not well managed. The complications of diabetes are the same for type 1 and type 2 diabetes. Early diagnosis, treatment and effective ongoing management reduce the risk of diabetes-related complications, which include¹:

- Heart attacks and strokes: up to four times more likely in people with diabetes
- Blindness: diabetes is the leading cause of preventable blindness in adults
- Kidney failure: three times more common in people with diabetes
- Amputations: 15 times more common in people with diabetes.
- Depression, anxiety and distress: in over 30% of all people with diabetes.

New Information on Causes of Diabetes - “Diabetes begets Diabetes”

- Recent studies highlight the possible contribution of in utero factors to the risk of type 2 diabetes in adult life due to epigenetic mechanisms¹⁰.
- Babies exposed to nutritional deprivation in utero and to other adverse events, including high blood glucose levels in the mother (for example in gestational diabetes), are more susceptible to obesity, diabetes and cardiovascular disease as adults.
- Epigenetic modifications have been defined as alterations in gene expression, without changes in DNA sequences that can be transmitted through future generations. This creates a “vicious cycle” which may be important in explaining the high rates of type 2 diabetes currently seen in many populations in the developing world as well as in Aboriginal and Torres Strait Islander communities.

The economic and personal burden of diabetes

The economic and social cost of diabetes is increasing exponentially. The total annual cost of type 2 diabetes in Australia is estimated at \$14.6 billion including healthcare costs, the cost of carers and Commonwealth government subsidies⁸. This is forecast to increase to \$30 billion by 2025. The average annual healthcare cost per person with diabetes is \$4025 if there are no associated complications. However this rises to as much as \$9645 in people with complications.

Diabetes is associated with a number of serious and expensive co-morbidities including obstructive sleep apnoea, fatty liver leading to cirrhosis, and erectile dysfunction. Australian surveys show that 22-35% of adults with diabetes experience moderate to severe depressive symptoms, while 14-19% experience moderate to severe anxiety symptoms⁹. These all add to the socio-economic cost of diabetes.

Diabetes adds financial costs to the household budgets of individuals with diabetes and their families. There are many aspects to diabetes that add to the financial burden. Self-monitoring of blood glucose, insulin needles, syringes and pump consumables are supported by the National Diabetes Services Scheme (NDSS) which is a significant financial help to almost 1.1 million Australians registered with the NDSS.

The indirect, social and personal costs of diabetes are incalculable. Unless effective prevention strategies are put into place, the incidence of diabetes will continue to rise. The growing national social and economic burden of diabetes underscores the importance of interventions to prevent diabetes and to delay or prevent its complications. This needs to be a vital and essential component of future public health strategies for Australia.

Issues

Type 2 Diabetes and Chronic Disease

The trend towards “chronic disease” programs rather than diabetes prevention and management programs reflects the common risk factors and co-existence of a number of chronic diseases in individuals. However, there is a risk that this leads to underestimating the seriousness, complexity and challenge of type 2 diabetes and its impact, and reduces the focus on diabetes which, arguably, is the most preventable chronic disease.

Type 2 Diabetes and Obesity

The close association of the obesity and type 2 diabetes epidemics has meant that, to many, these are seen as the same. There are serious flaws in this view:

- People with type 2 diabetes are often stigmatized and blamed for not looking after their diet and weight and the link is seen as direct and causal by many
- Simplistic solutions are often put forward which focus on short term weight loss which is not sustained and has no lasting benefit
- Many thousands of people at a healthy weight and who eat a healthy diet and maintain physical activity will still develop type 2 diabetes and are often forgotten
- The possible link between the development of diabetes, the maternal environment and in-utero factors is at risk of being neglected. The risk of diabetes can be “intergenerational”¹⁰.

High Risk Populations

Australia has significant high risk populations. Aboriginal and Torres Strait Islander (ATSI) people are at a much higher risk of diabetes than the general population¹. Other high risk populations which must be continuously considered in planning and implementing a new national diabetes strategy include:

- People from a culturally and linguistically diverse (CALD) background
- Those living in rural and remote areas
- Older Australians
- People with acute psychiatric illnesses

Australia's response to the diabetes epidemic

1996

Australian Health Ministers agreed to include diabetes as a National Health Priority Area in recognition of its impact on the individual with diabetes and their family and the impact on the wider Australian community.

1998

National Diabetes Strategy and Implementation Plan¹¹ developed to guide the allocation of funds and suggest structural and functional reorganisation.

2000

National Diabetes Strategy covering 2000–2004¹² signed by all Commonwealth, State and Territory Health Ministers in order to continue the momentum. There was little measurement or reporting of achievements against this strategy.

2005

National Service Improvement Framework for Diabetes¹³ released by the Australian Health Ministers' Advisory Council, with no clear outcome measures or reporting outcomes.

Since 2005

Australia has not had an official overarching national diabetes strategy and in 2007 the Commonwealth Department of Health and Ageing's National Diabetes Strategies Group was disbanded. Ad hoc expert groups have advised on specific projects.

2006

Victorian government led a COAG process as part of the National Reform Agenda and specifically looked at "human capital" and the social, economic and productivity impact of type 2 diabetes.

2007

Australian Government announced a \$103 million investment over 4 years for prevention of type 2 diabetes for the 40-49 age group, however, this program was poorly designed and **defunded in 2011**. (Victoria has a \$5 million per year, statewide diabetes prevention program operating successfully and supported by successive governments).

2009

Hospital and Health Services Commission Report pointed to the urgent need to address coordinated care for diabetes to prevent complications and hospital costs.

2010

Australian Government announced a \$449 million investment over 4 years in coordinated, multidisciplinary care for diabetes. **Both the funding and program were dropped** in the same year and replaced with a small scale pilot project.

Australia has not seen coordinated action on the diabetes epidemic which continues to rise in terms of impact on the nation. The graph in Figure 1 from AIHW shows this powerfully.

Over the past decade, while Australia has not had a National Diabetes Strategy and Action Plan, the following has happened:

- Over **543,000** people newly diagnosed with diabetes registered with the NDSS (see Figure 3)
- More than **20,000** people with diabetes have had lower limb amputations
- More than **10,000** people with diabetes have gone blind
- More than **25,000** have developed kidney failure from diabetes, requiring dialysis or transplantation
- More than **80,000** people with diabetes have had heart attacks
- More than **40,000** people with diabetes have had strokes.

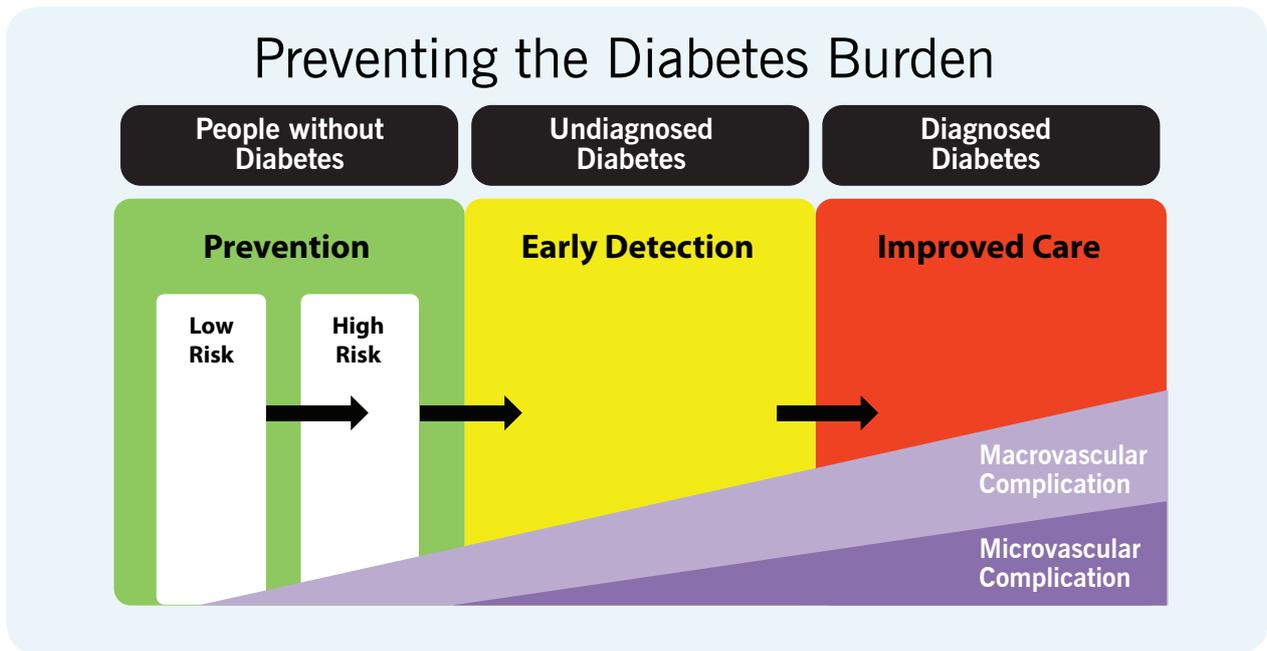


Figure 2: Preventing the diabetes burden

Figure 2 shows that macrovascular complications of diabetes (heart disease, stroke, peripheral vascular disease) may begin even before people develop diabetes. The microvascular complications (eye, kidney and nerve damage) begin when diabetes develops but many people will have complications when they are diagnosed because of a delay in diagnosis. In order to reduce the diabetes burden, a comprehensive National Diabetes Strategy must prevent the development of diabetes (in high risk individuals and the whole population), detect those with undiagnosed diabetes earlier, and improve the care for those with diabetes to prevent complications. Solid evidence exists for the effectiveness and benefits of diabetes prevention, earlier diagnosis and better care.

Goal 1 Prevent complications - optimal management and earlier diagnosis

Over 30% of all hospital admissions in Australia are diabetes related

Action 1

Develop and implement national programs with national targets and goals for primary care, hospitals and diabetes centres to focus on prevention of complications by creating integrated, coordinated, multidisciplinary care and measuring and reporting prevention of:

- Eye complications – retinopathy and vision impairment
- Kidney complications – damage and dialysis
- Cardiovascular complications – heart attacks and strokes
- Foot and limb complications – lower limb amputations
- Mental health complications – anxiety, depression, distress.

Serious but less common complications including hypoglycaemia, dead in bed syndrome and diabetic ketoacidosis (DKA).

Action 2

Ensure early detection of silent, undiagnosed type 2 diabetes through:

- Promotion of systematic risk assessment/screening across the community using the Australian Type 2 Diabetes Risk Test (AUSDRISK)
- Referral of people with a high risk score for clinical assessment with integrated assessment of diabetes, absolute cardiovascular risk, and kidney health risk
- Targets, plans, resources and reporting of early detection for all primary care services.

Action 3

Develop and implement national structured self-management education and support programs for type 1 and type 2 diabetes with particular focus on:

- The newly diagnosed
- Insulin commencement and ongoing therapy support
- Youth and transition from children to adult services
- Older people and their carers.

Discussion

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 mortality¹.

The complications of diabetes can be delayed or progress slowed. This requires access to information and services that are person-centred, integrated and coordinated, in addition to access to quality medicines. Access to support services is also required to ensure quality of life and general wellbeing are maximised. The basis of national programs to address the specific complications of diabetes is documented in nationally endorsed evidence-based guidelines.

Action 4

Take all types of diabetes seriously and enhance the quality of care through:

- Optimised management of newly diagnosed diabetes
- Targeting world leading care for type 1 diabetes, type 2 diabetes and gestational diabetes
- National social marketing campaigns for all types of diabetes and focusing on the seriousness, challenge and burden
- Resourcing and utilising the National Association of Diabetes Centres (NADC) for clinical and academic leadership, national benchmarking, and quality initiatives.

Action 5

Ensure access to treatments and technologies to support prevention of complications and burden:

- Regulatory and approval processes must ensure that all Australians with all types of diabetes have affordable access to a range of medicines to enable clinicians to tailor management to best prevent complications and burden
- Regulatory and approval processes should take account of measures and benefits beyond HbA1c and include wellbeing measures
- Diabetes management guidelines should reflect best clinical practice
- People with diabetes in certain high risk groups should have government supported access to Continuous Glucose Monitoring technology (for example hypoglycaemia unawareness)
- Expanded and targeted government supported national insulin pump program across all ages and including education/support services for pump commencement and periodic review
- Targeted use of the National Broadband Network and other technologies, such as telehealth and the PcEHR, to provide support to people with diabetes.

Action 6

Stop discrimination against people with diabetes and put an end to the social stigma surrounding diabetes:

- Ensure that all people with all types of diabetes have access to appropriate, affordable healthcare, as well as equitable access to information and education about living with diabetes. This is the right of all people with diabetes, not a privilege. A necessity not a luxury
- Ensure that no-one is discriminated against - at school or work, in insurance or social protection, or in the wider community - because they have diabetes
- Put an end to the social stigma surrounding diabetes, which promotes a culture of secrecy about diabetes and creates a barrier to appropriate self-care in public and accessing services, restricts employment and work-related opportunities, and may prevent people with diabetes from playing an active role in society
- Promote and protect the rights of all people with all types of diabetes by adopting the principles within the IDF International Charter of Rights and Responsibilities of People with Diabetes
- Engage and empower all people with all types of diabetes to be at the centre of the diabetes response and play a central role in developing diabetes and related policies and strategies and determining ways in which services are delivered
- Ensure that people with diabetes in rural and remote areas have equal access to specialist care teams when required.

Earlier detection of undiagnosed diabetes is an important strategy for reducing the burden of diabetes. A validated Australian screening tool (AUSDRISK) and simple testing protocols are available to identify and diagnose people at high risk of undiagnosed diabetes.

Goal 2 Prevent more people from developing type 2 diabetes

More than 2 million Australians are at high risk

High risk population strategies

Action 1

Develop and implement a National Diabetes Prevention Program to prevent type 2 diabetes in the more than 2 million Australians at high risk:

- Train and maintain a national prevention workforce of health professionals and others to be certified as diabetes prevention workers
- Create a national network of private and public providers of prevention services including community health centres, general practices, medical centres, workplace based services and others
- Establish a National Telephone Riskline service similar to the Quitline to support people who may think they are at risk to access prevention services
- Implement an integrated social marketing program which provides strong messages about the risks, seriousness and impact of type 2 diabetes to individuals and the community and the health system
- Include in high risk populations those with pre-diabetes, ATSI and certain CALD communities and some pre-existing conditions.

Action 2

Promote systematic risk assessment/screening across the community for type 2 diabetes using the Australian type 2 diabetes risk test (AUSDRISK):

- Identify people at high risk using non clinical risk assessment
- Utilise accessible, existing community settings such as pharmacy, credentialed diabetes educators, other allied health practitioners, community nurses
- All people with a high risk score should be referred to evidence based lifestyle behaviour change prevention services
- All people with a high risk score should be referred for clinical assessment with integrated assessment of diabetes, absolute cardiovascular risk, and kidney health risk.

Action 3

Ensure that workplaces are a primary setting for health risk assessment and prevention:

- Employment and workplace schemes should be integrated in the National Diabetes Prevention Program
- Workplace health checks should always include AUSDRISK and workers identified with a high risk score should be systematically referred to prevention services and for clinical assessment (integrated diabetes, absolute cardiovascular risk and kidney health).

Discussion

At least two million Australians have pre-diabetes and are at high risk of developing type 2 diabetes. Approximately one in three of these people will go on to develop type 2 diabetes within 10 years². There is strong evidence that type 2 diabetes in high risk individuals can be prevented by intensive lifestyle behaviour change to achieve sustained change to diet, physical activity levels, and weight reduction¹⁴. Importantly, the lifestyle behaviour changes produced through a National Diabetes Prevention Program are exactly the same changes needed for cardiovascular disease and other chronic disease prevention so the benefits are not one dimensional.

Action 4

Examine innovative ways of funding the National Diabetes Prevention Program including:

- Government should mandate that private health insurers provide coverage for evidence-based prevention services under the National Diabetes Prevention Program
- Workers compensation insurance schemes and self insurance schemes should be considered as co-funding sources.

Whole of population strategies

Action 5

Ensure healthy food environments to support primary prevention:

- Improved food labelling to enable Australians to make healthier choices
- Community wide interventions to reduce availability and consumption of unhealthy foods and increase availability and consumption of healthy foods
- Reduce the marketing and promotion of unhealthy foods to Australian children
- Ensure children have easy access to water and healthy food options
- Monitor children's health indicators through regular benchmarking.

Action 6

Ensure healthy physical activity environments to support the national primary prevention agenda:

- Increase physical activity through incentives to promote active transport including more walking and more cycling; and expand school based approaches including physical education in schools and after school activity programs
- Reduce sedentary behaviours in the home environment through reduced screen time for children and families
- Reduce sedentary behaviours in the workplace through effective workplace design and health promotion programs.

Prevention is Proven, Possible and Powerful

Internationally

- Structured lifestyle intervention programs, specifically designed to prevent type 2 diabetes developing from pre-diabetes, have been found to reduce diabetes risk by between 43–58% across several international trials (USA, China, Finland and India)^{5,6,7}.
- Success factors include: community-based, small-group (less than 15 participants), structured around lifestyle modification goals (weight loss, improved diet, increased physical activity), and sustained (for several sessions).

In Australia

- In Victoria, the Life! Program – helping you prevent diabetes, heart attacks and stroke – has received over 30,000 referrals and delivered intervention courses in groups and by telephone with an estimated 30% reduction in risk¹⁵.
- A National Diabetes Prevention Program can achieve the same success with large scale impact and benefits.

A national (high risk) diabetes prevention program needs to be implemented at the same time as a whole of community overweight/obesity prevention approach.

The “whole of community” obesity prevention approach should include public policy aimed at ensuring healthy food and healthy physical activity environments, and a reduction in sedentary behaviour, for all. This should include incentives for use of public transport, development of cycling and walking, and improved urban planning and design. Population wide prevention must go further than media campaigns and brands.

The epidemic continues to grow

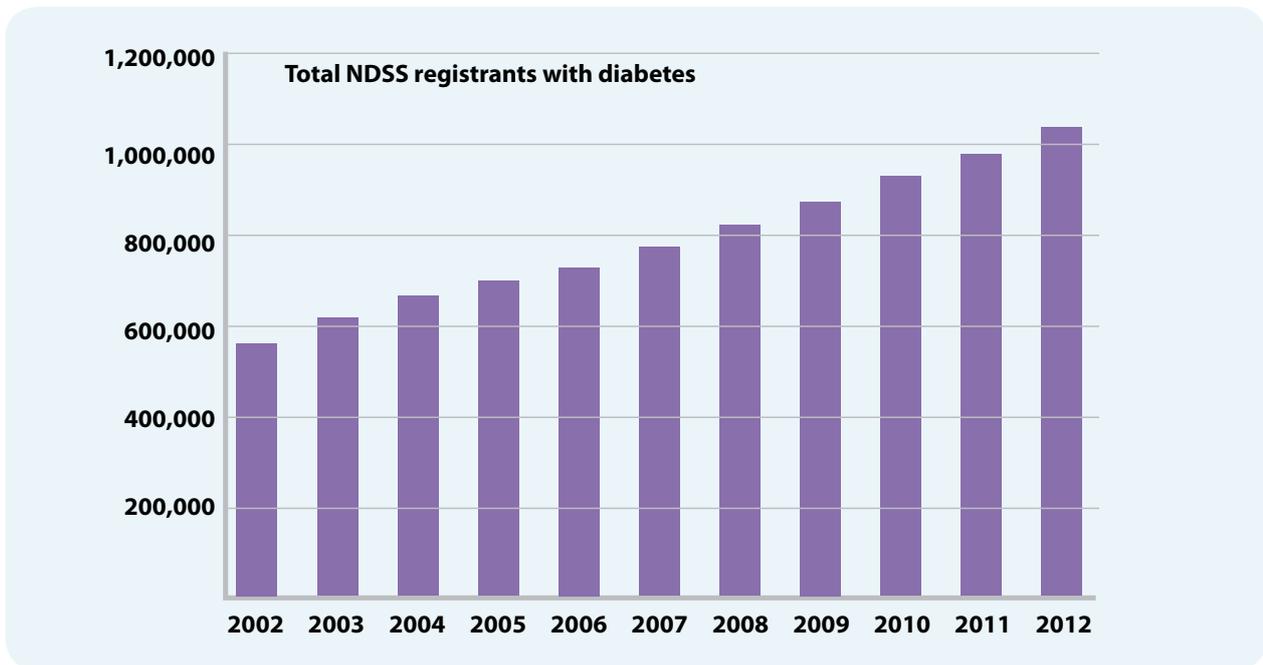


Figure 3: Total NDSS registrants with diabetes from 2002–2012.

Discussion

In women with pre-existing diabetes the occurrence of maternal and foetal complications is 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. For this reason, it is imperative that women with pre-existing diabetes receive pre-pregnancy counselling to ensure that diabetes control is optimised. It is also essential that women with both pre-existing diabetes and gestational diabetes receive care by an interdisciplinary team, to ensure the best outcomes for the mother and child.

Goal 3 Reduce the impact of diabetes in pregnancy for mothers and children

Every year over 20,000 Australian women develop gestational diabetes

Action 1

Develop national pre-pregnancy education programs to ensure women who do not have diabetes are aware of risk factors, including healthy weight for and during pregnancy.

Action 2

Ensure optimal management (pre-conception to post-pregnancy) of pre-existing diabetes in pregnancy and integrating:

- Previous gestational diabetes
- Pre-existing type 1 diabetes
- Pre-existing type 2 diabetes.

Action 3

Systematic identification and optimal management for all Australian women who develop gestational diabetes.

Action 4

Implement programs to monitor and support women who have had gestational diabetes, and their children:

- Enhance the newly-established National Gestational Diabetes Register (a sub register of the National Diabetes Services Scheme) to enable systematic follow-up of women after gestational diabetes and provision of evidence based education and prevention programs
- Implement a program to monitor and support the early years needs of children born to women after diabetes in pregnancy.

Gestational diabetes occurs in about 5-10% of pregnancies in Australia, and in addition to significantly increasing the risk of perinatal morbidity and mortality it also significantly increases the lifetime risk for developing type 2 diabetes in the mother. It is essential that women who develop gestational diabetes during pregnancy are offered postnatal programs to assist with the prevention of type 2 diabetes.

Goal 4 Reduce the impact of diabetes in Aboriginal and Torres Strait Islander (ATSI) Australians

ATSI Australians are three times more likely to have type 2 diabetes

Action 1

Ensure access to culturally appropriate diabetes and related health care through:

- Availability and access to comprehensive multi-disciplinary health care teams, and with affordable and timely access to tertiary specialist services to treat and manage complications
- Access to credentialled diabetes educators as essential members of primary health care teams
- Supply of Pharmaceutical Benefits Scheme (PBS) prescriptions through hospitals and remote health services
- Funding of a national diabetes self-management program for all ATSI people with diabetes that focuses on empowering ATSI people to work in partnership with health professionals to self-manage their diabetes.

Action 2

Develop, fund and implement a national diabetes prevention program designed for ATSI people, which is culturally relevant.

Action 3

Implement long-term programs aimed at increasing community awareness and early detection of type 2 diabetes, combining the following:

- Community-wide, culturally relevant social marketing and awareness programs about the seriousness of diabetes and its complications
- Systematic risk assessment programs designed for community-based, early identification of risk factors
- Broader access to clinical screening for diabetes and diabetes complications.

Discussion

In order to address the burden of existing diabetes in ATSI people, there must be access to a range of different models of culturally appropriate health care and medicines that focus on growing self-management capacity. An effective approach requires urgent action to empower people with diabetes through self-management education, provision of good quality coordinated primary health care, and ensuring access to tertiary specialist treatment when complications develop.

A national diabetes prevention program for those at high risk, structured specifically for ATSI adults and their families, should be implemented. Systematic risk assessment and earlier detection of undiagnosed diabetes in the context of primary health care must also be improved so prevention and management can begin earlier.

Action 4

Development of pregnancy and early years programs to:

- Enhance pre-conception health in ATSI women
- Optimise early detection and management of diabetes in pregnancy (both gestational diabetes and pre-existing type 1 and type 2 diabetes)
- Provide stimulating early years education and intervention programs which help address developmental vulnerabilities and address the social and environmental determinants of ATSI health.

Action 5

Ensure a health promoting environment for all ATSI people through:

- Community wide interventions to increase the availability, affordability and consumption of fresh foods and clean water as well as reducing availability and consumption of sugar sweetened beverages, high fat, high sugar, high salt and highly processed foods
- Programs to assist people to make informed and healthy choices through clearer food labelling and better pricing mechanisms.

Action 6

Enhance diabetes and related health workforce development for ATSI people, including funding that will improve access to training, mentoring and the identification and promotion of structured, qualified career pathways specific to diabetes and broader chronic disease prevention and management.

- Development of a national ATSI diabetes educator workforce
- Development of general workforce training and support for managing and preventing diabetes.

Diabetes and ATSI Australians

- ATSI Australians are 3 times more likely to have type 2 diabetes compared to non-ATSI Australians, and are more likely to develop diabetes complications¹
- ATSI Australians have the highest rate of kidney failure in Australia
- Alice Springs has the largest renal dialysis service in the Southern Hemisphere per capita.

Compared to other Australian women, ATSI women are more than 10 times as likely to have type 2 diabetes in pregnancy, and 1.5 times as likely to have gestational diabetes¹⁶. We must invest in early detection and management of the condition, knowing that management of diabetes during pregnancy is important to reduce pregnancy-related complications in both mother and baby.

It is critical that we recognise and respond to the fact that diabetes exists alongside a range of social determinants including education, employment, income, housing, environment and community functioning. All are crucial factors that influence the health of ATSI people.

Goal 5 Strengthen prevention, care and cure through knowledge and evidence

Research – the essential case for strengthening knowledge and evidence

Action 1

The national research agenda must have world leading diabetes research including diabetes prevention and diabetes management as a cornerstone focus:

- The NHMRC and ARC should prioritise and have stand-alone diabetes research programs, which are not a sub-set of endocrinology research
- National and global networks of diabetes research should be supported with active interactions with the Juvenile Diabetes Research Foundation (JDRF), the Diabetes Australia Research Trust (DART) and other relevant international diabetes oriented research programs.

Action 2

A world-leading national research agenda must be comprehensive and include:

- Basic science
- Clinical
- Complications
- Prevention
- Implementation and translation
- Health service delivery
- Behavioural
- Social, economic, demographic and environmental.

Action 3

Implementation and translational research should be a specific focus for all research funders and national programs.

Action 4

Research into the economic and social burden of diabetes should be a national focus.

Discussion

At this time there is no known cure for diabetes. However, research into the cause of diabetes and its complications, best practice and predisposing factors have enhanced our capacity to prevent or delay diabetes and care for people with diabetes.

Given the enormity of the diabetes epidemic, funding of diabetes research must be proportional to the problem. For both type 1 and type 2 diabetes there are still big questions about their aetiology, and this will provide a credible basis for research activities.

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. In addition, with no imminent cure for type 1 or type 2 diabetes, there must be increased research into specific complications and the often neglected co-morbidities including depression, dementia and sleep apnoea.

Partnerships for Implementation

The successful implementation of a new National Diabetes Strategy and Action Plan will require some new structures and processes. The following is proposed:

1 National Diabetes Commission

Diabetes Australia recommends the establishment of a new National Diabetes Commission modelled on the National Mental Health Commission (Australia) and US National Commission on Diabetes. This Commission should oversee reporting and facilitate integration and leadership.

2 National Diabetes Prevention Program Leadership

Leadership, management and delivery of the National Diabetes Prevention Program for the high risk population should be provided by a consortium led by Diabetes Australia (which has the leading expertise and experience in Australia gained through its large scale implementation work in the Life! Program in Victoria).

3 National Diabetes Strategy – Implementation Group

Coordination of leadership and implementation should be facilitated by a new National Implementation Group comprised of nominees of the Department of Health and Ageing and Diabetes Australia.

A National Diabetes Commission could work across all sectors and all levels of government. Not just the health sector.

The Commission would be required to report, advise and collaborate. This would help transform systems and promote change, so that all Australians achieve the best possible diabetes management and prevention.

A) Reporting

Produce an annual Report Card on the National Diabetes Strategy which would:

- Inform Australians of where we are doing well and where we need to do better in diabetes management and prevention
- Look at the facts and figures but also the real and everyday experiences of Australians
- Report on the diabetes related targets and indicators in the recently adopted World Health Organisation (WHO) global monitoring framework for Non-Communicable Diseases.

B) Advising

Use reports, relationships and influence to give honest and independent advice on where and how Australia can better support people living with diabetes, their families and support people, and those at risk of developing diabetes.

C) Collaborating

Work with others across all sectors, particularly outside the health sector, to influence positive change.

Encourage more collaborative ways of working, by helping to bring people together who have the same goals and the same vision.

A National Diabetes Commission would not:

- Get involved in individual cases or advocate for individual people or groups. (Instead, it will be an advocate for system improvement and better accountability.)
- Be a fund holding body.
- Directly provide services.

Types of Diabetes

There are three kinds of diabetes:

1 Type 1 diabetes

2 Type 2 diabetes

3 Gestational diabetes (GDM)

Type 1 diabetes

- Is an auto-immune condition in which the immune system destroys the cells in the pancreas which produce insulin. We do not know what causes this auto-immune reaction
- Is one of the commonest chronic diseases amongst children
- Australia has one of the highest rates of type 1 diabetes in the world
- Requires treatment of daily multiple insulin injections or a continuous delivery of insulin with a pump, for survival
- Accounts for approximately 10% of all persons with diabetes in Australia
- Can occur at any age, although most cases develop amongst children, teenagers and young adults. Children with type 1 diabetes grow into adults with type 1 diabetes, and 80% of Australians living with type 1 diabetes are aged over 18 years
- Cannot be prevented or cured at the present time.

Type 2 diabetes

- Is characterised by progressive failure of insulin production as well as resistance of body tissues to insulin action. In the first 2 years after diagnosis, insulin production can decrease by 40–70% of that of a healthy individual
- Is the main form of diabetes contributing more than 85% of people with diabetes in Australia
- Is typically diagnosed after the age of 40 years, but is now increasingly diagnosed in even younger adults, and in adolescents and even children
- Has a strong genetic (familial) predisposition, which combined with lifestyle factors including weight gain, unhealthy diets and physical inactivity drives the present diabetes epidemic
- Is preventable or can be delayed in a substantial proportion of people

- Is a progressive disorder which may initially be managed through a healthy diet, weight loss and physical activity. Most people, however, will eventually require medication, often multiple medications, and a significant proportion will require insulin therapy as their pancreatic function progressively fails
- There are now more Australians with type 2 diabetes on insulin therapy than for type 1 diabetes (200,000 compared with 118,000)
- Epidemiological studies suggest that the onset of type 2 diabetes often occurs 5–10 years before clinical diagnosis so is often silent and undiagnosed. Early detection is of paramount importance as up to 50% of cases in Australia may remain undiagnosed and may already have complications.

Gestational Diabetes Mellitus (GDM)

- Occurs during pregnancy
- Resolves after the birth of the baby but associated with a higher risk of diabetes subsequently
- Has a higher prevalence in high risk groups such as ATSI peoples, and people from South Asia, the Middle East and Pacific islands
- Every year, over 20,000 women in Australia develop gestational diabetes during pregnancy (5–10% of all pregnancies)
- Requires careful control of blood glucose levels during pregnancy to avoid adverse outcomes in mother and baby
- Can lead to a higher risk of the later development of type 2 diabetes and other health risks in mothers and their offspring.

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Diabetes Australia acknowledges there are other key diabetes organisations and partners who will need to be included in future discussions and action in relation to this proposed National Diabetes Strategy and Action Plan.

1 in 4 Australians are at high risk of developing type 2 diabetes¹.

Diabetes prevention is a smart investment².

Acknowledgements

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