Submission into the Standing Committee on Health's inquiry into Chronic Disease Prevention and Management in Primary Health Care

Thank you for the opportunity to provide a submission into the Standing Committee on Health's inquiry into Chronic Disease Prevention and Management in Primary Health Care.

Background – The size of the problem

Diabetes is the leading global threat to human health and productivity in the 21st century. It is forecast to become the leading burden of disease in Australia by 2017.[1] An estimated 1.7 million Australians currently are affected by diabetes (this includes all types of diabetes) and an additional 280 Australians develop the condition every day.

There are three main types of diabetes and all are increasing. Last year around 3,000 Australians developed type 1 diabetes; over 65,000 people developed type 2 diabetes; and around 30,000 women developed gestational diabetes during pregnancy.

Type 2 diabetes accounts for the largest part of the epidemic with more than 1 million Australians currently diagnosed and living with this condition. And if we don't act strongly, it will continue to grow. It is estimated that over two million Australians may have pre-diabetes and are at high risk of developing type 2 diabetes in the next 5-10 years.

Diabetes accounts for around one-third of all preventable hospital admissions with longer than average bed stays. A study of patients in 11 Melbourne hospitals found that, regardless of the reason for their hospitalisation, 24.7 per cent of inpatients had diabetes.[2] Evidence also shows that patients with diabetes spend longer in hospital with estimated ranging from one to 2.8 additional days in hospital.[3][4] The ripple effect from diabetes is large. It is often the underlying cause of serious complications such as heart attacks, stroke, eye damage leading to blindness, vascular damage leading to limb amputation, and kidney damage leading to dialysis. A staggering 65 per cent

[1] AIHW *Australia's health 2010.* Canberra, Australian Institute of Health and Welfare.
[2] Bach, L.A., et al. "The high burden of inpatient diabetes mellitus: the Melbourne Public Hospitals Diabetes Inpatient Audit." *Medical Journal of Australia* 2014; 201 (6): 334-338.
[3] Baker, S.T., et al. "Outcomes for general medical inpatients with diabetes mellitus and new hyperglycaemia. *Medical Journal of Australia* 2008; 188: 340-343.
[4] Whitson M, et al. "What can be learned from the impact of diabetes on hospital admissions from routinely recorded data?" *Diabetes Medicine* 2012; 29: 1199-1205.

of all cardiovascular-related deaths in Australia are people with diabetes.[5] These complications and comorbidities mean many people with diabetes become frequent users of the health system.

More than 15 per cent of frequent users of GPs were recently found to be diagnosed with diabetes[6]. This same review found people who frequently attended a GP were much more likely to see different doctors, with the highest users averaging 4.8 different GPs in a year. This has implications for continuity of care, and effective diabetes management.

The proportion of Australians aged over 65 years continues to increase and is projected to increase more rapidly over the next three decades. This presents unique challenges related to the cost and complexity of delivering healthcare to older Australians.

Worryingly, increasing numbers of younger people are developing type 2 diabetes. Nearly 1,000 people under the age of 20 have now been diagnosed with type 2 diabetes, and over 34,000 people with type 2 diabetes aged less than 40 are registered with the NDSS.[7] The prevalence of diabetes is forecast to grow by 207 per cent between the years 2003 and 2033[8]. Over the same period the cost to the health system will increase by 436 per cent.[9]

In the coming decades, Australia's health system will be defined by its capacity to manage and respond to the challenge of diabetes. Without a comprehensive response, there is every likelihood diabetes will overwhelm our health system and damage national productivity. The size of the problem, coupled with the complexities of the condition and the modifiable risk factors contributing to the type 2 diabetes epidemic, mean responsibility for responding to this challenge rests with all levels of government and spans the entire health system.

The role of the Government in dictating the direction of prevention and management of diabetes will be instrumental to our success in dealing with the issue.

Stop more people developing type 2 diabetes

Type 2 diabetes prevention is proven, powerful and possible. International studies show type 2 diabetes can be prevented or delayed in up to 58 per cent of cases making prevention and early intervention the best policy response to reduce the

[5] Barr, E.L. et al 2007. Risk of cardiovascular and all-cause mortality in individuals with diabetes mellitus, impaired fasting glucose, and impaired glucose tolerance: the Australian Diabetes, Obesity and Lifestyle Study (AusDiab). Circulation, 116, 151-7.

[6] National Health Performance Authority 2015, *Healthy Communities: Frequent GP attenders and their use of health services in 2012–13.*

[7] NDSS Statistical Snapshot March 2015.

[8] Goss J 2008. Projection of Australian health care expenditure by disease, 2003 to 2033. Cat. no. HWE 43.Canberra: AIHW.

[9] Goss J 2008. Projection of Australian health care expenditure by disease, 2003 to 2033. Cat. no. HWE 43.Canberra: AIHW.

impact of diabetes on both the health system and the long-term quality of life of the person with diabetes[10] [11].

The strongest evidence for prevention relates to structured, intensive lifestyle interventions producing sustained change to modifiable lifestyle factors including healthier diet, increased physical activity, and weight reduction for people at high risk of type 2 diabetes.

There is a clear evidence base to support the success of these interventions including a number of randomised control trials (RCTs). Three major RCTs (Finnish Diabetes Prevention Study, European Diabetes Prevention Study, and the Newcastle Diabetes Prevention Study) were reported around 2003, yet there is still no clear national response to systematically delivering this evidence-based prevention approach to the two million Australians with prediabetes and at high risk.

Australia needs a coordinated National Diabetes Prevention Program (NDPP) led nationally and delivered locally. Some States have funded the initial development of diabetes prevention programs. Victoria's *Life!- taking action on diabetes, heart disease and stroke* commenced in 2008 and continues to be the only substantive program in Australia. A new $27.2 million diabetes prevention initiative has been announced by the Queensland Government but it is yet to commence. A National Diabetes Prevention Program could leverage these existing investments as well as providing real national leadership and consistency. The NDPP should be based on the recent National Health and Medical Research Council commissioned *Case for Action*. [See Attachment 1: *NHMRC Case for Action*]

It should include:

- mass media campaigns linked to a telephone response line;
- the systematic identification of individuals at high risk of developing type 2 diabetes;
- lifestyle behaviour change interventions based on appropriate individual pathways, and
- a trained prevention workforce certified in diabetes risk assessment and prevention.

Changes in risk factors could be apparent within two years of the program's initiation.

Integrated Health Checks

Diabetes Australia supports the Integrated Health Check approach developed by the National Vascular Disease Prevention Alliance (NVDPA). Diabetes Australia is the current chair of the NVDPA which includes the National Heart Foundation of Australia, Kidney Health Australia and the National Stroke Foundation.

[10] AIHW Preventing *and treating ill-health. Australia's health 2014*. Canberra, Australian Institute of Health and Welfare.
[11] Harris, M and Lloyd, J *The role of Australian primary health care in the prevention of chronic disease.* Australian National Preventative Health Agency.

The Integrated Health Check approach would see systematic processes and payments systems created to shift the primary care system and practitioners towards conducting integrated health checks for a number of interrelated conditions. This would include the:

- Utilisation of AUDRISK tool and blood tests to determine the risk of developing type 2 diabetes or having undiagnosed type 2 diabetes;
- Assessment of chronic kidney disease risk;
- Calculation of an absolute cardiovascular risk score for cardiovascular disease;
- Timely referral to diabetes prevention programs (high risk) or coordinated care service (existing diabetes); and
- Timely referral to cardiovascular disease prevention programs.

This assessment should be supported through incentive payments and primary care based quality improvement initiatives. This structured approach could prevent diabetes-related deaths and complications by ensuring more people are identified for treatment earlier.

Prevention programs for families and diabetes in pregnancy

Women who develop gestational diabetes are at high risk of going on the develop type 2 diabetes, and their babies also have an increased risk.

There should be national leadership for a program to address three key elements:

- a national pre-pregnancy education program to ensure women are aware of the risk factors of gestational diabetes. These include maintaining a healthy weight before and during pregnancy
- Nationally consistent screening and detection of gestational diabetes and optimal management during pregnancy. All women who develop gestational diabetes should be registered to the National Gestational Diabetes Register (NGDR) (maintained by Diabetes Australia as part of the NDSS)
- National consistent follow up with women, families and GP's to ensure ongoing screening for type 2 diabetes and prevention programs. The NGDR should be linked to PHN's to enable systematic follow up, screening, prevention and other services to be accessed.

The role and importance of existing assets and programs

The National Diabetes Services Scheme (NDSS) is a national asset that should be one of the foundations for Australia's response to the diabetes epidemic. The NDSS, delivered by Diabetes Australia and local state/territory diabetes organisations, provides coordination, information, education and support services to people with all types of diabetes.

However, there are opportunities to expand and improve services offered by the NDSS to increase its reach and effectiveness. The NDSS could be better linked with primary health providers to ensure people who need support, receive it through the most appropriate and effective channel.

The NDSS could also be used to support PHNs to implement complications screening programs to ensure the early identification and optimal early treatment of problems like eye damage, kidney damage, vascular problems. Good evidence shows that if we screen and identify the problems early, then treatments are more likely to be effective and good health and productivity retained.

The NDSS could be expanded to provide a stronger focus on a range of areas that might include:

- early intervention for the newly diagnosed;
- for those people entering a new "stage" of their diabetes such as commencing insulin therapy; and
- for high risk/needs groups including young people, Aboriginal and Torres Strait Islander communities, people in remote communities and older people transitioning to aged care.

In all of these areas, enhanced early intervention support for the person with diabetes and families/carers including self care education, linkages to diabetes self management education, and other supports has the potential to provide a huge positive return on investment. In fact a report from Deloitte Access Economics found more than $16 is saved for every dollar spent on diabetes education.[12]

Optimal diabetes management to prevent complications

All types of diabetes can lead to serious complications including blindness, limb amputation, kidney failure, heart attacks and strokes.

More than 30 per cent of all hospital admissions in Australia are diabetes related. Billions of dollars are expended in providing care for complications. This is less effective and more expensive than investing in preventing complications. Effective self-management can defer or prevent complications in many cases[13]. Better diabetes management means a better quality of life and decreases the burden on the health system. However, self-management must be supported and assisted.

The Annual Cycle of Care is an important tool to support good diabetes management. It covers a range of checks and tests designed to alert people to complications and ensure they are managing their diabetes appropriately. PHNs should play a key role in ensuring every person with diabetes in their catchment is supported to fulfil the requirements of their Annual Cycle of Care.

In addition, PHNs could monitor other key indicators and outcomes of care for people with diabetes. This could include:

- Regular checks for 'the 9 care processes' (i.e. HbA1c, blood pressure, body mass index, urine microalbumin, creatinine, cholesterol, eye examination, foot examination and smoking status);

[12] Deloitte Economic Access. (2014). *Benefits of Credentialled Diabetes Educators to people with diabetes and Australia.* Report for the Australian Diabetes Educators Association Limited.
[13] World Health Organization. *Adherence to long-term therapies: evidence for action.* Geneva: WHO, 2003.

- Referrals to a credentialed diabetes educator for structured education for people newly diagnosed with diabetes; and
- Emergency admissions for diabetic ketoacidosis.

Australia should also create national targets and goals for PHNs and hospitals to measure and report on the prevention of diabetes-related complications including:

- Eye complications – retinopathy and vision impairment;
- Kidney complications – nephropathy and requirement for dialysis;
- Cardiovascular complications – heart attacks and strokes;
- Foot and limb complications – lower limb amputations;
- Mental health issues – depression, anxiety and distress; and
- Serious complications including hypoglycaemia.

Diabetes Australia believes Australia should also implement targeted screening and early intervention programs to address priority diabetes complications including a National Diabetes Blindness Prevention program.

There is strong international evidence supporting the success of targeted programs in reducing the impact of diabetes on both the individual and the health system. The United Kingdom, Iceland, Poland and Sweden have all dramatically decreased the incidence of blindness from diabetes, typically to between one third and one fifth of baseline rates. Diabetes Australia strongly believes Australia could and should adopt a systematic approach to early detection and treatment. Further strategies and programs could be developed to address amputation prevention and kidney health. The NDSS could be used as an active register and coordination tool to facilitate this.

People with diabetes should have universal access to Blood Glucose Test Strips (BGTS) for self monitoring blood glucose levels, contrary to recent recommendations from the PBAC.

These recent recommendations are a poorly informed and inappropriate policy response. There is no good evidence of any overuse or misuse of BGTS for people with type 2 diabetes and not insulin treated and the PBAC recommended limitation in this population is likely to harm efforts to encourage self care, self management and self responsibility. If we want people with type 2 diabetes to make healthy choices and take responsibility for their health, we need to continue provided supported access to the key tool they can use to enable this – BGTS.

The need for a multidisciplinary approach

Diabetes is a complex condition effecting every part of a person's health. Because of this treatment needs to focus on a network of care providers rather than individual health providers.

This requires a greater consideration of the role played by credentialed diabetes educators (CDEs), dietitians, practice nurses and other allied health practitioners. Sometimes, these practitioners are more central to the person with diabetes than the GP.

Optimal management of diabetes in Australia is still limited by a fractured health system, funding and professional silos, and great difficulty for consumers to navigate a complex system and find the services and support they need at the right time.

There has been much rhetoric about "patient centred" approaches, but the reality is that much of the primary care system is still provider centred and provider driven.

Nationally, we need a sustainable funding model that ensures everyone who needs access to structured diabetes self-management education can get it. There is strong evidence of the success of these programs internationally and in Australia we have seen positive results from programs like DAFNE (Dose Adjustment For Normal Eating) for people with type 1 diabetes and DESMOND (Diabetes Education and Self-Management for Ongoing and Newly Diagnosed) for people with type 2 diabetes. Both programs are delivered in group settings with a range of accredited health practitioners including credentialled diabetes educators, dietitians and other health professionals.

The role and importance of leadership

There is an urgent need for national oversight of diabetes prevention and management that could be achieved through the creation of a National Diabetes Commission. The Commission could be modelled on the existing National Mental Health Commission and could oversee ongoing national planning, monitoring and reporting and facilitate the integration of national standards and quality assurance and structural improvements. The Commission could work across all levels of government and would facilitate reporting, advice and collaboration across sectors and borders in an effort to transform systems and ensure better outcome for people with diabetes and those at risk

We need national leadership to ensure attention is given to diabetes in Aboriginal and Torres Strait Islander communities. Aboriginal and Torres Strait Islander people are three to four times more likely develop type 2 diabetes. Diabetes is the single biggest contributor to the gap in life expectancy between Indigenous and non-Indigenous Australians[14]. More than 60 per cent of people in some Indigenous communities could be living with type 2 diabetes.

Australia needs a comprehensive strategy devoted to addressing this critical health issues. This should include community-wide culturally relevant awareness campaigns, systematic community risk assessment programs and the investigation of broadening access to clinical screening for diabetes and related complications.

Significant attention should be devoted to addressing life after gestational diabetes within Indigenous communities with strong evidence based programs targeting families in the early years after childbirth. This essential to breaking the inter-generational cycle of diabetes within families. Diabetes Australia encourages greater examination of the barriers discouraging health professionals from working in rural and remote communities. There is a need to consider innovative workforce

[14] Australian Institute of Health and Welfare 2010.*Contribution of chronic disease to the gap in adult mortality between Aboriginal and Torres Strait Islander and other Australians*. Cat. No. IHW 48. Canberra: AIHW.

strategies such as collaborative arrangements, secondment and training or scholarships to encourage health professionals to work in these communities.

We also need culturally specific structured education programs to ensure people from culturally and linguistically diverse backgrounds, some of whom are at a significantly higher risk of developing type 2 diabetes, have the information they need to reduce their risk and to prevent complications.

Harnessing the benefits of improved diabetes technology

Potentially the greatest advancements in diabetes management could come through technology. There are many proven, new technologies that are available now but not being utilised on a larger scale due to cost and affordability issues.

Insulin pump therapy (IPT) is a proven technology that can transform the lives of people with type 1 diabetes and their families. Unfortunately, public policy has not kept pace with the development of this technologies. Australia has considerably lower rates of access to insulin pumps than comparable countries. For instance almost 25 per cent of people with type 1 in the United States are using IPT, compared to only around 14.3 per cent in Australia.

Australia has not provided equity of access. Around 80 per cent of all insulin pump users in Australia have obtained them through private health insurance. This is clearly out of proportion with community rates of private insurance and points to serious disadvantage for the poor and uninsured. The current Type 1 Diabetes Insulin Pump Program introduced a few years ago has not addressed this equity problem and only around 700 pumps have been provided under this program. There are over 17,000 pump users in Australia.

There are considerable problems in Australia with the current system for providing access to insulin pump therapy. The provision, use and support of insulin pumps lack integration, with many people – often those with greatest need – unable to access pump therapy.

In developing a better pathway to increase affordable access to diabetes technology, a number of issues need to be considered including the approval mechanisms (PBAC versus MSAC versus other), cost and level of subsidy, access through private insurance and other programs, and connection with existing programs like the NDSS.

Other technologies are currently not considered in any funding program. Continuous glucose monitoring (CGM) is ‘user pays’, and with costs running at about $5,000 per year (consumables and hardware), this technology is out of reach for most people.

There are no funding programs in place to allow for the funding of emerging technologies such as needle free syringes, ‘flash monitoring’ which is due to enter the Australian market in 2016, closed loop systems and others.

The use of the NDSS, a reliable existing access program, to provide subsidised access to all new diabetes technology and consumables would allow for better

integration of the provision of pumps, CGM (and new technologies) and consumables.

Diabetes Australia proposes that Australia should aim for 25 per cent pump utilisation by people of all ages with type 1 diabetes by 2020. It is proposed that the increase be staged over five years with attention given to those with high clinical need including:

- People with recurrent severe hypoglycaemia;
- Women planning for and during pregnancy;
- People with sub-optimal HbA1c; and
- People with fear of hypoglycaemia, diabetes-related distress or ability for insulin pump therapy to improve their quality of life.

Opportunities to fully subsidise people in disadvantaged areas may also be considered.

Consideration should also be given to expanding the program to include subsidised access for continuous glucose monitoring (CGM) technology. Diabetes Australia recommends a target of 25 per cent of insulin pump users with access to CGM by 2020.

The insulin pump program and CGM program and all future access programs should be integrated within the NDSS to enable better integration with support and education programs and to enable ongoing monitoring and review.

There is a need to increase the accessibility of technology through improved and new schemes. Access to initial and updated technology as well as the relevant education in the use of the technology can help to better manage diabetes, avoid complications and deaths, and ultimately reduce the impact of diabetes on our economy and our health system. [See Attachment 2: *Insulin Pump Therapy in Australia: The Case for Action*]

Conclusion

Diabetes is the major health challenge of the 21st century and the future of our health system depends on how well we meet this challenge. Without an urgent, substantial and systematic effort, diabetes will overwhelm our primary health system and our hospitals.

Fortunately, there is much we can do to reduce the numbers of people developing type 2 diabetes and to reduce the incidence of debilitating diabetes-related complications. In summary, Australia needs to:

- implement a National Diabetes Prevention Program led nationally and delivered locally with clear accountability for Primary Health Networks (PHNs) to ensure risk assessment programs and prevention programs are implemented in their areas;
- support the implementation of Integrated Health Checks through incentive payments and primary care based quality improvement initiatives;

- establish nationally led program addressing gestational diabetes and focussing on a national pre-pregnancy education program, nationally consistent screening and detection of gestational diabetes and consistent follow up with women, families and GPs to ensure ongoing screening for type 2 diabetes;
- to expand the National Diabetes Services Scheme to provide a stronger focus on key groups include early intervention for the new diagnosed, for those entering a new "stage" of their diabetes and for high risk/needs groups including young people, Aboriginal and Torres Strait Islander communities, people in remote communities and older people transitioning to aged care;
- create national targets and goals for measuring and reporting on diabetes-related complications; and ensure PHNs play a key role in ensuring person access an Annual Cycle of Care and are responsible for monitoring key indicators and outcomes of care
- implement targeted screening and early intervention to address diabetes complications including National Diabetes Blindness Prevention program;
- reinstate universal access to blood glucose testing strips to encourage Australians to make healthy choices and take responsibility for their health;
- create a National Diabetes Commission to oversee ongoing national planning, monitoring and reporting and facilitate the integration of national standards and quality assurance and structural improvements;
- develop a comprehensive strategy devoted to addressing diabetes in Aboriginal and Torres Strait Islander people including community-wide culturally relevant awareness campaigns, systematic community risk assessment programs and the investigation of broadening access to clinical screening for diabetes and related complications; and
- harness new technology by increasing accessibility through improved and new schemes.

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