The South Australian Aboriginal Diabetes Strategy 2017 – 2021

Prepared for:
The South Australian Department for Health and Ageing.

Prepared by:
Wardliparingga Aboriginal Research Theme, SAHMRI
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SAHMRI
South Australian Health & Medical Research Institute

WARDLIPARINGGA
Aboriginal Research

The South Australian Aboriginal Diabetes Strategy 2017 -2021

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EXECUTIVE SUMMARY

Diabetes mellitus is serious health condition that affects a growing number of people daily across the world. It is a significant health concern in Australia, where one person every five minutes is diagnosed with diabetes.[1] This long-term condition, disproportionately affects Australia's Indigenous people. In 2012, one in 20 Australian adults had diabetes and for every one, three Aboriginal and Torres Strait Islander adults had diabetes.[2] Gestational diabetes disproportionately affects Aboriginal and Torres Strait Islander women and is increasing within the population. Indigenous children are eight times more likely to develop diabetes than non-Indigenous children, and are also more likely to have type 1 diabetes.[3] It is a leading cause of death and disability in the Australian population and the annual cost impact of diabetes is $14.6 billion.[1] Diabetes not only affects the individual, but their family and the community.

There are three types of diabetes; type 1 diabetes, type 2 diabetes and gestational diabetes. Each is increasing in prevalence. Type 2 diabetes accounts for over 85% of all diabetes. This strategy addresses type 2 diabetes and gestational diabetes.

This Strategy has been designed to specifically meet the needs of Aboriginal people in South Australia. It was developed by Aboriginal people and people in policy and service provision positions. The development was governed by a multi-disciplinary, multi-sector Diabetes Steering Committee that included Aboriginal community representatives. Wardliparingga Aboriginal Research Unit of the South Australian Health and Medical Research Institute coordinated the development and undertook the research that informed the Strategy.

The recommendations in this Strategy prioritise a state-wide response to diabetes and guide potential health care reforms for diabetes and related conditions. South Australia has a world class health system, however, it does need to improve its ability to serve the Aboriginal population. This Strategy recommends enhanced use of existing infrastructure, systems and initiatives, complete implementation of evidence based guidelines, and strengthening the enablers to achieving these. Whilst many of the recommendations are becoming established or are established and need improvement, there are recommendations that will require new investment including the mechanisms to implement this Strategy.

Successful implementation of this Strategy will require a responsible governance structure and people who are committed and demonstrate the will to make a positive difference in the lives of Aboriginal people in South Australia. It will only be achieved through a coordinated approach across the South Australian Department for Health and Aging, the Aboriginal community controlled health sector, the peak body of which is the Aboriginal Health Council of South Australia, Adelaide and Country SA Primary Health Networks, and non-government organisations, particularly Diabetes SA. Success will require building and maintaining relationships with the Aboriginal community in South Australia and partnering with them to implement this Strategy. The implementation will be diverse, reflective of the Aboriginal population.

The SA Aboriginal Diabetes Strategy has six high-level goals, 23 recommendations with suggested pathways to achieve them and nine enablers. The six goals are aligned with the National Diabetes Strategy[4] and the pathways to achieve these goals have been informed by scientific and cultural evidence and knowledge, the SA Aboriginal community and service providers. The six goals are:

- **Goal 1. Reduce the incidence of type 2 diabetes and gestational diabetes.** It is essential that a diabetes strategy for Aboriginal people includes prevention. To achieve this goal, population-based diabetes prevention campaigns specifically developed with and for the Aboriginal population will need to be implemented. Prevention efforts must have a particular focus on reducing early life exposure to diabetes in utero as a major intervention for preventing the 'vicious' intergenerational cycle of this condition. Improving pre-conception health and care during and after pregnancy will contribute to achieving this. Prevention efforts must also focus on all age groups, increase the consumption of fruits and vegetables and water rather than sugary drinks, increase the health knowledge base of the Aboriginal population, and increase the use of primary health care health services for health maintenance. There is strong support for pre-diabetes programs among the Aboriginal community. Tailored initiatives for groups within the Aboriginal population that are at higher risk of developing type 2 diabetes and associated complications must be considered. It is imperative that the incidence of diabetes in pregnancy is reduced within this population group to reduce the pre-disposition to diabetes later in life.
- **Goal 2. Detect type 2 diabetes early.** Earlier detection of type 2 diabetes results in earlier management of the condition which can prevent or slow progress to diabetes-related complications. Increasing the number of Aboriginal people receiving annual health checks with necessary referrals and/or follow-ups will help achieve this goal. Having vailable Point of Care Testing for intermediate health outcomes including HbA1c will allow for immediate diagnosis and referrals for the appropriate management of type 2 diabetes. To successfully achieve this goal, the workforce and the

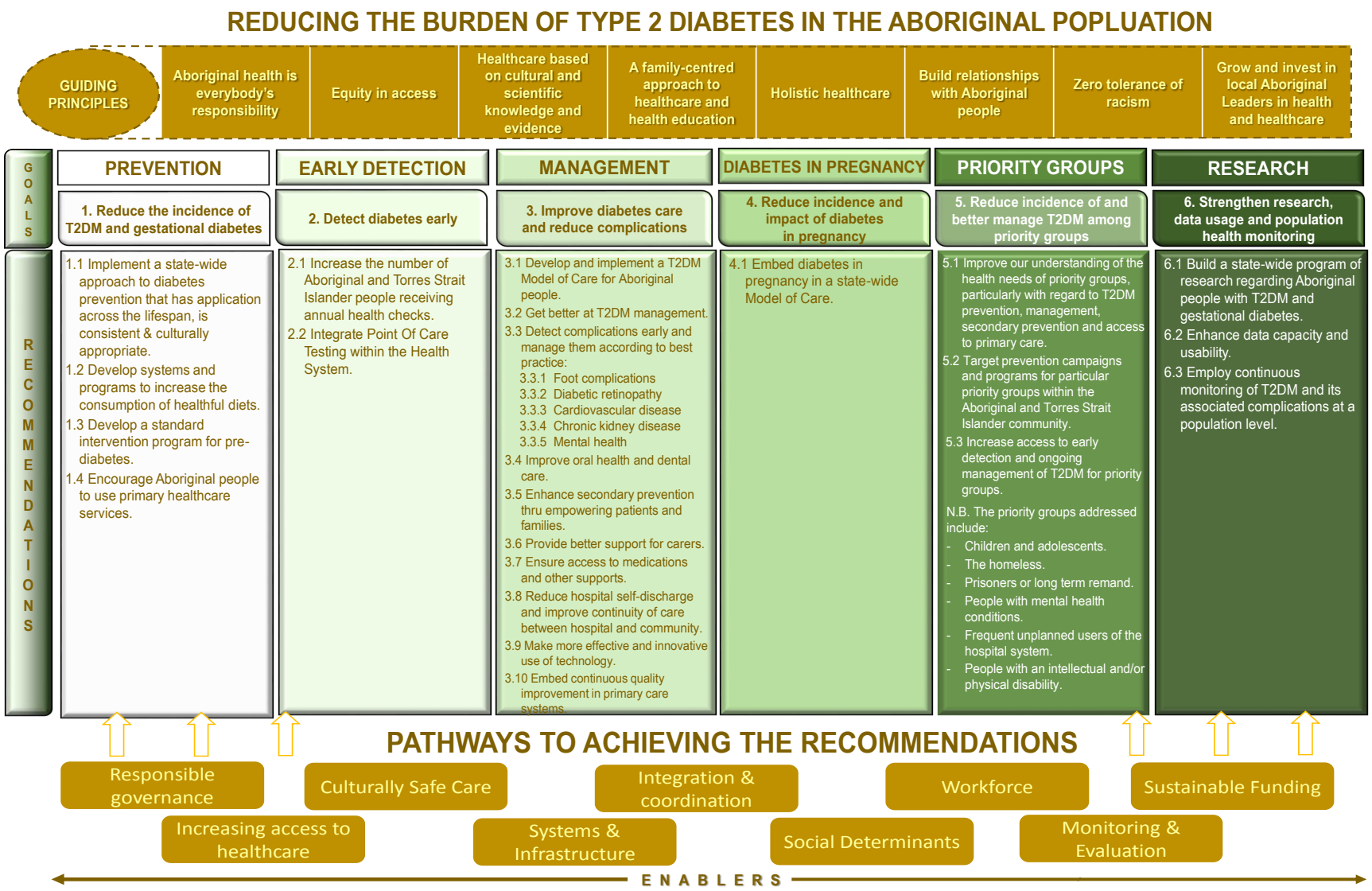
Aboriginal community must have a shared understanding of signs and symptoms of diabetes, the importance of early detection and how it is performed. Innovative approaches to increasing access to primary care services will need to be implemented, there will need to be an increase in the use of, and optimising, existing care arrangements and incentives and services must be equipped to manage the findings.

- **Goal 3. Improve diabetes care and reduce complications.** Correct management of type 2 diabetes can significantly improve quality of life for individuals and their families, and increase life expectancy**.** It requires a multi-disciplinary approach, involving family and well-functioning social and welfare support structures. A state-wide diabetes model of care that is flexible to account for diversity across the population and geographical areas will facilitate the implementation of this goal. There is an urgent need to improve and strengthen the way diabetes and its associated complications is managed. Patients must be invited to become more involved in their care, and including families is key to successful management. The primary care system must continually improve and innovate and technology must support the workforce to achieve evidence-based diabetes care and continuity of care between primary care providers, and hospitals. Increasing access to culturally safe health and social services for Aboriginal people, and a strong multi-disciplinary workforce is a priority.
- **Goal 4. Reduce the incidence and impact of diabetes in pregnancy.** Everyone in SA must have an opportunity for the best start in life. Evidence shows that babies born to mothers with diabetes in pregnancy are at increased risk of developing type 2 diabetes later in life compared to those born to mothers without diabetes in pregnancy. Gestational diabetes also increases the likelihood of mothers developing type 2 diabetes. This goal focuses on both women who have diabetes and become pregnant and those who develop diabetes in pregnancy. A comprehensive, state-wide evidence-based approach to preventing and managing lifestyle risk factors and diabetes in both parents preconception and in pregnancy is necessary and should be a component of the state-wide model of diabetes care. Aboriginal women who are pregnant must be supported to self-monitor their blood glucose at home. Service providers and mothers must together identify and have a clear understanding of the care pathway during pregnancy. Continuing care post pregnancy for both the mother and the baby must be offered and the uptake of this increased. It will be important to build on the success of the Aboriginal Family Birthing Program.
- **Goal 5. Reduce the incidence of and better manage type 2 diabetes among priority groups.** Aboriginal children and adolescents, those with an intellectual and/or physical disability, those who have mental health conditions, prisoners, the homeless and frequent hospital users have been identified as priority groups within the Aboriginal community. To achieve this goal, it will be important to gain a better understanding of the diabetes prevention and management needs of these priority groups. This will help with tailoring programs that reduce incidence, increase early detection and improve on-going management among these groups. It will be necessary to work with multiple organisations, including for example, the education department, disability services, correctional services, and with Aboriginal organisations and Leaders. Different healthcare responses will need to be considered for people living in remote areas and the diversity of the Aboriginal population will require innovative and flexible approaches to reducing diabetes incidence in this population.
- **Goal 6. Strengthen research, data usage and population health monitoring.** South Australia is well positioned to become a world leader in research. In order to implement evidence-based practices and make informed health policy decisions, SA needs to progress diabetes research with the Aboriginal community for a better understanding of the drivers of the diabetes epidemic and why the outcomes of diabetes in the Aboriginal community in terms of premature ill-health and mortality are much worse than those in the non-Aboriginal community. Enhancing data capacity and usability, particularly within the primary health care sector and connectivity between primary care and the hospital will be essential to improving the continuum of care, using existing knowledge to inform practice, and to monitor and evaluate efforts at a state-wide population level.

Figure 1 provides an overview of the Strategy's principles, goals, recommendations and enablers.

South Australia has the opportunity to become a national leader in improving the life expectancy of Aboriginal people by reducing the impact of type 2 diabetes in this population. This Strategy is a useful foundation for an implementation plan and can inform and guide this important work.

Figure 1 Overview: of the SA Aboriginal Diabetes Strategy 2017-2021



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Aboriginal Health Council of South Australia

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Aboriginal Health Branch

Aboriginal Family Birthing Program, Country Health SA Local Health Network (CHSALHN)

Advanced Clinical Lead Dietitian, CHSALHN

Barmera Aboriginal Health Services, CHSALHN

Diabetes Nurse Specialist Network, CHSALHN

Diabetes Service, CHSALHN

Eastern Eyre Health and Aged Care, Cleve, CHSALHN

Gawler Aboriginal Health Service, CHSALHN

Riverland Regional Health Service, CHSALHN

Whyalla Hospital & Health Services, CHSALHN

Aboriginal Health, Women's and Children's Health Network

Queen Elizabeth Hospital - Endocrinology Unit

Lyell McEwin Hospital

Lyell McEwin Hospital - Obstetrics

Muna Paiendi, Northern Adelaide Local Health Network (NALHN)

North Eastern and Northern Mental Health Services, NALHN

Watto Purrunna Aboriginal Health Service, NALHN and SALHN

Workforce Planning, Attraction and Retention, People and Culture, SA Health

Adelaide Primary Health Network

Australian Diabetes Educators Association

Australian Government Department of Health and Ageing

Baker IDI Heart and Diabetes Institute

Central Australian Aboriginal Congress

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Indigenous and Rural Health Division, Australian Government Department of Health
Indigenous Eye Health Unit, Melbourne School of Population and Global Health, The University of Melbourne
Juvenile Diabetes Research Foundation
National Diabetes Services Scheme, Diabetes SA
Nganampa Health Council
Northern Aboriginal Community, Northern Connections
Northern Health Network
Nunkuwarrin Yunti of South Australia Inc.
Nunyara Aboriginal Health Service
Pangula Mannamurna Inc.
Pharmaceutical Society of Australia - SA-NT
Pika Wiya Aboriginal Health Service
Port Lincoln Aboriginal Health Service Inc.
Royal Flying Doctors Service
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ABBREVIATIONS

AATSIHS	Australian Aboriginal & Torres Strait Islander Health Survey
ABCD	Audit and Best Practice for Chronic Disease
ACCHO	Aboriginal Community Controlled Health Organisation
ACR	Albumin:Creatinine Ratio
ACT	Australian Capital Territory
AHCSA	Aboriginal Health Council of South Australia
AHS	Aboriginal Health Service
AMIC	Aboriginal Maternal Infant Care
AMS	Aboriginal Medical Service
ANZDATA	Australia and New Zealand Dialysis and Transplant Registry
APY	Anangu Pitjantjatjara Yankunytjatjara
AUSDRISK	Australian type 2 diabetes risk assessment tool
BSL	Blood sugar levels
CARPA	Central Australian Rural Practitioners Association
CCSS	Care Coordination and Supplementary Service
CDE	Credentialed Diabetes Educator
CHSALHN	Country Health SA Local Health Network
CKD	Chronic kidney disease
COAG	Council of Australian Governments
CQI	Continuous Quality Improvement
CTG	Closing The Gap
CVD	Cardiovascular disease
DACC	Diabetes Annual Cycle of Care
DECD	Department for Education and Child Development
DR	Diabetic retinopathy
EDs	Emergency departments
ESKD	End-stage kidney disease
GDM	Gestational Diabetes Mellitus
GP	General Practitioner
GPMP	GP Management Plans
HbA1c	Haemoglobin A1c
HealthInSA	Health Industries South Australia
ICDP	Indigenous Chronic Disease Package
ICT	Information and communications technology
IGT	Impaired glucose tolerance
ITC	Integrated Team Care
IUIH	Institute for Urban Indigenous Health
LHN	Local Health Network
MBS	Medicare Benefits Scheme

MOICDP	Medical Outreach Indigenous Chronic Disease Program
NACCHO	National Aboriginal Community Controlled Health Organisation
NALHN	Northern Adelaide Local Health Network
NDSS	National Diabetes Services Scheme
NGO	Non-governmental organisation
NHMRC	National Health and Medical Research Council
NHSD	National Health Services Directory
NT	Northern Territory
OPAL	Obesity Prevention and Lifestyle
PBS	Pharmaceutical Benefits Scheme
PGA	Pharmacy Guild of Australia
PHC	Primary Health Care
PIP-IHI	Practice Incentives Program - Indigenous Health Incentive
POCT	Point Of Care Testing
PPA	Potentially preventable hospitalisation
QAAMS	Quality Assurance for Aboriginal and Torres Strait Islander Medical Services
QLD	Queensland
QUM	Quality use of Medicines
RACGP	Royal Australian College of General Practitioners
SA	South Australia
SAAHS	South Australian Aboriginal Health Survey
SAHMRI	South Australian Health and Medical Research Institute
SALHN	Southern Adelaide Local Health Network
T2DM	Type 2 Diabetes Mellitus
TCA	Team Care Arrangements
WA	Western Australia

INTRODUCTION

This South Australian Aboriginal Diabetes Strategy was developed following extensive consultation with Aboriginal Leaders and organisational stakeholders by the Wardliparingga Aboriginal Research Unit, SAHMRI, with funding from the South Australian Department for Health and Ageing. The prevalence of type 2 diabetes is significantly greater in the Aboriginal population compared to the non-Aboriginal population (Figure 2). Type 2 diabetes remains a leading cause of disability and premature death for Aboriginal people in South Australia; reducing the impact of the condition is a joint priority of the Aboriginal community and health organisations.

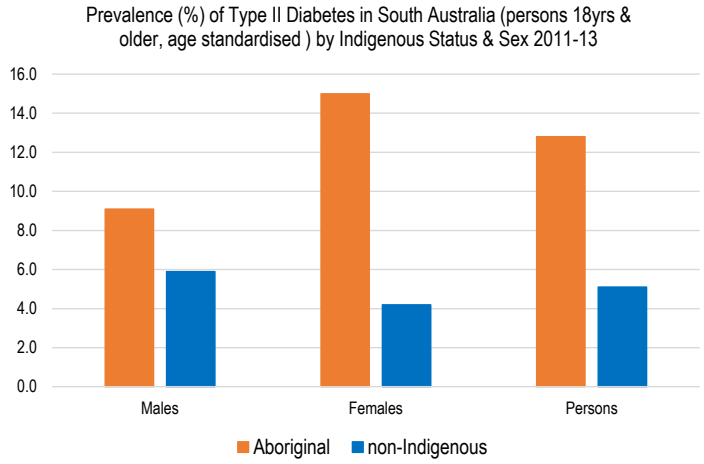


Figure 2 Prevalence of T2DM in South Australia by Indigenous status, 2011-13
Source: Productivity Report into Government Services 2015 Volume E. Attachment Tables: Table EA.41 viewed http://www.pc.gov.au/research/ongoing/report-on-government-services/2015/health

This Strategy aims to outline South Australia's response to diabetes among the Aboriginal population and inform how existing limited health care resources can be better coordinated and targeted across all levels of government. It was developed by Aboriginal people in partnership with all key service providers, policy makers and funding bodies, to ensure these parties had the opportunity to influence the future direction and development of the South Australian health system's response to this epidemic. Therefore this Strategy identifies the most effective and appropriate actions to reduce the impact of diabetes in the South Australian Aboriginal community, a population of 37,500, and lead the way nationally in diabetes prevention, management and research.

Successfully overcoming the many barriers to improving diabetes prevention and care will require a *multi-sectoral response* with *strong leadership and responsible governance* that is *implemented at the community level*.

This Strategy provides the framework for collaborative efforts by governments and the South Australian community, including Aboriginal peoples, health care professionals, non-government organisations, researchers, families, carers, and industry, to reduce the incidence of, and morbidity and mortality from, diabetes and its associated complications.

This newly developed South Australian Strategy is aligned with the Australian National Diabetes Strategy 2016 – 2020[4], which was released part way through this project. Representatives from the national working group were involved in the development of this Strategy.

Further work is required to develop policy options to implement this Strategy, including metrics to evaluate progress towards achieving the goals. This will build on existing work to enhance current investment in diabetes action and care and focus on high-impact achievable actions underpinned by the best available evidence. Implementation will involve all levels of government, in collaboration with the Aboriginal community, the health sector and relevant organisations. We encourage stakeholders to look actively for opportunities to develop new partnerships and strengthen existing ones, to develop and support the achievement of this Strategy's goals.

OVERVIEW

The South Australian Aboriginal Diabetes Strategy (the Strategy) provides a clear vision for a collaborative South Australian health system response to reduce the impact of type 2 diabetes among the Aboriginal population over the next five years. The goals are aligned with the National Diabetes Strategy[4]; the recommendations and pathways to achieve the vision address improvements to the South Australian health system, are inclusive of governments and all key stakeholders and have been informed by these parties and, importantly, by Aboriginal people (Figure 3).

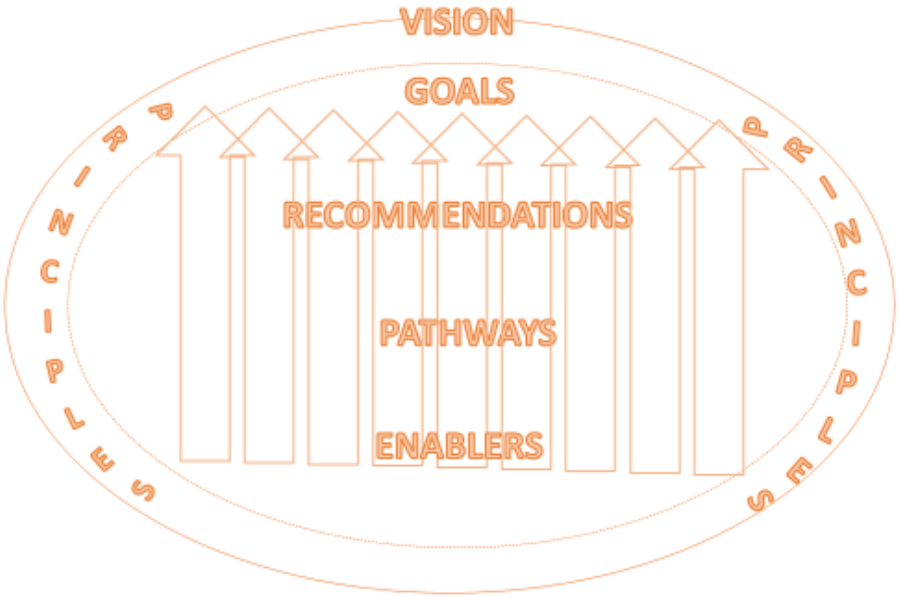


Figure 3 Elements of the South Australia Aboriginal Diabetes Strategy

Vision

This Strategy's vision is to reduce the health, social and economic burden of type 2 diabetes experienced by Aboriginal people, their families and communities by strengthening all sectors in developing, implementing and evaluating an integrated and coordinated approach to diabetes prevention and management.

Purpose

This Strategy aims to prioritise South Australia's response to diabetes and identify approaches to reducing the impact of diabetes in the Aboriginal community.

This Strategy supersedes Living with Diabetes, the South Australian Aboriginal Experience, a State Strategy and Action Plan for Aboriginal Diabetes 2000. However, some of the recommended actions within the previous Strategy can be found in this Strategy because they remain priorities that have not yet been addressed.

It recognises the social and economic burden of the disease and provides action areas that:

- are responsive to Aboriginal people's health and healthcare needs in culturally safe and empowering way
- prevent, detect and manage diabetes and associated complications
- improve diabetes services and care
- recognise the different roles and responsibilities of all levels of government and the non-government sector
- promote coordination of health resources across all levels of government
- facilitate coordinated, integrated and multidisciplinary care
- improve use of primary care services
- increase recognition of patient needs across the continuum of care.

Audience

This Strategy has been developed for policy makers at all levels of government, non-government organisations such as national peak bodies, stakeholder organisations, researchers and health professionals who advocate for and provide education, treatment and management of diabetes.

Time frame

The timeframe for this Strategy is five years, from 2017 to 2021. It is anticipated that implementation of this Strategy will be monitored on an ongoing basis and reviewed in its third year.

Goals

The six Goals are to:

1. Reduce the incidence of type 2 diabetes and gestational diabetes
2. Detect diabetes early
3. Improve diabetes care and reduce complications
4. Reduce the incidence and impact of diabetes in pregnancy
5. Reduce the incidence of and better manage type 2 diabetes among priority groups
6. Strengthen research, data use and population health monitoring.

This Strategy provides an opportunity to better coordinate health resources for diabetes prevention and management across all levels of government and to focus these resources where they are needed most.

Principles

Eight key guiding principles underpin the goals. These principles are expected to guide the policies and programs considered for the implementation of this Strategy.

1. **Aboriginal health is everybody's responsibility:** Create a health system that is responsive to the health needs of the Aboriginal population in a culturally safe way.
2. **Equity in access:** Access to and the provision of care should be on the basis of need.
3. **Healthcare based on cultural and scientific knowledge and evidence:** Health practitioners should seek to learn from and respect Aboriginal and Torres Strait Islander peoples' cultural knowledge and ensure the delivery of population prevention initiatives and care are delivered according to the best available evidence.
4. **A family-centred approach to healthcare and education:** Diabetes prevention and management should acknowledge the importance of Aboriginal peoples' families and carers. Where-ever possible, family members and carers should be involved, and health practitioners should seek to work collaboratively with Aboriginal patients, families, interpreters, cultural mentors, traditional healers and health practitioners.
5. **Holistic healthcare:** Improvement of Aboriginal and Torres Strait Islander peoples' health must include attention to physical, spiritual, cultural, emotional and social wellbeing.
6. **Building relationships with Aboriginal people:** Invest in building relationships with Aboriginal people and include patients and the Aboriginal community in the planning, delivery and evaluation of healthcare.
7. **Zero tolerance of racism:** Individuals and health service staff must actively work to reduce racism within health services. Leaders in healthcare must actively work to reduce institutional racism.
8. **Growing and investing in local Aboriginal leaders in health and healthcare:** Aboriginal people must be given opportunities to lead health care design and delivery with the support of non-Aboriginal colleagues. Aboriginal people should be given opportunities to be viewed by all South Australians as Leaders in healthcare and advocates, role models and champions for living a healthy lifestyle and managing their health and wellbeing.

Enablers

The enablers are factors that influence the ability to achieve success and are embedded throughout the recommendations and those that are relevant to achieving all goals are addressed in detail on pages 46 to 50. They focus on achieving:

- Responsible governance.
- Providing culturally safe care.
- Increasing access to healthcare.
- Integrated and coordinated services.
- Well-designed systems and supportive infrastructure.
- A strong diabetes workforce.
- Sustainable funding.
- Monitoring and evaluation.
- Addressing the social determinants of health.

Potential measures of progress

The information and knowledge collected during this project has not only informed the development of a diabetes prevention and management strategy for Aboriginal people in South Australia; it also provides a baseline from which Aboriginal people themselves can monitor its implementation in collaboration with key health service and community stakeholders into the future. APPENDIX 1 provides a key that identifies the current status of each recommendation pathway. This can be reviewed and updated as implementation progresses.

Ways to measure progress against each goal will be specified through the development of an implementation plan and associated metrics, including units of measurement, lead agencies and reporting responsibilities.

Next steps

Further work is required to operationalise each of the goals through development of an implementation plan that will consider the ways to direct funding and other resources, and further develop measures to evaluate the progress of this Strategy.

This should occur in collaboration with Aboriginal people including community members, stakeholders across all levels of governments, the health sector and relevant organisations.

DIABETES AND THE ABORIGINAL COMMUNITY

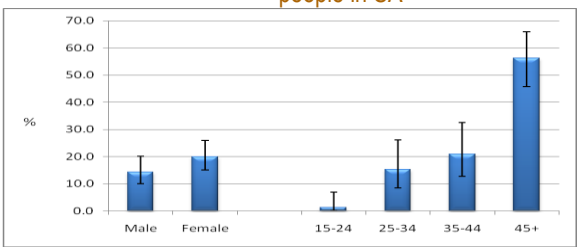
Diabetes prevalence

In 2012-13, the prevalence of Type 2 Diabetes Mellitus (T2DM) among Aboriginal people aged 18 or over in SA was 12.8% (±7.9%), compared with 5.1% (±1.2%) among the non-Aboriginal population.[5] The T2DM rate among Aboriginal females was higher than Aboriginal males (15.0% and 9.1% respectively), but 4.2% and 5.9% respectively among non-Aboriginal people.[6]

The total diabetes rates (types 1, 2 and gestational) for South Australia were 20% among Aboriginal people and 6.2% for non-Aboriginal people.[7,a]

Another, state-wide[b] survey of Aboriginal households, the 2012 South Australian Aboriginal Health Survey (SAAHS)[8], found similar prevalence rates of diabetes (17.4%) among Aboriginal people aged 15+ (including 2.9% not diagnosed but told by their doctor that they had a sugar problem). This rose to 24.4% for country SA and 40.2% in remote areas. SAAHS also showed a strong, statistically significant rise in diabetes prevalence with increasing age, and prevalence was slightly higher among women than men (see Figure 4).

Figure 4 Doctor diagnosed diabetes or "touch of sugar", by sex and age group for Aboriginal people in SA

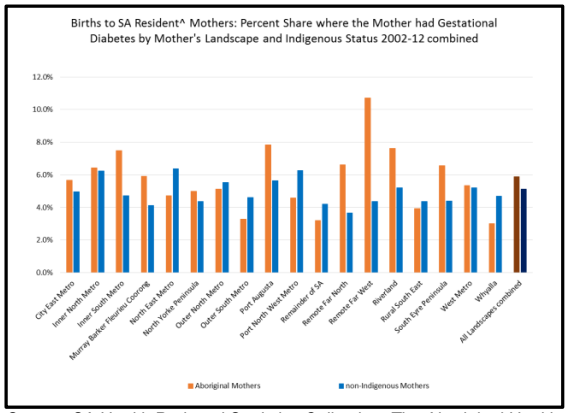


Reproduced from Fig 5.1 Taylor, AW, Marin, T, Avery, J, Dal Grande, E. *South Australian Aboriginal Health Survey*. March 2012. Population Research and Outcome Studies, Adelaide, SA

Between 2002 and 2012, the proportion of all births to SA Resident Aboriginal mothers, where the mother had gestational diabetes, was statistically similar to non-Indigenous mothers (5.9% vs 5.1%).

This varied significantly by small geographical area across South Australia (hereon referred to as Aboriginal Health Landscape areas). Gestational diabetes was higher (10.7% of all births) among Aboriginal mothers in the Remote Far West, but lower in most metropolitan areas (Figure 5).

Figure 5 Percent share of births where mother had gestational diabetes, by SA Indigenous area (Landscape) and Indigenous status, 2002-12 combined

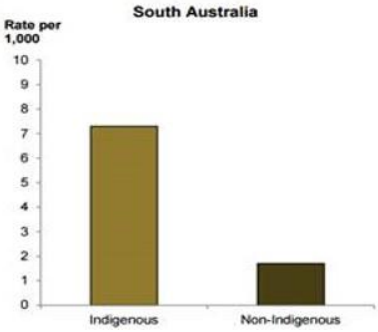


Source: SA Health Perinatal Statistics Collection, The Aboriginal Health Landscape Project (APPENDIX 2).

Diabetes hospitalisations and mortality

Hospitalisations with a principal diagnosis of diabetes are much greater for Aboriginal South Australians compared with non-Aboriginal SA residents (Figure 6).[9] After age-standardisation, the hospitalisation rate for diabetes for Aboriginal South Australians was 4.3 times higher than non-Aboriginal South Australians (7.3 per 1,000 compared with 1.7 per 1,000). The gap was 5.6 per 1,000.

Figure 6 Age standardised hospitalisations for diabetes in SA, by Indigenous status, 2011/12 - 2012/13



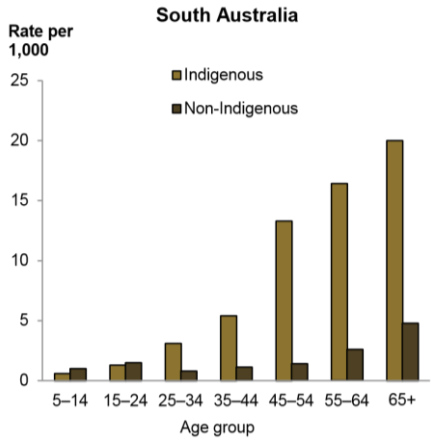
Source: AIHW 2015. Aboriginal and Torres Strait Islander Health Performance Framework 2014: South Australia. Cat. no. IHW 164. Canberra. p.50 (graph adapted to show SA only)

[a] The all-types diabetes rate is based on HbA1c and the T2DM rate on fasting blood glucose, therefore they are not directly comparable.

[b] Apart from the APY Lands, excluded due to logistical and cultural issues at the time (SAAHS report, p.15).

The age profile of Aboriginal South Australians hospitalised for diabetes shows greater rates from the age of 25-34 years onwards and a much steeper incline as age increases (Figure 7).[10]

Figure 7 SA hospitalisations for diabetes by Indigenous status and age, 2011/12-2012/13



Source: AIHW 2015. Aboriginal and Torres Strait Islander Health Performance Framework report 2014: South Australia. Cat. no. IHW 164. Canberra. p.50 (graph adapted to show SA only)

In the most recent two years of available data, hospital separations for diabetes complications for Aboriginal patients in SA have increased from 8.0 to 10.5 per 1,000 Indigenous people, despite a slight drop in the equivalent rate for non-Aboriginal patients in the same period (1.9 to 1.8 per 1,000).[11,12]

In 2010-11, national expenditure on potentially preventable hospital separations due to diabetes complications averaged of $60.60 per Indigenous person compared with $18.20 per non-Indigenous person.[13]

In the period 2008–2012, the age-standardised mortality rate from diabetes for Aboriginal South Australians was 56 per 100,000 and 18 per 100,000 for non-Aboriginal people.[14]

Social status

In the 2011 Census, nearly all measures of the social factors that impact on health show considerable disparities between Aboriginal and non-Aboriginal people in SA. These social factors have profound effects on short and long term health and wellbeing. Precise data are readily available[15] but broadly, some of these discrepancies include:

- Significantly smaller proportions of 15-64 year old Aboriginal South Australians were in the labour force (58% of males and 50% of females), compared with 80% and 71% respectively among non-Aboriginal people.
- Average annual household incomes were much lower, including more than twice the proportion in the lowest income category of less than $15,600 per year (24% vs 10%).
- 37% of Aboriginal households[c] had no Internet access vs 23% of non-Aboriginal households.
- 21% of Aboriginal households had no access to a motor vehicle (9% of non-Aboriginal households).
- Year 12 completion among 15-24 year old Aboriginal people in SA was half that of non-Aboriginal 15-24 year olds (22% of males and 27.0% of females, versus 47% and 55% respectively).

Improving the social determinants of health for Aboriginal people will be necessary to see equality in health and social outcomes, between Aboriginal and non-Aboriginal people, including the reductions needed in T2DM incidence and prevalence.

The evidence conclusively shows that there is an urgent need to address the high prevalence and complication rates of T2DM and gestational diabetes in the Aboriginal population in South Australia.

THE SOUTH AUSTRALIAN ABORIGINAL DIABETES STRATEGY

This Strategy articulates a vision supported by six high-level goals. The goals align with the National Diabetes Strategy[4]. Each goal contains recommendations for action and suggested pathways to achieve them which were directly informed by consultations with the Aboriginal community and key stakeholders, along with the South Australian evidence collected for the development of this Strategy (Figure 8). A technical report[16] outlines the method and results in detail and will be an essential reference for the implementation of this Strategy.

[c] Technically, dwellings with an Aboriginal or non-Aboriginal household.

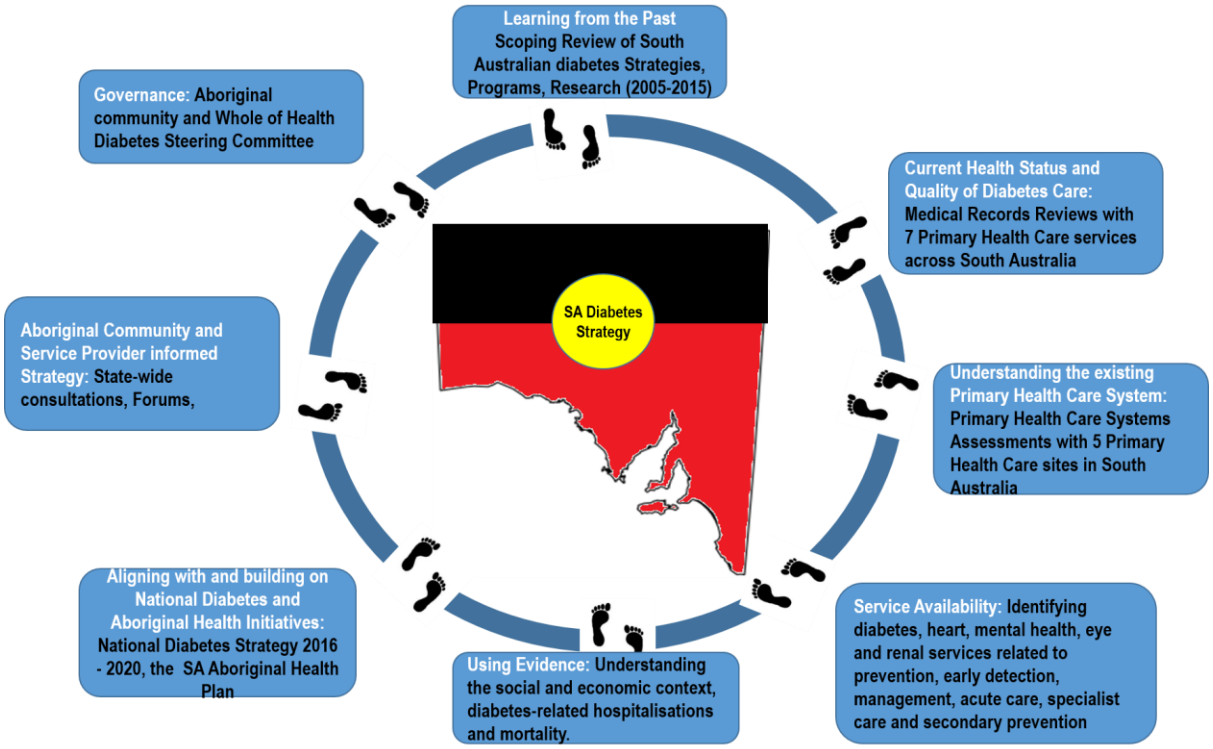


Figure 8 Overview of the SA Aboriginal Diabetes Strategy method of development

This Strategy specifies the *principles* by which it should be implemented and identifies *enablers* that will need to be present to achieve success.

The goals are aligned with the continuum of diabetes care:

- Prevention, early detection and management with a dual purpose of improving quality of life and reducing diabetes-related complications

Special attention has been given to population groups that are at higher risk of developing diabetes:

- Mothers and babies – Diabetes in Pregnancy
- Children and adolescents
- People who are homeless
- Prisoners
- People with mental health conditions
- Frequent unplanned users of the hospital system
- People with an intellectual and/or physical ability

There is a dedicated focus on reducing diabetes in pregnancy. There is recognition of the importance of building evidence through high quality research that is undertaken in partnership with the Aboriginal community and translating that knowledge into practice.

GOAL 1: REDUCE THE INCIDENCE OF T2DM AND GESTATIONAL DIABETES

Recommendation 1.1: Implement a state-wide approach to diabetes prevention that has application across the lifespan, consistent messages and is culturally appropriate

Rationale

It is evident that, in South Australia at this time, the existing health services generally undertake diabetes *prevention* as the opportunity arises or on an ad hoc basis.

It appears that funding for programs or promotion to support prevention of T2DM, whether targeting the Aboriginal population or aimed more broadly, is neither coordinated nor consistent at geographic or cohort levels. This uncertainty makes it difficult to establish and continue effective prevention initiatives aimed at a population level.

While some state government policies and programs address prevention of the risk factors leading to T2DM, they tend to be fragmentary, generally found within individual agencies or tightly targeted towards specific population cohorts (e.g. the Department for Education and Child Development's *Right Bite Food and Drink Spectrum* for schools and pre-schools and SA Health's Obesity Prevention and Lifestyle (OPAL) program).

It was very clear during the community forums and service provider consultations that diabetes *prevention* is a priority for Aboriginal people. In order to be culturally appropriate, prevention interventions must be flexible to suit local community needs.

Additionally, the development or adaptation of materials, education and prevention programs must be family-centred and community-centred, rather than focused on the individual.

While general awareness of diabetes is widespread in the Aboriginal population, health literacy around the contributing factors (causes), signs and symptoms and the potential complications is limited. This is compounded by the lack of Aboriginal-specific education resources to increase people's understanding of preventative strategies, risk factors and long term impacts.

Various consultations during this project reinforced the need to better align the education and health systems to deliver programs and teaching around diabetes prevention, with the aim of reducing the incidence of T2DM and gestational diabetes. An integrated approach would be required to address these issues and, in SA, would need to include:

- Department for Health and Ageing
- Aboriginal Health Council of South Australia
- Adelaide Primary Health Network
- Country SA Primary Health Network
- Department for Education and Child Development
- Department for Correctional Services
- Department for Communities and Social Inclusion
- Diabetes SA
- Office for Recreation and Sport
- Royal Flying Doctor Service
- Rural Doctors Workforce Agency

Pathways to Recommendation 1.1:

⇨ A state-wide prevention strategy must:

- deliver a consistent message across the lifespan including pre-pregnancy, early childhood, school, youth, working age and the elderly.
- launch a population health campaign that specifically focuses on preventing chronic disease and T2DM among Aboriginal people.
- include specific approaches for people at high risk of developing T2DM and those with diabetes in pregnancy.
- employ a family-centred approach in the delivery of education and awareness programs.
- actively involve Aboriginal people in the design, production and delivery of materials produced to support prevention campaigns.

- adopt an holistic health approach with particular emphasis on social and emotional wellbeing.

⇨ Implementation of a state-wide prevention Strategy should consider:

- using Aboriginal ambassadors and sporting heroes to champion and promote healthy lifestyle messages. They should be state-wide personalities and local community people.
- using wide-ranging delivery channels including Aboriginal community and sporting events, innovative technology and social media, so as to reach young males as well as the broader Aboriginal population.
- capturing Aboriginal people's experiences through their stories about making healthy choices and making these available to the Aboriginal population.

⇨ Build a comprehensive healthy lifestyle component into the education curriculum that encompasses a holistic and culturally appropriate framework.

Enablers for Recommendation 1.1:

- Establish a governance structure that will facilitate an integrated approach to prevention, to be driven jointly by SA Health, the two Primary Health Networks and Aboriginal Health Council of South Australia (AHCSA).
- The governance structure may be driven by those agencies, but must be inclusive of the other key players mentioned in the rationale.
- Build and equip the healthcare workforce to deliver the prevention strategy.

Recommendation 1.2: Develop systems and programs to increase the consumption of healthful diets

Rationale

Three triggers are key to increasing healthy eating: education, availability and affordability. Each varies considerably by region. In metropolitan Adelaide and larger regional urban areas, the availability of fresh food is not a major concern and the focus needs to be on improving health literacy at all ages and educating people to increase consumption of these items as substitutes for the energy-dense/nutrition-poor items that too often form a significant part of urban diets.

Affordability of fresh food varies greatly within and between the metropolitan area and regional cities, let alone the smaller rural towns and remote communities. This is a major factor in many people's choices.

Apart from affordability, there are consistent concerns about access to fresh food in the rural communities. Supply does not always meet demand and there can be days, in between deliveries, where fresh food is simply not available. People who are unable to buy and safely store enough in the first day or two are unable, rather than unwillingly, to consistently consume a healthful diet.

Food security was one of the priority initiatives under the South Australian Aboriginal Health Plan 2010-2016.[17] While there may have been improvements in food security as a result of this prioritisation, it has been difficult to locate published data on outcomes. The issue is not currently reported in the annual *State of Our Health* reports or the *State of Our Health Aboriginal Population Compendium* published by SA's Health Performance Council.[18]

The situation around palatable fresh water supplies has, without doubt, been improving, but concerns remain in rural areas where, in some locations, the drinking water is safe but poor tasting and unappealing due to its pipe-warmed temperature in summer. Increasing the consumption of fresh water, rather than sugary canned or bottled drinks, in these locations, will be challenging.

Numerous suggestions were put forward, during the community and service producer consultations, to encourage the adoption of traditional foods and food practices (which form a generally healthy way of eating), as this could have cultural resonance for many people and thereby help to encourage greater consumption of fresh food and water. Published figures[18] on traditional food consumption indicate that just under half of all Aboriginal people in SA aged 15+ (43%) include traditional foods in their diets, but with significant variation by region, from a low of 21% in Adelaide, to 42% in rural SA and 87% in remote SA. Efforts relating to this topic should focus, therefore, on Aboriginal people living in urban locations.

Pathways to Recommendation 1.2:

- ⇨ Increase education at all ages regarding food and nutrition.
- ⇨ Ensure a particular focus on food purchasing and preparation with those in the family who purchase and prepare food.
- ⇨ Encourage the consumption of water rather than energy-dense soft drinks.
- ⇨ Ensure that different approaches are taken for metropolitan, rural and remote areas.
- ⇨ Incorporate traditional foods and food practices in promotions and programs around healthy eating, using equivalent products for urban settings where traditional game, roots, berries, etc. would be less available.
- ⇨ Include outcomes relating to food security in the Health Performance Council's annual *State of Our Health* report and the next *State of Our Health Aboriginal Population Compendium*.

Enablers for Recommendation 1.2:

- ❍ Encourage councils to work in collaboration with local retailers and the local Aboriginal community to provide a greater supply of affordable fresh food and cool drinking water.
- ❍ Work with relevant agencies to make available drinking water that is palatable for all South Australians.
- ❍ Support state and national efforts to legislate a tax on sugar.
- ❍ Make fresh food in regional and rural areas more affordable and improve its availability.

Recommendation 1.3: Develop a standard intervention program for pre-diabetes

Rationale

Contrary to many Aboriginal people's expectations, it is not inevitable that they will develop T2DM. However, for those presenting to primary healthcare services with positive results on one or more of the identified risk factors, or whose tests show the presence of pre-diabetes (IGT: impaired glucose tolerance), there needs to be a clear intervention pathway to assist them to reduce those risks factors and avoid the transition from IGT to T2DM.

Guidelines from the Royal Australian College of General Practitioners (RACGP), for good clinical management of people who have been diagnosed with IGT, indicate that they should return yearly for a fasting blood glucose test but, on its own, this test is insufficient to aid people to change the lifestyle factors that have led to them to that point.

It appears there is no standard program or pathway designed to delay or prevent advancement to T2DM that health professionals could offer to people at risk of developing T2DM. A standard, evidence-based program could help practitioners to work more effectively with their patients and to reduce the incidence and, ultimately, the prevalence of T2DM.

With the withdrawal of state resources around health promotion in recent years and no corresponding federal funding to replace this, interventions that could assist people with pre-diabetes are no longer provided. Funded aid in the form of dietetics, physiotherapy, exercise physiology, etc. is available to assist people with diet and exercise once diagnosed with T2DM, but not resourced as preventive interventions. However, these could be more cost-effective in the long term.

Pathways to Recommendation 1.3:

- ⇨ Embed a standard intervention for pre-diabetes within the healthcare pathway, including referral pathways for those diagnosed with pre-diabetes or at risk of T2DM.
- ⇨ Create a common understanding of the risk factors, emphasising those that are modifiable, so Aboriginal people recognise T2DM is not inevitable.

Enabler to Recommendation 1.3:

- ❍ Work with other state and federal government agencies, Diabetes SA, AHCSA and other key organisations to adopt a standardised, national program, pathway or guidelines for people who have pre-diabetes.

Recommendation 1.4: Encourage Aboriginal people to use primary healthcare services

Rationale

According to the Australian Institute of Health and Welfare in 2011[19], use of GP services was similar at a national level between Aboriginal and Torres Strait Islander and non-Indigenous people (approximately 5,630 and 5,550 per 1,000 population respectively). However, Aboriginal and Torres Strait Islander Australians had a higher rate of long or complex consultations, which reflects their greater prevalence of chronic disease and risk factors.

The relative proportions of Aboriginal people using GPs, ACCHOs and community health centres for primary health care are not readily discoverable. Similarly, there appear to be no reliable comparisons between Aboriginal and non-Aboriginal people's use of primary care overall, apart from the 2011 GP-visit figures cited above. The Australian Aboriginal and Torres Strait Islander Health Survey, 2012-13, did not separate visits to GPs from specialists and, due to differences in methodology, there are no directly comparable data from the wider Australian Health Survey 2011-13 around consultations with health professionals.

Effective use of primary care may be assessed indirectly through the relative rates of potentially preventable hospitalisations (PPAs). In 2013–14, the age-standardised PPA rates in SA for *chronic* conditions for Aboriginal versus non-Aboriginal people were 39.8 vs 11.2 per 1,000 - a rate ratio of 3.6.[12]

Emergency departments (EDs) are used as primary care services by some people, who may find them easier to access than general practice clinics or ACCHOs. But exclusive use of these emergency services severely limits the likelihood of being tested for IGT and/or receiving advice on diabetes prevention.

Fortunately, South Australia has the lowest rate of all the states and territories for Aboriginal people using EDs for potentially avoidable, GP-type reasons. In 2011-12, the rate was 118.7 per 1,000 Aboriginal people, compared with 170.6 per 1,000 nationally. However, the SA rate remained nearly double that of non-Aboriginal people, which was 64.0 per 1,000.[18]

Overall, using primary healthcare services is important in helping to prevent the transition from IGT to type 2 diabetes and the consequent impacts on people's lives and costs to the health system.

Pathways to Recommendation 1.4:

- ⇨ Develop evidence-based programs to encourage Aboriginal people to utilise primary care to its fullest extent, taking into account the language barriers that exist in some areas.
- ⇨ Encourage Aboriginal people to self-identify their ethnicity to their medical practice(s), so their clinicians are aware of potential risk factors and can provide the full range of primary care initiatives available to Aboriginal people.
- ⇨ Encourage general practices to actively ask all patients, and accurately record, whether they are of Aboriginal and/or Torres Strait Islander origin.

Enablers for Recommendation 1.4:

- ❍ Embed culturally safe care within the health system, including private general practice.
- ❍ Develop a system to evaluate the provision of culturally safe care on an ongoing basis in all areas of the health system, including private general practice.

GOAL 2: DETECT DIABETES EARLY

Recommendation 2.1: Increase the number of Aboriginal and Torres Strait Islander people receiving annual health checks and relevant follow-up services

Rationale

Earlier detection of T2DM leads to care at an earlier stage, reducing the risk of developing associated complications. Having regular health assessments from an early age increases the chances of earlier detection.

The Medicare Benefits Scheme (MBS) allows for people who identify as Aboriginal or Torres Strait Islander to receive annual well-health checks at all ages. These checks are relatively comprehensive health assessments undertaken by general practices or ACCHOs; their stated aim is to *"help ensure that Aboriginal and Torres Strait Islander people receive primary health care matched to their needs, by encouraging early detection, diagnosis and intervention for common and treatable conditions that cause morbidity and early mortality."*[20]

Separate, age-dependant item numbers for these checks were consolidated in 2010 into one health assessment (MBS Item 715). This item may be claimed annually by general practitioners (GPs), but is not claimable by Commonwealth or State funded services unless they have an exemption under subsection 19(2) of the Health Insurance Act 1973. Federally-funded ACCHOs that have a GP attached have this exemption, as does SA Health's Port Adelaide Aboriginal Medical Service (part of Watto Purrunna, the Aboriginal Health Service within Northern Adelaide Local Health Network). However, other state-funded community health centres are generally not able to claim, as their GPs are state employees.

As Figure 9 below reveals, the proportion of Aboriginal people receiving these checks has been steadily increasing over the past few years, but it remains well below an optimal level, having risen to 14.8% in South Australia in 2013-14 (21.3% nationally).[21] The data also show that only Victoria, Tasmania and the ACT have lower rates. Given the potential benefits of prevention and early detection in improving the general health of Aboriginal people, there is a case for improving the uptake of MBS 715.

MBS 715 INDIGENOUS HEALTH CHECKS, 2010-11 TO 2013-14

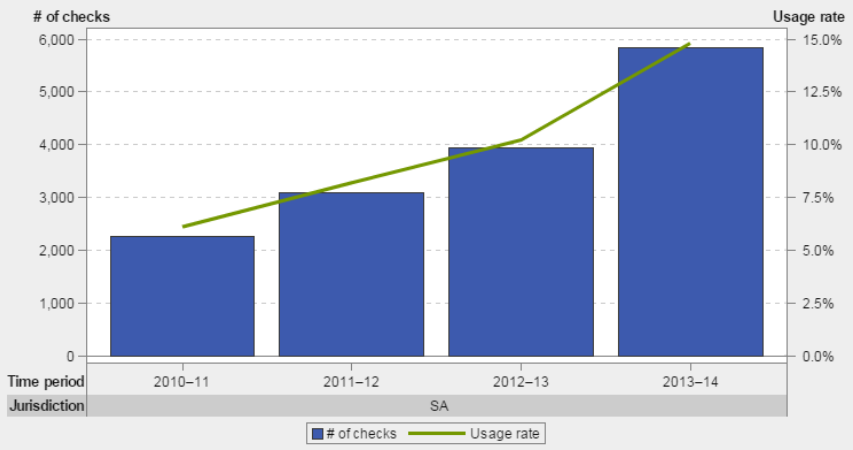


Figure 9 Number of MBS 715 claims and proportional usage rates, by year 2010-11 to 2013-14.

Source: AIHW Indigenous health check (MBS 715) data tool.

In addition, men are not accessing these health checks as often as women, with MBS 715 health checks claims being made for 13.4% and 16.2% of Aboriginal men and women respectively, in 2013-14.[21]

Annual risk assessment is the optimal population approach to diagnosing T2DM early. HbA1c point of care testing (POCT) can now be used to diagnose T2DM, which could positively impact early detection, not just the ongoing management of diabetes. The AUSDRISK tool has been developed, although not specifically for the Aboriginal population, to facilitate the early identification of people who may be at increased risk of developing T2DM. The tool is designed to be used from the age of 15 and by individuals, not just health professionals.

Word of mouth can be a very powerful communication tool and should be used to promote the annual health check, bearing in mind that the quality of the experience will be critical to its promotion.

It is advisable that Aboriginal people diagnosed with other chronic conditions but not T2DM, should be monitored regularly to enable early detection of T2DM, to prevent or slow development.

The link between T2DM and cardiovascular disease is well established. It is important that all people, but particularly those at risk of developing T2DM, are assessed for cardiovascular disease to enable earlier intervention.

Pathways to Recommendation 2.1:

- ⇨ Encourage GPs and other eligible practitioners to conduct more health checks under MBS 715, annually and whenever opportunities present.
- ⇨ Implement innovative approaches to screen those who are not currently having annual health checks, including after-hours opening times and taking services into communities.
- ⇨ Encourage Aboriginal and Torres Strait Islander people to self-identify to their ethnicity to medical practice(s) so they become eligible for the additional health checks and services available to them.
- ⇨ Ensure people who need follow-up care receive it.
- ⇨ Encourage Aboriginal people to request an annual health assessment.
- ⇨ Educate people with T2DM that their family members may have an increased risk of developing it too and should participate in annual health checks from childhood.
- ⇨ Promote the fact that comprehensive annual health checks are available to and recommended for Aboriginal people of all ages.
- ⇨ Embed use of Absolute Cardiovascular Risk Assessment in all primary care settings in SA.

Enablers for Recommendation 2.1:

- ❍ Standardise the use of risk assessment tools in primary care settings, such as HbA1c tests as part of annual health assessments for all Aboriginal adults who have not been diagnosed with T2DM.
- ❍ Ensure that Aboriginal people who use state primary healthcare services have full access to team care arrangements and to primary healthcare initiatives available to federally-funded primary care services.
- ❍ Provide training for staff to use diabetes risk assessment tools that are appropriate for the Aboriginal population and Absolute Cardiovascular Risk Assessment tools and take recommended actions based on the outcomes, supported by clear referral pathways.
- ❍ Become involved in national collaborations to improve risk assessment tools specifically for Aboriginal and Torres Strait Islander people of all ages.
- ❍ Encourage the work of national collaborations to tailor the Absolute Cardiovascular Risk Assessment tool for Aboriginal people's risk.

Recommendation 2.2: Integrate Point Of Care Testing (POCT) within the Health System

Rationale

POCT allows patients to provide blood and urine samples at the health service and receive their test results during the same visit, thereby increasing opportunities for follow-up discussion and intervention. In South Australia, most of the ACCHOs and state-run Aboriginal medical services provide POCT for Haemoglobin A1c (HbA1c) and urinary Albumin:Creatinine Ratio (ACR).

Trained Aboriginal Health Workers and other trained health professionals are able to conduct POCT and it is managed under a training and quality control system run by QAAMS (Quality Assurance for Aboriginal and Torres Strait Islander Medical Services)[22], which is based at Flinders University.

The QAAMS program requires health services to purchase the specified testing equipment and provide support for at least one staff member to undergo the QAAMS training, conduct the testing and perform regular quality checks on the equipment.

Medicare rebates for POCT are available to ACCHOs or state-run Aboriginal medical services, but not to other organisations or individual health professionals, and then only if the ACCHOs or AMSs operate POCT under the QAAMS program.

However, not all Aboriginal people attend the services supported by the QAAMS program; many attend ordinary general practices and/or other state-run community health centres. Research is needed to understand to what extent POCT could benefit them.

Also, it has been noted that young men are much less likely to attend any primary health care service, so taking POCT to them, e.g. to sporting events, carnivals etc., could be a way to reach them and initiate testing earlier than might otherwise be the case.

Pathways to Recommendation 2.2:

- ⇨ Investigate the inclusion of training for POCT in the Certificate 3 and/or Certificate 4 training for Aboriginal Health Practitioners and Credentialed Diabetes Educators.
- ⇨ Investigate the potential opportunities, barriers, advantages and disadvantages of extending supported POCT to other state-run health care organisations and rural general practices, including extending the Medicare rebate to mainstream services.
- ⇨ Investigate the potential to expand POCT to include testing for lipids and microvascular changes in eyes (diabetic retinopathy).

GOAL 3: IMPROVE DIABETES CARE AND REDUCE COMPLICATIONS

The consultations, assessments and research used to develop this South Australian diabetes strategy have given rise to the adoption of several themes, or focus areas, for action on managing T2DM care, once diagnosed; specifically:

1. Developing and implementing an evidence-based Model of Care.
2. Getting better at diabetes management.
3. Managing and preventing complications.
4. Enhancing secondary prevention by empowering patients and their families.
5. Supporting carers.
6. Improving access to medications and other supports.
7. Reducing self-discharge from hospital and improving the continuity of care between the hospital and the community.
8. Making more effective use of ICT.
9. Embedding continuous quality improvement.

The care-related strategies that follow, and the actions proposed to support them, are presented in line with these nine focus areas.

Recommendation 3.1: Develop & Implement a State-wide T2DM Model of Care for Aboriginal people

Rationale

Despite a focus being given to Aboriginal people in certain programs, there remains no agreed, state-wide Model of Care for T2DM, let alone one specifically designed to be culturally safe for Aboriginal people and flexible enough to accommodate the geographic and cultural diversity within this population.

Any such Model must, obviously, be evidence-based, but it must also take into account the flexibility required to meet Aboriginal people's needs at the community level, while also providing a greater degree of consistency than currently exists.

In addition to health sectors working together, strong managerial and clinical leadership at state and local levels will be required for local level implementation of a model of diabetes care. Existing models should be considered and localised where necessary.

Pathways to Recommendation 3.1:

⇨ Develop a state-wide Model of Care in partnership with Aboriginal and Torres Strait Islander people. It must:

- allow for implementation across a variety of local settings.
- adopt a wellness approach, particularly with regard to achieving and maintaining healthy lifestyles.
- incorporate complementary care provided by traditional healers.
- allow for a family approach to care, with health being considered and managed holistically; for example, a proportion of individuals will need support and linking with housing and welfare prior to their healthcare needs being addressed clinically.
- facilitate the alignment of diabetes education, medical management and people's contexts.
- address the provision of diabetes healthcare in a variety of service settings, including ACCHOs and Aboriginal health services, general practices, private allied health providers, specialists and hospitals.
- facilitate a common language on diabetes management and education across disciplines.

Recommendation 3.2: Get better at T2DM management

Rationale

There is considerable evidence that effectively managing the health outcomes and risk factors associated with T2DM (such as weight, diet, blood pressure, lipids) can reduce the incidence of diabetes-related complications, such as cardiovascular, renal and eye diseases, limb amputations and strokes. Primary health care is well placed to have a significant impact on slowing or preventing the progression of complications by providing ongoing, systematic and evidence-based diabetes care.

Use of MBS tools of Diabetes Annual Cycle of Care (DACC), GP Management Plans (GPMP) and Team Care Arrangements (TCA) are a useful framework to guide the comprehensive PHC led management of diabetes. They are also a valuable form of funding which assists greatly the sustainability of resources applied to chronic disease management in those primary care services with a 19.2 Exemption.

Pathways to Recommendation 3.2:

- Actively encourage all GPs to register with and utilise PIP- IHI, paying special attention to those services in areas where there is no ACCHO.
- Increase access to diabetes management to males and employed people, by considering after hours clinics.
- Link patients with complex needs requiring support to the Primary Health Networks' CTG and Supplementary Services program.
- Make available access to Traditional Healers to complement western management of diabetes.
- Increase the proportion of people with diabetes who receive annual eye checks, feet checks, an absolute cardiovascular risk assessment and influenza and pneumococcal vaccinations.
- Improve community coverage of diabetes care plans as appropriate
- Actively work to improve the proportion of people with diabetes who have well controlled blood pressure, good glycaemic control, good lipid levels and normal kidney function.
- Increase the number of people who receive follow-up care due to a poor result.
- Implement innovative ways that allow for families to be involved in diabetes care planning.
- Actively undertake brief interventions with people with diabetes and, if agreed, with their families in regard to quit smoking and improve physical activity, nutrition, wellbeing and self-management.

Enablers for Recommendation 3.2:

- Ensure healthcare services commit to chronic disease being reflected in strategic plans, and chronic disease-specific roles and responsibilities being clearly defined.
- Wherever possible, mandate the use of evidence-based guidelines in all treatment.
- Encourage Aboriginal health services and ACCHOs to consider a dedicated diabetes or chronic disease worker, team or program in PHC settings that coordinate local diabetes clinics and visiting allied health and specialist services.
- Design staffing for chronic disease care on the use of multi-disciplinary teams, rather than siloed service delivery.
- Actively aim for relevant staff to have protected time to manage chronic disease.
- Provide ongoing support for staff on the use of Communicare, including new and visiting staff.
- Support Aboriginal Health Workers (especially males) to specialise in Diabetes.
- Implement a clear, consistent system for following up and acting on abnormal results.
- Ensure systems that support systematic, evidence-based care for T2DM diabetes are available, effective and user-friendly. These systems must allow for:
  - routine use of evidence-based guidelines,
  - consistent and accurate documentation of care provided,
  - up-to-date patient lists that can be regularly reviewed and used to inform recall of patients for routine follow-up.

Recommendation 3.3: Detect complications early and manage them according to best practice

Rationale

In Australia in 2011-2013, the proportion of people 18 years and older with cardiovascular disease (CVD), chronic kidney disease (CKD) and diabetes combined was estimated to be 10.5% for Indigenous Australians compared to only 3.9% for their non-Indigenous counterparts. As might be expected, the estimated proportions of Indigenous people with the three conditions combined increased with age:

- 18-44 years - 3.7%.
- 45-64 years - 13.8%.
- 65 years & older - 19.4%.

Improving the capacity of primary health care services to effectively manage T2DM is likely to improve the services' capacity to manage other chronic diseases too. T2DM shares health risk factors and intermediate health outcomes, including metabolic syndrome, with other chronic diseases such as CVD and CKD. Managing these complex conditions well requires similar multi-disciplinary health care team arrangements and adequate levels of resourcing.

A recent initiative of the Australian Government is to implement a new Health Care Homes model that will allow people with multiple complex and chronic illnesses to enrol with their local GP to have all of their conditions and health care needs conveniently managed in one place. This model has the potential to provide better continuity and coordination of services required by people with multiple and complex health conditions. It based on individual personalised care and is supported by a flexible payment structure that encourages clinicians to spend quality time with patients as needed. An initial two-year trial of the Health Care Homes model will commence in July 2017 with 200 medical practices enrolling approximately 65,000 people.

The principal complications that regularly occur in people with T2DM are:

- foot complications.
- eye complications.
- cardiovascular disease (CVD).
- renal disease (CKD).
- mental health conditions.

Suggestions are made for addressing each of these complications as part of ongoing diabetes care, but it should be borne in mind that positive impacts on one complication may well have supplementary impacts elsewhere too.

Pathways to Recommendation 3.3:

- ⇨ Encourage Aboriginal people to enrol with the Health Care Homes initiative if their chosen provider is participating in the trial.
- ⇨ Ensure clinics have the infrastructure and resource capacity to streamline and optimise visiting allied health and specialist services.
- ⇨ Ensure visiting services are able to coordinate with local primary healthcare services to optimise patient time and increase service efficiency.
- ⇨ Ensure primary care services are able to become more involved in monitoring and coordinating shared care arrangements for Aboriginal people with diabetes who have multiple complications.
- ⇨ Ensure all who need follow-up care receive it.
- ⇨ Improve Aboriginal people's understandings of how to navigate the health system.
- ⇨ Ensure sufficient local and visiting health workforce to meet population based needs

3.3.1: Reduce foot complications

There are many references to a high rate of foot complications among people with diabetes, but data on prevalence in Australia, let alone among Aboriginal people in South Australia, is limited. However, some of the issues that have been reported include:

- Charles (2015)[23] noted that the little data available indicate that rates of ulceration, infection and amputation continue to rise.
- A study from Western Australia showed that Aboriginal people in that state are 10 times more likely to be admitted for diabetic foot complications and about 30 times more likely than non-

Indigenous people to have diabetes-related lower limb amputations.[24]

- Reportedly, different ways of classifying foot ulcers have made it difficult to collect consistent data. Diabetic Foot Australia has been compiling an *Australian Diabetic Foot Ulcer Minimum Dataset Dictionary*, with the ultimate aim of providing a "*foundation for the Australian diabetic foot community to begin considering collecting standard nationally pooled data to enable any future Australian diabetic foot disease database*" The dictionary is scheduled for release in June 2016.

Pathways to Recommendation 3.3.1

- ⇨ Primary care services to facilitate access to footwear and orthotics under the Supplementary Services program.
- ⇨ Increase the number of patients who receive foot checks as part of their annual cycle of diabetes care.
- ⇨ Ensure those patients who need it are seen by a podiatrist
- ⇨ Work with Communicare to include an indicator for patients with a high risk foot complications.

3.3.2: Reduce eye complications

Diabetic retinopathy (DR) is one or Australia's more common causes of blindness or vision loss, despite the availability of effective treatment. DR affects the small blood vessels of the retina and, as with other vascular complications, it is a common diabetes complication - one in three Aboriginal people with diabetes have diabetic retinopathy. People with T2DM are also at increased risk of cataract and sometime glaucoma.

Ninety-eight percent of blindness from diabetes is preventable with early detection and timely treatment. The National Indigenous Eye Health Survey[25], conducted in 2009, found that 13% of all Indigenous adults with diabetes had already lost their vision, that only 20% of Aboriginal people with diabetes had received an eye health check in the previous 12 months and that 37% of those needing laser surgery had received it. The availability of mainstream optometry services does not increase access to eye care for Aboriginal people; rather, the availability of eye care delivered within ACCHOs or state AMS is key. The Visiting Optometrists Scheme delivers eye care in rural areas, including to patients with diabetes. Those areas that do not provide eye care within an ACCHO or AMS are locations to focus on to improve access.

From 1 November 2016, two new items will be available on the Medicare Benefits Schedule to cover the testing of diabetic retinopathy with a non-mydriatic retinal camera for patients with medically diagnosed diabetes. Aboriginal patients will be eligible to receive Medicare benefits for the test once every 12 months. This measure will increase access to screening for diabetic retinopathy, particularly in rural and remote communities, by encouraging primary care practitioners to undertake opportunistic retinal photography for patients diagnosed with diabetes. Targeted funding will be provided for the purchase of, and training in the use of, retinal cameras. The equipment will be placed in Aboriginal Medical Services and mainstream primary care practices that provide services for a high number of Indigenous patients. Training in use of the equipment will be provided for GPs, nurses and Aboriginal Health Workers, including those working as care coordinators and Aboriginal and Torres Strait Islander Outreach Workers.

Due to the large proportion of Aboriginal people with diabetes, there is the potential to focus on diabetes and the link to other chronic diseases, to support eye care advancement.

Recommendations from the recent (March 2016) South Australian Aboriginal Eye Health Forum, which tie in with this T2DM strategy, include those following.

Pathways to Recommendation 3.3.2:

- ⇨ Increase the number of Aboriginal people with diabetes receiving annual eye checks including retinal examinations.
- ⇨ Place retinal cameras, clear reading and referral pathways and training of staff in ACCHOs as a means of achieving the above.

Enablers for Recommendation 3.3.2:

- Develop a state-wide eye health plan, based on the Roadmap to Close the Gap for Vision, which takes into account country and metropolitan needs for Aboriginal eye health care. Where appropriate, develop regional implementation plans. The state-wide eye health plan must:
  - wherever able, link existing primary care and specialist services to achieve better coordination of eye health care with other specialist services and NGOs;
  - identify areas across South Australia where there are no or insufficient eye services and provide services through an Aboriginal health service;
  - identify Aboriginal patients on eye surgery waiting lists and fast track their care;
  - develop a mechanism to link, share and aggregate data across agencies;
  - add an Aboriginal identifier to the revised low cost spectacle scheme that is about to be launched, to allow identification and review of spectacle uptake specifically by Indigenous people;
  - include a state-based eye health indicator, such as the number of Aboriginal patients with diabetes having an annual retinal examination; and
  - coordinate eye health service planning to sit within existing South Australian Aboriginal health governance structures.

3.3.3: Reduce cardiovascular events

Reported as the leading underlying cause of death in Australia, CVD effects more than 3.7 million people, with Aboriginal people 70% more likely to die of the disease[26]. CVD encompasses a broad spectrum of complications including: ischaemic heart diseases, cerebrovascular diseases, oedema, heart failure, and diseases of the arteries, arterioles and capillaries.

Among the Aboriginal population aged two years and over, the 2012-13 prevalence of heart and circulatory complications/diseases in SA was 12.5%, in line with the national average of 12.7%. However, it was nearly three times that of all South Australians (4.4%).

People with diabetes are more than twice as likely to die from CVD compared to people without diabetes, a link thought to be brought about by multiple shared risk factors: physical inactivity, obesity, smoking, high blood pressure and high blood cholesterol.[27]

Accessing emergency transport in the event of a heart attack can improve outcomes and even prevent death. There were consistent reports by Aboriginal people of reluctance to call on ambulance transport due to lack of understanding about costs and benefits.

Pathways to Recommendation 3.3.3:

- ⇨ Increase the uptake of Absolute Cardiovascular Risk Assessments within primary healthcare settings, particularly among patients with pre-diabetes and diagnosed T2DM.
- ⇨ Increase the number of Aboriginal people who have ambulance cover.

Enabler to Recommendation 3.3.3:

- Collaborate on the implementation of common strategies in the newly-developed South Australian Aboriginal Heart and Stroke Plan.

3.3.4: Reduce chronic kidney disease (CKD)

Diabetes is the most common cause of chronic kidney disease. Biomedical results from the 2012-13 AATSIHS showed that 37.7% of Indigenous people with chronic kidney disease also had diabetes and that around nine in ten Indigenous people with signs of kidney disease were not aware they had it.[28]

Nationally, the age-standardised death rate for urinary diseases was two and a half times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people.[28] In 2011, diabetes was the leading cause (1 in 3 new cases) of treated end-stage kidney disease (ESKD) (ANZDATA 2013).

The 2007-09 incidence rates for ESKD showed that Aboriginal people in SA were diagnosed with ESKD at 8.2 times the rate of non-Aboriginal people, behind only the NT (x18.0) and WA (x12.4).[29]

Service provider consultations indicated a lack of system-level structures for endocrinology outreach services to communities. The outreach services that are delivered in the Aboriginal primary care clinics are federally-funded through the Medical Outreach Indigenous Chronic Disease Program (MOICDP), with annual decisions on frequency and location, which can hamper clinic planning.

Diabetes clinics and care are coordinated at the local level by credentialed diabetes educators or Aboriginal Health Workers. Adequate management of intermediate health outcomes has a big impact on reducing the development and severity of CKD. It again highlights the need for a comprehensive chronic disease management program at the PHC level that serves the complex and interacting needs of Aboriginal people with diabetes.

Pathways to Recommendation 3.3.4:

- ⇨ Ensure the diabetes workforce within the PHC system have access to evidence-based protocols and the skills and specialist support to manage insulin adjustment.
- ⇨ Ensure patients receive adequate education from a skilled diabetic educator or equivalent in the use of insulin and home measurement of BSLs and initial self-management of hypoglycaemia.
- ⇨ Investigate the need for, and feasibility of, more state-run, outreach, diabetes specialist services.

3.3.5: Mental health care

The 2012 SAAHS[8] study found that one in ten (10.3%) Aboriginal people in South Australia reported living with a doctor-diagnosed mental health condition; the proportion was higher among metropolitan residents (15.5%) than those living in country SA (4.5%).

SA has an Aboriginal Mental Health Strategy. This strategy includes a policy that all consumers are to be screened for metabolic syndrome, but there does not appear to be a specific strategy for supporting Aboriginal people with diabetes who may also have a mental health condition.

Pathways to Recommendation 3.3.5:

- ⇨ Increase awareness among Aboriginal people and health practitioners about the link between diabetes and mental health.
- ⇨ Increase community-based, culturally safe mental health and drug and alcohol support for Aboriginal people that can be coordinated across SA in association with their diabetes care plans.
- ⇨ Increase opportunities to develop team care arrangements (TCAs) for people with diagnosed diabetes and mental health conditions and promote mental health practitioners being part of TCAs for GP Management Plans (GPMPs) for diabetes.

Enablers for Recommendation 3.3.5:

- ❍ Work with organisations that develop diabetes care guidelines, such as RACGP and CARPA, and with Medicare Australia, to have mental health assessments included in the diabetes annual cycle of care.

Recommendation 3.4: Improve oral health and dental care

Rationale

People with chronic health conditions, including T2DM, are more susceptible to oral disease and may have additional needs compared to those without a chronic condition.[30] But the need for better dental care among Aboriginal people is broader than just those with chronic conditions. Aboriginal children are at high risk of developing caries right through to adulthood. At the age of six, 72% of Aboriginal children have some tooth decay compared to 38% of non-Aboriginal 6 year olds.[31] Regional and rural adults experience 10% more caries than those in the metropolitan area, regardless of Indigenous status.[32]

Many low or middle income earners report that cost is a barrier to adult dental care and this includes a high proportion of Aboriginal adults. People with a Health Care Card or concession card issued by Centrelink or the Department of Veteran Affairs (and their dependents) are eligible for public dental care, with co-contributions but greatly reduced fees compared to other services.

Babies, children and most young people under 18 can receive free dental care through the school dental program but, while this program delivery is widespread, not all parts of South Australia are covered by this service.

Dental programs specifically for Aboriginal people are operated by Nunkuwarrin Yunti in Adelaide, Tullawon Health Service at Yalata, Pika Wiya in Port Augusta, Nganampa Health Service in the APY Lands and Umoona Tjutagku in Coober Pedy.

Pathways to Recommendation 3.4:

- ⇨ Promote the availability of concessional access to dental services for adults.
- ⇨ Give priority for oral health care to Aboriginal people with chronic health conditions, particularly diabetes.

Enablers for Recommendation 3.4:

- ❍ Aboriginal people's ability to achieve good oral health is affected by access to cool, fluoridated drinking water, access to affordable fresh fruit and vegetables and cold storage of food, access to toothbrushes and fluoride toothpaste, overcrowding in housing and poor living conditions. All of these need to be addressed in rural areas.
- ❍ Increase the availability of dental programs specifically for Aboriginal people.

Recommendation 3.5: Enhance secondary prevention by empowering patients and their families

As has been emphasised throughout this strategy, there is significant need for improving secondary prevention of complications associated with T2DM. There is clear need to improve health literacy about managing T2DM and its associated complications, not just with Aboriginal patients but their families too. There is international evidence that both approaches are factors of success for chronic disease interventions in Indigenous populations.[33]

To empower Aboriginal patients and families, health care providers must develop good relationships and break down communication barriers. Incorporating cultural and traditional knowledge into health care, acknowledging and building on Aboriginal people's insights from their own health care experiences and imparting knowledge, with ongoing support, to patients and their families can significantly enhance life-long T2DM management.

Change is challenging for individuals and their families, and takes time; however, Aboriginal people must be committed to making positive changes. It is also important for service providers to recognise that many Aboriginal people face competing demands and responsibilities that should not be perceived as not caring.

The following recommendations apply broadly across the spectrum of complications and encourage better health and wellbeing.

Pathways to Recommendation 3.5:

- Develop an education program with culturally appropriate materials to emphasise the risks of developing CVD, CKD, eye, foot, dental and mental health complications among Aboriginal people with diabetes and their families. This should include:
  - a focus on healthy eating and how to choose nutritious foods and avoid those that are energy-dense and nutrition-poor.
  - access for dieticians, podiatrists and Credentialed Diabetes Educators (CDEs) to support local staff to run clinics and/or group sessions to educate Aboriginal community members, not just those diagnosed with T2DM, about the benefits of reducing risks associated with diabetes.
- Provide patient and family education on the use and storage of diabetes medication.
- Support and skill patients to effectively self-manage T2DM on a daily basis within their own environments.
- Ensure that individuals and their families are more involved in the development of their diabetes care plans. Apart from this being simply good practice, messages about complications may become more meaningful.
- Consider peer support groups and support groups that involve health professionals. For example, Diabetes QLD has a private Facebook page for Aboriginal people with T2DM, which is run by a mentor - an Aboriginal person with diabetes who has received motivational training. People are invited by friends to join the page.

Recommendation 3.6: Provide better support for carers

Rationale

Raw data show the proportion of Indigenous people needing assistance with core activities (6.7% in the 2011 Census) to be higher than the non-Indigenous population (5.7%). If these data were to be age-standardised, the disparity would be even greater.

In South Australia in 2011, nearly 1,900 Aboriginal people responding to the Census needed assistance with one or more of three core activity areas (self-care, mobility, communication) because of a disability, long term health condition or old age. Nationally, the figure was close to 30,000. These numbers are likely to be underestimations.

Aboriginal people who are voluntary carers are younger than non-aboriginal carers, less likely to be employed, more likely to have a lower income and more likely to need care themselves. Our community forums reinforced the need to have supports in place for carers, who often experience barriers when seeking health care for their family members and, in addition, may have their own support needs.

Currently, carers have no access to the health information of the person they care for, unless that person is present during a consultation or has given written permission. This is even more problematic among a population that is often transient and using multiple health services.

In addition, lengthy waiting times to get bookings, together with long delays in waiting rooms, add to the burdens of both formal and informal carers.

Pathways to Recommendation 3.6:

- Develop and resource evidence-based support programs for those caring for Aboriginal people, with flexibility for use in different regions.
- Investigate and implement strategies to fast track health care for Aboriginal patients with carers.
- Encourage health services in South Australia to be proactive and prompt their Aboriginal patients who have carers to provide written permission for the carers to have access to their health information, including scheduled appointments and medications.

Recommendation 3.7: Ensure access to medications and other supports

Rationale

The cost of medication is a significant barrier to improving access to medicines for Aboriginal people. Despite two to three times higher levels of illness, the Pharmaceutical Benefits Scheme (PBS) per person expenditure for Aboriginal people is approximately half that of non-Aboriginal people and this has remained constant from 2008- 09 to 2010-11.[34]

To alleviate or remove the cost of medications for Aboriginal people, the Australian Government introduced the Closing The Gap (CTG) PBS Co-Payment measure in July 2010. Under the national CTG program, among other benefits, Aboriginal people are eligible to access PBS medicines with a lower or nil patient co-payment, if their GP considers that they require the medication for a chronic condition and are unlikely to take it without subsidy. CTG-annotated scripts mean that Aboriginal people without a concession card receive medications at a concessional co-payment rate, while concession card holders make no co-payment. Only GPs or nurse practitioners whose practices are registered for the PIP-IHI (Practice Incentives Program - Indigenous Health Incentive), or who work at an Aboriginal Health Service (state-funded AHSs and ACCHOs), may annotate a prescription as CTG-eligible, while specialists prescribing to CTG-eligible patients must have received their referral from a PIP-IHI enabled general practice.

However, there remains the challenge of finding a general practice that is registered for the PIP-IHI, when there is no AHS in a region. Multiple Internet searches have failed to find a way to locate such a practice, which makes it hard for travellers to select a practice that is able to provide access to CTG-related benefits such as prescriptions, care coordination and/or supplementary services.

Under Section 100 (S100) of the National Health Act 1953, patients living in remote areas can receive free PBS medicines from their local AHS without a prescription, and may also access free device consumables, e.g. test strips, syringes and needles.

However, when these residents travel outside remote areas, they will not have this free and readily-accessible supply without visiting a PIP-IHI registered general practice or non-remote AHS.

Hospitals are excluded from participating in the CTG PBS Co-Payment measure, regardless of whether the patient is already registered with the program. Currently the State Government requires that all hospital patients are charged the conventional PBS medicines co-payment irrespective of whether or not they are a CTG-entitled Aboriginal patient with a concession card. CTG-entitled Aboriginal patients with concession cards having to pay for hospital dispensed medication contradicts the supply of free-of-charge medication to these patients in the community setting. Confusion, disruption of continuity of care between chronically sick patients and hospital and community providers, as well as loss of confidence in caring services has been the result. Billing for hospital medications has become a notable barrier for such Aboriginal people resulting in levels of apprehension and fear that failure to pay may disqualify or dis-credit them from further hospital care. This State and Commonwealth Government divide is a barrier to continuity of care for patients moving between health care settings.

The National Aboriginal Community Controlled Health Organisation (NACCHO) and the Pharmacy Guild of Australia (PGA) released a joint position paper on the CTG PBS Co-payment in October 2015 (APPENDIX 3) which provides recommendations to address key issues including:

1. Interaction between programs and mobility of people living in remote areas
2. CTG eligibility status and requirement of annotation on the prescription
3. Coverage of medicines under the CTG co-payment measure
4. Improving Quality use of Medicines (QUM) support services
5. Promotion of the CTG co-payment measure

This Strategy adopts the joint position of NACCHO and the PGA, all of which will improve access to medications for Aboriginal people with T2DM and related conditions.

The National Diabetes Services Scheme (NDSS) provides subsidised testing and delivery devices nationally, to encourage regular testing and self-management; it does not cover medication. A doctor's or credentialed diabetes educator's referral is required to join the scheme, but thereafter products may be accessed without a prescription. Blood glucose and urine testing strips, along with insulin pump consumables are subsidised, while insulin syringes and pen needles are free.

But the number of Aboriginal people registered with NDSS is a small minority of those diagnosed with diabetes. It is known that some receive test products and consumables directly from their health service, but the concern is that many others may not be self-testing at all.

Given that many Aboriginal people move between regions regularly, it is important that they be able to readily replenish their test strips and other devices, with no additional requirement to see a local practitioner. NDSS registration could provide greater security and ease of access.

Pathways to Recommendation 3.7:

- Link CTG eligibility status to the patient so that the patient is eligible regardless of where they are and who the prescriber is.
- For the State government to work with the Commonwealth government to ensure that hospital can issue eligible patients with discharge CTG PBS prescriptions.

Prior to legislative changes regarding the above taking place, specific SA actions should be considered:

- Encourage general practices to become PIP-IHI registered so they can issue CTG scripts and specialist referrals for their Aboriginal patients; provide training to ensure they do.
- Ensure general practices are welcoming places where Aboriginal people are comfortable to identify as Aboriginal, so they can receive the additional services, CTG medication and NDSS product subsidies for which they may be eligible.
- Encourage private general practices to promote their 'CTG' status in their local areas, to enable Aboriginal people to find an appropriate service more easily.
- Increase the enrolment of Aboriginal people on NDSS by embedding the enrolment process in PHC practice through:
  - implementing a protocol that all staff working with patients with T2DM are able to facilitate NDSS enrolment.
  - nominating staff within PHC and hospital services to be responsible for ensuring patients with T2DM have access to NDSS enrolment.

Enablers for Recommendation 3.7:

- Add identifiers such as 'Closing The Gap' or 'Aboriginal healthcare' to the search options for general practices in the National Health Services Directory (NHSD).
- Prior to PIP-IHI restrictions being lifted, develop a central register of SA general practices registered for PIP-IHI, and thereby able to provide CTG-authorised prescriptions and other benefits, and make it available to the general public. Promote this register to Aboriginal communities.
- Abolish co-payments for PBS pharmaceuticals supplied from State hospitals to CTG-entitled-patients holding concession cards.

Recommendation 3.8: Reduce hospital self-discharge and improve continuity of care between the community and the hospital

Rationale

The 2011-13 data for all hospitalisations (excluding dialysis but age-standardised) show that South Australia has the second highest rate (after WA) of hospitalisation for Aboriginal people: 1.4 times that of non-Aboriginal South Australians. Aboriginal people in SA are approximately 2.5 times more likely than non-Aboriginal people to be hospitalised for an endocrine or metabolic condition.[35]

The rate per 1,000 Aboriginal people of potentially preventable hospital admissions (PPAs) due to diabetes complications is much lower in SA than nationally (24.8 per 1,000 vs 41.0 per 1,000). However, while that appears to be a positive result for SA's primary healthcare system, it should still be noted that the comparable figures are respectively 4.7 and 5.2 per 1,000 for non-Aboriginal people - a rate ratio in SA of 5.3 (7.9 nationally).

With diabetes-related conditions being the top reason for PPAs among Aboriginal people, the ultimate goal is to improve T2DM within the primary healthcare setting so that diabetes-related PPAs can be avoided.

However, when Aboriginal people with T2DM are hospitalised, for any reason and regardless of whether the admission is planned or unplanned, they should expect to receive high quality care from culturally competent hospital staff. There is still much work to be done for mainstream primary health and hospital services to consistently provide culturally safe care. Hospitals in non-remote areas are less likely to provide culturally safe care than those in remote areas.

Hospital discharge continues to be an issue for some service providers. Issues with communication between hospitals and PHC service providers on patient discharge continue to negatively impact on continuity of care. Some hospitals still rely on patients providing their hospital information to their primary health care provider.

Pathways to Recommendation 3.8:

- ⇨ Reduce waiting times for specialist appointments and planned hospitalisations.
- ⇨ Given the considerable lag that can occur between referral and receiving an out-patient appointment, ensure that appointment letters clearly state the purpose of the visit and the original date and source of referral.
- ⇨ Encourage primary healthcare services to collaborate with SA's Primary Health Networks and, potentially, local councils to reduce the financial burden of up-front transport and accommodation for patients requiring planned hospital or specialist visits.
- ⇨ Develop a system for patient discharge that facilitates an integrated, consistent, approach to prevent people falling through the gaps between hospital and primary care; this should include:
  - financial support for rural and remote residents who have been admitted by emergency transport and are not eligible for assisted travel to return home.
  - patients, their GPs and specialists receiving hospital discharge reports.
  - better liaison between hospital and PHC services and consistent follow-up after discharge.
- ⇨ Embed culturally safe care within hospitals.

Enablers for Recommendation 3.8:

- ❍ Resource Aboriginal Liaison Officer Units.
- ❍ Have all staff in state-run and state-funded agencies receive ongoing cultural safety training.
- ❍ Encourage general and allied health practices to adopt and train staff in culturally safe practices.

- Have affordable and accessible options available for accommodating family members and/or carers from rural and remote locations visiting people in hospital.
- Hospitals that service a large number of Aboriginal people should be required to set and aim for targets of Aboriginal employment, within specific areas of medical, clinical, management, administration and hospital services, which are to be reported on annually.
- Aboriginal staff who move from working in an Aboriginal Medical Service or ACCHO to a hospital or acute setting should be provided with a mentor to assist with the transition. Provide culturally safe and appropriate facilities and resourcing in all state-run sites.
- Provide culturally safe and appropriate facilities and resourcing in all state-run sites.
- Encourage the development of joint appointments of clinical pharmacists between State Government hospitals and Aboriginal community primary healthcare services.
- Strengthen the continuity of care on discharge through increased education of clinicians in acute care regarding CTG and how best to support the transition of CTG eligible and Aboriginal patients back to primary care and home.

Recommendation 3.9: Make more effective and innovative use of technology (ICT)

Rationale

Information and communications technology (ICT) was a key theme raised by service providers; its innovative use was seen as the future of healthcare in SA by both service providers and Aboriginal community members. Technologies that are patient- and provider-friendly and relevant, in the form of electronic patient records, hospital and practice management systems, telemedicine and tele-monitoring, are becoming integral to health care (although not yet sufficiently integrated) and will develop further into the future.

But these increasing ICT opportunities are not restricted to health service locations. Many health-related organisations, such as Diabetes SA, provide support and education materials on their websites and some telemedicine services (e.g. mental health; cardiac secondary prevention support; etc.) can be provided directly into people's homes.

However, as the 2011 Census showed, there are still clear divergences in the availability of Internet access in dwellings occupied by Aboriginal and non-Aboriginal households. Overall, close to four in ten (37.1%) Aboriginal households[d] had no Internet access, compared to 23.3% of non-Aboriginal households. In the APY Lands Landscape region, lack of Internet access rose to 93.4% of Aboriginal households (vs 22.0% of non-Aboriginal households).

Currently, a range of electronic patient management systems is used across and within primary health care organisations in SA: state-run Aboriginal primary care services use CHISM and Medical Director; ACCHOs use Communicare; private general practices predominantly use Medical Director, Best Practice, Zedmed, Medtech or Genie. These different systems do not link with each other.

Through the use of new technologies, there is real potential to address some of the barriers to Aboriginal people accessing better health care, particularly for the highly mobile part of this population. Data linkage, including genetic data, has the potential to inform positive changes in prediction, prevention, early detection, management and treatment.

However, it is important for Aboriginal people to be effectively and appropriately considered and consulted in the design and delivery of new technologies, if these are to have a substantial positive impact on health outcomes for this population. Additionally, it is essential that Aboriginal

[d] In this section, reference to an "Aboriginal household" should be understood to mean "dwelling with an Aboriginal household". The former term has been used in the text for brevity and readability.

people have sovereignty over their data at individual, community and population levels, so that Aboriginal people benefit from the changes they inform - as opposed to not benefiting, becoming more disadvantaged or being harmed.

The federal My Health Record program is designed to provide a secure, nationally-available, online summary of an individual's health information. Individuals registered for My Health Record (or their guardians) control what goes into it and who may access it. If given permission, the record allows doctors, hospitals, specialists and other healthcare providers to upload, view and share a person's health information and deliver optimal healthcare. This record system is particularly relevant for mobile populations accessing multiple healthcare providers.

South Australia is well positioned to lead the way in health-related ICT, especially with the establishment of Health Industries South Australia (HealthInSa) precinct and the state government's Open Data drive to support greater data exchange. South Australia also has more than 10% of its population already registered for My Health Record, more than any other state except Tasmania.

Pathways to Recommendation 3.9:

- ⇨ Work with COAG and the PHNs to embed routine use of My Health Record in general practice, allied health, specialists, ACCHOs, all community health centres and hospitals. A clear role out strategy should include:
  - all health services having the ability to clearly explain personal control of and potential benefits from My Health Record, to overcome patients' fears.
  - targeted and culturally appropriate promotion of My Health Record.
- ⇨ Deliver more specialist services to rural and remote areas using telemedicine.
- ⇨ Develop innovative approaches to T2DM prevention and management, using technology.

Enablers for Recommendation 3.9:

- ❍ Ensure all healthcare services state-wide have access to functional telemedicine capacity.
- ❍ Work with telecommunication service providers and federal agencies to increase access to affordable, high-speed Internet services among Aboriginal households.

Recommendation 3.10: Embed continuous quality improvement in primary care systems

Rationale

Continuous Quality Improvement (CQI) is the mechanism for driving best practice diabetes care in the South Australian Aboriginal Health sector.

There is an established, national CQI framework within the Aboriginal Health sector that has been operating since 2002. For over a decade, ACCHOs have been involved in the Audit and Best Practice for Chronic Disease (ABCD) project, which began in 12 Aboriginal PHC services and spread to more than 70.[36] In these settings, CQI began as a research initiative. This was followed by the One21Seventy CQI program, funded by the Commonwealth government and implemented in ACCHOs. State governments also funded the implementation of the same program in some of the State-run PHC services. In 2009, PHC services were able to move beyond being CQI research participants and embed the process as part of their core business. The ABCD National Research Partnership was established in 2010 to provide ongoing support for services implementing CQI.[37]

Each State and Territory NACCHO affiliate has a dedicated CQI coordinator to support their member services. The CQI process aims to improve the quality of PHC services, using evidence-based frameworks. Ideally, it is inclusive of all staff and allows for the objective analysis of clinical health results and a staff review of systems, which are used to inform positive improvements in healthcare.

These CQI programs have been shown to achieve improvements in the quality of diabetes care for Aboriginal and Torres Strait Islander people and have proven to be essential processes that should become a core part of the provision of T2DM care in Australia.

However, CQI results do show that there are varying degrees of quality across PHC services. Those PHC services in most need should be supported to improve the quality of care they provide.

There is no equivalent CQI framework within the mainstream PHC setting. This has implications for continual improvement of SA's PHC system, as well as monitoring how well our PHC system as a whole is delivering healthcare.

Pathways to Recommendation 3.10:

- ⇨ Support ongoing engagement and implementation of CQI processes and systems in all primary health care services in South Australia.
- ⇨ Provide additional support, retraining or resourcing to PHC services that have been identified as still needing to improve their quality standards and the care they provide.
- ⇨ Investigate with the PHNs establishing a CQI program within the private general practice sector that includes performance-based payments and annual reporting against the national key performance indicators.

GOAL 4: REDUCE INCIDENCE AND IMPACT OF DIABETES IN PREGNANCY

Recommendation 4.1: Embed diabetes in pregnancy in a state-wide Model of Care

Rationale

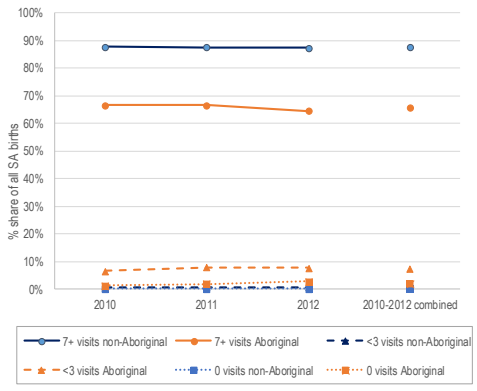
Women who have previously had gestational diabetes, or those at high risk of gestational diabetes, including Aboriginal women, should visit a GP as soon as possible and potentially be seen more often.

Gestational diabetes mellitus (GDM) is a risk factor for most adverse effects of pregnancy, labour and delivery.[38] Children of mothers who had GDM are more likely to be obese and develop T2DM in adult life. Diabetes prevalence among Aboriginal mothers living in SA was described earlier, with notable differences highlighted across Aboriginal Landscape areas.

Country Health SA Local Health Network runs a unique model of maternity care for Aboriginal women and their families, the *Aboriginal Family Birthing Program*, which is provided in a PHC setting using a partnership approach between Aboriginal Maternal Infant Care (AMIC) Workers or Practitioners, midwives and doctors. The women's needs are considered holistically, with emphasis on early intervention, culturally appropriate clinical services and care continuity through the antenatal, birth and postnatal journey.

In 2012, antenatal visit rates were significantly lower among Aboriginal women, with just 65% achieving 7 or more visits (84% of non-Aboriginal women) and 7.6% having fewer than 3 visits (vs 0.6%). 2.8% presented for birth with zero visits (0.1% of non-Aboriginal women) (Figure 10 unpublished Aboriginal Health Landscape).

Figure 10 Births to SA resident mothers, by mother's Indigenous status: Antenatal visits = 0, <3, 7+



Women who are pregnant generally refer themselves to a GP, typically around 12 weeks gestation, although Australia's Clinical Practice Guidelines recommend a first visit prior to 10 weeks. For an uncomplicated pregnancy, the guidelines recommend 7-10 antenatal visits, depending on whether it is a first or subsequent pregnancy.

Pathways to Recommendation 4.1:

- ⇨ Expand the Aboriginal Family Birthing Program to be state-wide, given that half the Aboriginal population in SA lives in the metropolitan area.
- ⇨ In the state-wide Model of Care (Recommendation 3.1), ensure that:
  - Aboriginal women are supported to routinely self-monitor their blood glucose at home.
  - women have options regarding their care and are made aware of these, including shared-care arrangements; Aboriginal Family Birthing program; GP care; other care pathways.
  - targeted programs or initiatives for Aboriginal women at risk of having gestational diabetes and those who have previously had gestational diabetes.
  - targeted programs for Aboriginal women who have pre-existing T2DM and are considering having a child or are pregnant.
  - all services and programs are culturally safe for Aboriginal women.
  - follow-up of mothers and babies occurs after birth, particularly the 6 week post-partum oral glucose tolerance test.
  - Country Health SA Diabetes Educators and other care options are better integrated with the Aboriginal Family Birthing Program.

Enablers for Recommendation 4.1:

- ❍ Ensure that appropriate cultural training is provided to midwives and doctors in all SA public hospitals and pregnancy-care services.
- ❍ Increase workforce opportunities and training for gestational diabetes in Aboriginal infant and maternal care.

GOAL 5: REDUCE THE INCIDENCE OF AND BETTER MANAGE T2DM AMONG PRIORITY GROUPS

Rationale

In the National Diabetes Strategy[4], Aboriginal and Torres Strait Islander people have been identified as a priority group. Within this South Australian Strategy for Aboriginal people, there are several parts of the Aboriginal population whose health needs generally, and diabetes needs in particular, should be given specific attention and, potentially, additional resourcing.

The following strategies go some way towards addressing the current lack of understanding about diabetes within these potentially more vulnerable sections of the community. Most of Goal 5's recommendations and actions address all of the priority groups, but some are specific to particular segments.

It should also be noted that these are not the only strategies and actions in this document that should be applied to these priority groups, which are interwoven throughout Aboriginal communities in South Australia. This must be borne in mind when reviewing or implementing all of the actions.

The priority groups in focus here include Aboriginal people who:

- are children or adolescents.
- are homeless.
- are in prison or on long term remand.
- have frequent unplanned hospital admissions.
- have intellectual and/or physical disability.
- have mental health conditions.

Recommendation 5.1: Improve our understanding of the health needs of priority groups, particularly with regard to T2DM prevention, management, secondary prevention and access to primary care

Rationale:

Little information is publicly available about the health of, in particular, transient, homeless or incarcerated Aboriginal people in South Australia - both general health and with regard to diabetes. Therefore, it may be difficult to develop interventions or initiatives unless there are increased agreements and opportunities to share data.

However, it is likely that recommendations for service improvements for some of these priority groups already exist and, where they show concordance with improving diabetes-related conditions, these should be implemented as a matter of urgency.

Pathways to Recommendation 5.1:

- ⇨ Foster additional data sharing between relevant agencies, to determine the T2DM and related health and lifestyle needs among the nominated priority groups.
- ⇨ Work with relevant agencies to better understand the needs of their clients with regard to diabetes prevention, early detection and ongoing management.
- ⇨ Review and, wherever possible, implement outstanding recommendations from previous strategies or policies associated with Aboriginal priority groups that are relevant to the prevention or management of T2DM, or the secondary prevention of complications.

Recommendation 5.2: Target prevention campaigns and programs for particular priority groups within the Aboriginal and Torres Strait Islander community

Rationale

A recurring theme emerging from the consultations was the need to pay greater attention to the links between mental health and diabetes. It was also reported that significant weight gain, a risk factor for T2DM, is common among Aboriginal men who become incarcerated.

More broadly, these examples highlighted the need to ensure that those in vulnerable situations or environments are also addressed by prevention campaigns and programs, not just the wider Aboriginal communities.

There is currently limited evidence of the relative incidence or prevalence of T2DM among the more vulnerable Aboriginal groups compared to the wider Aboriginal population, so it is difficult to determine what would be the overall or relative impact of improving prevention among these groups. However, it is readily understood that those groups would include Aboriginal people who are homeless, in prison, dealing with a mental health condition or experiencing physical or intellectual disability, and ethical principles alone would dictate that these people should be prioritised in any program design.

There is limited evidence around how, and to what extent, such priority groups of people accessing primary healthcare, if at all, and a better understanding of how primary care could be effectively delivered to these groups is central to improving their health status. Consequently, there is a corresponding recommendation under Goal 6, relating to developing better evidence on priority groups within the Aboriginal population.

Questions such as these would need to be resolved, and the relevant communities and stakeholder groups consulted for further input, prior to designing targeted campaigns or programs. Clearly, however, the needs of these groups are likely to be even more complex than in the broader Aboriginal population.

Pathways to Recommendation 5.2:

- Work with Aboriginal leaders, practitioners, advocacy groups and other relevant stakeholders to develop targeted programs, services or interventions aimed at reaching these complex segments of the population.
- Work with the Department for Correctional Services to ensure that Aboriginal prisoners are receiving comprehensive annual health assessments and follow-up care.
- Ensure that mental health clinicians and general practitioners managing mental health care plans are fully implementing the care plans and testing for diabetes annually.
- Support the Department for Education and Child Development (DECD) to work in partnership with SA Health and parents, to make the school environment supportive of Aboriginal children with type 2 diabetes, enabling them to manage their condition well within the school setting.

Enablers for Recommendation 5.2:

- Training of medical and administration staff, from all types of PHC and hospital services, to ensure priority groups receive respectful, effective and consistent healthcare equal to other patients and relevant to their needs.

Recommendation 5.3: Increase access to early detection and ongoing management of T2DM for priority groups

Pathways to Recommendation 5.2:

Actions for children and adolescents:

- Take opportunities to weigh children and adolescents whenever they present to a clinic, to enable early intervention.
- Institute regular screening for T2DM among children or adolescents who are overweight or obese and have a family history of diabetes, including diabetes in pregnancy.
- Maximise the administration of comprehensive health checks for children or adolescents, including POCT of capillary blood glucose levels

Actions for people who are homeless:

- Establish primary health care clinics within existing organisations that provide care to the homeless.

Actions for people who are in prison or long term remand:

- Ensure prisoners are receiving health checks on arrival and yearly, to initiate intervention and early detection.
- Ensure prisoners with T2DM have access to ongoing clinical management (action plans) and lifestyle support (e.g. recommended nutritional and physical activity) for this condition.
- Ensure prisoners diagnosed with chronic disease are evaluated regularly for mental health issues and mental health care is provided when needed.
- On release, facilitate the transfer of health information to the individual's GP or PHC clinic.

Actions for people with mental health conditions:

- Support and encourage service providers to complete annual diabetes screening for those people on mental health care plans.
- Develop clear referral pathways and shared care options for people on a mental health care plan to receive ongoing diabetes management.

Actions for frequent unplanned users of the hospital system:

- Identify individuals who have a high number of potentially preventable hospitalisations for diabetes and related conditions and work with them, their families and their primary care practice or practitioner to better manage their diabetes within the community setting to reduce their need for hospitalisation.
- Link patients with the Closing the Gap programs delivered by the PHNs, so they can access complex case management support if needed. For example, the model implemented by the Institute for Urban Indigenous Health(IUIH), QLD.

Actions for people with an intellectual and/or physical disability

- Work with disability services to ensure that people with disabilities have effective access to appropriate diabetes prevention and management services.

GOAL 6: STRENGTHEN RESEARCH, DATA USAGE AND POPULATION HEALTH MONITORING

Recommendation 6.1: Build a state-wide program of research regarding Aboriginal people with T2DM and gestational diabetes

Rationale

Australia has a long history of conducting high quality diabetes research contributing to international research efforts. However, the same cannot be said about the history of research with Aboriginal people, who may be the most researched people in the world but with limited benefit. While research ethics in Aboriginal Health are improving - including researching in partnership with, as opposed to being researched, and in culturally respectful and safe ways - Aboriginal people are yet to experience the full health and wellbeing benefits of research. To achieve this, it must be recognised that there are many communities, each with their own language, traditions, beliefs and practices, which influence health requirements. For programs to be successful, they will need to be tailored to specific needs.

Given this history, Aboriginal people need to be given every opportunity to be leaders and partners in research. A state-wide program of research should include research in prevention, delivering best practice care, reducing complications, improvements in medications and technologies.

South Australia is well positioned to deliver a state-wide program of research with three Universities (Adelaide, Flinders and South Australia) and the South Australian Health and Medical Research Institute (SAHMRI) that have strong collaborations with SA Health, the Aboriginal Health Council and their affiliate organisations. Each of these organisations are signatories to the South Australian Aboriginal Health Research ACCORD.[39]

Any research program must be translational. The newly established South Australian Advanced Health and Research Translational Centre should play a role in this.

The Next Steps[40] project for Aboriginal Health research, established in 2011, provides a comprehensive review of priorities for research within Aboriginal communities. In relation to T2DM the project identified the following recommended focus areas for research:

- the association between education and long-term health outcomes.
- prevention and early intervention.
- diabetes/obesity in adults and children, co-morbidities and multi-morbidities.
- cultural determinants of health.
- follow-up care including post-operative.
- identification of the barriers to Aboriginal people accessing general health services, tertiary and specialist services.
- pathways to increase access to care with particular attention on the differences for urban, regional and remote areas.
- an holistic healthcare model which is coordinated and resourced appropriately to include continuity of care and access to specialist services.

Pathways to Recommendation 6.1:

⇨ In addition to the Next Steps strategies, suggestions for research areas, from SA consultations, have included the need to gain better understanding of:

- maternal and child health, early development issues, including a particular focus on prevention and management of diabetes in pregnancy.
- the association between mental health and T2DM.
- diabetic retinopathy among Aboriginal people.

- the incidence and prevalence of diabetes among the Aboriginal population and among particular priority groups (children, adolescents, the homeless, those with a disability, those with mental health conditions) within the Aboriginal population.
- the expectations and needs of carers in the Aboriginal community.
- genetic markers of T2DM among Aboriginal and Torres Strait Islander people and prediction of complications associated with T2DM.
- health, social and service use disparities at a small area level of geography.
- the barriers and enablers associated with Aboriginal people seeking health checks and T2DM management.
- the prevalence of, and barriers to, regular self-testing of blood sugar levels among Aboriginal people with diabetes.
- primary health care and hospital use by Aboriginal people by identifying the barriers to greater use of primary care and in what ways, if at all, these vary by type of primary care organisation.

⇨ Implement interventions to reduce the incidence and the impact of diabetes in pregnancy.

⇨ Implement strategies to address barriers to health care access, including why people use emergency departments rather than waiting to visit a general practice or ACCHO, and whether this use is relevant to T2DM.

⇨ Implement lifestyle interventions for the prevention, early detection and management of T2DM.

⇨ Implement social interventions that target improving the social determinants of health for Aboriginal communities and families social.

⇨ Ensure that findings are used to inform practice and policy development in a timely manner by:

- having a strong and successful knowledge translation capability built into the research process.
- strengthening relationships between researchers, policy makers and service providers.

Enablers for Recommendation 6.1:

- Build an Aboriginal and Torres Strait Islander research workforce, particularly with skills in:
  - data analytics.
  - collaborative research.
  - clinical trials.
  - translational research.
- Increase the number of Aboriginal people with research Honours, Masters and PhD qualifications including level by:
  - developing chronic disease researcher career pathways.
  - making available scholarships.
- Develop the capacity of non-Indigenous researchers in Aboriginal health research.
- Promote all research to be done in partnership with Aboriginal people and abide by the SA Aboriginal Health Research ACCORD[39] and NHMRC Guidelines for Ethical Conduct in Aboriginal and Torres Strait Islander Health Research[41].
- Where beneficial to Aboriginal people in SA, partner with state, national and international research initiatives.

Recommendation 6.2: Enhance data capacity and usability

Rationale

Every Australian who has accessed medical care since 1993 has contributed data on the use of medical resources associated with various health conditions. These include hospitalisation, birth and death records, Medicare and Pharmaceutical Benefits Scheme data. Identification of Aboriginal people within these data sets has been poor; however, recording accuracy has improved over time.

In addition, national Key Performance Indicators on processes of care and health outcomes have been

collected, since 2013, from 200 primary health care organisations that receive funding from the federal Department of Health to provide services primarily to Aboriginal and Torres Strait Islander people. Also, the NDSS collates a voluntary register of people with diabetes, including women with gestational diabetes. This register records Indigenous status.

These data are national assets of immeasurable value in terms of research. They have the potential to strengthen the delivery of prevention and management of diabetes and indeed all chronic diseases, particularly if linked. These data have been captured but are yet to be used to their full potential. Improving access to these data will reduce the need to undertake new research to collect the same information, thereby reducing resource impact. Another benefit of these data is their collection in real-life setting as opposed to trial settings.

Pathways to Recommendation 6.2:

- ⇨ Liaise with primary health networks to:
  - Develop a way to monitor Aboriginal people's T2DM access to and quality of T2DM care received through general practices, state Aboriginal medical services, Royal Flying Doctor Service and ACCHOs.
  - Undertake periodic state-wide audit on diabetes and quality of care delivered in the primary care system. The aggregated results of which are made publicly available, in a safe way for services, fed back into the PHC system and used to inform change.
- ⇨ Establish a data linkage project incorporating demographic, social determinant, primary health care and hospital clinical data, service use and mortality data that has the ability to report at the small area level of geography.
- ⇨ Demonstrate the use and value of unique patient identifiers through a trial with a sub-population.
- ⇨ Monitor and respond to changes in geographical distribution of the Aboriginal community for future planning and include forced migration to metro areas for health service reasons.

Enablers for Recommendation 6.2:

- ❍ Improve the accuracy and identification of Aboriginal people within administrative datasets in public services and private general practices.
- ❍ Improve researcher access to existing data collections.

Recommendation 6.3: Employ continuous monitoring of T2DM and its associated complications at a population level

Rationale

It will be important to have in place good systems to monitor the impact of collective efforts at a population level. Aboriginal people should be involved in determining what is important to them that should be monitored and must be involved in monitoring the impact of policy initiatives on health and wellbeing. It may be necessary to strengthen and tailor existing monitoring systems to meet contemporary needs and be innovative in considering new systems.

Pathways to Recommendation 6.3:

- ⇨ Establish a diabetes and associated complications register for South Australia that includes women who have had diabetes in pregnancy and children born to mothers who have diabetes in pregnancy.
- ⇨ Use annual or biannual PHC audits led by the Primary Health Networks to monitor the provision of state-wide diabetes care.
- ⇨ Work with the Health Performance Council to establish a regular comprehensive reporting of T2DM (and diabetes in pregnancy) and its complications, including incidence, prevalence, management, avoidable hospitalisation rates, hospitalisation and complications.
- ⇨ Incorporate monitoring data into the data linkage project recommended in 6.2, to permit more comprehensive benchmarking and evaluation incorporating demographic, social determinant, primary health care and hospital clinical data, service use and mortality data at a small area level of geography.

ENABLERS

Responsible governance for implementation

This Strategy is for all organisations in South Australia who are involved in diabetes prevention and management with Aboriginal people and communities and for those services responsible for delivering the enablers supporting its implementation. Responsible governance will be essential to the successful implementation of this Strategy and building on the strengths of existing structures is recommended.

Results of the consultation clearly identified that Aboriginal people in South Australia want to be involved in the design, planning, delivery and evaluation of health care in partnership with funding bodies, policy makers and service providers. It is time to merge top down and bottom up approaches to decision-making, so that policies and organisations become more inclusive of Aboriginal people and responsive to their needs (World Health Organisation, 1998). This Strategy implementation could prove to be an exemplar of combining a top down and bottom up approach to addressing T2DM within this population.

The quality of local governance is associated with better outcomes and, to achieve these, any structure must give a voice to Aboriginal people and it must be dedicated to equity. Experts and Aboriginal people can collectively decide on actions that require new investment, re-investment or dis-investment.

Achieving responsible governance will require:

- A group that has decision-making powers, comprising representatives from AHCSA, State and Commonwealth government health departments and the Primary Health Networks, to oversee the implementation of the Strategy.
- The governance group to seek political champions at all jurisdictional levels.
- Implementation and monitoring groups that permit regional governance, comprising representation of Aboriginal health leaders, Aboriginal community members, all essential disciplines, all services involved in diabetes prevention and management, and researchers.
- Working with existing Aboriginal community governance structures: SA Health's Experts by Experience, Primary Health Networks' Aboriginal Health and Mental Health, Health Priority Groups

Increasing access to healthcare

Whilst access to health services for Aboriginal people is improving, there is still work to be done for Aboriginal people to be able to routinely and systematically access primary, secondary and tertiary care as and when needed. There still remains a need for the health system to focus specific attention on providing equitable access to all services for Aboriginal people. Improving access to all services can be realised by:

- Working with the Primary Health Networks to improve access to and coordination of care for Aboriginal people using private general practices.
- Increasing the availability of ACCHOs where a need is identified.
- Better resourcing and support of existing state government Aboriginal Medical Services.
- Considering transitioning services to those that have a greater ability to provide equitable healthcare for the Aboriginal population.
- Having flexible models of healthcare delivery related to opening hours, appointment times, provision of transport, home-based care.
- Reducing language barriers for Aboriginal people in accessing care.
- Successfully engaging with the Aboriginal community.
- Multiple disciplines providing the suite of diabetes care requirements within one setting.

Providing culturally safe care

It is essential that services are culturally appropriate and safe. They need to be built on the basis of developing trusting, ongoing relationships. Elements and means to achieving culturally safe health care have been evaluated and some approaches have a greater impact than others. For a mainstream healthcare service in Australia to consistently provide culturally safe healthcare, changes, organisational commitment and support for service providers to enable change are required. From July 2016 all PHN's are funded for the Integrated Team Care (ITC) activity which aims to improve care coordination for Aboriginal people with chronic disease and to improve cultural competency of mainstream primary care services.

Providing culturally safe healthcare to Aboriginal people has long been recognised as a priority in South Australia. Efforts have been made, at an organisational level and by particular services, to improve the ability of staff to be able to provide culturally safe services to Aboriginal people.

However, the provision of culturally safe care is not embedded within the entire healthcare system. This is a clear priority for the future. The Wellbeing Framework developed by Aboriginal people can contribute to informing how health services can provide culturally safe care.[42]

Embedding culturally safe care would require:

- A commitment from health care organisations, academic institutions and social support services.
- Aboriginal people co-leading the development and delivery of cultural safety training that is ongoing and available for all staff. This must be of local relevance.
- Implementation of a comprehensive, state-wide cultural safety training program that includes ongoing support for health professionals in the PHC and hospital settings. Existing cultural safety training programs may be built on to achieve this.
- The delivery of cultural safety training in undergraduate medical, nursing and allied health degrees, and the international medical graduates' training.

Integrated and coordinated services

With so many organisations in South Australia who each have an important role in health care provision it will be imperative that an integrated and coordinated approach to diabetes management is aimed for. Where possible, opportunities to coordinate with other chronic conditions could have the same or better outcomes for patients, their families, service providers and organisations. This Strategy has been developed by consulting widely and being inclusive of the Aboriginal community, multi-disciplinary service providers and key organisations. The following should be considered to achieve better service integration, cooperation and partnerships:

- Opportunities to better integrate within and between services should be taken, for example, with regard to clearly defining referral pathways.
- Seeking ways to foster better connectivity between government-run and private general and allied health practices, to optimise record and resource sharing.
- Service Agreements at an operational level between services and organisations, to facilitate formal partnership frameworks.

Well-designed systems and supportive infrastructure

South Australia has a world class health care system that caters for the majority of its population well. Five government-funded PHC services (3 ACCHOs, 2 AMSs) assessed the system within which they operate. It was found that, for the most part, the PHC sector is advancing across most areas that are important for diabetes management, albeit to varying degrees. Aggregated findings from the five services showed that the main areas for consideration overwhelming focused on:

- workforce issues that impact the use of evidence-based guidelines, and the electronic systems that support them.
- the provision of culturally safe care, including limited

involvement from the Aboriginal community in healthcare planning and evaluation.
- an absence of a family-centred approach to care.

The SA health system must consider the needs of the Aboriginal population in its design and infrastructure. System design and infrastructure should focus on:

- Abolishing institutional racism
- Ensuring that physical infrastructure is designed or modified to be more culturally-friendly, including introducing and embedding shared and open-air spaces rather than just isolated consulting rooms.
- Commitment at the health system level to building and maintaining chronic disease management infrastructure, including:
    - Improving the utility of information systems in preventing and managing T2DM.
    - Increasing the use of My Health Record by all health service providers.
    - Working with Communicare to include an indicator for patients with a high risk foot, eye, kidney and heart complications.

A strong diabetes workforce

Failure to invest in chronic disease prevention has resulted in a shift in how certain disciplines implement their roles. Those disciplines with lead roles in keeping people healthy or preventing chronic diseases have been reoriented towards providing health promotion and education only in settings that have a clinical focus. This has left a large gap in the delivery of group-based and community-based health education and health promotion initiatives for both primary and secondary prevention. Innovative solutions that are supported by a workforce, evaluated and adjusted accordingly will be required in order to develop the understanding of T2DM and its potential complications among the Aboriginal population in South Australia.

It is well established that evidence-based diabetes care can deliver better health outcomes. The implementation of evidence-based care requires a multi-disciplinary team approach. Guidelines alone will not deliver better outcomes. Due to the complex nature of the condition, each of the roles identified in the RACGP and NHMRC guidelines, as potentially important positions in the delivery of diabetes care, should be considered. In addition, multi-disciplinary teams will need to include areas of specialty for managing associated conditions, such as cardiovascular disease, mental health, retinal care, oral health and kidney health.

Building a strong diabetes workforce and achieving effective workforce buy-in would require the following:

- A workforce modelling exercise should be undertaken and resultant recommendations for action should be implemented.
- Develop a pathway for entry into Credentialed Diabetes Educator (CDE) or similar qualification for Aboriginal practitioners and health workers. Ensure this includes a mentoring program for 12 months post-completion.
- Consider establishing Specialist Diabetes Educator roles, not requiring post-graduate qualifications (but appropriately remunerated), to complement CDEs and, potentially, add tiers and other pathways to CDE accreditation.
- Explore the feasibility of training for diabetes health workers being delivered in collaboration with specialists, with staff being able to do placements in centres of excellence and have ongoing mentor relationships with a specialist for a period of time.
- Develop a workforce training package that deals with the spectrum of diabetes education including the epigenetics of T2DM, gestational diabetes and childhood type 1 diabetes.
- Support the continuation of the Country Health SA LHN's diabetes educator network.
- Establish a peer network for Aboriginal health workers working in diabetes management to communicate regularly, as a means of professional education and support.
- Establish strong clinical leadership with primary healthcare services to drive positive and evidence-based changes in prevention, early detection and management.

Sustainable funding

The current funding landscape mostly comprises

State and Commonwealth funding. Commonwealth funding in particular, is delivered through multiple avenues that are not always clearly accessible or, indeed, known about. In addition to mainstream funding initiatives, specific Aboriginal initiatives exist to reduce disparities in healthcare among this population.

Aboriginal people want to be empowered by understanding funding initiatives that they are eligible for, which can assist service providers in ensuring they have access to these. There were positive reports at the community forums on Closing The Gap funding initiatives such as the Coordinated Care and Supplementary Services program and the PIP-IHI.

Many of the Strategies in this Document are currently being done, however to advance them, some will require better and smarter resourcing.

- Achieving a clear understanding of funding pathways will be important for service providers, particularly those unfamiliar with Aboriginal health initiative.
- Better use of existing funding streams
- Developing funding models that resource holistic health care for Aboriginal people

Monitoring and evaluation

To confirm that collectively progress is being made, it will be important to the health system, service providers and the Aboriginal community to monitor the implementation of this Strategy. Key stakeholders, including the Aboriginal community must be involved in this process and reporting of progress should be made public. The results of the methods used to inform this Strategy have provided a sound baseline from which to monitor the Strategy.

- Monitor the implementation of this Strategy and publicly report on progress annually.
- Commission the development and validation of culturally-appropriate evaluation instruments and other tools, particularly for chronic disease related services.
- Measure the delivery of culturally safe care and its impact on service use by Aboriginal people.
- Work with the Health Performance Council to monitor:
  - hospital-based Aboriginal workforce targets
  - the level of racism within the health system, and
  - report on the implementation of this Strategy
- Build benchmarking and evaluation into all programs.

Addressing the social determinants of health

Since the turn of the century, a series of documents has been published describing a widely observed social gradient in health that exists in many countries.[43,44] This "social gradient in health" refers to a consistently observable relationship, at a population level, between a higher prevalence of a variety of risk factors for health and a higher prevalence of poor health outcomes among people with lower socio-economic status (whether this is measured by overall area disadvantage, income, education and/or labour market participation).

In South Australia, this phenomena has been described and geographically mapped[45] for the general population, and nationally it has been noted that Aboriginal people are over-represented in many measures of both poor health and low socio-economic status.[46,47]

Having meaningful employment affects health and wellbeing. Income through employment increases access to a range of options, provides independence from welfare and has societal benefits. Aboriginal people experience lower employment than non-Aboriginal people. Concerted efforts are required to increase the number of Aboriginal people in the workforce.

Lack of public transport in regional areas remains a significant issue. In general, available and affordable transport is a barrier to Aboriginal people accessing healthcare services.

To achieve health equity, Aboriginal people's social determinants of health must be improved. This is a massive, ongoing undertaking that will require health organisations to work with all tiers of government,

social services and Aboriginal communities. This will require:

- Advocate for increased public transport, in areas where there are limited transport options.
- Ensuring council planning and development policies include the need to assess health impacts, maximise opportunities for regular physical activity and build health-sustaining, infrastructure that is proactively Aboriginal-friendly for all age groups.
- Encouraging and supporting healthy environments that will facilitate safe physical activity for Aboriginal people of all ages. These places need not only to be safe, but also welcoming and actively inclusive.
- Encouraging and supporting healthy environments that allow Aboriginal people to meet regularly and engage in group activities.
- Encouraging local governments to source or provide sufficient funding to continue the Environmental Health Worker program with local communities.
- Encouraging local governments to train and employ Aboriginal people, as well as supporting health and social organisations or services that deliver Aboriginal-specific initiatives.
- Educating non-Indigenous people about the importance of group and community activities to Aboriginal people.

APPENDIX 1 CURRENT STATUS OF PATHWAYS AS AT JUNE 2016

Goals, Recommendations and the Pathways to achieving from an SA-wide Health System Perspective	New initiative ◇	Ad hoc, not system-wide ◈	Becoming established ◈	Needs strengthening ◆
GOAL 1: REDUCE THE INCIDENCE OF T2DM AND GESTATIONAL DIABETES				
Recommendation 1.1: Implement a state-wide approach to diabetes prevention that has application across the lifespan, consistent messages and is culturally appropriate	◇			
⇨ A State-wide prevention strategy must:				
o deliver a consistent message across the lifespan including pre-pregnancy, early childhood, school, youth, working age and the elderly.				
o launch a population health campaign that specifically focuses on preventing chronic disease and T2DM among Aboriginal people.				
o include specific approaches for people at high risk of developing T2DM and those with diabetes in pregnancy.				
o employ a family-centred approach in the delivery of education and awareness programs.				
o actively involve Aboriginal people in the design, production and delivery of materials produced to support prevention campaigns.				
o Adopt a holistic health approach with particular emphasis on social and emotional wellbeing				
⇨ Implementation of a State-wide prevention Strategy should consider:				
o using aboriginal ambassadors and sporting heroes to champion and promote healthy lifestyle messages. They should be state-wide personalities and local community people.				
o using wide ranging delivery channels including Aboriginal community and sporting events, innovative technology and social media, so as to reach young males as well as the broader Aboriginal population.				
o capturing Aboriginal people's experiences through their stories about making healthy choices and making these available to the Aboriginal population.				
⇨ Build a comprehensive healthy lifestyle component into the education curriculum that encompasses a holistic and culturally appropriate framework.		◈		
Recommendation 1.2: Develop systems and programs to increase the consumption of healthful diets				
⇨ Increase education at all ages regarding food and nutrition.		◈		
⇨ Ensure a particular focus on food purchasing and preparation with those in the family who purchase and prepare food.		◈		
⇨ Encourage the consumption of water rather than energy-dense soft drinks.		◈		
⇨ Ensure that different approaches are taken for metropolitan, rural and remote areas.		◈		
⇨ Incorporate traditional foods and food practices in promotions and programs around healthy eating, using equivalent products for urban settings where traditional game, roots, berries, etc. would be less available.		◈		

⇨ Include outcomes relating to food security in the Health Performance Council's annual State of Our Health report and the next State of Our Health Aboriginal Population Compendium.	◇			
Recommendation 1.3: Develop a standard intervention program for pre-diabetes				
⇨ Embed a standard intervention for pre-diabetes within the healthcare pathway, including referral pathways for those diagnosed with pre-diabetes or at risk of T2DM.	◇			
⇨ Create a common understanding of the risk factors, emphasising those that are modifiable, so Aboriginal people recognise T2DM is not inevitable.		◈		
Recommendation 1.4: Encourage Aboriginal people to use primary healthcare services				
⇨ Develop evidence-based programs to encourage Aboriginal people to utilise primary care to its fullest extent, taking into account the language barriers that exist in some areas.	◇			
⇨ Encourage Aboriginal people to self-identify their ethnicity to their medical practice(s), so their clinicians are aware of potential risk factors and can provide the full range of primary care initiatives available to Aboriginal people.		◈		
⇨ Encourage general practices to actively ask all patients, and accurately record, whether they are of Aboriginal and/or Torres Strait Islander origin.			◈	
GOAL 2: DETECT DIABETES EARLY				
Recommendation 2.1: Increase the number of Aboriginal and Torres Strait Islander people receiving annual health checks and relevant follow-up services				
⇨ Encourage GPs and other eligible practitioners to conduct more health checks under MBS 715, annually and whenever opportunities present.		◈		
⇨ Implement innovative approaches to screen those who are not currently having annual health checks, including after-hours opening times and taking services into communities.		◈		
⇨ Encourage Aboriginal people to self-identify their ethnicity to their medical practice(s) so they become eligible for the additional health checks and services available to Aboriginal people.		◈		
⇨ Ensure people who need follow-up care receive it.			◈	
⇨ Encourage Aboriginal people to request an annual health assessment.	◇			
⇨ Educate people with T2DM that their family members may have an increased risk of developing it too and should participate in annual health checks from childhood.		◈		
⇨ Promote the fact that comprehensive annual health checks are available to and recommended for Aboriginal people of all ages.		◈		
⇨ Embed use of Absolute Cardiovascular Risk Assessment in all primary care settings in SA.		◈		
Recommendation 2.2: Integrate Point Of Care Testing (POCT) within the Health System				
⇨ Investigate the inclusion of training for POCT in the Certificate 3 and/or Certificate 4 training for Aboriginal Health Practitioners and Credentialed Diabetes Educators.	◇			
⇨ Investigate the potential opportunities, barriers, advantages and disadvantages of extending supported POCT to other state-run health care organisations and rural general practices, including extending the Medicare rebate to mainstream services.	◇			
⇨ Investigate the potential to expand POCT to include testing for lipids and microvascular changes in eyes (diabetic retinopathy).	◇			
GOAL 3: IMPROVE DIABETES CARE AND REDUCE COMPLICATIONS				
Recommendation 3.1: Develop & Implement a T2DM Model of Care for Aboriginal people				
⇨ Develop a state-wide Model of Care in partnership with Aboriginal and Torres Strait Islander people. It must:	◇			
o allow for implementation across a variety of local settings.				

o adopt a wellness approach, particularly with regard to achieving and maintaining healthy lifestyles.				
o incorporate complementary care provided by traditional healers.				
o allow for a family approach to care, with health being considered and managed holistically; for example, a proportion of individuals will need support and linking with housing and welfare prior to their healthcare needs being addressed clinically.				
o facilitate the alignment of diabetes education, medical management and people's contexts.				
o address the provision of diabetes healthcare in a variety of service settings, including ACCHOs and Aboriginal health services, general practices, private allied health providers, specialists and hospitals.				
o facilitate a common language on diabetes management and education across disciplines.				
Recommendation 3.2: Get better at T2DM management				
⇨ Actively encourage all GPs to register with and utilise PIP- IHI, paying special attention to those services in areas where there is no ACCHO.	◇			
⇨ Increase access to diabetes management to males and employed people, by considering after hours clinics.	◇			
⇨ Link patients with complex needs requiring support to the Primary Health Networks' CTG and Supplementary Services program.			◈	
⇨ Make available access to Traditional Healers to complement western management of diabetes.				◆
⇨ Increase the proportion of people with diabetes who receive annual eye checks, feet checks, an absolute cardiovascular risk assessment and influenza and pneumococcal vaccinations.			◈	
⇨ Improve community coverage of diabetes care plans as appropriate.				
⇨ Actively work to improve the proportion of people with diabetes who have well controlled blood pressure, good glycaemic control, good lipid levels and normal kidney function.			◈	
⇨ Increase the number of people who receive follow-up care due to a poor result.			◈	
⇨ Implement innovative ways that allow for families to be involved in diabetes care planning.		◈		
⇨ Actively undertake brief interventions with people with diabetes and, if agreed, with their families in regard to quit smoking and improve physical activity, nutrition, wellbeing and self-management.		◈		
Recommendation 3.3: Detect complications early and manage them according to best practice				
⇨ Encourage Aboriginal people to enrol with the Health Care Homes initiative if their chosen provider is participating in the trial.	◇			
⇨ Ensure clinics have the infrastructure and resource capacity to streamline and optimise visiting allied health and specialist services.			◈	
⇨ Ensure visiting services are able to coordinate with local primary healthcare services to optimise patient time and increase service efficiency.			◈	
⇨ Ensure primary care services are able to become more involved in monitoring and coordinating shared care arrangements for Aboriginal people with diabetes who have multiple complications.		◈		
⇨ Ensure all who need follow-up care receive it.			◈	
⇨ Improve Aboriginal people's understanding of how to navigate the health system.		◈		
⇨ Ensure sufficient local and visiting health workforce to meet population based needs.		◈		
3.3.1: Reduce foot complications				

⇨ Primary care services to facilitate access to footwear and orthotics under the Supplementary Services program.		◈		
⇨ Increase the number of patients who receive foot checks as part of their annual cycle of diabetes care.		◈		
⇨ Ensure those patients who need it are seen by a podiatrist		◈		
⇨ Work with Communicare to include an indicator for patients with a high risk foot complications.	◇			
3.3.2: Reduce eye complications				
⇨ Increase the number of Aboriginal people with diabetes receiving annual eye checks including retinal examinations		◈		
⇨ Place retinal cameras, clear reading and referral pathways and training of staff in ACCHOs as a means of achieving the above.	◇			
3.3.3: Reduce cardiovascular events				
⇨ Increase the uptake of Absolute Cardiovascular Risk Assessments within primary healthcare settings, particularly among patients with pre-diabetes and diagnosed T2DM.		◈		
⇨ Increase the number of Aboriginal people who have ambulance cover.		◈		
3.3.4: Reduce chronic kidney disease				
⇨ Ensure the diabetes workforce within the PHC system have access to evidence-based protocols and the skills and specialist support to manage insulin adjustment.			◈	
⇨ Ensure patients receive adequate education from a skilled diabetic educator or equivalent in the use of insulin and home measurement of BSL's and initial self-management of hypoglycaemia.			◈	
⇨ Investigate the need for and feasibility of, more state-run, outreach, diabetes specialist services.	◇			
3.3.5: Mental health care				
⇨ Increase awareness among Aboriginal people and health practitioners about the link between diabetes and mental health.	◇			
⇨ Increase community-based, culturally safe mental health and drug and alcohol support for Aboriginal people that can be coordinated across SA in association with their diabetes care plans.				◆
⇨ Increase opportunities to develop team care arrangements (TCA's) for people with diagnosed diabetes and mental health conditions and promote mental health practitioners being part of TCA's for GP Management Plans (GPMP's) for diabetes.				◆
Recommendation 3.4: Improve oral health and dental care				
⇨ Promote the availability of concessional access to dental services for adults.		◈		
⇨ Give priority for oral health care to Aboriginal people with chronic health conditions, particularly diabetes.	◇			
Recommendation 3.5: Enhance secondary prevention by empowering patients and their families				
⇨ Develop an education program with culturally appropriate materials to emphasise the risks of developing CVD, CKD, eye, foot, dental and mental health complications among Aboriginal people with diabetes and their families. This should include:		◈		
o a focus on healthy eating and how to choose nutritious foods and avoid those that are energy-dense and nutrition-poor		◈		
o access for dietitians, podiatrists and CDE's to support local staff to run clinics and/or group sessions to educate Aboriginal community members, not just those diagnosed with T2DM, about the benefits of reducing risks associated with diabetes		◈		
⇨ Provide patient and family education on the use and storage of diabetes medication.			◈	

⇨ Support and skill patients to effectively self-manage T2DM on a daily basis within their own environments.		◈		
⇨ Ensure that individuals and their families are more involved in the development of their diabetes care plans. Apart from this being simply good practise, messages about complication may become more meaningful.		◈		
⇨ Consider peer support groups and support groups that involve health professionals. For example, Diabetes OLD has a private Facebook page for Aboriginal people with T2DM, which is run by a mentor - an Aboriginal person with diabetes who has received motivational training. People are invited by friends to joining the page.		◈		
Recommendation 3.6: Provide better support for carers				
⇨ Develop and resource evidence-based support programs for those caring for Aboriginal people, with flexibility for use in different regions.	◇			
⇨ Investigate and implement strategies to fast track health care for Aboriginal patients with carers.	◇			
⇨ Encourage health services in South Australia to be proactive and prompt their Aboriginal patients who have carers to provide written permission for the carers to have access to their health information, including scheduled appointments and medications.		◈		
Recommendation 3.7: Ensure access to medications and other supports				
⇨ Link CTG eligibility status to the patient so that the patient is eligible regardless of where they are and who the prescriber is				
⇨ For the State government to work with the Commonwealth government to ensure that hospital can issue eligible patients with discharge CTG PBS prescriptions				
⇨ Encourage general practices to become PIP-IHI registered so they can issue CTG scripts and specialist referrals for their Aboriginal patients; provide training to ensure they do.		◈		
⇨ Ensure general practices are welcoming places where Aboriginal people are comfortable to identify as Aboriginal, so they can receive the additional services, CTG medication and NDSS product subsidies for which they may be eligible.		◈		
⇨ Encourage private general practices to promote their 'CTG' status in their local areas, to enable Aboriginal people to find an appropriate service more easily.	◇			
⇨ Increase the enrolment of Aboriginal people on NDSS by embedding the enrolment process in PHC practice through:		◈		
o implementing a protocol that all staff working with patients with T2DM are able to facilitate NDSS enrolment.				
o nominating staff within PHC and hospital services to be responsible for ensuring patients with T2DM have access to NDSS enrolment.				
Recommendation 3.8: Reduce hospital self-discharge and improve continuity of care between the community and the hospital				
⇨ Reduce waiting times for specialist appointments and planned hospitalisations.			◈	
⇨ Given the considerable lag that can occur between referral and receiving an out-patient appointment, ensure that appointment letters clearly state the purpose of the visit and the original date and source of referral.		◈		
⇨ Encourage primary healthcare services to collaborate with SA's Primary Health Networks and, potentially, local councils to reduce the financial burden of up-front transport and accommodation for patients requiring planned hospital or specialist visits.		◈		
⇨ Develop a system for patient discharge that facilitates an integrated, consistent, approach to prevent people falling through the gaps between hospital and primary care; this should include:	◇			
o financial support for rural and remote residents who have been admitted by emergency transport and are not eligible for assisted travel to return home.				

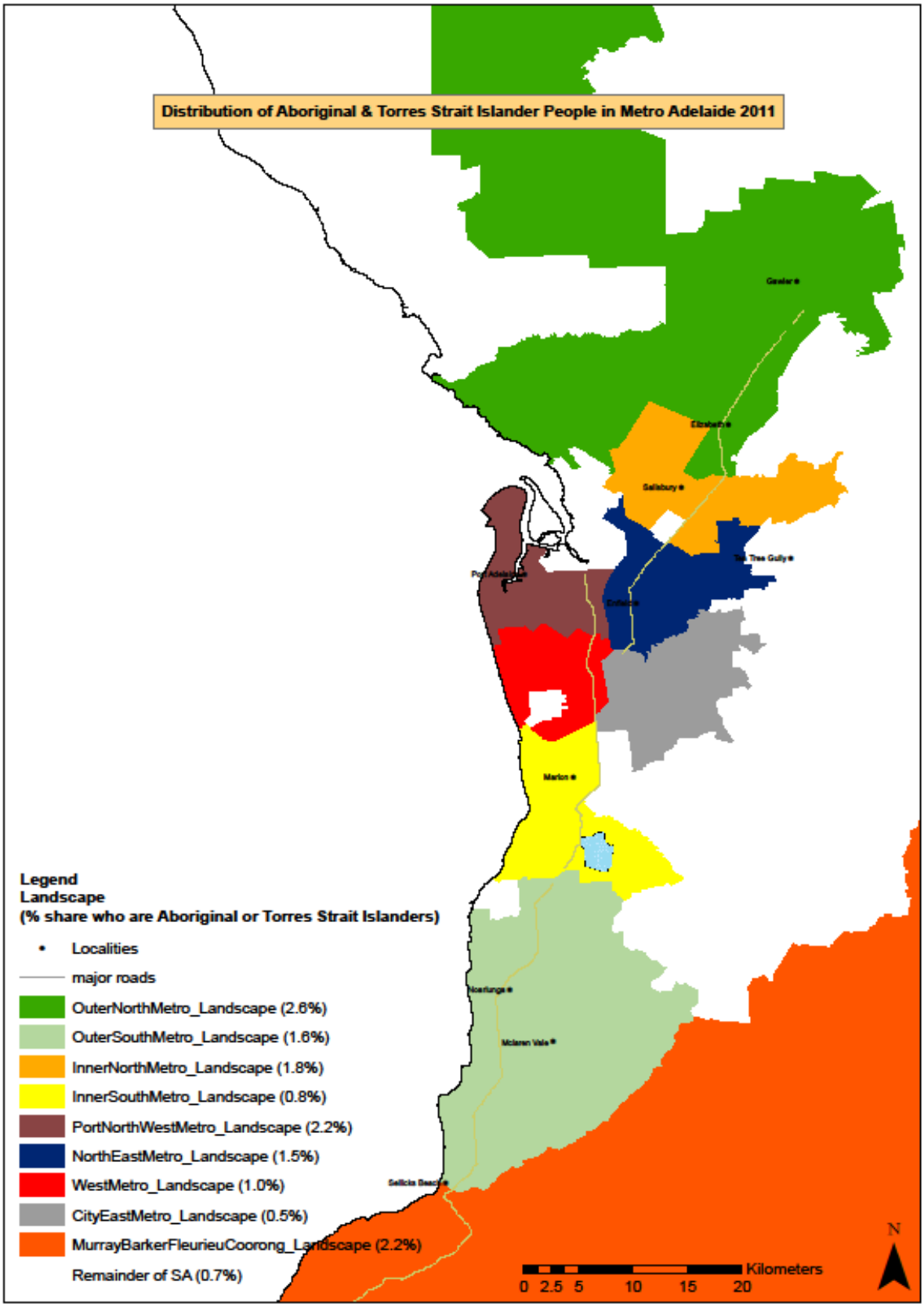
o patients, their GPs and specialists receiving hospital discharge reports.				
o better liaison between hospital and PHC services and consistent follow-up after discharge.				
⇨ Embed culturally safe care within hospitals.		◈		
Recommendation 3.9: Make more effective and innovative use of technology (ICT)				
⇨ Work with COAG and the PHNs to embed routine use of My Health Record in general practice, allied health, specialists, ACCHOs, all community health centres and hospitals. A clear role out strategy should include:			◈	
o all health services having the ability to clearly explain personal control of and potential benefits from My Health Record, to overcome patients' fears.				
o targeted and culturally appropriate promotion of My Health Record.				
⇨ Deliver more specialist services to rural and remote areas using telemedicine.			◈	
⇨ Develop innovative approaches to T2DM prevention and management, using technology.			◈	
Recommendation 3.10: Embed continuous quality improvement in primary care systems				
⇨ Support ongoing engagement and implementation of CQI processes and systems in all primary health care services in South Australia.				◆
⇨ Provide additional support, retraining or resourcing to PHC services that have been identified as still needing to improve their quality standards and the care they provide.		◈		
⇨ Investigate with the PHNs establishing a CQI program within the private general practice sector that includes performance-based payments and annual reporting against the national key performance indicators.	◇			
GOAL 4: REDUCE INCIDENCE AND IMPACT OF DIABETES IN PREGNANCY				
Recommendation 4.1: Embed diabetes in pregnancy in a state-wide Model of Care				
⇨ In the state-wide Model of Care, ensure that:		◈		
o Aboriginal women are supported to routinely self-monitor their blood glucose at home.				
o women have options regarding their care and are made aware of these, including shared-care arrangements; Aboriginal Family Birthing program; GP care; other care pathways.				
o targeted programs or initiatives for Aboriginal women at risk of having gestational diabetes and those who have previously had gestational diabetes.				
o targeted programs for Aboriginal women who have pre-existing T2DM and are considering having a child or are pregnant.				
o all services and programs are culturally safe for Aboriginal women.				
o follow-up of mothers and babies occurs after birth, particularly the 6 week post-partum oral glucose tolerance test.				
o Country Health SA Diabetes Educators and other care options are better integrated with the Aboriginal Family Birthing Program.				
⇨ Expand the Aboriginal Family Birthing Program to be state-wide, given that half the Aboriginal population in SA lives in the metropolitan area.	◇			

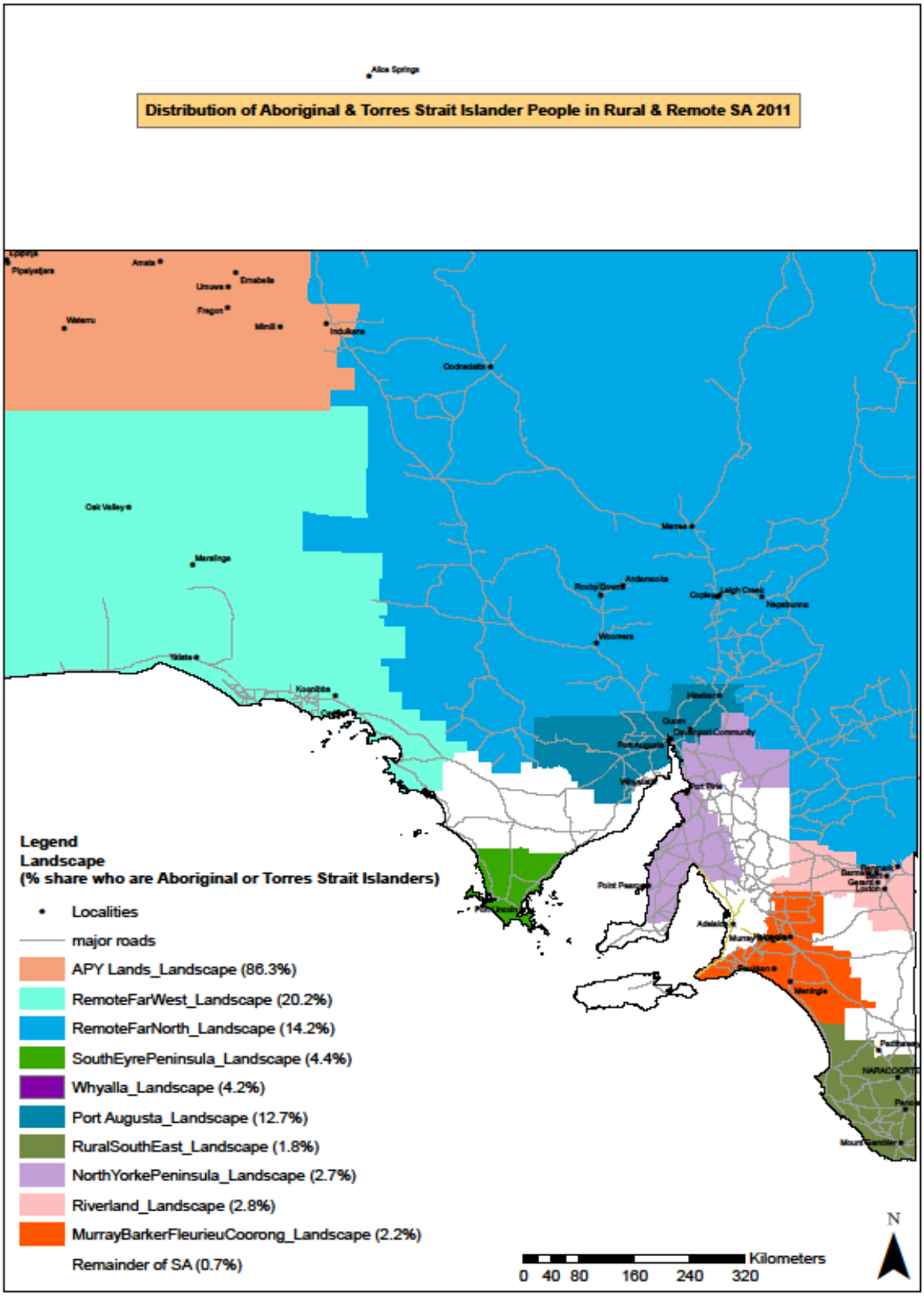
GOAL 5: REDUCE THE INCIDENCE OF AND BETTER MANAGE T2DM AMONG PRIORITY GROUPS				
Recommendation 5.1: Improve our understanding of the health needs of priority groups, particularly with regards to T2DM prevention, management , secondary prevention and access to primary care				
⇨ Foster additional data sharing between relevant agencies, to determine the T2DM and related health and lifestyle needs among the nominated priority groups.		◈		
⇨ Work with relevant agencies to better understand the needs of their clients with regard to diabetes prevention, early detection and ongoing management.		◈		
⇨ Review and, wherever possible, implement outstanding recommendations from previous strategies or policies associated with Aboriginal priority groups that are relevant to the prevention or management of T2DM, or the secondary prevention of complications.		◈		
Recommendation 5.2: Target prevention campaigns and programs for particular priority groups within the Aboriginal and Torres Strait Islander community				
⇨ Work with Aboriginal leaders, practitioners, advocacy groups and other relevant stakeholders to develop targeted programs, services or interventions aimed at reaching these complex segments of the population.	◇			
⇨ Work with the Department for Correctional Services to ensure that Aboriginal prisoners are receiving comprehensive annual health assessments.			◈	
⇨ Ensure that mental health clinicians and general practitioners managing mental health care plans are fully implementing the care plans and testing for diabetes annually.		◈		
⇨ Support the Department for Education and Child Development (DECD) to work in partnership with SA Health and parents, to make the school environment supportive of Aboriginal children with type 2 diabetes, enabling them to manage their condition well within the school setting.		◈		
Recommendation 5.3: Increase access to early detection and ongoing management of T2DM for priority groups				
Actions for children and adolescents				
⇨ Take opportunities to weigh children and adolescents whenever they present to a clinic, to enable early intervention.			◈	
⇨ Institute regular screening for T2DM among children or adolescents who are overweight or obese and have a family history of diabetes, including diabetes in pregnancy.		◈		
⇨ Maximise the administration of comprehensive health checks for children or adolescents, including POCT of capillary blood glucose levels		◈		
Actions for people who are homeless				
⇨ Establish primary health care clinics within existing organisations that provide care to the homeless.		◈		
Actions for frequent unplanned users of the hospital system				
⇨ Identify individuals who have a high number of potentially preventable hospitalisations for diabetes and related conditions and work with them, their families and their primary care practice or practitioner to better manage their diabetes within the community setting to reduce their need for hospitalisation.	◇			
⇨ Link patients with the Closing the Gap programs delivered by the PHNs, so they can access complex case management support if needed. For example, the model implemented by the IUIH, QLD		◈		

Actions for people with an intellectual and/or physical disability				
⇨ Work with disability services to ensure that people with disabilities have effective access to appropriate diabetes prevention and management services.		◈		
Actions for people who are in prison or long term remand				
⇨ Ensure prisoners are receiving health checks on arrival and yearly, to initiate intervention and early detection.			◈	
⇨ Ensure prisoners with T2DM have access to ongoing clinical management (action plans) and lifestyle support (e.g. recommended nutritional and physical activity) for this condition.	◇			
⇨ Ensure prisoners diagnosed with chronic disease are evaluated regularly for mental health issues and mental health care is provided when needed.		◈		
⇨ On release, facilitate the transfer of health information to the individual's GP or PHC clinic.		◈		
Actions for people with mental health conditions				
⇨ Support and encourage service providers to complete annual diabetes screening for those people on mental health care plans.			◈	
⇨ Develop clear referral pathways and shared care options for people on a mental health care plan to receive ongoing diabetes management.		◈		
GOAL 6: STRENGTHEN RESEARCH, DATA USAGE AND POPULATION HEALTH MONITORING				
Recommendation 6.1: Build a state-wide program of research regarding Aboriginal people with T2DM and gestational diabetes				
⇨ Areas of research to gain a better understanding of:			◈	
o Maternal and child health, early development issues, including a particular focus on prevention and management of diabetes in pregnancy.				
o The association between mental health and T2DM				
o Diabetic retinopathy among Aboriginal people				
o The incidence and prevalence of diabetes among the Aboriginal population and among particular priority groups (children, adolescents, the homeless, those with a disability, those with mental health conditions) within the Aboriginal population.				
o The expectations and needs of carers in the Aboriginal community.				
o Genetic markers of T2DM among Aboriginal and Torres Strait Islander people and prediction of complications associated with T2DM.				
o Health, social and service use disparities at a small area level of geography.				
o The barriers and enablers associated with Aboriginal people seeking health checks and T2DM management.				
o The prevalence of, and barriers to, regular self-testing of blood sugar levels among Aboriginal people with diabetes.				
o Primary health care and hospital use by Aboriginal people by identifying the barriers to greater use of primary care and in what ways, if at all, these vary by type of primary care organisation.				
⇨ Implement interventions to reduce the incidence and the impact of diabetes in pregnancy.		◈		
⇨ Implement strategies to address barriers to health care access, including why people use emergency departments rather than waiting to visit a general practice or ACCHO, and whether this use is relevant to T2DM	◇			
⇨ Implement lifestyle interventions for the prevention, early detection and management of T2DM		◈		
⇨ Implement social interventions that target improving the social determinants of health for Aboriginal communities and families	◇			

⇨ Ensure that findings are used to inform practice and policy development in a timely manner by:		◈		
o Having a strong and successful knowledge translation capability built into the research process.		◈		
o strengthening relationships between researchers, policy makers and service providers.		◈		
Recommendation 6.2: Enhance data capacity and usability				
⇨ Liaise with primary health networks to:			◈	
o Develop a way to monitor Aboriginal peoples T2DM access to and quality of T2DM care received through general practices, state Aboriginal medical services, Royal Flying Doctor Service and ACCHOs	◇			
o Undertake periodic state-wide audit on diabetes and quality of care delivered in the primary care system. The aggregated results of which are made publicly available, in a safe way for services, fed back into the PHC system and used to inform change.	◇			
⇨ Establish a data linkage project incorporating demographic, social determinant, primary health care and hospital clinical data, service use and mortality data that has the ability to report at the small area level of geography.	◇			
⇨ Demonstrate the use of unique patient identifiers through a trial with a sub-population	◇			
⇨ Monitor and respond to changes in geographical distribution of the Aboriginal community for future planning and include forced migration to metro areas for health service reasons.		◈		
Recommendation 6.3: Employ continuous monitoring of T2DM and its associated complications at a population level				
⇨ Establish a diabetes and associated complications register for South Australia that includes women who have had diabetes in pregnancy and children born to mothers who have diabetes in pregnancy.	◇			
⇨ Use annual or biannual PHC audits led by the Primary Health Networks to monitor the provision of state-wide diabetes care.	◇			
⇨ Work with the Health Performance Council to establish a regular comprehensive reporting of T2DM (and diabetes in pregnancy) and its complications, including incidence, prevalence, management, avoidable hospitalisation rates, hospitalisation and complications.	◇			
⇨ Incorporate monitoring data into the data linkage project recommended in 6.2, to permit more comprehensive benchmarking and evaluation, incorporating demographic, social determinant, primary health care and hospital clinical data, service use and mortality data at a small area level of geography.	◇			

APPENDIX 2 SOUTH AUSTRALIAN HEALTH LANDSCAPE REGIONS




Alice Springs
Distribution of Aboriginal & Torres Strait Islander People in Rural & Remote SA 2011
Legend
Landscape
(% share who are Aboriginal or Torres Strait Islanders)
Localities
major roads
APY Lands_Landscape (86.3%)
RemoteFarWest_Landscape (20.2%)
RemoteFarNorth_Landscape (14.2%)
SouthEyrePeninsula_Landscape (4.4%)
Whyalla_Landscape (4.2%)
Port Augusta_Landscape (12.7%)
RuralSouthEast_Landscape (1.8%)
NorthYorkePeninsula_Landscape (2.7%)
Riverland_Landscape (2.8%)
MurrayBarkerFleurieuCoorong_Landscape (2.2%)
Remainder of SA (0.7%)
Kilometers
0 40 80 160 240 320
N

APPENDIX 3 CTG PBS CO-PAYMENTS

The Pharmacy Guild of Australia

NACCHO
National Aboriginal Community Controlled Health Organisation
www.naccho.org.au

JOINT POSITION PAPER

Closing The Gap Pharmaceutical Benefits Scheme Co-payment Measure (CTG PBS Co-payment) – *Improving access to Pharmaceutical Benefits Schedule Medicines for Aboriginal and Torres Strait Islander people*

Background

The cost of medicines is a significant barrier to improving access to medicines for Aboriginal and Torres Strait Islander people. Despite two to three times higher levels of illness, PBS expenditure for Aboriginal and Torres Strait Islander people is about half that of the non-Indigenous average.[1]

The Australian Government introduced the CTG PBS Co-Payment Measure in July 2010 to reduce or remove the patient co-payment for PBS medicines for eligible Aboriginal and Torres Strait Islander patients living with, or at risk of chronic disease. The measure aims to reduce the cost of PBS medicines for Indigenous Australians and assist in the prevention and management of chronic disease in the Primary Health Care setting. The PBS Measure is one of 14 measures in the Closing the Gap – Tackling Indigenous Chronic Disease Package.

The CTG PBS Co-payment Measure

Patients access more affordable PBS medicines by attending a registered general practice that participates in the Indigenous Health Incentive (IHI) under the Practice Incentives Program (PIP) or a registered non-remote (urban or rural) Indigenous Health Service.[2]

After checking a patient's eligibility, general practitioners working in Aboriginal Health Services or mainstream general practices participating in the IHI register the patient in the measure. Once a patient is registered, prescribers use their software to annotate their prescription to indicate that it is to be dispensed with co-payment relief. Prescribers can manually annotate prescriptions by writing the letters 'CTG' and signing next to the annotation.

[1] Australian Institute of Health and Welfare AIHW *Expenditure on health for Aboriginal and Torres Strait Islander people 2010-2011* http://www.aihw.gov.au/publication-detail/?id=60129542787
[2] Department of Human Services: *Closing the Gap—PBS Co-payment Measure* http://www.medicareaustralia.gov.au/provider/pbs/pharmacists/closing-the-gap.jsp

Upon presenting a correctly annotated prescription to a pharmacy for dispensing, eligible patients who would normally pay the full PBS co-payment will pay the concessional rate. Those who would normally pay the concessional price will receive their PBS medicines without the requirement to pay a PBS co-payment. However, premiums for a small number of medicines will still need to be paid by the patient.1

Prescriptions for all of an eligible patient's PBS medicines are covered under the measure whether or not the medicines are being used to treat chronic or acute medical conditions.

Hospitals are excluded from participating in the CTG PBS Co-Payment Measure.

Participation rates[3]

Cumulative CTG PBS Co-payment Measure statistics for the period 1 July 2010 to 31 June 2014 show that:

- 258,316 patients are benefiting by accessing more affordable PBS medicines through the measure;
- In March 2014, 4,121 community pharmacies dispensed a 'CTG' annotated prescription and over 99% of community pharmacies have participated in the measure since implementation;
- 7,555,676 'CTG' annotated prescriptions have been dispensed under the measure;
- Uptake is highest in NSWwith 39.82% of CTG prescriptions dispensed, followed by QLD with 27.96%, WA with 10.89%, SA with 8.25%, VIC with 7.95%,TAS with 2.45%, NT with 1.92% and ACT with 0.77%; and
- The top 10 medicines dispensed under the Measure are: Atorvastatin, Metformin hydrochloride, Salbutamol Sulphate, Perindopril, Codeine phosphate with paracetamol, Paracetamol, Amoxycillin, Cephalexin, Esomeprazole magnesium Trihydrate and Amoxycillin with clavulanic acid.

Position

The Pharmacy Guild of Australia and National Aboriginal Community Controlled Health Organisation (NACCHO) support needs-based eligibility criteria for Aboriginal Peoples and Torres Strait Islanders living with, or at risk of, chronic disease who would experience setbacks in the prevention or ongoing management of chronic disease if the person did not take the prescribed medicine and are unlikely to adhere to their medicines regimen without assistance through the measure.

There is evidence that the CTG PBS Co-payment measure has improved access to medicines for Aboriginal and Torres Strait Islander people through reducing financial barriers resulting in improved health outcomes. However, enhancements need to be made to further improve access to medicines by Aboriginal and Torres Strait Islander peoples through the CTG PBS co-payment measure.

Key issues that need addressing include:

1. Interaction between programs and mobility of people living in remote areas
2. CTG eligibility status and requirement of annotation on the prescription
3. Coverage of medicines under the CTG co-payment measure
4. Improving Quality use of Medicines (QUM) support services
5. Promotion of the CTG co-payment measure

[3] Department of Health

1. Interaction between programs and mobility of people living in remote areas

The mobility of people living in remote areas needs to be considered along with their need to travel for specialist treatment and hospitalisation.

- Linking eligibility to the Medicare card would enable residents living in remote locations who access medicines through the S100 Remote Aboriginal Health Services Program (S100 RAHSP) to automatically access CTG prescriptions when travelling in rural and urban locations. This is currently not available and therefore limits an individual's ability to travel and or have timely and affordable access to medicines in the event of travel.

- Mechanisms are needed to enable the suite of PBS medicines programs to complement each other to better meet people's needs with particular regard to travel between remote and urban areas, and between hospital and home, whilst still maintaining access to their PBS medicines.

- Aboriginal Health Services in remote locations cannot currently provide both CTG prescriptions and medicines under the s100 RAHSP. These services should be able to provide services at their own discretion based on the needs of the patient whether under the S100 RAHSP or the CTG-PBS co-payment measure.

- Hospitals should be able to issue patients with discharge CTG PBS prescriptions. Prescriptions from hospitals are excluded from this measure, even if the patient is already registered for the measure. This change would assist with the continuity of care for patients regardless of location or health care setting.

- Integrating the CTG PBS measure with existing initiatives such as Quality Use of Medicines Maximised for Aboriginal Peoples (QUMAX) may increase the impact of PBS co-payment's measures.

2. CTG eligibility status and requirement of annotation on the prescription

When patients present with an unannotated CTG prescription at a pharmacy, they currently have to be sent back to the registered general practice or a registered non-remote Aboriginal Health Service (AHS) or the pharmacist has to contact the prescriber to clarify their intention causing a delay in access to medicines, even when the patient is known to the pharmacy to be eligible and registered for the CTG PBS co-payment measure

- Pharmacists should be granted the ability to annotate prescriptions if patients are already known to be eligible and registered for the CTG PBS Co-payment measure.

- CTG eligibility status should be linked to the patient to address the portability issue so that the patient is eligible regardless of where they are and who the prescriber is.

- Registration of an eligible patient should be linked electronically via the Medicare card to improve access and efficiency.

    - Linking the measure to the Medicare card would enable the pharmacist to call the Medicare helpline to check registration should a person present without their card. The PBS online system should also facilitate checking of CTG status.

- Electronic registration linked to the patient would resolve the access issue when they are away from their home base and/or not attending their principal health care provider.

- Linking CTG to the patient would overcome issues when medical practices are not registered under the Practice Incentives Program (PIP). Any prescriber should be able to annotate regardless of whether or not they are PIP registered.

- Linking the measure to the Medicare card will improve patient's privacy in community pharmacies. People who are eligible may be uncomfortable in self-identifying their eligibility if it is not raised by the GP or specialist.

- Registration for CTG should be in real time and on-line rather than having to mail or fax the forms.

- Alternatively, another system to consider is the system used by the Department of Veteran Affairs (DVA) where card holders have access to the range of pharmaceutical items available under the Repatriation Pharmaceutical Benefits Scheme (RPBS) [4]

3. Coverage of medicines under the CTG PBS co-payment measure

- The PBS listing for Aboriginal and Torres Strait Islander people needs to be expanded to better meet their health needs. There is a need to include commonly used medicines under the CTG measure, for example, vitamin D and Iron supplements. Inclusion of section 100 Highly Specialised Drugs (special supply arrangements) should also be considered as it will improve access for a range of medicines including Clozapine.

4. Improving Quality use of Medicines (QUM) support services

- Dose Administration Aids (DAAs) are designed to support at-risk patients (and/or their carers) in the community to better manage their medicine, with the objective of improving adherence and avoiding medicine misadventure and associated hospitalisation.

- There would be significant benefits to the patients and their families if DAA services were funded as part of the CTG PBS Co-payment measure along the lines of the Department of Veterans' Affairs (DVA)'s DAA funding model.

- The DVA service builds on their Quality Use of Medicines programs which include the Veterans' Medicines Advice and Therapeutics Education Services and aims to assist the veteran community to get the most out of their medicines and to reduce medicine mismanagement. Ongoing coordinated care is provided by the GP and pharmacist.

- Additional pictograms on medicines labels would improve health literacy along with other QUM education provided by health care providers. [5]

- The development of drug information sheets in plain English for the most commonly prescribed medicines would complement the use of pictograms and increase impact of the CTG measure. This can be achieved by modifying existing consumer medicines information (CMI).

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[4] Department of Veteran Affairs: *DVA Treatment Cards* http://www.dva.gov.au/service_providers/treatment_cards/Pages/index.aspx
[5] Dowse R and Ehlers M (2005) 'Medicine labels incorporating pictograms: do they influence understanding and adherence? Faculty of Pharmacy', *in Patient Education and Counseling*, Jul 2005, vol. 58, no. 1, p. 63-70.

5. Promotion of the CTG co-payment measure

- Information on how medicines are dispensed in different situations for Aboriginal and Torres Strait Islander peoples should be readily available to both patients and health professionals.

- This consolidated information would assist patients in understanding and handling expectation as they move between different health settings.

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[3] Burrow S, Ride K. Review of diabetes among Aboriginal and Torres Strait Islander people [Internet]. 2016. Australian Indigenous HealthInfoNet. [cited 2016 Jul 20]. Available from: http://www.healthinfonet.ecu.edu.au/chronic-conditions/diabetes/reviews/our-review

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