Aboriginal Health Council of Western Australia

Submission to the Standing Committee on Health, Aged Care and Sport

Inquiry into Diabetes

29 September 2023

The Aboriginal Health Council Western Australia (AHCWA) welcomes the opportunity to provide a submission to the House of Representatives Standing Committee on Health, Aged Care and Sport Inquiry into Diabetes (the Inquiry).

AHCWA is the peak body for 23 Aboriginal Community Controlled Health Services (ACCHS) in Western Australia (WA). WA ACCHS are located across geographically diverse metropolitan, regional and remote locations. They deliver the most effective model of comprehensive primary health care for Aboriginal people[1] and are in a unique position to identify and respond to the local, cultural and health needs of Aboriginal people and their communities. AHCWA exists to support and act on behalf of its 23 Member ACCHS, actively representing and responding to their individual and collective needs.

This submission responds to all of the Inquiry's Terms of Reference and provides feedback from AHCWA's Member Services, as well as research findings from Aboriginal communities throughout WA. The submission focuses primarily on Type 2 diabetes mellitus (diabetes) and gestational diabetes mellitus (GDM), highlighting the social determinants of health that cause, and further increase the risk of, diabetes for Aboriginal people, drawing attention to the need to address the recent rise in juvenile diabetes among Aboriginal young people. We discuss the essential role of ACCHS in diabetes screening, diagnosis, management and education for Aboriginal people, and recommend ways that Government can support ACCHS to reduce barriers experienced by Aboriginal people with diabetes. Finally, we explore the effectiveness of current Australian Government policies and programs to prevent, diagnose and manage diabetes and ways in which they might be more effective and further support Aboriginal people with diabetes and the Four Priority Reforms of the National Agreement on Closing the Gap.

Background

Diabetes is the fastest growing chronic disease in Australia, with just over 1.3 million people living with diabetes[2] and it is widely estimated that many people are living with undiagnosed Type 2 diabetes. In Australia, Aboriginal communities are disproportionately affected by diabetes, with prevalence rates at least three times greater, hospitalisation rates four times higher, and death due to complications five times more likely than in non-Indigenous Australians.[3] In 2020, 15 per cent of Aboriginal mothers had gestational diabetes,[4] which may cause complications for both the mother and baby during pregnancy, and increases the risk of the mother developing Type 2 diabetes later in life. Rates of Type 2 diabetes in pregnancy are ten-fold higher than in non-Indigenous Australian women, and Type 2 diabetes is a key

[1] Throughout this submission, AHCWA uses the term 'Aboriginal' to respectfully refer to all Aboriginal and Torres Strait Islander people across WA.
[2] https://www.aihw.gov.au/reports/diabetes/diabetes/contents/summary.
[3] Diabetes: Australian facts, About - Australian Institute of Health and Welfare (aihw.gov.au).
[4] https://www.aihw.gov.au/reports/mothers-babies/indigenous-mothers-babies/contents/antenatal-period.

contributor to higher rates of adverse perinatal outcomes among Aboriginal women.[5] Diabetes increases the risk of health complications, including heart disease, stroke, kidney disease, blindness and lower limb amputation. Moreover, diabetes is frequently associated with other chronic health conditions, such as cardiovascular disease and chronic kidney disease. Diabetic nephropathy, which is more common in Aboriginal people, is the single leading cause of end-stage renal disease and Aboriginal people living in remote areas have 20 times the incidence rate compared with the national average.[6]

Across WA, diabetes and related complications negatively impact the health of Aboriginal people across generations and throughout the life course. Gestational diabetes is the fastest growing type of diabetes in WA. Member services have observed many women remaining undiagnosed until later stages of their pregnancies which can lead to poorer pregnancy outcomes and long-term consequences for mothers and children. In WA, there were 290 young people on the Perth Children's Hospital register who developed Type 2 diabetes as children, 50 per cent of whom were Aboriginal.[7] AHCWA Member Services across various regions of WA have noted that diabetes in youth, which was once rare, is becoming more prevalent in younger age groups and that the severity of the condition among young people can proceed rapidly. Early onset places these children and adolescents at heightened risk of comorbidities and diabetes complications with glycaemic control deteriorating faster than in adults. Cataracts and diabetic retinopathy continue to be the leading cause of vision loss in Aboriginal people in WA and Aboriginal people living in remote areas have more than 20 times the incidence of end-stage renal disease compared with the national average.

AHCWA's recommendations:

Recommendation 1: All strategies, policies and programs related to diabetes and obesity must align with the National Agreement on Closing the Gap priority reform areas, acknowledging the social determinants of health and impacts of colonisation that increase the risk of diabetes and other risk factors among Aboriginal people.

Recommendation 2: Fund the Aboriginal Community Controlled Health Sector to lead and deliver evidence-based and sustainable diabetes prevention and health promotion programs for Aboriginal people as part of core business.

Recommendation 3: Ensure the National Strategy for Food Security in remote First Nations Communities (currently in development) is evidence-based, appropriately funded and implemented in keeping with the National Agreement on Closing the Gap priority reform areas.

Recommendation 4: Government to recognise the value of OGTT blood sample collection, and consider engaging with the *Royal College of Pathologists of Australasia* (RCPA) to update guidelines in keeping with findings of the ORCHID study, to avoid under-diagnosis of Gestational Diabetes Mellitus (GDM).

[5] Maple-Brown L, Lee IL, Longmore D, Barzi F, Connors C, Boyle JA, et al. Pregnancy And Neonatal Diabetes Outcomes in Remote Australia: the PANDORA study-an observational birth cohort. International Journal of Epidemiology. 2019;48(1):307-18.
[6] Australian Institute of Health and Welfare. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples 2015. Canberra: AIHW, 2015.
[7] Sophie McGough Personal communication 17 August 2023.

Recommendation 5: Fund the Aboriginal Community Controlled Health Sector to design and establish locally-relevant and comprehensive models of diabetes care which meet the needs of people with diabetes across the life course.

Recommendation 6: Invest in the upskilling of Aboriginal Health Workers and Practitioners to deliver culturally-safe diabetes education programs.

Recommendation 7: Expand eligibility for continuous glucose monitoring (CGM) systems to include Aboriginal and Torres Strait Islander people with Type 2 Diabetes.

Recommendation 8: Review PBS eligibility criteria for GLP-1 analogues to improve flexibility of choice to align with individual's unique risk profiles and preferences, including ensuring eligibility for Aboriginal and Torres Strait Islander people with obesity as an approach to diabetes prevention.

Recommendation 9:

a) Fast track implementation of key activities of the National Preventive Health Strategy, such as establishing a sugar tax, which must be combined with subsidized access to affordable healthy foods.
b) Create structures for local government areas, shires and ACCHS to work with young people to improve town infrastructure planning which allow participation and the voices of young Aboriginal people in creating healthy environments.
c) Expand investments in Aboriginal school-based programs and ranger programs that combine the benefits of being active and outdoors, and facilitating transfer of traditional skills for all members of the community.

Recommendation10: Include the ACCHS sector in the negotiation of the 2024 National Diabetes Services Scheme contract to provide input into determining who receives funding for education, prevention and management that is delivered to Aboriginal people with diabetes.

Recommendation 11: Continue funding and support for the QAAMS Program.

Causes of diabetes in Australia, including risk factors such as genetics, family history, age, physical inactivity, other medical conditions and medications used

It is widely recognised that, across the general population, there are a wide range of risk factors for developing diabetes. Non-modifiable risk factors include family history, genetics, age, sex and ethnicity. Biomedical risk factors such as high blood pressure, impaired glucose tolerance, and overweight and obesity, may be influenced by health behaviours, and behavioural risk factors such as unhealthy diet, insufficient physical activity and smoking may potentially be modified. These factors all contribute to Aboriginal people's high risk of diabetes. Modifying behavioural risk factors, where possible, may potentially reduce an individual's risk of developing Type 2 diabetes prematurely and result in decreased risk of complications.

While the Inquiry has noted genetic, biomedical and behavioural risks for developing diabetes, it is essential that the Committee recognise the structural inequalities that disproportionately affect Aboriginal people and both cause, and increase the risk of, diabetes in Aboriginal men, women, mothers and their babies. These include the social determinants of health, which are in turn shaped by a wider set of historical, social, cultural, geographical, economic and community factors. In the case of diabetes, food insecurity and the high cost and inaccessibility of healthy foods also play a role in inability to meet nutritional needs and in turn, making Aboriginal communities more susceptible to the risk factors for diabetes. Other key structural inequities that pose a great risk to poor health outcomes include low levels of household income, a lack of employment opportunities, inadequate housing and other environmental health factors, and the ongoing effects of intergenerational trauma. The ACCHS model of care that Member Services operationalise in practice that looks at the whole person, family, community, and diverse needs of every individual person, is best placed to deliver diabetes promotion and education while taking into account all holistic wrap around supports to achieve the best possible outcomes.

The impact of food insecurity and inaccessibility of healthy food

From the earliest start in a child's life, consuming nutritious food is essential to good physical health and development. Mothers who are well nourished are more likely to have children of normal birth weight. Good maternal nutrition, and healthy infant and childhood growth, are fundamental to achieving and maintaining good health throughout the life cycle. The lifelong impacts of poor maternal and infant health and nutrition are well known and include low birth weights and failure to properly grow and develop in infancy, which affects childhood growth and susceptibility to chronic disease.[8] Research shows that a degree of a person's susceptibility to chronic diseases is determined during pregnancy and is impacted by the mother's exposure to risk factors, one of which is factors surrounding poor nutrition.[9]

Prior to colonisation, Aboriginal people and their communities used the land, waterways and seas as their sources of food. Loss of these natural food sources, due to decreased access to Aboriginal land as cared for by community, caused a gradual shift from a traditional, varied and nutrient dense diet that is high in fibre, low in fat and without refined carbohydrates, to an energy-dense Westernised diet, high in fat and

[8] Barker, 1989 in https://www.telethonkids.org.au/globalassets/media/documents/aboriginal-health/start-stronger-live-longer/2__mat_health_final.pdf.
[9] IBID.

refined sugars.[10] Moreover, when food is scarce and incomes are less, people are often more likely to maximise calories per dollar spent and foods rich in fats, refined starches and sugars as they represent the lowest-cost options. The reality for many Aboriginal communities is that eating majority healthy options like lean meats, grains, and fruits and vegetables are more expensive and not readily and prioritised. AHCWA's Member Services have expressed concern regarding the dual burden Aboriginal communities face as a result of food insecurity, noting the co-existence of (1) underweight children as a result of not having enough nutritious food, and (2) children with early signs of overweight and obesity due to easily accessible high energy and low nutrient foods.

Children who are nutritionally deficient are more susceptible to chronic conditions later in life, including diabetes, hypertension, heart disease and renal failure. Clinical staff from AHCWA's Member Services (from locations including the Pilbara, Ngaanyatjarra Lands, Perth, and the Kimberley) all highlighted the spectrum of negative effects on childhood health they have seen in clinical settings as a result of calorie dense foods, including childhood obesity and early onset of Type 2 diabetes. Member Services from the Kimberley, Pilbara, Goldfields and Mid-West have noted children as young as 10 years old being diagnosed with diabetes and have said that diabetes prevention education and resources for young people are critical to address this.

Nutritious food tends to cost more and require refrigeration and preparation. The latest March ABS inflation data showed food inflation climbed to 7.5 per cent, with the biggest jump in the price of dairy and breads/cereals — at 15.2 per cent and 11.2 per cent respectively.[11] Cost of living pressures for Aboriginal people are exacerbated by inadequate income support and fewer employment opportunities as there is a consistent reduction in median gross personal income per week with increasing remoteness.[12] In remote Aboriginal communities, the higher cost of food is one of the biggest barriers to achieving food security. Surveys have found that healthy food baskets cost about 20-49 per cent more in remote areas than in major cities, and that the cost of food rises faster than the Consumer Price Index (CPI) for Australia.[13]

In its submission to the inquiry into food pricing and food security in remote communities, the WA Government acknowledged that food prices in Halls Creek and Fitzroy Crossing were 32 per cent and 29 per cent respectively, higher than in Perth.[14] Coupled with the high percentage of residents in remote communities earning a low income, Aboriginal people must spend a greater percentage of their income on food. It has been estimated that in some Aboriginal communities, 34 to 80 per cent of the family income is required to purchase healthy diets; this is compared to 30 percent for the lowest income families more generally, and 14 per cent for the average Australian family.[15]

Barriers to accessing affordable and healthy food combined with socioeconomic factors are inter-related and cannot be considered independent of each other, including low income, unemployment and welfare dependence; and housing issues such as overcrowding and poor environmental health. If Aboriginal

[10] Lee A, Ride K (2018) Review of nutrition among Aboriginal and Torres Strait Islander people. Australian Indigenous Health Bulletin 18(1) https://healthbulletin.org.au/wp-content/uploads/2018/02/Nutrition-Review-Bulletin-2018_Final.pdf.
[11] https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/monthly-consumer-price-index-indicator/jul-2023.
[12] Australian Institute of Health and Welfare's 2021 report titled 'Indigenous income and finance'.
[13] Pope, A Submission on Performance Audit of Food Security in Remote Indigenous Communities (2014).
[14] https://www.aph.gov.au/DocumentStore.ashx?id=f5f98a94-9d04-48e7-a339-8e9463cebb32&subId=686472.
[15] Lee A, Ride K (2018) Review of nutrition among Aboriginal and Torres Strait Islander people. Australian Indigenous Health Bulletin 18(1).

people are to enjoy long and healthy lives – Outcome 1 of the National Agreement on Closing the Gap – the underlying social determinants of health must be addressed by the Federal Government. Similarly, food insecurity in Aboriginal communities can only be meaningfully addressed by tackling all of the underlying determinants of health and wellbeing, in a cohesive and practical manner.

Recommendation 1: All strategies, policies and programs related to diabetes and obesity must align with the National Agreement on Closing the Gap priority reform areas, acknowledging the social determinants of health and impacts of colonisation that increase the risk of diabetes and other risk factors among Aboriginal people.

Recommendation 2: Fund the Aboriginal Community Controlled Health Sector to lead and deliver evidence-based and sustainable diabetes prevention and health promotion programs for Aboriginal people as part of core business.

Recommendation 3: Ensure the National Strategy for Food Security in remote First Nations Communities (currently in development) is evidence-based, appropriately funded and implemented in keeping with the National Agreement on Closing the Gap priority reform areas.

New evidence-based advances in the prevention, diagnosis and management of diabetes, in Australia and internationally

In this section, AHCWA highlights the strength of the ACCHS sector and draws attention to Aboriginal-led research that informs and improves localised ways of working and improving outcomes for Aboriginal people with diabetes. We discuss Aboriginal-led partnerships that provide culturally appropriate services, support and education for Aboriginal people. This section also includes the value of innovative technologies and effective medications.

For Aboriginal people, good health is more than the absence of disease or illness; it is a holistic concept that includes physical, social, emotional, cultural and spiritual wellbeing, for both the individual and the community. The ACCHS holistic Model of Care treats patients within that framework and the most effective care for Aboriginal people is delivered in Aboriginal community-controlled clinics, where Aboriginal people feel safe, know people and understand the treatment. The important role that ACCHS have in leading culturally safe care in community, and the need to ensure more mainstream services provide culturally responsive care, is highlighted in the National Aboriginal and Torres Strait Islander Health Plan 2021-2031, which identifies culture as a key protective factor for Aboriginal health and wellbeing.

Gestational diabetes and the ORCHID Study

Gestational diabetes mellitus (GDM) occurs during pregnancy and is usually resolved after the baby is born.[16] High blood glucose levels can cause complications for both the mother and baby during pregnancy and GDM also increases the risk of developing Type 2 diabetes for the mother. Screening is essential and current guidelines recommend testing all pregnant women at 24–28 weeks gestation using the oral

[16] Diabetes Australia 2020c. Gestational diabetes. Viewed September 2020.

glucose tolerance test (OGTT) with re-testing at 6–12 weeks post-partum recommended for women diagnosed with GDM. AHCWA's Member Services in the Kimberley, Pilbara, Western Desert, and in other regions have discussed the challenges women face in completing the OGTT. Women report that they find the sugar drink difficult and have trouble fasting before the OGTT. Clinicians discuss the challenges they face supporting women to spend hours in the clinic during the long timeframe necessary to perform the test and three blood draws.

The ORCHID Study is a project collaboration between the Rural Clinical School of WA, Kimberley Aboriginal Medical Services (KAMS) and WA Country Health Service (WACHS). The aim of the study is to develop algorithms to improve predicting the development of and screening for hyperglycaemia in pregnancy in rural communities.[17] The project has 27 sites across the Kimberley, Mid-West, Southwest, Great Southern and Goldfields regions of WA, and explored diabetes in pregnancy from 2015 to 2018 finding that 50 per cent of women were not being screened for GDM using the current OGTT. The study estimated that of those women who were tested by OGTT, 62 per cent of GDM was missed due to glucose sample instability, whereby cells inside blood sample tubes continue to convert glucose into energy long after collection, causing glucose levels to drop. In rural areas, there can be a long delay between collecting bloods and the samples reaching the laboratory which can further contribute to an under-estimate of blood glucose and therefore under-diagnosis of GDM.

The study found that the issue of glucose sample instability could be improved by using an alternative blood collection tube (fluoride-citrate (FC) mix tubes). These tubes have been used in the Kimberley since September 2019 in order to give more accurate glucose results, even if the blood sample takes a long time to reach the laboratory. Researchers continue to advocate to the *Royal College of Pathologists of Australasia* (RCPA) to consider updating guidelines to use FC Mix tubes for OGTT glucose testing.

The ORCHID study also found that HbA1c testing in early pregnancy identifies Aboriginal women with high-risk of GDM and large babies. Almost three-quarters (71 per cent) of Aboriginal women with an early HbA1c ≥5.6% went on to have a positive OGTT in pregnancy, likely indicating these women had pre-existing pre-diabetes. In the Kimberley all Aboriginal women are offered an early HbA1c at their first antenatal visit[18] to identify pre-existing diabetes and pre-diabetes. The use of HbA1c in early pregnancy is consistent with guidelines in Canada[19] and New Zealand[20], which recommend HbA1c as a routine part of booking antenatal blood tests. Diagnosis of pre-diabetes and diabetes in early pregnancy, and GDM by OGTT during pregnancy, enable appropriate monitoring and management of these conditions through pregnancy to improve outcomes for both mother and baby, including reducing the risk of having a large for gestational age baby.

Recommendation 4: Government to recognise the value of OGTT blood sample collection, and consider engaging with the *Royal College of Pathologists of Australasia* (RCPA) to update guidelines in keeping with findings of the ORCHID study, to avoid under-diagnosis of Gestational Diabetes Mellitus (GDM).

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[17] Kimberley Aboriginal Medical Services http://kams.org.au/research/current-projects/.

[18] Kimberley Aboriginal Health Planning Forum (KAHPF) Diabetes in pregnancy clinical protocol: https://static1.squarespace.com/static/5b5fbd5b9772ae6ed988525c/t/64364808313b536950e68fb6/1681278985597/Diabetes_in_Pregnancy_Kimberley_Clinical_Protocol_KAHPF_112017.pdf.

[19] Diabetes Canada Clinical Practice Guidelines Expert Committee. 2018. Diabetes and Pregnancy Clinical Practice Guidelines. Canadian Journal of Diabetes, 42. https://doi.org/10.1016/j.jcjd.2017.10.038.

[20] Ministry of Health. 2014. Diabetes in Pregnancy: Quick reference guide for health professionals on the screening, diagnosis and treatment of gestational diabetes in New Zealand. Wellington: Ministry of Health.

The need for greater investment in ACCHS models for diabetes care

Every three months at Kalumburu Remote Clinic, Wyndham Hospital, Warmun Remote Clinic and Halls Creek Hospital in the Kimberley, a multidisciplinary, interagency collaboration between WACHS General Practitioners (GPs), remote clinic nursing, Aboriginal Health Workers, and the Boab Health Services allied health team come together to support Aboriginal people with diabetes. Known as Diabetes One Stop Shop (DOSS), the aim of the clinic is to provide Aboriginal clients with diabetes with holistic, multidisciplinary care in one sitting (in a non-ACCHS setting). This model aims to mitigate barriers regarding follow up and gets together necessary practitioners involved in best practice collaborative diabetes care. GPs provide or review medical or care plans, while clinic staff provide generalists support. Patients receive Point of Care testing (POCT) HbA1c testing, medications are reviewed and clients can discuss concerns with their diets and physical activity. Boab Health Services allied health team provide foot checks, diabetes education and dietetic consultation all in one stop on one day. DOSS teams see clients either individually or in small groups and provide a safe and supportive environment for clients. In an informal manner, the team encourage clients to talk freely about their health goals, challenges and positive outcomes in self-managing their diabetes and the DOSS team reports that the response from, and engagement of, clients is high in that they are no longer required to go in to the hospital or clinic multiple times for individual appointments. Funding for the ACCHS sector to coordinate and lead interdisciplinary and multidisciplinary models of care is needed as well.

According to a joint position statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics "All people with Type 2 diabetes should be offered access to structured diabetes self-management education and support."[21] Based on national and international guidelines, best practice, and the gold standard of diabetes, the joint statement goes on to say that 10 hours of structured diabetes education is enough to prevent hospitalisation. Diabetes education is delivered through programs at ACCHS, and diabetes knowledge and information is gleaned from diabetes educators, allied health professionals and diabetes-related specialist appointments. Diabetes WA, for example, have developed a diabetes education program called the Diabetes Education and Self-Management Yarning (DESY), delivered by Aboriginal people from community to people with diabetes in community. The DESY aims to provide the space for Aboriginal people to share experiences, explore belief systems and learn about diabetes through yarning and hands-on activities. Having already trained 20 Aboriginal health professionals from ACCHS across WA, Diabetes WA aims to make diabetes education more accessible and at the same time culturally safe and appropriate for local communities. Recognising the need for greater Aboriginal workforce to provide culturally safe diabetes education, Diabetes WA has established a consortium, currently with four WA ACCHS, to support the Aboriginal Health Workforce Development Project, which aims to train and mentor 20 Aboriginal Health Workers to deliver the DESY program. The program has been funded by the Indigenous Australians' Health Programme (IAHP) and Diabetes WA is currently working to secure funding to continue and expand the program. Again, the ACCHS sector promote the vision of Aboriginal health in Aboriginal hands. Greater investment for ACCHS to engage in the time taken to deliver education and promotion training is desperately needed, for ACCHS to lead and/or coordinate.

[21] Powers MA, Bardsley J, Cypress M, Duker P, Funnell MM, Fischl AH, Maryniuk MD, Siminerio L, Vivian E. Diabetes Self-management Education and Support in Type 2 Diabetes: A Joint Position Statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. Clin Diabetes. 2016 Apr;34(2):70-80. doi: 10.2337/diaclin.34.2.70. PMID: 27092016; PMCID: PMC4833481.

Recommendation 5: Fund the Aboriginal Community Controlled Health Sector to design and establish locally-relevant and comprehensive models of diabetes care which meet the needs of people with diabetes across the life course.

Recommendation 6: Invest in the upskilling of Aboriginal Health Workers and Practitioners to deliver culturally-safe diabetes education programs.

Access to monitoring technologies and medications

Aboriginal people and communities may have a complex relationship with healthcare provision in terms of glucose monitoring technologies and medical and pharmaceutical treatments. Capillary blood glucose monitoring via a finger prick, for example, may carry stigma and shame for some, and pain for others. Accessing and maintaining stock of blood glucose monitoring supplies can be challenging for people who travel between communities frequently and can't access their primary healthcare service when away from home. Storing supplies in inadequately built and maintained housing may also contribute to this challenge. Others may live in housing where a lack of access to clean water for hand-washing, and refrigeration to store insulin or other medications to support diabetes management. AHCWA Member Services clinicians in the Pilbara's Western Desert and the Ngaanyatjarra Lands discussed this as a barrier to insulin use. Additionally, clinicians discussed how, for Aboriginal people, insulin use may have associated stigma including hesitancy to partake in monitoring glucose levels or receiving externally derived insulin to replace internal production and secretion. For all of these reasons, it is essential for the Australian Government to continue to support the work of the ACCHS sector in providing trusted and culturally safe support to Aboriginal people with diabetes, as well as increase access to alternate monitoring technologies and medications for Aboriginal people with diabetes.

Continuous Glucose Monitoring

Capillary blood glucose monitoring using a drop of blood from a finger prick to get a blood glucose reading from a glucometer may not be appealing for everyone and can be a deterrent for regular self-monitoring of blood glucose. Self-monitoring of blood glucose helps to improve glycaemic control and empowerment of people with diabetes. While empowering, traditional capillary blood glucose monitoring via finger prick can present a level of inconvenience, pain, shame and stigma.[22] An alternative to finger prick testing is Continuous glucose monitoring (CGM). These systems are used to manage Type 1 or Type 2 diabetes and measure glucose levels continuously. A sensor is attached to the back of the arm and the system automatically measures glucose every minute, with readings stored in 15-minute intervals. A transmitter sends results to a wearable device or mobile phone. For example, the Libre Reader (one type of CGM system) is held near the sensor when a glucose reading is needed. The reader device will then display the past 8 hours of glucose information, including current glucose, a trend graph, and a trend arrow. The system replaces finger prick testing, allowing people with Type 2 diabetes the ability to continuously self-monitor blood glucose levels.

Australians with Type 1 diabetes are eligible to apply for access to fully or partially subsidised glucose monitoring systems through the National Diabetes Service Scheme (NDSS), however, those with Type 2 diabetes are currently ineligible for the subsidy. The expansion of this subsidy program could provide a

[22] https://www.sbs.com.au/news/article/sharon-has-diabetes-and-says-this-device-is-buying-her-more-years/4izh1k1el?dlb=[2023/08/28]%20del_newspm_bau&did=DM28239&cid=sbsnews:edm:acnewspm:relation:news:na.

useful tool for Aboriginal people who, like many, perceive the regular finger pricking method to be a barrier in managing their Type 2 diabetes.

Some of AHCWA's Member Services discussed the benefits experienced by Aboriginal clients who were able to use CGMs to monitor their diabetes and receive real-time feedback on glucose levels. There was satisfaction in seeing the rise and fall of glucose levels that improved understanding of what was happening internally with consumption of certain foods and medicines. This life time feedback is not afforded by finger pricking tests, and would be useful in the prevention of eye, kidney disease and cardiovascular diseases.

Recommendation 7: Expand eligibility for continuous glucose monitoring (CGM) systems to include Aboriginal and Torres Strait Islander people with Type 2 Diabetes.

Screening

Early diagnosis of Type 2 diabetes, and glycaemic control, can prevent complications and improve long-term outcomes. According to the Royal Australian College of General Practitioners (RACGP), Aboriginal and Torres Strait Islander people should be screened annually with blood testing (fasting plasma glucose, random venous glucose or glycated haemoglobin (HbA1c)) from 18 years of age.[23] Some WA ACCHS implement clinical guidelines that recommend screening of all Aboriginal people from 15 years of age in keeping with the commencement of the adult Aboriginal and Torres Strait Islander health check[24]. In these guidelines, screening can be undertaken by HbA1c point-of-care testing (POCT). POCT allows patients to receive results within one consultation, on the same day. We will also discuss the Quality Assurance for Aboriginal and Torres Strait Islander Medical Services (QAAMS) program below, which provides funding to POCT. Furthermore, POCT is ultimately beneficial as diagnosis, education and management can be provided at the same time for patients.[25] Kimberley-based researchers have showed good concordance between laboratory and real-world remote setting HbA1c POCT.[26] Aboriginal children over 10 years may be screened if they meet certain risk profiles around weight, genetic predisposition and physical presentation of the condition. At this time, the MBS funds one sample per year for screening.

Medications

RACGP guidelines advise that "a person-centred approach should be used to guide the choice of glucose-lowering medication. Considerations include comorbidities (atherosclerotic cardiovascular disease, heart failure, and chronic kidney disease), hypoglycaemia risk, impact on weight, cost, risk for side effects and patient preferences."[27] This move towards an approach that considers an individual's unique risk profile

[23] The Royal Australian College of General Practitioners. Management of type 2 diabetes: A handbook for general practice. East Melbourne, Vic: RACGP, 2020.

[24] Kimberley Aboriginal Health Planning Forum Clinical Guidelines for Type II Diabetes in Adults: https://static1.squarespace.com/static/5b5fbd5b9772ae6ed988525c/t/63ff02f64f8045401a1af894/1677656823811/Diabetes_Type_II_in_Adults_Kimberley_Clinical_Protocol_KAHPF_endorsed_082017.pdf.

[25] Marley JV, Ph MS, Hadgraft N, Singleton S, Isaacs K, Atkinson D. Using glycated haemoglobin testing to simplify diabetes screening in remote Aboriginal Australian health care settings. Med J Aust 2015; 203(1):29-32. Doi:10.5694/mja14.01575.

[26] Marley JV, Oh MS, Hadgraft N, Singleton S, Isaacs K, Atkinson D. Cross-sectional comparison of point-of-care with laboratory HbA1c in detecting diabetes in real-world remote Aboriginal settings. BMJ Open 2015 Mar 12;5(3): e006277.doi: 10.1136/bmjopen-2014-006277.

[27] https://www.racgp.org.au/getattachment/41fee8dc-7f97-4f87-9d90-b7af337af778/Management-of-type-2-diabetes-A-handbook-for-general-practice.aspx.

and preferences in diabetes medication management is restricted by current PBS rules. Increased flexibility to utilise medications such as GLP-1 analogues, which can be given as a once weekly subcutaneous injection by clinic staff or by the patient themselves, would be beneficial. Additionally, GLP-1 analogues assist with weight loss and have evidence for a cardioprotective effect. Expansion of PBS eligibility of this class of medications to Aboriginal people with obesity would be an approach to prevent the onset of Type 2 diabetes in this high-risk population.

Recommendation 8: Review PBS eligibility criteria for GLP-1 analogues to improve flexibility of choice to align with individual's unique risk profiles and preferences, including ensuring eligibility for Aboriginal and Torres Strait Islander people with obesity as an approach to diabetes prevention.

The broader impacts of diabetes on Australia's health system and economy

The impact of diabetes is a massive burden on the Australian health system, and the economy at large. Considering the devastating effects of diabetes and related complications on Aboriginal people, coupled with the crippling pressure on the health system and the economic expenditure associated with diabetes, it is in the best interest of the Australian Government, to invest in diabetes prevention. Moreover, in line with Priority Reform 2 of the National Agreement on Closing the Gap, Government should invest in the Aboriginal community-controlled sector to deliver health promotion and diabetes prevention services – that are culturally safe and in community – beginning with maternal health, extending to children and young people, and continuing to support adults to lead healthy lives.

In 2021, diabetes contributed to 11 per cent of all deaths in Australia and in 2019–20, an estimated $3.1 billion of expenditure in the Australian health system was attributed to diabetes.[28] In 2020–21, almost 1.1 million hospitalisations were associated with Type 2 diabetes, 77,500 among Aboriginal and Torres Strait Islander people – a rate of 8,900 per 100,000 population.[29] After adjusting for differences in the age structure of the populations, the hospitalisation rate for Type 2 diabetes among Indigenous Australians was 4.6 times the rate for non-Indigenous Australians.

Diabetes-related complications have a devastating impact on the health of Aboriginal people. From July 2017 to June 2019, the top 5 causes of potentially preventable hospitalisations among Indigenous Australians accounted for almost half (48 per cent or 44,192) of all potentially preventable hospitalisations. This included 7,664 (8.3 per cent) hospitalisations for diabetes complications.[30]

Dialysis is a costly and resource intense activity and in WA, state-based health services and ACCHS in both urban, regional and remote communities support patients with diabetes to dialyse. In unpublished data from the Kimberley, 71 per cent of Aboriginal people undergoing dialysis had an Australian and New Zealand Dialysis and Transplant (ANZDATA) primary diagnosis of diabetes,[31] which is consistent with the 69 per cent from national figures.[32] AHCWA Member Services found it difficult to provide an exact cost to dialyse one patient in the Kimberley, as price per treatment incorporates a multitude of support service

[28] https://www.aihw.gov.au/reports/diabetes/diabetes/contents/about.
[29] https://www.aihw.gov.au/reports/diabetes/diabetes/contents/treatment-and-management-of-diabetes/diabetes-hospitalisations.
[30] Measure 3.07, Table D3.07.5 – AIHW analysis of National Hospital Morbidity Database.
[31] E. Griffiths, personal communication 28 August 2023.
[32] https://www.anzdata.org.au/wp-content/uploads/2020/09/c10_indigenous_2019_ar_2020_v0.11_20210215.pdf.

costs; however, the cost of dialysis was said to be comparable to remote Northern Territory (NT), which is approximately $120,000 per patient per year.[33]

Any interrelated health issues between diabetes and obesity in Australia, including the relationship between Type 2 and gestational diabetes and obesity, the causes of obesity and the evidence-base in the prevention, diagnosis and management of obesity

Interrelated health issues between diabetes and obesity significantly impact Aboriginal people, and pose a considerable challenge to their health and wellbeing. The relationship between Type 2 diabetes and obesity, including gestational diabetes, is intricate and multi-faceted, with shared risk factors and consequences. Overweight and obesity are risk factors for the development of Type 2 diabetes, which contributes to the higher prevalence of Type 2 diabetes among Aboriginal people. Moreover, excess body fat, particularly around the abdomen, can lead to insulin resistance, the cause of Type 2 diabetes. Obesity is a significant risk factor for gestational diabetes, which can have negative impacts on pregnancy and increase the risk of both maternal and foetal complications.

The causes of obesity are complex and include genetic, cultural and socioeconomic factors. Genetic predisposition and epigenetics can influence a person's susceptibility to obesity. In addition, high-calorie, processed foods contribute to weight gain. Just as importantly, socioeconomic disparities and the cultural determinants of health also have a significant role to play in influencing obesity in Aboriginal people. This inquiry would be remiss to not give equal weighting into all the important risk factors related to diabetes.

The effects of colonisation and industrialisation, along with climate change has impacted the food security of many Aboriginal people and their communities. Traditionally, bush food, or 'bush tucker', formed a large part of Aboriginal people's diets, with many Aboriginal people using the land as their primary food source. Loss of these natural food sources has created a dependence in many communities on non-traditional foods which have a higher fat and sugar content, which in turn can increase the risk of chronic diseases such as diabetes. Moreover, climate change has exacerbated the loss of natural food sources by making many places less habitable and negatively impacting growing conditions for plants and crops.

As mentioned above, making healthy foods and drinks more available and accessible is of particular importance in regional and remote areas. Food insecurity, including a lack of access to and the high cost of fresh food (especially in remote areas), remains a serious challenge facing Aboriginal communities in Australia. AHCWA's Member Services consistently express dissatisfaction with the cost of food in remote communities and highlight that this is an ongoing, major issue. Food availability in regional and remote areas of WA can be limited and inconsistent, which is influenced by geographical location and distance from depots.

School-based programs can contribute to healthy eating and nutrition among young people and are valued by community. Foodbank WA runs *Food Sensations for Schools*; this is a nutrition education program which is available to *School Breakfast Program* Schools. It aims to improve knowledge, attitudes and skills to encourage healthy eating and cooking.[34] This is an example of a program that provides

[33] Gorham, G., Howard, K., Zhao, Y. *et al.* Cost of dialysis therapies in rural and remote Australia – a micro-costing analysis. *BMC Nephrol* 20, 231 (2019). https://doi.org/10.1186/s12882-019-1421-z.
[34] https://www.foodbank.org.au/WA/food-sensations-for-schools/?state=wa.

interventions in schools, teaching skills and supporting a sustainable approach.[35] There are many valuable lessons to be learnt from co-designing programs with young people, to ensure Aboriginal people are leaders in their own health and wellbeing needs.

There needs to be great system-level thinking that commits multiple sectors and agencies to action. There are varying levels of access throughout WA to appropriate outdoor spaces, facilities and equipment for exercise and physical activity. AHCWA Member Services have said that young people utilise basketball courts and recreational spaces, and there is a need to community plan with infrastructure that provides holistic benefits to the whole community. Support for recreation facilities and maintenance along with support to provide 'on Country' activities would help to improve access to physical activity opportunities for people from remote areas, including support for and promotion of non-sporting activities, such as camping, fishing and gardening. These activities provide incidental exercise on country, complementing investment in other kinds of physical facilities and activities.

Importantly, any strategy to address obesity in Aboriginal people must take a holistic approach, aligning with the ACCHS Model of Care that considers the inter-relatedness of physical, emotion and spiritual wellbeing as well as community, country, family, culture and language. Moreover, it is imperative that any strategies *for* Aboriginal people are designed *by* Aboriginal people and that programs are led by ACCHS. This aligns with Priority Reform 2 – Building the Community Controlled Sector - of the National Agreement on Closing the Gap.[36]

Recommendation 9:

a) Fast track implementation of key activities of the National Preventive Health Strategy, such as establishing a sugar tax, which must be combined with subsidized access to affordable healthy foods.
b) Create structures for local government areas, shires and ACCHS to work with young people to improve town infrastructure planning which allow participation and the voices of young Aboriginal people in creating healthy environments.
c) Expand investments in Aboriginal school-based programs and ranger programs that combine the benefits of being active and outdoors, and facilitating transfer of traditional skills for all members of the community.

[35] https://www.phaa.net.au/documents/item/3840.
[36] https://www.closingthegap.gov.au/national-agreement.

The effectiveness of current Australian Government policies and programs to prevent, diagnose and manage diabetes

National Diabetes Services Scheme (NDSS)

The NDSS is an initiative of the Australian Government, administered by Diabetes Australia, to support people living with diabetes. It provides subsidised or free access to essential diabetes-related products, including blood glucose monitoring equipment, insulin, and syringes. Additionally, the NDSS offers information, education, and resources to help individuals manage their diabetes effectively. The program aims to reduce the financial burden associated with diabetes care and promote better health outcomes by ensuring that people with diabetes have access to the necessary tools and knowledge to manage their condition.

While the NDSS plays a crucial role in diabetes management and support across Australia, they provide centralised diabetes services without an understanding of the variability across Australia. Funding is allocated to state-based organisations based on overall population, not need, and distributed by a mainstream organisation in the eastern states. However, WA is quite unique with its vast distances and widespread distribution of the Aboriginal population. Similar to other states, not all Aboriginal people are registered with the NDSS and registrations are not a clear depiction of the number of Aboriginal people with diabetes.

The NDSS does not provide funding directly to the ACCHS. The ACCHS need greater access to diabetes educators, allied health professionals and funding to train Aboriginal Health Workers and Practitioners to conduct 715 comprehensive health assessments, provide care coordination and support. Many ACCHS would like to establish diabetes teams within their health services to provide culturally appropriate prevention and health promotion, on country, to children, young people, mothers and families.

The NDSS is up for renewal in 2024, and considering the high rates of diabetes among Aboriginal people in Australia, it is AHCWA's view that the ACCHS should have a seat at the negotiating table, to provide input into determining who receives funding for education, prevention and management that is delivered to Aboriginal people with diabetes. This is in line with Priority Reform 1 – Formal Partnerships and Shared Decision Making - and Priority Reform 2 – Strengthening the Community-Controlled sector - of the National Agreement on Closing the Gap.

Recommendation 10: Include the ACCHS sector in the negotiation of the 2024 National Diabetes Services Scheme contract to provide input into determining who receives funding for education, prevention and management that is delivered to Aboriginal people with diabetes.

Quality Assurance for Aboriginal and Torres Strait Islander Medical Services (QAAMS) Program

Funded by the Commonwealth Government Department of Health and Aged Care, the QAAMS Program provides a culturally appropriate and clinically effective diabetes diagnosis and management service for First Nations people.[37] The centrepiece of the QAAMS Program is the use of on-site point-of-

[37] https://qaams.org.au/aboutus#:~:text=The%20QAAMS%20(Quality%20Assurance%20for,Commonwealth%20Government%20Department%20of%20Health.

care pathology testing (POCT) to assist diabetes diagnosis and management. POCT for Haemoglobin A1c (HbA1c) and urine Albumin: Creatinine Ratio (ACR) is conducted under a quality management framework. This program is highly valued by WA ACCHS as POCT is performed primarily by the Aboriginal health professional, on-site at the health service, at the time of consultation with the client. A small medical device is used that requires only a very small sample of blood or urine and the result is available within minutes for the doctor and the client. According to the program website, there are currently over 220 devices at Aboriginal and Torres Strait Islander medical services enrolled in the QAAMS program, and every State and Territory is represented.

Recommendation 11: Continue funding and support for the QAAMS Program.

Integrated Team Care Program (ITC)

Funded by the Department of Health and Aged Care under the IAHP, the ITC program aims to contribute to improving health outcomes for Aboriginal and Torres Strait Islander people with chronic health conditions through access to care coordination, multidisciplinary care, and support for self-management; and improve access to culturally appropriate mainstream primary care services (including but not limited to general practice, allied health and specialists) for Aboriginal and Torres Strait Islander people.[38]

Primary Health Networks (PHNs) are funded to manage the ITC program engaging health organisations to link health care across various services; ensure Aboriginal clients can access the right care, quickly, through clear care pathways; and help mainstream health services provide culturally appropriate care. According to the ITC program implementation guidelines, activities to improve the cultural competency of mainstream primary care include, but are not limited to, delivering or organising cultural awareness training for staff; encouraging uptake of Indigenous MBS items such as 715 health checks and ensuring follow-up services are utilised; and helping practices create a more welcoming environment e.g., Indigenous artwork and posters.[39]

The ITC program funds various roles each with differing responsibilities that are also laid out, in detail, in the implementation guidelines. Aboriginal heath project officers work across their region to coordinate and support Aboriginal outreach workers and care coordinators; build capacity of health services to deliver culturally appropriate care; and support health services to communicate and work together. Aboriginal outreach workers provide clients with information about available services; encourage clients to access health care; and organise transport to and from medical appointments. Care coordinators, who are qualified health workers such as nurses or AHWs, provide clinical care, organise regular primary care reviews, and help clients manage and understand their condition.

AHCWA acknowledges the importance of the ITC program and supports its aims and objectives. However, in line with Priority Reform 2 of the National Agreement on Closing the Gap – Building the community-controlled sector – Government should fund ACCHS directly to manage ITC programs, rather than PHNs commissioning services in the regions where ACCHS have expressed interest, capacity and capability, or

[38] https://www.health.gov.au/sites/default/files/documents/2020/12/integrated-team-care-program-implementation-guidelines.pdf.

[39] https://www.health.gov.au/sites/default/files/documents/2020/12/integrated-team-care-program-implementation-guidelines.pdf.

the desire to strengthen oversight of the ITC program. ACCHS are embedded in communities and have longstanding relationships with their clients. They have dedicated and identified Aboriginal workforce who deliver culturally secure, holistic care that is defined by far more than cultural awareness training and posters and placards in a waiting room. ACCHS are best placed to support clients accessing the ITC program and with greater investment in workforce, ACCHS staff are able to meet the responsibilities of the three ITC roles. In September 2022, the Commonwealth Department of Health and Aged Care engaged Ninti One Limited, in partnership with First Nations Co, to design and carry out a review of Sector Funding Arrangements and Service Provider Capability for the ITC program. According to Ninti One, the Review will develop options for the Department to better align with the National Agreement on Closing the Gap Priority Reforms, and opportunities for ACCHS delivering ITC to be strengthened and supported through investment and capability building.[40]

Conclusion

AHCWA and Member Services spend a great deal of time collaborating on best approaches and community-driven advocacy to improve the health of Aboriginal people. This submission brings together collective knowledge across AHCWA's policy, advocacy, sector engagement, public health and medical officers, as well as Member Services, who lead the frontline response and care for Aboriginal people across the life course. We hope this submission portrays to need to improve access to safe evidence-based and interdisciplinary diabetes medical and wrap around intervention that takes into account the whole person, and the need to commit to transformative action that addresses structural inequities to improve environmental factors relating to health outcomes.

[40] https://www.nintione.com.au/review-of-sector-funding-arrangements-and-service-provider-capability-for-first-nations-integrated-team-care-itc-program-and-mental-health-and-suicide-prevention-services/.