THE HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON HEALTH, AGED CARE AND SPORT – PARLIAMENTARY INQUIRY INTO DIABETES

Reducing the impact of Diabetes on Aboriginal and Torres Strait Islander Australians

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REDUCING THE IMPACT OF DIABETES ON ABORIGINAL AND TORRES STRAIT ISLANDER AUSTRALIANS

Introduction

Diabetes Australia, the Australian Diabetes Society and the Australian Diabetes Educators Association represent 1.5 million Australians living with known, diagnosed diabetes; 500,000 Australians living with silent, undiagnosed type 2 diabetes; around 2 million Australians living with prediabetes; as well as their families and carers, diabetes healthcare professionals and researchers.

We are dedicated to reducing the incidence and impact of diabetes on people, health systems and society. We work with people living with, or at risk of, diabetes, their families and carers, health professionals, researchers, funders, other diabetes organisations and the community to positively change people's lives.

Given the scale of the impact of diabetes on Aboriginal and Torres Strait Islander Australians, it is appropriate that we make a submission focussed on reducing the impact of the condition on this population. Many of the recommendations for reducing the impact of type 2 diabetes on Aboriginal and Torres Strait Islander Australians are similar as recommendations for the non-Indigenous population; however, these policy responses and programs must be culturally appropriate for Aboriginal and Torres Strait Islander peoples, led by community and designed collaboratively.

The Parliamentary Inquiry into Diabetes is an opportunity to act decisively to reduce the impact of diabetes on Aboriginal and Torres Strait Islander peoples and help close the gap in life expectancy and other health outcomes. We strongly encourage the Committee to urge the Australian Government to adopt the recommendations contained herein.

Aboriginal and Torres Strait Islander Diabetes

Type 2 diabetes is one of the leading causes of the gap in life expectancy between Aboriginal and Torres Strait Islander peoples and non-Aboriginal and Torres Strait Islander Australians.[1] Aboriginal and Torres Strait Islander people are more than three times as likely to live with diabetes and nearly five times more likely to be hospitalised with diabetes-related complications.[2]

The Aboriginal and Torres Strait Islander Health Survey found 64,100 Aboriginal and Torres Strait Islander peoples self-reported living with diabetes. This is a prevalence of 7.9%; however, the actual prevalence is likely higher.[3] Recent research has found rates of type 2 diabetes in central

[1] Australian Bureau of Statistics 2014. Australian Aboriginal and Torres Strait Islander Health Survey: Biomedical Results, 2012-13.
[2] Australian Institute of Health and Welfare (2023) Diabetes: Australian facts, AIHW, Australian Government, accessed 10 August 2023.
[3] Australian Bureau of Statistics 2018-19, *National Aboriginal and Torres Strait Islander Health Survey*, ABS, viewed 31 August 2023, <https://www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/national-aboriginal-and-torres-strait-islander-health-survey/latest-release>.

Australia, where around 40% of adults are living with the condition, are the highest reported in the world.[4]

A particular area of concern is the impact the condition has on younger Aboriginal and Torres Strait Islander peoples. Recent research has found rates of youth onset type 2 diabetes (aged <25 years of age) are the highest in the world with children as young as four developing the condition. [5] In Aboriginal and Torres Strait Islander adults 3.4% of males and 7.2% of females aged 20-29 are living with diabetes, and 15.6% of males and 24.7% of females aged 30-39 live with diabetes.[6]

The prevalence of diabetes among Aboriginal and Torres Strait Islander young people (15–24) has increased by 100% over the past five years.[7] Data demonstrates that the younger people are diagnosed with diabetes, the more likely it is to be an aggressive condition with a much higher risk of developing diabetes-related complications.

Impact on the Australian hospital system

Every year there are almost 70,000 hospitalisations involving Aboriginal and Torres Strait Islander peoples where diabetes was a principal or additional diagnosis.[8] This is increasing with the number of hospitalisations per 100,000, climbing from 12,100 in 2015-16 to 14,300 in 2017-18, an increase of 18.1%.[9]

Mortality

According to the Australian Institute of Health and Welfare (AIHW) there were 833 diabetes-related deaths among Aboriginal and Torres Strait Islander peoples in 2021, a rate of 108 per 100,000.[10] This is about 4.4 times higher than in non-Indigenous Australians. Data from 2009 to 2013 found that in people aged 45-54 years of age, Aboriginal and Torres Strait Islander peoples were 17 times more likely to die from diabetes than non-Indigenous people.[11]

[4] Hare MJL, Zhao Y, Guthridge S, et al. Prevalence and incidence of diabetes among Aboriginal people in remote communities of the Northern Territory, Australia: a retrospective, longitudinal data-linkage study. BMJ Open 2022;12.
[5] Ibid.
[6] Titmuss, A., Davis, E.A., O'Donnell, V., Wenitong, M., MapleBrown, L.J., Haynes, A., Titmuss, A., Davis, E.A., O'Donnell, V., Wenitong, M., Barr, E.L.M., Boffa, J., Brown, A.D.H., Connors, C., Corpus, S., Dowler, J., Graham, S., Griffiths, E., Kirkham, R., Lee, C., Moore, E., Pearson, G., Shaw, J.E., Singleton, S., Sinha, A., White, G., Zimmet, P., MapleBrown, L.J., Haynes, A., 2022. Youth-onset type 2 diabetes among First Nations young people in northern Australia: a retrospective, cross-sectional study. The Lancet Diabetes & Endocrinology 10, 11–13.
[7] Titmuss, A., Davis, E.A., O'Donnell, V., Wenitong, M., MapleBrown, L.J., Haynes, A., Titmuss, A., Davis, E.A., O'Donnell, V., Wenitong, M., Barr, E.L.M., Boffa, J., Brown, A.D.H., Connors, C., Corpus, S., Dowler, J., Graham, S., Griffiths, E., Kirkham, R., Lee, C., Moore, E., Pearson, G., Shaw, J.E., Singleton, S., Sinha, A., White, G., Zimmet, P., MapleBrown, L.J., Haynes, A., 2022. Youth-onset type 2 diabetes among First Nations young people in northern Australia: a retrospective, cross-sectional study. The Lancet Diabetes & Endocrinology 10, 11–13.
[8] Australian Institute of Health and Welfare. (2020c, 9 December 2020). Indicators for the Australian National Diabetes Strategy 2016-2020: data update. Australian Institute of Health and Welfare.
[9] Ibid.
[10] Australian Institute of Health and Welfare (2023) Diabetes: Australian facts, AIHW, Australian Government, accessed 10 August 2023.
[11] Australian Bureau of Statistics (2015) Causes of death, Australia, 2013: Deaths of Aboriginal and Torres Strait Islander Australians [data cube]. Retrieved 31 March 2015 from http://www.abs.gov.au/ausstats/

The social determinants of health

Social determinants of health, as recognised by the World Health Organization, are the range of economic, social and environmental factors that can impact a person's health.

In Australia, a core legacy of colonialism, dispossession and structural racism is that Aboriginal and Torres Strait Islander Australians experience higher rates of unemployment and poverty, poorer living conditions including overcrowded housing, widespread food insecurity, lower levels of schooling and higher levels of incarceration.

These factors represent a public health crisis and are major contributors to the high prevalence of type 2 diabetes amongst Aboriginal and Torres Strait Islander peoples and the quality of healthcare they receive. This is highlighted in a recent *The Lancet* and *The Lancet Diabetes & Endocrinology* series examining the impact of racism and structural inequity on rates of diabetes and poorer health outcomes.[12,13]

The AIHW estimates around 34% of the health gap between Aboriginal and Torres Strait Islander Australians and other Australians can be attributed to social determinants such as employment and hours worked, level of schooling, quality of housing and household income.[14] Just under 19% of the gap was due to health risk factors such as alcohol consumption, high blood pressure, impact of overweight and obesity, consumption of fruit and vegetables, physical inactivity and smoking. It calculated 47% was attributed to access to health services and the ongoing impact of cultural and historical factors on health.[15]

These determinants must be addressed from a public health perspective. The Australian National Diabetes Strategy 2016-2020 (ANDS 2016 – 2020) noted that addressing the social determinants of health that negatively impact on the health outcomes … will reduce the impact of diabetes on this population group." This includes broader whole-of-population strategies to boost Aboriginal and Torres Strait Islander employment, school attendance and higher education attainment, economic status and social mobility, and improve housing quality and access.

Recommendation: The response to the diabetes epidemic in Aboriginal and Torres Strait Islander communities must robustly encompass the social determinants of health

[12] Agarwal S, Wade AN, Mbanya JC, et al. The role of structural racism and geographical inequity in diabetes outcomes. Lancet. 2023;402(10397):235-49.
[13] Walker AF, Graham S, Maple-Brown L, et al. Interventions to address global inequity in diabetes: international progress. Lancet. 2023;402(10397):250-64.
[14] AIHW (2022) Australian Burden of Disease Study: Impact and causes of illness and death in Aboriginal and Torres Strait Islander people 2018, AIHW, Australian Government, accessed 3 April 2022.
[15] AIHW (2022) Australian Burden of Disease Study: Impact and causes of illness and death in Aboriginal and Torres Strait Islander people 2018, AIHW, Australian Government, accessed 3 April 2022.

Aboriginal and Torres Strait Islander peoples must be at the centre of reform

For initiatives and programs to reduce the impact of diabetes on Aboriginal and Torres Strait Islander peoples to be successful, they must be led by Aboriginal and Torres Strait Islander peoples.[16]

This leadership also ensures initiatives are culturally appropriate, tailored to the specific needs of the communities they are designed to support, and that Aboriginal and Torres Strait Islander culture is deeply embedded in all programs.[17]

For instance, *Too Deadly for Diabetes* is a 10-week, Aboriginal-led healthy lifestyle program that has been variously adapted for people living in urban, regional and remote communities. Participants follow a simple, unprocessed diet of inexpensive and easily prepared meals with recipes available via an online program or printed copies for people who did not have access to the internet. This is augmented by an exercise program relying on bodyweight resistance training. Health literacy is also addressed.

One evaluation found participants lost an average of 7.46kg, reduced HbA1c by 1.68% and lowered systolic blood pressure by 8.88mmHg.[18] Qualitative findings include participants responding positively to the fact the program fostered a sense of community and that the lifestyle changes were easy to implement and maintain. The evaluation also found: "Much of the value of the program was found in it being run by an Aboriginal person, for Aboriginal people and in an Aboriginal organization."[19]

This principle has been enshrined in The National Aboriginal and Torres Strait Islander Health Plan 2021–2031. Priority 1 calls for genuine shared decision making and partnerships. This means Aboriginal and Torres Strait Islander voices should hold equal weight with the governments.

There are no one-size-fits-all solutions

There are no one-size-fits-all solutions in Aboriginal and Torres Strait Islander diabetes. Aboriginal and Torres Strait Islander peoples in Australia represent over 250 distinct language groups, each with its unique traditions, cultures, and histories. This diverse population spans from urban centres to remote communities. Solutions must be led by First Nations people and represent the diversity and cultures of each community.

[16] Gibson, O. et al. (2015) 'Enablers and barriers to the implementation of primary health care interventions for indigenous people with chronic diseases: A systematic review', Implementation Science, 10(1). doi:10.1186/s13012-015-0261-x.
[17] O'Dea, K. (1992) 'Diabetes in Australian aborigines: Impact of the western diet and lifestyle', Journal of Internal Medicine, 232(2), pp. 103–117. doi:10.1111/j.1365-2796.1992.tb00559.x.
[18] Power, T. et al. (2021) 'A mixed-methods evaluation of an Urban Aboriginal Diabetes Lifestyle Program', Australian and New Zealand Journal of Public Health, 45(2), pp. 143–149. doi:10.1111/1753-6405.13092.
[19] Ibid.

Understanding the complexity of type 2 diabetes

Recent evidence has demonstrated the heterogeneity of type 2 diabetes. This manifests in a number of ways including age of onset, progression of the condition and relative risk of complications.[20] While similar studies have not been conducted specifically of Aboriginal and Torres Strait Islander peoples, there is extensive observational evidence showing many Aboriginal and Torres Strait Islander peoples are impacted by earlier onset of type 2 diabetes, more aggressive progression and greater risk of complications, in particular, renal damage.

As Baker Heart and Diabetes Institute, Head of Diabetes Clinical Research, Associate Professor Neale Cohen observed regarding central Australia: "What we're seeing in these communities is not typical type 2 diabetes. Its onset is early and its progression to the end stage of complications is rapid. And it's not solely driven by lifestyle factors like diet and exercise. There are other factors, including genetics, that play a major role."[21]

Additionally, it has long been established that changes to diet and increases in physical activity can rapidly, and significantly, reduce the impact of diabetes and an individual's need for insulin.[22] It is important to note that these changes to diet and physical activity levels can only be enacted if they are available and accessible.

The intergenerational impact of type 2 diabetes

An area of significant concern in Aboriginal and Torres Strait Islander communities is the intergenerational impact of type 2 diabetes. Both the children of women diagnosed with gestational diabetes and women who have pre-existing type 2 diabetes in pregnancy are at a much higher risk of developing type 2 diabetes. In fact, a 2018 study found that half of all people with gestational diabetes will develop type 2 diabetes within 10-15 years.

This occurs through a process of epigenetics, which refers to changes in gene expression in the baby that occur as a result of stresses experienced by the mother. This can include smoking and alcohol use as well as hyperglycaemia which can occur in women with gestational diabetes and pre-existing diabetes.[23]

While Aboriginal and Torres Strait Islander mothers are only slightly more likely to be diagnosed with gestational diabetes, they are much more likely to be living with pre-existing type 2 diabetes during pregnancy.

This is another reason why type 2 diabetes prevention targeting children and young people is so important. If we can support mothers-to-be to reduce their risk of type 2 diabetes, we can also reduce the risk for their future children.

[20] Ahlqvist, E. et al. (2018) 'Novel subgroups of adult-onset diabetes and their association with outcomes: A data-driven cluster analysis of six variables', The Lancet Diabetes Endocrinology, 6(5), pp. 361–369. doi:10.1016/s2213-8587(18)30051-2.
[21] Baker Heart and Diabetes Institute. Towards Tomorrow: Impact Report 2022.
[22] O'DEA, K. (1992) 'Diabetes in Australian aborigines: Impact of the western diet and lifestyle', Journal of Internal Medicine, 232(2), pp. 103–117. doi:10.1111/j.1365-2796.1992.tb00559.x.
[23] Dhawan, S. and Natarajan, R. (2019) 'Epigenetics and type 2 diabetes risk', Current Diabetes Reports, 19(8). doi:10.1007/s11892-019-1168-8.

Recommendation: Ensure all Aboriginal and Torres Strait Islander mothers can access expert pregnancy care during pregnancy including at least five Credentialled Diabetes Educator (CDE) visits whether via telehealth or in person (three during pregnancy and two visits postpartum). Localised models of care should be developed, including case conferencing support/telehealth using remote monitoring and support from metropolitan diabetes centres.

Recommendation: Ensure all Aboriginal and Torres Strait Islander families can access culturally appropriate Type 2 Diabetes Prevention Programs both to prepare for pregnancy and post-partum.

Type 2 diabetes detection

It is essential that all Aboriginal and Torres Strait Islander peoples are regularly screened for type 2 diabetes. The Royal Australian College of General Practitioners (RACGP) recommends Aboriginal and Torres Strait Islander peoples are screened annually from the age of 18, rather than the age of 40 in the broader population. This screening should be performed via a blood check rather than just via the AUSDRISK tool. Funding the training and upskilling of CDEs and Aboriginal and Torres Strait Islander Health Workers and Health Practitioners to do these screens would increase the take up rate and availability of screens.

A study of Aboriginal Community Controlled Health Services (ACCHS) found 74% of First Nations adults had been tested in a three-year period; however, only 18% were checked annually.[24] The study identified groups who were least likely to be checked including Aboriginal and Torres Strait Islander peoples aged under 50, people who weren't current patients of an ACCHS, and people who interacted with their healthcare service less frequently.

The RACGP recommends opportunistic screening in primary care; however, programs and initiatives should be tailored to meet the needs of individual communities.

Studies showing the prevalence of diabetes-related complications in people living with undiagnosed type 2 diabetes highlight the importance of regular checks. One study of Aboriginal and Torres Strait Islander peoples found 6% of people were living with silent, undiagnosed type 2 diabetes. Complications were widely observed amongst this group including 19% who had albuminuria (an indicator of chronic kidney disease), 14% who had peripheral vascular disease and 6% who had neuropathy.[25]

[24] Paul, C.L. et al. (2017) 'Testing for type 2 diabetes in indigenous Australians: Guideline recommendations and current practice', Medical Journal of Australia, 207(5), pp. 206–210. doi:10.5694/mja16.00769.
[25] Cunningham J, O'Dea K, Dunbar T, Weeramanthri T, Shaw J, Zimmet P. Socioeconomic status and diabetes among urban Indigenous Australians aged 15–64 years in the DRUID study. Ethn Health 2008;13(1):23–27.

Recommendation: Fund opportunistic type 2 diabetes education and screening programs for Aboriginal and Torres Strait Islander communities that are tailored to the particular circumstances of individual communities. Fund additional CDE positions and training to upskill Aboriginal and Torres Strait Islander Health Workers and Practitioners and CDEs to provide screening.

Recommendation: Review incentives associated with 715 Health Checks to boost the number of Aboriginal and Torres Strait Islander peoples having annual diabetes checks.

Type 2 diabetes management

AIHW data on diabetes management among people living with diabetes has found a relatively high level of participation in essential health checks. For instance:

- 92% having blood glucose checked in the past 12 months
- 70% had changed diet, lost weight or done physical activity in the past two weeks
- 70% had their feet checked in the past 12 months
- 73% had an HbA1c check to assist with diabetes management in the past 12 months.

In comparison a meta-analysis of frequency of diabetes checks published in 201X found higher rates of health checks in Aboriginal and Torres Strait Islander peoples compared to non-Indigenous Australians:

- 64% of people had a HbA1c check compared to 51% of non-Indigenous people
- 79% of people had their blood pressure checked compared to 71% of non-Indigenous people
- 69% had lipids checked compared to 49% of the total population
- 62% had kidneys checked compared to 27% of non-Indigenous people

However, this analysis found that rates of eye checks lagged behind the non-Indigenous population (45%-71%).[26]

Despite these relatively high rates of screening, Aboriginal and Torres Strait Islander people continue to be disproportionately impacted by diabetes-related complications.

Screening must be followed by effective diabetes management education, provided by a CDE which should not focus simply on diabetes and its causes but should utilise a broad perspective that takes into account barriers to accessing care, psychosocial issues and individual and community behaviours and routines.[27] Education must be culturally appropriate and delivered in a culturally safe manner.

[26] Sainsbury E, et al. 2018. Burden of Diabetes in Australia: It's Time for More Action. Novo Nordisk, Sydney, Australia.
[27] Taylor, S., Fatima, Y., and Solomon, S. (2017) *Factors affecting the self-monitoring of blood glucose levels in Aboriginal patients: findings from a remote community.* Australian Indigenous Health Bulletin, 17 (3). pp. 1-8.

The impact of stigma on diabetes management

Diabetes-related stigma has considerable impact on diabetes management among Aboriginal and Torres Strait Islander peoples. Studies have identified feelings of shame, laziness and forgetfulness as well as stress all negatively impact diabetes self-management.[28,29]

Diabetes Australia's Aboriginal and Torres Strait Islander health professionals report widespread diabetes-related stigma amongst First Nations communities and the tragic complications related to the disengagement with diabetes care associated with diabetes-related stigma.

The government should invest in culturally appropriate anti-diabetes stigma campaigns. See the Diabetes Australia language statement and www.enddiabetesstigma.org. All health workers and health professionals should have cultural awareness and anti-diabetes stigma training.

Type 2 diabetes prevention programs

Australia's response to the diabetes epidemic must prioritise the prevention of type 2 diabetes. This is essential to reducing the impact of diabetes on Aboriginal and Torres Strait Islander peoples. Please see our submission *Type 2 Diabetes Detection, Prevention and Remission* for an in-depth discussion of this priority.

The recommendations contained in the submission are fundamentally relevant to preventing type 2 diabetes in Aboriginal and Torres Strait Islander peoples. However, it is important to note that social determinants and other factors previously discussed have a disproportionate impact on First Nations communities. Healthy lifestyle choices cannot be encouraged if Aboriginal and Torres Strait Islander peoples aren't provided with access and opportunities for those choices. The government must prioritise the health of First Nations Australians by ensuring communities have access to high quality affordable fresh fruits and vegetables, whole grains, and opportunities for physical exercise. These policies should be led by Aboriginal and Torres Strait Islander peoples and adapted to the needs and preferences of specific communities.

Recommendation: Fund Type 2 Diabetes Prevention and Type 2 Diabetes Remission Programs that are specifically tailored for Aboriginal and Torres Strait Islander peoples.

Type 2 diabetes in school

As outlined above the number of Aboriginal and Torres Strait Islander children and young people being diagnosed with type 2 diabetes is increasing. These children require unique support in the school environment both to ensure teachers can support students living with diabetes and reduce the impact of diabetes-related stigma. The existing Diabetes in Schools program, currently providing support for students living with type 1 diabetes, should be extended to support Aboriginal and Torres Strait Islander school students living with diabetes.

[28] Taylor, S., Fatima, Y., and Solomon, S. (2017) Factors affecting the self-monitoring of blood glucose levels in Aboriginal patients: findings from a remote community. Australian Indigenous Health Bulletin, 17 (3). pp. 1-8.
[29] Bruce DG, Davis WA, Cull CA, Davis TME. Diabetes education and knowledge in patients with type 2 diabetes from the community: The Fremantle Diabetes Study. Journal of Diabetes and Its Complications. 2003;17:82-9.

Recommendation: Extend the Diabetes in Schools program to provide support for Aboriginal and Torres Strait Islander students living with type 2 diabetes.

Complications

Diabetes-related kidney disease

Diabetes-related kidney disease, and kidney failure, is one of the most debilitating and costly diabetes-related complications. Around 20% of Aboriginal and Torres Strait Islander peoples living with diabetes have chronic kidney disease. Aboriginal and Torres Strait Islander peoples are also more than 10 times more likely to progress to kidney failure requiring dialysis or kidney transplant than non-Indigenous people. The fact that there are more than 30 dialysis clinics in regional and remote communities across Australia highlights the impact of diabetes-related kidney disease.

Diabetes-related amputations

Aboriginal and Torres Strait Islander women are 11 times more likely to be hospitalised for a limb amputation, while men are five times more likely when compared to non-Indigenous Australians.[30] The risk of amputation increased with remoteness, with rates of amputation three times as high in people living in very remote and remote areas when compared to people living in metropolitan areas.

Recommendation: Develop and fund an Aboriginal and Torres Strait Islander focused Diabetes-related Kidney Disease Screening Program that would support early detection and intervention.

Recommendation: Work with Aboriginal Community Controlled Health providers, CDEs and other health professionals to develop culturally appropriate models of care that support interventions to prevent or delay a range of diabetes-related complications.

Recommendation: Develop an Aboriginal and Torres Strait Islander Amputation Prevention Initiative that includes improved education, access to healthcare and access to essential products such as medical-grade footwear.

[30] AIHW (2018). Diabetes indicators for the Australian National Diabetes Strategy 2016-2020, https://www.aihw.gov.au/reports/diabetes/diabetes-indicators-strategy-2016-2020/contents/summary

Medicines

The latest generation of once-a-week diabetes injectable medications, such as semaglutide (Ozempic), are becoming widespread and have clearly established clinical benefits. In addition to these benefits the convenience of a once-a-week injection has been shown to improve diabetes management in Aboriginal and Torres Strait Islander communities. Studies have found that these medications were associated with increased attendance at medical clinics and clinically significant reductions in HbA1c.[31,32]

Recommendation: Ensure Aboriginal and Torres Strait Islander peoples have appropriate access to medications.

Workforce

There is an identified shortage of Aboriginal and Torres Strait Islander health professionals with diabetes expertise. This includes, but is not limited to, endocrinologists, CDEs, other allied health professionals, and Aboriginal and Torres Strait Islander Health Workers and Practitioners.

In particular, there is a need for Aboriginal and Torres Strait Islander Health Workers and Practitioners with a higher level of training and expertise in diabetes. This could be addressed by developing a new qualification of Aboriginal and Torres Strait Islander Diabetes Health Workers and Practitioners.

There is also a need to provide long-term funding for these positions to retain the workforce.

Additionally, it is critical that Australia's health workforce has requisite cultural capability to work with, and support, Aboriginal and Torres Strait Islander peoples. This will include embedding cultural capability training within tertiary education and in continuing professional development.

A variety of recent technological advancements have paved the way for improved health outcomes, including state-of-the-art diabetes technology (see "Improving access to diabetes-related technology and medicines" submission) and the availability of appointments through telehealth. However, the government must seek to improve access to CDEs and diabetes care in rural and remote areas and invest in programs that help Aboriginal and/or Torres Strait Islander people living with diabetes to access diabetes technology, including additional investments for smartphones and increased bandwidth internet capabilities in remote communities that are needed to use the devices and access telehealth.

Recommendation: Introduce a new Aboriginal and Torres Strait Islander Primary Health Care qualification for diabetes-specific Aboriginal Health Care Workers and appropriately fund positions for Diabetes Aboriginal Health Care Workers in Aboriginal and Torres Strait Islander communities.

[31] Ekinci, E.I. et al. (2021) 'Feasibility of once weekly exenatide-LAR and enhanced diabetes care in indigenous Australians with type 2 diabetes (Long-acting-once-weekly-exenatide laR-SUGAR, 'Lower SUGAR' study), Internal Medicine Journal, 51(9), pp. 1463–1472. doi:10.1111/imj.15428.
[32] Cohen, N. (2022) 'Indigenous Diabetes: An Urgent Issue of National Importance'. The Medical Republic. Accessed 30 August 2023.

Recommendation: Embed cultural capability training within all tertiary health education and in continuing professional development.

Recommendation: Provide incentives to attract to hire and retain Aboriginal and Torres Strait Islander nurses, allied health professionals and other health practitioners to become CDEs, especially in rural and remote areas.

Recommendation: Increase the diabetes workforce (CDEs, endocrinologists) in First Nations communities, particularly in rural and remote areas. All healthcare workers should understand how to deliver diabetes education in a culturally appropriate and safe manner.

Recommendation: Provide relevant and culturally appropriate education for Aboriginal and Torres Strait Islander peoples and their health professionals about where and how to access specialised diabetes support from a CDE or endocrinologist.

Recommendation: Additional funding for ACCHOs to employ CDEs to provide optimal support for local communities and their health professionals in a culturally safe environment.

Recommendation: Invest in programs that help Aboriginal and/or Torres Strait Islander people living with diabetes access diabetes technology, including additional investments for smartphones and increased bandwidth internet capabilities in remote communities that are needed to use the devices and access telehealth.

Recommendation: Improve the infrastructure required for Aboriginal and Torres Strait Islander peoples to access diabetes technology and telehealth consultations, especially access to internet/broadband connectivity.

Population health strategies

The strategies proposed in our submission "Reducing the impact of type 2 diabetes: Detection, prevention and remission" including a 20% levy on sugar-sweetened beverages, restrictions on junk food advertising to children, improvements to the Health Star Rating system and improvements to the built environment to enable physical activity are important for Aboriginal and Torres Strait Islander peoples.

Food security

Studies have found Aboriginal and Torres Strait Islander families in urban, regional and remote areas of Australia experience significant food insecurity. In non-remote areas as many as one in five Aboriginal and Torres Strait Islander peoples report being food insecure, while the number rises to one in four in remote communities.[33]

Remote stores

The Australian National Diabetes Strategy 2016-2020 Implementation Plan recommended the introduction of healthy food initiatives for remote stores as a priority action to be commenced within a 12-18 month timeline. To date very little work has been done to achieve this.

There are very limited opportunities to purchase healthy food in some remote Aboriginal and Torres Strait Islander communities. There are significant opportunities to drive healthier behaviour by implementing a raft of policies designed to promote consumption of healthier foods. However, it is impossible to improve the consumption of healthy foods without available affordable and abundant healthy food options. The Healthy Stores 2020 Policy Action was co-designed by 30 storeowners, retailers, Government and NGO stakeholders and academics across the Northern Territory and North Queensland.[34] It recommends:

- Ban the promotion of unhealthy foods and drinks
- Ban displaying unhealthy food and drinks in high traffic areas
- Limit sugar-sweetened beverage size to 600ml, with a maximum of 40% of refrigerator space designated for SSBs
- Enable a minimum of 10 fresh fruit and 15 fresh vegetable varieties
- Provide subsidies for healthy food and drinks.

Modelling has found that the implementation of these measures could drive a significant reduction in the amount of sugar consumed which would lead to a 10% risk reduction in mortality from cardiovascular disease.[35,36] The government must act to reduce food insecurity and improve the availability and affordability of health food options in First Nations communities.

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[33] Australian Bureau of Statistics. Australian Aboriginal and Torres Strait Islander Health Survey: Nutrition Results - Food and Nutrients, 2012–13. Canberra: Australian Bureau of Statistics; 2015.

[34] Ferguson M, Brimblecombe J. RE-FRESH CRE, editor. Melbourne2021. [cited 2021]. Available from: https://healthyfoodretail.com/resource/healthy-stores-2020-policy-action-series-healthy-policy-to-support-retailers-and-communities/.

[35] Brimblecombe J, McMahon E, Ferguson M, De Silva K, Peeters A, Miles E, et al. Effect of restricted retail merchandising of discretionary food and beverages on population diet: a pragmatic randomised controlled trial. The Lancet Planetary Health. 2020;4(10):e463-e73.

[36] Yang Q, Zhang Z, Gregg EW, Flanders WD, Merritt R, Hu FB. Added sugar intake and cardiovascular diseases mortality among US adults. JAMA Intern Med. 2014;174(4):516-24.

SUMMARY OF RECOMMENDATIONS

1. The response to the diabetes epidemic in Aboriginal and Torres Strait Islander communities must address the social determinants of health
2. Ensure all Aboriginal and Torres Strait Islander mothers can access expert pregnancy care during pregnancy. This will require localised models of care to be developed, including case conferencing support/telehealth using remote monitoring and support from metropolitan diabetes centres
3. Ensure all Aboriginal and Torres Strait Islander families can access culturally appropriate Type 2 Diabetes Prevention Programs both to prepare for pregnancy and post-partum
4. Fund opportunistic type 2 diabetes screening programs for Aboriginal and Torres Strait Islander communities that are tailored to the particular circumstances of individual communities
5. Fund additional CDE positions and training to upskill Aboriginal and Torres Strait Islander Health Workers and Practitioners and CDEs to provide screening
6. Review incentives associated with 715 Health Checks to boost the number of Aboriginal and Torres Strait Islander peoples having annual diabetes checks
7. Fund Type 2 Diabetes Prevention and Type 2 Diabetes Remission Programs that are specifically tailored for Aboriginal and Torres Strait Islander peoples and invest in supporting people to maintain weight loss and healthy behaviours
8. Extend the Diabetes in Schools program to provide support for Aboriginal and Torres Strait Islander students living with type 2 diabetes
9. Develop and fund an Aboriginal and Torres Strait Islander focused Diabetes-related Kidney Disease Screening Program that would support early detection and intervention
10. Work with Aboriginal Community Controlled Health providers and other health professionals to develop locally tailored models of care that support interventions to prevent or delay a range of diabetes-related complications
11. Develop an Aboriginal and Torres Strait Islander Amputation Prevention Initiative that includes improved education, access to healthcare and access to essential products such as medical-grade footwear
12. Ensure Aboriginal and Torres Strait Islander peoples have appropriate access to medications
13. Introduce a new Aboriginal and Torres Strait Islander Primary Health Care qualification for diabetes-specific Aboriginal Health Care Workers and appropriately fund positions for Diabetes Aboriginal Health Care Workers in Aboriginal and Torres Strait Islander communities
14. Embed cultural capability training within all tertiary health education and in continuing professional development
15. Provide incentives to attract Aboriginal and Torres Strait Islander nurses, allied health professionals and other health practitioners to become CDEs, especially in rural and remote areas

16. Provide relevant and culturally appropriate education for Aboriginal and Torres Strait Islander peoples and their health professionals about where and how to access specialised diabetes support from a CDE or endocrinologist
17. Additional funding for ACCHOs to employ CDEs to provide optimal support for local communities and their health professionals in a culturally safe environment
18. Increase the diabetes workforce (CDEs, endocrinologists) in First Nations communities, particularly in rural and remote areas. All healthcare workers should understand how to deliver diabetes education in a culturally appropriate and safe manner
19. Improve the infrastructure required for Aboriginal and Torres Strait Islander peoples to access diabetes technology and telehealth consultations, especially access to internet/broadband connectivity
20. Introduce the healthy food initiatives for remote stores as outlined in The Australian National Diabetes Strategy 2016-2020 Implementation Plan