PERSPECTIVE

Royal Australasian College of Surgeons

Obesity in Central Australia and the barriers to management

The problem: obesity and metabolic disease in Central Australia

Currently 12.5 million Australian adults live with overweight or obesity.[1] Rates of obesity within Australia's Indigenous population are increasing. In 2018–2019 it was found that 76.8% of Indigenous Australians were living with overweight or obesity.[2] Obesity is associated with many different health conditions, however, one of the most prevalent conditions in Central Australia is type 2 diabetes mellitus (T2DM). In 2019, the prevalence of T2DM amongst adult Indigenous Australians in Central Australia was found to be 39.5%.[3] This is the highest prevalence rate of T2DM recorded nationally and internationally.[3–5] This is an area of growing concern and rates of T2DM have been increasing over the last two decades.[3] An additional concerning feature is the young age of diagnosis of T2DM. The median age of diagnosis is 38 years old.[3] The prevalence of Diabetes is 17% amongst Indigenous Australian children in Central Australia.[3] Due to younger age of diagnosis of T2DM and obesity there are increasing rates of associated complications. Central Australia has the highest rates of end-stage renal disease (ESRD)[6] and lower limb amputations, compared to other regions of Australia.[7]

Obesity costs the Australian Government up to $21 billion dollars annually to manage.[8] There are incentives at a national, institutional and individual patient level to appropriately prevent and manage this condition. Obesity should be managed with a patient-centred model to manage chronic disease. This requires ongoing lifestyle changes, personal motivation for change and changes on national level regarding public health policy, infrastructure and industry.

Barrier 1: socioeconomic factors

The population of Central Australia is a marginalized group who are at risk of developing complications from obesity and T2DM, however, there are a significantly higher number of challenges in managing this condition compared with metropolitan centres.

Patients who live in Central Australia have unique socioeconomic characteristics. The Australia Bureau of Statistics found 20.6% of the population in Alice Springs and 85.6% in the remote living communities serviced by Alice Springs Hospital are Indigenous Australians.[9] In the Northern Territory the median household income for Indigenous Australians is $578 which is lower than the national average of $830.[9] There is already strong evidence of a significant health gap between Indigenous and non-Indigenous Australians.[10] The underlying causes are complex and include social determinants such as employment, income, housing, education, racism, cultural and historical factors and ongoing colonization.[10] There are also health risk factors such as obesity, physical inactivity and inadequate fruit and vegetable intake which further exacerbate this gap.[10] Indigenous Australians are 11 times more likely to suffer from T2DM.[11] In an already marginalized population in Central Australia there is insufficient state or federal government funding to improve the social determinants of health and provide access to healthy lifestyle infrastructure such as subsided healthy food and safe places to exercise. In addition, there is a lack of access to the Very Low Energy Diet and long-term pharmacological management options for obesity. A large proportion of patients in Central Australia live remotely and this makes follow up, monitoring for side effects and adherence difficult.

Barrier 2: local resources

Given the complexity of the management of obesity, a multidisciplinary team (MDT) is the gold standard. It has been found that psychologists, dieticians, exercise physiologists, bariatric surgeons and physicians are the key practitioners in the prevention and management of the disease.[12] In Central Australia there is limited dietetics input in both the inpatient and outpatient setting due to a lack of funding and resources. There is limited psychological support and there are no exercise physiologists within the local health institution. In addition, there is limited funding for endocrinologists and issues retaining staff in positions such as Diabetic Nurse Educators.

Barrier 3: access to bariatric surgery

Bariatric surgery has been proven to result in weight loss and decrease the incidence of T2DM.[13,14] In the Northern Territory there is currently no access to public bariatric surgery. Currently, patients are required to be referred interstate or to the private sector. Patients who live in Central Australia have lower household incomes and are therefore less likely to have private health insurance and cannot often afford the out-of-pocket expense for bariatric surgery. A review of an internal audit indicated the biggest obstacles for patients being lost to follow up after referral for bariatric surgery are due to identification issues, such as patients not having a known address and living remotely, incorrect phone numbers or not answering the phone. While bariatric surgery is an effective tool in a patient's weight loss journey, not all patients are appropriate for bariatric surgery. However, patients from Central Australia have a distinct

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lack of equity to access to such services and the referral processes are unclear and arduous with poor follow-up communication. In addition, there is hesitancy in facilitating visiting bariatric surgery specialists to service Central Australia locally, as the local hospital does not have the capacity or expertise to manage immediate post-operative complications and provide early multidisciplinary follow up.

Current practice in Central Australia and the future

In Central Australia most patients who are known to the clinic, suffer from multiple obesity-associated health conditions. Patients are managed with lifestyle modifications and pharmacological interventions. There have been initial positive results since the inception of the clinic however there are still far more resources required to manage such a complex chronic health condition. This clinic is also inaccessible or inappropriate for the majority of patients living remotely, the majority of whom are Indigenous patients, those at the highest risk for comorbid disease. Easier and more streamlined referral processes, bolstering local resources, MDT clinics and collaborative support from metropolitan weight management services would improve the weight management of individuals. In addition, there needs to be a national focus on the widening gap in chronic metabolic disease rates in places such as Central Australia and strategies developed to improve both the social determinants of health but also the local infrastructure to optimize and support healthier lifestyles to tackle this endemic at a more populations-based level.

Author contributions

Antonio Barbaro, Sean Davis: Conceptualization; writing – original draft; writing – review and editing. **Kirsten Neal:** Conceptualization; supervision; writing – review and editing. **Jaya Senaratne:** Supervision; writing – review and editing. **Elna Ellis:** Conceptualization; visualization; writing – original draft; writing – review and editing.

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Antonio Barbaro,*† MBBS, MSurg
Sean Davis,† MBBS, MSurg
Kirsten Neal,‡ BaAppSc (physiotherapy) Hons, MBBS, FRACP (Endocrinology)
Jaya Senaratne,* MBBS, FRACS, FRCSEd
Elna Ellis,‡ BSc Hons, MBChB, FRACP (Endocrinology), FRACP (General Internal Medicine)
**Department of Surgery, Alice Springs Hospital, Alice Springs, Northern Territory, Australia, †Department of Surgery, University of Adelaide, Adelaide, South Australia, Australia and ‡Department of Medicine, Alice Springs Hospital, Alice Springs, Northern Territory, Australia*

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