Royal Australasian
College of Surgeons

8.03.22

250–290 Spring Street
East Melbourne VIC 3002 Australia
Telephone +61 3 9249 1200
www.surgeons.org
ABN 29 004 167 766

The Hon. Greg Hunt MP
Minister for Health
House of Representatives
Parliament House
CANBERRA ACT 2600

Email: Minister.Hunt@health.gov.au

Dear Minister Hunt

The Royal Australasian College of Surgeons (RACS) is the peak body representing surgeons and surgery in Australia and New Zealand. We are writing to raise awareness of the increasing epidemic of diabetes and diabetes related complications, many of which are unfortunately surgical diseases. We would also like to lend support to a campaign seeking funding for insulin pumps and continuous glucose monitors (CGM's) for adults.

There are now 1.2 million Australians living with diabetes, mostly Type 2, but the numbers of both major types of diabetes continue to rise[1]. Diabetes is now estimated to cost this country $2.9 billion per year[2]. Much of this cost comes from the management of the complications of the disease, more than the disease itself. This is demonstrated by the fact that the lifetime cost of managing diabetes in someone who suffers complications is five times that of someone whose diabetes is well managed and hence is uncomplicated[2] .

These complications include foot ulcers, often requiring admission to hospital and often leading to amputation of toes or legs and causing massive physical, psychological and monetary costs to the individual and the health system. By way of example, there were 4400 major limb amputations undertaken in Australia in 2015[3] and this figure would almost certainly have gone up since then. This is the tip-of-the-iceberg of a much larger group of people with diabetic foot infections. It is estimated that there are 2-3 times that number of "minor" foot level amputations. Other common complications of diabetes include kidney failure – 38 per cent of the 14,554 Australians on kidney dialysis have diabetes (easily now the largest single cause)[4], and retinopathy causing blindness in 7,500 Australians[5], amongst other complications. All these complications are significantly over-represented in the indigenous population.

There is now strong evidence from multiple trials that the risk of these complications relates to how well the blood sugar levels are controlled[6,7]. Diabetes management is complex – all 127,000 type 1 diabetics require insulin and many of the larger group of type 2 diabetics also need insulin as well as other drugs. The delivery of insulin and the monitoring of its effect however is far from a "set and forget" regime. Type 1 diabetes requires an accurate dose of insulin for each gram of carbohydrate consumed and timed to be effective when the carbohydrate is metabolised. This is further complicated by the fact that some carbohydrates are long acting, others fast acting and sugar levels are affected by mood, exercise, concurrent illness and diurnal variation. All of this makes the avoidance of dangerous low sugar levels and the long term avoidance of hyperglycaemia, which leads to later disease very difficult, and for some impossible.

Most children with diabetes are now managed by the use of insulin pumps and CGM's which give a real-time accurate readout of glucose levels. Some systems are now feedback loops where the CGM data is fed directly to the pump which then automatically calculates the insulin dose. Again, the evidence is strong that these technologies lead to better diabetes control and lifestyle and hence less long-term complications, hospitalisations and surgery[8,9,10,11,12,13,]. This is to say nothing of the psychological well-being that goes with knowing ones real-time sugar levels and the quality of life advantages of being able to live a fuller more active life with greater knowledge and sugar control[14,15].

Children have had access to these technologies through the insulin pump program since 2008 and CGM's since 2017. We are grateful for the bi-partisan support of subsidy for these technologies for children in the past and for your role personally in support of the CGM funding for children. However, these subsidies disappear at age 18 and 21 for pumps and CGM's respectively. The annual cost per person of these technologies is approximately $6,000 per person[16] and therefore they are outside the reach of most people, hence are rarely even recommended by adult diabetes doctors. The result is that most individuals benefitting from the lifestyle and safety benefits of these technologies lose access on reaching adulthood. This has been likened to removing a cochlear implant when the patient reaches adulthood.

RACS is aware that there is currently a campaign led by the Juvenile Diabetes Research Foundation seeking government funding for pumps and CGM's for all Australians who need them, not just children. We are writing to add another voice to this campaign. From a purely surgical viewpoint, the addition of these devices to the management of adults with this disease would have a significant impact on the lives of so many Australians and help save them and their families from the terrible surgical complications listed above. It is estimated that this funding would cost $100 million per year [16], but this would be significantly offset by a reduction in the incidence of blindness, the reduced need for hospitalisations and life changing surgery, like amputation, the reduced cost of disability support, as well as a reduced need for other consumables (for example blood sugar monitors and test strips).

As the key body representing all surgeons within Australia, RACS therefore fully supports this campaign, which would reduce the rising incidence of these surgical diseases. We would welcome the opportunity to discuss this matter with you in greater detail, but ask that you also consider supporting this initiative and communicate the contents of this letter to other key decision makers within your government. In the hope of further bi-partisan support, this letter is copied to the Shadow Health Spokesman, Hon Mark Butler MP.

Yours sincerely

Dr Sally Langley
President

David King
Chair, RACS, SA Committee

Cc: Hon Mark Butler MP, Shadow Health Spokesperson

(1) Australian Institute of Health and Welfare 2020. Diabetes. Cat. no. CVD 82. Canberra: AIHW. Viewed 09 October 2021

(2) Economic Cost of Type 1 Diabetes in Australia, JDRF and Accenture, April 2021

(3) Australian Commission on Safety and Quality in Health Care, (2016). Australian Atlas of Healthcare Variation. [online] Australian Government. Available at: http://www.safetyandquality.gov.au/atlas/ [Accessed 29 Jun. 2016].

(4) ANZDATA 44th Annual Report 2021 (Data to 2020)

(5) National Eye Health Survey 2016

(6) Diabetologia. 2012 Mar;55(3):636-43. Association of HbA1c levels with vascular complications and death in patients with type 2 diabetes: evidence of glycaemic thresholds

(7) J Clin Endocrinol Metab. 2016 Sep;101(9):3257-63. Association Between HbA1c Variability and Risk of Microvascular Complications in Adolescents With Type 1 Diabetes

(8) Diabetes Care. 2022 Feb 1;45(2):391-397. Universal Subsidized Continuous Glucose Monitoring Funding for Young People With Type 1 Diabetes: Uptake and Outcomes Over 2 Years, a Population-Based Study

(9) Steineck I, Cederholm J, Eliasson B, et al. Insulin pump therapy, multiple daily injections, and cardiovascular mortality in 18,168 people with type 1 diabetes: Observational study. BMJ 2015;350(h3234).

(10) Pickup JC, Sutton AJ. Severe hypoglycaemia and glycemic control in type 1 diabetes: Meta-analysis of multiple daily insulin injections compared with continuous subcutaneous insulin infusion. Diabet Med 2008:25(7):765–774.

(11) Schreiver, C, Jacoby U, Watzer B, Thomas A, et al. Glycemic variability in pediatric patients with type 1 diabetes on continuous subcutaneous insulin infusion (CSII) or multiple daily injections (MDI): A cross-sectional cohort study. Clin Endocrinol 2012;79(5):641–47.

(12) Tamborlane WV, Beck RW, Bode BW, et al. Continuous glucose monitoring and intensive treatment of type 1 diabetes. N Engl J Med 2008;359(14):1464–76.

(13) Battelino T, Conget I, Olsen B, et al. The use and efficacy of continuous glucose monitoring in type 1 diabetes treated with insulin pump therapy: A randomised controlled trial. Diabetalogia 2012;55(12):3155-62.

(14) Polonsky WH, Hessler D, Ruedy KJ, Beck RW. The impact of continuous glucose monitoring on markers of quality of life in adults with type 1 diabetes: Further findings from the DIAMOND randomized clinical trial. Diabetes Care 2017;40(6):736–41.

(15) Nicolucci A, Maione A, Franciosi M, et al. Quality of life and treatment satisfaction in adults with type 1 diabetes: A comparison between continuous subcutaneous insulin infusion and multiple daily injections. Diabet Med 2008;25(2):213–20.

(16) JDRF Access For All Submission October 2021