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Submission to the parliamentary inquiry into Diabetes

https://www.aph.gov.au/Parliamentary_Business/Committees/House/Health_Aged_Care_and_Sport/Inquiry_into_Diabetes/Terms_of_Reference

Submission made by:

Dr. Alexia Pape, FRACP, Endocrinologist

Happy for the content to be publicly available, but please keep my personal contact details confidential (listed in online submission)

BODY of Submission:

WHY AM I MAKING A SUBMISSION? As an endocrinologist I treat people with diabetes mellitus every day and I see the difficulties people face in managing their diabetes, the inequalities caused by socioeconomic factors in what types of treatments and access are available, and the suffering diabetes mellitus can cause in particular with some of the long-term complications of diabetes.

On a personal note, my mother had type 1 diabetes, I have several family members and close friends with type 1 and type 2 diabetes mellitus, and I know on a personal level how much of an impact this chronic disease can have.

CONTENT: this will be grouped as per the terms of reference copied below in points 1-5.

Terms of Reference

The House of Representatives Standing Committee on Health, Aged Care and Sport will inquire into and report on diabetes. The Committee will investigate:

1. The causes of diabetes (type 1, type 2 and gestational) in Australia, including risk factors such as genetics, family history, age, physical inactivity, other medical conditions and medications used

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

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

4. 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; and

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

RESPONSES TO:

1) *The causes of diabetes (type 1, type 2 and gestational) in Australia, including risk factors such as genetics, family history, age, physical inactivity, other medical conditions and medications used*

- I would like to ask the committee to **consider better funding for research and trials into diabetes mellitus causes and treatment**. This could be with funding of established bodies like JDRF or the Australian Diabetes Society, and also with more public funding for research done by staff in the many national diabetes centres
- For the Australian context it is important to note that many people struggle with finances and access to healthy food – in particular I note that **access to fresh vegetables and fruit can be a big issue in some of our rural and remote communities**; but even **food insecurity** can have a big impact on food choices and also safety of diabetes treatment
    - for example someone who is on long acting insulin or glucose-lowering tablets may have a low sugar level if they cannot afford food – and this can potentially lead to reduction in alertness or passing out, which can cause injuries and accidents).
    - This is common even in metropolitan areas: One of the dietitians working at an Eastern suburbs hospital (not usually considered a low socioeconomic area), remarked at a recent conference that about a third of her patients had reported food insecurity when going through diabetes treatment for gestational diabetes.
    - Another issue is that food insecurity may lead to over-eating when food is available, which can contribute to obesity and the development of diabetes later on.
    - There is also data that starvation in early childhood can contribute to obesity and sugar abnormalities from adolescence onward (and also some data that starvation in the womb and being born small can contribute to that)

  So I would urge the government to consider **starting and supporting programs that address this issue, including programs that reduce poverty, programs that help with access to food,** including logistical support for food delivery/storage
- The committee should consider supporting the introduction of a **"sugar tax"** (a tax on drinks and foods with added sugar and similar caloric sweetening agents)
    - while simplistic it can be a successful measure in reducing the consumption of sugary drinks and foods, making healthier choices a less expensive option than snack foods would be ideal and this would be a step in the right direction
    - it can also help support a culture of "make healthy normal", and this is an important step to help prevention of gaining excessive weight and thus reducing risk of developing diabetes
- other important things to help a "make healthy normal" culture would be:
    - reducing the number of fast food outlets and fast food advertising, especially the strong marketing to children of fast food options;

    - having community spaces that allow physical activity for free: walking paths, cycling paths, swimming pools, sporting fields, exercise machines along public paths; inclusion of spaces like this should be mandated as part of development applications for new housing estates as well

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2) *New evidence-based advances in the prevention, diagnosis and management of diabetes, in Australia and internationally*
   For diagnosis:

- **HbA1c MBS items should not be restricted to once a year** for screening for diabetes (HbA1c is a 3 months sugar average, that can be done on a random pathology lab sample, no need for fasting)
    - if you have a patient at high risk of diabetes, and they happen to see a doctor once or twice a year, if they are willing to do a blood test to screen this should be reimbursed (also as sometimes if patients are changing doctors you may not know what has been done before)
- **Supporting finger-prick blood testing (glucometers and test-strips) as a diagnostic measure at no or low cost** can also be helpful for diagnosing diabetes:
    - for example in pregnancy, if a woman is not able to tolerate the glucose tolerance test (a sweet drink test, with a fasting sugar done first, and then another blood sample 1 and 2 hours later – it is a costly and long test, and many women vomit due to the intense taste of the 75gram glucose drink they have to have), 1-2 weeks of monitoring can make the diagnosis, but the test kits are fairly expensive;
    - this can also be helpful outside of pregnancy – for example if there is little access to pathology testing (remote communities/outreach clinics…)

   For management:

- Insulin pump therapy together with continuous glucose monitoring **(="hybrid closed loop pump systems):** pump therapy has advanced substantially over the last few years
    - one of the newest systems that has just come to market is finally a system that can help women achieve good sugar control during pregnancy – which has a huge impact on pregnancy complications (including maternal and newborn complications), and will also help patients to achieve near-normal glucose levels with minimal hypoglycaemia, so would have a massive impact on long-term complications
    - **BUT: insulin pump systems are expensive, and patients have to have top level private health insurance to access them: This is creating huge inequality**
        - I find it incredibly frustrating as a doctor treating patients with diabetes mellitus that I cannot offer all patients equal access to treatment: only those with money can get access to best care, this is just not right
        - The patients who would most benefit from these systems are often the least able to afford private health insurance
        - Even many patients who are working full time are not able to afford pump therapy or health insurance

        - I believe the cost of funding access to hybrid closed loop pumps to all patients with type 1 diabetes who want them will be offset by savings on expense in future complications, though it will take at least 5 years to see benefit

- I would like to note that the access to CGMS (continuous glucose monitoring systems) for patients with Type 1 diabetes mellitus has been a huge improvement in the system, and I thank the Australian Government for implementing this for patients with Type 1 diabetes mellitus – I can see the positive impact this has had on my patients – and also on many friends and colleagues with T1DM
    - These **CGMS systems should be made available to more patient groups:**
        - Patients with diabetes due to pancreatic insufficiency who require insulin (after pancreatic surgery or after pancreatitis) – these patients often struggle with very difficult to control sugar levels, as bad or worse than people with type 1 diabetes; but are often not mentally able to handle the burden of multiple daily fingerprick tests and multiple daily insulin injections and often have very poor diabetes control and recurrent hospital admissions
        - Patients with cystic fibrosis
        - Select patients with type 2 diabetes mellitus: during pregnancy; if from Aboriginal or Torres Straight Islander background, patients on multiple daily injections of insulin who are not achieving reasonable diabetes control (one can argue about what this is of course – but clinically for example if you have someone on 4 insulin injections a day and their HbA1c is over 9%, those patients clearly need all the help they can get)
        - Ideally I would also like to see access to hybrid closed loop pump therapy for the groups above
- Access to new diabetes treatments on the PBS:
    - **Many good medications do not go onto the PBS or are withdrawn:** examples - Fiasp coming off the PBS this year (a faster onset mealtime insulin helpful for patients on multiple daily injections), liraglutide was never listed, currently awaiting news on tirzepatide….
    - In general, the **PBS rules are quite tricky to navigate for some of the combination treatments for type 2 diabetes**:
        - for example it is recommended for kidney health to combine SGLT2 inhibitors and GLP1Ras by the latest KDIGO guidelines, but this is not PBS supported
        - sometimes these restrictions do not make sense – as the main alternative that is not restricted by the PBS is insulin, which is often more expensive than some of the combinations the PBS does not allow

3) *The broader impacts of diabetes on Australia's health system and economy;*

- What I see day to day
    - in the hospital is people having toe and foot amputations due to diabetes complications; people needing dialysis due to diabetes complications; people having heart attacks and strokes contributed to by diabetes; people in

    emergency and intensive care with extreme sugar derangements requiring hospital care; this can be very distressing for patients and also for their families
  - what I see every day **in the public diabetes clinic is that there are not enough appointments to see patients** as often as ideal, or at all
    - I cannot routinely see my patients with type 1 diabetes every 3monhts as would be ideal, often I do not even have an appointment within 6 months
    - Many patients discharged from hospital have to wait many months to be seen in the public clinic by a doctor
    - we have to turn many patients away from our public clinic to continue care with their GP (who may not bulk bill, and who may not have interest in diabetes care)
      - due to demand for services outstripping supply my diabetes service is currently not allocating public appointments with diabetes specialists to patients with Type 2 diabetes who have an HbA1c <8%, to allow us to focus on patients with poorer diabetes control and patients with type 1 diabetes mellitus
      - many patients who were followed up for years in the public service were understandably not happy about this
      - I worry about the patients we are discharging or turning away – will they be able to afford seeing their GP or a private specialist or will they continue with suboptimal control and then have more complications down the track? (UKPDS study showed getting HbA1c from 8% to 7% reduced all complications of diabetes from 7 years onwards by about 25-30%)
      - Nurse practitioners or diabetes nurse educators try to fill some of those gaps, but there is not enough funding for them
- **Hospital funding is not adequate for outpatient services:**
  - there is very little invested into prevention of hospital admissions by having well funded and staffed diabetes services:
    - the diabetes service where I work has increased clinical work significantly over the last 12 years that I have been there, with practically no increase in staffing – everyone is working harder and is getting more frustrated over time, with no hope in sight as our local health district has budget issues
  - Because it is difficult to measure events prevented, **health services that aim at avoiding complications are underfunded; whereas interventions to treat complications are better funded** (which cost much more)
    - For example a hospital gets paid when there is an amputation performed, but we cannot get funding to expand our preventative services (high risk foot clinic and podiatry services)
    - The one year budget in the health district does not help this issue
    - Investment into databases for each health district to look at adequately capturing diabetes diagnosis and complications may make it easier to review and plan services

    - The way we fund health needs to be fundamentally reconsidered – the activity based funding models do not work well for chronic disease management, and also favour metropolitan over regional areas;

4) *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;*

- I am sure some of the bigger organisations making submissions will provide full references for this but in brief:
    - there is no doubt that obesity is one of the major risk factors for type 2 and gestational diabetes; and impacts management of all forms of diabetes (including type 1 diabetes) as higher weight often correlates with higher treatment requirements
    - The HAPO follow-up study showed that exposure to gestational diabetes in the womb, increases the risk of obesity and reduced glucose tolerance form age 12-14 onwards; "diabetes begets diabetes" in short, the theory is that this is due to epigenetic changes
    - 20% weight loss can lead to a lasting remission of type 2 diabetes – there is evidence from UK GP practices and evidence from bariatric surgery trials for this
    - We have new medications – in particular tirzepatide, but also semaglutide, that will achieve many more people achieve substantial weight loss, and if they have diabetes substantial improvements in their diabetes control; off label use in type 1 diabetes also shows improvement in glycaemic control there
- **There is hardly any funding for obesity services, and this should change**
    - As there is such a high prevalence of obesity this of course has huge funding implications, so maybe limiting publicly funded services to patients with a very high BMI may be better than offering nothing
    - I think a pragmatic way forward would be to have some obesity services in every health district that could provide basic lifestyle advice (dietitian led) and access to a publicly funded exercise area that caters for people weighing more than 200kg safely; and **having publicly funded access to obesity medications and bariatric surgery for those patients that have a very low chance of losing weight with lifestyle measures** – even if a BMI cutoff of 45 was used this would be better than having nothing available.

5) *The effectiveness of current Australian Government policies and programs to prevent, diagnose and manage diabetes.*

- This goes beyond the scope of an individual submission
- I feel increasingly hopeless about the state of diabetes services in my health district: the staff are all trying very hard, but it feels like we are constantly swimming against the current
- My main concerns are:

- lack of funding and the focus of funding (more investment in keeping people healthy and in prevention and early diabetes management)
- inequality rising as detailed above – both in access to services and the types of services available (please fund pumps and CGMS for more people – I have seen the impact this technology can have on patients and close friends and family members)
- lack of support for effective data collection that can provide accurate snapshots of what the situation is, and how changes in services impact outcomes – a relatively small investment into databases may give you the answers about which interventions are effective

Overall, I also want to thank you for having the inquiry, and I hope it does help improve the lives of people living with diabetes and their families.