

Our Research Highlights for Policy and Practice

Northern Territory

November 2019

Diabetes across the Lifecourse: Northern Australia Partnership

This Partnership brief provides an overview of recent publications from the work of the Diabetes across the Lifecourse Partnership.

Should you have any questions, or require further information, including resources for health professionals and consumers (including brochures, posters and a PowerPoint on the Partnership's Key 5 for postpartum care after a pregnancy with diabetes) please contact us on: ntdippartnership@menzies.edu.au or ring (08) 8946 8634.

Cheng E, et al. Birth outcomes in women with gestational diabetes managed by lifestyle modification alone: The PANDORA Study. *Diabetes Research and Clinical Practice*, 2019.

<https://authors.elsevier.com/a/1ZxACcOiQDkQn>

Summary: This work from the PANDORA study involved evaluating outcomes of 97 Indigenous and 113 European women with gestational diabetes mellitus (GDM) managed by lifestyle modification alone (GDM-lifestyle) compared with 235 women without hyperglycaemia in pregnancy.

We found that women with GDM-lifestyle had higher body mass index and lower gestational weight gain than women without hyperglycaemia. Compared with women without hyperglycaemia, GDM-lifestyle was associated with a greater likelihood of labour induction. Babies born to women with GDM-lifestyle had lower gestational age at delivery, lower birthweight z-score, with a trend to lower large for gestational age and no difference in small for gestational age rates compared to those born to women without hyperglycaemia in pregnancy. These results likely reflect the benefit of dietary education, physical activity, weight management and glycaemic monitoring in women with GDM managed by lifestyle alone (compared to women without GDM). Reasons for higher rates of induction of labour in those with GDM-lifestyle are unclear and require further research.

Kirkham R, et al. Improving maternal health after diabetes in pregnancy: results of a pilot study in remote Australia. *The Australian and New Zealand Journal of Obstetrics and Gynaecology*, 2019. 59: 430-435.

Summary: This pilot study contacted 53 Aboriginal women in the Northern Territory who had diabetes in pregnancy, whose babies were born between December 2015 and October 2016, to assess whether enhanced support methods would result in women completing recommended postpartum health checks. Women were contacted via phone (call or text messages) or through other methods (Facebook or email). The results show that engaging women living in remote locations in postpartum care is difficult, which may be due to women's engagement with services, access to phones/internet and/or health communication issues. Further research is needed to better understand what methods may improve postpartum screening after a pregnancy complicated by diabetes.

Hjort L, Novakovic B, Grunnet LJ, Maple-Brown L, Damm P, Desoye G, Saffery R. Diabetes in pregnancy and epigenetic mechanisms- how the first 9 months from conception might affect the child's epigenome and later risk of disease. Lancet Diabetes Endocrinol, 2019 May 22. Doi:10.1016/S2213-5254

Summary: This review summarises evidence for the impact of diabetes in pregnancy on the health of subsequent generations and the likely mediating role of epigenetics. Epigenetics are mechanisms that regulate the activity of DNA without an actual change in the genetic code. These factors are affected by environmental exposures, particularly in-utero (such as maternal glycaemia or smoking) and can be passed on to future generations. This field of research is of particular relevance to Aboriginal health, as a potential mechanism to explain the intergenerational burden of diabetes and why we are increasingly seeing type 2 diabetes in children and youth across Northern Australia.

Kirkham R, et al. Diabetes care in remote Australia: the antenatal, postpartum and inter-pregnancy period. BMC Pregnancy and Childbirth. 2019 Oct 28; 19(1): 389. Doi: 10.1186/s12884-019-2562-6.

Summary: This mixed methods study aimed to better understand Northern Territory health professionals' perspectives around antenatal and postpartum diabetes screening and management. Data collection included a survey and interviews/focus groups with health professionals (82 and 62 respectively) working in primary care, hospitals, Aboriginal Community Controlled Health organisations and non-government organisations. Data were collected between March and December 2016.

The research showed that there are many challenges in providing timely and culturally appropriate postpartum care for women who had a pregnancy complicated by diabetes. Health professionals had less confidence in providing postpartum care than antenatal care and said that there was confusion as to who was responsible for providing follow up care. There are opportunities to strengthen health systems communication and information to improve timeliness and quality of postpartum care. Our Partnership is working to address some of these challenges, and we have been working together over the past few years to strengthen and improve postpartum health after diabetes in pregnancy. See top of page 1 for resources related to the Key 5 in postpartum care after diabetes in pregnancy.



Panel discussion at the Annual Symposium



Melinda Hammond discusses creating healthy settings in Cape York



Diabetes across the Lifecourse: Northern Australia Partnership members

2019 Annual Education Symposium

The Partnership's Annual Education Symposium was held in September 2019 and showcased recent results of emerging research and some of our program's research. We are currently updating our website (dipp.org.au) please visit it soon for symposium presentations and resources.