

NT & FNQ DIABETES IN PREGNANCY PARTNERSHIP

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Diabetes – big news

Diabetes incidence mapped across Australia, highest rates in SA and NT

By Alina Eacott

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Diabetes is most prevalent in South Australia and the Northern Territory, new mapping from Diabetes Australia has shown.



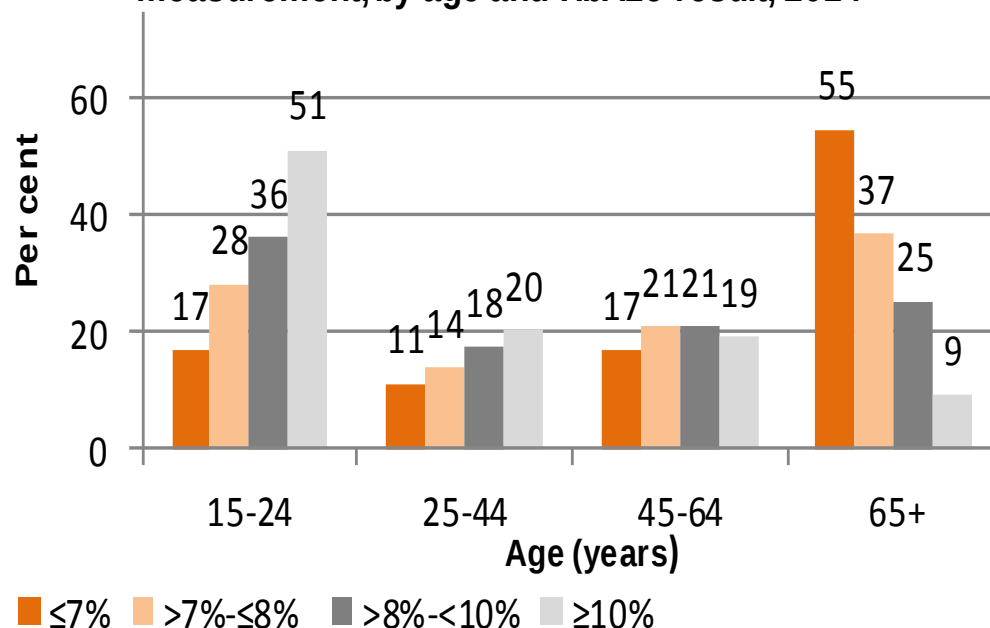
It said 58 people per 1,000 were registered as diabetes sufferers in South Australia, and the Northern Territory was close behind with 56 people per 1,000.

Maternal and Paternal Diabetes and a dash of pregnancy

- Diabetes in the NT



Figure 1.8.3: Proportion of Aboriginal residents aged ≥ 15 years with type 2 diabetes and a HbA1c measurement, by age and HbA1c result, 2014



Hyperglycaemia in pregnancy



- Australia (2010) 1 in 20 pregnancies

Pre-existing <1% GDM 5%

- NT (2014)

3854 mothers (33% Aboriginal) 3904 babies

518 (13%) of women had GDM

Aboriginal (16%) Non-Indigenous (12%)

69 (1.8%) of women had pre-existing diabetes

Aboriginal (4.5%) Non-Indigenous (0.5%)

Diabetes in pregnancy

Uncontrolled diabetes in pregnancy can have a devastating effect on both mother and child, substantially increasing the risk of

- fetal loss,
- congenital malformations,
- stillbirth,
- perinatal death,
- obstetric complications,
- maternal morbidity and mortality.



Gestational diabetes increases the risk of

- some adverse outcomes for mother and offspring during pregnancy, childbirth and immediately after delivery
- pre-eclampsia and eclampsia in the mother;
- large for gestational age and shoulder dystocia in the offspring.

However, it is not known what proportion of obstructed births or maternal and perinatal deaths can be attributed to hyperglycaemia.

Detecting Hyperglycaemia in Pregnancy

- Assessing risk factors at first visit – taking a peek at the population

Moderate Risk factors

Ethnicity of Aboriginal, Torres Strait Islander, Asian, Indian Pacific Islander, Maori, Middle Eastern, Africa

BMI (25 – 35)

High Risk factors

Past history of GDM or impaired glucose intolerance

Family history of diabetes

Previous large for gestational age baby

Obesity (BMI > 35)

Age Over 40 years

Polycystic ovary syndrome

Previous adverse pregnancy outcome

Medicines – antipsychotics, cortico-steroids

Pre-existing Diabetes

Type 1 DM

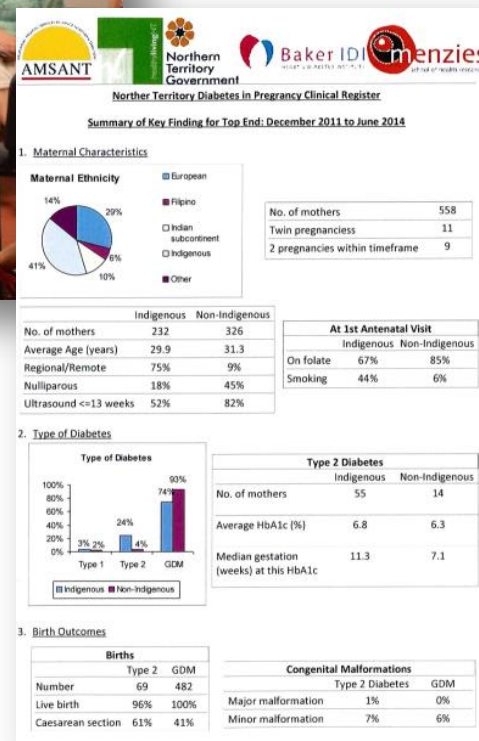
Type 2 DM

Women with pre-existing diabetes have 3 – 5 times greater rates of adverse pregnancy outcomes (congenital malformation, stillbirth or neonatal death) than women without diabetes.

Murphy et al 2010

So..what are we doing about it?

- Diabetes in Pregnancy Partnership
- Clinical Register
- Models of Care
- PANDORA

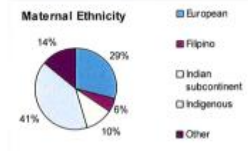


Clinical Register

- Can it make a difference?
- What has it told us so far?
- Where to next?

Summary of Key Finding for Top End: December 2011 to June 2014

1. Maternal Characteristics

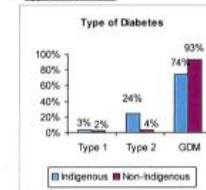


No. of mothers	558
Twin pregnancies	11
2 pregnancies within timeframe	9

	Indigenous	Non-Indigenous
No. of mothers	232	326
Average Age (years)	29.9	31.3
Regional/Remote	75%	9%
Nulliparous	18%	45%
Ultrasound <=13 weeks	52%	82%

At 1st Antenatal Visit		
	Indigenous	Non-Indigenous
On folate	67%	85%
Smoking	44%	6%

2. Type of Diabetes



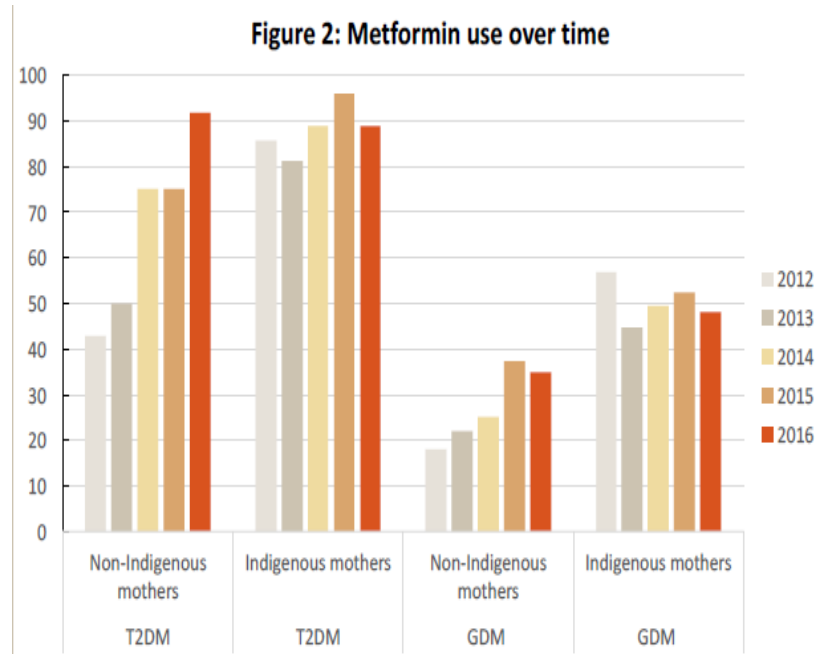
Type 2 Diabetes		
	Indigenous	Non-Indigenous
No. of mothers	55	14
Average HbA1c (%)	6.8	6.3
Median gestation (weeks) at this HbA1c	11.3	7.1

3. Birth Outcomes

Births		
	Type 2	GDM
Number	69	482
Live birth	96%	100%
Caesarean section	61%	41%

Congenital Malformations		
	Type 2 Diabetes	GDM
Major malformation	1%	0%
Minor malformation	7%	6%

- Rates of metformin use were high in Indigenous women (88% T2DM, 50% GDM) and increased over time in non-Indigenous women.
- Metformin was associated with a slightly earlier gestational age at birth in GDM, however no difference was observed in:
 - Prematurity (<37 weeks)
 - adverse birth outcomes
 - This is consistent with previous studies.



Lindenmayer et al 2017 (ADS Perth)

Models of Care

- What we tried to do, What did we achieve?
- What are we working towards now?

Before and after pregnancy

Preconception care

(indicators – folic acid, HbA1c, gestational age at first visit) are associated with fewer adverse pregnancy outcomes. (Murphy et al 2010)



Just Five Things....

Glycaemic control

Maternal Weight

Smoking

Contraception

Breastfeeding

PANDORA

- What we found?
- The mothers said....
- Their kids.....



Thanks



References

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ts

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