

# ANTENATAL DIABETES CLINIC PRESENTATIONS FROM FIRST SCREENING BLOOD TEST

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## BACKGROUND:

Historically antenatal screening for gestational diabetes (GDM) was offered to women with specific risk factors, or through a glucose challenge test at 24-28 weeks gestation. However, risk factor screening fails to identify women with GDM without prior risk factors. New Zealand guidelines, implemented in February 2016, include an HbA1c in the first antenatal blood screening tests, taken around 16-20 weeks gestation<sup>1</sup>.

Women with an HbA1C between 40-49mmol/mol receive one hospital appointment and then follow standard care. Concern was raised that the clinic would be under-resourced to manage these women.

Women with an HbA1C<40mmol/mol perform an oral glucose tolerance test (OGTT) at 24-28 weeks gestation with a diagnosis of GDM if a fasting glucose is <5.0 mmol/l, or a 2 hour glucose is >9 mmol/l.

## AIM:

To quantify the number of women with a screening HbA1C between 40-49mmol/mol presenting to the antenatal diabetes clinic.

To identify the booking HbA1C in women diagnosed with gestational diabetes.

## METHODS:

All pregnant women in the Wellington region with a recorded HbA1C were identified from laboratory records. Southern Community Laboratory is the only laboratory to service the region and therefore would capture all blood tests performed. Those with an HbA1c between 40-49mmol/mol were reviewed for clinical outcomes. Data for women with an HbA1c 35-39mmol/mol were additionally explored.

The diabetes in pregnancy database was searched to identify the booking HbA1C in those later diagnosed with GDM by an OGTT.

## RESULTS:

Between February 2016 and December 2016 0.59% (n=51/8692) women had an HbA1C 40-49mmol/mol and 0.58% (n=50) women had HbA1C >50mmol/mol (Figure 1). Eleven of the 51 women had contact with Wellington Maternity Services: two had pre-existing diabetes; six required insulin therapy. 6.6% (n=572) of all pregnant women had a booking HbA1C between 35-39mmol/mol.

31% of women presenting to diabetes antenatal clinic who had a diagnosis of GDM, based on OGTT, had a booking HbA1C 35-39mmol/mol (n=34/109) (Figure 2) and 50% of women presenting to clinic with an HbA1C 40-49mmol/mol had previously had a booking HbA1C 35-39mmol/mol.

Figure 1: Booking HbA1C's for all women in Wellington

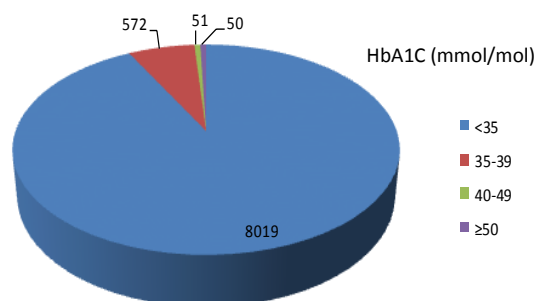
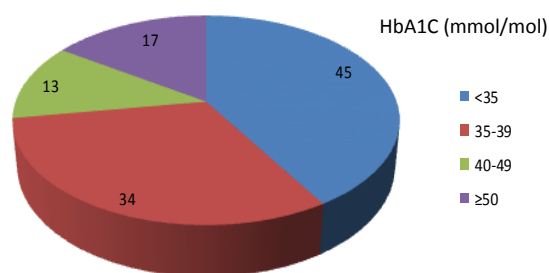


Figure 2: Booking HbA1C's for women diagnosed with GDM by OGTT at 24-28 weeks gestation.



## CONCLUSIONS:

First, although funded universal screening now occurs, access to secondary care does not appear inclusive. The current clinic is well-resourced to manage women with an initial HbA1C 40-49mmol/mol but not all women are accessing services.

Second, of concern is the large number of women with an HbA1C 35-39mmol/mol who progress to gestational diabetes, where 72% of women diagnosed with GDM had a booking HbA1C <40mmol/mol.

More widespread lifestyle education from a lead maternity carer may prevent this progression and should be explored further.

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**REFERENCES:** 1. Screening, Diagnosis and Management of Gestational Diabetes Guidelines in New Zealand (2014)