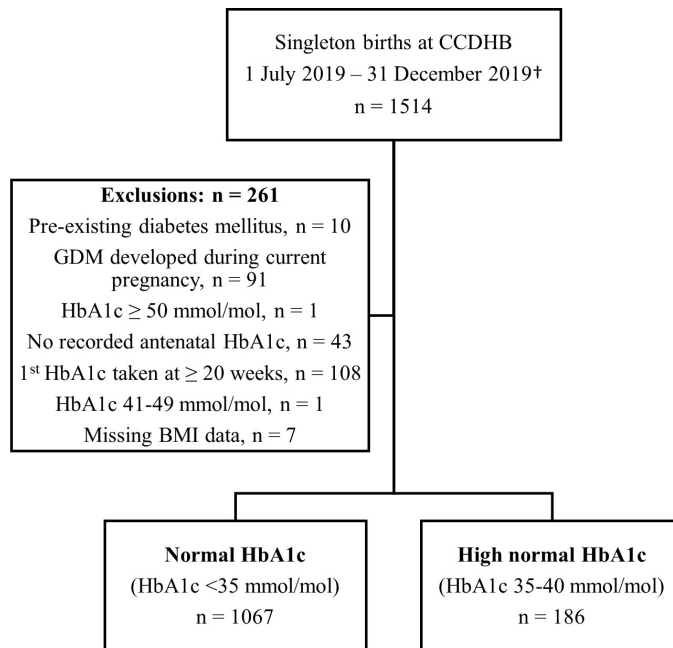


Figure 1: Flow diagram of study protocol.



†Births at Wellington Regional Hospital, Kenepuru Maternity Unit or Paraparaumu Maternity Unit. Only people who domiciled to the Wellington region (CCDHB) were included.

Table 1: Baseline characteristics of participants based on early pregnancy HbA_{1c} group, excluding pre-existing diabetes and GDM in current pregnancy.

		Normal HbA_{1c} (HbA_{1c} <35mmol/mol) n = 1,067	High normal HbA_{1c} (HbA_{1c} 35–40mmol/mol) n = 186	p-value
Age, years	mean (SD)	32.1 (5.4)	32.4 (5.2)	.3929
BMI, kg/m ²	median (range)	24.4 (16.9–68.1)	25.4 (14.5–59.9)	.0263
Ethnicity	NZ European, n (%)	492 (46.1%)	55 (29.6%)	<.0001
	Māori, n (%)	125 (11.7%)	28 (15.1%)	
	Pacific peoples, n (%)	91 (8.5%)	27 (14.5%)	
	Indian, n (%)	50 (4.7%)	18 (9.7%)	
	Other Asian, n (%)	125 (11.7%)	33 (17.7%)	
	Other, n (%)	184 (17.2%)	25 (13.4%)	
Parity	Primiparous, n (%)	506 (47.4%)	64 (34.4%)	.0013
	Multiparous, n (%)	561 (52.6%)	122 (65.6%)	

Table 2: Perinatal outcomes using odds ratios comparing early pregnancy HbA_{1c} group: high normal HbA_{1c} vs normal HbA_{1c}, excluding pre-existing diabetes and GDM in current pregnancy.

Outcomes	Normal HbA_{1c} (HbA_{1c} <35mmol/mol) n = 1,067	High normal HbA_{1c} (HbA_{1c} 35–40mmol/mol) n = 186	p-value[†]	Odds ratio (95% CI)[†]
Birth weight (g)				
Mean (SD) [‡]	3,459.6 (582.1)	3,417.3 (578.8)	.6933	
Customised birth centiles				
Large for gestational age (>90th centile), n (%)	140 (13.1%)	23 (12.4%)	.7775 [§]	0.934 (0.570, 1.470) [§]
Small for gestational age (<10th centile), n (%)	86 (8.1%)	23 (12.4%)	.0565 [§]	1.610 (0.968, 2.584) [§]
Neonatal composite adverse outcomes, [¶] n (%)	414 (38.8%)	83 (44.6%)	.1837	1.244 (0.900, 1.713)
Maternal composite adverse outcomes, [#] n (%)	647 (60.6%)	98 (52.7%)	.0074	0.640 (0.462, 0.888)*

Table 2 (continued): Perinatal outcomes using odds ratios comparing early pregnancy HbA_{1c} group: high normal HbA_{1c} vs normal HbA_{1c}, excluding pre-existing diabetes and GDM in current pregnancy.

Components of composite outcomes		
Mode of delivery		
Normal vaginal delivery (NVD), n (%)	600 (56.2%)	118 (63.4%)*
Caesarean section (CS)		
Total caesarean section, n (%)	362 (33.9%)	58 (31.2%)
Emergency caesarean section, n (%)	235 (22.0%)	37 (19.9%)
Forceps or ventouse delivery, n (%)	105 (9.8%)	10 (5.4%)
Shoulder dystocia, n (%)	1 (0.1%)	0 (0%)
Perineal tears (third and fourth degree), n (%)	44 (4.1%)	8 (4.3%)
Post-partum haemorrhage (PPH), n (%)	342 (32.1%)	40 (21.5%)*
Induction of labour, n (%)	235 (22.0%)	30 (16.1%)
Pre-term delivery, <37 weeks, n (%)	63 (5.9%)	15 (8.1%)
NICU admission, n (%)	160 (15.0%)	28 (15.1%)
NICU admission in days, mean (SD)	12.3 (21.6)	13.6 (21.1)
NICU requiring respiratory support, n (%)	89 (8.3%)	14 (7.5%)
Hypoglycaemia requiring treatment, n (%)	70 (6.6%)	16 (8.6%)
Perinatal death, n (%)	5 (0.5%)	0 (0%)

[†]Adjusting for age, ethnicity and BMI.

[‡]Box Cox transformation applied, lambda = 1.92.

[§]Not adjusted for ethnicity or BMI as these are adjusted for within the GROW Calculator.

[¶]Neonatal composite adverse outcomes: birth weight more than 4,000g, large for gestational age, small for gestational age, shoulder dystocia, pre-term delivery (<37 weeks), admission to NICU, hypoglycaemia requiring treatment and perinatal death.

[¶]Maternal composite adverse outcomes: caesarean section, perineal tears (third and fourth degree), post-partum haemorrhage, induction of labour and pre-term delivery (<37 weeks).

*Statistically significant difference. P-value = 0.05 for NVD and 0.01 for PPH.