

ESM Table 1: Maternal and infant demographics according to availability of HbA_{1c} measurement pre-pregnancy and in each trimester

	Prepregnancy				2 nd trimester				3 rd trimester			
	Type 1 diabetes		Type 2 diabetes		Type 1 diabetes		Type 2 diabetes		Type 1 diabetes		Type 2 diabetes	
	HbA _{1c} available (n=2351)	No HbA _{1c} available (n=1427)	HbA _{1c} available (n=813)	No HbA _{1c} available (n=801)	HbA _{1c} available (n=2100)	No HbA _{1c} available (n=1678)	HbA _{1c} available (n=771)	No HbA _{1c} available (n=843)	HbA _{1c} available (n=1971)	No HbA _{1c} available (n=1807)	HbA _{1c} available (n=797)	No HbA _{1c} available (n=817)
Maternal age at delivery, years (SD)	30.1 (5.7)	29.1 (5.7)***	33.8 (5.5)	32.6 (5.6)***	29.8 (5.7)	29.7 (5.6)	33.4 (5.5)	33.0 (5.7)	29.8 (5.6)	29.7 (5.7)	33.5 (5.5)	32.9 (5.7)
SIMD score (SD)	22.6 (16.7)	25.0 (17.6)***	28.5 (18.0)	27.5 (18.3)	22.6 (16.0)	24.6 (18.2)***	27.8 (18.0)	28.1 (18.3)	22.6 (16.1)	24.6 (18.0)***	27.7 (17.4)	28.3 (18.8)
Duration of diabetes, years (SD)	14.7 (8.4)	13.0 (8.4)***	4.8 (4.0)	3.6 (4.1)***	14.7 (8.4)	13.2 (8.4)***	4.5 (4.0)	3.9 (4.2)**	14.6 (8.5)	13.5 (8.3)***	4.4 (4.0)	4.0 (4.2)
Nulliparous	50.5% (n=1176)	49.3% (n=695)	30.8% (n=248)	31.2% (n=248)	50.9% (n=1057)	49.0% (n=814)	30.7% (n=235)	31.2% (n=261)	50.8% (n=986)	49.3% (n=885)	31.2% (n=248)	30.7% (n=248)
Maternal Smoking	17.0% (n=369)	26.1% (n=344)***	19.2% (n=143)	23.2% (n=172)	20.1% (n=398)	21.0% (n=315)	19.5% (n=140)	22.8% (n=175)	19.7% (n=366)	21.4% (n=347)	20.6% (n=152)	21.8% (n=163)
Prepregnancy maternal BMI (SD)	26.3 (4.7)	26.4 (5.5)	33.8 (7.1)	34.6 (7.1)	26.3 (5.0)	26.2 (4.7)	34.1 (7.1)	34.0 (7.2)	26.3 (5.0)	26.2 (4.7)	34.2 (7.3)	33.8 (6.9)
Stillbirth rate	16.2 (n=38)	16.1 (n=23)	20.9 (n=17)	25.0 (n=20)	13.3 (n=28)	19.7 (n=33)	19.5 (n=15)	26.1 (n=22)	13.7 (n=27)	18.8 (n=34)	13.8 (n=11)	31.8 (n=26)*
Male fetus	49.8% (n=1170)	48.9% (n=698)	51.2% (n=416)	51.3% (n=411)	49.6% (n=1042)	49.2% (n=826)	49.9% (n=385)	52.4% (n=442)	49.1% (n=967)	49.9% (n=901)	51.8% (n=413)	50.7% (n=414)
Gestational age delivery, weeks (SD)	36.6 (2.2)	36.6 (2.3)	36.9 (2.4)	37.3 (2.3)***	36.5 (2.1)	36.6 (2.4)	36.9 (2.4)	37.3 (2.4)***	36.8 (1.8)	36.3 (2.6)***	37.2 (1.8)	36.9 (2.9)**
Birth weight Z-score (SD)	1.43 (1.30)	1.28 (1.31)***	0.94 (1.41)	0.74 (1.32)**	1.38 (1.32)	1.36 (1.29)	0.94 (1.40)	0.75 (1.33)**	1.42 (1.28)	1.32 (1.33) *	0.91 (1.41)	0.77 (1.32)*

Values are presented as % of group, or mean ± SD, *p<0.05, **p<0.01, ***p<0.001 for stillbirth versus livebirth by, χ^2 or t-test

Scottish Index of Multiple Deprivation (SIMD) 2012 score is indicator of average material deprivation in area of residence at time of delivery. Scores range 0.89-89.89, with higher numbers reflecting residence in an area of higher material deprivation.

ESM Table 2: Stillbirth prevalence according to birth weight centile and diabetes diagnosis

	Birth weight centile			
Type 1 diabetes (n=3728)	<10th (n=72)	10th to 90th (n=1705)	>90th (n=1951)	>95th (n=1527)
% stillbirth (n)	6.9% (5)	1.2% (20)	1.7% (34)	1.7% (26)
% livebirth (n)	93.1% (67)	98.8% (1685)	98.3% (1917)	98.3% (1501)
Odds Ratio stillbirth (95% confidence interval)	6.3 (2.3-17.3)	Ref	1.5 (0.9-2.6)	1.5 (0.8-2.6)
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Type 2 diabetes (n=1600)	<10th (n=82)	10th to 90th (n=948)	>90th (n=570)	>95th (n=417)
% stillbirth (n)	4.9% (4)	1.7% (16)	2.8% (16)	3.55% (15)
% livebirth (n)	95.1% (78)	98.3% (932)	97.2% (554)	96.45 (402)
Odds Ratio stillbirth (95% confidence interval)	3.0 (1.0-9.2)	Ref	1.7 (0.8-3.4)	2.2 (1.1-4.4)

Missing values (n): 50 in type 1, 14 in type 2

ESM Table 3: Mean birth weight Z-score according to combined pre-pregnancy and 3rd trimester HbA1c

	Type 1 diabetes				Type 2 diabetes			
	3 rd trimester HbA _{1c} 1 st quartile	3 rd trimester HbA _{1c} 2 nd quartile	3 rd trimester HbA _{1c} 3 rd quartile	3 rd trimester HbA _{1c} 4 th quartile	3 rd trimester HbA _{1c} 1 st quartile	3 rd trimester HbA _{1c} 2 nd quartile	3 rd trimester HbA _{1c} 3 rd quartile	3 rd trimester HbA _{1c} 4 th quartile
Pre-pregnancy HbA _{1c} 1 st quartile	0.90 (0.12)	1.43 (0.14)	1.62 (0.19)	1.62 (0.30)	0.39 (0.13)	0.95 (0.17)	1.55 (0.29)	2.35 (0.43)
Pre-pregnancy HbA _{1c} 2 nd quartile	0.73 (0.17)	1.32 (0.11)	1.54 (0.11)	1.70 (0.15)	0.38 (0.28)	0.74 (0.23)	1.51 (0.27)	1.93 (0.39)
Pre-pregnancy HbA _{1c} 3 rd quartile	0.96 (0.23)	1.29 (0.14)	1.61 (0.11)	1.80 (0.12)	0.69 (0.34)	0.97 (0.32)	1.84 (0.39)	1.52 (0.36)
Pre-pregnancy HbA _{1c} 4 th quartile	0.64 (0.27)	1.12 (0.19)	1.40 (0.13)	1.73 (0.09)	0.88 (0.36)	0.89 (0.31)	1.11 (0.29)	1.79 (0.26)

Quartiles defined by combined HbA_{1c} from type 1 and type 2 diabetes:

Pre-pregnancy quartile 1 <52 mmol/mol (6.9%); quartile 2 ≥52 mmol/mol (6.9%) and <63 mmol/mol (7.9%); quartile 3 ≥63 mmol/mol (7.9%) and <76 mmol/mol (9.1%); quartile 4 ≥ 76mmol/mol (9.1%)

3rd trimester quartile 1 <42 mmol/mol (6.0%); quartile 2 ≥42mmol/mol (6.0%) and < 49mmol/mol (6.6%); quartile 3 ≥49mmol/mol (6.6%) and <56 mmol/mol (7.3%); quartile 4 ≥ 56 mmol/mol (7.3%)

ESM table 4: HbA_{1c} value correlation at pre-pregnancy, 1st, 2nd and 3rd trimester in type 1 and type 2 diabetes

	Type 1 diabetes				Type 2 diabetes			
	Pre-pregnancy HbA _{1c} (n=2351)	1st trimester HbA _{1c} (n=2251)	2 nd trimester HbA _{1c} (n=2100)	3 rd trimester HbA _{1c} (n=1971)	Pre-pregnancy HbA _{1c} (n=813)	1st trimester HbA _{1c} (n=828)	2 nd trimester HbA _{1c} (n=771)	3 rd trimester HbA _{1c} (n=797)
Pre-pregnancy HbA _{1c}	1.000	0.687 (n=1658)****	0.493 (n=1512)****	0.466 (n=1382)****	1.000	0.733 (n=550)****	0.503 (n=495)****	0.478 (n=476)****
1 st trimester HbA _{1c}	0.687 (n=1658)****	1.000	0.658 (n=1670)****	0.586 (n=1527)****	0.733 (n=550)****	1.000	0.604 (n=584)****	0.469 (n=551)****
2 nd trimester HbA _{1c}	0.493 (n=1512)****	0.658 (n=1670)****	1.000	0.747 (n=1626)****	0.503 (n=495)****	0.604 (n=584)****	1.000	0.746 (n=606)****
3 rd trimester HbA _{1c}	0.466 (n=1382)****	0.586 (n=1527)****	0.747 (n=1626)****	1.000	0.478 (n=476)****	0.470 (n=551)****	0.746 (n=606)****	1.000

**** p<0.0001

ESM Figure 1: Birth weight Z-score and gestational age at delivery according to health board area of delivery (1A: gestational age at delivery type 1 diabetes, 1B: gestational age at delivery type 2 diabetes; 1C: birth weight type 1 diabetes, 1D: birth weight type 2 diabetes).

Dots show mean value; error bars show standard deviation.



