

**Title: Effects of guidance changes for gestational diabetes mellitus (GDM) in a UK hospital setting during the COVID-19 pandemic: a before and after comparison of management and outcomes**

**Ref HIRSEC7211**

#### Objective

To understand the effects of the Royal College of Obstetrics & Gynaecology Emergency Guidance for diagnosis and management of GDM during the coronavirus pandemic.

#### Design

Retrospective cohort study in a large tertiary hospital in South East England

#### Methods

We compared 'pre-COVID-19', when 2-hour glucose tolerance test (GTT) (WHO criteria) was used for diagnosis (18 August 2018–2 April 2020); to 'during COVID-19', when diagnosis was by fasting or random plasma glucose, and/or HbA1c (3 April–9 September 2020). Data were extracted from GDMHealth™ and hospital electronic records. Baseline characteristics at diagnosis, blood glucose monitoring, medications for diabetes, and perinatal outcomes associated with GDM were assessed using binary logistic regression adjusted for differences in baseline and treatment characteristics.

#### Results

Of 812 women with GDM, 668 were pre-COVID-19 and 144 during COVID-19. Birth outcomes were available for 738 babies (650 pre-COVID-19 and 88 during COVID-19). During COVID-19, GDM was diagnosed later (29.6 vs 28.0 weeks of gestation  $p=0.004$ ) and more women came from black ethnic backgrounds (8.9 vs 2.4%,  $p = 0.02$  for trend). Glucose monitoring frequency and proportion of out-of-target readings were similar. During COVID-19 babies were more likely to be large for gestational age, odds ratio 2.2 (95% confidence interval 1.0–4.8), deliver by emergency caesarean section, OR 1.9 (1.1–3.3), or experience shoulder dystocia at birth, OR 5.1 (1.7–15.7).

#### Conclusions

Changes in GDM screening practice during the COVID-19 pandemic adversely impacted birth outcomes. Until a better diagnostic tool is available for GDM, a return to GTT for diagnosis should be prioritised.