

HbA1c is an inferior screening test to OGTT

Risk of adverse outcomes however remains low

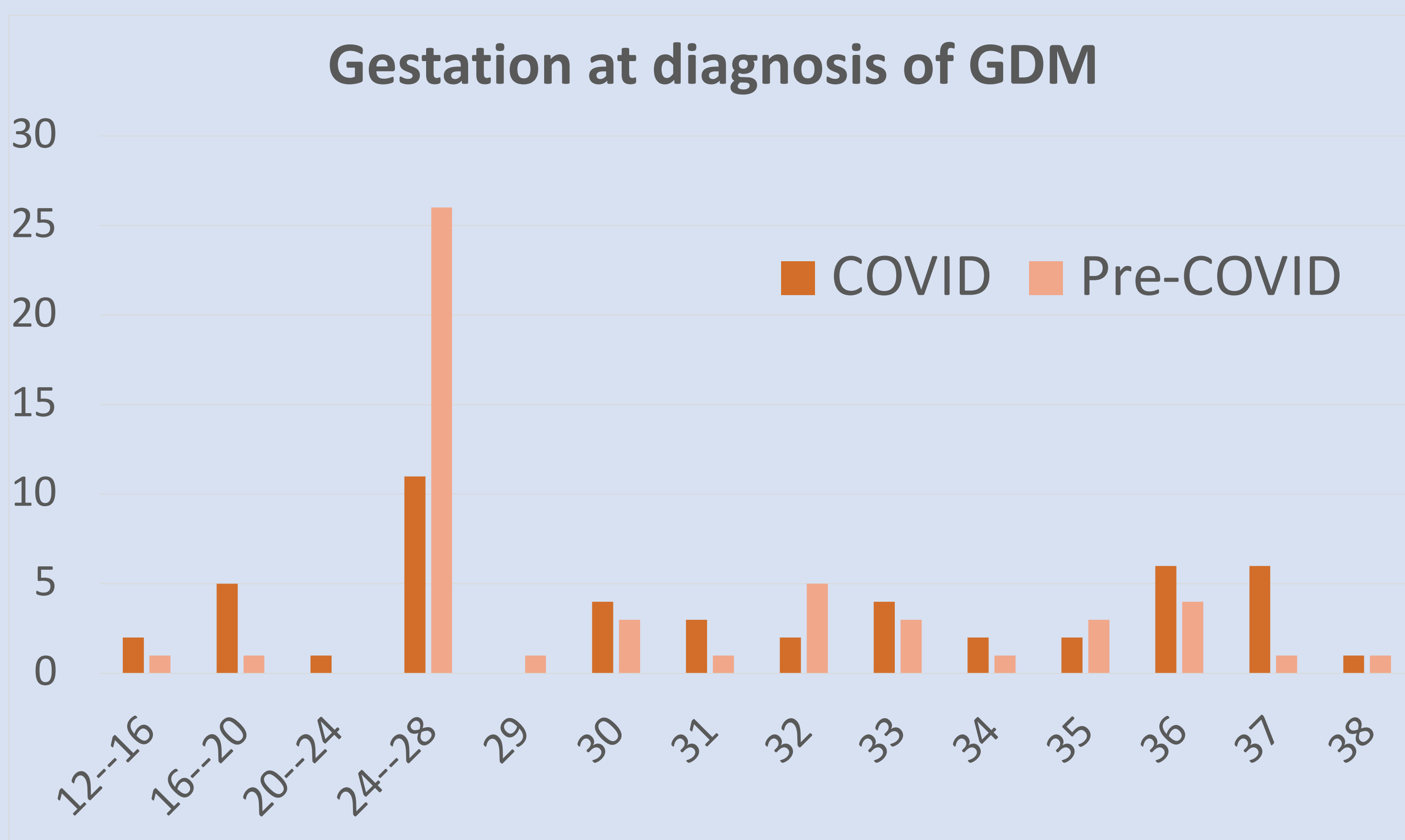
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Objective

Gestational diabetes (GDM) is an increasingly common problem; timely diagnosis through screening is vital to reduce risk for these mothers and their babies. During the first Covid lockdown the RCOG recommended a random plasma glucose and a serum HbA1c at booking and 28 weeks to screen for GDM, instead of using an oral glucose tolerance test. **Our objectives were to establish if HbA1c/Random plasma glucose at 28 weeks have comparable sensitivity to oral glucose tolerance tests, to establish if the incidence of macrosomia was consequently increased and if this therefore led to poorer outcomes for mothers and infants at term.**

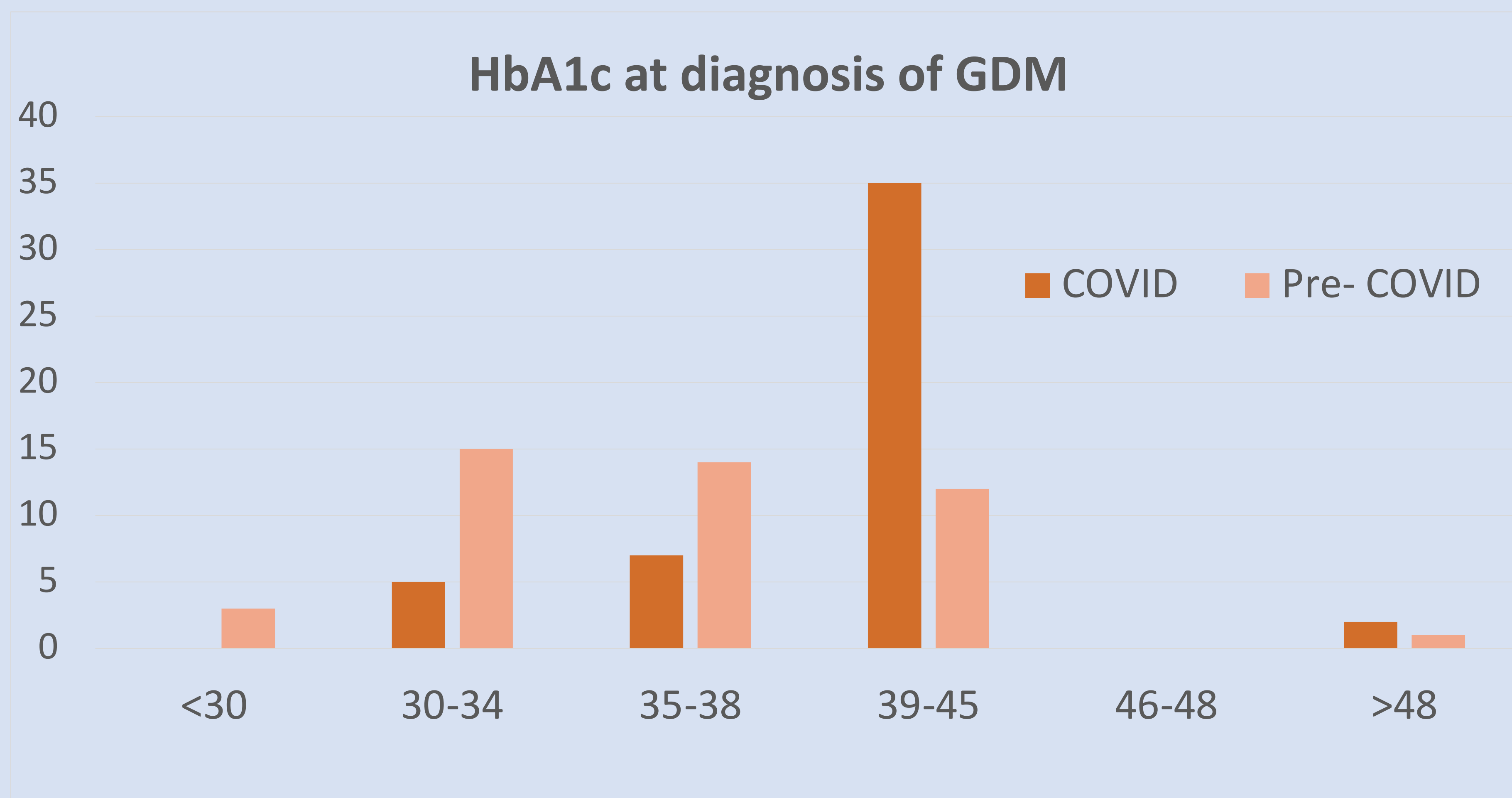
Design

We designed a retrospective audit of 100 cases of gestational diabetes in a busy district general hospital, both immediately pre and post the first Covid lockdown in March of 2020. The annual incidence of GDM in this hospital in 2018 was 226 cases, therefore this sample size was appropriate and proportional.



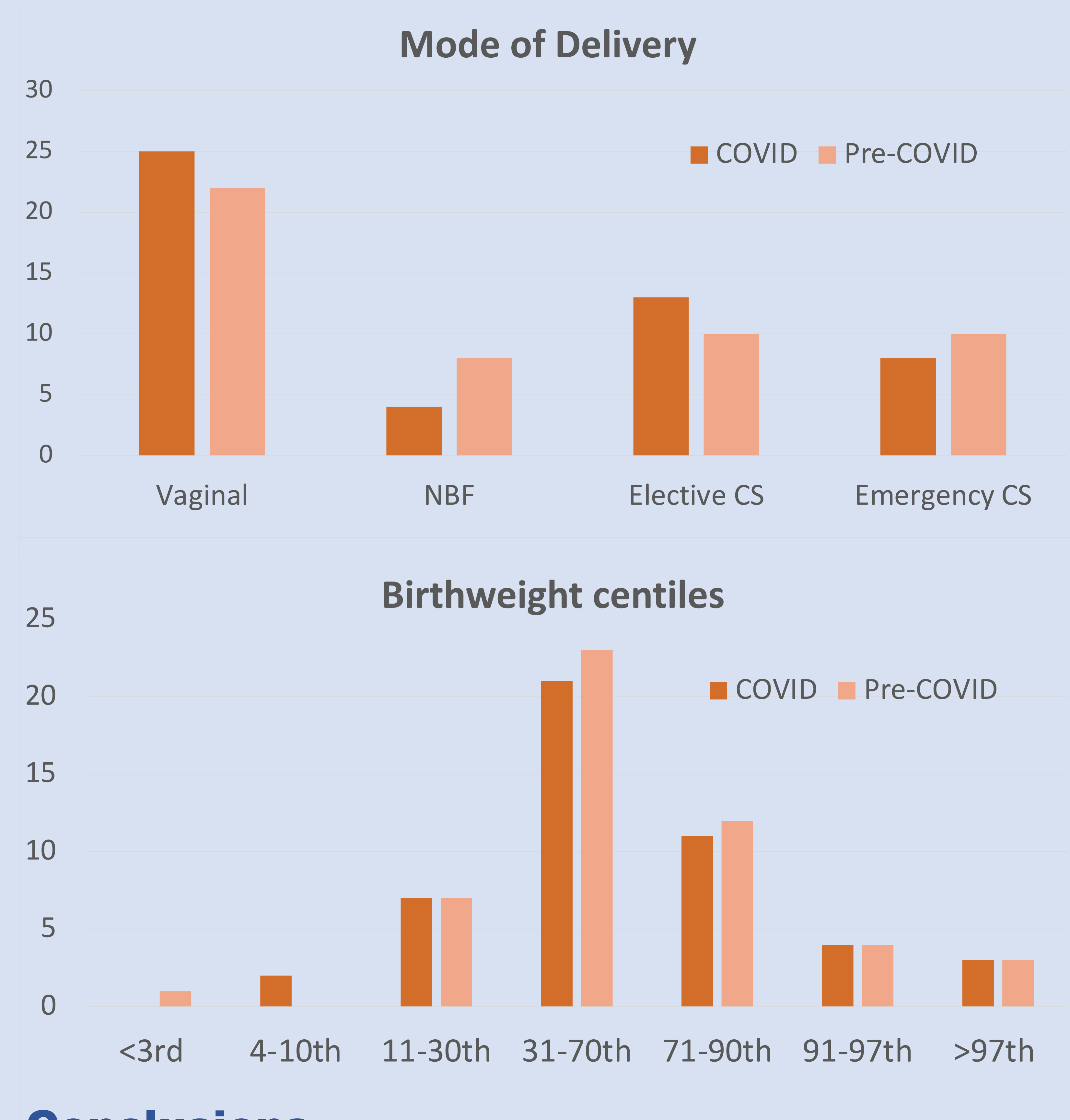
Method

50 cases from each cohort were randomly selected using a database of women with GDM compiled prospectively by our diabetic specialist midwife. The women in the pre-covid cohort were selected who had estimated due dates between February 2019 and May 2020, as all cases had an oral glucose tolerance test as their initial method of GDM screening. The post covid cohort had estimated due dates of June 2020 onwards, as these women all had HbA1c/random plasma glucose as their primary method of GDM screening. Antenatal, intrapartum and postnatal data were collected on a paper proforma from the Orion maternity computer system and we analysed the results manually using Microsoft Excel.



Results

We found that using HbA1c and random plasma glucose we were only detecting 50% of women with GDM at 28 weeks vs 72% detected used oral glucose tolerance tests. There was a 12% increase in large for gestational age babies at term using HbA1c as a screening tool and a 10% increase in elective caesarean sections. Despite this, birthweight and delivery outcomes were similar in both cohorts, with no evidence of increased maternal or neonatal harm.



Conclusions

HbA1c and random plasma glucose are inferior screening tools compared to oral glucose tolerance tests leading to later diagnosis of GDM in some women and a small increase in macrosomia. The effects of these however do not confer any increased risk of adverse outcomes to mothers or their babies.