Pregnancy outcomes in women with Gestational Diabetes Mellitus differ by models of care: A retrospective cohort study

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Background

- GDM is the most common medical complication of pregnancy, with increasing rates internationally (1, 2)
- Increased rates of adverse maternal and neonatal outcomes are observed in women with mild forms of GDM (3), or glucose intolerance not classified as GDM (4)
- There is little evidence available on the impact of models of care for outcomes in women with GDM, with health services adapting heterogenous approaches

Objective

- To explore the demographic characteristics of women with GDM attending different clinics at Westmead hospital
- To identify the differing maternal and neonatal outcomes between women attending dedicated and non-dedicated GDM clinics

Materials and Methods

- Routinely collected data analysed from all deliveries at Westmead hospital between 01/01/2018 and 30/11/2020
- Demographics and outcomes calculated and compared between women without GDM, women with GDM attending non-dedicated clinics, and women with GDM attending Dedicated Clinic 1 and Dedicated Clinic 2
- Logistics regression used to adjust for medical comorbidities, maternal age, ethnicity, parity, previous pre-term pregnancy, conception method and BMI

Results

- The GDM rate was 16.3%, with 34.7% of women managed in dedicated GDM clinics.
- Women with GDM had higher rates of several adverse outcomes including HDP, IOL, PTB, operative delivery, neonatal hypothermia, hypoglycaemic, respiratory distress and NICU/SCN admission
- Women with GDM attending non-dedicated clinics had increased odds of:
    - HDP (Adj OR 1.6, 95%CI 1.2-2.0)
    - PTB (Adj OR 1.7, 95% CI 1.4-2.0)
    - OASIS (Adj OR 1.4, 95% CI 1.0-2.0)
    - Similar odds of induction (Adj OR 1.0, 95% CI 0.9-1.2) to women without GDM
    - Increased odds of Neonatal Intensive Care Unit (NICU) admission (Adj OR 1.5, 95% CI 1.3-1.8), similar to women attending high risk GDM clinics

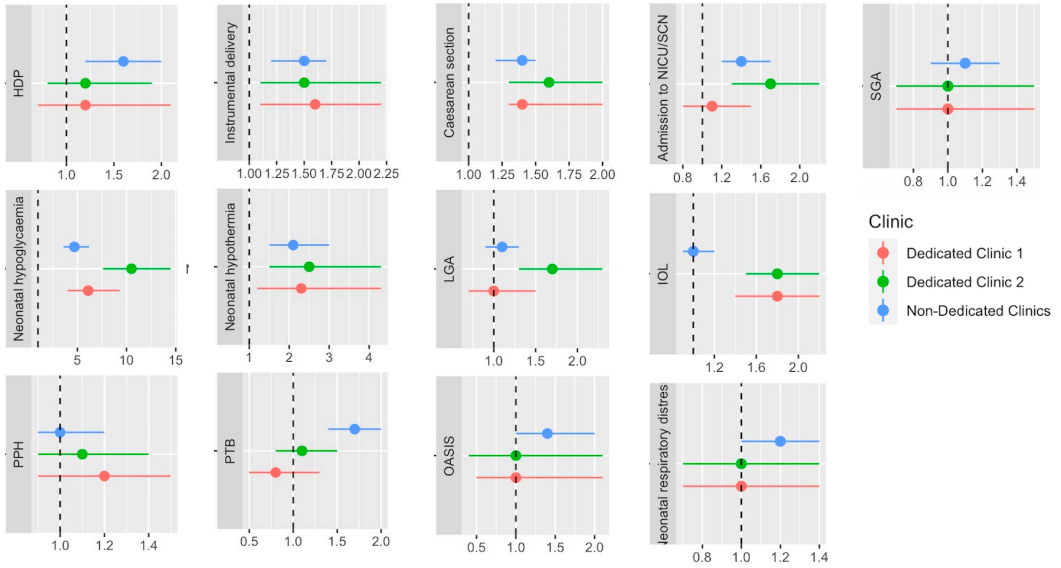
Discussion

- Health services that allocate only a subgroup of women with GDM to dedicated clinics imply a greater severity of disease requiring more intensive monitoring
- The assumption of milder disease amongst women attending the non-dedicated clinics is not consistent with our findings
- Our study found that current methods of stratifying women into dedicated or non-dedicated clinics on the basis of insulin requirements and medical co-morbidities appear ineffective, especially for with women deemed to have milder GDM.

Conclusion

The antenatal model is an independent factor in determining outcomes for women with GDM. Pathways of care need to be similar in all women with GDM.

Results



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