

Improving Postpartum Healthcare and Health Outcomes of Women with a History of Gestational Diabetes Mellitus

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Abstract

Background

Women who have had gestational diabetes mellitus (GDM) are at increased risk of type 2 diabetes (T2DM), and are recommended to have T2DM screening in the postpartum period, although this screening is often not undertaken. This thesis examines how postpartum care for women with GDM may be improved.

Methods

Two systematic reviews of qualitative/survey studies examine:

- (1) Clinicians' views and knowledge relating to provision of healthcare in the postpartum period for GDM.
- (2) Women's views and knowledge relating to healthcare seeking after GDM.

A randomised controlled trial and two nested studies assess:

- (1) Postpartum SMS reminders to women who have experienced GDM to test for T2DM:
The DIAMIND Trial
- (2) Predictors of postpartum diabetes screening in the DIAMIND Trial
- (3) Barriers and facilitators to postpartum diabetes testing.

Results

The systematic review on clinician's views included 13 studies (4435 clinicians). Key themes included adequacy of knowledge of risk of T2DM, and differing perceptions of the value of postpartum screening. Women faced obstacles to accessing healthcare, and a need for improved GDM education. Studies reported shortfalls in systems to ensure communication of the GDM diagnosis and postpartum screening.

The systematic review on women's views included 42 studies (7949 women). Non-judgemental, well-coordinated care was preferable. Perception of T2DM risk increased with time from their GDM diagnosis, family history of T2DM and other risk factors for GDM. Children's needs took priority over their own healthcare. A need for a more pro-active approach to postpartum care was identified.

The DIAMIND Trial found that SMS reminders did not increase attendance for an oral glucose tolerance test (OGTT) within six months postpartum, with 104 (77.6% of 134) women attending in the six week group and 103 (76.8% of 134) women attending in the control group (RR 1.01, 95% CI 0.89-1.15).

Women were more likely to complete OGTTs if they were of Asian ethnicity ($P = 0.007$), had a bachelor's degree ($P = 0.036$), and if they did not smoke prior to pregnancy ($P = 0.045$).

Women were less likely to attend if they had gained excessive weight during their pregnancy ($P = 0.004$) or were Caucasian ($P = 0.001$).

208 women (75%) returned their questionnaires. Preferred reminder types were *SMS* (67%), *email* (17%), *postal* (12%) and *voice call* (1%). Common barriers to postpartum glucose testing included: *not having enough time* (73%), *inadequate or non-availability of childcare* (30%), and *a need to focus on the health of the baby* (30%). The most common facilitator for postpartum testing was *having a shorter test* (33%).

Conclusions

Postpartum care for women with GDM could be improved through systematic communication of the diagnosis, clear responsibilities for postpartum care, better GDM education and minimisation of healthcare cost barriers. Non-judgemental, holistic and pro-active care is preferable.

An OGTT postpartum attendance “ceiling effect” may explain the non-increase in attendance in the six week SMS reminder group. Lack of time and caring responsibilities were barriers to OGTT completion. Further research is needed on reasons for postpartum non-attendance to facilitate diabetes detection and prevention.

Thesis Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree. I give consent to this copy of my thesis when deposited in the University Library, being made available for loan and photocopying, subject to the provisions of the Copyright Act 1968.

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