



Comparing of outcomes in women with gestational diabetes (GDM) using a smart phone application (SPA) to a paper based (PB) log in a regional setting.

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Introduction

There has been a recent trend of using mobile applications with the aim to improve care for women with GDM. Limited studies regarding this have not clearly shown any benefits.

Aims

The aim of the study is to assess if there is a difference in maternal and neonatal outcomes before and after introducing the app.

Methods

A retrospective cohort study was conducted of women with GDM managed by a Queensland regional unit between January 2021 and June 2023. The unit transitioned from PB log blood glucose (BGL) monitoring to SPA based BGL monitoring in October 2021.

124 women managed with PB logs were compared to 161 women managed with SPA (N=285). Primary outcomes were maternal weight gain, number of appointments, birth weight, APGAR score and gestational age at delivery. Secondary outcomes were mode of delivery, shoulder dystocia and perineal tears events. All outcomes were analysed as subgroups depending on the treatment (diet, metformin, insulin, metformin +insulin).

Results

Maternal demographics were similar in both groups. In women treated with metformin and insulin, the number of appointments were significantly less in the SPA based monitoring groups compared to PB groups ($p=0.023$, $p=0.0013$ respectively). No significant differences were showed in other outcomes among all treatment groups, irrespective of BGL monitoring method.

Discussion

Benefit was shown from using a SPA for BGL monitoring, by reducing the number of antenatal appointments, without compromising health outcomes for mothers or neonates. This is a feasible option for units experiencing pressure on availability of antenatal appointments.