



Mobile platform for gestational diabetes support

We've developed and trialled a mobile health platform to help women and clinicians better monitor and manage gestational diabetes.

The challenge

Approximately one in 10 pregnant women in Australia will be diagnosed with gestational diabetes mellitus (GDM), a condition linked with increased risk of complications to the mother and baby in pregnancy and birth.

Because of the complexities of pregnancy and diabetes, women with the condition are supported by a team of medical experts, but much of the management of their condition happens at home.

Women have to track their blood sugar levels and other key health indicators. Multiple clinicians need access to this information to provide optimised support.

GDM can be particularly challenging for geographically dispersed populations and when social distancing is required.



Our response

With Redland Hospital, we co-developed a mobile platform to help women with GDM, and their treating clinicians, better monitor and manage their condition.

The platform, called M♡THER, replaces a traditional paper-based diary system. Women can record information in a smartphone app such as blood sugar levels, blood pressure, weight, diet and exercise.

This information is uploaded to the linked clinician portal, so their dietitian, diabetes educator, midwife and obstetrician can monitor their progress in real time and intervene if required.

The app also includes educational resources to help women understand and manage GDM.

Benefits

The M♡THER health platform was tested in a feasibility study of 40 women at Redland Hospital in Queensland, Australia.

The women reported the app was user-friendly, convenient, helpful in managing their gestational diabetes, and that it gave them more confidence in managing their condition.

Treating clinicians reported improved communication with the women in their care and experienced more multi-disciplinary coordination among themselves.

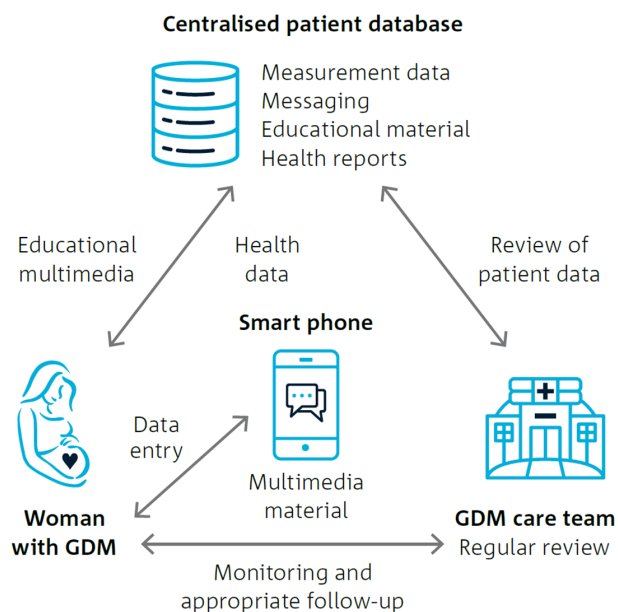
The platform enabled early intervention for a number of women identified with elevated blood glucose level readings in the first week of using the app.

Implementation

The successful trial has seen Metro South Health and CSIRO provide additional funding for implementation research in antenatal clinics in Queensland. Further evaluation at Redland Hospital and Mater Mother's Hospital, Queensland's largest maternity hospital, commenced in June 2020.

To date over 5000 women have utilised the platform across the two sites, with the Mater Mother's Hospital engaging CSIRO in a business agreement to utilise the platform as part of their standard care for three years. Further implementation studies are also underway at Logan Hospital and Royal Brisbane Women's Hospital.

The M♡THER Platform



Scope

GDM is a growing challenge for Australian women and access to specialist care in regional and remote areas remains limited. Likewise, culturally aware care for Aboriginal and Torres Strait Islander women and those that are culturally and linguistically diverse remains challenged by human and structural resources. CSIRO aims to partner with community advocates and organisations to determine if and how mHealth can bridge gaps in GDM care for those that experience additional barriers to care. Moreover, feasibility studies at the Cairns Hospital and Health Service and the Mt Isa Base Hospital in northern Queensland will provide greater insight into adoption and acceptability.

In addition to GDM, research partners have expressed interest in the platform's capacity to support the management of other pregnancy-related conditions, such as Hypertension Disorders during pregnancy (HDP) (for ex. preeclampsia). In collaboration with Western Sydney University and three South Western Sydney Local Health District Hospitals, a randomised control trial is planned to compare remote blood pressure monitoring to conventional face-to-face consultation, in pregnant women with or at high risk of developing HDP.



Australian e-Health
Research Centre