

M♥THER

Support for Women with Gestational Diabetes Mellitus

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www.csiro.au



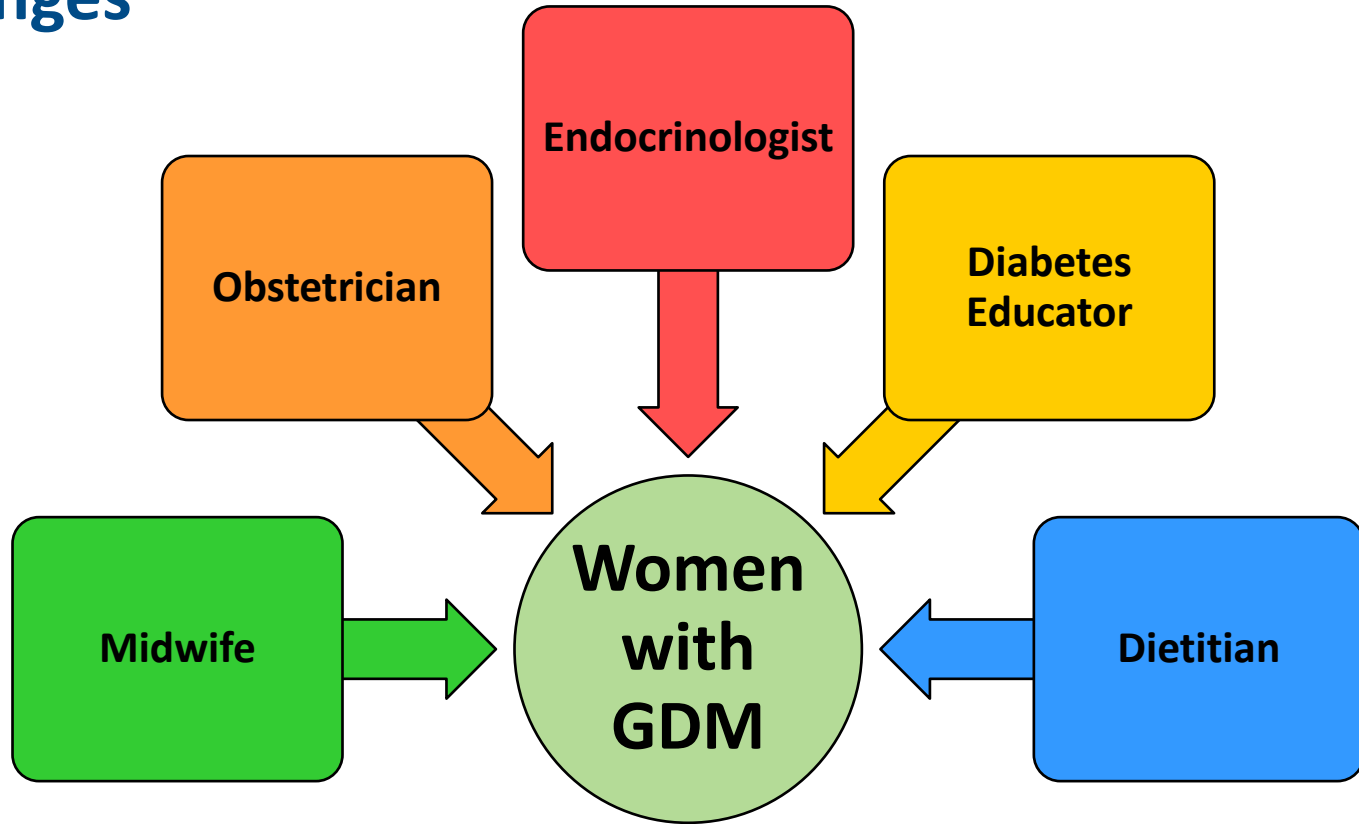
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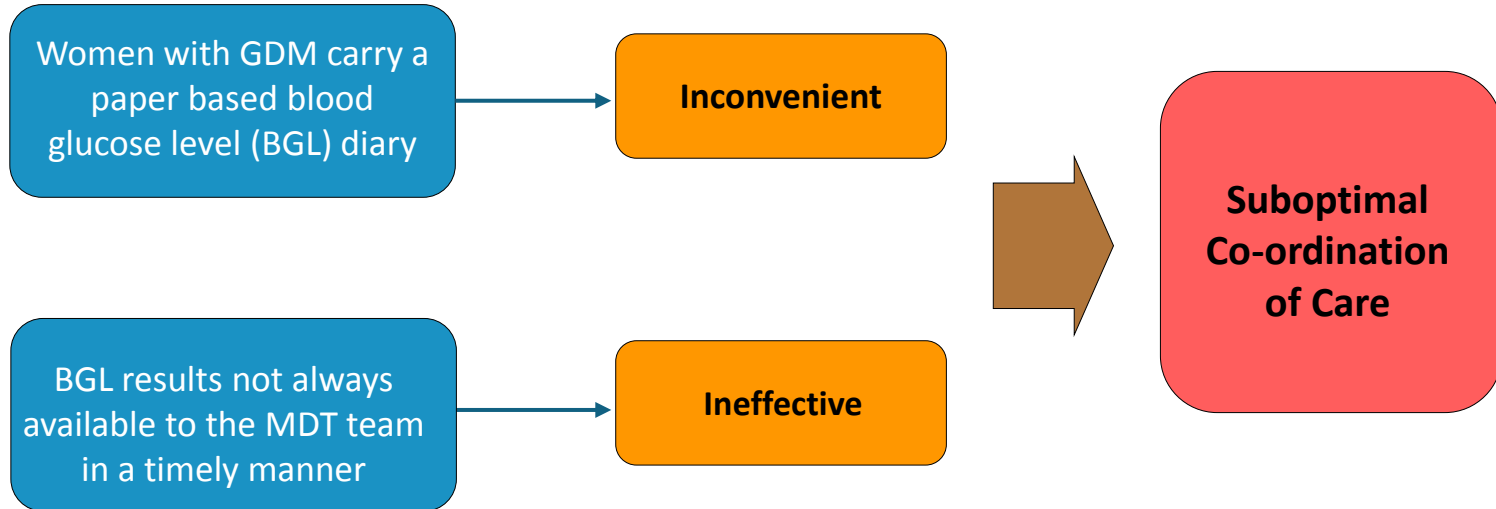
What is the problem?

- GDM is one of the most common medical complications of pregnancy
- Usually occurs around the 24th to 28th week of pregnancy
- Associated with short and long term risks for both mother and baby, especially if blood glucose levels not well controlled
- Incidence of GDM is increasing
- New diagnostic criteria for GDM were introduced in 2014
- At Redland Hospital, 16% of women engaged in Maternity Services are diagnosed with GDM

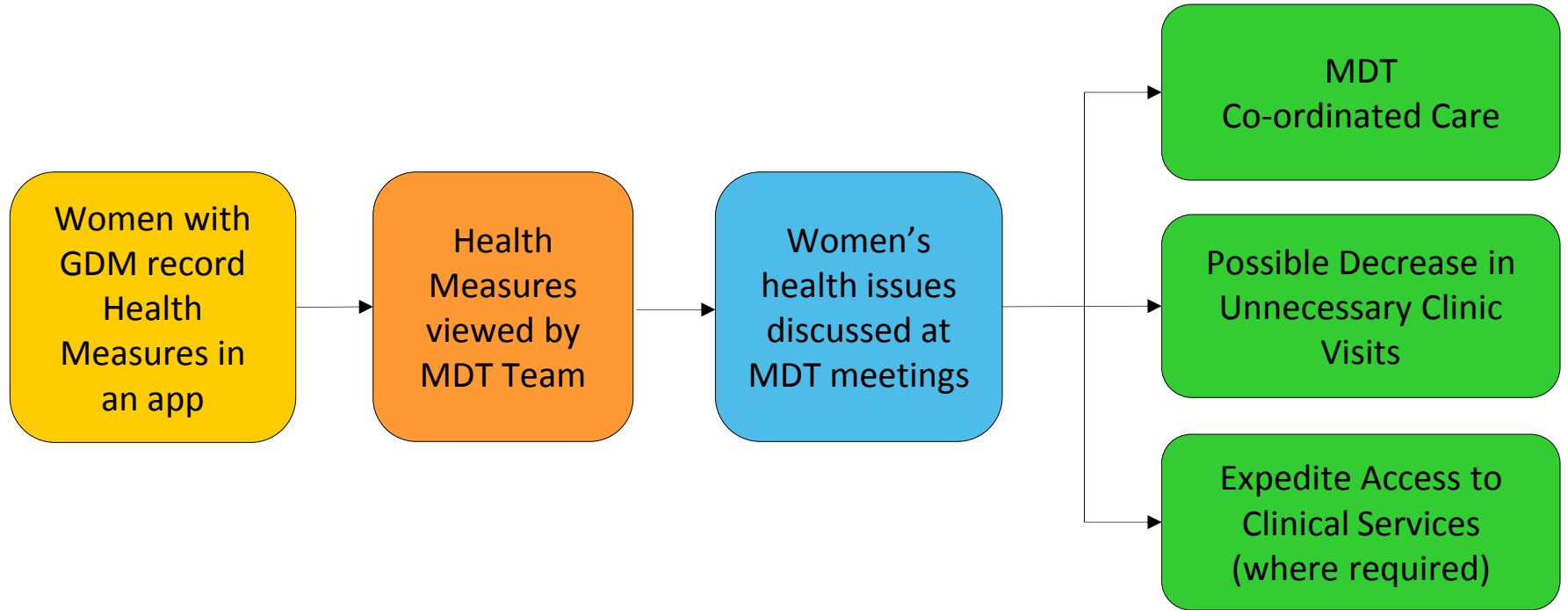
Challenges



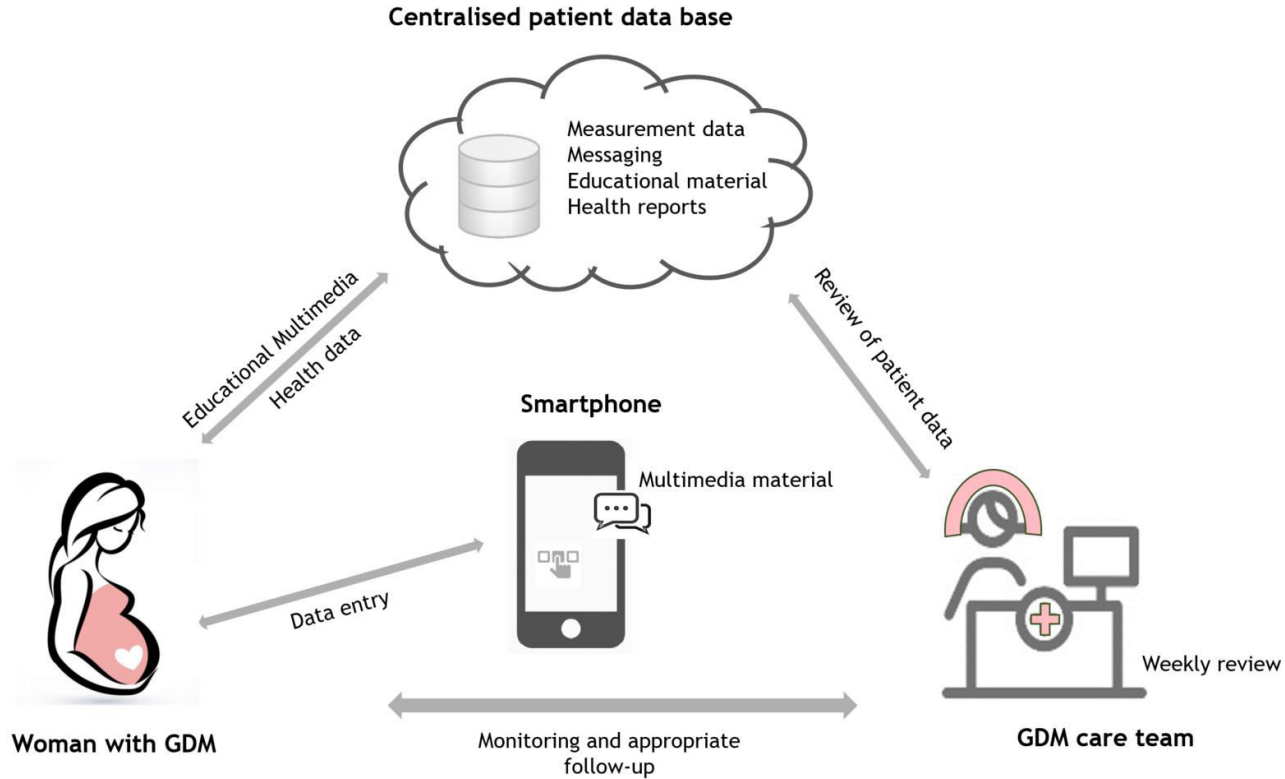
Key problems



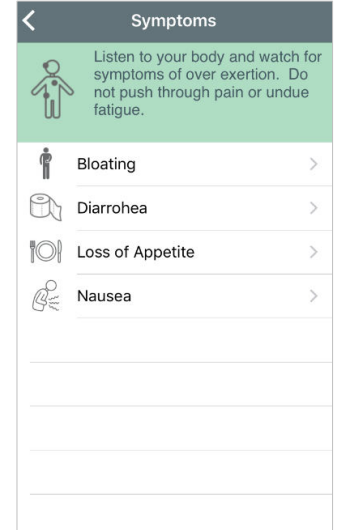
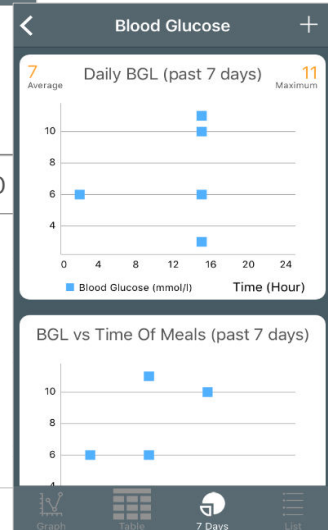
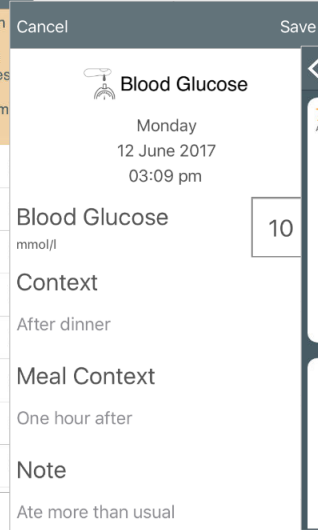
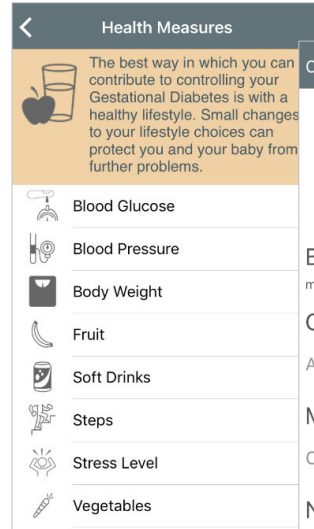
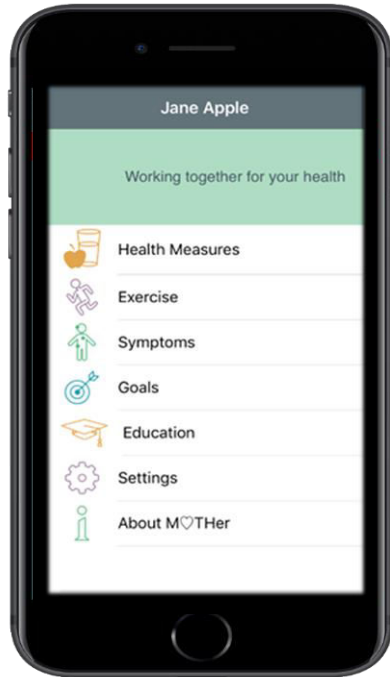
Aims



Our solution



Smartphone app – Apple iOS



Clinician portal



Create New Patient

* 'password' is required.

Username

Password

Remember Me

Demographics

First Name*	<input type="text" value="Amber"/>	Sex*	<input type="text" value="Female"/>	URN*	<input type="text" value="Yyyy"/>
Last Name*	<input type="text" value="Perkins"/>	Title*	<input type="text" value="Mrs"/>	Email Address*	<input type="text" value="amberperkins@gmail.com"/>
Date of Birth*	<input type="text" value="06/03/1987"/>	Mobile Number*	<input type="text" value="0479089935"/>	Indigenous Status	<input type="text" value="None"/>
Pre-Pregnancy Weight*	<input type="text" value="59"/>	Height (cm)*	<input type="text" value="166"/>		

Monitoring

<input type="checkbox"/> Alcohol	<input checked="" type="checkbox"/> Blood Glucose	<input checked="" type="checkbox"/> Blood Pressure	<input checked="" type="checkbox"/> Body Weight
<input checked="" type="checkbox"/> Fruit	<input type="checkbox"/> Heart Rate	<input type="checkbox"/> Oxygen Saturation	<input checked="" type="checkbox"/> Sleep
<input type="checkbox"/> Smoking	<input checked="" type="checkbox"/> Soft Drinks	<input checked="" type="checkbox"/> Steps	<input checked="" type="checkbox"/> Stress Level
<input checked="" type="checkbox"/> Vegetables	<input checked="" type="checkbox"/> Water		

Select All?

Clinician portal

Patient Recorded Data

Blood Glucose Measurements Health Measures Goals Symptoms Exercise

Day	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00
Wed 14 Jun																
Tue 13 Jun																

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Review Topics

17-May-2017 24-May-2017 31-May-2017 07-Jun-2017 14-Jun-2017 21-Jun-2017 28-Jun-2017 05-Jul-2017

Review Topics

BGL Review Yes No N/A

Patient Specific Reminders

New Topic:

Review Notes

Education Links

Add Link

Display Name	URL	Remove
Diabetes Australia	https://www.diabetesaustralia.com.au	
The Glycaemic Index	https://www.diabetesaustralia.com.au/glycemic-index	

Redland Feasibility Study (n=40)



Primary outcomes:

- User adoption and user satisfaction

Secondary outcomes:

- Number of BGL clinical reviews
- Frequency of antenatal contact
- Occasions of service related to GDM attended by women
- Time to commencement of therapy

Use experiences

“It was easier than writing things down, knowing there was a team monitoring it every week to manage my blood glucose levels”

“Online instant recording of my data, reducing the need for paper”

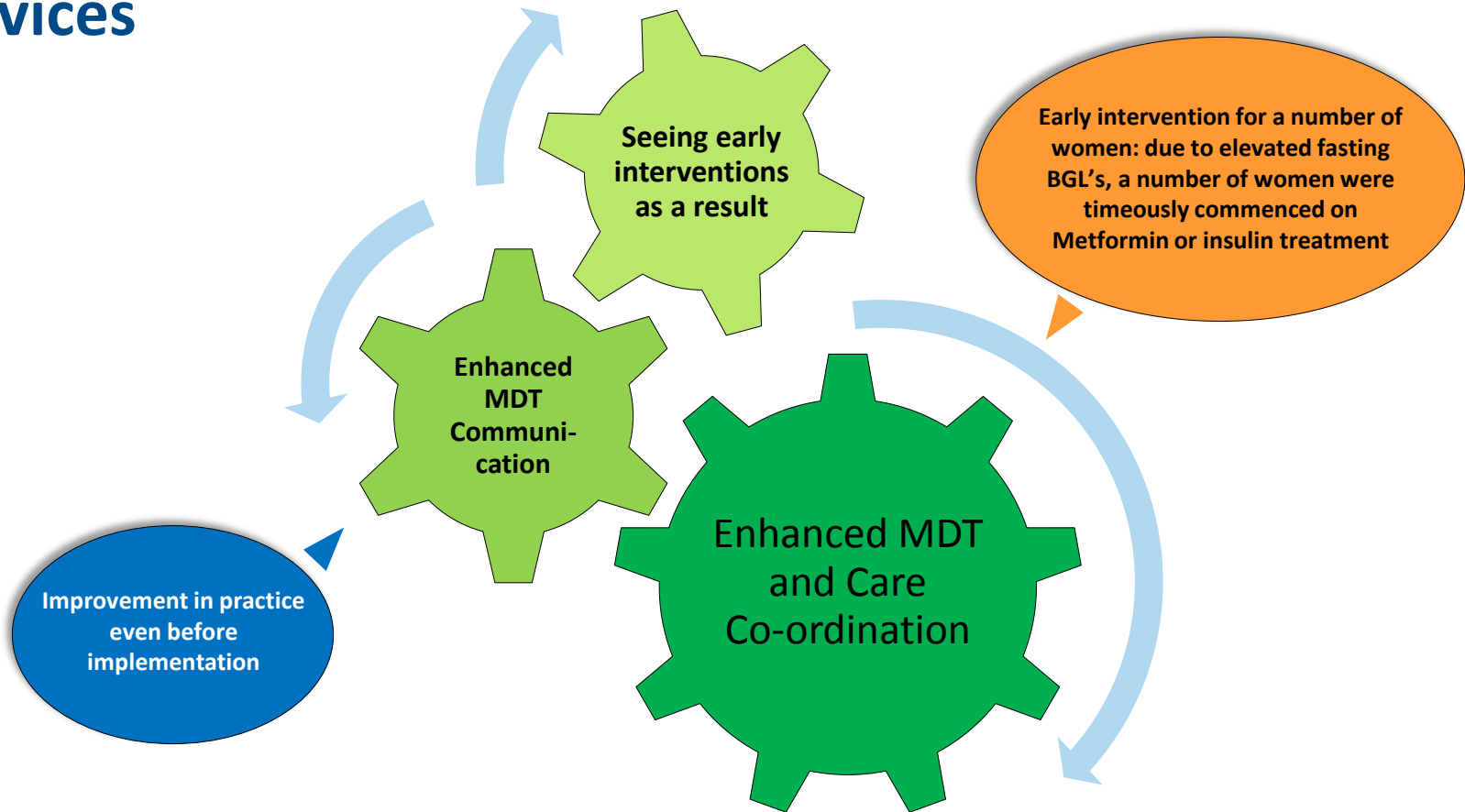
“Easy to use, connection between the app and the monitor, the advice it gave”

“What I liked most was the convenience of it”

“Such a timesaver”

“It’s so easy to use”

Services



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Gestational diabetes app helps health workers monitor pregnant women

[Listen now](#) [Download audio](#)

Thursday 10 May 2018 6:36AM [\(view full episode\)](#)

Gestational diabetes affects one in ten pregnant women and can cause serious complications if it's not managed correctly.

Women who are diagnosed need to modify their diet, take regular exercise and do frequent testing – which can be a burden for already tired and busy mums-to-be.

But a new smartphone app has been trialled to help women manage the condition.

The app sends data directly to health workers and is already showing promising results.



IMAGE: GESTATIONAL DIABETES CAN PUT AN UNBORN BABY AT RISK. (UNSPASH:ARTEIDA MJESHTR)

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New gestational diabetes app designed to help pregnant women

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Carolyn Tate | May 25 2018 at 8:52 AM



Photo: Shutterstock

A new smartphone app developed by CSIRO's Australian e-Health Research Centre in collaboration with Redland Hospital in Queensland is helping pregnant women and their medical team better manage gestational diabetes.

Diabetes Australia reports more than 200,000 women have developed gestational diabetes during the past 10 years, and that number is expected to grow to a massive 500,000 in the next 10 years.



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Gestational diabetes app helps healthcare workers keep a close eye on pregnant women

[RN Breakfast](#), By [Stephanie Small](#)

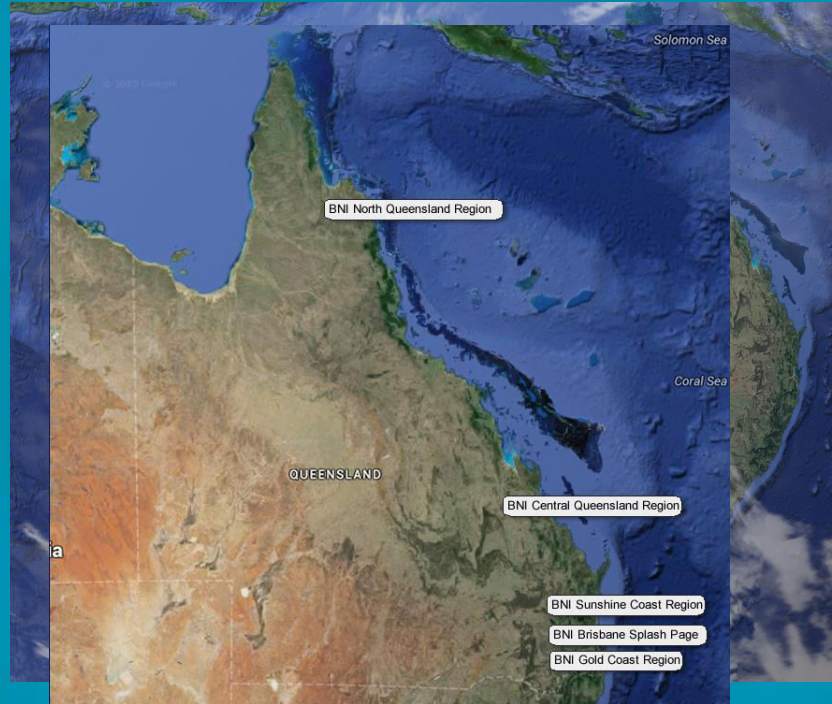
Updated Thu at 5:39am



PHOTO: If left untreated, the disease can be deadly and has the potential to cause premature birth, overweight babies and pre-eclampsia. (Unsplash.com: Jerko Felic, CC0)

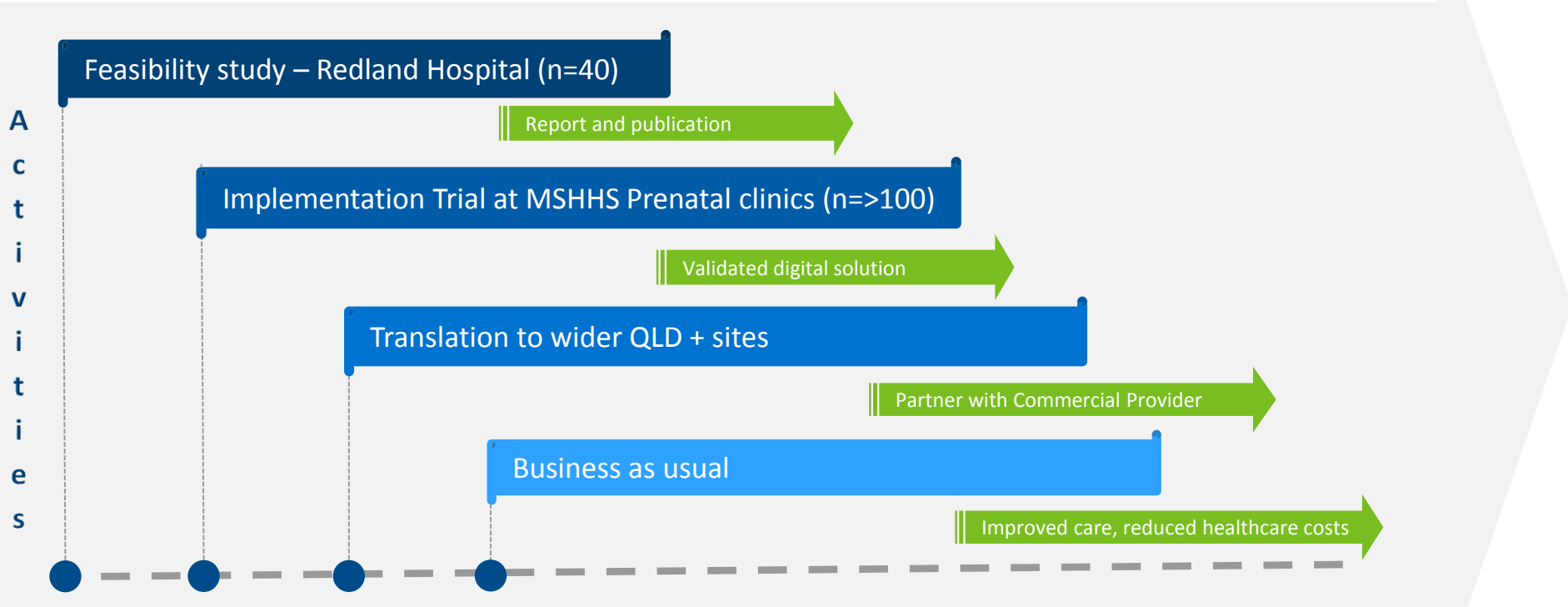








Implementation Pathway



Acknowledgments



Principal Investigator:

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Co-Investigators:

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Dr Rachel Stoney, Director Nutrition and Dietetics, Redland Hospital.



Questions?

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