Faculty of Health: Medicine, Dentistry and Human Sciences

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# Mobile health as a primary mode of intervention for women at risk of, or diagnosed with, gestational diabetes mellitus

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10.11124/jbies-21-00294 JBI Evidence Synthesis Lippincott, Williams & Wilkins

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#### mHealth for use during pregnancy (n=19)

### mHealth for use postpartum (n=6)



#### Purpose

 Behavior change for prevention of T2DM<sup>b</sup> (n=5)
Education for lifestyle change (n=1)

#### Key Features

PA<sup>d</sup>, nutritional intake and weight tracking

Progress tracking and feedback

Integrated rewards

Social support via social media

Behaviour change theory and techniques

1 app developed with  ${\rm BC}^{\rm e}$  theory

11/26 BCTs<sup>f</sup> identified

Range of techniques used in mHealth interventions for behaviour change for  $T2DM^b$  prevention (5-7)

#### Study Design

Early development (n=3). Qualitative feedback on prototypes, mixed methods pilot studies

Later stage evaluation (n=3). Non-blinded RCT<sup>f</sup> to measure impact of app use on outcomes related to body weight and healthy behav-iours.

#### Implementation

Timing of use varied from delivery to 5 years postpartum. Limited information available on implementation setting

Purpose
1) Support self-management for BGC <sup>a</sup>(n=14)
2) Education (n=1)
3) Behavior change for healthy lifestyle (n=4)

#### Key Features

Blood glucose reading tracking Feedback on BG<sup>c</sup> readings Interaction with healthcare professionals PA<sup>d</sup> and nutritional intake tracking

#### Behaviour change theory and techniques

2 apps developed using BC<sup>e</sup> theory 9/26 BCTs<sup>f</sup> identified Range of techniques used in mHealth for self management of BGC<sup>a</sup> (1-5)

#### Study Design

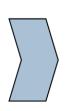
Early development (n= 11). Mixed methods studies to assess feasibility, usability and acceptability

Later stage evaluation **(n=13)**. Non-blinded RCT<sup>g</sup> to measure impact of app use vs. standard care on clinical outcomes including glycaemic control.

#### Implementation

Apps typically introduced at hospital setting, with a face-to-face training session for use from point of diagnosis to delivery

Figure 2. Summary of scoping review main findings.









<sup>a</sup>BGC blood glucose control
<sup>b</sup>T2DM type 2 diabetes
<sup>c</sup>BG blood glucose
<sup>d</sup>PA physical activity
<sup>e</sup>BC behavior change
<sup>f</sup>BCT behavior change technique
<sup>g</sup>RCT randomized control trial