

Title: Patient-reported benefits and limitations of mobile health technologies for diabetes in pregnancy – A scoping review

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Background

For women with pre-existing and gestational diabetes mellitus, pregnancy involves specialized and intensive medical care to improve maternal and infant outcomes. Medical management for patients with diabetes in pregnancy typically occurs via frequent face-to-face outpatient appointments. COVID-19-induced barriers to face-to-face care have signalled the need for high-quality, patient-centred virtual healthcare modalities, such as mobile health (mHealth) technologies.

Objective

Our objective is to identify the patient-reported benefits and limitations of mHealth technologies among women with diabetes in pregnancy. We also aim to determine how the women's experiences align with the best practice standards for patient-centred communication.

Methods

We used the framework by Arksey and O'Malley for conducting scoping reviews with refinements by Levac et al. to guide the conduct of this review. We identified relevant studies through comprehensive database searches of MEDLINE, Embase, Emcare, and PsychINFO. Thomas and Harden's Methods for the Thematic Synthesis of Qualitative Research in Systematic Reviews guided our synthesis of patient-reported benefits and limitations of mHealth technology.

Results

We included 19 studies describing the use of 16 unique mobile health technologies among 742 women in the final review. Patient-reported benefits of mobile health included convenience, support of psychosocial well-being and the facilitation of diabetes self-management. Patient-reported limitations included a lack of important features, some burdensome aspects of mHealth and a lack of trust in virtual healthcare.

Conclusions

Women with diabetes appear to benefit from some aspects of mHealth during pregnancy. The opportunity to co-design future technologies with end-users may help mitigate the noted limitations of the currently available technologies.