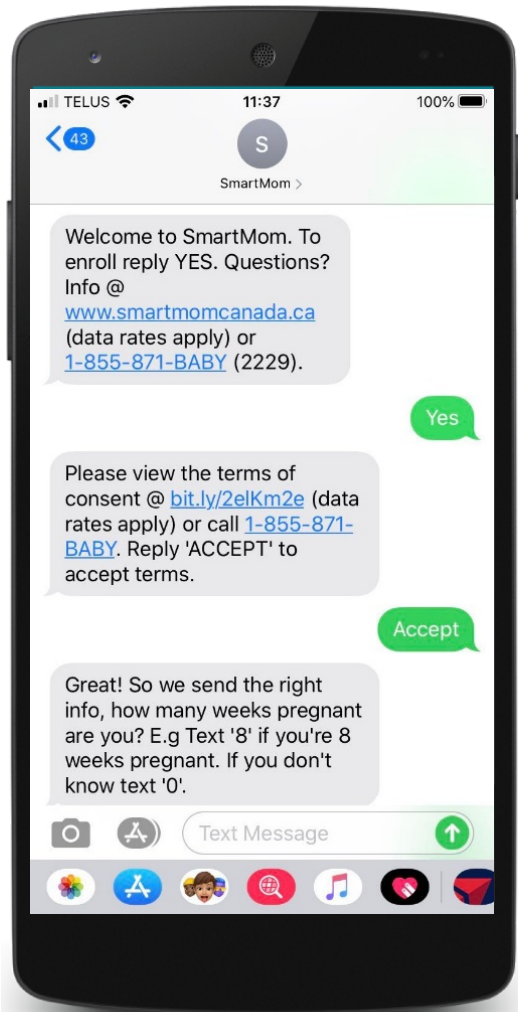


Problem

A review of studies indicate that less than one third of women attend prenatal classes and instead, are turning to the internet, especially smartphone pregnancy apps, to navigate the complexities and challenges of pregnancy and birth. These sources are not based on current evidence and are sponsored by lay groups or commercial interests. There are concerns about the quality of this information. In addition, information available from the internet is potentially overwhelming in its sheer volume, exacerbating the difficulty of identifying accurate, relevant, evidence-based, and unbiased information. Finally, there are concerns about the completeness and timeliness of information that is not organized to provide the right information to the right person at the right time. Therefore, women are not sufficiently prepared to make informed choices to promote a healthy birth. This can be particularly relevant for at-risk and vulnerable populations.



Mission

To teach women about what they can expect during pregnancy and how to prepare for the birth of their baby by directing them to the proper local, contextual, and regional services they may require during a critical time.

Solution

Women enrolled in SmartMom receive three tailored SMS text messages each week. These messages focus on accessing knowledge, undergoing assessment, and adopting behaviours to support healthy pregnancy and psychological birth. Participants receive information and links to online sources of evidence-based topics such as discomforts of pregnancy, fetal development, exercise and activity in pregnancy, nutrition, labor and birth, mental health, prenatal screening, and vaccinations. They also suggest topics of conversation women should have with their healthcare providers.

The message set is anchored to the woman's due date to be relevant to each week of gestational age for individual participants. SmartMom provides adaptive supplemental streams for women with additional messages addressing special topics such as: reducing use of tobacco, alcohol, or illicit drugs; depression; obesity; maternal age over 35; violence in the home; and vaginal birth after a prior caesarean section.

The messages are brief (136 characters or fewer) and tested for health literacy (grade eight reading level). Messages contain embedded links to more detailed information online. Consistent with Social Cognitive Theory, our links also take women to interactive learning tools designed to enhance engagement and promote self-efficacy, critical elements in behaviour change^{1,2}

Validation

Our evaluations to date have demonstrated significant improvements on knowledge tests and standardized measures of anxiety, depression, and fear of childbirth at completion of the program.

99% of all participants have indicated they found the program useful and the information provided in the messaging comprehensive and reliable.

The messages are consistent with current professional guidelines and peer reviewed prenatal education curricula³, and have been endorsed by the Society of Obstetricians and Gynaecologists of Canada.

Clinically and commercially validated, since 2012 MEMOTEXT solutions have been shown to improve adherence⁴, provide efficiencies in care coordination and empower provider decision support in commercial, clinical and academic settings

Optimal Birth BC is a program funded by CIHR and BC Children's Hospital Research Institute in Vancouver, BC. Optimal Birth members include nurses, doctors, midwives, and specialists in environmental health and health communication. Optimal Birth BC works with health authorities across the province to optimize practices for improved maternity care.

1. Lagan B, Sinclair M, Kernohan W. Internet use in pregnancy informs women's decision-making: a web-based survey. *Birth*. 2010;37(2):106–15.
2. Bandura A. Health promotion by social cognitive means. *Health Ed Behav*. 2004;31:143–64.
3. Province of British Columbia Ministry of Health. *Baby's Best Chance: Parents' Handbook of Pregnancy and Baby Care*. 6th ed. Victoria, BC. 2011.
4. Boland MV, Chang DS, Frazier T, Plyler R, Je erys JL, Friedman DS. Automated Telecommunication-Based Reminders and Adherence With Once-Daily Glaucoma Medication Dosing: The Automated Dosing Reminder Study. *JAMA Ophthalmology*. 2014;132(7):845–850.