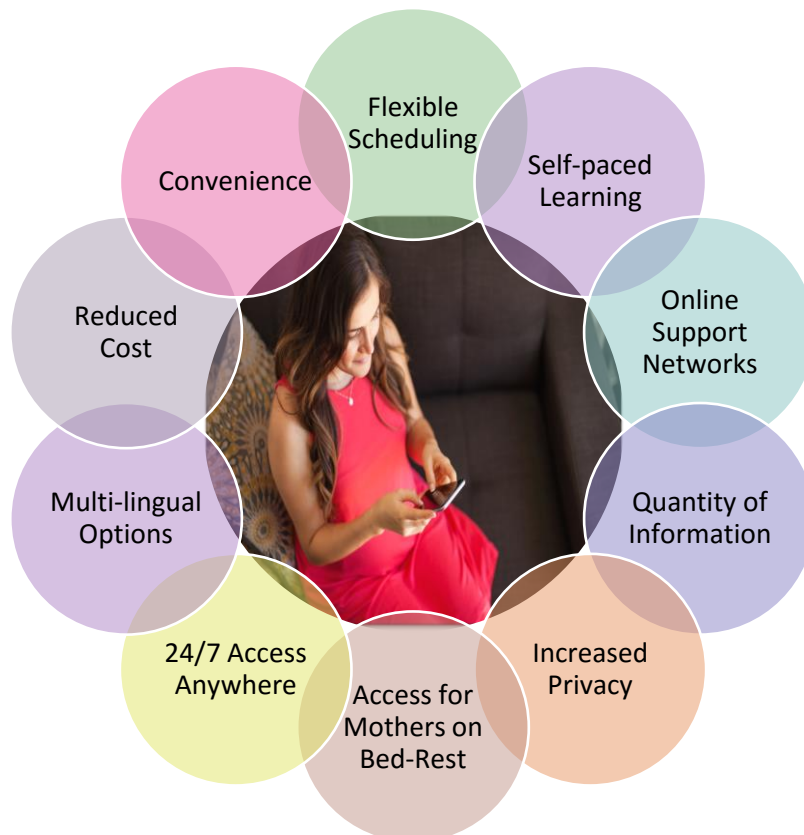


## **Prenatal eHealth Tools for Expectant Parents:** A Report to Inform Prenatal Education Efforts in Saskatchewan SUMMARY OF FULL REPORT

Expectant parents today have access to an abundance of information on pregnancy and child birth and much of that information is accessed electronically. Knowledgeable health care providers who understand the strengths and limitations of these new technologies are in an excellent position to offer expert guidance to a public eager to adopt these new technology-

based tools. Technology-based prenatal health tools can provide cost-effective health information and services through the Internet and mobile devices to improve health care and health outcomes. This technology can benefit consumers and health care providers, as well as those working in health education, promotion, research, and surveillance.

### **Benefits of Electronically Available Prenatal Health Information for Pregnant Women and their Supports**



Technology-based health tools are commonly referred to as eHealth or as mHealth. *eHealth* is the cost-effective and secure use of information and communications technologies in support of health care providers, health care consumers, health, and health-related fields. *mHealth* is an area of eHealth, specifically the provision of health services and information via mobile technologies such as mobile phones, tablets, and personal digital assistants, to improve health outcomes, health care services, and health research.

Research shows most Canadians to be highly technologically literate, well supported with the required infrastructure, and enthusiastic users of both Internet and mobile communications technologies. Saskatchewan has the second highest percentage of households in Canada with an active mobile phone, and smart-phones are becoming the preferred method of receiving personal health information electronically.

### Saskatchewan Populations that may see Greater Benefit from eHealth Tools

		
Young Parents	Lower Socio-Economic Groups	Rural and Remote Families
<p>In Saskatchewan, pregnancy rates among young women are some of the highest in Canada. Mothers who are young, typically have lower educational levels and live in low income households. Compared with other women, these mothers report less favourable pregnancy experiences and are more likely to report not having enough information about pregnancy-related topics.</p>	<p>In addition to their limited financial means, these vulnerable populations in Saskatchewan are also more likely to have limited access to health care information and services. Increased access to the Internet and mobile devices would help to reduce the gap in access to health information.</p>	<p>In Saskatchewan, 33% of the population lives in a rural or remote location compared to the national average of 19%. Living in a rural setting may limit an individual's access to health care information and services. Technology-based prenatal health information provides an opportunity to support rural expectant parents.</p>

There are an abundance of prenatal eHealth and mHealth tools available for expectant parents; so many in fact, expectant parents and health care providers may feel overwhelmed in their search. Complicating matters, the informational quality of these tools ranges from excellent to poor, with some that could be classified as harmful. Electronically accessible health information can be extremely useful and empowering, assisting individuals when making important health decisions. However, health information can also be confusing and overwhelming, especially without the ready guidance of a knowledgeable health care provider.

## Regulation of Prenatal Technology-Based Tools

The regulation of both eHealth and mHealth tools is complicated, and made especially difficult by the fact that access to online information and tools are generally very difficult to restrict; electronically available health information is 'borderless'. Websites and apps may be developed in any number of countries, located and stored on servers anywhere in the world, and are available to people regardless of their physical location. Regulations in one jurisdiction often do not apply in another, or are impossible to enforce.

*Online health information and tools are not evaluated or regulated in Canada.* This is also true globally. There are numerous guidelines and recommendations for assessing the quality of this information, but a framework for removing information judged as inaccurate or misleading does not exist. A *caveat emptor* – buyer beware – approach needs to be taken toward health information found online, and attention given to its limitations. Even with regulation, enforcement would be nearly impossible given the rapid proliferation of online content. *Content recommendations by Subject Matter Experts are typically considered the gold-standard by health care professionals.*

### How can a health care professional evaluate prenatal technology-based tools for expectant parents before offering advice and guidance?

<p style="text-align: center;"><b>eHealth</b> (online health information)</p>	<p style="text-align: center;"><b>mHealth</b> (online health information accessed via mobile technology, e.g. apps)</p>
<ul style="list-style-type: none"> <li>• Does it say who is responsible for the health information and how to contact them? Remember, the Internet is not regulated. Anyone can set up a website or develop an app.</li> <li>• Is there a commercial interest behind the website? Non-profit educational or medical organizations and government agencies usually provide reliable, unbiased information based on evidence.</li> <li>• Are references from peer reviewed research or other reliable sources provided?</li> <li>• Is the information written in clear and easy to understand language?</li> <li>• Is it stated when the information was prepared and updated?</li> <li>• Has there been any research or evaluation of the website or app?</li> </ul> <p><b><i>If you are still unsure:</i></b></p> <ul style="list-style-type: none"> <li>➤ Consult with an expert in the topic area about the information provided.</li> <li>➤ Trust your instincts – if it doesn't seem reasonable and believable, don't recommend it.</li> </ul>	<p><b><i>In addition to the precautions regarding eHealth tools on the left, health care professionals should also take the following steps before recommending an app for patient use:</i></b></p> <ol style="list-style-type: none"> <li>1. Search the app stores for all relevant apps using the most relevant and targeted key words. This is not always efficient, as apps are not always classified based on their purpose but by the app's name or key description provided by the developer.</li> <li>2. Review app descriptions, user ratings, and reviews. These can offer evidence of usability, functionality, and efficacy; however, view with caution as ratings and reviews may not be objective.</li> <li>3. Conduct a social media query within professional and patient networks: look for peer reviewed recommendations from third-party organizations; search online news sites, professional conferences, and recommendations by health delivery organizations; as well as word-of-mouth recommendations from trusted sources.</li> <li>4. Pilot the app, involve Subject Matter Experts, examine functionality, accuracy of content, and usability. The importance of this step cannot be emphasized enough.</li> <li>5. Elicit feedback from patients. Patients may be able to provide valuable insights after they have used the app.</li> </ol> <p><i>* It is acknowledged that completing the 5 steps above is a time consuming task and may contribute to the lack of evaluation and recommendation of apps by health care providers.</i></p>

## Potential Next Steps to be Explored by the Saskatchewan Prevention Institute and Interested Partners:

### 1. Create a list of recommended eHealth and mHealth resources

This list could assist health care providers to identify trustworthy resource(s) they are willing to recommend to prenatal women. The list would be created by following the recommendations provided above.

### 2. Develop or adapt an eHealth or mHealth tool specifically for Saskatchewan

This would ensure the information is trustworthy, evidence-based, and relevant to Saskatchewan residents (i.e., issues of concern to Saskatchewan residents, link to locally available services and resources). There are two ways that this could be done:

- i) Develop a unique resource in collaboration with a local college or university and other stakeholders.
- ii) Adapt an existing resource in partnership with stakeholders.

**For more detailed information**, including a full list of references, please refer to the Saskatchewan Prevention Institute's literature review titled "*Prenatal eHealth Tools for Expectant Parents: A Report to Inform Prenatal Education Efforts in Saskatchewan*". This literature review will be available from the Saskatchewan Prevention Institute's website.