MY HEALTH eSNAPSHOT
A local strategy for improving preconception health through innovation and technology

Preconception health is defined as the health of all individuals during their reproductive years, regardless of gender identity, gender expression or sexual orientation. It is an approach that promotes healthy fertility and focuses on actions that individuals can take to reduce risks, promote healthy lifestyles and increase readiness for pregnancy, whether or not they plan to have children one day (OPHA, 2014).

WHY PRECONCEPTION HEALTH?
About 50% of all pregnancies are unplanned. Waiting until pregnancy may be too late to prevent exposure to risk factors, as the first few weeks are the most critical for a developing fetus. It is important that a woman’s body be ready for an unexpected pregnancy to support both maternal and fetal health. There are several preconception health risk factors that may lead to poor birth outcomes, including genomics, poor nutrition, obesity/being underweight, poor and health, tobacco/alcohol/drug use, chronic diseases, infections (including sexually transmitted), mental health, stress, and environmental toxins. If we shift our attention to PCH and help manage and/or reduce these risk factors, then we have a better chance of improving birth outcomes by reducing the rates of preterm birth, low birth weight, and congenital anomalies, all of which can lead to lifelong medical/developmental concerns or infant mortality.

PRELIMINARY RESEARCH FINDINGS
Risk Assessment (RA) (n=300):
• Most prevalent risk factors: nutrition, ethnicity, caffeine-intake, unprotected sex and stress.
1-Week Participant Online Survey (n=188)
• Majority of participants reported a positive experience using the RA (89-99%)
• Majority of participants felt that the RA made it easier to have a conversation with their healthcare provider (65%)
• Majority of participants indicated that they were motivated to make positive changes after the RA (56%), and following a conversation with their healthcare provider (59%)
• The majority of participants would recommend My Health eSnapshot to a friend (76%)
2-Month Participant Online Survey (n=144)
• Majority of participants learned the importance of talking to their healthcare provider about life-long health needs (72%), and how their health now affects their own health and the health of their future children (51%)
• Majority of participants followed some health advice (69%)
• Most prevalent risk factors that participants planned to do something about or had already done something about: anxiety, depression, stress, nutrition and weight.

Key Informant Interviews with Primary Care Providers (n=7)
• Most participants reported benefits to participants and clinics
• Benefits: Use of Ocean tablet technology with EMR integration, new opportunity to learn more about patients and provide health teaching, enhancement of EMR, easy identification of risk factors, and increased PCH profile.
• Challenges: Time, recruitment of participants, physician buy-in, and internet/technology issues.
• Recommendations: Shorten RA and patient handout, offer at specific types of appointments (e.g., physicals, sexual health, family planning), and explore opportunities to increase physician buy-in.
• All healthcare providers interviewed would consider using My Health eSnapshot in future when changes are made.

CONCLUSIONS
Preliminary research findings are promising. However, data analysis is ongoing in order to address all of the research questions and to make final conclusions and recommendations. An advisory committee will be developed to: review research findings to fine-tune the intervention model, and engage in additional testing involving the recruitment of research sites across Ontario to explore the roll-out of the improved model across Ontario and beyond.

The My Health eSnapshot research study is the first of its kind in Ontario. It contributes to the growing momentum around PCH in Canada and internationally with the potential to open new doors in the PCH world to improve maternal and child birth outcomes.

Introduction & Research Goals
Wellington-Dufferin-Guelph Public Health (WDGPH) developed a patient-driven electronic preconception health (PCH) risk assessment tool using tablet technology called My Health eSnapshot. It is comprised of sixty-two questions organized into eighteen topic areas and also includes a patient handout with evidence-informed PCH messages. In partnership with Brantford Medical Centre, this tool was adapted from The Gabby Preconception Care System for use in the Canadian healthcare provider setting. WDGPH used a health information technology platform called Ocean, created by a Toronto-based company CognisantMD, to program and deliver My Health eSnapshot.

The primary research question:
• Can a patient-driven electronic PCH risk assessment tool, for use during healthcare provider visits, increase PCH knowledge and behaviour change among women of reproductive age (15-49 years)?

Secondary research questions:
• Identified the prevalence of PCH risk factors in WDG area
• Evaluated the process designed to administer the model
• Evaluated the user-friendliness of the model

Background
WDGPH is mandated by the Ontario Public Health Standards to work on PCH, but there is no standardized programming for health units to follow. To address this challenge, WDGPH conducted an environmental scan and community survey from 2013 to 2014 in search of a local strategy. The concept of PCH care visits emerged as a promising strategy in the literature. A need for more research and use of innovative strategies was also highlighted. The community survey found that the majority of respondents reported that their top choice for getting health information was from their health care providers. Further, the majority of respondents indicated that if their doctor initiated a PCH conversation they were more likely to follow the advice given. To support this strategy, the Canadian Community Health Survey tells us that the majority of respondents reported that if their doctor initiated a PCH conversation they were more likely to follow the advice given. To support this strategy, the Canadian Community Health Survey tells us that the majority of respondents reported that if their doctor initiated a PCH conversation they were more likely to follow the advice given. To support this strategy, the Canadian Community Health Survey tells us that the majority of respondents reported that if their doctor initiated a PCH conversation they were more likely to follow the advice given. To support this strategy, the Canadian Community Health Survey tells us that the majority of respondents reported that if their doctor initiated a PCH conversation they were more likely to follow the advice given. To support this strategy, the Canadian Community Health Survey tells us that the majority of respondents reported that if their doctor initiated a PCH conversation they were more likely to follow the advice given. To support this strategy, the Canadian Community Health Survey tells us that the majority of respondents reported that if their doctor initiated a PCH conversation they were more likely to follow the advice given. To support this strategy, the Canadian Community Health Survey tells us that the majority of respondents reported that if their doctor initiated a PCH conversation they were more likely to follow the advice given. To support this strategy, the Canadian Community Health Survey tells us that the majority of respondents reported that if their doctor initiated a PCH conversation they were more likely to follow the advice given.

Methods
My Health eSnapshot was studied across seven primary care sites in the WDG area from February to June 2016. Research sites were asked to recruit 120 participants. Eligible participants were female, between ages 15 and 49, not pregnant, had no hysterectomy, were able to read and write in English, were comfortable using a tablet, had an email address and lived in the WDG area. Participants were offered a $10 gift card incentive.

My Health eSnapshot was implemented using a three part model which involved participants:
1. Completing an electronic risk assessment in a primary care provider’s office with results automatically integrated into their electronic medical record
2. Discussing results with their primary care provider
3. Receiving a customized patient handout

WDGPH-collected data from participants through the risk assessment tool and a series of evaluation tools. A 1-week and 2-month online surveys were emailed to participants to evaluate the risk assessment tool, the PCH messages, and changes in participant’s knowledge and behaviour for PCH risk factors identified in the risk assessment tool. Key informant interviews were also conducted with primary care providers to identify the benefits, challenges and sustainability of implementing My Health eSnapshot.

Limitations
• Target sample not reached.
• Participant attrition.
• High non-response rates to some questions.
• Number of participating primary care providers at each research site not known.
• The fidelity of implementation (e.g., participant recruitment, intervention model) varied across research sites.
• Internet technology issues at some research sites.

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