One-size-fits-all approach doesn't work for treating hypertension in pregnancy

May 11 2020

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Treatment guidelines for hypertension in pregnancy suggest that more women should be on medication to control their blood pressure. However, new research led by the Centre for Health Evaluation and Outcome Sciences (CHÉOS) suggests that a one-size-fits-all approach doesn't work when it comes to women's treatment decisions during

pregnancy.

The findings, published recently in the *Canadian Journal of Cardiology*, are important for health-care providers to help women better understand the risks and benefits of hypertension treatment during pregnancy, and to better determine how their patients' values align with those treatments.

"Pregnancy is a unique period in a woman's life," says Rebecca Metcalfe, the study's lead author and a Ph.D. candidate in the School of Population and Public Health at UBC. "Decisions are being made for two people at once and, historically, the emphasis has often not been on what the woman wants."

"But we know that treatment adherence and effectiveness is improved when treatments align with patients' values," Metcalfe says. "Our results show that there are diverse preferences and values among patients, and different levels of need when it comes to shared decision making."

Hypertension and related disorders during pregnancy are the leading cause of pregnancy-related health complications worldwide. In Canada, one in 10 women may have high blood pressure during pregnancy.

While women in Canada are fortunate to have relatively good access to health care so we are able to avoid most infant and maternal deaths due to hypertension, Metcalfe says these unfortunate events do still happen here, even with proper management of blood pressure.

Results of the Control of Hypertension in Pregnancy Study (CHIPS) trial convinced many health care providers to promote "tight" control of blood pressure for mothers compared to less-tight control. Tight control meant that treatments are aimed to get diastolic blood pressure down to 85 mmHg, whereas less-tight control is aimed for 100 mmHg. The recommendation for tight control was added to the Hypertension Canada

clinical guidelines in 2018.

However, the margin of benefit between tight and less-tight control in the CHIPS trial was small. Tight control also tends to require more medication, which women often feel nervous about taking. This means it's important to consider patient preferences and values in this treatment decision.

To better understand patient priorities and preferences, Metcalfe interviewed pregnant women to understand what characteristics of a treatment they considered to be most important. For example, participants identified that the three per cent increase in risk of early delivery with less-tight control seen in the trial was very important to them, even though this finding was not considered statistically significant.

Based on those interactions, the research team developed a survey to determine women's preferences for blood pressure control, their priorities in choosing a treatment, and how they factored risk of adverse outcomes into their decision-making. The survey was administered online to 183 women across Canada.

Survey results showed that half of the women preferred tight control and half preferred less tight. The characteristics associated with preferring tight control were Caucasian ethnicity, a university education, and a higher score for knowledge about hypertension and pregnancy.

These characteristics, explains Metcalfe, are also factors that predict better experiences with the health care system meaning that these women may be more inclined to accept treatment compared to women who have not had positive experiences.

Unexpectedly, respondents with a current or past experience of

hypertension in pregnancy had a significantly lower knowledge score than those without experience.

"This result shows that we can't expect women to have all the information they need just because they've been through this experience before," says Metcalfe.

The research team also observed three distinct groups of people; the majority participants gave equal priority to all aspects of a treatment, while 25 per cent prioritized avoiding the risk of an early delivery and 15 per cent prioritized avoiding medications during pregnancy. Half of the women in the study wanted to make the final decision about treatment on their own, after talking to their doctor.

Since very few randomized controlled trials have been done for treatments in pregnancy and, historically, some dangerous treatments have been approved without proper evidence, like thalidomide, having a group of women who aim to avoid all medications during pregnancy is not surprising, says Metcalfe

The team is now working on a decision aid to help women better understand the risks and benefits of treatment and how their values align with those treatments.

"This next step is about supporting women in their discussions with their doctor so they can spend the time discussing what matters to them and ultimately choose and receive a treatment that aligns with their values," says Metcalfe.

The study was co-authored by CHÉOS scientists Drs. Nick Bansback, Mark Harrison and Joel Singer, as well as Dr. Laura Magee, who is also the principal investigator of the CHIPS trial. Metcalfe is supervised by Dr. Nick Bansback.

More information: Rebecca K. Metcalfe et al, Patient Preferences and Decisional Needs When Choosing a Treatment Approach for Pregnancy Hypertension: A Stated Preference Study, *Canadian Journal of Cardiology* (2020). DOI: 10.1016/j.cjca.2020.02.090