

## **Survey on the acceptability of a fetal monitoring device**

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Pregnant mothers living in rural areas are faced with reduced access to adequate maternal and fetal healthcare, leading to disparities in delivered care and contributing to increased adverse birth outcomes for mothers and babies. Using remote monitoring may help mitigate these issues. This project focuses on piloting a survey that will allow pregnant mothers to provide their input to the design process of a wearable fetal echocardiogram (fECG). This device will allow continuous monitoring of fetal health and the communication of this information to healthcare professionals. The survey includes 30 questions evaluating participant demographics and using a five-point Likert scale to determine the acceptability of using a wearable medical device during pregnancy. A convenience sample of eighteen women of childbearing age (18-49) was used for the pilot survey, meaning that women who were easiest to access for the researchers were surveyed. At the end of the survey, participants were asked follow-up questions concerning the survey methodology. Results were analyzed using descriptive statistics, and qualitative methods were used to summarize the main themes of the open-ended questions. All surveys in the pilot were taken online; when asked about preferred method of response, participants indicated that they would rather take the survey online, rather than verbally or on paper. According to participant feedback, the survey was easily understood, but several terms used in the survey need to be better defined. The project goal is to refine and fine-tune the survey to maximize participant cooperation and comprehension, as well as the quality of the data gathered in order to implement the survey among a sample size of 200 pregnant mothers in the summer of 2023.