Factors associated with prenatal ultrasound utilization

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Prenatal ultrasound utilization has been steadily increasing globally, which can be concerning due to unnecessary costs on healthcare systems as well as safety issues. Although generally considered safe, the long-term effects of ultrasound in pregnancy have not yet been determined and increased exposure to ultrasound has been shown to cause cell death, increased maternal anxiety and unnecessary medical interventions.

The first study that will be described in this presentation aimed to investigate the relationship between the number of prenatal ultrasounds and caesarean delivery in Canada and the USA. This relationship is of importance to explore because the rate of caesareans in Canada and the USA greatly surpasses the WHO recommendations. The Maternity Experiences Survey (a national Canadian Survey) and the Listening To Mothers III survey (a national survey from the USA) were utilized to answer this question. Results from this study demonstrate an association between an increased number of prenatal ultrasounds and caesarean deliveries in Canada and the USA, even after adjusting for several confounding factors. An increased number of prenatal ultrasounds may be considered as a modifiable risk factor for caesarean delivery that can be targeted by efforts aimed at reducing caesareans.

The second study that will be described aimed to investigate the relationship between having a single or multiple prenatal care provider(s) and the number of prenatal ultrasounds received during pregnancy in the USA. Responses from the Listening To Mothers III survey were analyzed to explore this relationship while adjusting for confounding variables. Even though no significant relationship between single/multiple provider(s) and the number of prenatal ultrasounds was demonstrated, this study initiates the discussion of this relationship that may be different in different settings.

The above studies present baseline findings that can be built upon by future studies that may aim to explore these relationships using different databases, allowing for better control of confounding variables.