Australian-first model to improve maternal and childhood vaccination rates

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An Australian-first antenatal vaccine communication model for midwives showed promise for increasing uptake of maternal and childhood vaccines, according to a pilot study.

The research, led by the Murdoch Children's Research Institute (MCRI)

and published in Vaccine, found the intervention was feasible, acceptable and improved midwives' vaccine discussions with expectant mothers. The model is the first vaccine communication intervention package developed for Australian midwives in the public antenatal setting.

MCRI's Dr. Jessica Kaufman said pregnancy was a critical time for vaccine decision-making, but maternal vaccination rates remained low in Australia with only 30 to 50 percent of pregnant women covered for influenza and about 80 percent for whooping cough.

Dr. Kaufman said current maternal vaccination promotion in Australia was quite ad hoc, driven by state and local hospital policies. Vaccine information provided to expectant parents was often relatively basic, with limited detail about vaccine safety and effectiveness, she said.

"Vaccination during pregnancy provides two for one protection by directly protecting the mother and her baby through transplacental transfer of antibodies to both influenza and whooping cough," she said.

The study tested a multi-component model involving midwives, called 'MumBubVax'. This included using stickers to prompt and record vaccine conversations, an online webinar on effective maternal vaccine communication, a website with maternal and child vaccination resources for midwives and expectant parents, such as fact sheets on vaccine benefits and vaccine-preventable disease severity, along with SMS vaccine reminders for pregnant women.

The study involved 25 midwives and 62 pregnant women recruited at The Royal Women's Hospital (RWH).

Midwives reported the training made their vaccine conversations easier and they felt more confident in addressing parental concerns. Of the

pregnant women enrolled in the study, 86 percent reported discussing influenza and 82 percent whooping cough vaccination with their midwives.

Self-reported maternal vaccine uptake in the group was 82 percent and 93 percent for influenza and whooping cough respectively, and 96 percent of infants in the study received all three National Immunisation Program vaccines due at two months.

This compares to vaccine rates of 43 percent for maternal influenza and 60 percent for maternal whooping cough by women who had their babies delivered at the Royal Women's Hospital in 2017-18.

"We know that midwives face intense pressure to cover a broad range of issues in their limited appointment times, so our aim was to try and make their conversations as efficient and effective as possible," Dr. Kaufman said.

"The MumBubVax website we created saves discussion time while providing additional detailed information for those parents who are seeking this, including links to high-quality childhood vaccine information on the Sharing Knowledge About Immunisation website."

The MumBubVax intervention was developed by the MCRI researchers and colleagues in Australia and the US after their previous research showed that many midwives received little or no vaccination communication training, despite their status as the most trusted information source of vaccine information in the Australian public antenatal system.

MCRI Associate Professor Margie Danchin said vaccination coverage was more likely to increase with interventions that addressed multiple barriers and different levels of healthcare decision making.

"Increasing and sustaining high maternal vaccine coverage rates is critical, especially as new maternal vaccines for respiratory syncytial virus and group B strep are introduced in coming years," she said.

"With up to four vaccines eventually being available in pregnancy, these decisions and discussions will become even more complex and challenging. We need a strong platform to ensure these discussions occur at set times in pregnancy and are not too time consuming."

Associate Professor Danchin said she hoped the communication package would become routine in all public antenatal settings and researchers were looking to adapt it for GPs.

More information: Jessica Kaufman et al. Feasibility and acceptability of the multi-component P3-MumBubVax antenatal intervention to promote maternal and childhood vaccination: A pilot study, *Vaccine* (2020). DOI: 10.1016/j.vaccine.2020.04.010

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