

Study confirms the importance of vaccinating for whooping cough during pregnancy

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An important baseline study to determine the benefits of mothers being vaccinated during the third trimester of pregnancy against pertussis, or 'whooping cough' has recently been published in the prestigious Cambridge University Press *Epidemiology & Infection Journal*.

The study by Menzies School of Health Research (Menzies), *Pertussis epidemiology prior to the introduction of a maternal vaccination program, Queensland Australia*, looked at 53 901 cases of pertussis from 1997 to 2014, prior to the introduction of the vaccination in pregnancy program which commenced in Queensland in 2014, and followed nationally in 2015.

Pertussis is a highly contagious disease, particularly in the first two weeks of infection, which can result in significant illness or death. Infant deaths from the disease are highest in those younger than six months of age when they are too young to have completed the recommended primary immunisation schedule of three vaccines, given at 6-8 weeks, followed by doses at four and six months of age.

Lead author, Menzies researcher, Lisa McHugh said that the control of pertussis is a high public health priority, with prevention of severe disease in infancy a specific focus.

"Queensland was the first state to recommend and subsequently fund pertussis vaccination in pregnancy in 2014 to assist against this high burden of the disease. The vaccination is now funded by every state and territory in Australia.

"In order to evaluate the impact of the maternal pertussis vaccination program, our research was designed to create a baseline of the burden of pertussis in Queensland, by age group and sex, prior to the implementation of the program.

"From 1997 to 2014 we found notifications were highest in infants younger than four months of age and the highest annual notification rates in infants younger than one month of age. Notably, we found that among Aboriginal and Torres Strait Islander infants younger than one month of age, this rate almost doubled. Six infant deaths were identified, all younger than two months of age," said Ms McHugh.

The study also found that for women of childbearing age (15-<45 years) the burden of illness was higher compared to men of the same age group. Notably again, the figure was almost double in Indigenous women compared to Indigenous men of the same age group.

"The identification of a high disease burden both in early infancy and among women of childbearing age suggests both of these groups should receive a dual benefit from the maternal pertussis vaccination program," Ms McHugh said.

"And from an equity perspective, Indigenous women need to be a high priority for the maternal vaccination as their disease burden is disproportionately high.

“To assess the impact of the maternal pertussis vaccination program, the next step will be to monitor the epidemiology of at risk-groups – infants too young to be vaccinated, women of childbearing age, and Indigenous people – following an operational period of the program,” Ms McHugh said.

The Australian Government’s Pharmaceutical Benefits Advisory Committee is currently considering whether to add the maternal pertussis vaccine to the National Immunisation Program.

The full paper can be viewed [here](#).

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Menzies School of Health Research

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