

## Factors Associated with Uptake of Influenza and Pertussis Vaccination in Pregnant Women

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**Abstract :** Maternal immunization is an effective strategy to protect pregnant women and their offspring from vaccine-preventable diseases. Despite the recommendation of maternal influenza and more recently pertussis immunization in Australia, uptake of these vaccines has been suboptimal. Monitoring the impact of the current funded vaccine programs for pregnant women is limited. The study aimed to assess the impact of the funded program and determine factors associated with vaccine uptake in pregnant women. This observational prospective study was undertaken between November 2014 and July 2016 at the Women's and Children's Hospital in South Australia (WCH). Demographic details and vaccination history from South Australian pregnant women who attended the WCH were reviewed. A standardized self-reported survey was conducted in antenatal care with a follow up telephone interview at 8-10 weeks post-delivery. A midwife delivered immunization program for pregnant women in antenatal clinic commenced in April 2015. Of the 180 pregnant women who completed the survey questionnaire, 75.5% and 80.5 % received maternal influenza and pertussis vaccines respectively. First-time mothers had twice the odds of having received influenza vaccine during pregnancy than multiparous women (OR 2.4; CI 1.14 - 4.94; p= 0.021). The proportion of women who received pertussis vaccine during pregnancy, following the introduction of the midwife delivered pertussis vaccination program (140/155, 90.3%) was significantly higher compared with women who received maternal pertussis vaccination prior to the introduction of the program (5/22, 23.7%, p < 0.001). The odds of women receiving maternal pertussis vaccine following the implementation of the midwife delivered program were 31 times higher than women who delivered babies prior to the program (OR 31.7, CI 10.24- 98.27; p < 0.001). High uptake of influenza and pertussis vaccines during pregnancy can be attained with health care provider recommendation and inclusion of maternal immunization as part of standard antenatal care.

**Keywords :** influenza, maternal immunization, pertussis, provider recommendation

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