



Factors associated with the uptake of influenza and pertussis vaccination in pregnant women attending the Women's and Children's Hospital in South Australia

Hassen Mohammed

Co- Authors: Michelle Clarke, Ann Koehler, Maureen Watson, Helen Marshall

Background

- Pregnant women - increased risk of morbidity & death from influenza infection
- *Bordetella pertussis* infections can also pose high risk to infants
- Immunization of pregnant women
 - effective in not only protecting the mother
 - fetus/newborn via transfer of transplacental antibodies
- Mar 2015 -ATAGI recommended pertussis containing (dTPa)vaccine for pregnant women with a recent announcement of a nationally funded program
- Influenza immunisation for pregnant women
 - recommended at any time during pregnancy through NIP- 2010



2

Background (continued)

- State government funded pertussis vaccination programs for pregnant women
 - Introduced progressively between Aug 2014 to Jun 2015 in all Australian states and territories
 - via general practitioners and hospital antenatal clinics, local councils, community health care centres,
 - Uptake has been historically low
 - Influenza uptake = 7% to 40% (McCarthy et al., 2011) (Lu AB et al., 2012) (Taksdal et al., 2012)
- Midwife delivered maternal immunisation program- SA, April 2015
 - Midwives underwent training in influenza and pertussis immunisation
 - Administer pertussis and influenza immunisations to pregnant women
 - Using a standing medication order, without the need for a prescription from a medical doctor
- Monitoring the uptake of the funded vaccine programs for pregnant women is limited.
- The study aimed to estimate maternal influenza and pertussis vaccine uptake and identify factors associated with uptake among pregnant women

3

Methods

- Prospective study - Nov 2014 and July 2016 at the WCH
- Following consent, demographic details and vaccination history for South Australian pregnant women who attended the antenatal clinic were collected.
- A standardised self-reported survey was completed during pregnancy with a follow up telephone interview at 8-10 weeks post-delivery.
- Vaccination was self-reported and not validated by medical record review.

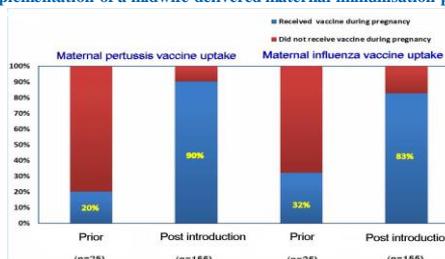
4

Key findings

- 205 women consented & completed the self-reported survey.
- Of the 180 pregnant women who completed the study
 - 76% and 81% received maternal influenza and pertussis vaccines respectively
- Uptake of the vaccines following the introduction of a midwife delivered immunisation program
 - Pertussis (OR 31.73, CI 10.24- 98.27; p<0.001)
 - Influenza (OR 8.0, CI 3.06-20.9; p<0.001)
- Women receiving a recommendation from a HCP (OR 3.03,1.49-6.14; p<0.001) were significantly more likely to receive influenza vaccination during pregnancy.
 - First time mothers (OR 2.37, CI 1.14 - 4.94; p= 0.021)

5

Fig 1 Maternal receipt of pertussis and influenza vaccine pre-and post implementation of a midwife delivered maternal immunisation program



6

Conclusions

- High uptake of influenza and pertussis vaccines during pregnancy can be attained with health care provider recommendation and inclusion of maternal immunisation as part of standard antenatal care.
- A midwife delivered maternal immunisation program is a promising approach to improve maternal vaccine uptake by pregnant women.

7



Acknowledgment



- The authors would like to acknowledge and thank all the women who participated in the questionnaire and the staff of the Vaccinology and Immunology Research Trials Unit (VIRTU) at the Women's and Children's Hospital; Louise Goodchild, Sue Evans, Suja Mathew, Mary Walker and Kathryn Riley for their assistance with recruitment and survey data collection

University of Adelaide

8