COMMUNICABLE DISEASE CONTROL DIRECTORATE

DATE: 13 March 2015

TO: Professor Bryant Stokes  
A/DIRECTOR GENERAL

VIA: Professor Tarun Weeramanthri  
EXECUTIVE DIRECTOR  
PUBLIC HEALTH AND CLINICAL SERVICES DIVISION

SUBJECT: Request to initiate an antenatal pertussis vaccination program

Please find attached briefing note for your approval.

Dr Gary Dowse
ACTING DIRECTOR
COMMUNICABLE DISEASE CONTROL DIRECTORATE
ISSUE
Request to initiate an antenatal pertussis vaccination program.

BACKGROUND

- Pertussis (whooping cough) is a highly contagious respiratory illness.
- Infants are the most vulnerable to severe disease, which can be complicated by pneumonia, hypoxic encephalopathy and death.
- Mothers, fathers and other carers are a common source of pertussis infection for the newborn.
- In response to increasing disease incidence, in January 2011 the Department launched a program to provide pertussis vaccine to new parents and other adult carers residing in the household of a newborn in Western Australia.
- The strategy of protecting infants from pertussis by vaccinating those in close contact with them is known as "cocooning."
- At the time that WA initiated this program all other jurisdictions were providing free pertussis vaccine to parents in response to increased pertussis activity occurring throughout Australia.
- Under the WA New Parent Pertussis Vaccination Program, state-funded pertussis vaccine was available to the mother, father and grandparents of a newborn.
- Full implementation of 'cocooning' proved to be a challenge logistically in WA and elsewhere, both nationally and internationally.
- Pertussis activity in WA declined in the latter half of 2012, and the New Parent Program Vaccination Program was subsequently discontinued on 31 December 2012.

CURRENT SITUATION

- Pertussis activity in WA has decreased since the peak in 2011 but remains elevated (see graph).
CURRENT SITUATION (cont’d)

- Pertussis activity is typically cyclical and limited data from other jurisdictions indicate pertussis may be on the rise again in Australia.

- International recommendations for cocooning newborns to protect against pertussis infection have been supplanted by recommendations to vaccinate women while they are pregnant.

- Babies born to mothers vaccinated in pregnancy have higher levels of antibodies than those born to unvaccinated mothers, and this can protect the infant during the first months of life, i.e. the time when they are most vulnerable to pertussis.

- In October 2012, both the UK Department of Health and the US Advisory Committee on Immunization Practices recommended that pregnant women should receive a dose of pertussis-containing vaccine while they are pregnant.

- Since that time studies conducted in Europe have found that:
  1. There is no evidence of an increased risk of any adverse events related to pregnancy among women given pertussis vaccination in the third trimester.
  2. The adjusted vaccine effectiveness of maternal pertussis immunisation in preventing pertussis infection in the newborn exceeds 90%.

- The Australian Technical Advisory Group on Immunisations (ATAGI) is in the process of finalising new recommendations for pertussis vaccination during pregnancy in Australia.

- The new recommendations will be released in June 2015 and are expected to read as follows:

  "Pertussis vaccine is recommended as a single dose during the third trimester of each pregnancy.

  Vaccination during pregnancy has been shown to be more effective in reducing the risk of pertussis in young infants than vaccination of the mother postpartum.

  This added benefit is due to direct passive protection of the newborn by transplacental transfer of high levels of pertussis antibodies from the vaccinated woman to the foetus.

  Vaccination is recommended with each pregnancy to provide maximal protection to every infant; this includes pregnancies which are closely spaced (e.g. <2 years)."
CURRENT SITUATION (cont’d)

- Four other jurisdictions (NSW, VIC, QLD, NT) have communicated their intent to use state funds to establish maternal pertussis vaccination programs in their respective jurisdictions.

- The Communicable Disease Control Directorate believes that implementing a maternal pertussis vaccination is an important step to protecting newborns from pertussis.

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<tr>
<th>Number of births WA/year</th>
<th>35,000</th>
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<tr>
<td>% mother receiving vaccine</td>
<td>65%</td>
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