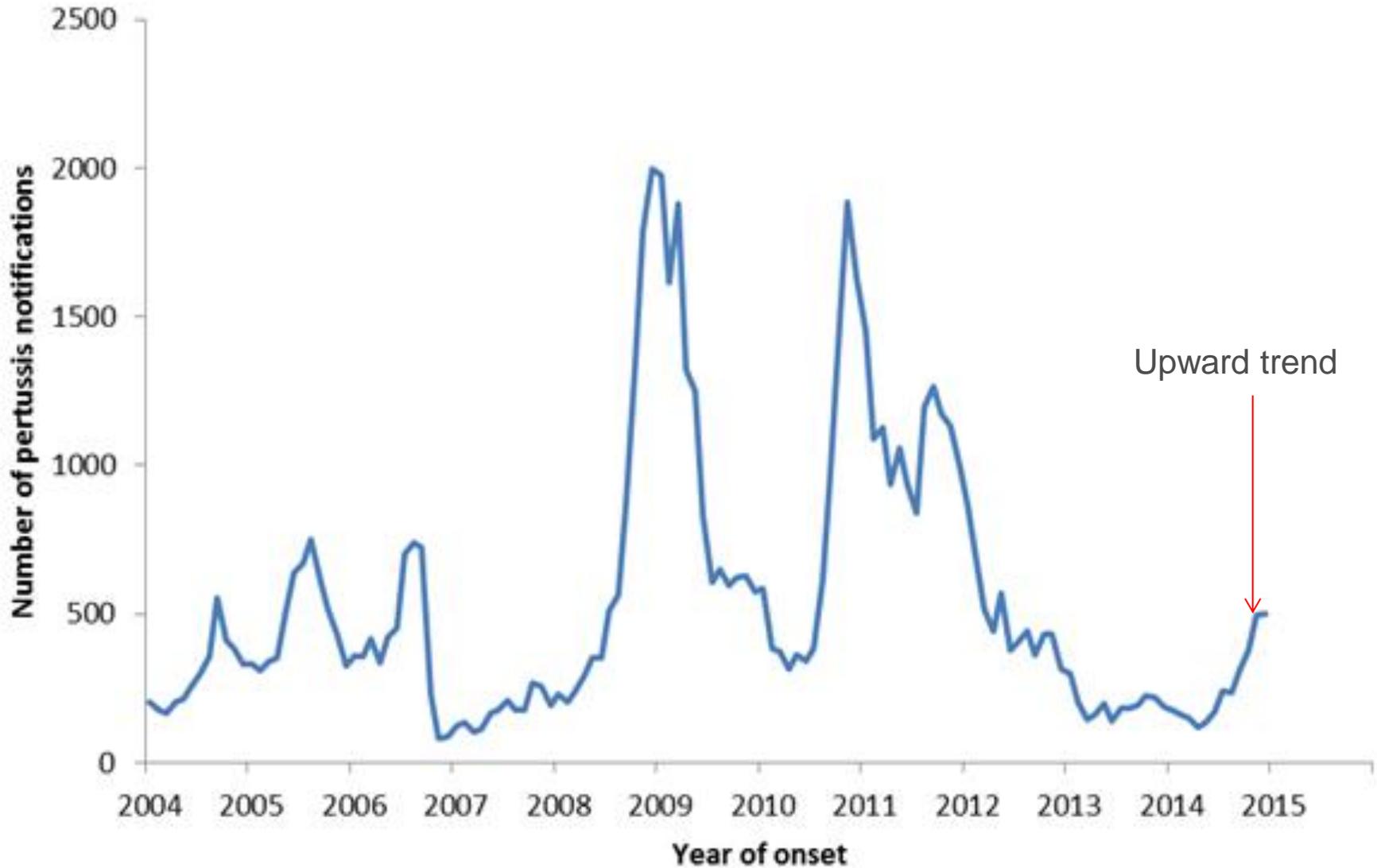


# NSW Pertussis Control Program 2015

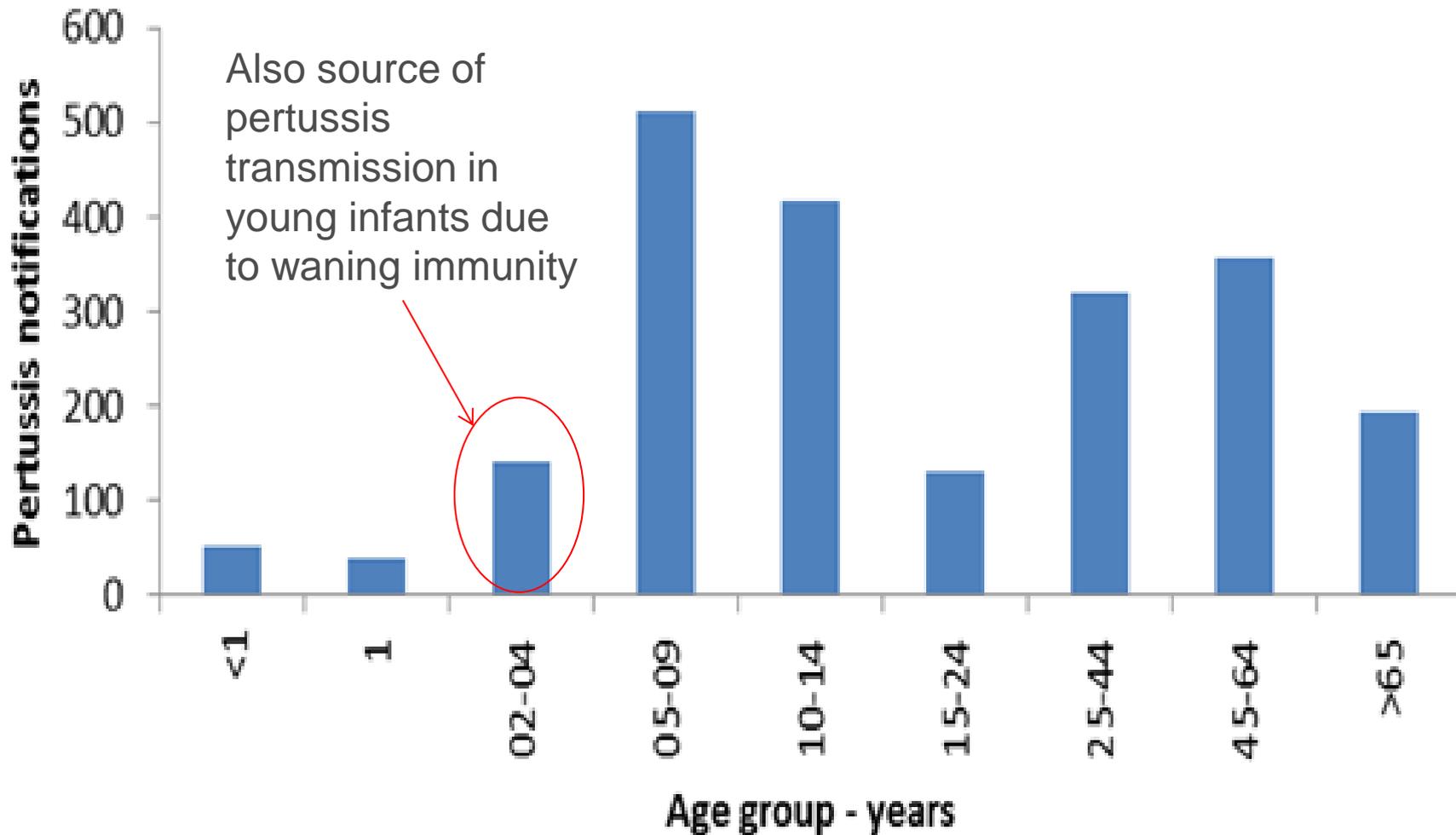
# Pertussis Disease

- Pertussis ('whooping cough') is a bacterial infection affecting the respiratory system, caused by the organism *Bordetella pertussis*
- It affects individuals of all ages, but is more severe (and can be fatal) in small babies, particularly those too young to be vaccinated or those who are unvaccinated

# NSW Pertussis Notifications



# Pertussis notifications in NSW by age group 1 July 2014 to 31 December 2014



# Pertussis Disease Burden

- Infants bear the greatest burden of pertussis; four deaths in NSW since 2009
- Hospital costs alone for infants <1 year of age are estimated at \$3.2 million in an outbreak year
- Neither vaccination nor naturally acquired infection provides lifelong immunity

# Previous Outbreak Control Measures

From March 2009, two vaccine-related outbreak control measures were introduced in NSW as part of the response to the increased notifications:

- NSW Health funded pertussis vaccine for new parents and adult carers (cocooning strategy) of infants less than 12 months old
- First dose of infant pertussis-containing vaccine was promoted to 6 weeks of age from 8 weeks

# Previous Outbreak Control Measures

NSW Health cocooning strategy was amended in July 2013 due to:

- waning of the pertussis epidemic
- updated NH&MRC recommendations on the timing of the maternal dose
- recently completed research in NSW which showed that pertussis vaccination of mothers was only effective if given at least 4 weeks before onset of illness in the infant

# Previous Control Measures II

- Free vaccine was no longer provided for new parents and carers of infants
- NSW Health continued to provide free pertussis vaccine in NSW Health public hospitals for the opportunistic vaccination of women post-partum who had not received the vaccine in the previous five years.

# Other Control Measures

- Public health units receive notifications of all pertussis cases
- PHUs work with GPs and schools/child care centres to provide information and prophylaxis to cases and contacts according to national guidelines
- Timely vaccination is encouraged at:
  - 6 weeks, 4 months, 6 months
  - 4 years
  - 12 years (high school program)



# **PERTUSSIS PROTECTION PLAN 2015**

# New Research

- Recent evidence suggests greater protection for infants from pertussis disease through maternal vaccination in the 3<sup>rd</sup> trimester of pregnancy which results in utero transfer of maternal antibodies
- Is likely to provide protection to young infants from disease until pertussis vaccination begins at 6 weeks of age
- A UK study has shown a 91% reduction in infant pertussis disease
- Extensive use in UK & US show pertussis vaccine in pregnancy is safe

# NH&MRC Draft Recommendations

- Pertussis containing vaccine is recommended as a single dose during the 3<sup>rd</sup> trimester of each pregnancy.
- Vaccination during pregnancy is more effective in reducing the risk of pertussis in young infants than vaccination of the mother post-partum
- added benefit is due to direct passive protection of the newborn by transplacental transfer of high levels of pertussis antibodies
- the mother will also be protected against pertussis in the 3<sup>rd</sup> trimester and less likely to transmit pertussis to her infant after delivery

# NSW ObstetriX database

- At the end of 2014, maternal influenza and pertussis vaccination status questions were included in ObstetriX
- aims to prompt NSW midwives to discuss the need for maternal pertussis vaccination
- is a relatively new initiative – needs to be promoted widely to the relevant staff. It provides a means of measuring uptake of both vaccines

# NSW Antenatal Pertussis Vaccination Program

## Hospitals:

- the postnatal catch-up vaccination will move to an antenatal vaccination program
- dTpa vaccine should be offered to all pregnant women in the 3<sup>rd</sup> trimester, ideally at the 28 week visit but can be given at any time during the 3<sup>rd</sup> trimester up to delivery.

## Shared care patients:

- Free vaccine to pregnant women through GPs, public hospital and Aboriginal Medical Services as and outbreak measure

# Other Control Measures

- Staff vaccination – ensure all staff in maternity and paediatric units have received booster in last 10 years
- Policies to investigate and furlough staff in high risk areas with coughing illness
- Isolate/cohort children with suspected pertussis
- Promote “Identify – Protect – Prevent” to new parents

