Public Health England

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Dear Colleague,

Re: Change in the timing of pertussis vaccine in pregnancy

Background

Despite high coverage of the routine childhood immunisation programme in the UK, from autumn 2011 an increase in pertussis cases was seen across the country, initially affecting adolescents and adults but later extending to young unimmunised infants. In response to the high number of infant cases and deaths in 2012, with 14 babies dying that year, a national outbreak was declared. The majority of infant cases occurred in babies who were too young to be protected from pertussis by the routine immunisation programme starting at eight weeks of age. As a result, an immunisation programme was introduced in October 2012, offering a pertussis containing vaccine to pregnant women, preferably between 28 and 32 weeks gestation.

Since its introduction, the maternal pertussis immunisation programme has been shown to be over 90% effective in protecting against pertussis from birth and in the first months of life[1, 2]. Based on a large study of nearly 18,000 vaccinated women, the Medicines and Healthcare Products Regulatory Agency, found no safety concerns relating to pertussis vaccination in pregnancy with similar rates of normal, healthy births in vaccinated and in unvaccinated women[3] . From the introduction of the maternal programme in October 2012 to 31 September 2015, 13 deaths in infants with confirmed whooping cough have been reported. Eleven of these infants were born to unvaccinated mothers[4] and the remaining two were immunised too close to delivery for the vaccine to have been effective.

Change to the timing of pertussis vaccine in pregnancy

In February 2016 the Joint Committee on Vaccination and Immunisation (JCVI) reviewed new evidence indicating that high levels of maternal antibody are transferred to the infant, even if women are vaccinated earlier in pregnancy[5]. Therefore, from 1 April 2016 it is recommended that pregnant women should be offered a single 0.5 ml dose of dTaP/IPV vaccine between gestational weeks 16 and 32 **in every pregnancy**. JCVI advised that this was the optimal period when vaccination would maximise the protection of the baby from birth.

In practice, the customary time to offer pertussis immunisation will be after the foetal anomaly scan, (also known as the 20-week scan) which usually takes place between 18 and 20 weeks gestation. Pertussis immunisation can be offered at any time from 16 weeks, but the current GP contract allows for the pertussis vaccine to be offered from 20 weeks gestation. As most vaccine is offered via primary care, the PHE national template PGD has been worded to reflect this contractual position. However, commissioners and maternity service providers wishing to offer pertussis immunisation as part of antenatal care are not obliged to restrict the offer to *only* after 20 weeks of gestation. The vaccine can be offered at any time from 16 weeks, ideally at the same visit as the foetal anomaly scan.

Women may still be immunised after week 32 of pregnancy but this may not offer as high a level of passive protection to the baby. Vaccination late in pregnancy will, however, offer protection against disease to the mother and thereby reducing the risk of exposure in her infant.

The change to the timing of the offer should be introduced throughout 2016/17 and be fully implemented by April 2017.

The maternal pertussis immunisation programme has been highly effective at preventing cases and deaths from pertussis in infants. However, levels of pertussis remain heightened in the population and we continue to observe infant deaths primarily in those born to unvaccinated mothers. It is therefore critically important that women are offered the pertussis-containing vaccine at the optimal time in **each** and **every** subsequent pregnancy.

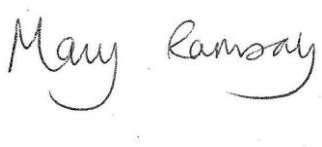
Both Boostrix®-IPV and Repevax® (dTaP/IPV) are suitable for vaccination in the maternal programme. Boostrix-IPV is licensed for boosting from 4 years of age and therefore can only be used in the maternal programme. If available, therefore, Boostrix-IPV should be used for pregnant women. Providers should order the vaccine recommended on ImmForm. Where there is no Boostrix®-IPV (dTaP/IPV) vaccine available, Repevax® (dTaP/IPV) is a suitable alternative. In those exceptional circumstances when a woman attends and neither Boostrix®-IPV nor Repevax® (dTaP/IPV) is available, rather than delay vaccination, Infanrix®-IPV (DTaP/IPV) should be given.

Public Health England (PHE) has recently published a new leaflet to inform women of the importance of immunisations against pertussis and influenza in pregnancy and the need for MMR post-natally if indicated. An electronic copy is available here: www.gov.uk/government/publications/pregnancy-how-to-help-protect-you-and-your-baby

It can also be ordered free of charge, in paper copy via the health and social care publications order line here: www.orderline.dh.gov.uk/ecom_dh/public/home.jsf

All those involved in the care of pregnant women are therefore advised to discuss pertussis immunisation as part of routine antenatal care, noting the change in the timing of pertussis immunisation. Pregnant women can be sign-posted to their GP to receive the vaccine, or in some cases be offered the vaccine via maternity services.

Yours sincerely



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References

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2. Dabrera G, Amirthalingam G, Andrews N, *et al* (2014). A case-control study to estimate the effectiveness of maternal pertussis vaccination in protecting newborn infants in England and Wales, 2012–2013. *Clin Infect Dis*.
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4. Public Health England (2015) Laboratory confirmed cases of pertussis reported to the enhanced pertussis surveillance programme in England during July to September 2015 (Q3), Health Protection Weekly Report, Volume 9 Number 45 Published on 18 December 2015.
5. Joint Committee on Vaccination and Immunisation (2016), Minute of the meeting on 3 February 2016.