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## Vaccine Preventable Disease Programme

# Coverage of pertussis and influenza vaccination in pregnant women in Wales 2015/16

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### Purpose and Summary of Document:

Our aim was to ascertain coverage of pertussis and influenza vaccine in a sample of pregnant women at the time of their delivery. The survey was conducted on women in post-natal units during a five day period in January 2016, with the exception one unit which surveyed women over a five day period in April 2016. Self-reported uptake was 72.4% for pertussis vaccination, 75.6% for influenza vaccination and 66.5% for both pertussis and influenza vaccination. An offer of both vaccines during pregnancy was recalled by 92.7% of the women surveyed. Coverage of both pertussis and influenza vaccination has increased this year compared to last year, from 69.1% to 72.4% and 72.4% to 75.6%, respectively.

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# 1 Background

Following a rise in the number of cases of whooping cough in young babies during 2012, the Chief Medical Officer (CMO) for Wales announced on 28<sup>th</sup> September 2012 that pregnant women will be offered vaccination to protect their newborn babies (Welsh Government, 2012). Cases of pertussis in infants born to vaccinated mothers have reduced by over 90% as a result of the programme (Amirthalingam *et al*, 2014). In light of the success of the temporary pertussis vaccination programme in saving infant lives and the continued increase in pertussis incidence, the Joint Committee on Vaccination and Immunisation (JCVI) recommended in June 2014 that the programme should be extended for a further five years.

In August 2012 JCVI recommended that the best way to protect young infants before they are old enough to start their primary immunisations was to offer pertussis vaccination to pregnant women between 28 to 32 weeks gestation (JCVI, 2012). In April 2016, the advice was changed to recommend that immunisation against pertussis can take place from week 16 of pregnancy (JCVI, 2016). Ascertaining accurate denominator information and calculating uptake at the point of immunisation, in a robust way, for this group through data routinely collected from general practice is not currently possible.

Pregnant women are at higher risk of complications of influenza and therefore are also recommended to receive seasonal influenza vaccine (Welsh Government, 2014).

Although routine surveillance data is collected automatically from General Practice on vaccinations given to pregnant women, difficulties remain in robust ascertainment of the denominator using General Practice which are likely to result in underestimation of uptake. Therefore, this annual survey was established to provide robust estimates of coverage of pertussis and influenza vaccine in pregnant women at the time of delivery. This year, the survey was conducted in January 2016 in the majority of maternity units of Wales, with the exception of one unit which conducted their survey in April 2016.

## 2 Introduction

### 2.1 Pertussis

Pertussis incidence typically has a cyclical pattern with peaks of cases every three to four years. The peak prior to 2014 in England and Wales was in 2008, with 902 laboratory confirmed cases (PHE, 2014). In 2012, there was a significant increase in the number of pertussis cases reported in the UK (Kmietowicz, 2012) and in USA (Centers for Disease Control and Prevention, 2015), New Zealand (Institute of Environmental Science and Research Ltd, 2012) and Australia (Government of Western Australia, 2012). In Wales, there were 344 confirmed cases in 2012, 29 cases were in infants under one year of age of which 22 were aged under three months (PHE, 2014). Children under one year of age are the group most susceptible to serious complications.

During 2013 and 2014, the number of confirmed pertussis cases in Wales decreased to 212 cases and 114 cases, respectively. The provisional figure for cases in Wales during 2015 is 267. Although the number of confirmed cases in children under one year of age remains low, there were thirteen confirmed cases in this age group in 2015 compared to four cases in 2014.

Given the continued heightened pertussis activity in those over one year of age the maternal pertussis immunisation programme remains important in the control of pertussis in those less than one year of age. In England fourteen infants under three months old died of pertussis in 2012, seven died in 2013, and three died in 2014. The greatest decrease in disease since the peak in 2012 has been in infants under six months of age who are targeted by the maternal pertussis vaccination programme (PHE 2015).

## 2.2 Influenza

Influenza presents significant risks to pregnant women and their babies. A total of 36 women died from influenza infections between 2009 and 2012 in the UK (MBRRACE-UK, 2014). If a woman catches influenza during pregnancy they are at increased risk of experiencing severe disease, admission to intensive care and perinatal mortality (Jamieson *et al*, 2009; Pierce *et al* 2011). One in eleven maternal deaths during 2009-12 in the UK was caused by influenza (MBRRACE UK, 2014). There were no maternal deaths in the UK from influenza in 2012 and 2013, this is mainly due to the low level of influenza activity in 2012 and 2013 compared to 2009 and 2010, (MBRRACE UK, 2015).

## 2.3 Vaccination of pregnant women

### Pertussis

The Joint Committee on Vaccination and Immunisation (JCVI) reviewed the available information on the evolving outbreak in August 2012 and recommended that the best way to protect young infants before they are old enough to start their primary immunisations was to offer pertussis vaccination to pregnant women between 28 to 32 weeks gestation (JCVI, 2012). In April 2016 the Green Book, Immunisation against infectious disease pertussis chapter was updated to recommend that maternal pertussis immunisation can take place from week 16 of pregnancy (JCVI, 2016). The change in advice is based on a recent Swiss study, that showed that maternal immunisation against pertussis in the second trimester significantly increased neonatal antibodies (Eberhardt *et al*. 2016). Offering maternal immunisation earlier than the 28 week recommendation should not only improve infant protection, it will also provide more opportunity for pregnant women to be offered the pertussis vaccine during pregnancy, there were no safety issues with earlier pertussis vaccination in pregnancy. As a result the JCVI recommendation from April 2016 is that pertussis vaccination should be offered from 16 week gestation.

Women who took part in this survey would have been subject to the previous recommendation and should have been offered pertussis immunisation from weeks 28 to 32 of their pregnancies. Vaccination of the mother boosts maternal antibodies that can pass across the placenta to the unborn infant to provide protection during the early weeks of life.

The UK's Medicines and Healthcare Products Regulatory Authority (MHRA) recently carried out a study of more than 20,000 pregnant women in the UK who have received the pertussis vaccine (Donegan *et al*, 2014). The study assessed the safety of the vaccine in pregnancy and found no increased risk to the baby or the mother associated with the vaccine. This is an important study evaluating the safety of the pertussis vaccine in pregnancy.

## Influenza

All pregnant women are recommended to receive influenza vaccine irrespective of their stage of pregnancy. The vaccine provides protection for the woman and the baby during pregnancy and protects the baby against influenza for up to six months following birth (Dabrera *et al*, 2014).

### 2.4 Measurement of influenza and pertussis vaccine uptake in pregnant women using Read coded data from General Practice

Public Health Wales monitors uptake of influenza immunisation in pregnant women using data collected by General Practices through Audit+.

There are challenges in collecting and reporting immunisation uptake data for influenza and pertussis in pregnant women, which highlights the importance of surveying the number of women giving birth who have been vaccinated. Current influenza immunisation uptake data collected through Audit+ includes all women who were recorded as being pregnant as at the start of September 2015 or who were newly recorded as being pregnant between September 2015 and January 2016. As a result, the denominator will include a proportion of women whose pregnancies ended before they would have been offered the vaccine. The timeliness of removal of pregnancy associated Read codes from patient records in general practice after pregnancies have ended is unknown, late removal of these codes would result in an inflated denominator of pregnant women and underestimation of uptake. The current estimated uptake of influenza in 2015/16 in all pregnant women using Audit+ data as of 5<sup>th</sup> April 2016 was 46.9% for Wales (PHW, 2016).

For the women participating in this survey, pertussis immunisation should have been offered in the third trimester of pregnancy. Given that Audit+ data provides an estimate of uptake in women who have been pregnant at any point during pregnancy, it is not possible to accurately identify pregnant women in their third trimester in a systematic way.

### 3 Methods

The sample frame for this survey was defined as all pregnant women delivering in Wales in main maternity units over a five day period in January 2016, with the exception of one unit which carried out their survey over a five day period in April 2016. The Heads of Midwifery in all seven Health Boards agreed to participate in the survey. All sixteen main maternity units in Wales were included in the survey and maternity services collected data for the five survey days using a questionnaire (Appendix 1).

The questionnaire collected self-reported information from the women on their age, the offer and receipt of pertussis and influenza vaccinations, gestational week when vaccinated and gestational week at delivery.

An estimate for the number of births in a five day period in the Health Board was calculated using live and still births data for 2014/2015 from Welsh Government statistics (Appendix 2). There are differences in the estimates of births for a five day period and some Health Board births data due to a variety of reasons:

- All the main maternity units in Wales participated but some Health Boards also have smaller community maternity units that did not participate in the survey.
- The estimate of live births during a five day period calculated from the 2014/2015 Welsh Government statistics is based on an average five day period and does not take into account seasonal or annual fluctuations in birth rate.
- Powys Teaching Health Board (THB) is a mainly rural area with no District General Hospital. Within Powys THB there are six smaller maternity units. The annual number of all births (live and still) in Powys THB between 1<sup>st</sup> April 2014 and 31<sup>st</sup> March 2015 was 141. Only data for Powys THB residents that delivered in Powys THB are presented in the results section.

## 4 Results

### 4.1 Survey participation

Table 1 shows the estimated number of deliveries in a five day period, based on Welsh Government 2014/2015 delivery statistics (Appendix 2), compared to the number of women delivering during the five day survey period. We estimated 412 deliveries would take place in maternity units in a five day period using Welsh Government data, and data was collected through the survey from 427 pregnant women. This suggests that the survey is likely to include information from the majority of women that would be delivering in Wales during the survey period.

**Table 1.** The number of pregnant women participating in the 2015/16 survey, during the survey week in January 2016, compared with the estimated number of deliveries during a five day period in 2014/2015, by Health Board

Health Board	Estimated number of deliveries in maternity units over a 5 day period <sup>1</sup> (n)	Number of women with uptake data (n)
Abertawe Bro Morgannwg UHB	75	77
Aneurin Bevan UHB	79	68
Betsi Cadwaladr UHB	85	92
Cardiff & Vale UHB	75	91
Cwm Taf UHB	51	54
Hywel Dda UHB	43	39
Powys THB	1	6
<b>Wales</b>	<b>412</b>	<b>427</b>

<sup>1</sup>Source: Welsh Government Stats Wales deliveries data for 2014/2015. Excludes deliveries that did not take place in hospital.

### 4.2 Offer of pertussis vaccination

Women were asked if they were offered pertussis vaccine during their pregnancy. Table 2 shows that 93.4% reported they were offered the vaccine during pregnancy. Twenty eight (6.6%) did not recall being offered pertussis vaccination (Table 2).

**Table 2.** Number of women participating in the 2015/16 survey who recall being offered pertussis vaccination during pregnancy

Offered pertussis vaccination while pregnant	Number of women (n)	Percentage (%)
Yes	399	93.4%
No	28	6.6%
Not known/missing	0	0.0%
<b>Total</b>	<b>427</b>	<b>100%</b>

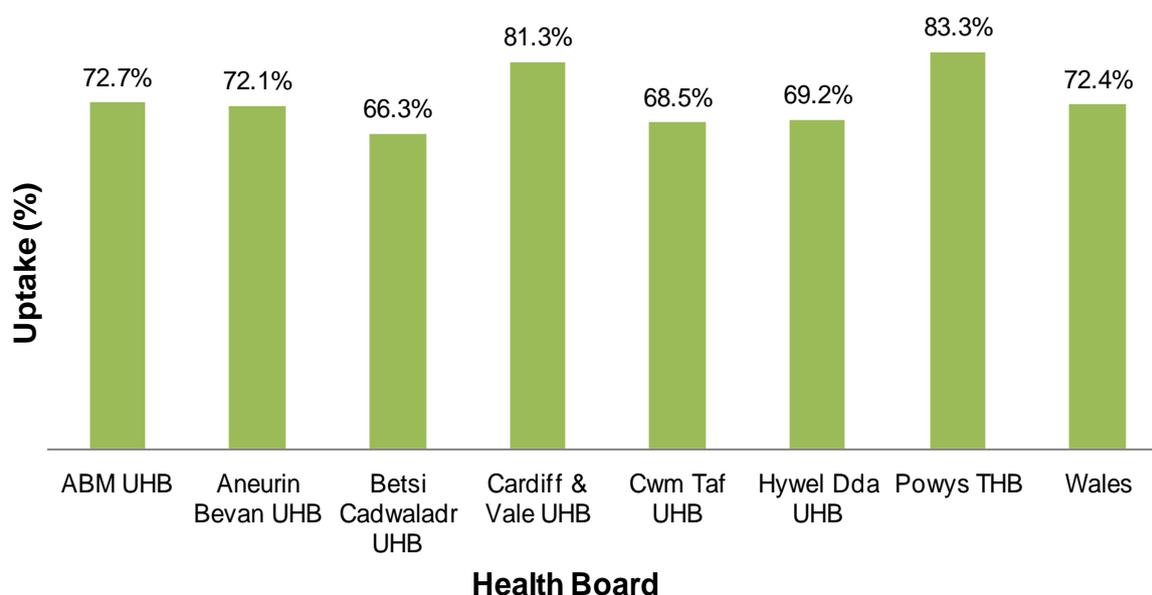
### 4.3 Uptake of pertussis vaccination

Self-reported coverage of pertussis vaccination in the women surveyed was 72.4% (309/427) for Wales, and ranged by Health Board from 66.3% (Betsi Cadwaladr UHB) to 83.3% (Powys THB). However, data from Powys THB are based on a small sample of six women (Table 3 and Figure 1). Responses were missing for five women (1.2%).

**Table 3.** Number of women participating in the 2015/16 survey who recalled receiving pertussis vaccine during pregnancy

Received pertussis vaccination while pregnant	Number of women (n)	Percentage (%)
Yes	309	72.4%
No	113	26.5%
Not known/missing	5	1.2%
<b>Total</b>	<b>427</b>	<b>100%</b>

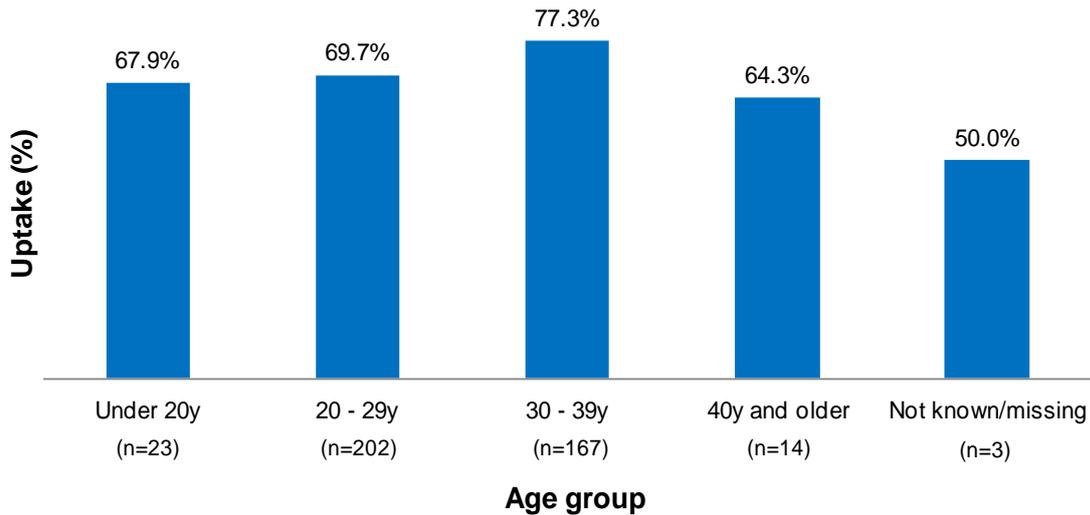
**Figure 1.** Uptake of pertussis vaccination in pregnant women participating in the 2015/16 survey, by Health Board\* (n=427)



\* Proportions for Powys THB are based on a small sample of women (n=6).

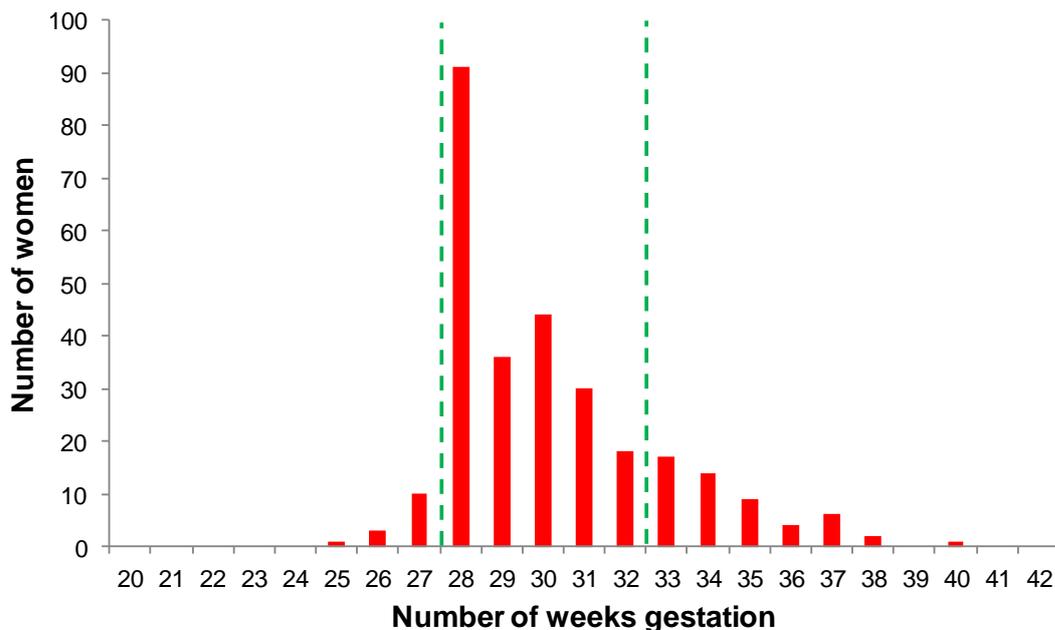
Coverage of pertussis vaccination within age groups was highest in women aged 30-39 years (77.3%, 133/172) and lowest in women aged 40 years and older (64.3%, 9/14) (Figure 2). Information on age was unknown or missing for 0.3% (1/309) of vaccinated women.

**Figure 2.** Uptake of pertussis vaccination in pregnant women participating in the 2015/16 survey, by age group (n=427)



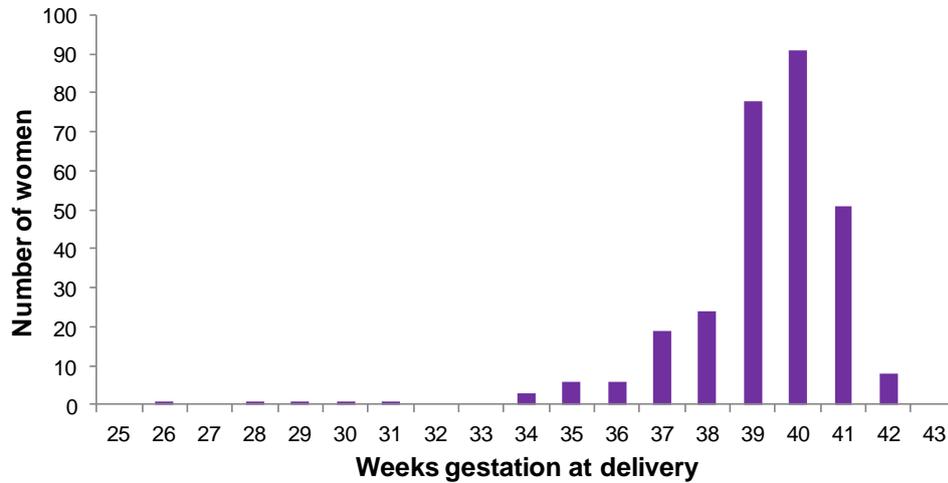
The women who took part in this survey would have been subject to the previous recommendations, for the pertussis vaccination to be given from week 28 to 32 of gestation. Out of the women who had received pertussis vaccination in this survey, 76.6% (219/309) had received the vaccine during week 28 to 32 (Figure 3). Information on gestational week when vaccinated was unknown or missing for 7.4% (23/309) of vaccinated women.

**Figure 3.** Number of weeks gestation when vaccinated in pregnant women participating in the 2015/16 survey (n=286, dashed green lines refer to the recommended gestational week period to receive pertussis vaccination as at time of the audit)



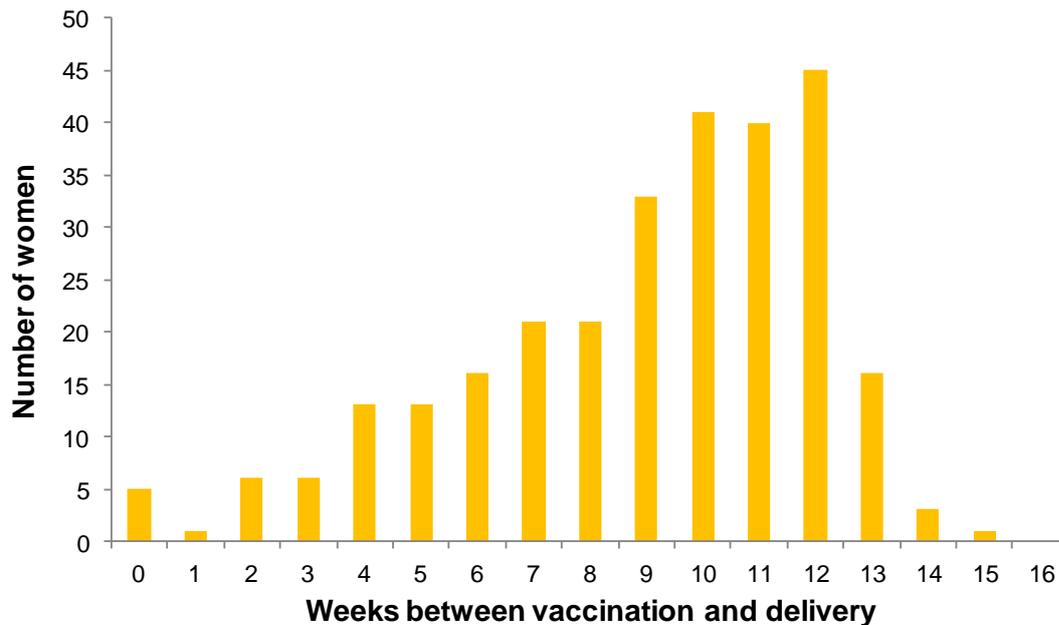
Gestational week at delivery for women who had received pertussis vaccination ranged from week 26 to 43 (Figure 4), and 94.7% (286/309) of women delivered between week 36 and 42. Information on gestational week at delivery was unknown or missing for 2.3% (7/309) of vaccinated women.

**Figure 4.** Number of weeks gestation at delivery for those who received pertussis vaccination in pregnant women participating in the 2015/16 survey (n=302)



The mean interval between pertussis vaccination and delivery was 9 weeks and ranged from 0 weeks to 15 weeks (Figure 5).

**Figure 5.** Number of weeks interval between receiving pertussis vaccination and delivery in pregnant women participating in the 2015/16 survey (n=281)



## 4.4 Offer of influenza vaccination

Women were asked if they were offered influenza vaccination during their pregnancy. Table 4 shows that 95.6% of women reported that they were offered influenza vaccine and only 4.4% did not recall being offered influenza immunisation (Table 4).

**Table 4.** Number of women participating in the 2015/16 survey who recall being offered influenza vaccination during pregnancy

<b>Offered influenza vaccination while</b>	<b>Number of women (n)</b>	<b>Percentage (%)</b>
Yes	408	95.6%
No	19	4.4%
Not known/missing	0	0.0%
<b>Total</b>	<b>427</b>	<b>100%</b>

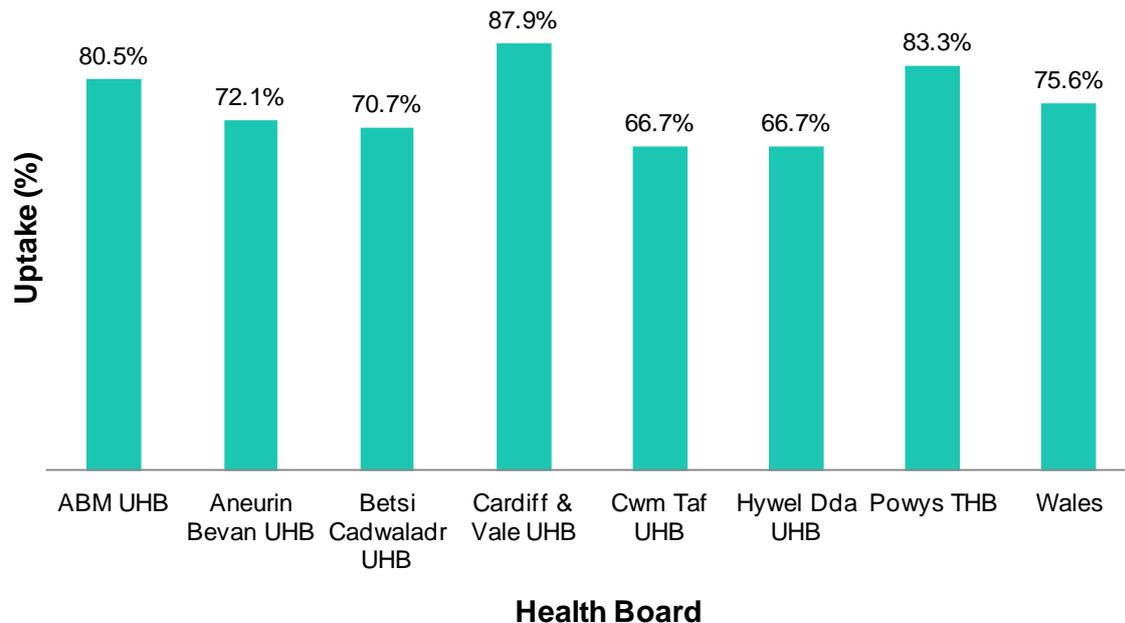
## 4.5 Uptake of influenza vaccination

Women were asked if they recalled receiving an influenza vaccine during pregnancy. Self-reported coverage of influenza vaccination in women included in this survey was 75.6% nationally, ranging by Health Board from 66.7% (Cwm Taf UHB and Hywel Dda UHB) to 87.9% (Cardiff & Vale UHB) (Table 5 and Figure 6).

**Table 5.** Number of women participating in the 2015/16 survey receiving influenza vaccine during pregnancy

<b>Received influenza vaccination while pregnant</b>	<b>Number of women (n)</b>	<b>Percentage (%)</b>
Yes	323	75.6%
No	103	24.1%
Not known/missing	1	0.2%
<b>Total</b>	<b>427</b>	<b>100%</b>

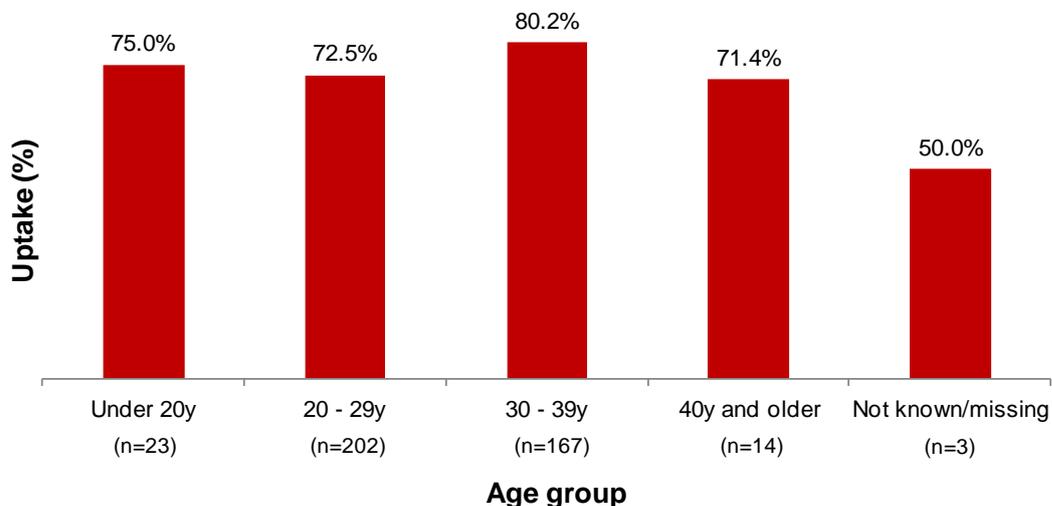
**Figure 6.** Uptake of influenza vaccination in pregnant women participating in the 2015/16 survey, by Health Board\* (n=427)



\* Proportions for Powys THB are based on a small sample of women (n=6).

The age-group where uptake of influenza vaccination was highest was women aged 30-39 years (80.2%, 138/172); it was lowest in women aged 40 years and older (71.4%, 10/14) (Figure 7).

**Figure 7.** Uptake of influenza vaccination in pregnant women participating in the 2015/16 survey, by age group (n=427)



## 4.6 Coverage of both pertussis and influenza vaccination

Of the women surveyed, 92.7% (396/427) recalled being offered both influenza and pertussis vaccines and 66.5% (284/427) received both influenza and pertussis vaccines (Tables 6 and 7). In addition, 91.9% (284/309) of women who received pertussis vaccine also received the influenza vaccine.

**Table 6.** Number of women participating in the 2015/16 survey who recalled being offered both the pertussis and influenza vaccines during pregnancy

		Offered pertussis vaccine when pregnant (n)			
		Not known/missing	No	Yes	Total
<b>Offered influenza vaccine while pregnant (n)</b>	Not known/missing	0	0	0	<b>0</b>
	No	0	16	3	<b>19</b>
	Yes	0	12	396	<b>408</b>
	<b>Total</b>	<b>0</b>	<b>28</b>	<b>399</b>	<b>427</b>

**Table 7.** Number of women participating in the 2015/16 survey receiving both the pertussis and influenza vaccines during pregnancy

		Received pertussis vaccine when pregnant (n)			
		Not known/missing	No	Yes	Total
<b>Received influenza vaccine while pregnant (n)</b>	Not known/missing	0	0	1	<b>1</b>
	No	0	79	24	<b>103</b>
	Yes	5	34	284	<b>323</b>
	<b>Total</b>	<b>5</b>	<b>113</b>	<b>309</b>	<b>427</b>

## 4.7 Trends in pertussis vaccination uptake

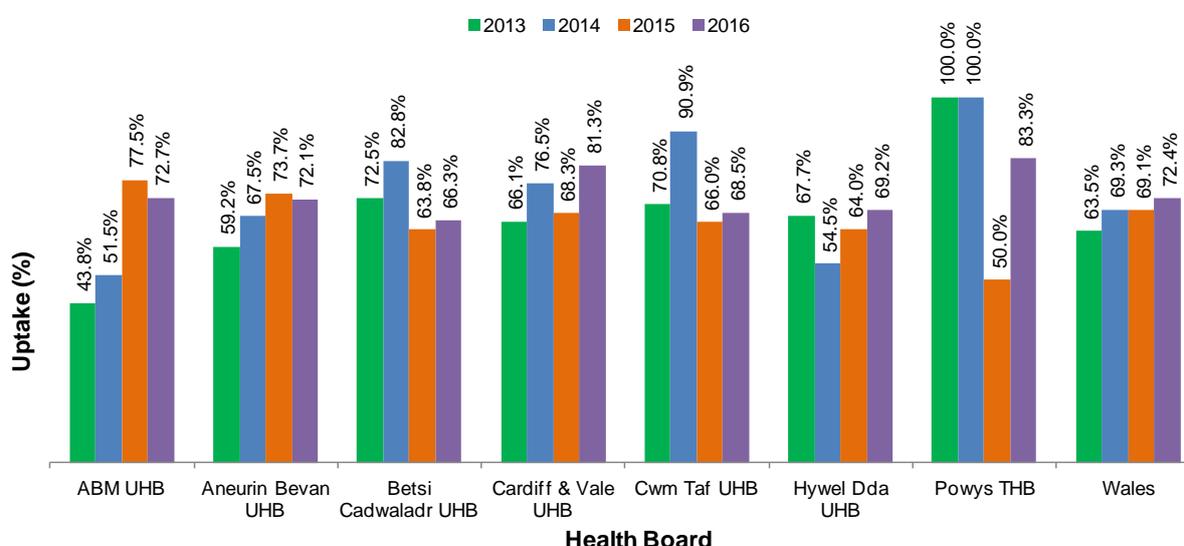
National coverage of pertussis vaccination has increased from 69.1% in the 2014/15 survey to 72.4% in the 2015/16 survey. Uptake compared to the previous year increased in five Health Boards and decreased in two Health Boards (Table 8, Figure 8).

**Table 8.** Uptake of pertussis vaccination in pregnant women participating in the 2012/13, 2013/14, 2014/15 and 2015/16 surveys, by Health Board\*

Health Board	% received pertussis vaccination			
	2012/13	2013/14	2014/15	2015/16
Abertawe Bro Morgannwg UHB	43.8%	51.5%	77.5%	72.7%
Aneurin Bevan UHB	59.2%	67.5%	73.7%	72.1%
Betsi Cadwaladr UHB	72.5%	82.8%	63.8%	66.3%
Cardiff & Vale UHB	66.1%	76.5%	68.3%	81.3%
Cwm Taf UHB	70.8%	90.9%	66.0%	68.5%
Hywel Dda UHB	67.7%	54.5%	64.0%	69.2%
Powys THB	100.0%	100.0%	50.0%	83.3%
<b>Wales</b>	<b>63.5%</b>	<b>69.3%</b>	<b>69.1%</b>	<b>72.4%</b>

\*Proportions for Powys THB are based on a small samples of women (2013 n=3, 2014 n=2, 2015 n=4, 2016 n=6), interpret with caution.

**Figure 8.** Uptake of pertussis vaccination in pregnant women participating in the 2012/13, 2013/14, 2014/15 and 2015/16 surveys, by Health Board\*



\*Proportions for Powys THB are based on a small samples of women (2013 n=3, 2014 n=2, 2015 n=4, 2016 n=6).

## 4.8 Trends in influenza vaccination uptake

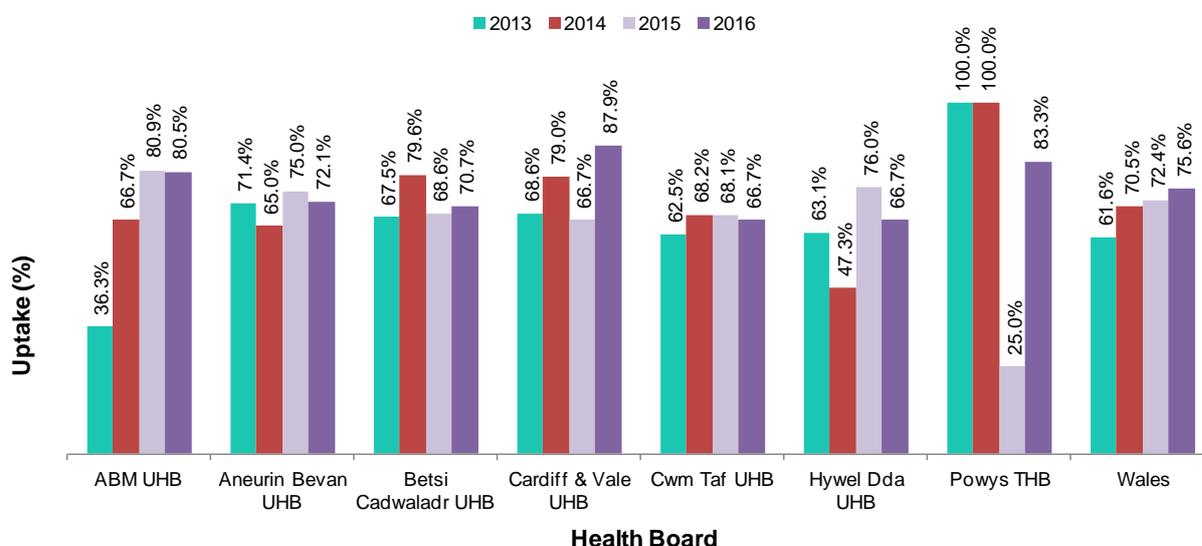
National coverage of influenza vaccination continues to increase each year in women included in the point of delivery surveys. Uptake increased in three Health Boards in the 2015/16 survey compared to the 2014/15 survey, remained stable in one Health Board and decreased in three Health Boards (Table 9, Figure 9).

**Table 9.** Uptake of influenza vaccination in pregnant women participating in the 2012/13, 2013/14, 2014/15 and 2015/16 surveys, by Health Board\*

Health Board	% received influenza vaccination			
	2012/13	2013/14	2014/15	2015/16
Abertawe Bro Morgannwg UHB	36.3%	66.7%	80.9%	80.5%
Aneurin Bevan UHB	71.4%	65.0%	75.0%	72.1%
Betsi Cadwaladr UHB	67.5%	79.6%	68.6%	70.7%
Cardiff & Vale UHB	68.6%	79.0%	66.7%	87.9%
Cwm Taf UHB	62.5%	68.2%	68.1%	66.7%
Hywel Dda UHB	63.1%	47.3%	76.0%	66.7%
Powys THB	100.0%	100.0%	25.0%	83.3%
<b>Wales</b>	<b>61.6%</b>	<b>70.5%</b>	<b>72.4%</b>	<b>75.6%</b>

\*Proportions for Powys THB are based on a small samples of women (2013 n=3, 2014 n=2, 2015 n=4, 2016 n=6), interpret with caution.

**Figure 9.** Uptake of influenza vaccination in pregnant women participating in the 2012/13, 2013/14, 2014/15 and 2015/16 surveys, by Health Board\*



\*Proportions for Powys THB are based on a small samples of women (2013 n=3, 2014 n=2, 2015 n=4, 2016 n=6).

## 5 Conclusions

This is the fourth year that the point of delivery survey has been conducted.

This year:

- 72% of pregnant women reported they received pertussis vaccination,
- 76% of pregnant women reported they received influenza vaccination,
- 67% of pregnant women reported they received both pertussis and influenza vaccination and,
- 93% of pregnant women recall being offered pertussis and influenza vaccines during pregnancy.

As with the previous year, uptake of pertussis vaccine was lowest in women younger than 20 and older than 40 years. Most pertussis vaccinations (77%) were given between weeks 28 and 32, the recommended stage of pregnancy at the time the audit was completed. The recent change in recommendations from JCVI that pertussis vaccine can be given after 16 weeks gestation will allow more opportunity to vaccinate pregnant women during routine appointments.

The uptake of pertussis vaccine has increased from 69% in 2014/15 to 72% in 2015/16. The uptake of influenza vaccine has continued to increase each year since the survey was introduced in 2013 with uptake in 2015/16 at 76% compared to 2014/15 when uptake was 72%. The percentage of women who recall receiving both vaccines has increased from 64% to 67%.

Data automatically collected from General Practice through Audit+ as at 5<sup>th</sup> April 2016 showed that uptake of influenza vaccination in women pregnant at some point during flu season was 47% during 2015/16. This is a measure of the percentage of women immunised, whose general practice record had a pregnancy-associated Read code attached, at any point from September 2015 to January 2016. Due to the challenges in ascertaining accurate uptake data for pregnant women using Read codes in general practice records, the figure (47%) is expected to underestimate the true coverage of influenza vaccination in pregnant women, and the results of this survey also suggest this to be the case.

This survey shows that acceptability of influenza and pertussis vaccine to pregnant women remains high. Although this survey did not identify how offers of vaccination were made, the proportion of women who could recall being offered vaccines during pregnancy was very high. Uptake of influenza vaccine in pregnant women has increased for the fourth consecutive year, and has exceeded the 75% uptake target for influenza vaccination set by Welsh Government.

Investigation into reasons for pregnant women not consenting to influenza or pertussis vaccination and also into the circumstances surrounding the women who did not receive a memorable offer of vaccination could lead to further increases in coverage. This survey highlights the confidence that pregnant women have in receiving both pertussis and influenza vaccines and the effectiveness of primary care and midwifery services delivering the programmes. A proportion of women reported that they had not been offered vaccination, may have been offered the vaccines but could not remember, however efforts should continue to ensure that the offer rate is 100%. Offering and

encouraging women to receive pertussis and influenza immunisation during each pregnancy remains the best way of preventing life-threatening pertussis and influenza infections in babies too young to receive their own vaccinations and women during pregnancy. These surveys help to inform decisions about the future of the programmes and service development such as further communications and training resources.

### Acknowledgements

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**Appendix 2: All deliveries 1<sup>st</sup> April 2014 to 31<sup>st</sup> March 2015 by Welsh Birth Unit and Health Board**

Health Board / Welsh Birth Unit	All deliveries 01/04/2014 to 31/03/2015	Estimate of weekly deliveries	Estimate of all deliveries in 5 days
<b>Abertawe Bro Morgannwg UHB<sup>1</sup></b>	<b>5,511</b>	<b>105</b>	<b>75</b>
Neath Port Talbot	388	7	5
Princess of Wales	2,016	38	27
Singleton	3,106	59	42
<b>Aneurin Bevan UHB</b>	<b>5,809</b>	<b>111</b>	<b>79</b>
Nevill Hall	1,948	37	26
Royal Gwent	3,580	68	49
Ysbyty Ystrad Fawr	273	5	3
Ysbyty Aneurin Bevan	8	0	0
<b>Betsi Cadwaladr UHB</b>	<b>6,277</b>	<b>120</b>	<b>85</b>
Bryn Beryl	0	0	0
Dolgellau & Barmouth District	0	0	0
Tywyn & District	0	0	0
Wrexham Maelor	2,438	46	33
Ysbyty Glan Clywd	1,975	37	27
Ysbyty Gwynedd	1,864	35	25
<b>Cardiff &amp; Vale UHB</b>	<b>5,534</b>	<b>106</b>	<b>75</b>
University Hospital of Wales	5,534	106	75
<b>Cwm Taf UHB</b>	<b>3,737</b>	<b>71</b>	<b>51</b>
Aberdare General	0	0	0
Prince Charles	1,770	34	24
Royal Glamorgan	1,967	37	26
<b>Hywel Dda UHB</b>	<b>3,155</b>	<b>60</b>	<b>43</b>
Bronlais General	481	9	6
Withybush	499	9	6
Glangwili General	2,175	41	29
<b>Powys Teaching HB</b>	<b>141</b>	<b>2</b>	<b>1</b>
Powys Maternity Units <sup>2</sup>	141	2	1
<b>Wales</b>	<b>30,164</b>	<b>580</b>	<b>412</b>

Source: Welsh Government Stats Wales number of deliveries by birth unit data for 2014/2015. <https://statswales.wales.gov.uk/Catalogue/Health-and-Social-Care/NHS-Primary-and-Community-Activity/Maternity/numberofdeliveries-by-unit-deliverymethod>

<sup>1</sup> Includes deliveries in hospital only. One delivery with unknown birth unit.

<sup>2</sup> Breconshire Memorial Hospital, Knighton Hospital, Llandrindod Wells Hospital, Llandiloes & District Memorial Hospital, Montgomeryshire County Infirmary and Victoria Memorial Hospital