

National summary of neonatal hepatitis B immunisation –2014



Background

This report summarises uptake and timeliness of the first three doses of hepatitis B immunisation and trends in babies who were born to hepatitis B positive mothers during 2014 and were notified to Public Health Wales Health Protection Team. Uptake and timeliness of the fourth dose of hepatitis B immunisation in babies born to hepatitis B positive mothers in 2013 is also presented.

The data in this report are taken from the All Wales Neonatal Hepatitis B immunisation database. The database was developed to assist the Public Health Wales Health Protection Team in the monitoring and follow up of hepatitis B immunisation in babies born to hepatitis B positive mothers. The database also allows Public Health Wales to monitor uptake and timeliness of hepatitis B vaccination in neonates and young children born to infected mothers. Data contained in this report were extracted on 25 June 2015.

Table 1. Uptake and timeliness of neonatal hepatitis B immunisation in Wales, babies born to hepatitis B positive mothers and resident in Wales during 2013 and 2014

	Year of birth	Immunisation	Immunisation	Immunisation		
		Required	Received	Received on time ⁶		
		(n)	(n)	(%)	(n)	(%)
HBIG^{1,2}		9	9	100	9	100
Dose 1²	2014	48	48	100	48	100
Dose 2³		48	48	100	28	58
Dose 3⁴		48	45	94	25	56
Dose 4⁵	2013	60	51	85	36	71

¹ Not required for all neonates

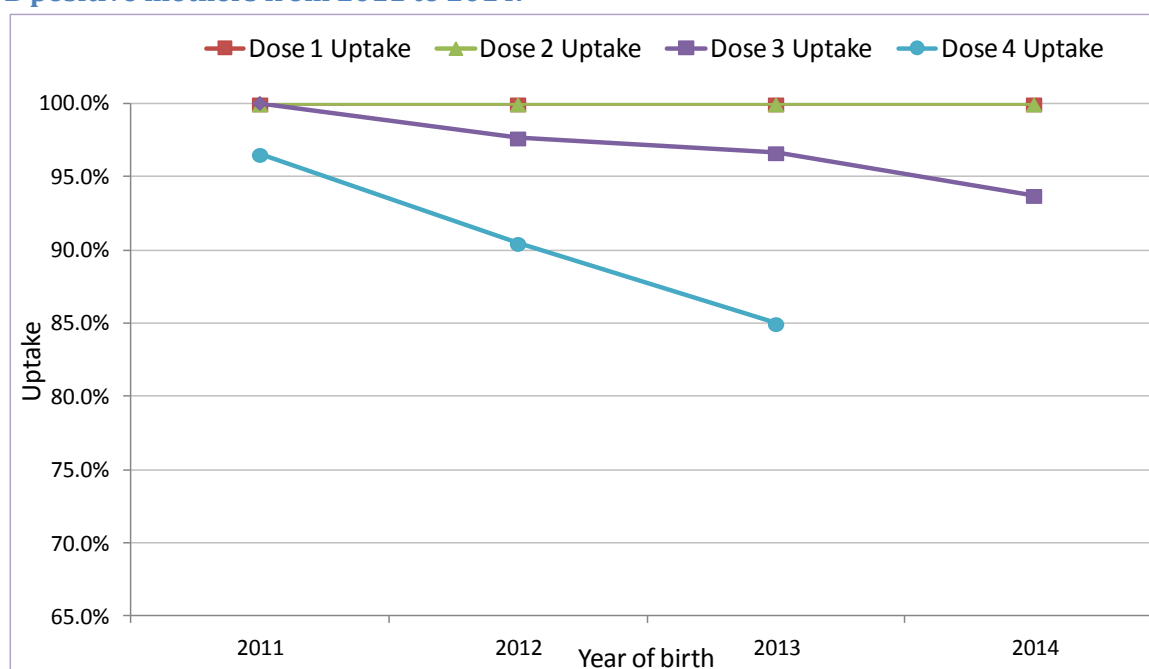
² Recommended to be given on the day of birth or the next day

³ Recommended interval: within 25 - 36 days after dose 1

⁴ Recommended interval: within 25 - 36 days after dose 2

⁵ Recommended interval: within 334 – 396 days of birth

Figure 1. Trends in uptake (%) of hepatitis B immunisations¹ in babies born to hepatitis B positive mothers from 2011 to 2014.



¹Uptake timeliness of dose 4 for babies born in 2014 was not available at this time at the time which data were extracted for this report.

Table 2. Trends in the timeliness of hepatitis B immunisations in babies born to hepatitis B positive mothers from 2011 to 2014.

Percent received on time	Year of birth			
	2011	2012	2013	2014
Dose 1 ¹ (%)	100	100	100	100
Dose 2 ² (%)	50	70	55	58
Dose 3 ³ (%)	67	48	64	56
Dose 4 ^{4,5} (%)	61	60	71	-

¹The timely interval for dose 1 is on the day of birth or the next day, for the purpose of this report.

²The timely interval for dose 2 is between 25 and 36 days after dose 1, for the purpose of this report.

³The timely interval for dose 3 is between 25 and 36 days after dose 2, for the purpose of this report.

⁴The timely interval for dose 4 is between 334 – 396 days after birth, for the purpose of this report

⁵ Uptake timeliness of dose 4 for babies born in 2014 is not available at this time.

Findings

1. During 2014, 53 babies born to hepatitis B mothers were reported to the Health Protection Team in comparison to 63 babies in 2013. Five babies who were born during 2014 are not included in this report, because they moved away from Wales.
2. Hepatitis B immunoglobulin (HBIG) was indicated for 19% (9/48) of neonates born to hepatitis B positive mothers in Wales during 2014, an increase from 17% in 2013. As with the last two years, HBIG was delivered to 100% of these neonates and all received it on their day of birth or the next day (Table 1).
3. Uptake of the first dose of hepatitis B immunisation was 100% in 2014, the same as in the previous three years, with all neonates receiving their first dose on their day of birth or the next day (Table 1).
4. Uptake of the second dose of hepatitis B immunisation was 100% in 2014, also the same as in the previous three years. Fifty-eight per cent of the babies received their second dose between 25 and 36 days after their first dose, a slight increase from 55% in 2013 (Table 1). Six per cent of babies had a period shorter than 25 days between their first and second doses, and 35% of babies had a period longer than 36 days between their first and second doses.
5. Uptake of the third dose of hepatitis B immunisation was 94% compared to 97% in 2013. Fifty-six per cent of the babies received their third dose between 25 and 36 days after their second dose, a decrease from 64% in 2013 (Table 1). Forty-four per cent of babies had a period of longer than 36 days between their second and third doses.
6. Uptake of the fourth dose of hepatitis B immunisation was 85% in babies born to hepatitis B positive mothers in 2013, a decrease from 90% in babies born in 2012. Seventy-one per cent of the babies received their fourth dose between 334 and 396 days of birth, an increase compared to 61% in babies born in 2012, and 29% received the dose later than 396 days from birth.
7. Twenty-one (35%) of the babies born to hepatitis B positive mothers resident in Wales in 2013 were serologically tested for hepatitis B surface antigen, of whom:
 - 8 (38%) were tested at 12 months of age (365 – 396 days old)
 - 1 (5%) was tested before 12 months of age (younger than 365 days) of age
 - 12 (57%) were tested after 12 month of age (older than 396 days).
 - All 21 babies were serologically tested by 18 months of age.

Discussion

This is the fourth annual report of uptake of hepatitis B immunisation in neonates born to hepatitis B positive mothers in Wales. The report contains information on the first three doses of hepatitis B vaccination for babies born during 2014 as well as on the fourth dose of the schedule and serological testing for babies born during 2013. All of these babies born during 2014 should have received their first, second and third doses of hepatitis B vaccine and the fourth dose of the vaccine and tested for serology if born during 2013, by the time data for this report were extracted (25 June 2015).

These data show that all of the babies born to hepatitis B positive mothers, who were resident in Wales during 2014, and notified to Public Health Wales received HBIG (if indicated) and their first two doses of the hepatitis B immunisation schedule, an uptake trend which has been consistent

since 2011. Since 2012 all eligible babies have consistently received HBIG (if indicated) and the first dose of the hepatitis B immunisation within the recommended timely interval. Compared to 2013, there was a slight increase in the proportion of babies who received their second dose within the recommended timely interval, but a decrease in the proportion of babies who received their third dose within the recommended timely interval. Six per cent of babies did not receive their third dose of the vaccine, an increase from 3% in 2013.

A lower proportion of babies born in 2013 (85%) received their fourth dose of the schedule compared to the babies born in 2012 (90%). The proportion of babies receiving their fourth dose of the schedule has been decreasing each year since coverage of the fourth dose has been reported on. Similarly, the proportion of babies born in 2013 who were serologically tested considerably decreased for a third consecutive year. However, the proportion of babies born in 2013 who received their fourth dose within the recommended timely interval increased compared to babies born in 2011 and 2012. Improvement in the completion of the full four dose course of hepatitis B vaccination and serological testing is important to ensure babies are fully protected from developing chronic hepatitis B infection.

For more information on neonatal hepatitis B immunisations consult 'The Green Book' at <http://immunisation.dh.gov.uk/category/the-green-book/>

Quarterly coverage figures for neonatal hepatitis B immunisations are available from the [Public Health Wales COVER reporting scheme](#)