Summary of neonatal hepatitis B immunisation in Wales – 2024

Background

This report summarises uptake and timeliness of the first three doses of hepatitis B immunisation and uptake trends in babies born to hepatitis B positive mothers during 2024 who were notified to the Public Health Wales Health Protection Team. Uptake and timeliness of the dose of hepatitis B immunisation due at 12 months and serology in babies born to hepatitis B positive mothers in 2023 are also presented.

Hepatitis B infection can be passed from an infected mother to her baby during birth. Babies infected in this way are very likely to become chronically infected, so can infect others. The risk of infection at birth can be reduced by over 90% by timely vaccination.

From 1st August 2017 all babies became eligible for the hexavalent ('6 in 1') vaccine that includes hepatitis B and replaced the '5 in 1' (DTaP/IPV/Hib combined diphtheria, tetanus, pertussis, inactivated polio and *Haemophilus influenzae* type B vaccine) vaccine scheduled at 2, 3 and 4 months of age. These babies should receive doses of monovalent Hepatitis B vaccine at birth and at 1 month of age, the '6 in 1' vaccine as scheduled at 2, 3 and 4 months and monovalent vaccine at 12 months, a total of six doses of Hepatitis B containing vaccine. For the purpose of monitoring whether at risk babies are protected from Hepatitis B, this report focuses on uptake and timeliness of hepatitis B containing vaccine at 0, 1, 2 and 12 months.

In May 2025, a WHC was released which outlined changes to the routine childhood immunisation schedule, including changes related to the selective hepatitis B programme. For infants born after 1st July 2025, the 12 month monovalent dose will be replaced by an additional dose of the hexavalent vaccine at 18 months. Testing or HepB surface antigen can also be carried out at any time between one year to 18 months of age. The 2025 report will be updated to reflect these changes.
Changes to routine childhood and selective neonatal hepatitis B vaccinations (WHC/2025/019) [HTML] | GOV.WALES

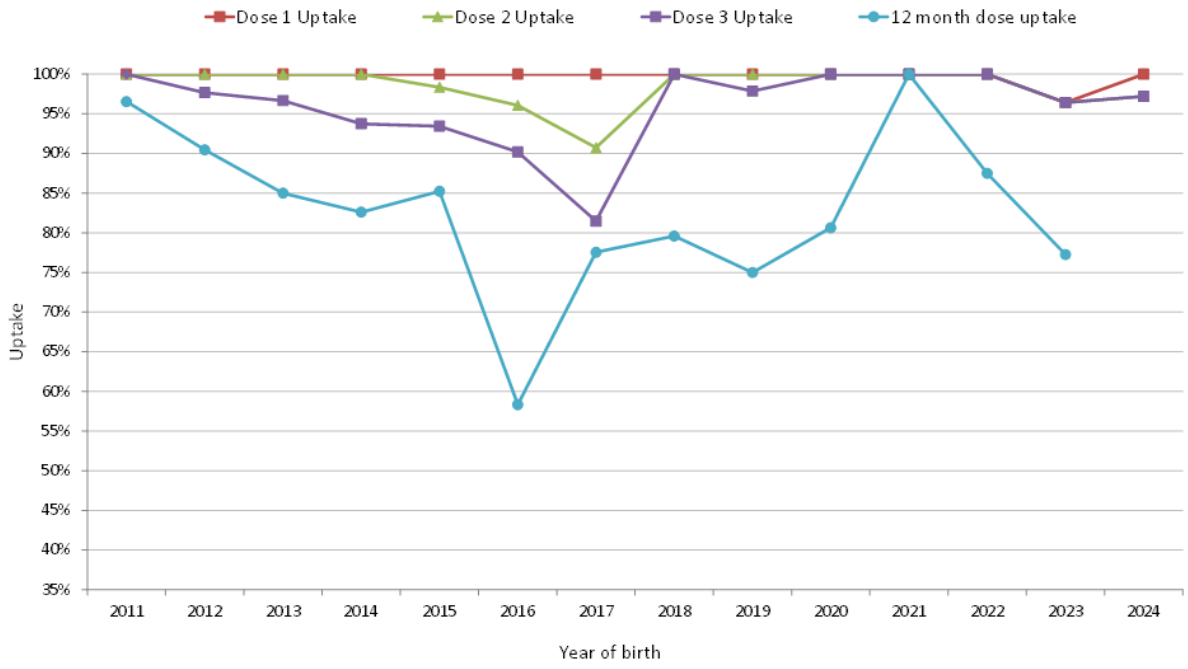
The data presented in this report were extracted from the Public Health Wales Tarian case and incident management system on 24th July 2025, following a move from the Public Health Wales Neonatal Hepatitis B database. The database was developed to assist the Health Protection Team in the monitoring and follow up of hepatitis B immunisation of babies born to hepatitis B infected mothers and to provide a source for statistics on uptake and timeliness of hepatitis B immunisation in this group.

Table 1. Uptake and timeliness of neonatal hepatitis B immunisation in Wales, babies born to hepatitis B positive mothers and resident in Wales during 2023 and 2024

	Year of birth	Immunisation Required	Immunisation Received		Immunisation Received on time	
		(n)	(n)	(%)	(n)	(%)
HBIG[1,2]	2024	2	2	100	2	100
Dose 1[2]		36	36	100	36	100
Dose 2[3]		36	35	97	19	54
Dose 3[4]		36	35	97	24	69
Dose 4[5]	2023	22	17	77	10	59

[1] Hepatitis B Immunoglobulin. 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 immunisations[1] in babies born to hepatitis B positive mothers from 2011 to 2024.



[1]Uptake timeliness of the dose due at 12 months for babies born in 2023 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 2024.

Percent received on time	Year of birth													
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Dose 1[1] (%)	100	100	100	100	98	98	98	100	100	100	100	100	100	100
Dose 2[2] (%)	50	70	55	58	53	51	61	60	51	50	40	40	67	54
Dose 3[3] (%)	67	48	64	56	56	52	61	85	63	63	64	60	59	69
Dose at 12 months[4,5] (%)	61	60	71	68	46	36	53	74	64	72	65	48	59	-

[1]The timely interval for dose 1 is on the day of birth or the next day, for the purpose of this report.
[2] The timely interval for dose 2 is between 25 and 36 days after dose 1, for the purpose of this report.
[3]The timely interval for dose 3 is between 25 and 36 days after dose 2, for the purpose of this report.
[4]The timely interval for due at 12 months is between 334 – 396 days after birth, for the purpose of this report
[5] Uptake timeliness of dose due at 12 months for babies born in 2023 is not available at this time.

Findings

1. During 2024, 36 babies born to hepatitis B mothers were reported to the Health Protection Team, four more than in 2023.
2. Hepatitis B immunoglobulin (HBIG) is recommended to be administered to babies born to highly infectious mothers. HBIG was indicated for 6% (2/36) of neonates born to hepatitis B positive mothers in Wales during 2024, compared to 0 in 2023.
3. Uptake of the first dose of hepatitis B immunisation was 100% in 2024, an increase from 96% the previous year, with 100% of the neonates receiving their first dose on time (on their day of birth or the next day) (Table 1).
4. Uptake of the second dose of hepatitis B immunisation was 97% in 2024, remaining stable compared to 2023. Fifty-four per cent of the babies received their second dose between 25 and 36 days after their first dose, a decrease compared to 2023 (Table 1).
5. Uptake of the third dose of hepatitis B immunisation was 97%, remaining stable compared to 2023. Sixty-nine per cent of the babies received their third dose between 25 and 36 days after their second dose (Table 1).
6. Uptake of the fourth dose of hepatitis B immunisation was 77% in babies born to hepatitis B positive mothers in 2023, a decrease compared to babies born in 2022 (88%). Fifty-nine percent of the babies received their fourth dose between 334 and 396 days of birth an increase compared to 48% of babies born in 2022.
7. Of the babies born to hepatitis B positive mothers and resident in Wales in 2023, 55% (12/22) were serologically tested for hepatitis B surface antigen by 18 months of age. None of the babies tested were found to have acquired hepatitis B infection.

Discussion

The report contains information on the first three doses of hepatitis B vaccination for babies born during 2024 as well as information on the 12 month dose of the schedule and serological testing for babies born during 2023. All of the babies born during 2024 should have received their first, second and third doses of hepatitis B vaccine and the 12 month dose of the vaccine and tested for serology if born during 2023, by the time data for this report were extracted (24th July 2025).

100% of babies received the first dose of the hepatitis B immunisation schedule, and all vaccinated on time. 97% of babies received their second dose of vaccine, with 54% of babies receiving their second vaccine dose on time, a decrease compared to 2023. The proportion of babies receiving their third dose remained stable at 97%. In 2024, 69% of babies received their third vaccine dose on time. The proportion of babies who received their vaccination dose due at 12 months on time increased compared to the previous year at 59% from 48%.

Following the introduction of the hexavalent combination vaccine (DTaP/IPV/Hib/HepB) in the routine childhood vaccination schedule, this report shows an increase in the uptake of the second, third and fourth scheduled vaccine doses in babies at high risk of chronic hepatitis B infection. This follows a long-term downward trend in uptake between 2011 and 2017. Babies who do not complete the full immunisation course or who receive hepatitis B immunisation doses late could be at risk of developing hepatitis B infection. The proportion of babies serologically tested increased to 77% compared to 58% of babies born in 2022. Testing is essential to determining whether infection from hepatitis B was effectively prevented.

Of the 36 babies born during 2024, ten received their second dose of hepatitis B vaccine as part of the new hexavalent combination vaccine (DTaP/IPV/Hib/HepB) in the routine childhood vaccination schedule.

For more information on the introduction of the hexavalent (“6 in 1”) vaccine including hepatitis B into the routine immunisation schedule see https://gov.wales/sites/default/files/publications/2019-07/hepatitis-b-immunisation-for-babies-born-on-or-after-1-august-2017.pdf

For more information on neonatal hepatitis B immunisations consult ‘The Green Book’ at https://www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book

Quarterly coverage figures for neonatal hepatitis B immunisations are available from the COVER - National childhood immunisation uptake data - Public Health Wales (nhs.wales)

Report prepared by Public Health Wales Vaccine Preventable Disease Programme and Communicable Disease Surveillance Centre with the Health Protection Team.