Document No:

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TITLE: Hepatitis B and C - Maternal and Neonatal Care

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1. Purpose

To provide pregnant women, who are Hepatitis positive and those women whose antigen status is unknown, with the appropriate screening investigations, care and information to reduce transmission of Hepatitis infection to their baby.

To identify babies at risk of Hepatitis transmission at and following birth and to prevent transmission.

2. Scope

All Heath NZ Lakes medical, midwifery, nursing staff and LMC Access Agreement Holders providing care to pregnant women/wahine/people and their babies/pēpi.

The terms 'woman/women' in the context of this guideline are used as a biologically based term and are not intended to exclude those people who do not identify as women.

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3. Background

• Hepatitis B

Hepatitis B may cause acute or chronic inflammation of the liver; it can lead to cirrhosis, liver failure and liver cancer later in life.

Transmission of Hepatitis B Virus (HBV) occurs through contact with infected blood or body fluids and the risk of this occurring is higher (up to 90%) during birth. Neonatal infection can be prevented by giving early immunoglobulin and immunising the newborn and, in some cases, treatment of the mother with Tenofovir in the third trimester of pregnancy.

• Hepatitis C

Hepatitis C affects a small proportion of women of childbearing age, many who will not have previously been diagnosed. It leads to inflammation of the liver, sometimes liver failure and cancer in later life.

Hepatitis C is less infectious than Hepatitis B, because it requires blood to blood contact (usually via needles) for it to be transmitted. Vertical transmission during birth is rare (4-5%) and it is now easily cured. The goal is to identify infected women and provide treatment once they are no longer breastfeeding.

4. Antenatal Screening

4.1 Hepatitis B

Screening for Hepatitis B surface antigen (HBsAg) is recommended for every pregnant woman as part of routine antenatal blood tests, to identify those currently infected with Hepatitis B infection.

(See over page for process when a woman is un-booked and HBsAg status is unknown).

Results – (also see Appendix 1. For a guide on interpreting results);

- If HbsAg negative no further action is required.
- If HbsAg negative and antibody (HbsAB) positive no further action, woman is immune.
- If HbsAg negative and antibody (HbsAB) negative no action, but advise woman to consider HBV vaccination as she is not immune (vaccine can be given in pregnancy).
- If HbsAg positive the following further tests should be ordered;
 - Hepatitis B e antigen (HbeAg) (indicates the level of viral replication and infectivity)
 - Hepatitis B surface antibody (Anti-HBs) (indicates immunity via infection or vaccination)
 - Hepatitis B virus DNA load (HBV DNA) (measures the amount of virus in the blood stream)
 - Liver function tests (LFT's)

Note: These tests should be done, and results obtained, <u>prior to</u> any invasive antenatal procedures such as amniocentesis or chorionic villus sampling (CVS).

If the viral load is >200 000 IU/mL (>6 log copies per mL) **and/or** the woman is Hepatitis B e antigen positive, refer to Medicine Physician.

See over page for further actions if HBsAG positive.....

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Further actions if HBsAg positive;

- 1. Advise the woman, discuss the results with the woman (and her partner) at the next antenatal visit and explain that a consultation with an obstetrician is recommended.
- 2. Record the results in the woman's antenatal record and activate the antenatal management plan in the maternity clinical information system (BadgerNet) pregnancy care record (add a 'New Note', go to 'Antenatal Management Plan', and 'Management Plans and Associated Risks' and choose 'Hepatitis BsAg positive').
- 3. Check the immunisation status of family/whanau and/or sexual partners and advise them to be tested, or if necessary, immunised by their General Practitioner (G.P.) as soon as possible.
- 4. Provide the woman with the current Ministry of Health information (<u>Fact Sheet HE1402</u>). Discuss this information and the consent process with her and her whanau.
- 5. Inform the woman that you are required to <u>notify the Medical Officer of Health</u> of the positive result and also that they will be notified following the birth (Hepatitis B is a notifiable disease).
- 6. Notify the woman's GP.
- 7. Refer to The Hepatitis Foundation of New Zealand for on-going follow up, with patient consent. **Contact details** Email: hepteam@hfnz.nz Freephone: 0800 33 20 10

If the woman is un-booked and her HBsAg status is unknown at presentation in labour;

• Send bloods for first antenatal tests and include a request for urgent testing for HBsAg.

4.2 Hepatitis C

Routine testing of all pregnant women is not currently recommended. However, Hepatitis C screening (HCV antibody test) should be offered to those women who have symptoms of Hepatitis C or are at an increased risk of having contracted it:

- History of injectable drug use
- Blood transfusion or organ transplant prior to July 1992
- Tattoo or piercing using unsterile equipment
- Lived (or received medical/dental treatment) in a country/region with high HCV prevalence. These are: European, Eastern Mediterranean, Western Pacific, South-East Asian and African.
- Been in prison
- Born to a mother with Hepatitis C (or mother who had a history of drug addiction)
- Unexplained elevation of LFT's

Symptoms of Hepatitis C include:

- Chronic Fatigue
- Pruritus (itching) in pregnancy

If a woman has a positive HCV antibody result – further investigations are required:

HCV RNA testing should be requested to determine if they actually have Hepatitis C.

Note: This test should be done <u>prior to</u> invasive procedures such as amniocentesis or CVS.

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5. Antenatal Treatment

5.1 Hepatitis B

If a high Hepatitis B viral DNA load is detected (>200,000 units/mL), the pregnant woman should be offered treatment with antiviral therapy (Tenofovir) during the third trimester of pregnancy to reduce the risk of mother-to-child transmission during birth.

Referral needs to be made to a Medicine Physician Clinic for a treatment plan.

Tenofovir should be commenced in the third trimester, between 30 – 32 weeks gestation and usually continued for 6 weeks postpartum. Tenofovir is fully funded and should be prescribed as;

Tenofovir Disoproxil 245mg once daily.

Monthly liver function tests are required throughout pregnancy. Adjust dose in renal impairment.

Tenofovir has a long safety record in pregnancy. Although data sheets advise against breastfeeding because small amounts are found in breastmilk, Tenofovir cannot be readily absorbed in the GI tract so the amount absorbed from breastmilk is thought to be negligible. It is therefore recommended that treatment can continue while breastfeeding.

5.2 Hepatitis C

There is no antiviral treatment for Hepatitis C during pregnancy. If a pregnant woman is identified as having chronic Hepatitis C, they should be counselled on the risks of transmission to the baby and on measures that can be taken to reduce this. A referral should be made to their GP to discuss treatment options postnatally and for follow-up of the baby.

6. Care During Labour and Birth

6.1 Hepatitis B

- Follow Lakes standard Infection Prevention Policy as for all women using recommended universal precautions.
- Artificial rupture of membranes (ARM) is not contraindicated, however care must be taken with the amnihook so as not to scratch the fetal scalp.
- Avoid the use of fetal scalp electrodes, fetal blood sampling and instrumental birth where possible.
- Mode of birth: Hepatitis B status should not alter mode of delivery, and decisions regarding caesarean section should be made for the usual obstetric indications, as evidence is not conclusive to indicate that caesarean section reduces perinatal HBV transmission (RANZCOG, 2019).

6.2 Hepatitis C

- The risk of vertical transmission of Hepatitis C is low (less than 5%), however the risk is increased with a high viral load, prolonged rupture of membranes and invasive procedures.
- Avoid the use of fetal scalp electrodes, fetal blood sampling and instrumental birth where possible.
- Caesarean section is not recommended as a means of reducing perinatal hepatitis C transmission.

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7. Care of the Neonate at Birth

Follow these steps if the mother is;

- Hepatitis B antigen positive (HBsAg) or Hepatitis B status is unknown or
- Hepatitis C RNA positive, or if either Hepatitis C RNA positive or HCV RNA is unknown:
 - 1. Wear personal protective equipment (as part of standard precautions) especially when there is a risk of body fluid splash (e.g. gown, gloves, protective eye wear)
 - 2. Perform hand hygiene before and after any contact with the baby
 - 3. Wear gloves when handling the baby until the baby has been washed and dried
 - 4. If >32 weeks gestation, bath the baby as soon as possible (and <u>prior to Vitamin K</u> administration) using chlorhexidine surgical scrub 4%.
 - a. Wet hands, pour some chlorhexidine surgical scrub 4% into hands and lather up solution.
 - b. Using hands cover all of baby's skin and hair (avoiding eyes and ears).
 - c. Place baby in bath water and rinse off the chlorhexidine.
 - d. Dry baby
 - 5. Encourage and support baby to breastfeed (see Section 10. Breastfeeding)

8. Care of the Neonate following Birth

8.1 Infants Born to Hepatitis B Antigen (HBsAg) Positive Mothers

- As soon as possible after birth and within 12 hours (and following the baby being bathed), the LMC (or core midwives who feel competent or nurse vaccinators):
 - Explain vaccination, provide <u>Health NZ Patient Information Leaflet</u>, answer any questions.
 - Obtain parent/guardian consent (use form in Appendix 3.)
 - prescribe Hepatitis B Immunoglobulin and Vaccine on medication chart;
 - Immunoglobulin = Hepatitis B Immunoglobulin (HBIG)
 - Dose = 100-110units administered via deep intramuscular injection at or as close as possible to birth (within 12 hours).
 - Hepatitis B Immunoglobulin is ordered from Blood Bank (using 'Blood Products Administration Record' EDMS 2993105),
 - Vaccine = Hepatitis B (Engerix-B) 10micrograms (0.5mL)
 - Dose = 10micrograms (0.5mL) administered via intramuscular injection as close as possible to birth (preferably within 12 hours).
 - Hepatitis B Vaccine is obtained from the Emergency Drug Cupboard fridge in pharmacy.
 - Refer to Section 8.3. for Administration advice. (If there is a delay of longer than 7 days, inform a paediatrician).
- Vitamin K (phytomenadione) intramuscular injection can be given in either leg, but at a different site to HBIG.
- Notify Medical Officer of Health (see Appendix 5.)

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8.2 Infants Born to Mothers Where Hepatitis B Status is Unknown

- Obtain a blood sample from the mother and send this for urgent Hepatitis B serology.
- Because HBsAG testing is performed offsite and the laboratory cannot guarantee results will be available within 12 hours
 - The infant should be given Hepatitis B vaccine (with informed and signed maternal consent) while waiting for the result of the urgent HBsAg test on the mother. Refer to Section 8.3 Administration.
 - If the woman is subsequently found to be HBsAg positive, administer the immunoglobulin (within 48 hours) (refer to Section 8.3 Administration). If there is a delay of longer than 7 days, inform a paediatrician
 - o If the mother is HBsAG negative, then no immediate vaccination is required.

8.3 Administration of Hepatitis B Immunoglobulin and Hepatitis B Vaccine

Hepatitis B Immunoglobulin 110 units / 0.5mL (HBIG neonatal)					
Guidance:	How to Administer Hepatitis B Immunoglobulin				
Administration:	Administer 100 – 110units slowly by the intramuscular (IM) route into the <u>outer aspect of</u> the right thigh. (See <u>Appendix 3. Intramuscular Injection</u>)				
Caution: Do not give intravenously (IV).					

Hepatitis B Vac	Hepatitis B Vaccine - Engerix-B Paediatric 10 micrograms/0.5 mL					
Preparation:	Vaccine is in a pre-filled syringe, shake well before use. After shaking the vaccine is a slightly opaque, white suspension. Unscrew cap and attach needle prior to administration.					
Administration:	Administer 10micrograms (0.5mL) slowly by the IM route into the <u>outer aspect of the left</u> thigh. (See Appendix 3. Intramuscular Injection)					
Caution:	<u>Do not</u> give intravenously (IV).					

Contraindications:

 Severe thrombocytopenia or coagulation disorder that would contraindicate IM injection.

• Adverse reactions:

- Local tenderness at injection site
- o Rarely fever, vomiting, pyrexia, tachycardia and anaphylaxis

(For a full list of adverse effects and contraindications please visit the New Zealand Formulary for Children (www.nzfchildren.org.nz))

- Monitoring: Closely observe the neonate for 20 minutes after administration.
- <u>Documentation</u>: Record medication administration in;
 - o the clinical records i.e. medication chart, blood product sheet
 - BadgerNet (see <u>Appendix 5.</u> for how to do this)
 - o the 'Well Child Book'
 - Note: BadgerNet messaging will automatically send data to Aotearoa Immunisation Register (AIR)

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8.4 Infants Born to Hepatitis C RNA Positive Mothers

- There is currently no treatment available for neonates born to Hepatitis C RNA positive mothers so no immediate action for the baby is required.
- The risk of vertical transmission to babies is low (<5%) and Hepatitis C is much less infective than Hepatitis B (it requires blood to blood transmission). These babies should not be considered as having the risk potential of infecting others.
- Babies should not be tested for Hepatitis C before 18 months of age.

9. Post-partum Care

- Room Facilities: If the woman is known to have a high viral load and there is adequate room in the unit to provide the woman with a single room with private toilet facilities, then please do so, but universal precautions are all that are required.
- <u>Precautions</u>: Instruct the woman on management of standard precautions for blood and body secretions.
- <u>Communication</u>: Inform the GP if a woman has been diagnosed with HBV infection during pregnancy. Provide copies of any relevant blood tests performed. Advise the GP if the woman has been referred to a hepatology clinic.
- <u>Treatment</u>: If a woman has been receiving treatment for Hepatitis B (i.e. Tenofovir) during
 pregnancy, they are usually advised to remain on treatment until 6 weeks post-partum to reduce
 the risk of peripartum hepatitis flare. The practitioner responsible for supervising the Hepatitis B
 treatment will manage this.
- <u>Further Testing</u>: If the diagnosis of Hepatitis B positive was initially made during pregnancy (i.e. from antenatal bloods) further blood serology test should be taken at 6 months postpartum for confirmation.

10. Breastfeeding

- Advise women who are Hepatitis B surface antigen positive there is no evidence that breastfeeding increases the risk of HBV transmission provided the neonate receives Hepatitis B Vaccination and Hepatitis B Immunoglobulin (HBIG) at birth.
- Advise HBV carrier women not to participate in breast milk donation.
- Seek microbiology or pharmacy advice for information regarding specific antiviral agents and safety. Antiviral medications are known to have multiple drug interactions so refer to pharmacy to check these if patients have other regular medications. Breastfeeding is not contraindicated in women with HBV receiving Tenofovir.
- If the mother is Hepatitis B or C positive and her nipples are cracked and/or bleeding, encourage
 the mother to discontinue breastfeeding, but support lactation by pumping and then discarding
 milk until the nipples are healed.
- Tongue-tie release (frenotomy) <u>is not recommended</u> until 24 hours following Hepatitis B prophylaxis.

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11. Neonatal Follow-Up

- On discharge home the 'Labour and Birth' summary from BadgerNet will notify the GP of the baby's hepatitis vaccination (for a baby vaccinated while in SCBU send form <u>HE1446 Consent for</u> <u>Hepatitis B</u>).
- To notify the local Medical Officer of Health follow directions in Appendix 5.
- Further Hepatitis B vaccines are required for infants at 6 weeks, 3 months and 5 months as per the <u>Health NZ Immunisation Handbook</u>.
- Serological testing is also required at age 9 months (anti-HBs and HBsAg). Make sure the woman, LMC and G.P. are aware of the need for these.
- Babies born to mothers who have been treated with Tenofovir should be followed up in a paediatric clinic refer to General Paediatrics in Rotorua Hospital.

12. Infection Prevention

- Health care workers are advised to be vaccinated against HBV.
- Precautions should be taken to avoid exposure to blood and bodily fluids. See Infection
 Prevention and Management policy for Lakes 'Blood and Body Substance Exposure and
 Management Policy' 783768 (available to Lakes Health employees through the Document Library
 in Lakes Clinical Workstation).

13. Associated Documents

- Blood and Body Substance Exposure and Management Policy EDMS 783768.
- Blood Products Administration Record EDMS 2993105
- Consent for Hepatitis B Vaccine and Hepatitis B Immunoglobulin See Appendix 3.
- Consent for Use of Blood and Blood Products EDMS 2993109
- Policy for Infection Prevention EDMS 285243

Patient Information

- Hepatitis B: Information During Pregnancy HE1402. Ministry of Health. (April 2023) https://healthed.govt.nz/products/hepatitis-b-information-for-pregnant-women
- See 'Hepatitis B and Pregnancy' leaflet produced by the Hepatitis Foundation of New Zealand.
 https://www.hepatitisfoundation.org.nz/site files/36909/upload files/Hepatitis%20B%20&%20
 Pregnancy%20November%202023.pdf?dl=1

14. References

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- Health NZ. <u>HE1446 Consent for Hepatitis B.</u> <u>https://healthed.govt.nz/products/hepatitis-b-consent-form</u>
- Health NZ. (2023). Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines). Wellington, New Zealand. https://www.tewhatuora.govt.nz/publications/guidelines-for-consultation-with-obstetric-and-related-medical-services-referral-guidelines
- 3. Health NZ Tairawhiti. Hepatitis B Reducing the Risk of Mother-Baby Transmission. (2020)
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- 14. The Hepatitis Foundation of New Zealand. https://www.hepatitisfoundation.org.nz/
- 15. The Hepatitis Foundation of New Zealand. The Management of Hepatitis B. A Guide for Health Professionals.

https://www.hepatitisfoundation.org.nz/site_files/36909/upload_files/ManagementofHepBforHealthProfessionals-Version2Final.pdf?dl=1

16. The New Zealand Formulary. https://nzformulary.org/

Authorised by: Maternity Continuous Quality Improvement (CQI) Meeting

Endorsed by: Children's Continuous Quality Improvement (CQI) Meeting

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15. Appendices

Appendix 1. Hepatitis B Serology Markers

Hepatitis B Surface Antigen (HBsAg)	Hepatitis B Core Antibody (anti HBc or HBcAb)	Hepatitis B Surface Antibody (anti HBs or HBsAb)	Maternal Status	Action Required
Negative	Negative	Negative	No Previous Exposure or Immunisation (Not Immune)	Routine vaccination of baby as per schedule, starting at six weeks of age.
Positive	Negative	Negative	Early Acute Infection; transient (up to 18 days) after vaccination	Baby requires HBIG and Hepatitis B Vaccine* at birth. If previously unknown to be positive, refer household contacts to GP and ensure GP follow-up for mother.
Positive	Positive	Negative	Acute/Chronic Infection (Infectious)	Baby requires HBIG and Hepatitis B Vaccine* at birth. If previously unknown to be positive, refer household contacts to GP and ensure GP follow-up for mother.
Negative	Positive	Negative	Possible Acute Resolving Infection	Seek advice on further testing from a Laboratory Pathologist, a Doctor with Hepatitis B expertise or Medical Officer of Health.
Negative	Positive	Positive	Resolved Infection (Immune)	Routine vaccination of baby as per schedule, starting at six weeks of age.
Negative	Negative	Positive	Post Vaccination (Immune)	Routine vaccination of baby as per schedule, starting at six weeks of age.

Adapted from Health NZ Immunisation Handbook, Hepatitis B

• In acute and chronic infection Hepatitis B e Antigen or Hepatitis e Antibody may also be present. The results of these do not change management of babies born to Hepatitis B Surface Antigen positive mothers.

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^{*}HBIG = Hepatitis B Immunoglobulin 100 - 110 units

^{*}Hepatitis B Vaccine = Engerix-B Paediatric 10 micrograms/0.5 mL

Appendix 2. Management of Hepatitis B in Pregnancy Flowchart

Antenatal Screening

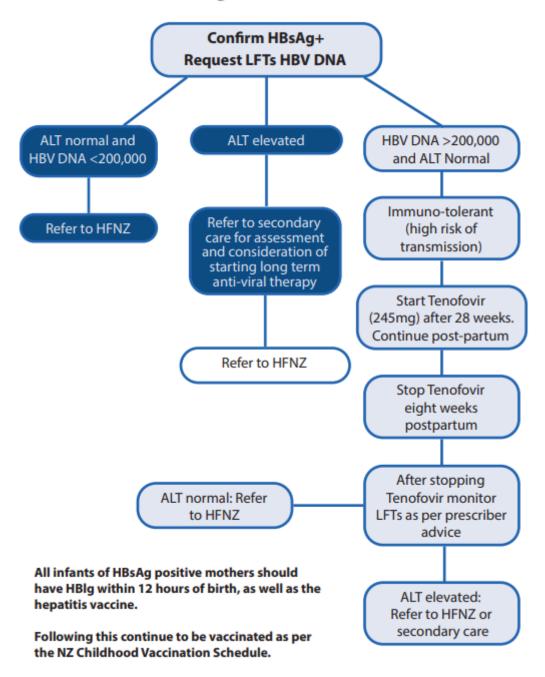


Chart from:

The Hepatitis Foundation of New Zealand (HFNZ). The Management of Hepatitis B. A Guide for Health Professionals.

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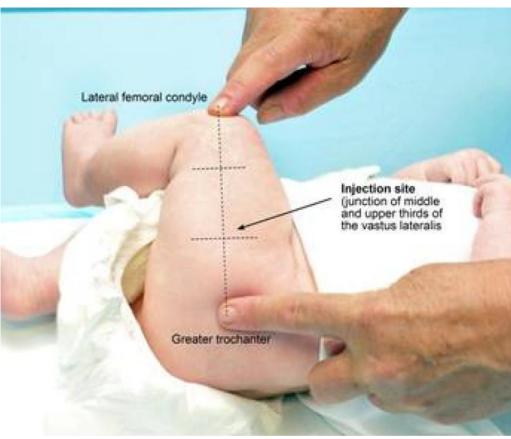
Appendix 3. Parent/Guardian Consent for Hepatitis B Vaccine & Immunoglobulin

	Place Patient Label Here Please ensure you attach the correct patient label FOR HEPATITIS B VACCINE AND TITIS B IMMUNOGLOBULIN
PARENT / GUARDIAN CONSI	ENT
I understand that the course of	four doses of Hepatitis B vaccine and a single dose of
Hepatitis B immunoglobulin will carrier of the Hepatitis B antige	protect most children from Hepatitis B if their mother is a n.
☐ I have been given information	on and have had any questions answered to my satisfaction.
☐ I consent / do not consen	t (delete which is not applicable) to the above child
receiving the Hepatitis B vac	cine and Hepatitis B immunoglobulin at birth.
☐ I am aware that information	n will be given to the Medical Officer of Health, the Aotearoa
Immunisation Register (AIR)	and the child's General Practitioner (G.P.) to ensure the
above child receives follow-t	up and the full course of these vaccines.
Parent/Guardian Name:	

Appendix 4. Intramuscular Injection

- 1. Make sure there is a written medication order on the medication chart.
- 2. Check the correct drug/dose/time/interval/route/patient with a second checker.
- 3. Draw the medication up into the syringe using the large bore needle.
- 4. Change to a 23 g 25 mm needle or 25 g 16 mm needle.
- 5. To locate the injection site, undo the nappy, gently adduct the flexed knee and (see picture below):
 - a. find the greater trochanter
 - b. find the lateral femoral condyle
 - c. section the thigh into thirds and run an imaginary line between the centres of the two markers.

The injection site is at the junction of the upper and middle thirds and slightly anterior to (above) the imaginary line, in the bulkiest part of the muscle.



The infant lateral thigh injection site

Image from: Health NZ Process for Safe Immunisation

- 6. Position baby and limb so muscle is relaxed.
- 7. Do not swab skin prior to vaccination.
- 8. Insert the needle at a 90-degree angle to the skin surface.
- 9. Inject the vaccine at a controlled rate.
- 10. Leave needle there for further 5 seconds to allow for dispersal of vaccine.
- 11. Smoothly withdraw the needle.
- 12. If blood spot, dab with cotton wool. **Do not** massage or rub the vaccination site.
- 13. Observe site for further 30 seconds.
- 14. Observe baby for 20 minutes after injection.

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Appendix 5. Entering Vaccination Details into BadgerNet



Documenting for Baby of a Hepatitis B Positive Woman

IMPORTANT!

- · Complete this form for all babies of Hepatitis B Positive women, whether Hepatitis B Vaccination and Immunoglobulin are accepted or declined.
- Hepatitis B Vaccination & Immunoglobulin must be documented on the physical medication chart prior to being given, and then documented in BadgerNet.

Complete the Vaccinations (Baby) note -- Midwife

- Select 'Enter new note...'
- 2. Type in 'Vaccinations' into the search bar
- 3. Select the 'Vaccinations (Baby)' option

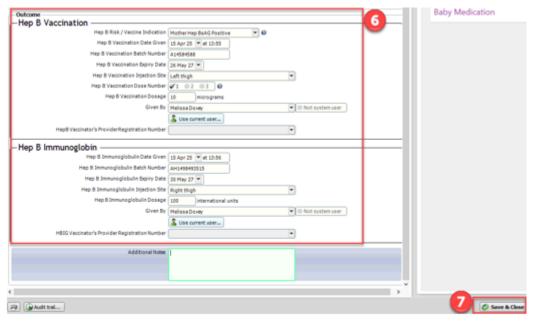


- 4. Select 'Hep B Vaccination' and 'Hep B Immunoglobulin' from the 'Offered and Explained' drop-down menu.
- 5. Consent Not Given:
 - 1. Complete the 'Declined' block
 - 2. Save & Close the note

Consent Given: Select the 'All Accepted' button and continue......



- Complete the remainder of the form, ensuring ALL fields are completed, including:
 - a. Batch number,
 - Expiry Date
 - C. Given By



7. Save & Close the Vaccinations (Baby) form

(Continued over page......)

Document Name: BadgerNet Guide for Vaccinators

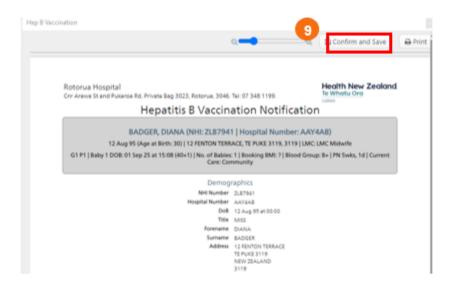
Publish date:

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- 8. The 'Hepatitis B Vaccination Report' will automatically open with the option to 'Confirm & Save' or 'Print'
- Select 'Confirm and Save'.
 (*Admin to be alerted to email this to the Medical Officer of Health see below and workflow on Page 3).



- 10. Click 'Authorise' and enter username and password
- 11. Click 'Save & Close'
- *Attach the laminated 'Hepatitis B Positive' note to the front of the woman's chart this is so Admin knows
 to undertake the workflow to send the Hep B Vaccination Notification to the Medical Officer of Health (see
 over page).
- 13. Document Vaccination and Immunoglobulin in Baby's Well Child Tamariki Ora Book.

Note: The vaccination information in BadgerNet will automatically be sent to AIR (<u>Agreezoa</u> Immunisation Register) at discharge.

Document Name: BadgerNet Gu Publish date: October 2025

BadgerNet Guide for Vaccinators Page 2 of 3

Sending the Hep B Vaccination Report to the Medical Officer of Health -- Admin

When notified by a Midwife, or on noticing a laminated 'Hepatitis B Positive' note on the front of the woman's chart;

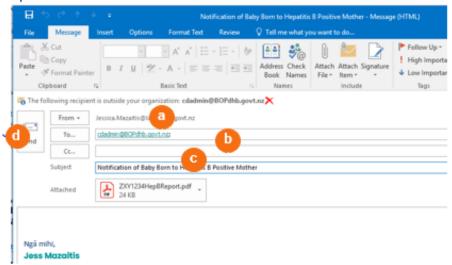
1. Locate the Hep B Vaccination Notifications Report under Clinical Reports and select it for viewing.



3. This will open the report in a new screen with a Save (disc) and a Print (printer) button in the top Left



- 4. Click the Save (disc) button
- 5. Save on the U drive (it will default to this) as [NHIHepBReport] (Use Woman or Baby NHI)
- 6. Email the 'Hepatitis B Vaccination Notification' form to the Medical Officer of Health;
 - a. Email address: CD.Admin@bopdhb.govt.nz
 - b. Subject: Notification of Baby Born to Hep B Positive Mother
 - Attach the 'Hepatitis B Vaccination Notification' file from U drive: U drive > Production > WCF > Badgernet > file name [NHIHepBReport] (Woman or Baby NHI)
 - d. Send



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