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Hepatitis B vaccination for babies at risk
Resource Pack

Section A
For babies born to mothers with hepatitis B infection

Contents:

Context

The purpose of this pack is to prevent perinatal transmission by ensuring that babies born to mothers with hepatitis B infection receive their first dose of hepatitis B vaccine within 24 hours (preferably at birth) and that systems are in place for subsequent doses and follow up.

This resource pack sets out the actions required, and contains the necessary documents which are essential in maintaining good communication with colleagues in primary care and public health to ensure that the mother's health, that of her baby and her family is protected.

Hepatitis B virus is acquired through contact with blood and body fluids. Most carriers acquire the virus from their mother at birth or by exposure in early childhood. Some people may have acquired it through intravenous needle sharing or sexual contact. Following hepatitis B infection as an adult, 90% of individuals clear the virus, become immune and are not infectious to others. However, with infection acquired at birth, up to 90% will not clear the virus and will become chronically infected. This is shown by the positive hepatitis B surface antigen (HBsAg) result. If the hepatitis B e-antigen (HBeAg) is
also positive, this means that the patient has viral protein associated with a high level of infectivity.

Perinatal transmission can be prevented by administration of a course of active immunisation (HB vaccine) which is indicated for all babies born to hepatitis B positive mothers, together with hepatitis B immunoglobulin (HBIG) at birth where indicated – see Green book Chapter 18 page 14 Table 18.5.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/628602/Greenbook_chapter__
18.pdf).

Other members of the family may be infectious carriers and even if the baby escapes infection at birth, he/she may still be at risk of infection at a later date. This is why it is extremely important to ensure that babies born to HBsAg positive mothers are fully vaccinated against hepatitis B. If the child is vaccinated, breastfeeding is safe.

Paediatric hepatitis B immunisation schedule

From autumn 2017, all babies born on or after 1 August 2017 will become eligible for a hexavalent vaccine, which includes hepatitis B, for their primary immunisations. Babies born to hepatitis B positive mothers should receive monovalent hepatitis B vaccine at birth and 4 weeks of age and then three doses of hexavalent vaccine at 8, 12 and 16 weeks of age. They should receive a booster dose of monovalent hepatitis B vaccine at 12 months of age. Serology is checked at 14 months of age to ensure that the baby has not become infected despite vaccination (see table below).

Timely vaccination at birth and at four weeks of age is critical to preventing infection in the infant. The first dose of monovalent hepatitis B vaccine should be given by hospital staff within 24 hours of birth and before the baby is discharged from hospital. Subsequent doses will be given on ambulatory care, or neonatal team if the baby stays in the neonatal unit beyond one month.

Table. Hepatitis B immunisation schedule – for routine childhood programme and for babies born to Hepatitis B infected mothers

Age	Routine Childhood Programme		Babies born to Hepatitis B Infected Mothers	
At birth (in hospital)	X		✓	Monovalent HepB (with HBIG if indicated)
4 weeks	X		✓	Monovalent HepB
8 weeks	✓	Hexavalent	✓	Hexavalent
12 weeks	✓	Hexavalent	✓	Hexavalent
16 weeks	✓	Hexavalent	✓	Hexavalent
12 months	X		✓	Monovalent HepB
14 months (at hospital)	X		✓	Blood test
Pre- school Hepatitis B Booster	X		X	

Pathway for paediatric staff after delivery of baby at risk of hepatitis B infection

Baby is born

↓

Paediatric doctor / ANNP gains consent for immunisation

↓

Administration of first dose of hepatitis vaccine within 24hrs (preferably at birth) for all babies born to hepatitis B positive women. Arranges for HBIg if required. Document on badger.

↓

Paediatric doctor / ANNP organises follow-up:

Ambulatory care:4 weeks for 2nd vaccine
12months for booster vaccine
Post vaccination serology at 14 months
Dr Ketteridge review BGH clinic 16 months

↓

Paediatric doctor / ANNP completes SIRS form

Paperwork to be completed by neonatal nurse practitioner / paediatric doctor at this point:

1) Complete consent form
2) Record information regarding 1st vaccine dose on SIRS notification form and send to Child Health Admin.
3) Complete required details on appropriate letter to be sent to the GP. Give a copy to mother to give to GP when she registers her baby with the GP.
4) Document on badgernet that first dose of hepatitis B vaccine and HBIG (if indicated) has been given, with date.
5) Write vaccine schedule in red book for health visitor.
6) Give the mother the information for parents and carers sheet

CONSENT FOR HEPATITIS B IMMUNISATION

I have received and read the information leaflet '*Immunisation for babies at risk of hep B – information for parents and carers*' and have had an opportunity to discuss the immunisation being offered with a health professional.
I understand the reasons for the immunisation offer. I also understand the significance of my baby not having this immunisation.
I am aware that my decision whether or not to have this immunisation will not affect the quality of care delivered by healthcare professionals.

Baby's name…… Date of birth…….

CHI number ……

- ☐ I wish my baby to be immunised against hepatitis B
- ☐ I **do not** wish my baby to be immunised against hepatitis B

Signature…….…… (Parent) Date……..……..

Signature ……..... (Witness: Healthcare professional)

Print name …….

Designation: …… Date…….

Babies receiving Hep B Vaccine and HBIG

Dear Dr,

PREVENTION OF HEPATITIS B TRANSMISSION IN AT-RISK INFANTS

MOTHER'S NAME: **MOTHER'S DOB:**

BABY'S NAME: **BABY'S DOB:**

BABY'S CHI:

Routine antenatal screening has shown that this woman is infected with hepatitis B virus. Her baby requires to be protected against this infection by immunisation against hepatitis B. Hospital staff have administered hepatitis B immunoglobulin (HBIG) and the first dose of hepatitis B vaccine before discharge.

Subsequent doses of hepatitis B vaccine will be given as per the accelerated schedule as follows:

- First dose of monovalent hepatitis B vaccine at birth (already given with HBIG)
- Second dose of monovalent hepatitis B vaccine at 4 weeks of age will be given on ambulatory care, Ward 15. Appointment has been made
- Hexavalent vaccine (which contains hepatitis B) according to routine schedule at 8, 12 and 16 weeks of age
- Booster dose of monovalent hepatitis B vaccine at 12 months on ambulatory care
- Post-vaccination serology at 14 months to exclude infection will be organised on ambulatory care.

Serology testing (clotted blood sample) is required at 14 months of age to exclude infection. This has been arranged with ambulatory care prior to discharge from hospital.

Additionally, please advise the mother that if the child is being vaccinated, breastfeeding is safe.

Household contacts of this patient should be counselled regarding possible infection with hepatitis B, and the need for screening and immunisation if they are susceptible to infection. (Please see up to date hepatitis B chapter in the Green Book "Immunisation against infectious disease" on the Department of Health Website.)

Many thanks for your help.

Yours sincerely,

Table - Hepatitis B immunisation schedules

Age	Routine Childhood Programme		Babies born to Hepatitis B Infected Mothers	
At birth (in hospital)	X		✓	Monovalent HepB (with HBIG if indicated)
4 weeks	X		✓	Monovalent HepB
8 weeks	✓	Hexavalent	✓	Hexavalent
12 weeks	✓	Hexavalent	✓	Hexavalent
16 weeks	✓	Hexavalent	✓	Hexavalent
12 months	X		✓	Monovalent HepB
14 months (at hospital)	X		✓	Blood test
Pre- school Hepatitis B Booster	X		X	

Babies receiving HB Vaccine only (No HBIG)

Dear Dr,

PREVENTION OF HEPATITIS B TRANSMISSION IN AT-RISK INFANTS

MOTHERS NAME: **MOTHERS DOB:**

BABY'S NAME: **BABY'S DOB:**

BABY'S CHI:

Routine antenatal screening has shown that this woman is infected with hepatitis B virus. Her baby requires to be protected against this infection by immunisation against hepatitis B. Hospital staff have administered the first dose of hepatitis B vaccine before discharge. Hepatitis B immunoglobulin was NOT indicated for this baby.

I would be most grateful if you could administer the subsequent doses of hepatitis B vaccine as per the accelerated schedule as follows:

- First dose of monovalent hepatitis B vaccine at birth
- Second dose of monovalent hepatitis B vaccine at 4 weeks of age will be given on ambulatory care, Ward 15. An appointment has been made.
- Hexavalent vaccine (which contains hepatitis B) according to routine schedule at 8, 12 and 16 weeks of age
- Booster dose of monovalent hepatitis B vaccine at 12 months will be given on ambulatory care
- Post-vaccination serology at 14 months to exclude infection will be organised on ambulatory care.

Serology testing (clotted blood sample) is required at 14 months of age to exclude infection. This will be arranged with ambulatory care prior to discharge from hospital.

Additionally, please advise the mother that if the child is being vaccinated, breastfeeding is safe.

Household and sexual contacts of this patient should be counselled regarding possible infection with hepatitis B, and the need for screening and immunisation if they are susceptible to infection. (Please see up to date hepatitis B chapter in the Green Book "Immunisation against infectious disease" on the Department of Health Website.)

Many thanks for your help.

Yours sincerely

Table - Hepatitis B immunisation schedules

Age	Routine Childhood Programme		Babies born to Hepatitis B Infected Mothers	
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4 weeks	X		✓	Monovalent HepB
8 weeks	✓	Hexavalent	✓	Hexavalent
12 weeks	✓	Hexavalent	✓	Hexavalent
16 weeks	✓	Hexavalent	✓	Hexavalent
12 months	X		✓	Monovalent HepB
14 months (at hospital)	X		✓	Blood test
Pre- school Hepatitis B Booster	X		X	

Immunisation for Babies born to mothers with hepatitis B infection: Information for Parents and Carers

This leaflet provides information on:

- Hepatitis B
- How to protect babies at risk of hepatitis B infection
- What parents and carers can do to help

This leaflet is about preventing hepatitis B in babies born to mothers who have hepatitis B infection. All pregnant women are offered a blood test for hepatitis B. If a pregnant woman is infected with hepatitis B, her baby will be given additional treatment to prevent infection at birth.

What is hepatitis B?

Hepatitis B is a virus that can damage the liver and is highly infectious (spread easily from one person to another).
Many people with hepatitis B infection have no symptoms at all and do not know that they are infected. Others have 'flu-like' symptoms and yellowing of the skin and eyes (jaundice). In most cases hepatitis B infection can only be identified by a blood test. Most adults infected with hepatitis B virus recover fully from the infection, but about 1 in 10 become chronically infected (a carrier) with the virus and can infect others. About 1 in 5 of these people with chronic infection will develop serious liver disease later in life.

How can you get hepatitis B infection?
Hepatitis B virus is carried in the blood and body fluids. There are three main ways that infection is spread:

- From an infected mother to her baby during birth
- By sexual intercourse with an infected person
- By direct contact with the blood of an infected person, e.g. between drug users who share needles, syringes and other equipment; by sharing toothbrushes and razors; and from equipment used for tattooing and body piercing.

How hepatitis B is not spread
The virus is not spread by normal day-to-day contact and activities, e.g. coughing, sneezing, hugging, holding hands, sharing bathrooms and toilets, or food, cups, plates, bowls, cutlery or towels.

Why is hepatitis B infection serious for babies?
Generally, having hepatitis B infection will not affect your pregnancy and delivery, but without vaccination many babies born to mothers who are chronically infected will also become infected. As many as 9 out of 10 babies infected at birth develop long-lasting infection and these babies are at risk of developing serious liver disease as they grow older. If they become infected, their infection could be passed on to their close family and other contacts in the future.

Can my baby be protected from hepatitis B infection?
Yes. Your baby can be protected from infection by a full course of hepatitis B vaccine (5 doses in total). In some cases an injection of immunoglobulin (antibodies to the virus) also needs to be given at birth.

Is hepatitis B vaccine safe for babies?
Yes. The vaccine is very safe and millions of doses have been given to babies worldwide without serious side-effects. In some babies, the site of the injection may become red and swollen, but this does not last for long.

When should my baby have hepatitis B vaccine?
Your baby should have the first dose of vaccine soon after they are born. Some babies also need to have an injection of immunoglobulin at the same time. Your midwife will discuss this with you before the baby is born and make sure your baby gets the first dose in hospital. Your baby will need further doses of vaccine for full protection against infection. Your GP or health visitor should give these when your baby is 1, 2 and 12 months old. A further pre-school booster dose of vaccine is recommended between 3 and 4 years of age.

Why it is important for a full course of vaccine to be given?
It is essential that your baby receives the full course of vaccine at the right ages for it to work. At about 14 months of age your baby will need to have a blood test to make sure that they are free of infection. To arrange this, you will be asked to take your baby to the hospital.

Will it be safe to breastfeed my baby?
Yes - but your baby must still receive a full course of vaccine.

Could my partner and other children have hepatitis B?
The antenatal clinic will tell your family doctor that you have hepatitis B so that they can discuss this with you and your partner and arrange for hepatitis B testing and vaccination of household members as necessary. If you have concerns about other people finding out that you have hepatitis B infection, please discuss them with your midwife or doctor.

Do I need to see a doctor because of my hepatitis B infection?
Your Obstetrician will refer you to a Liver Specialist for assessment and advice about managing or treating your own infection.

If you have any other questions or concerns, talk to your doctor or midwife.

Immunisation for Babies at risk of hepatitis B infection: Information for Parents and Carers

This leaflet provides information on:

- Hepatitis B
- How to protect babies at risk of hepatitis B infection
- What parents and carers can do to help

What is hepatitis B?

Hepatitis B is a virus that can damage the liver and is highly infectious (spread easily from one person to another).
Many people with hepatitis B infection have no symptoms at all and do not know that they are infected. Others have 'flu-like' symptoms and yellowing of the skin and eyes (jaundice). In most cases hepatitis B infection can only be identified by a blood test. Most adults infected with hepatitis B virus recover fully from the infection, but about 1 in 10 become chronically infected (a carrier) with the virus and can infect others. About 1 in 5 of these people with chronic infection will develop serious liver disease later in life.

How can you get hepatitis B infection?
Hepatitis B virus is carried in the blood and body fluids. There are three main ways that infection is spread:

- From an infected mother to her baby during birth
- By sexual intercourse with an infected person
- By direct contact with the blood of an infected person, e.g. between drug users who share needles, syringes and other equipment; by sharing toothbrushes and razors; and from equipment used for tattooing and body piercing.

How hepatitis B is not spread
The virus is not spread by normal day-to-day contact and activities, e.g. coughing, sneezing, hugging, holding hands, sharing bathrooms and toilets, or food, cups, plates, bowls, cutlery or towels.

Can my baby be protected from hepatitis B infection?
Yes. Your baby can be protected from infection by a full course of hepatitis B vaccine (5 doses in total).

Is hepatitis B vaccine safe for babies?
Yes. The vaccine is very safe and millions of doses have been given to babies worldwide without serious side-effects. In some babies, the site of the injection may become red and swollen, but this does not last for long.

When should my baby have hepatitis B vaccine?
Your baby should have the first dose of vaccine soon after they are born. Your midwife will discuss this with you before the baby is born and make sure your baby gets the first dose in hospital. Your baby will need further doses of vaccine for full protection against infection. Your GP or health visitor should give these when your baby is 1, 2 and 12 months old. A further pre-school booster dose of vaccine is recommended between 3 and 4 years of age.

If you have any other questions or concerns, talk to your doctor or midwife.

Childhood Immunisation GP Notification

Child Health Dept
Borders General Hospital
Melrose, TD6 9BS

Name of Child …… CRN. No.……CHI No……...

Address……...……...……

……..…….……...……

The above child attended Ambulatory Care Unit/Special Care Baby Unit/Maternity Unit, BGH and has received the following immunisation/s:

Vaccination Given	**Course No. (1st / 2nd etc)**	**Batch No**	**Date Given**
Diphtheria, tetanus, pertussis (whooping cough), polio, hib and HepB			
Rotavirus			
Pneumococcal (PCV) / PPV (please circle appropriate)			
MenB			
MenC			
Hib/MenC			
Measles, mumps and rubella			
Diphtheria, tetanus, pertussis and polio			
Tetanus, Diphtheria and polio			
Men ACWY			
Human Papilloma Virus (HPV)			
BCG			
HEP B			
Influenza (Seasonal Flu)			
Palivizumab (RSV)			
Rotavirus			
Other			

This was given without complications.

Kind regards

Ambulatory Care Unit/Special Care Baby Unit
Copies:
Health Visitor/School Nurse
Child Health Dpt
BGH Notes