Scottish Paediatric & Adult Infection & Immunology Network

Pathway for paediatric and adolescent chronic hepatitis B in Scotland

NOTE

This guidance is not intended to be construed or to serve as a standard of care. Standards of care are determined based on all clinical data available for an individual case and are subject to change as scientific knowledge and technology advance and patterns of care evolve. Adherence to guidance recommendations will not ensure a successful outcome in every case, nor should they be construed as including all proper methods of care or excluding other acceptable methods of care aimed at the same results. The ultimate judgement must be made by the appropriate healthcare professional(s) responsible for clinical decisions regarding a particular clinical procedure or treatment plan. This judgement should only be arrived at following discussion of the options with the patient, covering the diagnostic and treatment choices available. It is advised, however, that significant departures from the national guidance or any local guidelines derived from it should be fully documented in the patient's case notes at the time the relevant decision is taken.

This document has been prepared by NHS National Services Scotland (NSS) on behalf of the Scottish Paediatric & Adult Infection & Immunology Network (SPAIIN). Accountable to Scottish Government, NSS works at the heart of the health service providing national strategic services to the rest of NHS Scotland and other public sector organisations to help them deliver their services more efficiently and effectively. SPAIIN is a collaboration of stakeholders involved in care of infectious

Approved: 26 August 2025
Review: 26 August 2028
NSD608-019.18 V1
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diseases and immunology, who are supported by an NSS Programme Team to drive improvement across the care pathway.

Contents

Approved: 26 August 2025
Review: 26 August 2028
NSD608-019.18 V1

Introduction

The Scottish Paediatric & Adult Infection & Immunology Network (SPAIIN) support improvements in access to and the quality of services for children and adolescents with HIV, Hepatitis B and C infections, and people of any age with a Primary Immune Deficiency.

This document was developed by SPAIIN to support healthcare professionals working within paediatric infectious diseases in Scotland to deliver high quality and equitable care to children and adolescents with Hepatitis B.

Epidemiology

Hepatitis B infection in children largely arises from vertical transmission from HBeAg positive mothers. In the UK, all antenatal attenders are offered Hep B testing and pregnancies are managed to reduce the risk of transmission (neonatal immunisation +/- passive immunoglobulin +/- maternal tenofovir in pregnancy) with a current risk of transmission of <1%. All infants of Hepatitis B infected positive mothers are offered HBsAg testing at 12 months of age.

In recent years new migrants have made up the majority of new attenders at paediatric Hepatitis B clinics often originating in countries of much higher prevalence of infection and/or where services to prevent transmission are less well developed. All migrant children with a history of Hepatitis B in the family should be offered testing (HBsAg, anti-HBc & Anti- HBs). New entrants from countries with a prevalence of hepatitis B >2% (Hepatitis B: migrant health guide - GOV.UK (www.gov.uk) should be offered testing for Hepatitis B HBsAg, anti-HBc & Anti-HBs).

Diagnosis

Diagnosis of acute infection is based on detection of hepatitis B surface antigen (HBsAg) and IgM antibodies to hepatitis B core antigen (anti-HBc). Chronic hepatitis B is defined as persistence of HBsAg for 6 months or more after acute infection with hepatitis B virus.

All new paediatric diagnoses should be entered onto the SPAIIN Clinical Audit System to allow for review at the 6 monthly national Hepatitis B cohort meeting.

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Initial assessment

1) History and examination – have other household members been tested and immunised if necessary?

2) Laboratory investigation

- HBeAg hepatitis B e antigen
- Anti-HBe hepatitis B e antibody
- anti-HAV hepatitis A antibody (if negative then offer immunisation)
- anti-HCV hepatitis C antibody
- anti-HDV delta antibody
- HIV antibody

- FBC/coagulation
- LFTs/GGT/Bilirubin/CK & AFP
- HBV DNA PCR

3) Imaging

- Fibroscan if available
- Liver & spleen US

Monitoring and follow up

The requirement for treatment should be evaluated at each follow-up visit and will be discussed 6 monthly at the national Hepatitis B cohort reviews. Children with chronic Hepatitis B should undergo measurement of serum ALT, HBV DNA & FBC at every follow-up, and HBeAg/anti-HBe levels yearly as well as a non-invasive test e.g. elastography alternate years. Those with abnormal ALT should also have a coagulation & AFP checked on follow-up.

Lifetime follow-up is warranted because of the risk of cirrhosis, hepatocellular carcinoma and reactivation of HBV infection, with reversion to HBeAg-positive status or progression to HBeAg-negative hepatitis.

Approved: 26 August 2025
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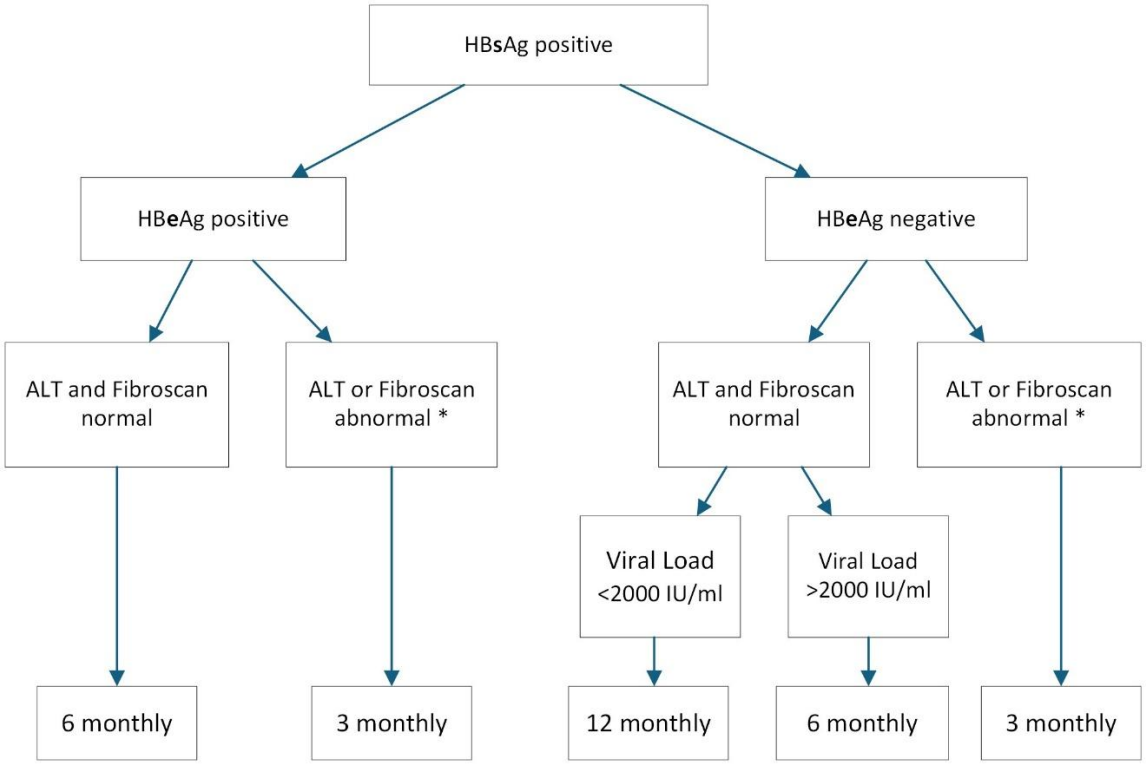
NSD608-019.18 V1

Monitoring frequency.



An abnormal ALT is defined as >ULN.

If ALT abnormal on 2 consecutive occasions within 12 months, then also check auto antibodies (ANA, anti-LKM, AFP, copper, caeruloplasmin, and alpha 1 antityrpsin).

All adolescents should be advised on the risk of sexual transmission, the use of barrier contraception, the potential to offer immunisation to partners or PEP (post exposure prophylaxis) if unimmunised. Partners should be referred for sexual health screening.

Immunocompromised patients are at increased risk of progression of liver disease and different thresholds for treatment may apply (see EASL 2025). If immunocompromised and HBcAb +ve check HBV DNA PCR even if HBsAg negative.

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Treatment Decisions

Antiviral therapy aims to reduce the risk of progression of liver disease, cirrhosis, and hepatocellular carcinoma.

All children and adolescents with Hepatitis B should be reviewed at the 6 monthly national Hepatitis B cohort meeting.

European Association for the Study of the Liver (EASL, 2025)[1] have published updated treatment guidance which includes children and adolescence. Treatment primarily will involve the usage of long term anti-viral medication with the need for children/adolescents and families to adhere to avoid risk of resistance.

Treatment decisions are complex and should take into account viral status, liver health, ability to adhere to medication, side-effects of medication & potential for onward transmission. Currently most adolescents are not on treatment, but guidance is evolving, and these decisions should be reviewed regularly through the national Hepatitis B cohort meeting.

References

1. EASL Clinical Practice Guidelines on the management of Hepatitis B infection. https://doi.org/10.1016/j.jhep.2025.03.018

Appendix 1 – Stakeholder Involvement

Guidance Development

The following stakeholders developed this guidance:

Name	Designation	Organisation
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There are no conflicts of interest noted.

Approval

This guidance was approved by the SPAIIN Steering Group on 26 August 2025. The Steering Group comprises of:

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