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Trust Guideline for Screening Infants and Children at risk of Hepatitis C infection

A clinical guideline recommended

For use in:	NICU and maternity services, JLOPD and community paediatric settings
By:	Medical, nursing and midwifery staff, GPs
For:	Children at risk of HCV infection
Division responsible for document:	Women and Children's Services
Key words:	Hepatitis C, HCV, chronic hepatitis
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Assessed and approved by:	Clinical Guidelines Assessment Panel (CGAP)
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Ratified by or reported as approved to (if applicable)**:**	Clinical Safety and Effectiveness Sub-Board
To be reviewed before: This document remains current after this date but will be under review	03/05/2023
To be reviewed by:	Dr Florence Walston
Reference and / or Trustdocs ID No:	1213
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Descriptions of changes:	No changes
Compliance links: *(is there any NICE related to guidance)*	No
If Yes – does the strategy/policy deviate from the recommendations of NICE? If so, why?	N/A

This guideline has been approved by the Trust's Clinical Guidelines Assessment Panel as an aid to the diagnosis and management of relevant patients and clinical circumstances. Not every patient or situation fits neatly into a standard guideline scenario and the guideline must be interpreted and applied in practice in the light of prevailing clinical circumstances, the diagnostic and treatment options available and the professional judgement, knowledge and expertise of relevant clinicians. It is advised that the rationale for any departure from relevant guidance should be documented in the patient's case notes.

The Trust's guidelines are made publicly available as part of the collective endeavour to continuously improve the quality of healthcare through sharing medical experience and knowledge. The Trust accepts no responsibility for any misunderstanding or misapplication of this document.

Version and Document Control:

Version Number	Date of Update	Change Description	Author
4.1	03/05/2022	Reviewed documents remain fit for purpose, but a one-year review date given to allow for through review in the future	Dr Samir Dervisevic, Dr Florence Walston, Dr Mary-Anne Morris

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Trust Guideline for Screening Infants and Children at risk of Hepatitis C infection

Objective/s

To advise appropriate screening for infants and children at risk of HCV infection.

Rationale

In the UK figures estimate that there are approximately 250,000 individuals with chronic active hepatitis (PHE 2013). National estimate of seroprevalence is 0.4% Infection can be acquired vertically from an infected mother or horizontally by exposure to blood, sexual intercourse or IV drug use. Fifty percent of infected patients have no identifiable risk factors.

The majority of cases seen in children are the result of perinatally acquired infection. The risk for vertical transmission from a mother with HCV infection is 4-6 per cent but increases to 14-17% if there is a high viral load or co-infection with HIV or hepatitis B virus (HBV). Some studies suggest that transmission is more likely from mothers who were IV drug users or infected by blood products. Vertical transmission is confined to mothers whose blood contains detectable HCV RNA. There is insufficient evidence to support caesarean section or excluding breast feeding at this time (American Academy of Paediatrics 1998; Gibb 2000).

The incubation period for postnatally acquired infection is 6-12 weeks. Both acute and chronic infection are usually asymptomatic and liver function tests are often normal. However chronic hepatitis causes cirrhosis and associated symptoms 10-15 years after adult-acquired infection. This may take even longer in children. Treatment with antivirals can clear infection. All children with proven chronic infection will be managed in conjunction with Paediatric Hepatology services.

Current guidelines (DOH 2004, PHE 2013) support use of a selective screening programme to detect subclinical infection in infants born to infected mothers and children with unexplained hepatitic illnesses or chronic hepatitis. Guidelines produced by the Department of Health in November 2004 also suggest screening children who may have shared or been exposed to needles used for injecting IV drugs, those who may have had sexual intercourse (vaginal, anal, oral) with those at risk of blood borne infection and those with clinical features in keeping with infection.

Infection with HCV is suggested by detection of Anti-HCV. However the antibody appears at a variable time after infection and persists after the infection has cleared. Maternal antibody can be detected in the infant's blood up to 18 months of age and immunocompromised individuals may not develop an antibody response. The recommended screening also involves HCV PCR, which should be positive on two consecutive samples to confirm infection and persisting for greater than 6 months to diagnose chronic infection. Two consecutive results 6 months apart must be positive or negative to confirm or refute chronic infection.

Infants at risk of HCV infection may also be at risk of HIV or Hepatitis B infection. It is recommended that Trust guidelines "Guidelines for infants born to HIV positive mothers, CA 2018" Trustdocs ID No: 1184 and "Trust Guideline for the Immunisation of Infants at Risk of Hepatitis B Infection CA2017 " Trustdocs ID No: 1183 are referred to.

Trust Guideline for Screening Infants and Children at risk of Hepatitis C infection

Recommendations:

Infants considered at risk of Hepatitis C infection are those whose parents are known to be Hepatitis C Positive (Anti HCV positive and/or HCV RNA positive) or are past or present IV drug users.

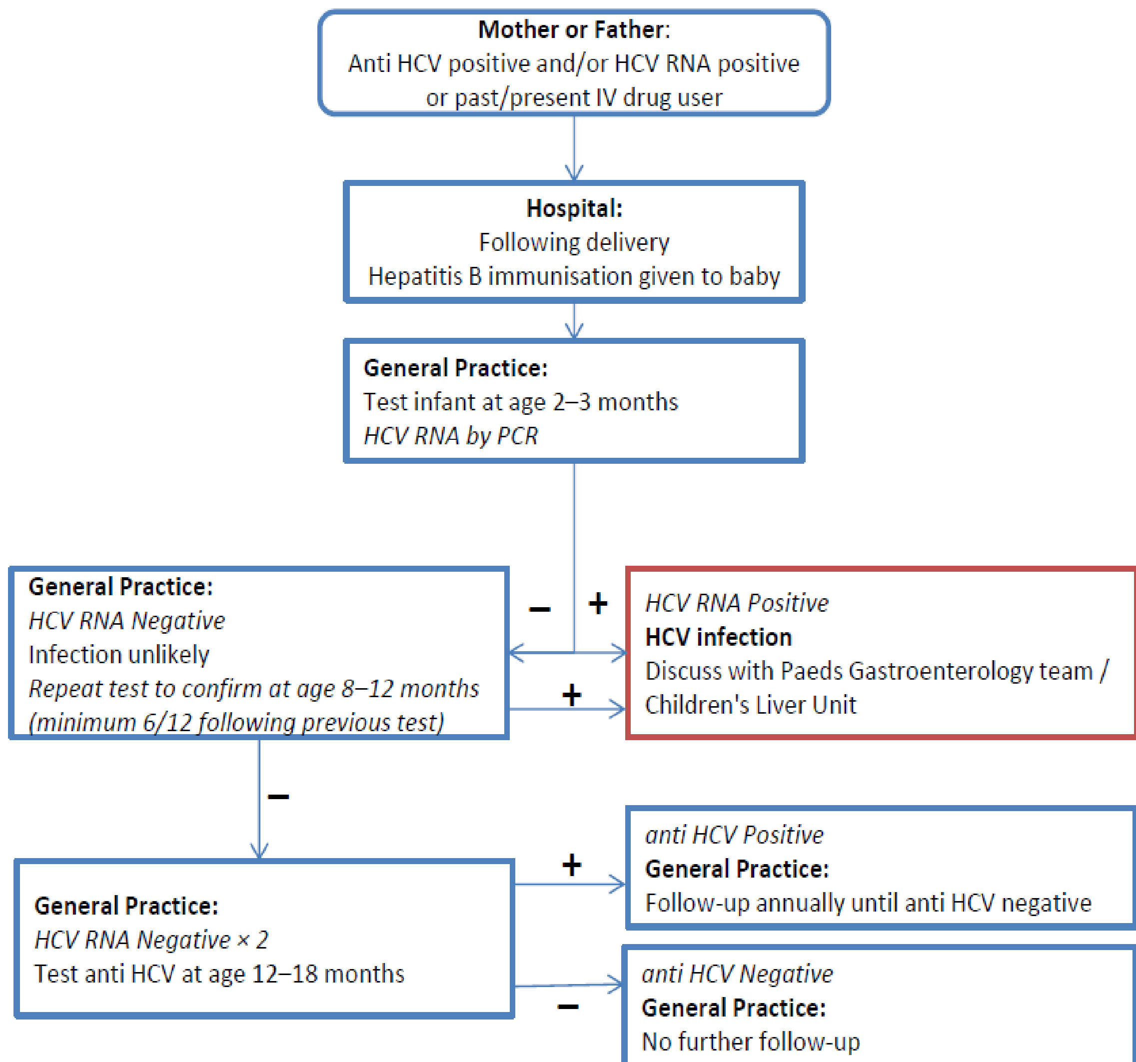
- Follow appropriate algorithm (*below*) **(1) Infants at risk of perinatal HCV infection** or **(2) Older Children at risk of HCV infection**.

- Send letter to GP (***appendix A***) and provide copy to parents

- It is advised that all infants at risk of HCV infection be offered Hepatitis B immunisation. *(Please see Trust Guideline for the Immunisation of Infants at Risk of Hepatitis B Infection CA2017 V4)* Trustdocs ID No: 1183

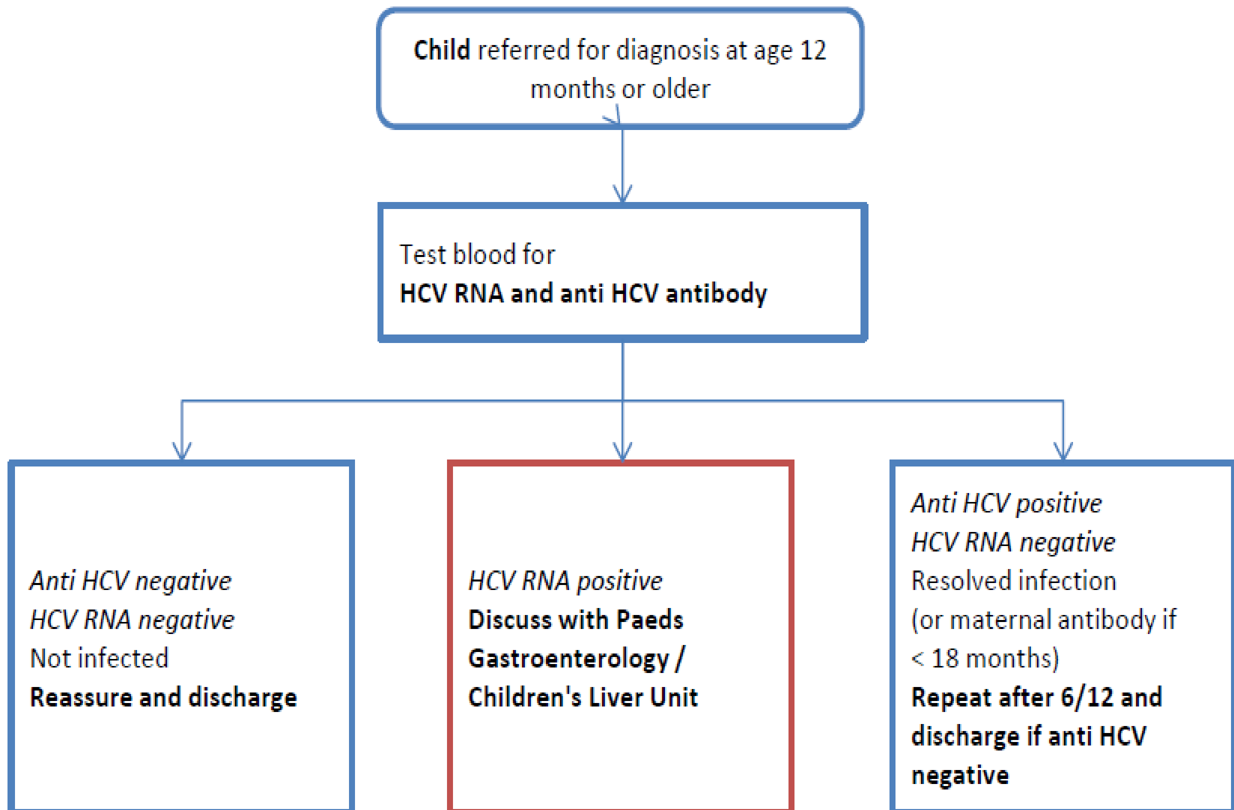
Algorithms for Diagnosis of HCV Infection in Infants and Children

1) **Infants at risk of perinatal HCV infection**



Trust Guideline for Screening Infants and Children at risk of Hepatitis C infection

2) Older Children at risk of HCV infection



Trust Guideline for Screening Infants and Children
at risk of Hepatitis C infection

Clinical audit standards

- Infants at risk of Hepatitis C infection must have appropriate investigations as listed above.
- Hepatitis B immunisation to be offered to all infants at risk of HCV infection

Summary of development and consultation process undertaken before registration and dissemination

The authors listed above drafted the guideline. During its development it was circulated for comment to: Dr G Briars (Paediatric Gastroenterologist, WSH), Dr S Steel (Community Paediatric Consultant) Doreen Kelf (Gastroenterology Nurse Specialist), Miss F Harlow (O&G guidelines lead). It was presented to, and endorsed by, a neonatal department guidelines meeting which *s*uggested alterations to clarify flow diagram and text, now incorporated into final document.

Distribution list / dissemination method

Trust intranet

NICU guidelines folder

References / source documents

1. American Academy of Pediatric Committee on Infectious Diseases. Hepatitis C virus infection. *Pediatrics* 1998; **101**, 481-85

2. Diseases of the liver and biliary system in children. Kelly. Blackwell Publishing 2004

3. Hepatitis C in the UK: 2013 report (Public Health England, 2013)

4. Hepatitis C: Essential information for professionals and guidance on testing. DOH 2004

5. Mother-to-child transmission of hepatitis C virus: evidence for preventable peripartum transmission. Gibb et al. *Lancet* 2000; **356**, 904-07

6. Perinatal hepatitis C virus infection: diagnosis and management. Kelly et al. *Arch Dis Child* 2006; **91**:781–785

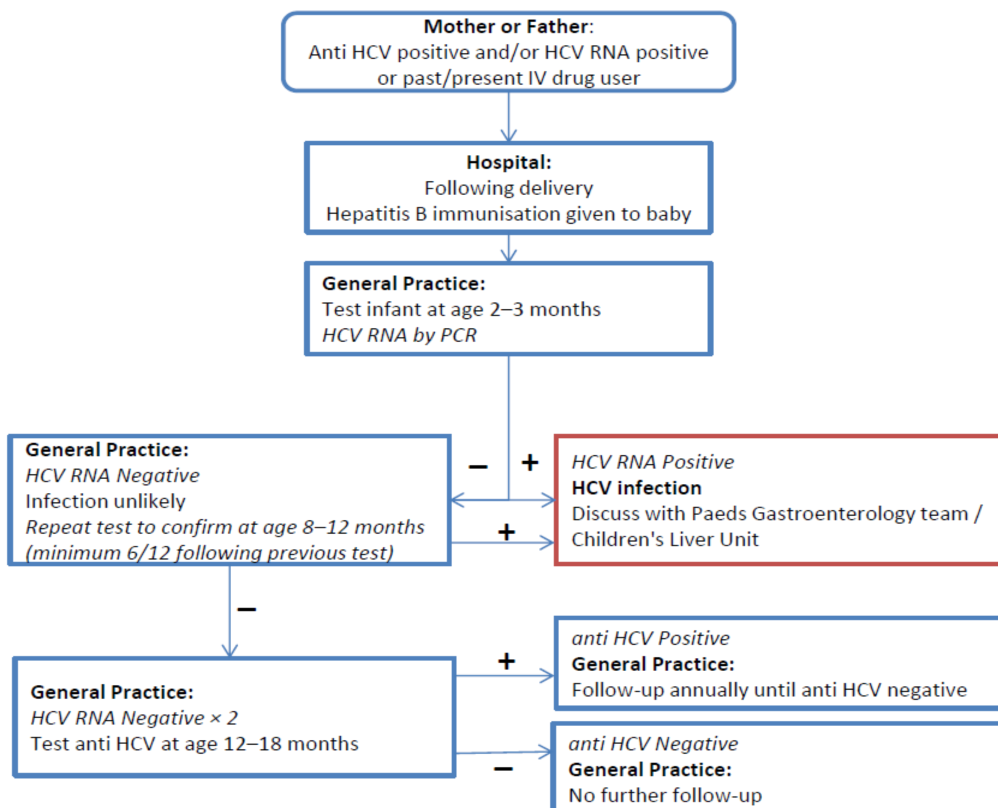
Trust Guideline for Screening Infants and Children at risk of Hepatitis C infection

Dear General Practitioner,

The above named baby is an infant with risk factors for contracting Hepatitis C.

In order to allow early diagnosis and appropriate follow-up, I would be grateful if you could arrange the following blood tests as per the guideline.

If you are unable to perform the blood tests in your practice, please provide the parents with request forms to take to the NNUH phlebotomy department.



Please contact me for further information

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