



GUIDELINE

Hepatitis C Virus (HCV): Care of the Infant Born to Women with HCV Infection

Scope (Staff):	Nursing and Medical Staff
Scope (Area):	NICU KEMH, NICU PCH, KEMH PNW, NETS WA

Child Safe Organisation Statement of Commitment

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations. This is a commitment to a strong culture supported by robust policies and procedures to reduce the likelihood of harm to children and young people.

This document should be read in conjunction with this [disclaimer](#)

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Aim

To provide guidance on identifying, testing, and managing infants born to Hepatitis C Virus (HCV)-positive mothers, ensuring early detection, minimising missed testing opportunities, and promoting timely referral to appropriate specialists for intervention and management of HCV in infants.

Risk

Failure to follow this policy may result in delayed diagnoses, and missed opportunities for early intervention, potentially leading to long-term health complications for HCV infected infants.

Background

Hepatitis C Virus (HCV) is an RNA virus affecting millions globally, with high prevalence rates in the Eastern Mediterranean, Southeast Asia, and Europe who are chronically infected¹. HCV infects the liver and circulates in the bloodstream. In children exposed to the virus, an acute hepatitis episode may occur, though severe cases are uncommon.

In Australia, perinatal transmission is the most common mode of HCV transmission for children³. Infants born to HCV RNA-positive mothers have a 5.8% risk of acquiring hepatitis C, which increases to 10.8% if the mother is co-infected with HIV^{4,5}.

The risk of transmission to infants born to mothers who are HCV antibody positive but HCV RNA-negative (consistent with past cleared infection, successfully treated infection or a false positive HCV antibody result) is minimal, especially where there are no ongoing maternal risk factors for HCV acquisition during the current pregnancy. For information regarding HCV acquisition risk factors in adults, see: [Decision Making In Hepatitis C | ASHM Health](#)

While the natural history of hepatitis C virus (HCV) infection in adults has been established, less is known about its course in children⁶. About 25-50% of HCV infected infants spontaneously clear the infection by 4 years of age^{2,6}. Those who do not clear it and have chronic HCV face an increased risk of developing cirrhosis, liver failure, or liver cancer in early adulthood due to ongoing progressive fibrosis⁷. Although there is no vaccine for HCV, effective antiviral treatments are now available, including safe options for children².

Definitions

Acute HCV infection	A recent hepatitis C virus (HCV) infection, typically occurring within the first six months after exposure.
Chronic HCV infection	An HCV infection that persists for more than six months.
Past HCV infection	Evidence of a resolved HCV infection, where HCV antibodies are present, but no detectable HCV RNA. This indicates that the person was previously infected but has cleared the virus, either spontaneously or through treatment.
Women with current HCV infection	Women are classified as having a current HCV infection if they test positive for HCV antibodies and have detectable HCV RNA in their blood at any point during pregnancy, regardless of whether they are undergoing treatment for HCV during pregnancy.

HCV Antibody	The presence of HCV antibodies indicates exposure to the virus but does not confirm an active infection.
HCV RNA	Detection of HCV RNA in blood indicates an active infection, as it confirms the presence of the virus in the blood.
HCV Viral load	The quantity of HCV RNA in the blood, measured as copies per millilitre.
Blood borne viruses	Viruses that can be transmitted through exposure to infected blood or bodily fluids. Common BBVs include hepatitis B (HBV), hepatitis C (HCV), and human immunodeficiency virus (HIV).

Key Points

- It is unnecessary to test cord blood or perform immediate testing of the neonate after birth².
- Standard precautions are sufficient for the care of babies born to women with current HCV infection in the nursery. There is no risk of virus transmission through urine or stool. Please refer to [CAHS IPC Transmissible Diseases Index Guideline](#) for further information.
- Breastfeeding is generally safe; however, mothers should be advised of the increased risk of transmission of HCV to their baby if they have cracked nipples, engorgement, mastitis, or other inflammatory conditions. During these times, mothers should avoid breastfeeding, feed the infant with formula or previously stored expressed breast milk, and express and discard breast milk until the condition resolves^{2,6}.
- All infants born to mothers with active HCV infection, or a documented history of HCV, should be tested for HCV. See [Diagnostic Testing of Infants and Children](#).
- Confirm that the mother has had antenatal testing for other bloodborne viruses, particularly HIV and Hepatitis B, and syphilis during the current pregnancy.

Transmission and Prevention in Neonates

The risk of perinatal transmission is not influenced by delivery mode but is increased by premature rupture of membranes and invasive foetal monitoring. To reduce transmission risk, obstetric management should focus on limiting foetal exposure to maternal fluids and blood by avoiding invasive procedures whenever possible⁸.

The infant should be bathed to remove maternal body secretions prior to administering intramuscular injections⁸.

Breastfeeding Guidance

Breastfeeding is generally not a significant route for HCV transmission from mother to child. Although HCV RNA has been detected in breast milk from mothers with very high viral loads, levels are typically much lower than in blood. Breastfeeding is not contraindicated for HCV-positive women. However, mothers with cracked nipples or inflammatory conditions (such as engorgement or mastitis) should temporarily avoid breastfeeding until these issues resolve⁸. Refer to the [Hepatitis C and breastfeeding \(healthywa.wa.gov.au\)](http://healthywa.wa.gov.au)

Diagnostic Testing of Infants and Children

It is recommended that all infants born to mothers with active HCV infection, or a documented history of HCV undergo testing for the virus. Testing pathways should be stratified based on the assessed risk level. Infants born to mothers who are HCV-positive or/and unknown HCV RNA status, with ongoing risk factors (refer to [Decision Making In Hepatitis C | ASHM Health](#)), should be categorised as high risk. Infants born to mothers with resolved HCV infection and no identified ongoing risk factors should be classified as minimal risk.

Parents should be counselled and offered testing to determine their infant's HCV status.

For **high-risk** infants, a referral to the PCH Infectious Diseases Team is recommended for early HCV RNA testing at 3–4 months of age. This allows for early diagnosis and referral to paediatric Gastroenterology services for monitoring and later consideration of treatment with directly acting antivirals (DAAs). If HCV RNA testing at 3–4 months is negative, HCV serology testing at 18 months should be performed to confirm clearance of passively acquired antibodies. Repeat HCV RNA testing before 18 months is not recommended in the context of an initial appropriately timed negative result given the high sensitivity of HCV RNA testing from the age of 2 months onwards. Testing siblings born to the same mother with current HCV infection for perinatally acquired HCV is also advised if there is no record of them being tested previously.

For infants at **minimal risk**, antibody-based testing is recommended at or after 18 months of age and can be arranged through their local paediatrician (especially for rural patients) or general practitioner. Please complete the [Minimal Risk Perinatal Hepatitis C \(HCV\) Exposure – Follow-Up for Baby](#) letter to the GP to ensure they are informed and can assist with coordinating follow-up testing. Referral can still be made to the PCH Infectious Diseases outpatient service for follow-up of these infants if it is the family's or clinician's preference. Maternal anti-HCV antibodies naturally decline after birth and are typically absent by 18 months, so uninfected infants should test antibody-negative by this age².

Opportunistic testing should be considered for infants seeking medical care for other reasons if appropriate Hepatitis C testing has not yet been conducted.

HCV Testing Requirements (Specimen Type and Minimum Volume)

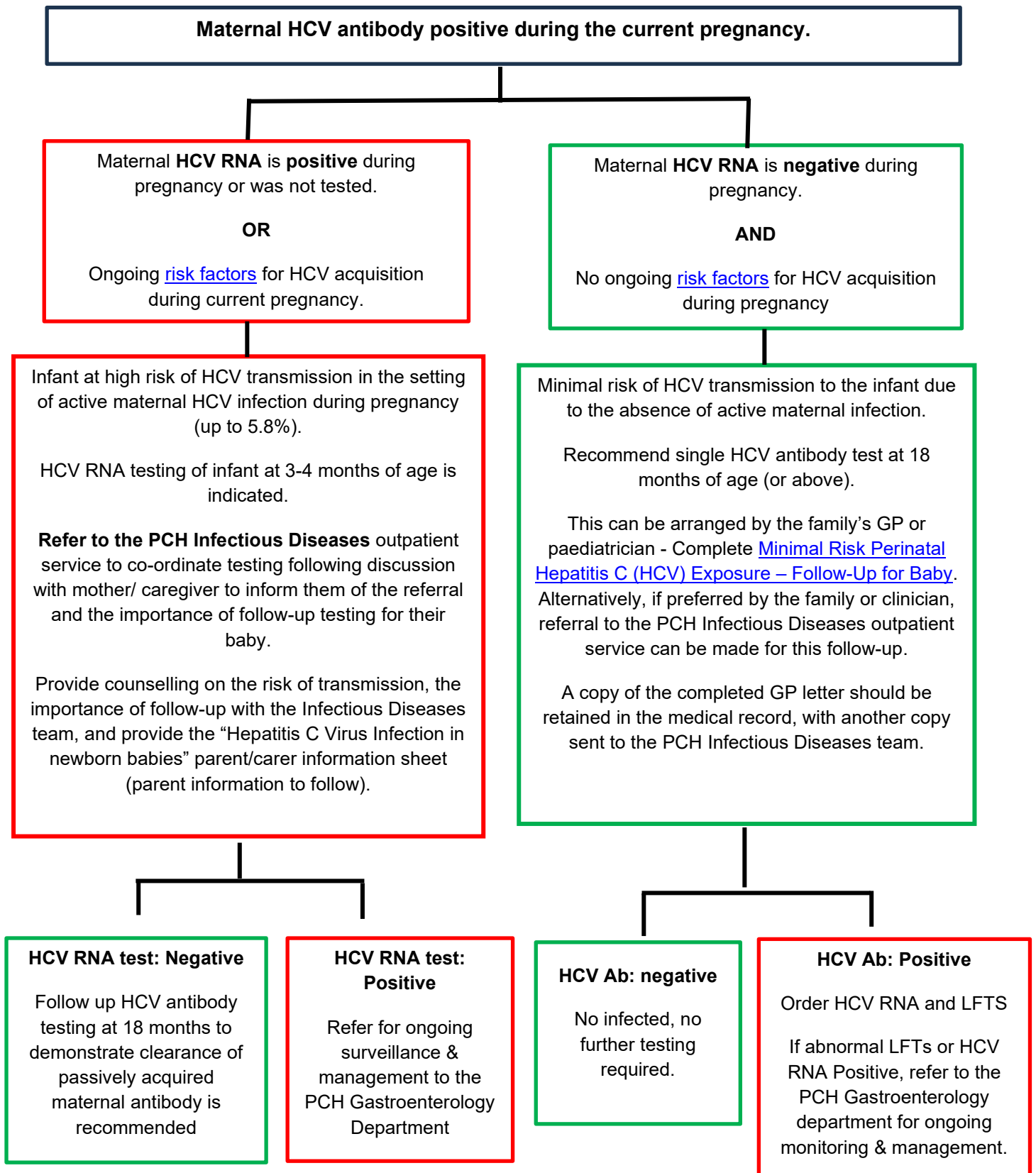
For further information, refer to [Home - PathWest Laboratory Medicine WA](#):

Test	Timing of test(age)	Specimen type	Minimum volume	Clinical history must be indicated on form.
HCV RNA	3-4 months	EDTA mauve top tube	1mL	Maternal HCV RNA Positive or Ongoing risk factors for HCV.
HCV Antibody/ HCV serology	18 months	SST gold top tube	1mL	Maternal HCV Ab Positive but HCV RNA Negative.

*At least three patient identifiers are required, and they must match the specimen.

Typically, early diagnosis does not necessitate immediate medical intervention apart from ensuring that infants are fully vaccinated against Hepatitis A and Hepatitis B given the higher risk of severe infection in the context of HCV co-infection. Infants confirmed positive for HCV RNA should be referred to the PCH Gastroenterology outpatient service.

Recommended outpatient referral and infant testing algorithm based on maternal test results and risk factors.



Treatment

Treating infants with liver disease and HCV requires specialist expertise from a Paediatric Gastroenterologist. Safe, well tolerated and effective therapies are available for children with chronic HCV.

Parental advice for mothers with current HCV infection

The CAHS parent information sheet, “Hepatitis C Virus Infection in newborn babies” (parent information to follow) is specifically applicable to parents of higher-risk infants for HCV transmission. It provides information on the potential for transmission to the child, the necessity of follow-up care with the PCH Infectious Diseases team, testing and contact information. Mothers with current HCV infection are encouraged to pursue follow-up care or treatment, with further assistance available at the [The Deen Clinic — Hepatitis WA](#) or through [Hepatitis WA](#). For nationwide support, the Hepatitis Info Line offers free, confidential, and specialised guidance on viral hepatitis. Contact 1800 437 222 (1800 HEP ABC).

Related CAHS internal policies, procedures and guidelines

WNHS Obstetrics and Midwifery Clinical Guidelines

[WNHS Infections in Obstetrics: Hepatitis C](#)

[CAHS.IC.Transmissible Diseases Index \(health.wa.gov.au\)](#)

References and related external legislation, policies, and guidelines

1. World Health Organisation, 2024, Hepatitis C, accessed 8 November 2024, available at: [Hepatitis C \(who.int\)](#)
2. ASHM, 2024, HCV In Children: Australian Commentary On AASLD-IDSA Guidance.
3. ASHM, 2024, Decision Making – Hepatitis C In Children.
4. Benova, L., Mohamoud, Y.A., Calvert, C. and Abu-Raddad, L.J., 2014. Vertical transmission of hepatitis C virus: systematic review and meta-analysis. *Clinical infectious diseases*, 59(6), pp.765-773.
5. Quek, J.W.E., Loo, J.H., Lim, E.Q., Chung, A.H.L., Othman, A.B.B., Tan, J.J.R., Barnett, S., Nguyen, M.H. and Wong, Y.J., 2024. Global epidemiology, natural history, maternal-to-child transmission, and treatment with DAA of pregnant women with HCV: a systematic review and meta-analysis. *Eclinicalmedicine*, 74.
6. Musto, F., Stracuzzi, M., Crivellaro, E., Rubinacci, V., Cibarelli, A., Porro, C., Ghidoni, E., Zuccotti, G.V. and Giacomet, V., 2024. Natural History and Management of Hepatitis C in Children: 25 Years Experience of a Reference Center in Northern Italy. *The Pediatric Infectious Disease Journal*, pp.10-1097.
7. Modin, L., Arshad, A., Wilkes, B., Benselin, J., Lloyd, C., Irving, W.L. and Kelly, D.A., 2019. Epidemiology and natural history of hepatitis C virus infection among children and young people. *Journal of hepatology*, 70(3), pp.371-378.
8. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists, 2020, Management of Hepatitis C in pregnancy

Useful resources (including related forms)


[Hepatitis C and breastfeeding \(healthywa.wa.gov.au\)](https://healthywa.wa.gov.au)

[Minimal Risk Perinatal Hepatitis C \(HCV\) Exposure – Follow-Up for Baby](#)

Parent Information Sheet: Care and Testing of Infants Born to Mothers with Hepatitis C Virus (HCV) (Parent information to follow)

[HepatitisWA](#)

This document can be made available in alternative formats on request.

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