

Policy

Clinical Guideline

Hepatitis C in Pregnancy Clinical Guideline

Policy developed by: SA Maternal & Neonatal Clinical Network

Approved SA Health Safety & Quality Strategic Governance Committee on:
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Summary Clinical practice guideline on hepatitis C in pregnancy

Keywords Hepatitis C virus, HCV, HCV Ab, PCR, Polymerase chain reaction, PCR, viral load, Ribonucleic acid, RNA, clinical guideline, hepatitis C in pregnancy, clinical guideline

Policy history Is this a new policy? **N**
Does this policy amend or update an existing policy? **Y v4.0**
Does this policy replace an existing policy? **N**

Applies to All SA Health Portfolio
All Department for Health and Ageing Divisions
All Health Networks
CALHN, SALHN, NALHN, CHSALHN, WCHN, SAAS

Staff impact All Staff, Management, Admin, Students, Volunteers
All Clinical, Medical, Nursing, Allied Health, Emergency, Dental,
Mental Health, Pathology

PDS reference CG123

Version control and change history

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5.0	07 Sept 2015	Current	

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South Australian Perinatal Practice Guidelines

hepatitis C in pregnancy

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Note

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

Explanation of the aboriginal artwork:

The aboriginal artwork used symbolises the connection to country and the circle shape shows the strong relationships amongst families and the aboriginal culture. The horse shoe shape design shown in front of the generic statement symbolises a woman and those enclosing a smaller horse shoe shape depicts a pregnant women. The smaller horse shoe shape in this instance represents the unborn child. The artwork shown before the specific statements within the document symbolises a footprint and demonstrates the need to move forward together in unison.



Australian Aboriginal Culture is the oldest living culture in the world yet Aboriginal people continue to experience the poorest health outcomes when compared to non-Aboriginal Australians. In South Australia, Aboriginal women are 2-5 times more likely to die in childbirth and their babies are 2-3 times more likely to be of low birth weight. The accumulative effects of stress, low socio economic status, exposure to violence, historical trauma, culturally unsafe and discriminatory health services and health systems are all major contributors to the disparities in Aboriginal maternal and birthing outcomes. Despite these unacceptable statistics the birth of an Aboriginal baby is a celebration of life and an important cultural event bringing family together in celebration, obligation and responsibility. The diversity between Aboriginal cultures, language and practices differ greatly and so it is imperative that Perinatal services prepare to respectfully manage Aboriginal protocol and provide a culturally positive health care experience for Aboriginal people to ensure the best maternal, neonatal and child health outcomes.

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SA Health

Hepatitis C virus (HCV)

- > Hepatitis C is a blood borne viral liver infection that can result in liver disease, such as chronic viral hepatitis, cirrhosis, liver failure and hepatocellular carcinoma. The risk of progressive hepatitis C related liver disease increases with the duration of chronic infection¹
- > The incubation period is six to ten weeks; however, seroconversion may take up to three months. Infection is considered to be chronic after six months²
- > The initial acute hepatitis C may not be diagnosed as symptoms are mild or absent in a large proportion of people
- > Symptoms of chronic viral hepatitis C associated with early and / or slowly progressive liver disease are generally nonspecific. Individuals may complain of tiredness, anorexia, nausea, intolerance to fatty foods, and abdominal discomfort, particularly in the right upper quadrant. Malaise, fevers and night sweats can also occur

Transmission risk

- > Transmission of HCV is primarily through blood to blood contact, e.g.
 - > Sharing drug injection equipment
 - > Non-sterile tattooing, body piercing or acupuncture
 - > Non-sterile medical or dental procedures, particularly in countries where hepatitis C is more common
 - > From mother to infant during birth
 - > In occupational settings through needle stick injuries and accidental exposures to infected blood or blood products
 - > Transfusion of infected blood or blood products in Australia before 1990
- > Transmission is much more common in prisons due to multiple risk factors
- > The risk of transmission is low in the following situations:
 - > Sexual transmission has been documented (extremely rare)¹; however blood contact during unprotected intercourse should be avoided. Condoms are an effective barrier
 - > Mother to baby transmission – in HCV RNA positive women perinatal transmission risk is approximately 5%³
 - > Household transmission – rare and does not occur through usual family and domestic contact. However personal grooming items such as razors, nail files, manicure scissors and tooth brushes may contain minute traces of infected blood and should never be shared
- > There is no vaccine available against HCV

Literature review

- > In 2012, an estimated 230,000 persons in Australia were living with chronic hepatitis C virus¹
- > The majority (75 - 85 %) of individuals who are hepatitis C RNA PCR positive will become chronically infected²
- > Perinatal transmission is rare in cases of women who are HCV RNA PCR negative at delivery³
- > Co-infection of HCV with human immunodeficiency virus (HIV) confers a three to four-fold perinatal transmission risk for HCV⁴

Antenatal screening

- > In South Australia, routine screening for hepatitis C antibodies is offered to all pregnant women at their first antenatal appointment
- > All women, who are pregnant, should receive pre-test education as well as written information about hepatitis B, C, and HIV to enable them to give informed verbal consent to these tests
- > Antenatal counselling in relation to HCV should include:
 - > Implications of a negative or positive result
 - > Education about factors associated with a high infection rate of HCV
 - > Risk reduction strategies (especially if in a high risk category) e.g. access to sterile injecting equipment, ensuring sterile tattooing, piercing or acupuncture, avoid sharing toothbrushes, razors or other articles, which may have blood on them
 - > The woman's informed verbal consent is required before these tests are ordered
- > Obtain HCV serology (hepatitis C antibody) at the first visit
- > All hepatitis C antibody positive women require confirmation of active infection by hepatitis C RNA PCR on a further sample

Initial test results

HCV Ab positive and RNA PCR negative

- > Shows evidence of exposure to the virus. Importantly, does NOT provide immunity against reinfection with the HCV virus. Remains positive following successful treatment

HCV Ab and RNA PCR positive

- > Shows active infection (i.e. quantitative viral load)

ALT

- > If elevated in the context of HCV Ab, generally shows some level of liver disease from HCV virus. High levels are associated with disease progression

Invasive procedures

- > There are no data regarding the risk of vertical transmission during procedures such as amniocentesis, chorionic villus sampling and external cephalic version⁵
- > However, in the presence of high level viraemia (e.g. during a primary infection), the vertical transmission risk may be higher. Medical expert consensus recommends that in these cases, the consequences of avoiding the above procedures should be balanced against the risk of increased vertical transmission⁵
- > The risk of maternal fetal haemorrhage during amniocentesis is approximately ten percent⁵

Management of women who are Hepatitis C antibody positive

Notification

- > Hepatitis C is a notifiable disease. Notification must be made to the Communicable Disease Control Branch of SA Health as soon as possible and at least within three days of suspicion of diagnosis, telephone number: 1300 232 272⁶
- > The forms for notification of hepatitis C are not yet available online (available by the end of 2015). Forms are currently sent to the practitioner who requests any positive hepatitis C test
 - > When available use the following link instead:
<http://www.sahealth.sa.gov.au/NotifiableDiseaseReporting>
- > Currently, the medical officer should telephone CDCB on 1300 232 272, Monday to Friday (8.30 am to 5.00 pm). The notification form is sent out to the medical officer upon receipt of a positive laboratory result (antibody and / or PCR). The responsible medical officer then completes the medical notification form. Fax to (08) 8226 7187 or post to the Communicable Disease Control Branch (CDCB) PO Box 6 Rundle Mall, 5000
- > This form is not to be sent by email for reasons of confidentiality

Counselling

- > Inform the woman early in the consultation of her HCV RNA PCR result. (Referral to a specialist infectious diseases clinic may be preferable, if available)

HCV Ab positive and RNA PCR negative

- > HCV Ab positive indicates exposure to the virus
- > HCV RNA negative: may represent either false positive antibody, past cleared infection, past successful treatment or low level viremia below assay detection level³
- > Maternal follow up is required in 6-12 months to check sustained clearance
- > Explain to the woman that a single negative maternal RNA test does not exclude all risk and advise to consider an anti-HCV test on the infant at 18 months of age³

HCV Ab and RNA PCR positive

- > Wherever possible, referral to infectious diseases or hepatologist for counselling should occur before delivery
- > The medical officer should use clear language (e.g. "You have hepatitis C").
- > Explain that hepatitis C is a notifiable disease
- > Advise testing for hepatitis B and human immunodeficiency virus (HIV) if not already tested
- > Aim to minimise the psychological impact of the diagnosis. Reassure the woman about confidentiality and offer information about available sources of support within the hospital system
- > It is important to assess how much information the woman can process. There may be a need to arrange a number of consultations to discuss implications for the woman and her unborn baby

Education

- > Verbal and written information should be given about:
 - > Course of the illness
 - > Preventing transmission
 - > Need for further monitoring throughout pregnancy and beyond
 - > Issues around disclosure and stigmatisation
- > Address the need for lifestyle modifications, e.g. avoidance of hepatotoxic substances including alcohol, herbal remedies, and some medications. Cease illicit drug use, smoking, and encourage a well-balanced diet and physical activity
- > Antenatal visits and intrapartum admission may provide an additional opportunity to engage infectious diseases / hepatologist for counselling
- > In pregnant women with chronic hepatitis C, serum alanine aminotransferase levels tend to decrease, and serum HCV RNA levels tend to increase during the second and third trimesters¹¹ however there is liver biopsy evidence suggesting that pregnancy may worsen HCV-related liver injury¹²

Investigations

- > Clinical assessment for liver disease should include:
 - > Complete blood picture (routinely repeat at 28 weeks)
 - > Liver function tests (including ALT, albumin and bilirubin) (repeat at 28 weeks gestation)
 - > INR
 - > Hepatitis C RNA PCR (If previously negative or a very high viral load (millions/mL) has been confirmed in this pregnancy, do not repeat the quantitative PCR. If HCV RNA positive (with unknown viral load) or previously low positive viral load (less than 1,000 copies / mL), a repeat PCR between 35 and 37 weeks is indicated)

Available support services

- > The following services may provide the woman with linkage to primary care in the community (and support to GPs) and can be coordinated by referral to:

Viral hepatitis nurses:

- > Provide advice to GPs on the management of patients with viral hepatitis, including assistance with referral to specialists. Patients may also self-refer
- > Support is also available for people in country areas
- > For contact details, link to <http://www.sahealth.sa.gov.au/hepatitisnurse>

Relationships Australia (South Australia)

- > **PEACE** multicultural services
- > **MOSAIC** counselling and case management services
 - > For further information see Relationships Australia (SA) website at URL: <http://www.rasa.org.au/>
 - > Telephone contact: 1300364277



Aboriginal Maternal Infant Care (AMIC) workers

- > **Health care workers can contact the AMIC worker or Aboriginal Health Professional (e.g. Aboriginal Liaison officer, Aboriginal Cultural Consultant, Aboriginal Health Worker) in their local area to provide support for Aboriginal and Torres Strait Islander women**

Intrapartum management

- > The risk of vertical transmission of hepatitis C virus appears to be related to the level of viraemia in the pregnant mother. There is no evidence that caesarean section will reduce the risk of perinatal transmission¹⁰
- > Common sense measures should be taken to avoid procedures that may inoculate the baby, for example:
 - > Fetal scalp electrodes
 - > Fetal scalp blood sampling
 - > Vigorous aspiration or oral suction of baby
- > If there is an obstetric indication to expedite delivery in second stage, an instrumental delivery may be the safest mode; however, there is a small risk of traumatising the fetal skin and inoculating the baby

At birth

- > Standard precautions: Protective eyewear, gown / apron and gloves should be worn by the attending clinicians

Postpartum

- > If the woman is susceptible to hepatitis B, recommend combined hepatitis A and B vaccination to the woman
- > If the woman is immune to hepatitis B recommend hepatitis A vaccination to the woman
- > The vaccines can be given antepartum

Care of the newborn baby

- > Standard precautions should be utilised when handling the baby
- > The skin at the injection site should be cleaned with soap and water (if visible blood) OR with an alcohol swab before administering hepatitis B vaccine, immunoglobulin or Konakion[®] (vitamin K)
- > The baby should remain in the birthing room until transfer to the ward unless transfer to the nursery is indicated
- > Consider washing (with soap and water) any visible blood or body fluids from hair or skin before contact with extended family
- > Babies direct rooming in with their mother may be cared for in the ward nursery as required
- > Studies have shown that HCV RNA virus has been detected at extremely low levels in breast milk. However, only isolated studies show some indication of HCV infection of the infant secondary to breastfeeding in mothers with a high viral load. Even though theoretical transmission may be possible, breast milk likely becomes inactivated in the neonatal digestive tract⁴
- > Breastfeeding should be encouraged unless nipples are cracked and bleeding (express and discard milk until healed)³. If only one breast has a cracked and bleeding nipple, the woman may breastfeed from the other side until healed

Newborn Immunoglobulin and vaccination

- > Recommend hepatitis B vaccine (HB vaccine) and preferably administer within 12 hours after birth.
- > Hepatitis B immunoglobulin (HBIG) should be administered within 12 hours after birth if mother **co-infected** with hepatitis B virus (HBV)

Dosage

- > Follow link to hepatitis B immunoglobulin and vaccination dosage at www.sahealth.sa.gov.au/perinatal in the A to Z index

Follow-up of baby

- > The general recommendation for testing a well child with perinatal HCV exposure is to test the child for HCV antibodies at ≥ 18 months of age as transplacental maternal HCV antibodies should clear by then

If concerned earlier:

- > Hepatitis C RNA can be performed on infants ≥ 3 months; however follow-up ≥ 18 months with HCV antibody is still required

Hepatitis C RNA positive

- > Refer to paediatric gastroenterologist / paediatric infectious diseases for ongoing management

Follow-up of HCV positive women

- > Refer to viral hepatitis nurses who may also refer to infectious diseases clinic for counselling and advice on management of hepatitis C
- > If non-immune, encourage immunisation against hepatitis A and B
- > ***All follow up should be referred to the nominated Aboriginal Health Professional***



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Useful web sites

SA Health You've got what: hepatitis C

> Available from URL: www.sahealth.sa.gov.au/youvegotwhat in the A to Z index

Australian Society for HIV Medicine (ASHM). Nurses and Hepatitis C

> Available from URL: http://www.ashm.org.au/default2.asp?active_page_id=561

Abbreviations

Ab	Antibody
AHP	Aboriginal Health Professional may include:
	ACC - Aboriginal Cultural Consultant
	AHW - Aboriginal Health Worker
	ALO - Aboriginal Liaison Officer
	AMIC - Aboriginal Maternal Infant Care
ALT	Alanine Transaminase
ASHM	Australasian Society for HIV medicine
e.g.	For example
et al.	And others
HBIG	Hepatitis B immunoglobulin
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HIV	Human immunodeficiency virus
INR	International normalised ratio
%	Percent
PCR	Polymerase chain reaction
RNA	Ribonucleic acid
SA	South Australia
URL	Uniform resource locator

Version control and change history

PDS reference: OCE use only

Version	Date from	Date to	Amendment
1.0	15 Apr 04	29 Nov 10	Original version
2.0	29 Nov 10	30 Nov 10	Reviewed
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