Antenatal and Perinatal Hepatitis C testing

**Epidemiology in the Antenatal Population and Mode of Transmission**

An estimated 211,000 people were living with chronic HCV in Australia at the end of 2009. The prevalence of HCV antibodies in the Australian antenatal population is estimated at 1.4% of pregnant women. Approximately 70% of people with HCV antibodies have ongoing viral infection as indicated by a detectable HCV RNA test.

**Risk factors for HCV infection**

- People who have ever injected drugs
- People who are, or have been, incarcerated
- Recipients of organs, tissues, blood or blood products before February 1990 in Australia, or at any time overseas
- People with tattoos or skin piercings (indications to test will include poor infection control procedures, e.g. tattooing and skin piercings which were carried out in some overseas countries or in a custodial setting)
- People born in countries with high hepatitis C prevalence (Asia, Africa, Middle East, Eastern and Southern Europe)
- Sexual partners of people with hepatitis C

**Effect of HCV on Pregnancy**

Women with HCV are generally at no greater risk of obstetric or perinatal complications than HCV uninfected women. Advanced liver disease is uncommon in pregnancy, however, if present, the issues arising from this, such as coagulation disturbances, may complicate the pregnancy and delivery.

**Effect of Pregnancy on HCV**

Prospective studies following women with HCV during pregnancy and in the postpartum period have reported a trend to normalisation of liver function tests with an increase in the HCV viral load during the third trimester of pregnancy. The viral load returns to pre-pregnancy levels in the postpartum period with the proportion of viremic women remaining unchanged. Women with HCV may be at risk of a hepatic flare in the months following delivery and should be monitored by an infectious diseases specialist or a hepatologist.

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**Mother-to-Child Transmission (MTCT)**

The estimated rate of MTCT of HCV in viremic women is approximately 5%, although this may be higher if the woman is also infected with HIV. The exact mechanism of HCV transmission to the newborn is unknown.

**Antenatal HCV Screening**

The National Hepatitis C Testing Policy 2007 recommends selective antenatal screening for HCV based on identified risk factors as listed above. Other reasons for testing include maternal request after discussing risk factors and/or signs of liver disease or extrahepatic manifestations of HCV. All testing must be confidential, voluntary, and with informed consent.

The rationale for selective screening includes the low prevalence of hepatitis C amongst pregnant women and the lack of evidence to suggest that universal screening would identify more cases than selective screening. Indeterminate and false positive results may be expected to occur in a low-prevalence population, causing unnecessary anxiety. Importantly, the risk of MTCT is low, and interventions to minimise the risk of transmission are very limited. Treatments for HCV are contraindicated in pregnant women. Although women diagnosed antenatally may be given health advice, it is unlikely that being diagnosed whilst pregnant will result in any positive health benefit for mother or baby during the pregnancy.

While RANZCOG, in its position statement on routine antenatal assessment, recommends screening of all pregnant women for HCV infection, it does acknowledge this as a contentious area of practice. The recommended screening test for HCV is an HCV antibody using an enzyme immunoassay (EIA). All women who test positive for the HCV antibody should have confirmation with a second independent assay before they are reported as positive. Women who are hepatitis C antibody positive require liver function tests and qualitative HCV RNA testing. Those who are HCV RNA negative are at extremely low risk of transmitting HCV to their newborn, however as HCV antibodies are not protective, they are at risk of re-infection if re-exposed. Quantification of HCV viral load is not recommended in the routine management of pregnancy, and is currently used to assess transmission risks in research settings only.

**Interventions During Pregnancy, Delivery and Postpartum**

In contrast to HBV and HIV, there is little evidence that interventions during pregnancy or at the time of delivery reduce the risk of MTCT of HCV. **For a woman with a diagnosis of HCV during pregnancy, referral to an infectious diseases specialist or Hepatologist (contact list attached), as well as to hepatitis support groups for information and advice, should be made during the pregnancy.** This will facilitate provision of accurate information, counselling and linkages for follow up and treatment if desired postpartum.

The role of elective caesarean section in the management of women infected with HCV remains uncertain, and further research is required before a recommendation can be made on the mode of delivery used to prevent transmission. Standard precautions and delay of intramuscular injections until after the baby has been bathed to remove all maternal blood are advised. There is no evidence that breastfeeding is associated with an increased risk of HCV transmission to the newborn despite the detection of HCV RNA in breast milk. Consideration should be given to expressing and discarding milk if nipples are cracked and bleeding, until healed. The infant should have an HCV antibody test at 12-18 months of age. If HCV antibody positive, the infant requires qualitative HCV RNA testing to determine if he/she is still infectious, and referral to a pediatric hepatologist. Earlier detection with qualitative HCV RNA testing at 2-3 months is possible, however this is unlikely to alter the care of the newborn.
Sydney Local Health District Liver Clinics Contacts List

Named Referrals can be made to the following Clinics
Please avoid writing “Dear Liver Clinic”

Royal Prince Alfred Hospital

AW Morrow Gastroenterology and Liver Centre Admin,
50 Missenden Road
Camperdown NSW 2050
Phone: 02 9515 7268
Fax: 02 9515 8242
Email: GastroandLiver.RPA@sswhs.nsw.gov.au
Visit Website: awmorrowgel.org

**RPA Hospital Staff Specialist Liver Clinic**
Prof Geoffrey McCaughan
A/Prof David Koorey
A/Prof Simone Strasser
Dr Nicholas Shackel
Dr David Bowen
Dr Emilia Prakoso
Phone: (02) 9515 7268
Fax: 02 9515 8242

**Liver/Gastro Clinic**
Dr Bill Bye
Phone: (02) 9515 7269
Fax: 02 9515 8242

**RPAH Hepatitis B Nurse**
Ms Margaret Fitzgerald
Phone: (02) 9515 6228

**RPAH Hepatitis C Clinical Nurse Consultants**
Ms Sue Mason
Phone: (02) 9515 7049
Ms Sinead Sheils
Phone: (02) 9515 7661

**Community Hepatitis B Nurse led Clinic (Mondays 1-3pm)**
Marrickville Community Centre
157 Livingstone Road
Marrickville NSW 2204
Phone: 02 9562 0500
Fax: 02 9562 0501

**Clinic Nurse (Hepatitis B Clinical Nurse Consultant RPAH)**
Ms Catherine Stevens
Phone: 9515 3627
Mob: 0423 293 470
Email: catherine.stevens@sswhs.nsw.gov.au
Concord Hospital
Concord Hospital Gastroenterology and Liver Department
Main Building, Level 1 West
Hospital Road
Concord West NSW 2139
Phone: (02) 9767 5570
Fax: (02) 9767 6767
Email: Jocelyn.Schramko@sswahs.nsw.gov.au

Concord Hospital Staff Specialist Liver Clinic
Dr Alice Lee
Dr Meng Ngu
Dr Gordon Park
Dr Venessa Pattullo
Dr Lisa Shim
Dr Elke Wiseman
Phone: (02) 9767 5570
Fax: (02) 9767 6767

Hepatitis Clinical Nurse Consultant (Concord)
Ms Jocelyn Schramko
Phone: (02) 9767 6372
Fax: (02) 9767 5324
Email: Jocelyn.Schramko@sswahs.nsw.gov.au

Canterbury Hospital

Canterbury Hospital Staff Specialist Liver Clinic (Thursday afternoons)
Dr Venessa Pattullo
Dr Lisa Shim
Dr Elke Wiseman
Canterbury Hospital Outpatients Department
Thorncraft Parade
Campsie NSW 2194
Phone: 9787 0164
Fax: 9787 0094
Email: Jocelyn.Schramko@sswahs.nsw.gov.au

SLHD Hepatitis Dietitian
Ms Kate Teevan
Phone: 0466 580 478
Email: kate.teevan@sswahs.nsw.gov.au

SHLD Hepatitis Coordinator
Janice Pritchard-Jones
Phone: 0434360357
Email: Janice.pritchard-jones@sswahs.nsw.gov.au