# Chronic Hepatitis B and C Primary Care Pathway

A quick guide to managing your patient with chronic hepatitis B or C in the community:

- what patients can do to optimise their own health
- how to manage their long term care
- which patients to refer
- how to refer
- where to go for more information

## General

### Informing your patient
- Provide contact details of support services and relevant material.
- Use a professional interpreter if required. Call Translating and Interpreting Service (TIS) 13 14 50.

### Reduce transmission
- Avoid behaviours that risk re-infection/super-infection and transmission to others.
- Advise care with blood and personal grooming items.
- Counsel patients with chronic HBV about safe sex practices.
- Refer to alcohol and drug service for opioid substitution treatment as necessary [www.dao.health.wa.gov.au](http://www.dao.health.wa.gov.au)
  - If your patient is continuing to engage in injecting drug use refer to the WA Substance Users’ Association [www.wasua.com.au](http://www.wasua.com.au)
  - Patients with chronic HCV or HBV who are health care workers must not perform exposure prone procedures (EPPs) while they are HCV RNA or HBV DNA positive, but they may be permitted to return to EPPs after successful treatment or following spontaneous clearing of HCV RNA or HBV DNA. For further information see Operational Directive OD 0394/12 [www.health.wa.gov.au](http://www.health.wa.gov.au)

### Immunisation
- Offer HAV vaccination to those who are not immune and who are at risk of infection (e.g. MSM, travellers to endemic countries).
- Offer HBV vaccination to those with HCV who are not immune to HBV.

### Alcohol – a modifiable risk factor for disease progression
- Abstinence is best, tailor according to previous intake and stage of disease
  - Early disease with no risk factors for progression, consistently normal ALT and normal clinical examination → alcohol advice as per general population, NHMRC Australian guidelines to reduce health risks from drinking alcohol [www.nhmrc.gov.au](http://www.nhmrc.gov.au)
  - Significant fibrosis → one standard drink/day and no binging
  - Cirrhosis → aim for total abstinence
- Refer to alcohol and drug services as necessary [www.dao.health.wa.gov.au](http://www.dao.health.wa.gov.au)

### Psychological support and counselling
- For patient and their family/partners.
- Telephone support, education and support groups through Hepatitis WA [www.hepatitiswa.com.au](http://www.hepatitiswa.com.au)

### Optimise general health

#### Smoking
- Quitting will lead to improved general health [www.quitnow.gov.au](http://www.quitnow.gov.au)

#### Weight management
- Aim for an ideal body weight (BMI 18.5-25kg/m²) or in overweight patients a gradual but sustained loss of at least 5-10% body weight [www.livelighter.com.au](http://www.livelighter.com.au)

#### Nutrition
- General recommendations for a healthy diet see Australian Dietary Guidelines [www.nhmrc.gov.au](http://www.nhmrc.gov.au)
- Refer to a dietitian as necessary [www.health.wa.gov.au/health_index/n/nutrition.cfm](http://www.health.wa.gov.au/health_index/n/nutrition.cfm)

### Do you need up-skilling?
- Free e-learning modules available online through Edith Cowan University [http://hepatitis.ecu.edu.au](http://hepatitis.ecu.edu.au) (Funded by WA Health).

### Further information for health professionals
- HepBHelp [www.hepbhelp.org.au](http://www.hepbhelp.org.au)
- European Association for the Study of the Liver [www.easl.eu](http://www.easl.eu)

For more copies of this pathway email SHBBVP.GVH@health.wa.gov.au

or download electronic version from [www.health.wa.gov.au](http://www.health.wa.gov.au)
### Chronic Hepatitis B

**HBsAg or HBV DNA (PCR) has been detected on two occasions at least 6 months apart.**

**Evidence of decompensated liver disease:** one or more of the clinical complications of chronic liver disease

- peripheral oedema
- low albumin
- high INR
- variceal bleeding
- ascites
- encephalopathy

**High risk of progression**

- male
- co-infection with HIV/HCV/HDV
- presence of cirrhosis
- >65yrs of age
- heavy alcohol intake
- long duration of infection
- family history of hepatocellular carcinoma (HCC)

**Management**

- **Initial investigations** (tests in bold are required prior to referral)
  - FBC
  - LFTs (AST, ALT, ALP, GGT, Albumin, Bilirubin)
  - U&E
  - INR
  - HBeAg/HBeAb
  - Iron studies
  - HBV DNA (quantitative viral load)

- Screening for hepatocellular carcinoma: Ultrasound and AFP every 6 months for those at high risk
  - presence of cirrhosis
  - Indigenous people >50yrs
  - Asian men >40yrs

- Symptom management
  - Fatigue: advise planning rest periods during the day and the addition of light to moderate exercise into their routine to reduce fatigue.

- Important: Provide immunisation and advice on how to reduce transmission (see back page for more information).

### Chronic Hepatitis C

**HCV positive immunoassay result detected on two occasions at least 6 months apart and HCV RNA positive.**

**Evidence of decompensated liver disease:** one or more of the clinical complications of chronic liver disease

- peripheral oedema
- low albumin
- high INR
- variceal bleeding
- ascites
- encephalopathy

**High risk of progression**

- male
- co-infection with HIV/HBV
- persistent elevation of ALT 5x normal
- insulin resistance
- obesity
- long duration of infection

**Management**

- **Initial investigations** (tests in bold are required prior to referral)
  - FBC
  - LFTs (AST, ALT, ALP, GGT, Albumin, Bilirubin)
  - U&E
  - INR
  - HCV genotype
  - Liver/abdominal ultrasound
  - HDV serology
  - HCV RNA (quantitative viral load)
  - HBV serology
  - HBV DNA (quantitative viral load)
  - HAV serology
  - HAV serology
  - HDV serology
  - ANA/ASMA

- Ongoing
  - Review every 6–12 months and monitor for signs and symptoms of liver disease e.g. palmar erythema, spider naevi, jaundice, ascites, encephalopathy, hepa-to-splenomegaly, pruritis, weight loss and/or lethargy.

- Investigations should be guided by HBeAg and LFT

<table>
<thead>
<tr>
<th>HBeAg</th>
<th>LFT</th>
<th>LFT (ALT)</th>
<th>HBV DNA</th>
<th>HBeAg and HBeAb</th>
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- Screening for hepatocellular carcinoma: Ultrasound and AFP every 6 months for those at high risk
  - presence of cirrhosis
  - Indigenous people >50yrs
  - Asian men >40yrs

- Symptom management
  - Fatigue: advise planning rest periods during the day and the addition of light to moderate exercise into their routine to reduce fatigue.

- Important: Provide immunisation and advice on how to reduce transmission (see back page for more information).

### Referral

**Urgent (seen <1 week):** If evidence of decompensated liver disease discuss directly with Gastroenterology/General Physician at your local hospital and fax a completed referral directly to the relevant hospital.

**Routine**

- Regional Western Australia: Direct to your regional Physician/Hospital/Hepatology Nurse/Public Health Unit.

**Refer those with**

- cirrhosis
- HBeAg +ve and HBV DNA >2000 IU/ml and raised LFT
- pregnancy
- raised AFP
- High risk of progression and/or are complex
- alcohol consumption
- symptoms and signs of hepatitis (e.g. jaundice)

**Ensure specialist can access investigation results** (those in bold in management section).

**Note:** Patients with HIV co-infection and who are asymptomatic with no signs of chronic liver disease can be managed by Infectious Diseases/Immunology.

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**Screening for hepatocellular carcinoma:** Ultrasound and AFP every 6 months for those with cirrhosis.

**Symptom management**

- Fatigue: advise planning rest periods during the day and the addition of light to moderate exercise into their routine to reduce fatigue.

**Important:** Provide immunisation and advice on how to reduce transmission (see back page for more information).

**Reference**


Regional Western Australia: Direct to your regional Physician/Hospital/Hepatology Nurse/Public Health Unit.

**Refer those with**

- cirrhosis
- raised AFP (exclude pregnancy)
- HCV RNA +ve and at high risk of progression and/or are complex
- alcohol consumption
- symptoms and signs of hepatitis (e.g. jaundice)

**Ensure specialist can access investigation results** (those in bold in management section).

**Note:** Patients with HIV co-infection and who are asymptomatic with no signs of chronic liver disease can be managed by Infectious Diseases/Immunology.
### Chronic Hepatitis B

**Evidence of decompensated liver disease:** one or more of the clinical complications of chronic liver disease
- peripheral oedema
- low albumin
- high INR
- variceal bleeding
- ascites
- encephalopathy

**High risk of progression**
- male
- co-infection with HIV/HCV/HDV
- presence of cirrhosis
- >45yrs of age
- heavy alcohol intake
- long duration of infection
- family history of hepatocellular carcinoma (HCC)

### Management

**Initial investigations** (tests in bold are required prior to referral)
- **FBC**
  - LFTs (AST, ALT, ALP, GGT, U&EE, Albumin, Bilirubin)
- **U&E**
  - HBeAg/HBeAb
- **INR**
  - HBV DNA (quantitative viral load)
- **Iron studies**
  - HBV serology

**Investigations should be guided by HBeAg and LFT**

#### Previous result | Investigation and frequency |
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<tbody>
<tr>
<td>HBeAg</td>
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**Screening for hepatocellular carcinoma:** Ultrasound and AFP every 6 months for those at high risk
- presence of cirrhosis
- Indigenous people >50yrs
- Asian women >50yrs
- >40yrs with raised ALT +/- high INR
- family history of HCC
- Asian men >40yrs
- African >20yrs
- HBV DNA (>2,000 IU/ml)
- high INR

**Symptom management**
- Fatigue: advise planning rest periods during the day and the addition of light to moderate exercise into their routine to reduce fatigue.

**Important:** Provide immunisation and advice on how to reduce transmission (see back page for more information).

### Referral

**Urgent (seen <1 week):** If evidence of decompensated liver disease discuss directly with Gastroenterology/General Physician at your local hospital and fax a completed referral directly to the relevant hospital.

**Routine**
- Regional Western Australia: Direct to your regional Physician/Hospital/Hepatology Nurse/Public Health Unit.

**Refer those with**
- cirrhosis
- hepatitis B or HBV DNA (PCR) has been detected on two occasions at least 6 months apart.

**Information to include with referral**
- likely date and mode of transmission
- other drugs (include injecting drug use)
- symptoms and signs of hepatitis (e.g. jaundice)

**Ensure specialist can access investigation results** (those in bold in management section).

**Note:** Patients with HIV co-infection and who are asymptomatic with no signs of chronic liver disease can be managed by Infectious Diseases/Immunology.

### Chronic Hepatitis C

**Evidence of decompensated liver disease:** one or more of the clinical complications of chronic liver disease
- peripheral oedema
- low albumin
- high INR
- variceal bleeding
- ascites
- encephalopathy

**High risk of progression**
- male
- co-infection with HIV/HBV
- persistent elevation of ALT 5x normal
- heavy alcohol intake
- presence of cirrhosis
- insulin resistance
- obesity
- long duration of infection

### Management

**Initial investigations** (tests in bold are required prior to referral)
- **FBC**
  - LFTs (AST, ALT, ALP, GGT, U&EE, Albumin, Bilirubin)
- **U&E**
  - HBeAg/HBeAb
- **INR**
  - HCV genotype
- **Iron studies**
  - HCVAb
- **HBV DNA (quantitative viral load)**

**Ongoing**
- Review every 6–12 months and monitor for signs and symptoms of liver disease e.g. palmar erythema, spider naevi, jaundice, ascites, encephalopathy, hepato-splenomegaly, pruritis, weight loss and/or lethargy.

**Suitability/considerations for antiviral therapy**
- social situation: availability of support
- lifestyle: planning children (men and women)
- current income/work situation

**Note:** Consideration of antiviral therapy is required for patients with cirrhosis or HCC.

**Important:** Monitor FBC, ALT, INR, albumin and bilirubin every 6–12 months.

**Screening for hepatocellular carcinoma:** Ultrasound and AFP every 6 months for those with cirrhosis.

**Symptom management**
- Fatigue: advise planning rest periods during the day and the addition of light to moderate exercise into their routine to reduce fatigue.
- Side-effects of treatment: e.g. depression.

**Psychological support and counselling available through Hepatitis WA [www.hepatitiswa.com.au](http://www.hepatitiswa.com.au)

**Important:** Provide immunisation and advice on how to reduce transmission (see back page for more information).

### Referral

**Urgent (seen <1 week):** If evidence of decompensated liver disease discuss directly with Gastroenterology/General Physician at your local hospital and fax a completed referral directly to the relevant hospital.

**Routine**
- Regional Western Australia: Direct to your regional Physician/Hospital/Hepatology Nurse/Public Health Unit.

**Refer those with**
- cirrhosis
- raised AFP (exclude pregnancy)
- male
- co-infection with HIV/HBV
- HCV RNA +ve and at high risk of progression and/or are complex
- HCV RNA +ve and may be suitable for antiviral therapy
- alcohol consumption
- symptoms and signs of hepatitis (e.g. jaundice)

**Information to include with referral**
- likely date and mode of transmission
- other drugs (include injecting drug use)
- alcohol consumption
- current medications

**Ensure specialist can access investigation results** (those in bold in management section).

**Note:** Patients with HIV co-infection and who are asymptomatic with no signs of chronic liver disease can be managed by Infectious Diseases/Immunology.
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