



Hepatitis B

YOUR CRUCIAL ROLE AS A PRIMARY HEALTH CARE NURSE

Primary Health Care Nurses (PHCNs) can play a critical role in utilising their chronic disease management skills to support the testing, diagnosis and management of people with chronic hepatitis B (CHB). PHCNs can facilitate and support lifestyle modification strategies to improve patient outcomes. This resource provides information about how PHCNs working in the general practice setting can incorporate hepatitis B care into their existing role, however the information is broadly applicable to nurses based in other primary care settings.

WHY?

- 218,000 people in Australia have CHB but only 1 in 2 people are diagnosed
- Without appropriate monitoring and treatment, up to 1 in 4 people with CHB will die from liver cancer or liver failure
- Liver cancer, the majority of which is caused by viral hepatitis, is the fastest increasing cause of cancer death in Australia
- Most patients with CHB do not need to see a specialist regularly. They can be managed in the community by GPs and PHCNs with specialist support depending on disease stage.

ANMF NATIONAL PRACTICE STANDARDS FOR NURSES IN GENERAL PRACTICE (NiGP)

The Australian Nursing and Midwifery Federation (ANMF) developed Practice Standards (2014) to articulate the scope of practice for nurses working in the general practice setting. Elements that provide an example of how the PHCN may meet a specific Practice Standard through their involvement in hepatitis B care are highlighted throughout this resource.

NB: This resource is intended to be read in conjunction with other ASHM hepatitis B resources, such as *Decision-Making in HBV, Hepatitis B and Primary Care Providers*, *B Positive* & the *Hepatitis B Testing Policy*; and the *ANMF National Practice Standards for Nurses in General Practice (NiGP)* (see References).

HOW CAN PHCNs MAKE A DIFFERENCE?

Support people at risk of hepatitis B to reduce their risk of infection.

HEPATITIS B TRANSMISSION:

- vertically (mother to child during childbirth) – most common mode of transmission in high prevalence countries (in the absence of vaccination at birth). Hepatitis B vaccination and immunoglobulin (HBIG) should be administered at birth for babies born to mothers with hepatitis B. Breastfeeding does not increase the risk of transmission.
- horizontally – transmission can occur to non-vaccinated household contacts (e.g. sharing toothbrushes, razors and other personal items that lead to an exchange of body fluids).
- sexually – through unprotected vaginal, anal or oral sex.
- percutaneously – through the sharing or re-use of injecting equipment e.g. needles, syringes, water, spoons, filters and tourniquets; tattooing or body piercing equipment; acupuncture needles, cupping and other cultural practices involving body fluids.
- medically acquired – through blood transfusions, organ transplants and other medical interventions in countries where hepatitis B is not screened for, and other procedures (e.g. dentistry and surgery) where infection control principles are not adhered to.

HEPATITIS B IS NOT TRANSMITTED BY:

- water
- sharing food and drink
- coughing, sneezing
- hugging, kissing
- other casual contact, such as in the workplace.

Identify individuals from priority populations who should be tested for hepatitis B and vaccinated if susceptible.

ANMF NATIONAL PRACTICE STANDARDS FOR NiGP

STANDARD 8: Effectively implements evidence-based health promotion & preventive care relevant to the Practice community.

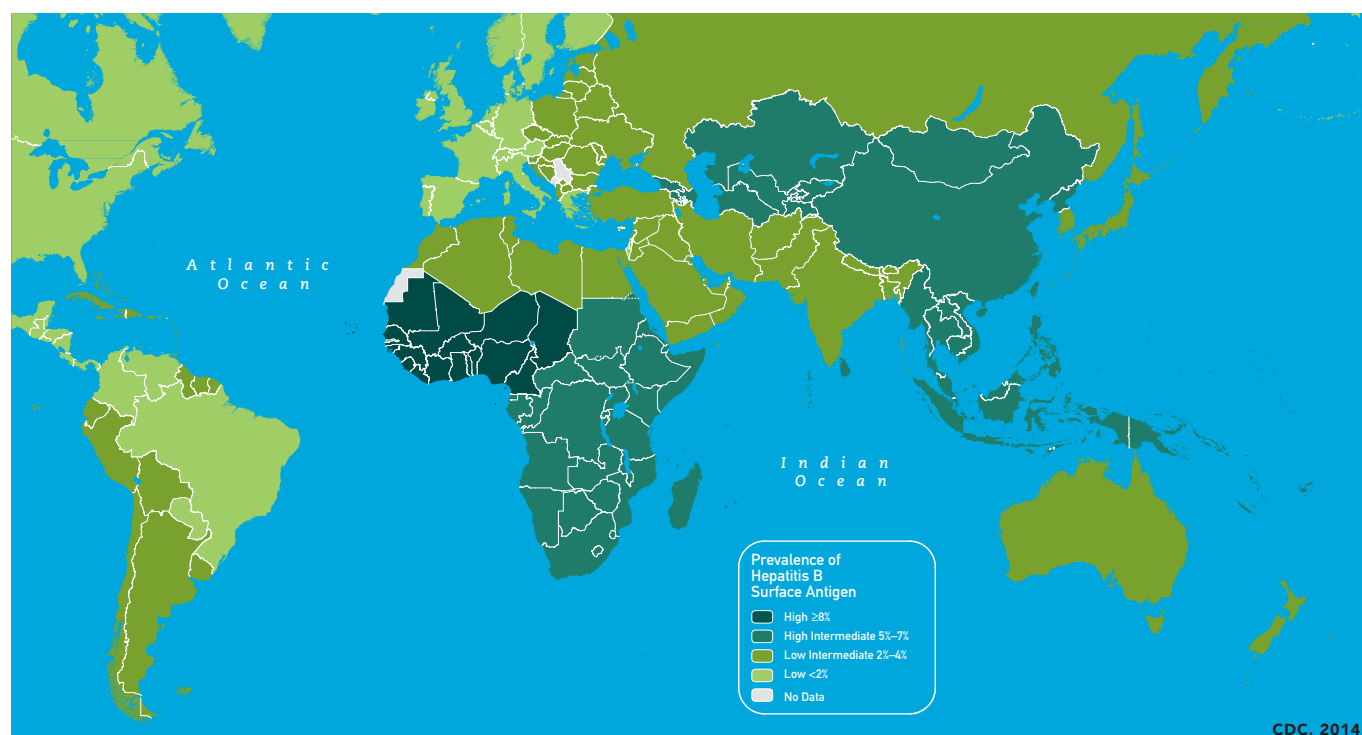
STANDARD 9: Empowers & advocates for consumers.

ANMF NATIONAL PRACTICE STANDARDS FOR NiGP

STANDARD 7: Undertakes nursing assessment & plans ongoing care.

STANDARD 10: Understands diversity in the Practice community & facilitates a safe, respectful & inclusive environment.

FIGURE 1: GLOBAL PREVALENCE OF CHRONIC HEPATITIS B



PRIORITY POPULATIONS:

- People born in countries with intermediate and high hepatitis B prevalence, particularly Asian-Pacific or Sub-Saharan African countries (Figure 1)
- Aboriginal and Torres Strait Islander people
- Children born to mothers with hepatitis B
- Unvaccinated adults at higher risk; men who have sex with men, sex workers, people who inject drugs, household and sexual contacts of people with hepatitis B, people in custodial settings, people with HIV and/or hepatitis C
- Patients about to commence chemotherapy or immunosuppressive therapy.

Ensure comprehensive testing is completed for patients with CHB.

Encourage and support testing and appropriate vaccination of family members and sexual and household contacts of people with CHB.


Ensure appropriate vaccination and testing of babies born to mothers with CHB to assess whether the baby is protected (3 months after final dose of vaccine).

Provide education and supportive resources to people with CHB, with consideration given to their health literacy and cultural understanding of the disease.

HEALTH LITERACY:

- 60% of Australians have inadequate health literacy
- many people leave a medical consult not understanding their condition, how to take medication or how they can look after their health
- consider the individual's health beliefs about their illness and what it means to them
- use short sentences and plain language, addressing just 2 or 3 concepts at a time
- practise strategies to ensure clear 2-way communication e.g. Teach-back, Ask me 3 (see *Additional Resources*)
- written health information should be at a grade 7 level and culturally appropriate
- discussions should be conducted in a culturally appropriate and safe manner.

INVOLVING INTERPRETERS:

- family members can be of great support to the patient, but should **never** be used in place of an accredited interpreter
- accredited interpreters are essential to ensure information is properly understood and there is an opportunity for patients to clarify information and ask questions
- information and resources in the patient's first language should be provided (See *Additional Resources*)
-  The Translating and Interpreting Service (TIS) is available 24 hours/7 days. Doctor's Priority Line – 1300 131 450.

Encourage testing for hepatitis A and vaccinate if susceptible. Hepatitis A vaccine is free for Aboriginal and Torres Strait Islander children living in QLD, NT, WA & SA and recommended (but not free) for people with CHB.

ANMF NATIONAL PRACTICE STANDARDS FOR NiGP

STANDARD 6: Demonstrates the knowledge & skills to provide safe, effective & evidence-based nursing care

ANMF NATIONAL PRACTICE STANDARDS FOR NiGP

STANDARD 9: Empowers & advocates for consumers.

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ANMF NATIONAL PRACTICE STANDARDS FOR NiGP

STANDARD 10: Understands diversity in the Practice community & facilitates a safe, respectful & inclusive environment.

STANDARD 11: Effectively delivers evidence-based health information to improve health literacy & promote self management.

ANMF NATIONAL PRACTICE STANDARDS FOR NiGP

STANDARD 22: Liaises effectively with relevant agencies & health professionals to facilitate access to services & continuity of care.

Routinely monitor people with CHB to assess changes in disease stage and liver function and ensure appropriate management or referral when indicated.

Identify people with CHB who should be enrolled in liver cancer screening and encourage 6 monthly screening (abdominal ultrasound and alpha fetoprotein).

Implement evidence-based lifestyle modification approaches to support safe sex practices, a reduction in alcohol and tobacco intake and improvement in nutrition. Assist process by making appropriate and timely allied health referrals, make free condoms available or plan other health promotion activities.

Support and encourage adherence for people on antiviral treatment for CHB, as the majority that treatment is appropriate for will require lifelong treatment. Treatment is only necessary in phase 2 (immune clearance) and phase 4 (immune escape) and in some other situations e.g. pregnant women, cirrhosis.

Utilise Medicare Benefits Schedule (MBS) Care Planning items including GP Management Plans (GPMP) and Team Care Arrangements (TCA) to support comprehensive coordinated care and regular monitoring.

All patients with CHB are eligible for a GPMP for 2 years, with a review every 6 months	MBS 721 & 732
Patients with complex needs who require ongoing care from at least 3 collaborating health providers are eligible for a TCA	MBS 723 & 732
As interdisciplinary care is often needed for CHB, GPs can contribute to a multidisciplinary care plan prepared by another health care provider	MBS 729 or 731

Negotiate with GPs and other PHCNs within the practice to agree on consistent terminology to use in patient management systems to record hepatitis B status in past history and recalls/reminders.

Employ existing patient management systems to support the management of CHB patients e.g. recalls and reminders in practice software, appointments made in advance, provide pathology and ultrasound request forms in advance, use appointment reminders, follow-up fail to attends and utilise audit tools that work with your practice software.

ANMF NATIONAL PRACTICE STANDARDS FOR NiGP

STANDARD 2: Provides nursing care consistent with current nursing & general practice standards, guidelines, regulations & legislation.

ANMF NATIONAL PRACTICE STANDARDS FOR NiGP

STANDARD 8: Effectively implements evidence-based health promotion & preventive care relevant to the Practice community.

STANDARD 9: Empowers & advocates for consumers.

ANMF NATIONAL PRACTICE STANDARDS FOR NiGP

STANDARD 11: Effectively delivers evidence-based health information to improve health literacy & promote self management.

ANMF NATIONAL PRACTICE STANDARDS FOR NiGP

STANDARD 15: Understands the context of general practice within the wider Australian health care system, including funding models.

ANMF NATIONAL PRACTICE STANDARDS FOR NiGP

STANDARD 21: Effectively communicates, shares information & works collaboratively with the general practice team.

ANMF NATIONAL PRACTICE STANDARDS FOR NiGP

STANDARD 13: Demonstrates proficiency in the use of information technology, clinical software & decision support tools to underpin health care delivery.

STANDARD 14: Effectively uses registers & reminder systems to prompt intervention & promote best practice care.

INTERPRETING INITIAL HEPATITIS B DIAGNOSTIC TESTING

This diagram does not illustrate the order that tests should be made, but should be used to help with sequential interpretation of results.

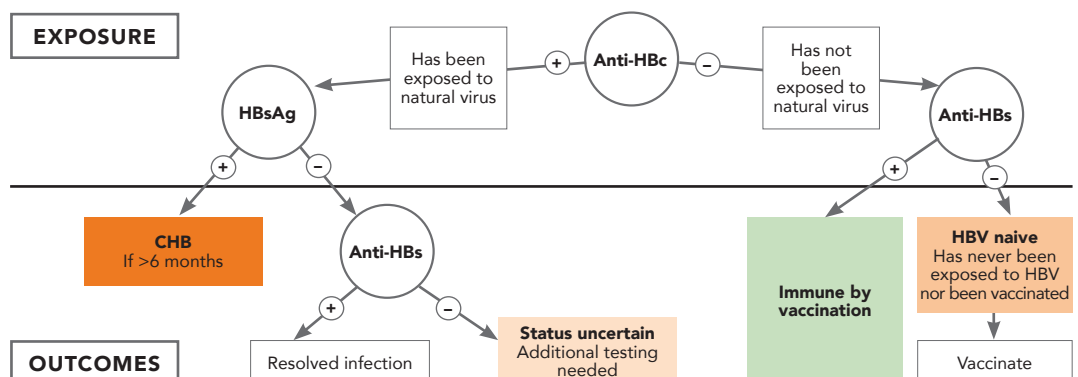
The following 3 hep B tests should be completed at the same time to determine susceptibility; immunity through vaccination or resolved infection; or current infection:

HBsAg = hepatitis B surface antigen

Anti-HBs = hepatitis B surface antibody

Anti-HBc = hepatitis B core antibody.

Adapted from tool developed by Dr Ross Drewe, 2015



INITIAL ASSESSMENT OF CHRONIC HEPATITIS B IN PRIMARY CARE

It is essential to assess the phase of hepatitis B for all people who are HBsAg positive and undertake an assessment of liver health. The presence of other liver co-morbidities should also be investigated e.g. fatty liver disease.

TEST	WHAT THE RESULT INDICATES & COMMENTS
Hepatitis B e antigen (HBeAg) / Hepatitis B e antibody (anti-HBe)	HBeAg +ve / anti-HBe -ve = Phase 1 or 2 HBeAg -ve / anti-HBe +ve = Phase 3 or 4
HBV DNA viral load	Quantifies amount of virus in the blood
LFTs, INR, FBC	Assesses inflammatory activity and synthetic function in the liver
Hepatitis C, hepatitis D, hepatitis A (total), HIV	Presence of co-infection. Vaccinate for hepatitis A if susceptible
Abdominal ultrasound, alpha fetoprotein	Assesses for the presence of liver cancer. Alpha fetoprotein also assists in identifying the presence of a flare or cirrhosis.
FibroScan™	< 7.0 kPa = Absent or mild fibrosis 7.0 – 9.5 kPa = Significant fibrosis 9.5 – 12.5 kPa = Severe fibrosis > 12.5 kPa = Cirrhosis. A non-invasive assessment of liver stiffness, FibroScan™ is increasingly available with no out of pocket expenses in most tertiary hospitals, through some outreach services and in some regional centres.

MANAGEMENT OF CHRONIC HEPATITIS B IN PRIMARY CARE

PHASE 1 (IMMUNE TOLERANT):

High HBV DNA viral load (>20,000 IU/mL), normal LFTs, HBeAg +ve, anti-HBe -ve

- LFTs, FBC, INR, HBeAg/anti-HBe: test every 6-12 months
- Annual HBV DNA viral load (only Medicare rebatable once per year if not on treatment)
- Liver cancer screening, according to guidelines.

PHASE 3 (IMMUNE CONTROL):

Low HBV DNA viral load (<2,000 IU/mL), normal LFTs, HBeAg -ve, anti-HBe +ve

- LFTs, FBC, INR: test every 6-12 months
- Annual HBV DNA viral load (only Medicare rebatable once per year if not on treatment)
- Liver cancer screening, according to guidelines.

PHASE 2 (IMMUNE CLEARANCE) & PHASE 4 (IMMUNE ESCAPE):

Phase 2: High and fluctuating HBV DNA viral load, abnormal LFTs, HBeAg +ve, anti-HBe -ve

Phase 4: HBV DNA viral load >2000 IU/mL, abnormal LFTs, HBeAg -ve, anti-HBe +ve

- Patients should be referred to an accredited GP prescriber or specialist for treatment consideration
- While on treatment, the prescriber should lead the monitoring and it should involve testing 3 monthly for the first year, followed by 6 monthly ongoing once fully suppressed
- Liver cancer screening, according to guidelines.

LIVER CANCER SCREENING

Regardless of the CHB phase, all patients who meet the liver cancer (hepatocellular carcinoma (HCC)) screening guidelines should receive an abdominal ultrasound and alpha fetoprotein test every 6 months.

LIVER CANCER SCREENING GUIDELINES FOR PEOPLE WITH HEPATITIS B:

Africans >20 years

Asian men >40 years

Asian women >50 years

Aboriginal and Torres Strait Islander people >50 years

People with cirrhosis

People with a family history of liver cancer

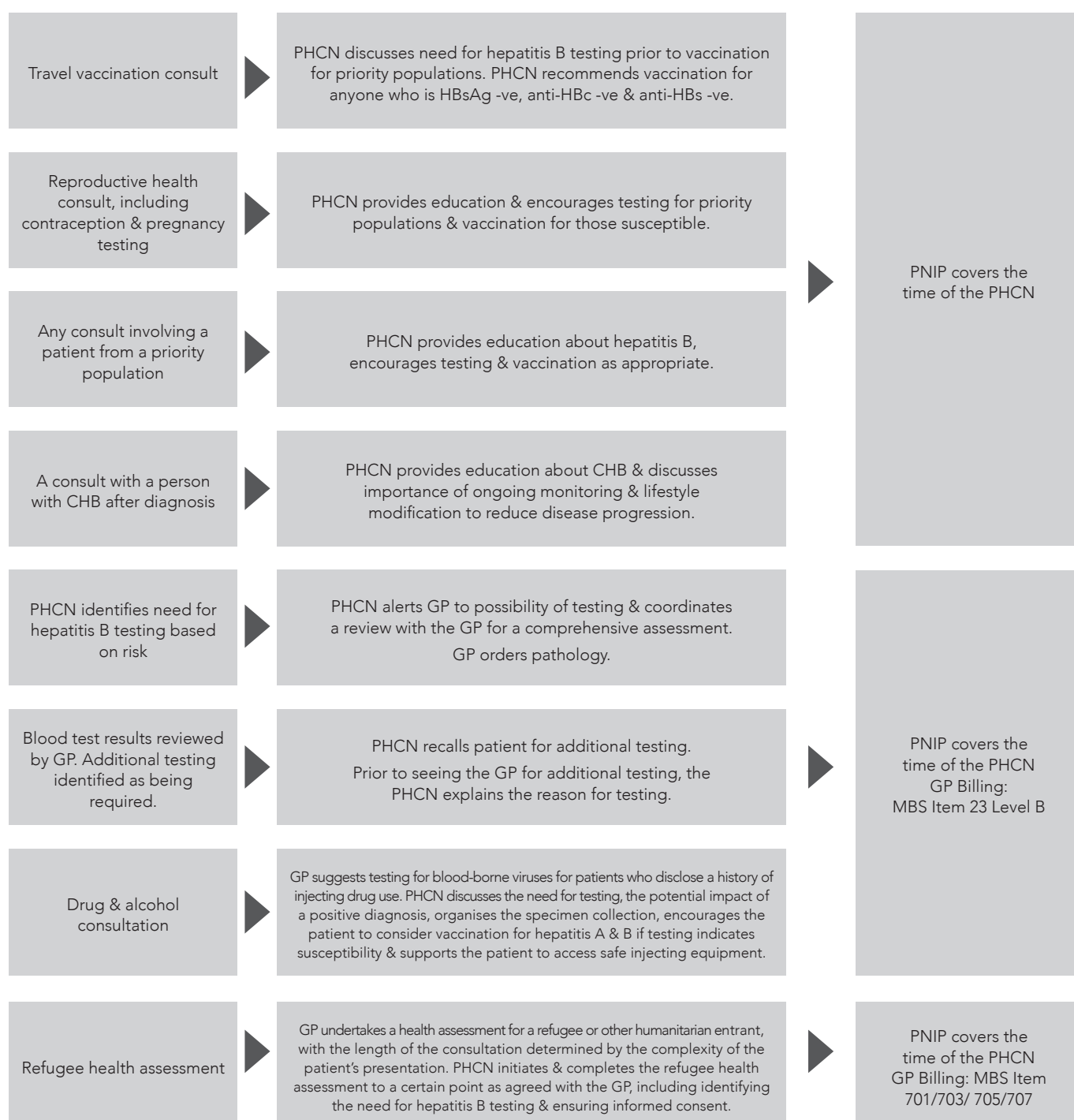
OPPORTUNITIES FOR PHCNs TO ENGAGE IN HEPATITIS B CARE

PHCN involvement in hepatitis B prevention, testing, management and treatment should always be guided by the individual nurse's scope of practice and the context of the setting in which care is provided.

Medicare item numbers and billing options suggested below may be used where appropriate, following guidelines provided by Medicare. Nurse Practitioners (NP) working in primary care would use the time based item numbers as appropriate for an NP consultation.

OPTION 1: Eligible practices use the Practice Nurse Incentive Program (PNIP) to cover the consultation.

The PNIP was established to allow for an expansion in the PHCN role. The PHCN can have an important role in supporting hepatitis B prevention testing, management and care. Examples of opportunities for hepatitis B to be incorporated into consultations include:



OPTION 2: Practices utilise the appropriate GP or PHCN consultation item number, in addition to the PNIP for eligible practices.

The PHCN, in consultation with the GP, provides hepatitis B management and care. Examples of opportunities for hepatitis B to be incorporated into consultations include:



OPTION 3: Practices charge a fee for a PHCN consultation.

The Practice charges a set fee for an appointment with a PHCN. This appointment could focus on chronic disease management and lifestyle modification aspects of hepatitis B care, contact tracing, adherence support, education and/or health promotion.

REFERENCES

- Allard NL, MacLauchlan JH, Cowie BC. The cascade of care for Australians living with chronic hepatitis B: measuring access to diagnosis, management and treatment. *Aust N Z J Public Health*. 2015;39(3):255-259.
- ASHM. B Positive, All You Wanted to Know About Hepatitis B: A Guide for Primary Care Providers. ASHM; Sydney: 2014. Available at www.ashm.org.au/resources
- ASHM. Decision-making in HBV. ASHM; Sydney: 2013. Available at www.ashm.org.au/resources
- ASHM. Hepatitis B and Primary Care Providers. ASHM; Sydney: 2012. Available at www.ashm.org.au/resources
- ASHM. National Hepatitis B Testing Policy. ASHM; Sydney: 2014. Available at <http://testingportal.ashm.org.au/hbv>
- Australian Government Department of Health. National Immunisation Program Schedule (from 1 July 2013). 2015. Available at www.immunise.health.gov.au [Accessed June 2015].
- Australian Government Department of Health. The Australian Immunisation Handbook (10th ed.). Commonwealth of Australia; Canberra: 2013
- Australian Nursing and Midwifery Federation (ANMF). ANMF National Practice Standards for Nurses in General Practice. ANMF; Melbourne: 2014. Available at www.anmf.org.au
- Centers for Disease Control and Prevention. Chapter 3: Infectious diseases related to travel. *Travelers' Health*. CDC: 2014. Available at wwwnc.cdc.gov/travel/yellowbook/2014 [Accessed June 2015]
- MacLachlan JH, Allard NL, Cowie BC. Disparities in hepatitis B vaccine funding in Australian jurisdictions: limiting access for priority populations. *Aust N Z J Public Health*. 2015; 39(2):192.
- MacLauchlan JH, Allard N, Towell V, Cowie B. The burden of chronic hepatitis B virus infection in Australia, 2011. *Aust N Z J Public Health*. 2013; 37(5):416-422.
- Medicare Benefits Schedule (MBS). MBS Online. Available at www.mbsonline.gov.au [Accessed June 2015].

TYPES OF HEPATITIS B CARE DELIVERY

TYPES OF CARE	CHARACTERISTICS OF HEPATITIS B & ASSOCIATED FACTORS	COMMENTS
PHCN or GP-led care for monitoring	Phase 1 (immune tolerant) Phase 3 (immune control)	Regular hepatitis B monitoring & liver cancer screening for eligible patients.
Shared care between specialist* & GP (+/-PHCN supporting care)	Patients in all phases of disease	Collaborative approach through an established relationship between specialist* & primary care. Roles will vary depending on relationship, capacity, individual clinical context & patient needs. Specialist-led* treatment when appropriate, with some monitoring conducted by the GP. PHCNs can support monitoring, lifestyle modification & the patient's understanding of CHB.
GP prescribing treatment (+/- PHCN supporting care)	Phase 2 (immune clearance) Phase 4 (immune escape)	GPs can be accredited community s100 prescribers managed under the Hepatitis B Prescriber Program, allowing them to initiate treatment & provide maintenance scripts. GPs may seek a specialist's* opinion at baseline or in complex situations. PHCNs can support adherence, monitoring, lifestyle modification factors, education & the care coordination between patients, GPs & other health professionals.
Specialist-led care*	Complex patients, children, people who are immunosuppressed, people with co-infection, pregnant women, patients who prefer specialist* care, people with cirrhosis, advanced liver disease &/or liver cancer	For some complex co-morbidities & patients, specialist-led* care is recommended. Some patients prefer specialist-led* care & choose this option. The GPs & PHCNs may have minimal involvement in CHB & focus on other health conditions.
Integrated care	Patients in all phases of disease	Integrated care models are becoming more common & involve a nurse who coordinates the care between specialists* & primary care. The level of involvement of the different health professionals varies between clinics & patients. Allows for flexible, responsive option for care delivery.

* Specialists may be based in a hospital or community setting and may be Physicians with Infectious Diseases, Gastroenterology, Hepatology, General or Sexual Health training.

Elements of this resource were based on *Sexual Health Care in General Practice by Primary Health Care Nurses*. Developed by NSW STI Programs Unit; 2014. Available at www.stipu.nsw.gov.au
Content adapted from *Hepatitis B and Primary Care Providers & B Positive, All You Wanted to Know About Hepatitis B: A Guide for Primary Care Providers*. Developed by ASHM. Available at www.ashm.org.au/resources

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ADDITIONAL RESOURCES

ASHM. B Seen, B Heard: Hepatitis B from our Perspective (DVD). ASHM; Sydney: 2013. Available at www.ashm.org.au/resources

ASHM. Hepatitis B Factsheets for People Newly Diagnosed (multiple languages).

ASHM; Sydney: 2012. Available at www.ashm.org.au/resources

ASHM. Hepatitis C: Your Crucial Role as a Primary Health Care Nurse. ASHM; Sydney: 2015. Available at: www.ashm.org.au/resources

ASHM. eLearning Education. ASHM. Available at <https://lms.ashm.org.au>

Australian Commission on Safety & Quality in Healthcare. Health Literacy. 2014. Available at www.safetyandquality.gov.au

Australasian Hepatology Association (AHA). Consensus-based Nursing Guidelines for the Care of Patients with Hepatitis B, Hepatitis C, Advanced Liver Disease and Hepatocellular Carcinoma. AHA; Melbourne: 2012. Available at www.hepatologyassociation.com.au

Australian Primary Health Care Nurses (APNA). STI and BBV eLearning Module. Available at <https://apna.elearning.com.au>

Hepatitis Australia – provides national leadership and advocacy on viral hepatitis and support partnerships. Available at www.hepatitisaustralia.com

Hep B Help – independent website which aims to assist GPs in the further investigation and management of patients diagnosed with chronic hepatitis B. Available at www.hepbhelp.org.au

Hepatitis Infoline (National) - 1300 HEP ABC (1300 437 222) diverts to information and support lines at your local state and territory hepatitis organisations

Menzies School of Health Research. Hepatitis B Story – visual, interactive app in English and Yolngu matha. Available at www.menzies.edu.au/page/Resources/Hep_B_Story

National Patient Safety Foundation. Ask Me 3. Available at www.npsf.org

St Vincent's Hospital. The Hepatitis B Story – teach-back tool for clinicians, booklets/videos in 5 languages. Available at www.svhm.org.au/gp/clinics/Pages/gastroenterology.aspx

ASHM EDUCATION AND TRAINING

There is a wide range of education, resources and support available from ASHM and affiliated organisations to support PHCNs to build their skills, knowledge and confidence in hepatitis B care. www.ashm.org.au



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