Nurses play an integral role in the management and care of people with, and affected by, hepatitis C. They provide education about: the disease and its prevention; lifestyle and psychosocial factors; testing and diagnosis; support during treatment; resources and referral to support services.

This profession-based booklet is aligned with the Australasian Hepatology Association’s Consensus-based Nursing Guidelines for the Care of Patients with Hepatitis B, Hepatitis C, Advanced Liver Disease and Hepatocellular Carcinoma and the Australasian Hepatology Association’s Practice Standards for the Hepatology Nurse. It also references the Australian recommendations for the management of hepatitis C virus infection: a consensus statement (Consensus Statement).

Chronic hepatitis C virus (HCV) infection is a major public health challenge for Australia, affecting approximately 230,500 people who are at risk of progressive liver fibrosis leading to cirrhosis, liver failure and hepatocellular carcinoma (HCC). HCV infection is the most common cause of liver disease requiring liver transplantation in Australia. The burden of liver disease due to HCV is projected to triple by 2030. However, HCV infection is curable, and viral eradication is associated with multiple clinical benefits, including improvement in quality of life, loss of infectivity, regression of cirrhosis, a reduced risk of liver failure and HCC and a reduction in mortality. Until recently, the treatment of HCV involved interferon-based therapy, which had limited efficacy and was poorly tolerated. The introduction of direct-acting antiviral (DAA) therapies that are highly effective and well tolerated is a major advance in the management and care of HCV. All Australians living with HCV should now be considered for antiviral therapy.
Nurses and Hepatitis C

The virus
The hepatitis C virus is a ribonucleic acid (RNA) virus belonging to the flavivirus family.³ There are seven different HCV genotypes (GT 1-7) but the most common genotypes in Australia are GT 1 (50-55%; 1a:1b =2:1) and GT 3 (35-40%). As current approved treatment regimens for HCV infection are genotype-specific, HCV genotyping is necessary before treatment initiation.⁴

Natural history
Hepatitis C affects people in different ways. The vast majority of people with HCV are asymptomatic during the initial (acute) phase of infection. However, for those who are symptomatic, common symptoms include fatigue, nausea, headaches, depression, upper abdominal pain, intolerance to fatty foods and alcohol, and occasionally, jaundice. During the acute phase, levels of the virus in the blood rise dramatically until the body’s immune response starts producing antibodies. Acute infection progresses to chronic disease in up to 75% of cases, and these people are at risk of progressive liver fibrosis leading to cirrhosis, liver failure and hepatocellular carcinoma (HCC). Around 20%–30% of people with chronic HCV infection will develop cirrhosis, generally after 20–30 years of infection.

A patient has chronic HCV infection if they have documented infection for more than six months. This means a positive polymerase chain reaction (PCR) test 6 months or more after the initial infection.

Risk factors for transmission of hepatitis C
HCV transmission occurs through blood-to-blood contact.⁶ The blood of a person with HCV needs to enter the bloodstream of another person in order for viral transmission to occur. In Australia the most common risk factor for HCV infection is reusing injecting equipment.

Table 1: How is hepatitis C different from hepatitis A and B?

<table>
<thead>
<tr>
<th>Virus Type</th>
<th>Hep A (HAV)</th>
<th>Hep B (HBV)</th>
<th>Hep C (HCV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile</td>
<td>Usually a mild disease that does not become chronic.</td>
<td>Can be mild, severe, acute or chronic. Less than 5% of adult HBV infections become chronic.</td>
<td>Hepatitis C is likely to become a chronic condition in 70-80% of infected people, with 20-30% developing severe liver disease.</td>
</tr>
<tr>
<td>Transmission</td>
<td>Orally via food and/or water contaminated with faecal particles from an infected person. Occasionally via oral/anal sexual contact. Rarely through blood-to-blood contact.</td>
<td>Most cases of chronic HBV infection worldwide occur through mother-to-child transmission. In Australia, most new cases of HBV are acquired through sexual contact with an infected person. Also transmitted through contaminated injecting equipment.</td>
<td>Transmitted when infected blood enters the bloodstream of another person (blood-to-blood contact). Unlike hepatitis B, it is very rare for hepatitis C to be transmitted by sexual activity (although there are higher levels of sexual transmission in HIV positive men who have sex with men (MSM)) or through mother-to-child transmission. Hepatitis C is not transmitted by food or water contamination.</td>
</tr>
<tr>
<td>Vaccination</td>
<td>Yes</td>
<td>Yes</td>
<td>None for HCV. To prevent the complications of co-infection, people with hepatitis C should be vaccinated against hepatitis A and B.</td>
</tr>
<tr>
<td>Treatment</td>
<td>No specific treatment.</td>
<td>Antiviral therapy and post-exposure prophylaxis (PEP) are available.</td>
<td>Antiviral therapy.</td>
</tr>
<tr>
<td>Notifiable</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 2: Populations at high risk of contracting HCV infection⁷

- People who inject drugs or who have ever injected drugs
- Sex workers
- People in custodial settings
- People with tattoos or body piercing
- People who received a blood transfusion or organ transplant before 1990
- Children born to HCV-infected mothers
- Sexual partners of an HCV-infected person
- People living with HIV or hepatitis B virus
- People with evidence of liver disease
- People who have had a needlestick injury
- Migrants from high-prevalence regions including Egypt, Pakistan, Mediterranean and Eastern Europe, African and Asia
The role of sexual transmission, if any, is still controversial. The current evidence suggests a very low rate of sexual transmission may occur if there is blood-to-blood contact during sexual activity or other high-risk behaviours. There is also evidence that transmission rates may be higher if the patient is co-infected with human immunodeficiency virus (HIV) or other sexually transmissible infections (STIs).

The risk of perinatal transmission during delivery of HCV varies from 0.1-1.1% and averages 5%. Coinfection with HIV increases this risk two-fold.

Household transmission (e.g. via the sharing of razors, toothbrushes) is considered rare. Nevertheless, where the possibility of blood-to-blood contact exists, these items should not be shared.

There is NO risk of viral transmission of hepatitis C through the sharing of cups and plates, hugging and other such personal contact.

Hepatitis C testing

Obtaining consent for testing

Nurses and other primary health care professionals play an important role in diagnosing hepatitis C. All testing for hepatitis C should be done after the patient has provided their informed consent. Professional, accredited interpreters may be required to ensure the patient understands the processes and implications of testing.

Thorough test discussions in a primary health care setting are a valuable educational opportunity to help minimise the transmission of HCV in the community. The National HCV Testing Policy, (http://testingportal.ashm.org.au/hcv) provides details of indications for testing and links to related resources, guidelines and policies.

Conveying test results

The person who requests the test is responsible for ensuring the delivery of the test result. There must be consideration given to the implications of the result, whether further testing is required, and addressing any issues the result raises.

Gaining informed consent

This discussion should include information on:

- Risk assessment and the reason for testing;
- How to reduce the risk of becoming infected or infecting others; for example, information about safe injecting when this is relevant;
- Possible need for other blood-borne virus (BBV) and/or STI screening;
- The window period;
- Confidentiality, disclosure and privacy;
- The testing process, including how results are to be provided;
- What happens to the test results (i.e. the notification process);
- Seeking informed consent for the test to be conducted;
- Assessment of the person’s preparedness to be tested;
- What a negative and positive result means, including basic printed information about hepatitis C; and
- Assessment of support mechanisms while waiting for the test result and/or if the result is positive.

Negative results

If the test result is negative for HCV, the decision on how to give the result (e.g. in person, by phone or text etc.), will depend on the clinical judgement of the person responsible for delivering it. This assessment should consider the psychological ability of the person tested to deal with the outcome of the result. If the test result is negative, a post-test discussion is an opportunity to reinforce harm-reduction strategies and education about safe injecting behaviours.

Positive results

A positive test result indicating current HCV infection will have a significant impact on the person receiving it. A positive test result should always be given in person, in private and with sensitivity to the gender, culture, behaviour, language and literacy level of the person who has been tested.

Practice Tip

Make sure you have culturally relevant written material and contact details for support services when giving a positive test result. Refer patients to Hepatitis Australia for the National Infoline (1800 437 222), fact sheets and other downloadable resources.

Conveying a positive test result

If the test result is positive, discussion should include (at appropriate time intervals):

- Immediate needs and support, including written referral information;
- Safe behaviours – education, information and support, including needle and syringe programs if appropriate;
- Information about legal requirements for disclosure and how to disclose to family and friends;
- Help with managing or understanding strong emotions, feelings, reactions and changes;
- Options in drug treatments and clinical management;
- Support for referral to ongoing counselling or therapy if required;
- Support for referral to complementary/alternative management options;
- Information about ways to deal with loss and grief, depression, anger and anxiety;
- Strategies for managing hepatitis C which are flexible and appropriate to the person’s needs; and
- Legislative requirements (notification, contact tracing, storage and coding).

Initial assessment

If someone is considered at risk of infection from HCV, (see Table 1), a HCV antibody (anti-HCV) test should be performed. A positive anti-HCV test result indicates exposure to the hepatitis C virus at some time in that person’s life, but does not prove current infection. Anti-HCV remains positive for life even after clearance of the virus whether spontaneously or after treatment. HCV antibodies do not protect against re-infection in the future.

Current HCV infection is detected through a polymerase chain reaction (PCR) assay for HCV RNA. A positive HCV RNA test documents viraemia and therefore indicates current infection. HCV PCR tests can either be qualitative (HCV detected or not detected) or quantitative (amount of virus circulating in the blood).

The presence of a positive antibody test and an elevated ALT (alanine aminotransferase) level, particularly in the setting of risk factors for transmission, is highly suggestive of current HCV infection, but the PCR assay must always be used to confirm HCV status – see figure 3.
Table 3: Diagnostic tests and their use

<table>
<thead>
<tr>
<th>Test</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCV antibody (HCV Ab)</td>
<td>If positive, shows evidence of exposure to the virus. Importantly, it does NOT provide immunity against reinfection with the hepatitis C virus. Remains positive for life, even following successful treatment.</td>
</tr>
<tr>
<td>HCV qualitative PCR</td>
<td>If detected, shows active or current infection (i.e. viraemia).</td>
</tr>
<tr>
<td>HCV genotype and subtype</td>
<td>Genotype determines the length and type of treatment.</td>
</tr>
<tr>
<td>HCV quantitative PCR (viral load)</td>
<td>Determines level of virus. Does not correlate with liver disease progression risk. It has clinical implications in terms of treatment monitoring and response.</td>
</tr>
</tbody>
</table>

Interpreting HCV testing

Figure 3: Interpreting hepatitis C tests

Cleared infection

People found to be HCV antibody positive but HCV RNA negative should be reassured that while they have been exposed to the HCV in the past, they have cleared the infection either spontaneously or through treatment.

It is recommended that people who have tested positive anti-HCV and no detectable HCV RNA have repeat PCR testing for detection of HCV reinfection on an annual basis, if there is ongoing risk behaviour such as injecting drug use.

On-treatment monitoring recommendations

Frequent monitoring of patients taking DAA regimens is not usually required, unless the patient has a significant comorbidity, advanced liver disease or is at risk of non-adherence. Monitoring may be required for the small number of patients on interferon and/or ribavirin containing treatments. The Australian recommendations for the management of hepatitis C virus infection: a consensus statement 2016 (Consensus Statement - available at www.hepcguidelines.org.au) has full details of HCV treatments and monitoring recommendations.

Identifying those most at risk of disease progression

One of the most important things to establish in monitoring a person with chronic hepatitis C infection is whether or not they are likely to develop serious liver damage. The following factors must be assessed and documented as there is very good evidence that they are associated with higher risk of advanced liver disease or cirrhosis. The following are factors associated with increased risk of liver disease progression:

- Excessive alcohol intake (more than 4 standard drinks/day);
- Duration of infection (over 20 years since exposure);
- Coinfection with HIV or HBV;
- Stage of fibrosis on FibroScan® or biopsy, where performed;
- Metabolic risk factors including metabolic syndrome, obesity, insulin resistance and diabetes;
- Serological indicators: low albumin, low platelets, raised bilirubin and raised INR;
- Male gender.

NB: Most people over 40 years of age with chronic hepatitis C infection in Australia are likely to have been infected for more than 15 or 20 years. They should be more strongly considered for treatment assessment. Liver biopsy is rarely used to stage fibrosis. It is no longer a specific requirement for treatment.

The Consensus Statement recommends formal evaluation for liver fibrosis and cirrhosis with a non-invasive test before treatment. FibroScan® is the most common method used for diagnosing cirrhosis.

FibroScan® is a device which assesses liver elasticity or stiffness through transient elastography. It is non-invasive and gives a rapid reading. The device has been validated in identifying mild fibrosis (F0-F1) and cirrhosis (F4) but provides no information on the degree of current inflammation. Fibroscan assessment® is available in most tertiary liver centres and some HCV-experienced GP clinics. New models of care recommend increasing the availability of FibroScan outside tertiary centres.

There are a number of other non-invasive tests available such as serum biomarkers for liver fibrosis. The most common tests include APRI, FibroGENE and Hepascore. For more detailed information go to the Consensus Statement - Supplementary table 1. Non-invasive serum markers for assessing liver fibrosis stage currently available in Australia.

Treatment for hepatitis C

All Australians living with HCV should be considered for antiviral therapy.

Aims of treatment

The aims of antiviral therapy in HCV are to:

- Eradicate the infection (cure)
- Prevent disease progression
- Improve liver histology
- Improve survival
- Improve symptoms
- Reduce stigma

Treatment of chronic HCV via Direct-Acting Antivirals (DAAs)

New DAA medicines are available through the PBS for all people living with hepatitis C over the age of 18 and who have a Medicare card. However, the particular combination of medicines used will depend on a range of individual factors.
The DAA medicines available on the PBS since 1 May 2016 include:

- Daklinza® (daclatasvir)
- Harvoni® (sofosbuvir + ledipasvir)
- Sovaldi® (sofosbuvir)
- Viekira Pak® (paritaprevir + ritonavir + ombitasvir + dasabuvir)
- Viekira Pak RBV® (paritaprevir + ritonavir + ombitasvir + dasabuvir + ribavirin)

Following a clinical assessment, these medicines are used independently or in combination with other medicines depending on the person's particular situation. For people with genotype 1 and 3, who make up about 90% of chronic HCV infections in Australia, the use of DAA regimens shortens the duration of treatment to between 12 to 24 weeks. For a select cohort of genotype 1 patients, who do not have cirrhosis and are treatment naive with baseline viral load of <6 million IU/mL, can be treated with 8 weeks of Harvoni. Treatment protocols will depend upon: the patient's genotype, viral load, whether they are treatment naive or experienced, whether they have cirrhosis, presence or absence of liver decompensation, prior treatment history, the potential for drug-drug interactions and any comorbidities. For now, treatment for people with genotypes 4, 5 and 6 will still require a combination of Sofosbuvir in conjunction with pegylated interferon (PegIFN) and ribavirin, but for a shorter duration than before.16

The Consensus Statement has detailed information about DAAs and all the different regimens currently recommended for each HCV genotype including those that still involve a combination of PegIFN/ribavirin.

As more DAs become available, refinements to the S85 and S100 treatment recommendations will be made. Check with PBS guidelines (pbs.gov.au) for the latest treatment availability. Check the Consensus Statement (www.hcvguidelines.org.au) for the latest treatment protocols.

**Treatment response**

The Sustained Virological Response (SVR) with current DAA treatments has significantly increased. SVR is defined as undetectable HCV RNA 12 weeks after the completion of therapy. SVR 12 is also regarded as a "cure" and 90-95% who complete a DAA treatment regimen fall into this category.17 Patients with genotype 3, who are treatment experienced and have cirrhosis, are likely to have a lower rate of SVR. The benefits of achieving an SVR include a reduced risk of liver disease progression for people at all stages of the disease. In addition, there have been reports of significant regression of fibrosis, even in people with cirrhosis.

**Side effects of current treatments**

The side effect profile with DAAs is considerably less than with PegIFN therapy. The main side effects may include:

- Headache
- Diarrhoea
- Tiredness
- Nausea
- Anaemia (ribavirin regimes only)
- Rash (ribavirin regimes only)

Many people do not experience any of these symptoms.

The side effect profile (adverse effects) for PegIFN is considerably more extensive. Refer to specific Consumer Medicine Information about PegIFN for a more comprehensive list of possible side effects.

**Drug-drug interactions**

Drug–drug interactions are a potential issue for all DAA treatment regimens. Important drugs to consider for potential interactions with DAAs include proton pump inhibitors, statins, St John’s wort, antimicrobials, anticonvulsants and related agents, amiodarone, immunosuppressive agents, and antiretroviral agents.

The University of Liverpool’s Hepatitis Drug Interactions website (www.hep-druginteractions.org) provides a comprehensive list of drugs that have no interaction, drugs with potential interactions that can be used with caution and drugs that are contraindicated in combination with DAA regimens.

**Pregnancy and hepatitis C**

**Conception**

HCV does not affect the sperm or ova therefore there will be no adverse effect from HCV on the baby after conception.

**Pregnancy**

The overall risk of HCV foetal transmission is around 5%, where there are detectable levels of HCV virus present in the blood (PCR positive). There is an increased risk to the baby during pregnancy if:

- the mother is in the acute stage of hepatitis C infection; or
- the mother is co-infected with HIV and/or hepatitis B.

Current research regarding when transmission from mother to baby may occur is inconclusive. There is evidence that transmission may occur during pregnancy, while other studies indicate this may occur at the time of birth. "Standard Precautions" during birthing procedures is paramount. There should be a pre-agreed obstetric plan in place and adhered to for the health of the mother and the baby. It is paramount that HCV is not the focus during the birth.

The change in a pregnant woman's hormones can affect the liver, particularly if she has cirrhosis. This stage of advanced liver disease may cause decompensation.

**Postnatal**

Women may experience vaginal bleeding for up to six weeks following birth, and the hepatitis C virus can be detected in this blood. Therefore, all standard precautions should be taken with regard to possible transmission risks as with all potential blood-exposures.

All babies born to HCV positive mothers will test positive to HCV antibodies. This is due to the mother's antibodies crossing the placenta into the baby's bloodstream. The baby will remain antibody positive for approximately 18 months, after which time antibodies are cleared from the body if the baby is not infected and the baby will test negative to the virus. If the baby continues to test positive for the antibodies, specialist advice should be sought.

**Breastfeeding**

HCV is not detected in breast milk. HCV positive women should be encouraged to breastfeed where possible except if the mother has cracked or bleeding nipples. The National Health and Medical Research Council (NHMRC) guidelines recommend women express and discard their milk until the nipples heal.

**Pregnancy and postnatal HCV treatment**

DAA regimens are classed as Category B drugs therefore are not recommended for pregnant women. DAA regimens that have Ribavirin (Category X) with or without PegIFN are contraindicated in pregnancy.1
Men and women of childbearing age should avoid pregnancy while on DAAs. Contraception should be arranged for all women of childbearing age and a pregnancy test should be performed just prior to DAA treatment commencement. Those prescribed Ribavirin (Category X) need to consent to using double contraception both during and for 6 months after treatment.

Treatment of women with HCV who are breastfeeding is not recommended. It is not known whether DAAs and their metabolites are excreted in human breast milk. Mothers should be advised not to breastfeed if they are taking a DAA regimen.

**General management**

**Vaccination**

Co-infection with more than one hepatitis virus may be associated with more severe liver disease. Super-infection with hepatitis A infection in a person with chronic hepatitis B (HBV) or HCV, or acute HBV in a person with chronic HCV may precipitate the development of acute liver failure. In the long term, people with HBV and HCV co-infection tend to be more likely to progress to cirrhosis and to develop hepatocellular carcinoma. Under NHMRC immunisation guidelines, hepatitis A and B vaccinations are recommended for people with chronic liver disease.18

**Practice Tip**

Hepatitis A and B status should be assessed for all people with chronic HCV infection, and vaccination offered if required.

**Lifestyle factors**

The possibility of lifestyle modification needs to be discussed with the patient, particularly in relation to alcohol consumption and drug use.

**Alcohol**

The NHMRC Alcohol Guidelines: reducing the risk,19 recommend healthy adults have no more than 2 standard drinks on any day to reduce the lifetime risk of harm from alcohol-related disease or injury. For people living with HCV, ideally alcohol intake should be minimal. Excessive alcohol consumption (>40 g/day) is associated with higher risk of disease progression and a poorer response to treatment. Advice about alcohol intake should be tailored to the individual’s stage of disease and risk of progression. People with cirrhosis should be advised to avoid drinking alcohol altogether.20

**Practice Tip**

Advice to your patient about alcohol intake should be guided by the NHMRC Australian Guidelines to Reduce Health Risks from Drinking Alcohol2 and should be tailored to their stage of disease and risk of disease progression.

**Injecting drug use**

There will be individuals who continue to inject drugs and who require ongoing care and monitoring. They are not only at risk of super-infection with other HCV genotypes, but may be putting others at risk through injecting practices. Nurses play an important role in identifying those most at risk and providing harm reduction education to prevent reinfection and transmission to others.

**Practice Tip**

Counselling patients about the risks of HCV and the benefits of treatment, assisting in preparing the patient for HCV treatment and discussing other aspects of the person’s care, including options such as opiate substitution therapy and chronic disease self-management are all important roles for the nurse.

**Nutrition**

For most people with HCV, dietary recommendations are the same as for the general population.

Overweight or obese patients should be advised to aim for gradual weight reduction, particularly as there is increasing evidence of interaction between HCV, obesity and type 2 diabetes accelerating the progression of HCV. Those who have fatty liver disease need to avoid a precipitous fall in weight as this can induce deterioration in liver function.

**Practice Tip**

Cirrhotic patients should be offered assessment by a dietitian experienced in liver disease. Protein and calorie requirements are increased in cirrhosis and patients may be susceptible to electrolyte imbalances. Long periods of fasting should be avoided.

**Complementary therapies**

Drug-drug interactions are a potential issue for all DAA regimens, and this includes over the counter drugs, and herbal medicines. Some herbal medicines have reported hepatotoxicity and should be avoided (e.g. heliotropium, Kava kava, kombucha tea, mistletoe and valerian). There are others such as milk thistle that may have some benefits. However, all have the potential for adverse drug-drug interaction.

**Practice Tip**

DAA drug-drug interactions can be checked using on-line tools such as the University of Liverpool’s Hepatitis Drug interactions website: www.hep-druginteractions.org or download a free app: HEP ichart.

**Hepatitis C and HIV**

HIV/HCV co-infection is associated with an accelerated rate of progression to liver cirrhosis, increased risk of HCC and increased mortality.20 Ten percent of people with HIV are also living with HCV, which means HCV is a significant cause of co-morbidity in HIV. On the other hand, only about 1% of people living with HCV have HIV. The viruses are, however, very different.

There is no fundamental difference in the management of HCV in the presence of HIV. This means there is no change in DAA drug selection for HCV mono-infection and HCV-HIV co-infection individuals although the dosage and duration of treatment may differ. However, an assessment of interactions between DAAs and HIV antiretroviral (ART) drugs and other prescribed medications should be done prior to commencing treatment.

**Prevention**

Nurses play an important role in educating people living with hepatitis C about preventing transmission. Prevention messages may include the following:

- People who inject should use sterile needles and syringes and new injecting equipment every time they inject drugs (same applies for snorting devices). They should safely dispose of equipment and wash hands immediately before and after injecting. Needle and Syringe Programs can be used to obtain sterile injecting equipment, education and referral advice on drug use. More information on safe injecting is available from the Australian Injecting and Illicit Drug Users League (AIVL) National Hepatitis C Education Program (refer to Contacts section).
■ Use condoms or dental dams where there is the possibility of blood contact during sex.
■ When breastfeeding, milk from cracked or bleeding nipples should be expressed and discarded until the lesions are healed.
■ Do not share toothbrushes, razors, shavers, dental floss or barber’s haircutting equipment.
■ Do not share or reuse tattoo or body-piercing equipment (including inks).

Standard precautions
Standard precautions are recommended for the care and treatment of all patients, regardless of their perceived or confirmed infectious status, and in the handling of:
■ Blood (including dried blood);
■ All other body fluids, secretions and excretions (excluding sweat), regardless of whether they contain visible blood;
■ Non-intact skin;
■ Mucous membranes.
All blood and body fluids of all patients should be considered potentially infectious. Effective infection control for communicable diseases lies in the application of standard precautions when caring for all patients. These include aseptic technique, hand washing, use of appropriate Personal Protective Equipment (PPE) including gloves and eye protection, as well as appropriate reprocessing of instruments and equipment.

Needlestick injury
The risk of HCV transmission through a needlestick injury depends on the viral load of the source patient, the first aid administered and the instrument involved; for example, a hollow bore needle.

Practice Tip
In the event of an occupational needlestick injury or other exposure to blood or body fluids, follow all local infection control guidelines and procedures, including first aid measures and reporting and documenting the exposure. Seek testing and follow-up with an appropriate health professional.

Healthcare workers with hepatitis C
Healthcare workers must not perform exposure-prone procedures (EPPs) if they are known to be HCV RNA positive (by PCR or similar test). An EPP is any procedure in which there is a potentially high risk of blood-borne virus transmission from a healthcare worker to a patient during a medical procedure, such as any with sharp handheld instruments beneath the mucous membrane, or any procedure dealing with sharp pathology or bone spicules in a confined space or where visibility is poor.

If a HCV infected healthcare worker undergoes successful treatment, as indicated by two negative HCV RNA tests using different assays at least six months after completion of treatment, they may be considered to be cured and therefore non-infectious. They can perform EPPs if the advice from the treating clinician is that the likelihood of relapse is very low.

For more information regarding the rights and responsibilities of healthcare workers with hepatitis C, contact your state or territory’s health department, your local hepatitis organisation (refer to Contacts section of this booklet) or your state or territory’s Anti-Discrimination Board or Equal Opportunity Commission.

Discrimination
Australian Commonwealth law prohibits discrimination against someone with an infectious disease, unless the discrimination can be shown to be necessary to protect public health. In addition, most states and territories have laws in the same terms as the Commonwealth law.

Hepatitis C is a highly stigmatised condition, and many people living with the disease experience discrimination. The Anti-Discrimination Board of NSW found that discrimination in healthcare settings may take many forms and results in unfair treatment of patients.

Everyone living with HCV should have access to care and services regardless of transmission route, gender, ethnicity, culture, sexual orientation or lifestyle factors (such as drug use). Accurate non-judgemental language, combined with a concern for the patient’s welfare, helps to build trust with a patient.

Practice Tips
To build trust, AVOID terms such as: addict, addiction, drug abuse, drug abuser, drug addict and intravenous
USE terms such as: ‘drug use’ rather than drug abuse; ‘reused equipment’ rather than shared equipment; ‘new equipment’ rather than clean equipment; and ‘injecting’ rather than intravenous

Note: Injecting equipment covers more than just needles; it includes swabs, filters, water, tourniquets and syringes. When discussing drug use with the patient, ask about the presence of drug dependence or withdrawal symptoms, rather than addiction. Clarifying the meaning of any colloquial terms, or terms that you do not understand, facilitates more effective communication with patients.

Nursing models of care, support and monitoring
DAA treatment regimens are available in a number of different settings and no longer limited to tertiary settings or HCV experienced GPs with high caseloads. Because of the simplification of treatment and low side effect profile of DAAAs, the traditional on-going monitoring of most people with HCV will no longer be necessary.

Nurse-led models of care are offered by advanced practice nurses or nurse practitioners. These models may involve supervised practice within defined clinical protocols including education, clinical assessment, performance of diagnostic testing and monitoring of treatment.

It is recognised that the nursing models of care are underpinned by the Fourth National Hepatitis C Strategy 2014–2017. Nursing practice in the field of hepatology is also supported by the Australasian Hepatology Association’s (AHA) Consensus-based Nursing Guidelines for the Care of Patients with Hepatitis B, Hepatitis C, Advanced Liver Disease and Hepatocellular Carcinoma and the Australasian Hepatology Association’s Practice Standards for the Hepatology Nurse. Go to the AHA website (www.hepatologyassociation.com.au) for more details on these documents.

Outside this type of model of care, nurses remain crucial to the support of a person living with HCV. The management of any side effects, the giving of advice and education about HCV and lifestyle behaviours are key elements of this support and can make a difference in outcomes for a person living with HCV.
ASHM resources

Other ASHM resources, including the following hepatitis C related publications, are available from the ASHM website: www.ashm.org.au

Profession Based Booklets
- Antenatal Testing and Blood-Borne Viruses
- Dental and Orofacial Health and Hepatitis C
- Primary Care Providers and Hepatitis C

Factsheets
- Decision-Making in HCV
- Decision-Making in Viral Hepatitis Related Advanced Liver Disease

Monographs
- Co-infection: HIV & viral hepatitis – a guide for clinical management
- HIV, Viral Hepatitis and STIs: a guide for primary care providers (4th edition)

Nurses
- Hepatitis B: Your Crucial Role as a Primary Health Care Nurse
- Hepatitis C: Your Crucial Role as a Primary Health Care Nurse

Other
- Stigma and Discrimination around HIV and HCV in Healthcare Settings: Research Report

Online Resources
- Australasian Contact Tracing Guidelines: http://www.contacttracing.ashm.org.au

Online Learning Modules:
- Hepatitis C Nursing Concepts and Issues
- Hepatitis C Nursing Concepts and Issues for primary health care nurses
- New developments in Hepatitis C treatment and care

Available at: lms.ashm.org.au

ASHM offers training in HIV, viral hepatitis and sexually transmissible infections for general practitioners, nurses and allied health care workers around Australia.


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References are available on the downloadable version of this booklet at: www.ashm.org.au/resources

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Contacts

Australia and New Zealand hepatitis organisations

Hepatitis Australia
(Provides links to State and Territory Hepatitis Councils)
Tel: 1800 437 222 (or 1800 HEP ABC)
Web: www.hepatitisaustralia.com

The Hepatitis Foundation of New Zealand
Tel: 0800 33 20 10
Email: hepteam@hfnz.nz
Web: www.hepatitisfoundation.org.nz

Further resources and support information are available from the following organisations:

ASHM
Tel: 02 8204 0700
Web: www.ashm.org.au

Australian Drug Information Network
Tel: 03 9278 8100
Web: www.adin.com.au

Australian Government Department of Health
Freecall: 1800 020 103
Web: www.health.gov.au

Australian Drug Foundation
Tel: 03 9278 8100 or 1300 858 584 (Infoline)
Web: www.adf.org.au

Australian Liver Association, Gastroenterological Society of Australia
Tel: 1300 766 176
Web: www.gesa.org.au

Australian Hepatology Association
Web: www.hepatologyassociation.com.au

Haemophilia Foundation Australia (HFA)
Tel: 03 9885 7800
Web: www.haemophilia.org.au

Australian Society for Infectious Diseases (ASID)
Web: www.asid.net.au

National Centre for Education and Training on Addictions
Web: www.nceta.flinders.edu.au

Australian Injecting and Illicit Drug Users League (AIVL)
Tel: 02 6279 1600
Web: www.aivl.org.au

National Health and Medical Research Council
Tel: 13 000 64672
Web: www.nhmrc.gov.au

Pharmaceutical Benefits Scheme

Australian recommendations for the management of hepatitis C virus infection: a consensus statement 2016
Web: www.hepcguidelines.org.au

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Endorsed by:
Australasian Hepatology Association (AHA)
Australian Primary Health Care Nurses Association (APNA)
References


