Tips and Tricks for HCV treatment

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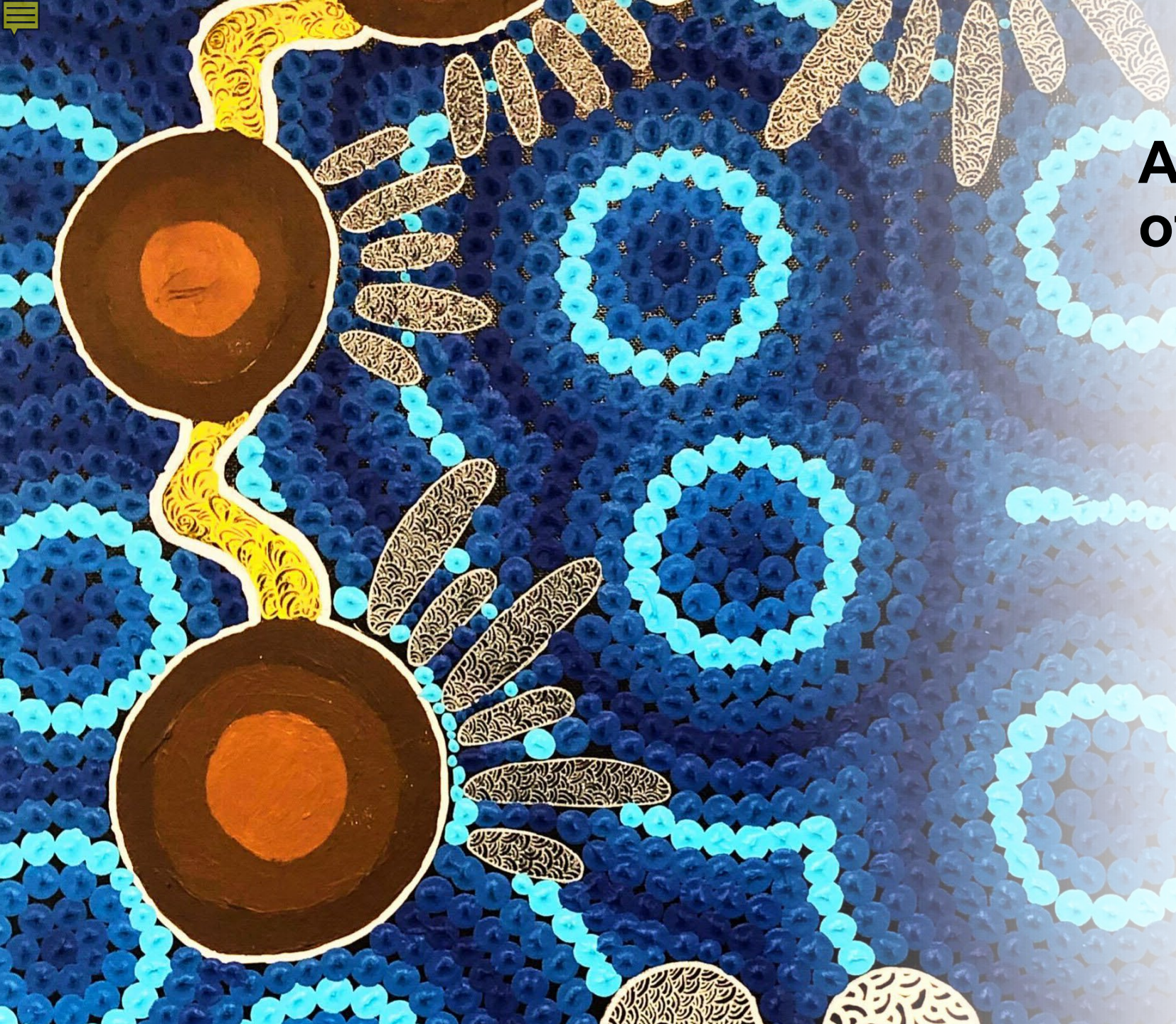


Acknowledgement of Country

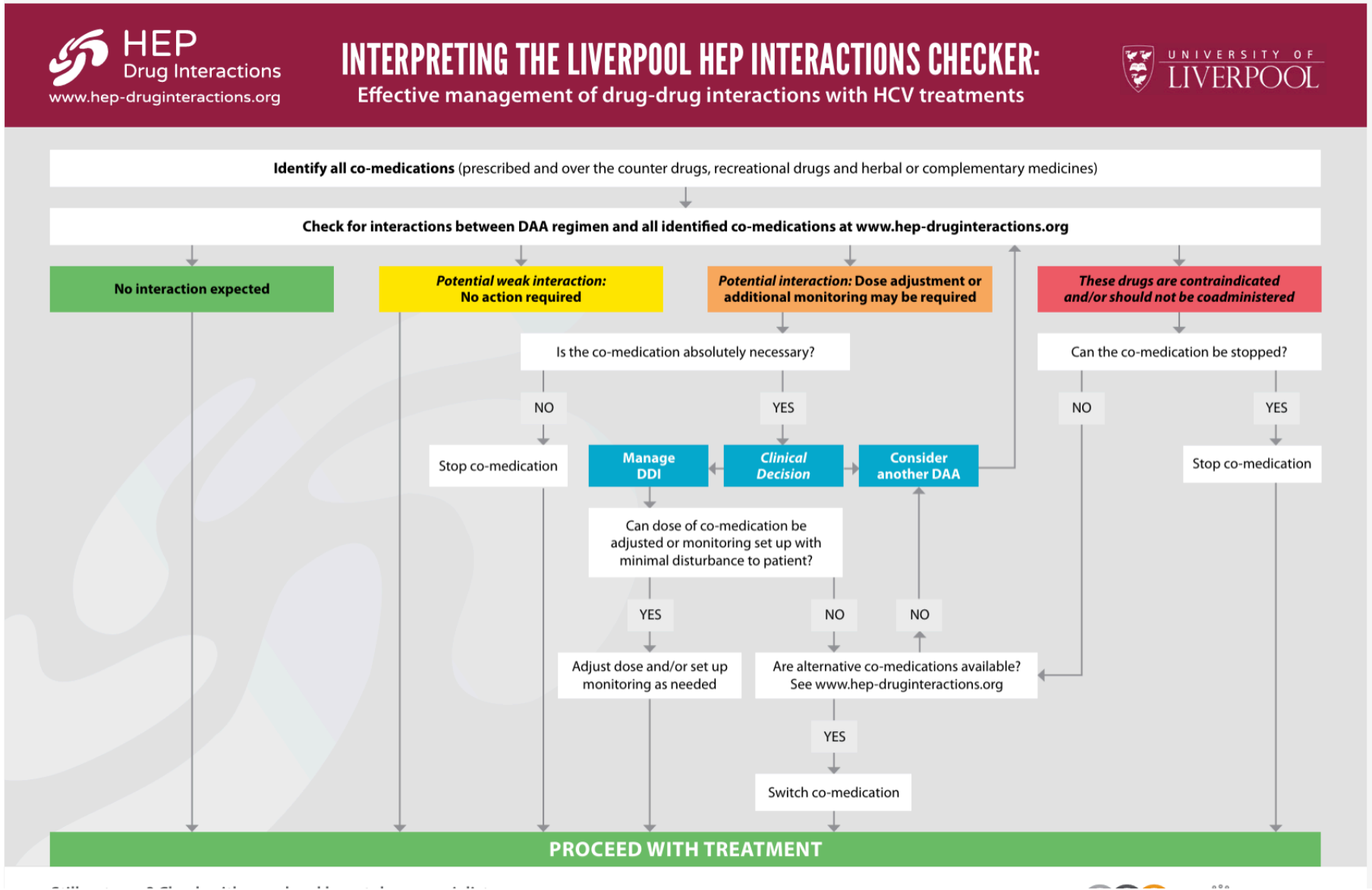
I would like to acknowledge the traditional custodians of this land and pay our respects to the Elders past, present and future for they hold the memories, the traditions, the culture and hope of their people.

hepatitiswa

Engagement

- Important to meet the patient where they are at – homeless, access to food, money for dispensing medication. Their priorities will be different to yours unless you ask.
- Stigma – acknowledge what they may feeling
- Ask about what they know – friends? Family? IFN?
- KEEP IT SIMPLE
  - Check DDI before you start the consult –
    - https://hep-druginteractions.org/checker
  - PRODA ready
  - Cirrhotic status ready – APRI/ FIB-4 –need AST and ALT/ FBC

Liverpool HEP



OPTIONS – Pan-genotypic options

- 2016 DAAs on PBS
- Pangenotypic regimens (sofosbuvir/velpatasvir or glecaprevir/pibrentasvir)
- Previously needed Gastro/ Hepatology sign off – now only need PBS authority required

- Among those receiving their first DAA treatment between 2016 and 2025, 39% were prescribed treatment by general practitioners (GPs), followed by 36% by gastroenterologists.
- In 2025, 49% of individuals were initiated on treatment by GPs, 14% by gastroenterologists, 12% by NPs, and 25% by other prescribers.

Table 2. Recommended pan-genotypic treatment protocols for people with hepatitis C virus (HCV) infection and compensated liver disease, including people with HCV–HIV coinfection*

Regimen	HCV genotype	Pill burden	Treatment duration	
			No cirrhosis	Cirrhosis
First-line regimens for people who are treatment-naive				
Sofosbuvir 400 mg, orally, daily + Velpatasvir 100 mg, orally, daily	1–6	1 pill daily	12 weeks	12 weeks
Glecaprevir 300 mg, orally, daily + Pibrentasvir 120 mg, orally, daily	1–6	Once daily (3 pills)	8 weeks	8 weeks*
Regimen for people who do not respond to first-line therapy due to virological failure				
Sofosbuvir 400 mg, orally, daily + Velpatasvir 100 mg, orally, daily + Voxilaprevir 100 mg, orally, daily	1–6	1 pill daily	12 weeks	12 weeks

HIV = human immunodeficiency virus.

* A treatment duration of 12 weeks may be considered for patients with compensated cirrhosis, at the discretion of the prescriber.

- Successful ~95%
- Minimal side effects – headache, fatigue, nausea, nasopharyngitis – not clinically significant vs placebo
- Link in with a community pharmacist
  - Can take 1 day to order in meds – deliver? Webster pack? Weekly dispense?
  - Support workers
- Not monitoring needed during treatment

- Set up reminders and recalls - ? Half way? Next dispense ? End of treatment check in
- SVR 4 – acceptable, book in advance – RECORD SVR

Special Populations

- Co-infections
  - HBV
    - Manage with specialist
    - HBsAg-positive should undergo HBV DNA testing beforehand
  - HIV –
    - Drug-drug interactions between ART-DAAs!, toxicities, pill burden, MDT care
    - HIV should be controlled before HCV treatment, particularly in those with advanced HIV immunosuppression inc. oppourtunistic infections
    - thrombocytopenia →may impact APRI/FIB-4, may not be portal HTN,
- Renal impairment
  - No dose adjustment is required for the current first-line DAA regimens
- Pregnancy
  - Trials ? 20/40 tertiary unit
  - NB contraception discussion – check DDI
- Breastfeeding
  - The safety of the listed DAA regimens during lactation has not yet been established, and treatment of women who are breastfeeding is therefore not recommended.

Missed Doses?

- **Dose interruptions ≤ 7 days:**
  - Resume DAA therapy and complete the original prescribed course

- **Dose interruptions > 7 days:**
  - Within the first 4 weeks of treatment: start again, prescribing a complete course of DAA therapy
  - Beyond Week 4 of treatment, test plasma or whole-blood HCV RNA, and:
    - if negative, repeat testing of plasma or whole-blood HCV RNA at Week 12 after treatment discontinuation to test for SVR
    - if positive, assume patient is a non-responder to first-line DAA therapy and retreat with sofosbuvir + velpatasvir + voxilaprevir for 12 weeks

What to do after?

C. Monitoring after SVR
SVR, no cirrhosis and normal LFT results (males, ALT ≤ 30 U/L; females, ALT ≤ 19 U/L): • Patients who are cured do not require clinical follow-up for HCV
SVR and abnormal LFT results (males, ALT > 30 U/L; females, ALT > 19 U/L): • Patients with persistently abnormal LFT results require evaluation for other liver diseases and should be referred for gastroenterology review. Investigations to consider include: fasting glucose level, fasting lipid levels, iron studies, ANA, ASMA, anti-LKM antibodies, total IgG and IgM, AMA, coeliac serology, copper level, caeruloplasmin level and a-1-antitrypsin level
SVR and cirrhosis: Patients with cirrhosis require long-term monitoring and should be enrolled in screening programs for: • HCC — liver ultrasound ± serum a-fetoprotein level • oesophageal varices — gastroscopy • osteoporosis — dual emission x-ray absorptiometry
SVR and risk of reinfection: • Patients with ongoing risk of HCV infection should have at least annual HCV RNA testing • Anti-HCV antibodies will remain positive in all people with prior exposure and this does not require repeated testing

- ASHM
  - Decision making guide in Hepatitis C
- Hep C guidlienes → https://hepcguidelines.org.au/
- Prevention/ harm minimisation - NSP
- Vaccination
- Naloxone
- Re-infection
- Reach- C form → https://reach-c.ashm.org.au/

DECISION MAKING IN HEPATITIS C

HCV

1 When To Test

Clinical Indicators

- Abnormal liver function tests (LFTs) (males, ALT ≥ 30 U/L; females, ALT ≥ 19 U/L)
- Jaundice

Presence of Risk Factors

- Injecting drug use (current/ever)
- Sharing of snorting equipment
- Born in high prevalence region^
- Blood transfusions and blood products before 1990 in Australia
- Unsterile tattooing/body piercing
- Unsterile medical/dental procedures/blood transfusions in high prevalence countries
- Time in prison
- Needlestick injury
- Mother to child transmission
- Sexual transmission in men who have sex with men (MSM)
- Sexual transmission in those who are HIV positive
- People living with HIV or HBV infection

^Africa, the Middle East (in particular Egypt), the Mediterranean, Eastern Europe, and South Asia

Other

- Initiating PrEP
- When someone requests a test

When gaining informed consent before testing, discuss:

- Reason for test
- Availability of curative treatment

2 Test/s, Results and Actions

Order HCV Antibody (Ab) + Reflex HCV RNA* (qualitative)

HCV Ab negative

Does NOT have HCV

NO action

However, if possible recent infection re-test (HCV Ab) or if ongoing risk factors repeat screening (HCV Ab) annually

When conveying a NEGATIVE result, discuss:

- Modes of transmission and risk reduction

HCV Ab positive

HCV RNA negative

Has CLEARED HCV

RE-TEST if:

Ongoing risk factors
(repeat RNA test annually)

HCV RNA positive

Has CHRONIC HCV
(including/or detectable HCV RNA in plasma or whole blood and the absence of clinical features of acute hepatitis)

Further ASSESSMENT and TREATMENT

(see next page)

When conveying a POSITIVE result, discuss:

- Modes of transmission and risk reduction
- Availability of curative treatment
- Lifestyle factors e.g. alcohol minimisation, diet
- Availability of peer support services, information and support services
- Refer to HepLink Australia 1800 437 222

***If high level suspicion also consider requesting reflexive HCV RNA (ordering HCV Ab + HCV PCR if HCV Ab is positive) + LFTs**

DECISION MAKING IN HEPATITIS C

HCV

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3 Pre-Treatment Assessment

Baseline screening after positive HCV PCR

- ☐ LFTs (including AST) and INR
- ☐ Full Blood Count
- ☐ Urea, electrolytes, creatinine

Assess liver fibrosis: cirrhotic status

- ☐ Signs of chronic liver disease (spider naevi, palmar erythema, jaundice, encephalopathy, hepatomegaly, splenomegaly, ascites, peripheral oedema)
- ☐ Non-invasive assessment of fibrosis:
  - Serum biomarkers such as APRI (<1.0 means cirrhosis unlikely). Calculator available hepatitisc.uw.edu/page/clinical-calculators/apri
  - Elastography assessment e.g. Fibroscan® (>12.5 kPa consistent with cirrhosis)

Check for other causes of liver disease

- ☐ Check for viral coinfection:
  - HIV Ab/Ag
  - Hepatitis A – check hep A IgG; vaccinate if negative
  - Hepatitis B – check HBsAg, anti-HBc and anti-HBs; vaccinate if all negative
- ☐ Heavy alcohol intake
- ☐ Fatty liver disease - check weight, BMI

Check for other major co-morbidities

- ☐ Renal impairment (eGFR < 50)

Review previous HCV treatment

- Choice/length of treatment may be influenced by prior HCV treatment experience/response

Consider pregnancy and contraception

- HCV treatment not recommended for use in pregnant or lactating women

4 Treatment

Recommendation for treatment now includes all people with a risk factor for hepatitis C transmission who are found to have detectable HCV RNA in plasma or whole blood, regardless of the duration of infection.

Is your patient likely to have cirrhosis?
(APRI ≥ 1.0 or Fibroscan® > 12.5 kPa)

- ☐ Yes → Discuss with or refer to a specialist#
- ☐ No

Has your patient received previous treatment for HCV?

- ☐ Yes → Discuss with or refer to a specialist#
- ☐ No

Treatment	Dosage	Duration if no cirrhosis present	Duration if compensated cirrhosis (Child Pugh A) present
SOF/VEL~ (Epclusa®)	400/100mg Once-daily (1 pill)	12 weeks	12 weeks
GLE/PIB~ (Maviret®)	100/40mg per pill Once-daily (3 pills)	8 weeks	8 weeks†

- ☐ Check for drug-drug interactions at hep-druginteractions.org
- ☐ Call the PBS Authority Script Line (1800 020 613) for approval

Consult with your local specialist or complete the online remote consultation form at reach-C.ashm.org.au (turn-around time <24 hours).

 # All patients with cirrhosis or prior HCV treatment experience should be reviewed by someone experienced in hepatitis C treatment. If cirrhosis is suspected (APRI ≥ 1.0 or elastography > 12.5 kPa), further evaluation is required before commencing treatment.

† A treatment duration of 12 weeks may be considered for patients with compensated cirrhosis at the discretion of the prescriber.

5 Monitoring

Monitoring while on treatment

- Generally not required but approach should be individualised
- Side effects of HCV treatment are generally minimal
- Dose interruptions should be managed according to duration and DAA therapy completed (Refer to Hepatitis C Consensus Statement)

4-12 weeks post treatment

- ☐ Opportunistic testing: HCV RNA to confirm cure (sustained virological response SVR4 = cure)
- ☐ LFTs

6 Follow Up

If your patient has no cirrhosis and normal LFT results (males, ALT< 30 U/L; females, ALT < 19 U/L) ALT = alanine aminotransferase

No clinical follow-up for HCV required

If your patient has ongoing risk factors

Annual HCV RNA test. If re-infected, offer re-treatment and harm reduction strategies

If your patient has abnormal LFT results

(males, ALT ≥ 30 U/L; females, ALT ≥ 19 U/L) Evaluate for other causes of liver disease and refer to specialist for review

If your patient has cirrhosis

Refer to specialist. Patients with cirrhosis require long-term monitoring:

- 6-monthly abdominal ultrasound (hepatocellular carcinoma screening)
- Consideration of screening for oesophageal varices
- Osteoporosis: 2-yearly DEXA scans and monitor serum vitamin D
- Assess risk of clinically significant portal hypertension (elastography, PLT)

CONSULT WITH A SPECIALIST IF:

Pre-treatment

- Prior treatment failure of HCV treatment
- Cirrhosis is present or likely – APRI ≥1 and elastography score not available; elastography >12.5kPa
- Coinfected with HIV or HBV
- Renal impairment (eGFR < 50)
- Complex drug interactions
- Complex co-morbidities
- Not comfortable prescribing HCV treatment
- Paediatric populations

During treatment

- Major medication side events

Post-treatment

- RNA positive 12 weeks post treatment
- Abnormal LFTs at SVR12

Disclaimer: Guidance provided on this resource is based on guidelines and best-practices at the time of publication. This quick-reference guide is not intended to be a comprehensive list of all available options. Refer to the General Statement for Drugs for the Treatment of Hepatitis C for all current PBS-listed regimens.

For more information www.hepcguidelines.org.au.

~SOF/VEL = Sofosbuvir/Velpatasvir ; GLE/PIB = Glecaprevir/Pibrentasvir

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HCVPOCT
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