Hepatitis C:
Cure chronic disease in primary care

Developing a sustainable HIV, viral hepatitis, and sexual health workforce

These slides have been adapted from a presentation developed by clinicians representing: ASHM, ALA/GESA, ASID, RACGP, Kirby Institute

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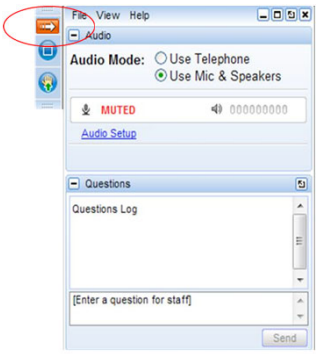
Where is my control panel?



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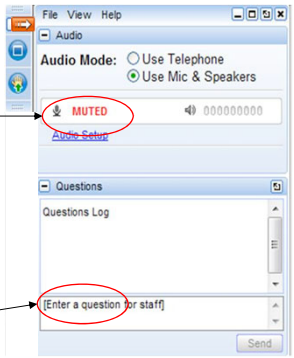

Poll test

QI&CPD Requirements

To be eligible for 3 category 2 QI&CPD points participants must:

- attend the entire session
- complete the evaluation questions which will be emailed to in the next couple of days

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Disclosure of interests

Year	Type of relationship	Entity	Comment	Payment received (Y/N)
2019	Nil to date	-	-	-
2018	Speaker & Advisory Board	AbbVie MSD	GP education, International Ad Boards	Y
2017	Speaker & Advisory Board	AbbVie Gilead MSD	GP education, International Ad Board	Y

Learning outcomes

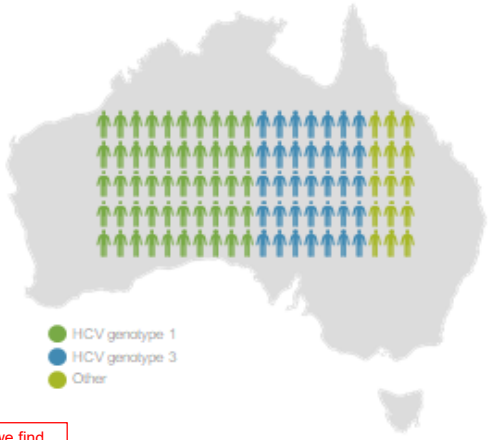
- Identify who to test, how to test and how to interpret the results
- Assess for liver fibrosis and important co-morbidities
- Decide which patients can be treated and followed in General Practice, and identify patients requiring referral for specialist management

Hepatitis C prevalence in Australia

182,144

Australians living with chronic HCV infection at the end of 2017

About 80% people infected with HCV through injecting drug use.



1 in 5 people with HCV don't know it

How do we find the estimated 20% still undiagnosed?

The Kirby Institute. HIV, viral hepatitis and sexually transmissible infections in Australia, Annual Surveillance Report 2018

DAA costs: The Australian response

- In late 2015, the Australian Government announced a $1+ Billion investment in hepatitis C treatment over 5 years in exchange for an unlimited volume of DAAs for HCV from suppliers
- This approach results in lower per-patient prices

Key features -

- All people with chronic hepatitis C eligible for DAAs
- No liver disease restrictions; retreatment possible
- Current modelling suggests treatment cost at approx. AU$9,595 per patient treatment course (far less than the 'list price' of up to $94,958)

Suerie Moon, Elise Erickson.Universal Medicine Access through Lump-Sum Remuneration — Australia's Approach to Hepatitis C, NEJM February 14, 2019

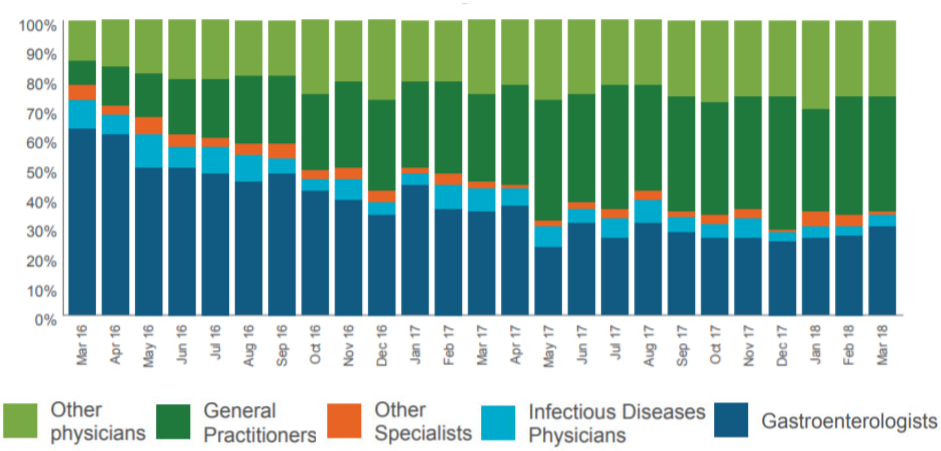
Monitoring hepatitis C treatment uptake in Australia. Issue #9 July 2018. The Kirby Institute.

Consider your role in the hepatitis C response

Primary care providers have a vital role in:

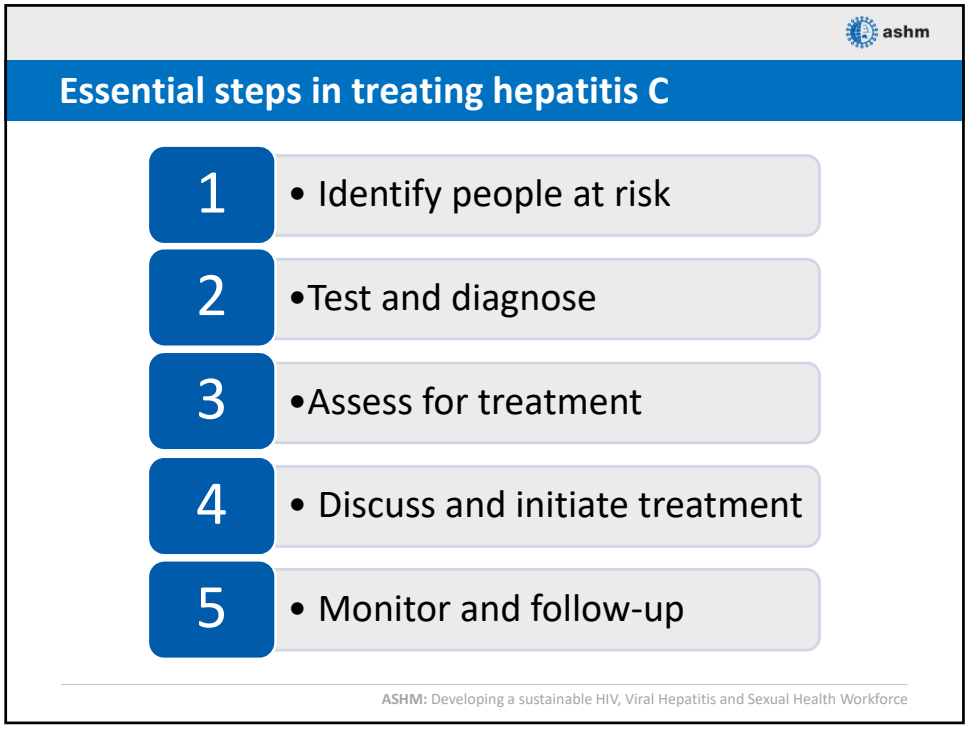
- Screening
- Hepatitis C management and treatment
- Managing comorbidities – drug use, mental health, other chronic diseases etc.

GPs are increasingly treating hepatitis C



56,968 people in total have been cured during 2015-2017

The Kirby Institute. Monitoring hepatitis C treatment uptake in Australia (Issue 9). The Kirby Institute, UNSW Sydney, Sydney, Australia, July 2018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Essential steps in treating hepatitis C
1
• Identify people at risk
2
•Test and diagnose
3
•Assess for treatment
4
• Discuss and initiate treatment
5
• Monitor and follow-up
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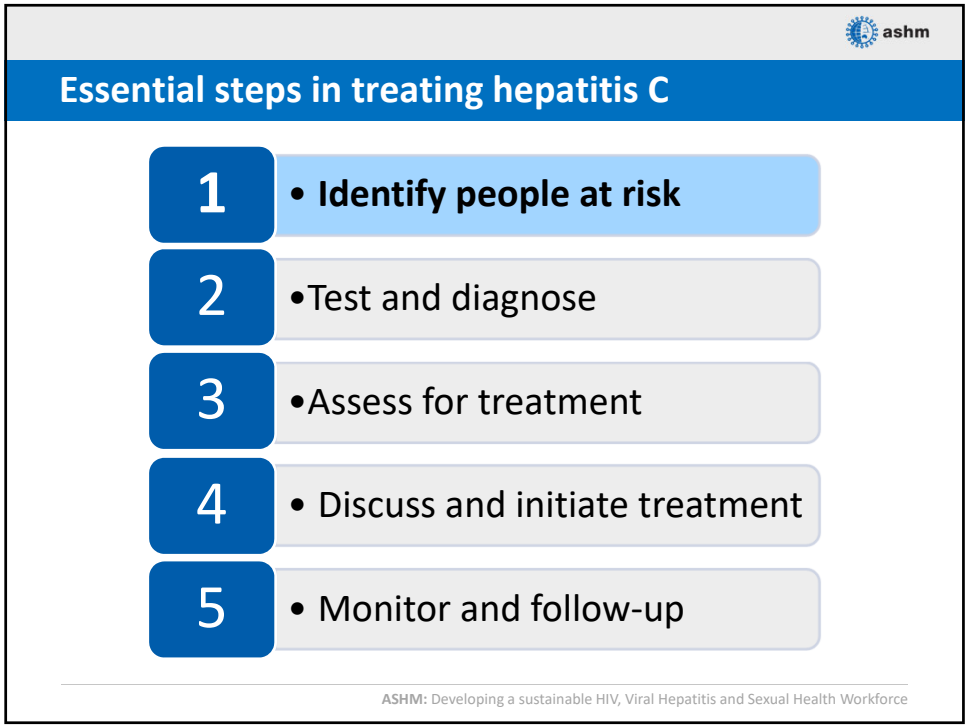
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How to find undiagnosed patients

New patients	Existing patients
Test anyone who asks for a test - they may not be comfortable raising their injecting drug use history	
Incorporate a risk assessment into all routine history taking	
Test anyone in a risk group, with risk factors or with a clinical indication	
Consider testing people: • planning travel, starting a family, in a new job (for OH&S purposes) • with a new or recent change in sexual partner • as part of a baseline check	Test: • pregnant women and children born to mothers with HCV • partners of people with known HCV
Consider testing if clinical indications: • jaundice, fatigue • unexplained abnormal LFTs • known HIV or HBV infection	Consider: • conducting a retrospective case audit of patients in your practice, particularly those from priority populations or with abnormal LFTs. • testing 'Baby Boomers'

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Case discussion - Tim

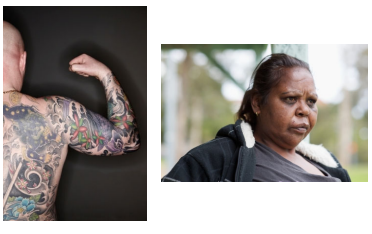
Case 1: Tim – history and examination

- 56 year old office worker
- New to your practice after moving into the area
- Experiencing extreme tiredness lately
- Otherwise well, no regular medications
- Minimal alcohol
- During history taking, he tells you he briefly injected drugs in 1980
- Physical examination = no signs of cirrhosis

What do you do next?

Test anyone who:

- Has ever injected drugs (including people who currently inject drugs)
- Has been in prison
- Has tattoos or body piercings
- Identifies as Aboriginal and Torres Strait Islander
- Is from a high-prevalence region (Egypt, Pakistan, Mediterranean, Eastern Europe, Africa and Asia)



Adapted from: Hepatitis C Virus Infection Consensus Statement Working Group. Australian recommendations for the management of hepatitis C virus infection: a consensus statement (Sept 2018). Table 1.

Test anyone who:

- Has had sex with an HCV+ve person (especially men who have sex with men and people with HCV-HIV coinfection)
- Received a blood transfusion or organ transplantation before 1990
- Was born to an HCV positive mother
- Has HIV or hepatitis B
- Has liver disease - even an ALT slightly out of range
  (ALT normal range: 5-30 IU/L for men; 5-19 IU/L for women)
- Has had a needle-stick injury

Adapted from: Hepatitis C Virus Infection Consensus Statement Working Group. Australian recommendations for the management of hepatitis C virus infection: a consensus statement (Sept 2018). Table 1.

Polling question 1

Hepatitis C transmission risks

Sexual	Household	Mother to child transmission
Sexual activity without blood-blood contact is considered low risk. Transmission occurs in ~5% of monogamous serodiscordant heterosexual couples (risk of 1 in 190,000 sexual contacts)	There are no risks in sharing food, drinks, cutlery, crockery and drink-ware	MTCT risk is approx. 5%. Transmission dependent on viral load (lower risk $<10^6$) Possible ↑ risk: active IDU, premature rupture of membranes
Increased sexual transmission risk in MSM, unprotected anal intercourse and people with HCV-HIV coinfection	There are no risks in hugging, kissing, touching a person living with HCV	Mode of delivery (vaginal vs. caesarean) and breastfeeding are not associated with transmission
Ulcerative STIs (e.g. syphilis) ↑ risk	There are no risks associated with sneezing or coughing, toilet use or mosquito/other insect bites	Babies born to HCV +ve mothers should not be tested until >18 months due to presence of maternal antibodies
Sexual contact causing bleeding ↑ risk	Avoid sharing of razors, toothbrushes and nail clippers etc as ↑ risk	Breastfeeding is recommended unless there are cracked/bleeding nipples

Case 1: Tim – risk factor

- Risk factor (injecting drug use history) indicates you should suggest testing for HCV

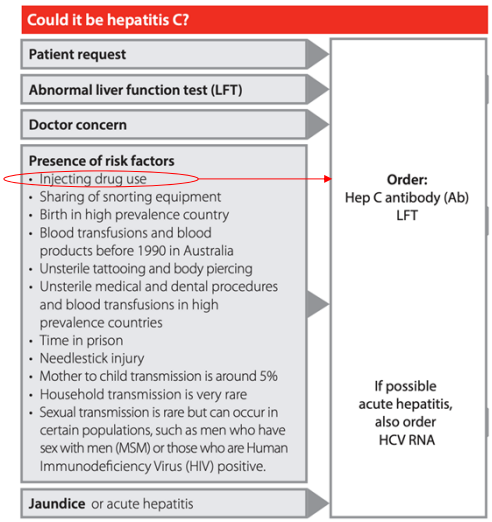
What tests do you order?

Essential steps in treating hepatitis C

1. • Identify people at risk
2. •**Test and diagnose**
3. •Assess for treatment
4. • Discuss and initiate treatment
5. • Monitor and follow-up

Polling question 2

Case 1: Tim – how to test for hepatitis C



Order:

Hepatitis C antibody
(also called anti-HCV/HCV Ab)
&
LFTs

Case 1: Tim – test result

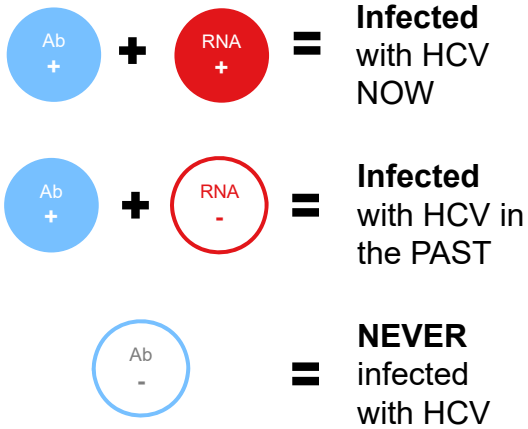
- Hepatitis C Ab +ve

What does this result mean?

There are 2 tests needed to diagnose hepatitis C

Ab (antibody test/anti-HCV)
EVER has come into contact with HCV

RNA +
Infected with the virus NOW



Perform other investigations if hepatitis C suspected

We also need other tests/investigations:

- FBE, LFTs, urea and electrolytes, eGFR, INR
- HBV, HIV and HAV serology
- Pregnancy test for women of child-bearing age

Test for HBV before commencing HCV treatment

Order all 3 tests: HBsAg, anti-HBc, anti-HBs

	HBsAg	Anti-HBc	Anti-HBs	Recommended action
Chronic HBV	+	+	-	Consult specialist
Unexposed	-	-	-	Vaccinate
Immune – prior infection	-	+	+	Nil needed
Prior infection - resolved	-	+	-	Consult specialist (low risk of HBV reactivation)
Immune – prior vaccination	-	-	+	Nil needed

HBV reactivation (during or after DAA therapy) has been reported in HCV/HBV coinfected patients not on HBV therapy

Case 1: Tim – test results

- FBC: Hb 142, WCC 6.0, Plt 270
- EUC: Na 134, K 4.3, eGFR > 90
- LFT: Alb 36, Bil 16, ALT 52, AST 46, GGT 111, ALP 101
- Fasting Chol 5.2, TG 2.3, HDL 1.6, LDL 3.5
- HCV RNA +ve
- HBsAg-ve, HBcAb-ve, HBsAb 56
- HIV-ve
- HAV IgG+ve

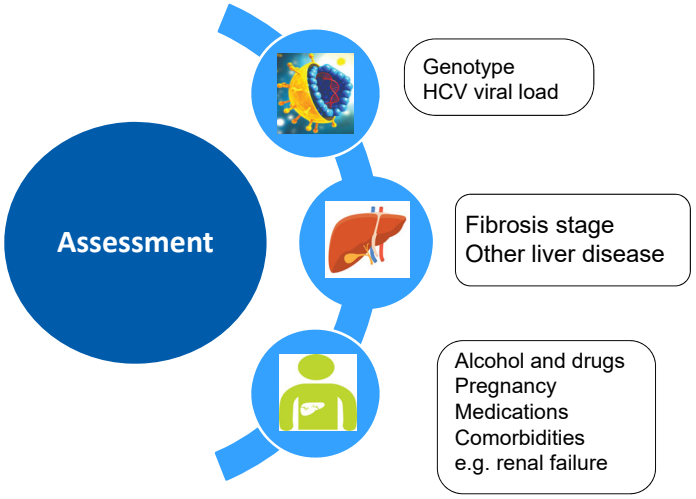
Does Tim have hepatitis C?

What else should we consider?

Essential steps in treating hepatitis C

1. • Identify people at risk
2. •Test and diagnose
3. **•Assess for treatment**
4. • Discuss and initiate treatment
5. • Monitor and follow-up

Assess virus, liver and patient factors



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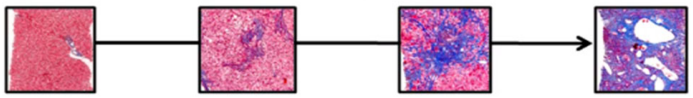
The importance of liver fibrosis assessment

METAVIR Scale

Score	F0	F1	F2	F3	F4
Fibrosis (scarring)	No damage	Mild Portal fibrosis without septa	Moderate Portal fibrosis with rare septa	Advanced Numerous septa, not cirrhosis	Severe Cirrhosis



It is essential to assess for advanced fibrosis (F3) or cirrhosis (F4).

Cirrhosis determination is needed to:

- **Select appropriate HCV treatment regimen**
  - Poorer response rates for some treatments when cirrhosis is present
  - Some options of shortened durations only if cirrhosis is excluded
- **Inform when special referral is required**
- **Establish requirement for long term follow up after SVR; including HCC surveillance**

Cirrhotic status is currently required for PBS approval

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How to assess liver fibrosis

History:
Length of infection
Presence of co-morbidities such as alcohol use

Physical examination:
Jaundice, ascites, varices, encephalopathy

Laboratory tests:
Liver tests, platelet count, coags

Serum biomarker:
APRI
(or FIB-4, ELF test, Hepascore)

If APRI<1, cirrhosis unlikely

If APRI>1, assess further for cirrhosis

Radiological imaging:
US, CT, MRI

Fibroscan
or shear wave elastography

No single test is accurate enough

Using non-invasive serum bio markers to assess for cirrhosis – APRI

- Non-invasive serum markers can be used for assessing liver fibrosis stage
- In general, they have good performance characteristics for excluding the presence of cirrhosis.
- **APRI** is a simple, easily calculated method to predict significant, severe fibrosis or cirrhosis

Online calculator e.g. https://www.hepatitisc.uw.edu/page/clinical-calculators/apri

Calculating and interpreting an APRI score

APRI (**A**ST **P**latelet **R**atio **I**ndex) Score:

$$\text{APRI} = \left(\frac{\dfrac{\text{AST Level}}{\text{AST (Upper Limit of Normal)}}}{\text{Platelet count } (10^9/\text{L})} \right) \times 100$$

Fluctuating AST and/or platelet count impacts on reliability of APRI

If APRI >1, need further assessment to exclude cirrhosis

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Case 1: Tim – APRI score calculation

AST to Platelet Ratio Index (APRI) Calculator

This is an **A**ST to **P**latelet **R**atio **I**ndex calculator tool. Enter the required values to calculate the APRI value. The APRI Score will appear in the oval on the far right (highlighted in yellow). Most laboratories use 40 IU/L as the value for the AST upper limit of normal.

$$APRI = \frac{\text{AST Level } (IU/L) = 46}{\text{AST (Upper Limit of Normal) } (IU/L) = 40} \times \frac{1}{\text{Platelet Count } (10^9/L) = 270} \times 100 = 0.426$$

Tim does not need further assessment- treat him as non-cirrhotic

Interpretation:
In a meta-analysis of 40 studies, investigators concluded that an APRI score greater than 1.0 had a sensitivity of 76% and specificity of 72% for predicting cirrhosis. In addition, they concluded that APRI score greater than 0.7 had a sensitivity of 77% and specificity of 72% for predicting significant hepatic fibrosis.

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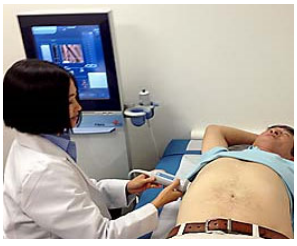
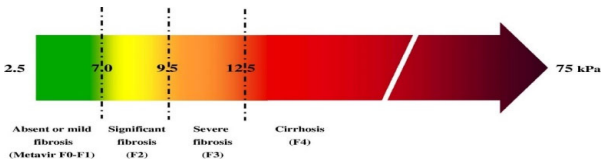
Determining cirrhosis using Fibroscan (if available)

The stiffer the liver is, the greater the degree of fibrosis



Good at determining normal liver and cirrhosis

Limited discrimination between intermediate levels of fibrosis (F1-F3)



HCV cirrhosis = liver stiffness measurement >12.5 kPa

Polling question 3

Polling question 4

Remember: no single test is accurate enough! Use All Your Tools to Assess the Liver

- Clinical examination
- AST/ALT ratio >2 suggest advanced fibrosis/cirrhosis if no alcohol
- Platelet count <150,000 especially <100,000 suggest portal hypertension
- APRI ≥ 2 suggest cirrhosis
- Fibroscan ≥ 9.5 suggest advanced fibrosis and ≥ 12.5 suggest cirrhosis
- Abdo ultrasound: splenomegaly or portal vein diameter ≥13 mm suggest portal hypertension

Assess alcohol use

Strong association between excessive alcohol use and liver disease progression / HCC

- Increased risk of developing cirrhosis in people with HCV
- Decreased survival, increases risk of HCC
- Light-moderate alcohol use increases risk of HCC in patients with HCV infection and cirrhosis

Provide advice to stop and interventions to reduce alcohol consumption

BUT continued alcohol consumption or current injecting should not be used as a reason for withholding treatment

Case 1: Tim – recap what we know so far

Confirm chronic HCV	PCR +ve
Date of infection	? 1980
Genotype	Unknown
Viral load	Unknown
Fibrosis	APRI 0.426 – no cirrhosis
Co-morbidity liver	Nil
Co-morbidity other	Nil
Co-infection	Nil
Other medications	Nil
Previous HCV treatment	Nil
Cirrhosis screening	Not needed

What else do you need to know before treating Tim?

Case 1: Tim - further testing results

- Genotype 1a
- HCV RNA 440,000IU/mL

Note:

- Current PBS requirement to establish the genotype
- This was more relevant with earlier drug regimens; less relevant now with pangenotypic regimens
- PBS requirements likely to be removed this year

What should you do next?
Should you treat Tim?

Provide general support and advice if hepatitis C is confirmed

General Support	• Review understanding of HCV, including health beliefs • Consider the impacts of stigma and discrimination • Referral to counselling, peer-support organisation
Lifestyle Measures	• Reduce or cease alcohol and tobacco use • Maintain a healthy diet, exercise and lose weight if indicated • Check for diabetes, dyslipidaemia
Medical Issues	• Avoid hepatotoxic medications • Vaccinations: hepatitis A and B if not immune • Check for advanced fibrosis • Specific treatment options, monitoring
Prevent Transmission	• Reinforce safer injecting behaviours • Needle and syringe programs, opioid substitution therapy if indicated

Consider the impact of stigma and discrimination

https://vimeo.com/264925003

What are some consequences of stigma and discrimination in healthcare settings and what strategies you can incorporate in your practice to address these?

Preventing HCV transmission and reinfection

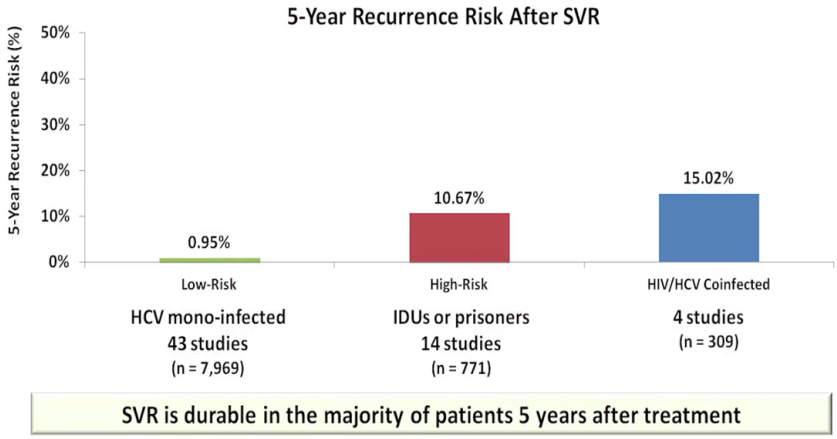
Multiple prevention strategies are needed

- Treatment alone is not enough: transmission must be stopped
- Treat injecting social network
- Treat reinfection

- Among PWID, harm reduction strategies are very effective:
  - Current opioid substitution treatment (OST) reduces HCV acquisition risk by 50%
  - High coverage needle syringe programmes (NSP) reduce HCV acquisition risk by ~21%
  - In combination, both high-coverage NSP and OST can reduce risk of acquiring HCV by 76%

1. Fraser H et al, Hepatology 2018;68:402-11. 2. Platt L et al, Addiction 2017: Epub ahead of print

Achieving cure does not protect against HCV reinfection



SVR is durable in the majority of patients 5 years after treatment

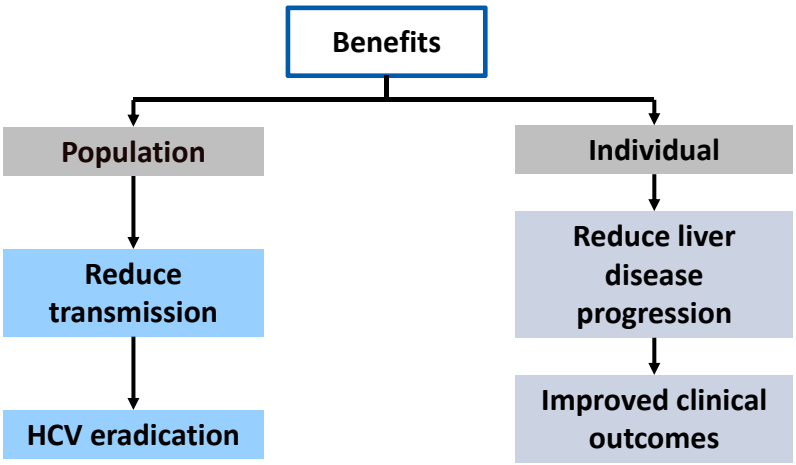
Simmons B, et al. *Clin Infect Dis*. 2016;62(6):683-694.

Essential steps in treating hepatitis C

1. Identify people at risk
2. Test and diagnose
3. Assess for treatment
4. **Discuss and initiate treatment**
5. Monitor and follow-up

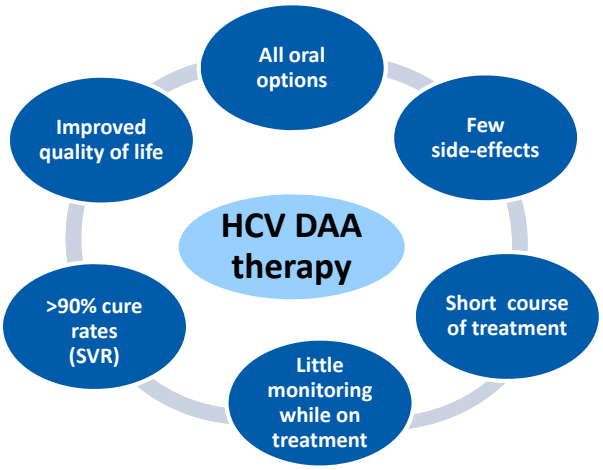
Polling question 5

Offer treatment to everyone with hepatitis C



1. Smith-Palmer J, et al. BMC Infect Dis. 2015;15:19. 2. Negro F, et al. Gastroenterology. 2015;149:1345-1360. 3. George SL, et al. Hepatology. 2009;49:729-738. 4. Aghemo A et al, J Hepatol 2012;57:1326-35; 5. Ghany MG, et al. Hepatology. 2009;49(4):1335-1374; 6. Hill A et al, AASLD 2014

Treatment is easy and effective



Treatment should be offered to everyone with hepatitis C

Case 1: Tim – discuss the benefits of cure

What benefits can Tim experience to his physical and mental health after curing hepatitis C?

Recommended PBS-listed DAAs in Australia in 2019

Pangenotypic: Genotypes 1−6

Sofosbuvir/Velpatasvir (EPCLUSA®)

Glecaprevir/Pibrentasvir (MAVIRET™)

Genotype 1
Sofosbuvir/Ledipasvir (HARVONI®)

Genotype 1, 4
Grazoprevir/Elbasvir (ZEPATIER™)

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Hepatitis C treatment regimens – for treatment naïve and compensated liver disease

Genotype	Regimen	Dose	Pills per day	Treatment duration - no cirrhosis	Treatment duration - cirrhosis	Administration
Recommended regimens						
All	GLE/PIB	300/120 mg	3	8 wks	12 wks	With food
All	SOF/VEL	400/100 mg	1	12 wks	12 wks*	+/- food
1	SOF/LDV	90/400 mg	1	8 or 12 wks	12 wks	+/- food
1 + 4	GZR/EBR	50/100 mg	1	12 wks	12 wks	+/- food
Additional regimens						
1 + 3	SOF+DCV	400mg+60mg	2	12 wks	12 or 24 wks	+/- food
All	SOF/VEL/VOX**	400/100/100 mg	1			With food

* For Sofosbuvir + Velpatasvir: consider adding Ribavirin for GT3 compensated cirrhosis
** For salvage therapy only, not PBS listed yet

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Deciding which pangenotypic regimen to use

Glecaprevir/ Pibrentasvir

- 3 tablets WITH food daily
- 8–12 weeks of treatment
- Drug interactions: some statins, atazanavir or rifampin
- Avoid in decompensated cirrhosis (Child-Pugh B, C)
- Can be used in all renal impairment

Similarities

- Pan-genotypic
- Risk of reactivating HBV
- Adverse reactions: Headache and Fatigue

Sofosbuvir/ Velpatasvir

- 1 tablet +/- food daily
- 12 weeks of treatment
- Drug interactions: some statins, acid suppression, amiodarone
- Can be used in all cirrhosis (Child-Pugh A, B, or C)
- Not recommended in eGFR <30 mL/min

Polling question 6

DAAs are generally very well tolerated

HCV Regimen	Main Adverse Events Observed in patients in clinical trials
Sofosbuvir / Velpatasvir 'EPCLUSA®'	Headache, fatigue, nausea, nasopharyngitis
Glecaprevir / Pibrentasvir 'MAVIRET™'	Headache, fatigue, nausea
Sofosbuvir / Ledipasvir 'HARVONI®'	Fatigue, headache, nausea, diarrhoea
Elbasvir / Grazoprevir 'ZEPATIER™'	Fatigue, headache, nausea

EPCLUSA Product Information. Accessed at www.tga.gov.au; MAVIRET Product Information. Accessed at www.tga.gov.au; HARVONI Product Information. Accessed at www.tga.gov.au; ZEPATIER Product Information. Accessed at www.tga.gov.au

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Case 1: Tim – treatment options

Treatment Regimen	HCV genotype	No cirrhosis	Cirrhosis

Glecaprevir + Pibrentasvir (Maviret): **8 weeks**

Sofosbuvir + Ledipasvir (Harvoni): **8 weeks** may be considered if HCV RNA level is < 6×10^6 IU/mL in people without cirrhosis and who are treatment-naïve

1. What treatment options could be considered for Tim?

2. Which treatment option would you prescribe?

* For Sofosbuvir + Velpatasvir: consider adding Ribavirin for GT3 compensated cirrhosis

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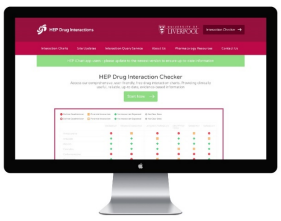
Assess for potential drug interactions

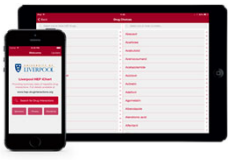
Review all prescription, OTC meds, herbal supplements and complementary medications.

Be alert for interactions with common drugs such as:

- Statins
- Proton pump inhibitors
- Antiepileptic drugs (e.g. carbamazepine)
- Birth control preparation (e.g. ethinyl oestradiol)
- Some herbal – esp. St John's Wort



HEP Drug Interactions website
www.hep-druginteractions.org



HEP iChart app
App store | Google Play

Remember: patients rarely tell you all the pills they are taking

Are any drug-drug interactions relevant for Tim?

➢ **In Tim's case, there are no DDIs to consider**

Discuss adherence strategies

1. **Are there any consequences if Tim misses a few doses?**
2. **What strategies could be recommended to Tim to support adherence?**

Recommend 100% adherence

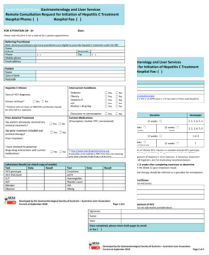
- Discuss adherence at every visit
  - *What is affecting adherence?*
  - *How does the patient think this may be improved?*
- Check for side effects
- Advise that occasional missed doses may not affect outcome
- Involve and empower patient in decisions about treatment

Strategies:

- Pill box
- Dosing time link to routine
- Treatment calendar with important dates
  - Start date
  - Refill due
  - Labs due
  - Appointments
- Mobile phone alarms
- Looping in caregivers
- Supervised dosing (eg at methadone clinic)

Gain specialist approval to treat

If not experienced in treating hepatitis C, seek specialist approval via fax, email or phone or use one of these methods:



Remote Consultation Request for Initiation of Hepatitis C Treatment Form
- download from:
http://www.gesa.org.au/ or
http://www.hepcguidelines.org.au

Reach-C online form
- the turnaround time for specialist approval is 24 hours
- complete form at:
http://www.reach-c.ashm.org.au/

When to consult with or refer patients to a specialist

- Patients with advanced fibrosis or cirrhosis
- Patients with extrahepatic manifestations
- Patients with complex co-morbidities
- Patients with renal impairment
- Patients with HIV/HCV or HBV/HCV coinfection
- Patients who failed first line DAA
- Patients with acute HCV

Hepatitis C Virus Infection Consensus Statement Working Group. Australian recommendations for the management of hepatitis C virus infection: a consensus statement (Sept 2018).

Essential steps in treating hepatitis C

1. Identify people at risk
2. Test and diagnose
3. Assess for treatment
4. Discuss and initiate treatment
5. **Monitor and follow-up**

Monitoring on treatment

Monitoring requirements are generally minimal

Routine monitoring for an 8-12 week treatment regimen:	
Week 0	FBE, LFTs, EUC/eGFR, HCV RNA level (quantitative)
Week 8	*LFTs (if on Grazoprevir/Elbasvir)
Week 12 post (SVR12)	LFTs, HCV RNA (qualitative)

- *People treated with elbasvir plus grazoprevir should have LFTs tested at week 8 to screen for hepatotoxicity.
- Patients taking ribavirin may require FBE at week 2 and week 4 and then every 4 weeks.
- Patients with cirrhosis require HCC screening by liver US every 6 months.

Closer monitoring required for patients with cirrhosis, especially decompensated cirrhosis, poor adherence and if risk of reinfection

Hepatitis C Virus Infection Consensus Statement Working Group. Australian recommendations for the management of hepatitis C virus infection: a consensus statement (September 2018). Melbourne: Gastroenterological Society of Australia, Sept 2018. (www.hepcguidelines.org.au)

Case 1: Tim – treatment, monitoring and follow-up

- Tim is treated with Sofosbuvir/Ledipasvir for 8 weeks
- Reviewed at week 4 (consultation or phone): slight headache, requiring no treatment. No missed doses
- Seen at 12 weeks after the end of treatment with normal LFT and HCV RNA-ve (SVR12)

Is Tim cured?

Does Tim need any further follow-up?

Confirming cure

- **SVR12 =** undetectable HCV RNA 12 weeks post treatment completion
  - Don't need another repeat SVR after SVR12 (=cure) but consider on a case by case basis – if risk of reinfection is high, test yearly.
- **Note that HCV antibody tests will remain positive after cure and should not be repeated**
  - Important to **warn patients that this can happen** in case the test is repeated by another doctor
- **Treatment failure =** detectable HCV RNA 12 weeks post treatment completion

Polling question 7

Determining post-treatment follow-up: no cirrhosis

No cirrhosis, normal LFTs at SVR12

- Patients who are cured do not require clinical follow-up for HCV
- Discussion around moving on as 'hepatitis C free'
- Ongoing HCV monitoring (annual LFTs and HCV RNA) if potential risk of re-exposure (PWID, HIV+ve, MSM) or if LFTs abnormal.

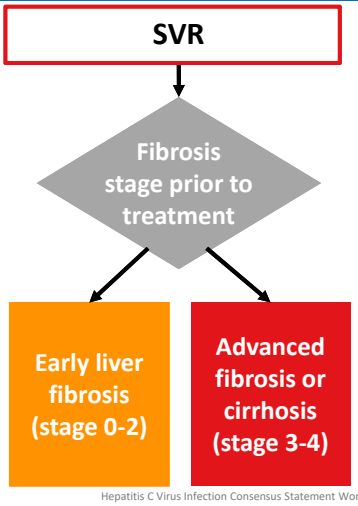
Abnormal LFTs at SVR12

- Patients with persistently abnormal LFTs require evaluation for other liver diseases and should be referred for gastroenterology review
- Check for other causes of liver disease including alcohol, metabolic syndrome.

In Tim's case, he does not need any further follow-up

Hepatitis C Virus Infection Consensus Statement Working Group. Australian recommendations for the management of hepatitis C virus infection: a consensus statement (September 2018). Melbourne: Gastroenterological Society of Australia, Sept 2018. (www.hepcguidelines.org.au)

Determining post-treatment follow-up in patients with advanced fibrosis/cirrhosis



Advanced fibrosis / Cirrhosis and SVR12

- Routine follow up at least 2 times per year
- Patients with evidence of cirrhosis require long-term monitoring and should be enrolled in screening for:
  - HCC
  - oesophageal varices
  - osteoporosis
- Monitor for progression of liver disease. Look for signs of decompensation:
  - Oedema
  - Ascites
  - Encephalopathy
  - Bleeding
- Calculate MELD score (bilirubin, creatinine, INR)
  - Contact hepatologist if rising

Hepatitis C Virus Infection Consensus Statement Working Group. Australian recommendations for the management of hepatitis C virus infection: a consensus statement (September 2018). Melbourne: Gastroenterological Society of Australia, Sept 2018. (www.hepcguidelines.org.au)

Recommendations for HCC surveillance after cure

Who?

- People with severe fibrosis or cirrhosis (F3 or F4)
- Unclear status: Intermediate stages of fibrosis plus comorbidity with risk for HCC
  - Diabetes, alcohol abuse, fatty liver, older (≥age 60-65 y)

How?

- Abdominal ultrasound every 6 months
- AFP every 6 months
  - Predictive value higher in patients who have achieved SVR

If AFP or ultrasound is abnormal, refer to specialist

AASLD IDSA Guidelines 2016 (http://www.hcvguidelines.org)

Other management issues

We've talked through a simple case which is indicative of about 80% of patients that you will manage.

Here are some other management issues you may encounter:

- Treatment-experienced patients
- Pregnancy
- Treatment failure

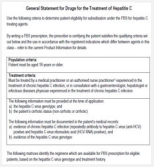
Treatment protocols for treatment-experienced

There are **different treatment regimens** for treatment-experienced people with HCV infection.

Check the:

General Statement for Drugs for the Treatment of Hepatitis C

www.pbs.gov.au



Australian Recommendations for the Management of Hepatitis C Virus Infection: A Consensus Statement

www.hepcguidelines.org.au
or www.gesa.org.au

Polling question 8

Use of DAAs in pregnancy is contraindicated

Screen for pregnancy pre-treatment and periodically during treatment

Ribavirin free regimens

- Pregnancy category B
- Avoid therapy during pregnancy or lactation
- Recommend contraception during therapy
- According to expert consensus, the washout period for DAAs is 4 weeks

➢ Ribavirin is teratogenic - avoid during pregnancy

Refer people who do not respond to hepatitis C treatment

Treatment failure is uncommon with DAAs

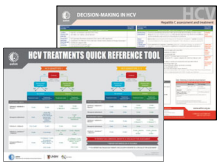
- Specialist referral is recommended with quantitative HCV RNA & genotype results
- May be relapse or reinfection
- People who become reinfected should be retreated

Summary: essential steps in treating hepatitis C

1. • Identify people at risk of HCV infection
2. •Test and diagnose
3. •Assess for treatment
4. • Discuss and initiate treatment
5. • Monitor and follow-up

Further resources and education opportunities

ASHM resources: ashm.org.au/resources



ASHM eLearning: lms.ashm.org.au

- *Curing hepatitis C in primary care – eLearning*
- *Curing hepatitis C in primary care – Refresher Module*
- *Hepatitis C in Primary Care and Drug and Alcohol Settings*

For upcoming ASHM training in your area, visit ashm.org.au/training

ASHM: Developing a sustainable HIV, Viral Hepatitis and Sexual Health Workforce