Hepatitis C
Care Guide

August 2024

CALIFORNIA CORRECTIONAL
HEALTH CARE SERVICES

Information contained in the Care Guide is not a substitute for a health care professional's clinical judgment. Evaluation and treatment should be tailored to the individual patient and the clinical circumstances. Furthermore, using this information will not guarantee a specific outcome for each patient. Refer to "Disclaimer Regarding Care Guides" for further clarification.
https://cchcs.ca.gov/clinical-resources/

Table of Contents

GOALS

- Identify Hepatitis C (HCV) infected patients. Screen all patients with HCV Antibody (Ab), (not viral load) once at California Department of Corrections and Rehabilitation (CDCR), such that all patients who have a history of HCV can be flagged for annual rescreening and substance use disorder (SUD) risk regardless of treatment/clearance of the virus. Thereafter, for those with history use ribonucleic acid (RNA) (test code 11348).
- Screen patients with ongoing risk due to drug use, tattooing, men who have sex with men (MSM) -unprotected at least annually*.
- Monitor all HCV patients for signs of or diagnostic criteria for cirrhosis.
- Improve chances of achieving a sustained virologic response (SVR) by emphasizing importance of adherence.
- Complete pretreatment labs and FibroTest (if FIB-4 is ≥1.45 and <3.25), if indicated (see page 7), and/or liver ultrasound (US) (if F4/cirrhosis) as soon as possible after diagnosis of chronic HCV.
- FibroTest is preferred due to non-inferiority for most patients, ease of testing and alleviation of FibroScan access.
- Initiate HCV treatment within 30 days of completing the pretreatment evaluation or as soon as possible.
- Screen all patients with HCV, or history of HCV for an underlying SUD according to the California Correctional Health Care Services (CCHCS) Care Guide: Substance Use Disorder, and referred for the Integrated Substance Use Disorder Treatment (ISUDT) program as indicated. (See page 10)

ALERTS

HCV TREATMENT

- HCV treatment requires submission of an electronic HCV Treatment Selection Review Request (TSR) within the Electronic Health Record System (EHRS) for appropriate regimen selection.
- Do not initiate HCV treatment without an appropriate regimen selection from the Headquarters (HQ) HCV Central Treatment Team
- LINKAGE TO SUD – Link all patients with HCV or history of HCV to care for SUD if appropriate. Treat patients for HCV even if they decline linkage to SUD care. (See page 10)
- All with pretreatment fibrosis assessment of F4 will continue with hepatocellular carcinoma (HCC) screening with US and AFP Q6 months regardless of post-HCV treatment fibrosis improvements
- Report Acute HCV (see page 6)

PATIENTS WITH CIRRHOSIS—see Liver Cirrhosis Care Guide

- Screen for HCC. Patients require continued screening even after HCV treatment
- Determine if varices screening is needed.
- Identify and manage decompensated cirrhosis.

* Consider periodic retesting of all other patients if they have a history of injection or inhalation drug use or symptoms/signs of acute hepatitis (right upper quadrant abdominal pain, nausea, vomiting, jaundice, or transaminitis) by checking an HCV Antibody with reflex to viral load and genotype.

PREVENTION

Who's at risk? People who inject or inhale drugs, tattooing, patients w/ Human Immunodeficiency Virus (HIV) who are also MSM, hemodialysis, and long term sex partners of persons w/ HCV.

Education: Addressing the root causes of HCV infection is critical. All patients with HCV history or active infection should be screened for SUD. (See page 10) Patient Education (PE-1) has practical patient education on reducing risks of infection with injection drug use (IDU). Also, in appropriate patients, consider discussing risks and benefits of harm reduction through smoking instead of injecting. (Ensure education on the pulmonary risks of smoking.) Also counsel on safe sex practices and the availability of condoms at all facilities through self-serve dispensers. MSM, rough sex, HIV, or having a sexually transmitted infection (STI) increase the risk of transmission. Further, avoid sharing anything that could have blood on it such as razors, nail clippers, and toothbrushes.

Screening: At arrival, all in high risk groups patients with findings of liver disease, patients with ongoing risk factors, and anyone who requests. Use Antibody with reflex- (94345) for all at least once per incarceration. Then RNA level (test code 11348) if prior history of infection ever subsequently. (See general patient education page PE-1.)

Education regarding Cell Block 64 & and protecting yourself from IDU: Appendix E (English) & (Spanish) and Appendix G (English) & (Spanish), Serratia (SharePoint)

TREATMENT

Patient Selection

- American Association for the Study of Liver Diseases/Infectious Diseases Society of America (AASLD/IDSA)** recommends treatment for all patients with chronic HCV infection, except those with life expectancies < 12 months that cannot be remediated by treating HCV, by liver transplantation, or by other directed therapy.
  - Unless there is a medical contraindication, all patients with chronic HCV are treatment candidates if they desire treatment and are willing to adhere to a medication and monitoring plan.
  - Treat acute HCV unless the viral load is very low and clearly appears to be down-trending

Treatment

- The recommended medication regimen depends on genotype and many clinical factors including the presence or absence of cirrhosis, co-infection with HIV or Hepatitis B Virus (HBV), other comorbidities, and any history of prior treatment.
- Refer all patients to the HQ HCV Central Treatment Team for selection of the most appropriate treatment regimen by submitting an HCV TSR (See page 11)

MONITORING

All chronic HCV infected patients:

- Annual clinical assessment: If untreated, consider labs including complete blood count (CBC), comprehensive metabolic panel (CMP), prothrombin time/international normalized ratio (PT)/INR every 12 months to assess progression of liver disease. Determine FIB-4 (see page 7) annually. Annually screen patients with SUD without prior HCV and any at risk for 1st or re-infection.
- Vaccines: For all HCV patients, document vaccination or test for Hepatitis A (HAV) Antibody, Total (test code 508) and for HBV surface antigen, core antibody (test code 501), and surface antibody. (Note: only order the antibody with reflex to IgM (test code 36504) if there is clinical evidence of acute HAVE.) If not immune: document offer for HAV and HBV vaccination. If patients are agreeable, vaccination without serology first is acceptable and cost effective. Use Heplisav®. If not immune to both Hepatitis A and B, recommend Heplisav-B® 2 shots plus the HAV series, also 2 shots (Havrix®-1440units/mL), but Twinrix® is an option. Offer pneumococcal if indicated, as recommended by Centers for Disease Control and Prevention (CDC). (Note guidelines updated in 2022) See CDC pneumoccocal vaccine guidelines and CCHCS Pneumococcal Vaccine memo. Encourage COVID-19, annual influenza and respiratory syncytial virus vaccination as indicated and recommended by CDC.
- Substance Use Disorder: Evaluate patients being seen for HCV for the status of their underlying SUD chronic disease. Order Urine Drug Screening (UDS) to assess status objectively. SUD patients do not have to be seen by Clinical Social Worker (CSW), ISUDT program, or be stable on MAT for HCV treatment. Treat HCV promptly to mitigate further transmission within CDCR.

HCV patients receiving antiviral therapy:

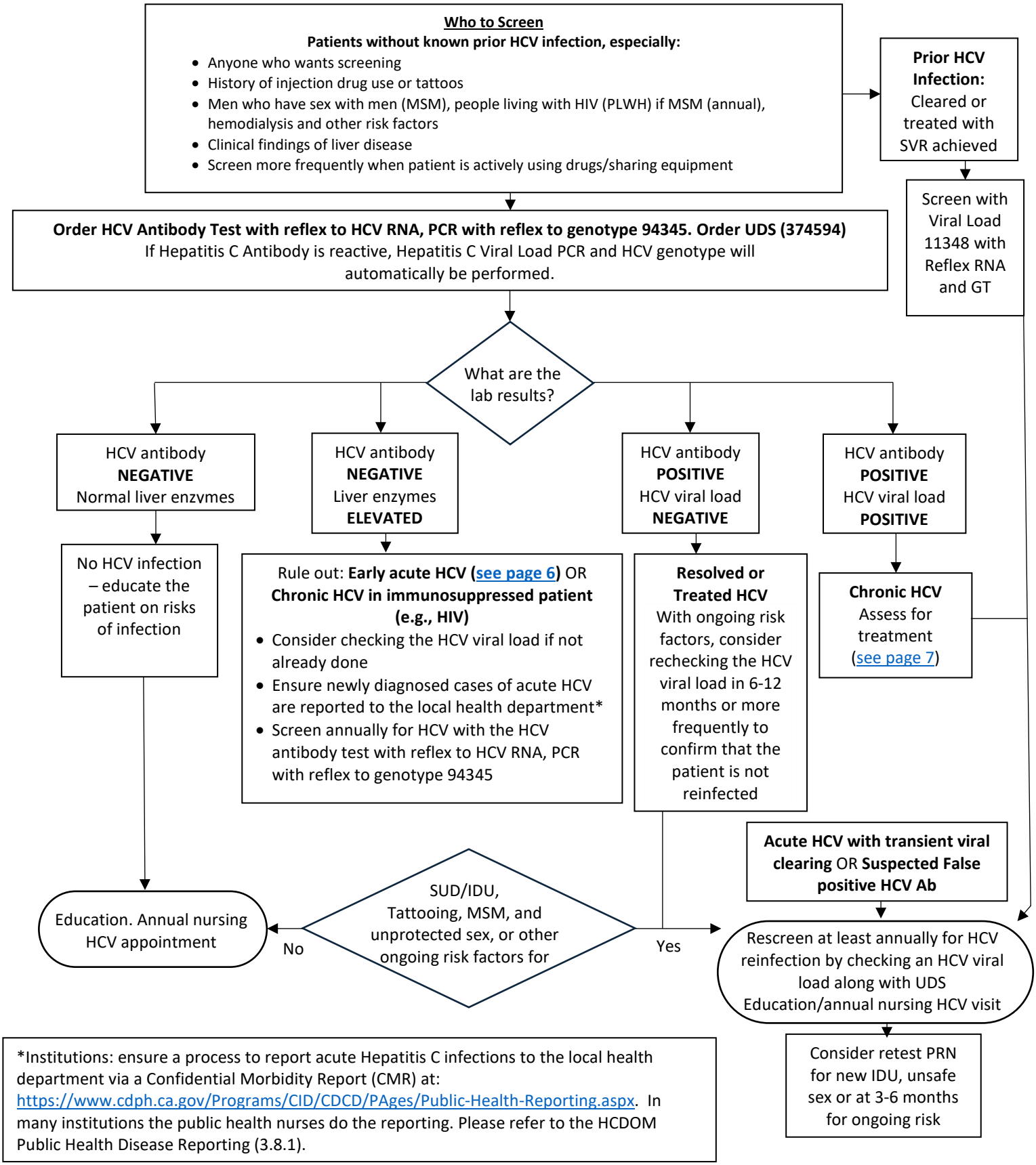
- See page 12 regarding intervals for CMP
- Clinic visits are recommended as clinically indicated during treatment. At each visit, ensure medication adherence, and monitor for adverse events and potential drug-drug interactions with newly prescribed medications. Be sure to address canteen drug-drug interactions (DDI)s, especially antacids.
- Manage education and monitoring of HCV treatments using the Complete Care Model. Patients receiving HCV treatment are listed on the Daily Care Team Huddle Report, and these patients are to receive education, care coordination, and follow up for HCV and SUD from the primary care team, Licensed Vocational Nurses (LVNs), Registered Nurses (RNs), Primary Care Providers (PCP), and Case Managers only as clinically indicated. Patients transferring to a new care team in the last 7 days will now be an alert on the Huddle Report. Use of the auto-reconciliation process supports continuity of orders with the original compliance dates.

Chronic HCV infected patients with cirrhosis: See page 14 for post-HCV treatment HCC screening guidance

- [Clinical and/or Metavir score F4 (Fib4 of ≥ 3.25, Fibrotest of >0.72, Enhanced Liver Score (ELF)* of ≥ 11.3 or liver stiffness kPa ≥12 or F4 on FibroScan or F4 range on US elastography)] Note: elastography kPa cutoffs may differ from FibroScan and between different machines. Calculate Child-Pugh Scores (see page 9) See the CCHCS Liver Cirrhosis Care Guide. Liver ultrasound and alpha-fetoprotein (AFP) every 6 months (Q6) to screen for hepatocellular carcinoma (HCC).
- Continue HCC screening after HCV treatment regardless of post-treatment <F4 assessments.

*(ELF is used in Metabolic Dysfunction-associated Steatotic Liver Disease (MASLD) fibrosis assessment. Only Use FibroTest for HCV)

SCREENING FOR HEPATITIS C



*Institutions: ensure a process to report acute Hepatitis C infections to the local health department via a Confidential Morbidity Report (CMR) at: https://www.cdph.ca.gov/Programs/CID/CDCD/PAges/Public-Health-Reporting.aspx. In many institutions the public health nurses do the reporting. Please refer to the HCDOM Public Health Disease Reporting (3.8.1).

Acute HCV: Diagnosis, Evaluation, and Treatment

Definition

- Positive HCV viral load with negative HCV antibody, OR
- Documented change in HCV antibody from negative to positive within a 6-month time period, OR
- A new (within the last 3 months) positive HCV antibody accompanied by:
  - A new elevation of alanine transaminase (ALT) (defined as at least 5 times prior baseline level obtained within the last 24 months), or
  - An increase of ALT to more than 5 times > normal ALT levels if no baseline labs in last 24 months, and
  - No other concomitant conditions to explain the rise in liver enzymes.

Diagnosis

Patients meeting the diagnostic criteria: Acute HCV is a reportable disease. The form can be found: **HERE**

Evaluation

- The majority of patients are asymptomatic. Clinical presentation may include jaundice, dark urine, fatigue, and/or right upper quadrant abdominal pain.
- "Time Zero" is the date of the first signs and symptoms of acute hepatitis or first lab abnormalities. If none of these are present, the most recent date of IV drug use or tattooing can be used to determine the interval for HCV lab surveillance.

LAB EVALUATION OF ACUTE HCV:

	CBC	CMP	PT/INR	HCV viral load	HIV Test	HBV if not immune	UDS
Baseline: Time Zero	✓	✓	✓	✓	✓	✓	✓
Week 8 to 12		✓		✓			
Week 16		✓		✓*			
As Needed				✓	✓	✓	✓

**If the HCV viral load at week 8 to 12 is negative, order an additional HCV viral load to confirm that the patient cleared the acute infection. Repeat the HCV viral load every 4-6 weeks until 2 negative HCV viral loads are obtained. Rescreen for HCV annually thereafter.*

INTERPRETATION OF DIAGNOSTIC STUDIES:

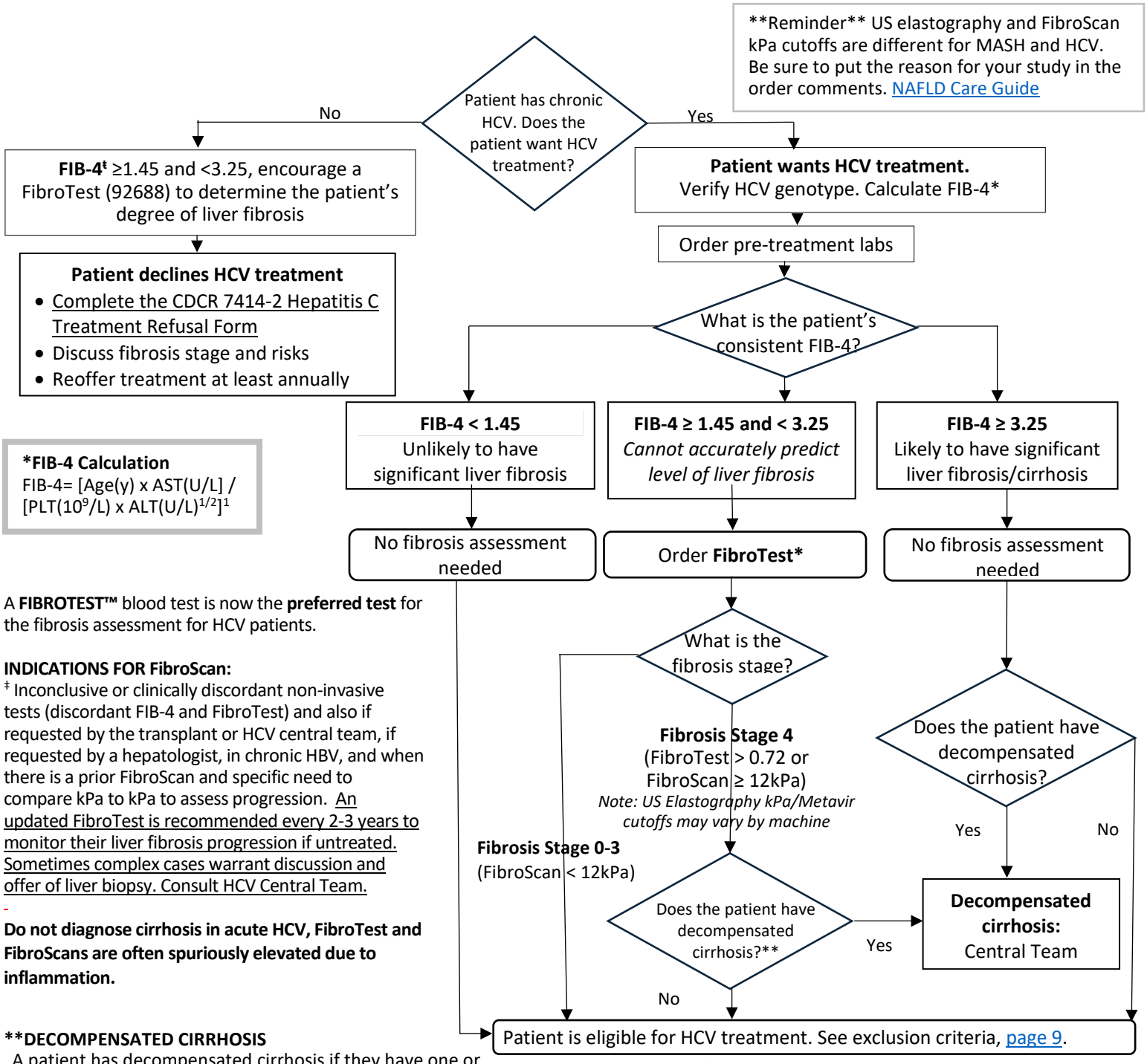
HCV antibody	HCV antibody signal: cut off	HCV viral load	ALT	Interpretation
Negative	Low	Negative	Normal	HCV negative
		Positive	High	Acute HCV
Positive	Low	Negative	Normal	False positive HCV Antibody
		Negative	High	Early acute HCV
		Positive	High	Acute HCV
Positive	High	(New) Positive	High	Acute re-infection
		Positive	Normal	Chronic HCV
		Negative	Any	Treated or cleared HCV

- Consult the HCV warmline: CDCR CPHCS HCV Questions@cdcr.ca.gov if the diagnosis (acute or chronic) is uncertain.
- Counsel the patient regarding risk reduction.

Treatment

- Approximately 20% of patients with acute HCV will clear their infection without treatment within 3-6 months of the initial exposure. Newer recommendations highlight early treatment during the acute phase to decrease the risk of transmission. Consideration will be made to treat the patients at high risk of transmission during the acute phase. Please submit a TSR for evaluation to determine the best treatment course for these patients. Assess all patients for underlying substance use disorder (see the CCHCS Care Guide: Substance Use Disorder)
- Provide patient education to patients who spontaneously clear HCV to include the risk of reinfection with high-risk exposures.

CHRONIC HCV: PATIENT PRETREATMENT EVALUATION



***FIB-4 Calculation**
FIB-4= [Age(y) x AST(U/L] / [PLT(10^9/L) x ALT(U/L)$^{1/2}$]^1

A **FIBROTEST™** blood test is now the **preferred test** for the fibrosis assessment for HCV patients.

INDICATIONS FOR FibroScan:
‡ Inconclusive or clinically discordant non-invasive tests (discordant FIB-4 and FibroTest) and also if requested by the transplant or HCV central team, if requested by a hepatologist, in chronic HBV, and when there is a prior FibroScan and specific need to compare kPa to kPa to assess progression. An updated FibroTest is recommended every 2-3 years to monitor their liver fibrosis progression if untreated. Sometimes complex cases warrant discussion and offer of liver biopsy. Consult HCV Central Team.

Do not diagnose cirrhosis in acute HCV, FibroTest and FibroScans are often spuriously elevated due to inflammation.

****DECOMPENSATED CIRRHOSIS**
A patient has decompensated cirrhosis if they have one or more of the following:
- Esophageal variceal hemorrhage
- Ascites
- Hepatic encephalopathy
- Spontaneous bacterial peritonitis
- Hepatopulmonary/or Hepatorenal disease
- CTP score of ≥ 7 (CTP ≥ 6 if HIV/HCV co-infected) (See page 9)

Fibro Test Score (f)	F ≥ 0 and f ≤0.21	F ≥ 0.21 and f ≤ 0.27	F > 0.27 and f ≤ 0.31	F > 0.31 and f ≤ 0.48	F > 0.48 and f ≤ 0.58	F > 0.58 and f < 0.72	F ≥ 0.72 and f ≤ 1.00
Metavir Score	F0 (no fibrosis)	F0-F1 (no fibrosis)	F1 (minimal fibrosis)	F1-F2 (minimal fibrosis)	F2 (minimal fibrosis)	F3 (advanced fibrosis)	F4 (severe fibrosis)

ULTRASOUND ELASTOGRAPHY—uses shear wave elastography (SWE) or acoustic radiation force impulse (ARFI) to measure liver stiffness. Studies have shown comparable results with FibroScan and may be used as an alternative to FibroScan when FibroScan is needed but unavailable. US SWE or US ARFI are measured in kilopascals (kPa) like FibroScans, but it will be important to check the ranges for F4 on the reports, as they may be different.

FIBROSCAN™ uses transient elastography to measure liver stiffness.[2] The shear wave velocity has been correlated with stages of fibrosis in HCV patients in the following manner: A FibroScan is only recommended prior to HCV treatment (not during or after HCV treatment) to determine the patient's degree of liver fibrosis if the FIB-4 is consistently between 1.45 and 3.25. If the patient has not yet received HCV Treatment, an updated FibroScan is recommended every 2-3 years to monitor their liver fibrosis progression and stage their degree of fibrosis when they are ready for treatment.

LIVER BIOPSY is used infrequently due to non-invasive alternatives and some issues with sampling and observer variability.

FibroScan result (kPa)	≤ 7.0	> 7.0	≥ 9.5	≥ 12.0
Equivalent stage of fibrosis (HCV)	F0-F1	F2	F3	F4

[1]Vallet-Pichard, A et al, FIB-4: an Inexpensive and Accurate Marker of Fibrosis in HCV Infection. Comparison with Liver Biopsy and FibroTest. Hepatology 2007;46:32-36.

[2]Ziol, M et al, Noninvasive Assessment of Liver Fibrosis by Measurement of Stiffness in Patients with Chronic Hepatitis C. Hepatology 2005; 48-54.

[3]Unless transiently elevated due to toxin, acute HCV, etc.

HCV Patient Risk* Categories for Poor Liver Outcomes

***NOT a prioritization for treatment.** Treat all viremic patients ASAP. Assess untreated patients for Fibrosis annually.*

Risk Group*	Clinical Examples
1 (Highest) **^Refer to Central Team** **Highest Risk for liver related mortality and morbidity**	· Current FibroTest > 0.58 (or FibroScan or liver biopsy demonstrating stage 3 or 4 fibrosis—≥ 9.5 kPa. Keep in mind the consistency of scores and relationship to pre and post treatment dates and whether there is congruence in assessments and the clinical picture. Consult HCV team for any questions.) · Cirrhosis otherwise diagnosed · Diagnosis of decompensated cirrhosis (see page 7) · Diagnosis of hepatocellular carcinoma (see exclusion criteria below) · HIV co-infection · HBV co-infection · Liver Transplantation (consult with transplant and HCV specialists required) · Women of childbearing age who wish to get pregnant in the next 12 months · Serious extra-hepatic manifestations of HCV (e.g., leukocytoclastic vasculitis, membranoproliferative glomerulonephritis, or symptomatic cryoglobulinemia) · History of convincing treatment failure
2 (Medium) **At higher risk for Fibrosis progression**	· Current FibroTest >0.48 to ≤ 0.58 (or FibroScan or liver biopsy demonstrating stage 2 fibrosis—> 7.0 kPa Keep in mind the consistency of scores and relationship to pre and post treatment dates and whether there is congruence in assessments and the clinical picture. Consult HCV team for any questions.) · Age > 50 years old · Patients with diabetes · HCV genotype 3 · Body mass index > 30 kg/m^2 · Glomerular filtration rate (GFR) < 30 · Does not meet any priority group 1 criteria · Comorbid liver disease states · Alcoholism or history of alcoholism · Metabolic syndrome
3 (Lowest)	· Current FibroTest ≥ 0 to ≤ 0.48(or any previous FibroScan or liver biopsy demonstrating stage 0-1 fibrosis— ≤ 7.0 kPa Keep in mind the consistency of scores and relationship to pre and post treatment dates and whether there is congruence in assessments and the clinical picture. Consult HCV team for any questions.) · Does not meet any priority group 1 or 2 criteria

Note: Patients with straightforward SUD-related reinfections may be treated by the PCP if not in Risk Group 1.

HCV Treatment Exclusion Criteria

Treatment Exclusion Criteria

THERE IS NO EARLIEST POSSIBLE RELEASE DATE (EPRD) EXCLUSION FOR HCV TREATMENT.

Take care there is sufficient time to complete pretreatment labs or diagnostics if needed, submit TSR (turn around typically within a week) and have appointment to discuss and obtain the prescribed medication before parole. Consider a patient's level of understanding and engagement, likelihood of seeking treatment once paroled, and other individual factors such as homelessness and whether or not a patient already has cirrhosis and/or coinfections with HBV or HIV. Counsel patients discharging to parole while on treatment or awaiting SVR on the importance of adherence and the follow up SVR test out in the community. In general, err on the side of treatment.

No exclusion for treatment at receptions centers (RCs). HCV Treatment is now occurring at the RCs! HCV Central Team is attempting to treat as soon as possible after entry in efforts to keep prevalence down statewide.

Exclusion Criteria: HCV Treatment (all)

· Life expectancy < 12 months that cannot be remediated by treating HCV, by transplantation, or by other directed therapy
· Inability to cooperate with treatment
· Inability to give informed consent (some cases may require pursuit of a surrogate decision maker, see Palliative Care Guide)
· Pregnancy or inability to practice contraception
· HCC and most cancers – stabilize patient before treatment. Seek hepatology or transplant hepatology input as needed
· Mental health crisis – stabilize patient before treatment. Assess initiation or continuation appropriateness case by case

Exclusion Criteria: Direct-Acting Antiviral (DAA)

· On a medication contraindicated for use with DAA and unable to substitute
· Allergy to DAA
· Allergy or contraindication to Ribavirin (RBV) (if regimen requires RBV)

Exclusion Criteria: RBV

· Poorly controlled or unstable cardiopulmonary disease
· Anemia; hemoglobin < 11 g/dl or hematocrit < 33%
· Allergy to RBV
· Inability to practice contraception during and for 6 months after treatment completion (serious teratogen)

Cirrhosis—Please see Liver Cirrhosis Care Guide

CTP Points				CTP Cirrhosis Scoring[1,2,3]			
Number of points	**1**	**2**	**3**	**Class**	**Points**	One year	Two year
Encephalopathy	None	Grade 1-2	Grade 3-4 (or chronic)				
Ascites	None	Mild/Moderate (diuretic-responsive)	Severe (diuretic-refractory)	A	5-6	95	90
Bilirubin (mg/dl)[§]	< 2	2-3	>3	B	7-9	80	70
OR							
Modified total bilirubin[§]	<4	4-7	>7				
Albumin (g/dl)	>3.5	2.8-3.5	<2.8	C	10-15	45	38
INR	<1.7	1.7-2.3	>2.3				

Complete a POLST and discuss end of life planning for patients with advanced liver disease. Consider palliative care early and Compassionate Release candidacy. See CCHCS Palliative Care Guide.

Encephalopathy Grading

Grade 1	mild confusion, anxiety, restlessness, fine tremor, slowed coordination
Grade 2	drowsiness, disorientation, asterixis
Grade 3	somnolent but arousable, marked confusion, incomprehensible speech, incontinence, hyperventilation
Grade 4	coma, decerebrate posturing, flaccidity

[§]Modified total bilirubin used to score the patients who have Gilbert's syndrome or who are taking atazanavir or indinavir

[1] Child C.G., Turcotte J.G., The Liver and Portal Hypertension. *Philadelphia, WB Saunders Co*. 1964

[2] Pugh R.N., Murray-Lyon I.M., Dawson J.L., et al., Transection of the oesophagus for bleeding oesophageal varices. *Br J Surg*. 1973; 60:646

[3] Trey C., Burns D.G., Saunders S.J., Treatment of hepatic coma by exchange blood transfusion. *NEJM*, 1966; 274:473

Special Populations

HBV Co-Infection (requires co-management by a CCHCS HCV specialist)

- Persons with HBV/HCV co-infection and detectable viremia of both viruses are at increased risk for disease progression, decompensated liver disease, and the development of HCC. Ensure consult to HBV team is in place.
- During HCV treatment, cases of HBV reactivation have been reported, in some cases resulting in fulminant hepatitis, hepatic failure, and death. It is critical to ensure that all patients with HBV are on HBV antiviral therapy before HCV treatment.
- Screening for HBV infection and viremia is required prior to starting HCV treatment. If HBV infection is noted, consult HBV Central Team. Treatment to suppress HBV viremia may be recommended before HCV treatment commences. If already sufficiently suppressed and not already on HBV treatment, concurrently begin HBV prophylaxis with HCV treatment and obtain monthly HBV viral loads are recommended during HCV treatment and after (see page 12).

HIV Co-Infection

Note multiple interactions exist with HCV and HIV medications. Do not adjust HIV medications without HIV specialist input. Ensure HIV consult is in place.

Renal Impairment

No dosage adjustment is required for any GFR. Specific HCV treatment recommendations exist for patients on dialysis or with GFR < 30 mL/min.

Pregnancy

RBV is a known teratogen and cannot be used in pregnancy. Patients should take extreme care to avoid pregnancy during therapy and for 6 months after completion of therapy in both female patients and in female partners of male patients who are or have recently taken RBV therapy.

Transplant (requires co-management by a CCHCS HCV specialist)

Specific HCV treatment recommendations exist for patients with a kidney or liver transplant.

Substance Use Disorder (SUD) Co-morbidity

Because of DAA treatment, it is important to recognize that the risk of death from SUD overdose is much higher risk than that of cirrhosis. Addressing underlying SUD is essential. Offer treatment of underlying SUD to **all patients with a history of HCV and any with recurrent viremia from an HCV re-infection. A CSW National Institute on Drug Abuse—Modified Assist (NIDA-MA) assessment should be ordered to establish type and severity of SUD; treatment with medication assisted treatment (MAT) should be expedited and should not be delayed awaiting an CSW NIDA-MA assessment.**

Discuss SUD (see the **CCHCS Care Guide: Substance Use Disorder**) at HCV intake and as the underlying cause of most HCV, address SUD at subsequent HCV visits. Question patients utilizing motivational interviewing about their current use habits, sobriety, cravings, and ISUDT engagement. Include a UDS as part of the pre-treatment work-up for HCV (Treat patients for HCV even if they decline UDS or SUD help/linkage). When in consult with a Hepatitis patient, consider whether a UDS might benefit patient care by offering a place to begin a discussion around where they are with respect to their SUD. Because SUD is a chronic disease and well-known to be relapsing and remitting, file a UDS at least annually, even in patients with longstanding remission.

CCHCS rates of recurrent viremia are higher than the general population primarily due to the high prevalence of co-morbid SUD. Patients on MAT have a significantly reduced risk of HCV re-infection. **Patients who have discontinued MAT are a very high risk of overdose**, especially in the first 4 months off MAT treatment.

Note: Patients with straightforward SUD-related reinfections may be treated by the PCP if not in Risk Group 1 (RG1).

Selection of HCV Treatment Regimen

Chronic HCV treatment is advancing more rapidly than CCHCS Care Guide revision cycles. In order to avoid the publication of outdated HCV treatment regimens in this Hepatitis C Care Guide, the provider is referred to *HCV Guidance: Recommendations for Testing, Managing, and Treating Hepatitis C*; www.hcvguidelines.org (AASLD/IDSA) for information regarding the most up to date specific recommended treatment regimens. Treatment protocol selection depends on HCV genotype, whether the patient is treatment naïve, or treatment experienced, and additional clinical factors.

Refer for treatment by submitting a TSR in EHRS for selection of the most appropriate treatment regimen by the HQ HCV Central Treatment Team. The TSR can be found in EHRS under Ad Hoc forms in the Case Management folder—HCV Treatment Selection Review Request. CCHCS's goal is to initiate HCV treatment as soon as possible and within 90 days of completing the pretreatment evaluation (labs and/or imaging if indicated, see page 7.) There is now a Pre-Treatment Lab Power Plan in EHRS that collects all relevant labs, FibroTest and US orders in one place.

Patients who are treatment experienced (not recurrent viremia from a re-infection) require pretreatment labs and the SVR lab (12 week post-treatment HCV viral load) according to the table below, but the active treatment labs may differ depending upon the particular regimen selected. Please submit a TSR for patients who are treatment experienced and the HCV Central Team will select the most appropriate regimen and follow the patient (if applicable).

When the TSR has been reviewed there will be a notification alert in the EHRS with one of the following depositions:

- **TSR has been approved:** A medication has been selected and treatment can commence. The primary care team is responsible for ordering the recommended medication, all appointment visits, and all required labs during and after treatment. **The treatment selection expires after 30 days.**
- **TSR is deferred**: The patient requires further pre-treatment preparation such as labs/diagnostics or drug-drug interactions that need to be addressed. Please resubmit the TSR PowerForm when the requested information/action has been completed. An order set PowerPlan is in EHRS.
- Case has **been assigned to the Central Team**: The central team will be responsible of all care and management of HCV treatment, including prescription for the medication, visits and labs. No further action by the PCP is needed.

Labs Recommended for Patients IF On-Treatment Monitoring is required.

The table below applies only to select patients who are treatment experienced with or without cirrhosis. There is no need for the week 4 labs for most patients, especially if treatment naïve.

Rx week	Result	Action/Interpretation
Any week	ALT: > 10 fold increase	**Stop treatment,** clinical evaluation recommended
	ALT increase but < 10 fold; with increased bilirubin, alkaline phosphatase or INR and/or symptomatic (weakness, nausea, vomiting, jaundice)	
	ALT increase but < 10 fold and asymptomatic	Recheck ALT in 2 weeks
Week 4	HCV viral load (VL): if > 15 detected, repeat VL	If > 15 detected at week 4, repeat VL at week 6
Week 6	HCV VL: 1 log increase from week 4	**Stop treatment**
	HCV VL: < 1 log increase from week 4	Continue treatment
12 weeks	HCV VL: Detectable	Treatment failure or reinfection
	HCV VL: Undetectable	SVR=Cure. Annual VL testing recommended.
	Aspartate aminotransferase (AST) or ALT abnormal	Assess for other causes of liver disease if the HCV VL is undetectable
	AST or ALT within normal limits	No further action required

Labs/Diagnostics Recommended For HCV Treatment

		Studies		βHCG	CBC	CMP	PT/ INR	HCV viral load	HCV GT	HIV test	HBV serology	UDS	HCC Screening
PRE-TREATMENT ****FibroTest for all with mid-range Fib 4 needed before treatment. (≥1.45—<3.25) can start.**	**Treatment Naïve**	Cirrhosis	Any time frame					✓	✓	✓	✓[4]		
			Within past 6 months		✓	✓	✓						✓
			Within past 3 months									✓[7]	
			Within past 1 month	✓[1]									
		No Cirrhosis	Any time frame					✓	✓	✓	✓[4]		
			Within past 6 months		✓	✓							
			Within past 3 months									✓[7]	
			Within past 1 month	✓[1]									
	Treatment Experienced	Cirrhosis	Within past 12 months					✓	✓	✓	✓[4]		
			Within past 6 months		✓	✓	✓						✓
			Within past 3 months									✓[7]	
			Within past 1 month	✓[1]									
		No Cirrhosis And regressed Cirrhosis after prior SVR	Within past 12 months					✓	✓	✓	✓[4]		
			Within past 6 months		✓	✓	✓						
			Within past 3 months									✓[7]	
			Within past 1 month	✓[1]									
ACTIVE TREATMENT[9]	**Treatment Naïve**	Cirrhosis	Week 4			✓						✓[7]	
			Week 8			✓[9]							
		No Cirrhosis	Week 4									✓[7]	
			Week 8										
	Treatment Experienced	Cirrhosis and No Cirrhosis	Week 2		✓[2]								
			Week 4		✓	✓		✓				✓[7]	
			Week 8		✓[2]	✓[3]							
			Week 12		✓[2]								
	End of treatment				✓[2]								
	After treatment for all	12 weeks after treatment ends				✓[5]		✓[6]				✓[7]	✓ (see page 14)
	After Treatment for HBV Core+/HBs-	Consider monthly for patients with isolated core positivity x 3 months				✓[8]							
	After Treatment for HBV co-infected	Monthly for patients x 3 months, then quarterly				✓					✓DNA		

*Pretreatment for Tx experienced with SVR and prior F4 who have now regressed to <F4 and do not have indication of clinical cirrhosis.

1. Recommended for women of childbearing age.
2. Obtain CBC at treatment week 2, 4, 8, 12, 16 (if applicable) if taking RBV.
3. Updated AASLD/IDSA Guidelines showing simplified treatment model can be found here: https://www.hcvguidelines.org/treatment-naive. Treatment-naïve & no cirrhosis do not need lab monitoring during treatment. Although it may be considered for those with isolated core positivity.
4. If HBV surface antigen and HBV surface antibody are negative but HBV core antibody is positive, consider HBV deoxyribonucleic acid (DNA) level (see next page, top)
5. CMP with SVR test is recommended for certain patients that are treatment experienced, have cirrhosis, or other comorbidities.
6. If the HCV VL is undetectable and the AST or ALT are abnormal, assess for other causes of liver failure.
7. If indicated, UDS may be appropriate/indicated at shorter intervals. Order a UDS at least annually at minimum for all patients with HCV or history of HCV.
8. Consider LFTs in patients with isolated core antibody positivity (surface antigen and antibody negative) at post-week 4, 8 and 12 after treatment (recommended by some, but not in AASLD guidelines)
9. Week 8 CMP optional depending on level of compensation and other co-morbidities.

Isolated Core Positivity (Surface Antigen and Antibody negative)

If HBV surface antigen and HBV surface antibody are negative but HBV core antibody is positive: DAA treatment has a very low risk of reactivation (<1%) and most patients do not need an HBV DNA. Routine HBV DNA testing in isolated core positive patients will no longer be done for pre-treatment labs. Consider obtaining HBV DNA in Individuals with advanced liver disease, very high ALTs, persons with HIV, if any clinical suspicion for possible acute HBV and those who need immunosuppressive therapy to exclude low-level chronic HBV infection (occult HBV). Post-treatment liver function testing to check for hepatitis is also prudent for this group of patients to check for hepatitis. Patients with isolated core positivity who will undergo immunosuppressive therapy have actions based on **risk of reactivation with certain therapies (see Up to Date). This is typically managed by the specialist starting the therapy.** Please consult the central HBV team for questions as needed.

Medical Holds & Transfers

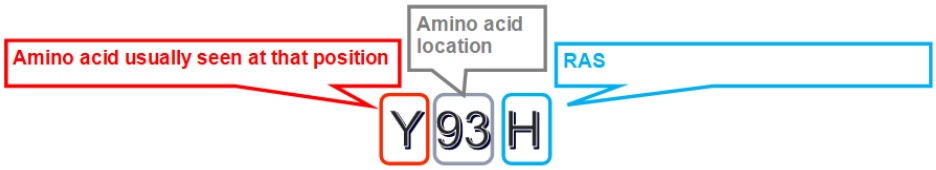
The HCV Registry has alerts to allow the HCV Central Team to monitor care continuity for patients who transfer while on active HCV treatment, so it is not necessary to manually alert the HCV Central Team when a patient transfers. Care teams are encouraged to utilize the Cross Encounter Reconciliation process when patients transfer, which assists in achieving continuity of medications and orders. Additionally, medical holds are no longer required for the purpose of receiving HCV treatment.

Resistance to Direct Acting Oral Agents

HCV is an approximately 9.5 kilobase RNA virus that replicates at a rate of billions of copies daily. Many of these viral copies are not functional due to errors during replication. However, the rate of replication allows for drug-resistant virus to develop when a patient is taking an HCV combination that is suboptimal or if the patient is not adherent with medication.

HCV RNA Viral Structure			*Replication Complex*					
Structural proteins			*Non-structural proteins*					
C	*E1*	*E2*	*p7*	NS3	NS4A	NS4B	NS5A	NS5B
HCV Medication			**NS3/4A Protease**		**NS5A Inhibitors**		**NS5B Polymerase Inhibitors**	**NS5B Polymerase**
Medications			Glecaprevir, Grazoprevir, Voxilaprevir		Daclatasvir, Elbasvir, Ledipasvir, Pibrentasvir, Velpatasvir		Sofosbuvir	Dasabuvir

An area of the HCV virus conferring resistance to a particular medication is called a resistance associated substitution (RAS). An RAS' name identifies the amino acid position where the substitution took place, the amino acid that is normally coded for (preceding the amino acid position), and the amino acid that is now being coded for. Multiple letters following the amino acid position indicate a mixed virus with more than one resistant variant present.



The presence of RAS impacts HCV treatment depending on patient genotype, the level of liver fibrosis, and if the patient is treatment experienced or naïve. RAS can remain present for weeks to months. Some RAS confer cross class resistance, while others only affect specific members of a medication class. Resistance can be overcome in some cases with the addition of ribavirin or additional agents and/or the extension of treatment duration.

Testing for Resistance

The most common drug resistant virus develops as a result of NS3 or NS5A failures; NS5B failures are rarely seen in clinical settings. There are commercially available assays to detect RAS in genotype 1 NS3/4a, NS5A and NS5B and in genotype 3 NS5A regions. RAS testing is to be ordered in only specific instances; see hcvguidelines.org for more information. RAS testing is not recommended prior to retreatment of DAA failures.

SCREENING FOR HCC

Does my patient need to continue HCC screening after HCV treatment? See **CCHCS Care Guide: Liver Cirrhosis.**

Patient has clinical evidence of cirrhosis, which may include:
Physical stigmata: spider angiomata, palmar erythema, asterixsis, jaundice, itchy skin, protuberant abdomen, abdominal fluid wave, peripheral edema
Abnormal Diagnostics

- **Abnormal labs**
  - Elevated: AST, ALT, Bili
  - Low: Albumin, platelets

Patient has had metavir FIB4 level fibrosis assessment regardless of physical exam or lab abnormalities:

- Fib 4 ≥ 3.25
- FibroTest ≥ 0.72
- ELF ≥ 11.3 in MASH
- Ultrasound elastography or FibroScan in F4 kPa range
- Ultrasound consistently showing nodularity and shrunken liver (ultrasound is highly insensitive, but is specific when nodularity found consistently)

Validity of F4 Study
Does patient's prior F4 range diagnostic study seem spuriously elevated (acute HCV, autoimmune thrombocytopenia) and patient otherwise has no evidence of cirrhosis?

Yes → Consult HCV Central

Reminder US elastography and FibroScan kPg cutoffs are different for MASH and HCV. Be sure to put the reason for your study in the order comments.
NAFLD Link

No, prior F4 appears valid, or invalidity cannot be ruled out

Patient has cirrhosis

Patient completes HCV treatment

Post HCV treatment resolution of cirrhosis?

No → Assess for fibrosis after completing HCV treatment to see if HCV Tx regressed cirrhosis.

Yes

Screen for HCC with ultrasound and alpha feto-protein q 6 months
Patients with PRE-TREATMENT F4 fibrosis or clinical cirrhosis will need indefinite continuation of HCC screening regardless of SVR and fibrosis improvement that is <F4 after treatment

HCV Medication Comparison Overview				
Medication	**Genotype**	**Pills/Day**	**Duration (treatment naïve, no cirrhosis)**	**Resistance Testing Required? (treatment naïve, no cirrhosis)**
Ledipasvir/Sofosbuvir [Harvoni®]	1, 4, 5, 6	1	8, 12 weeks	No
Sofosbuvir/Velpatasvir [Epclusa®]	1, 2, 3, 4, 5, 6	1	12 weeks	No
Glecaprevir/Pibrentasvir [Mavyret®]	1, 2, 3, 4, 5, 6	3 pills once/day	8 weeks	No
Elbasvir/Grazoprevir [Zepatier®]	1, 4	1	12, 16 weeks	If Genotype 1A **and going to use Zepatier,** then resistance testing is required (Hepatitis C Viral RNA Geno 1 NS5a Drug Resist-92447)

Medications

· **WARNING: Risk of Hepatitis B virus reactivation in patients co-infected with HCV and HBV.** Test all patients for evidence of current or prior HBV infection before initiating HCV treatment.
· If treatment interruption occurs or is anticipated, contact the HCV warmline immediately.
· Multiple drug-drug interactions may occur. Consult the pharmacy or HCV warmline prior to initiating new medications during the HCV treatment course (see page 20).

Direct Acting Oral Agents

Medication	Dosing	Adverse Effects/Interactions*
Glecaprevir/Pibrentasvir [Mavyret®] Tablet: 100/40 mg Glecaprevir NS3 protease inhibitor Pibrentasvir NS5a inhibitor	*Activity in all genotypes* **Dose:** Three tablets orally once daily with food **Renal dosing:** · No adjustments needed **Hepatic impairment:** · Not recommended in patients with moderate hepatic impairment (CTP B) · Contraindicated in patients with severe hepatic impairment (CTP C)	· Fatigue · Headache · Contraindicated with atazanavir, rifampin, carbamazepine, efavirenz, ethinyl estradiol, darunavir, lopinavir/ritonavir, atorvastatin, lovastatin, simvastatin · Caution with digoxin, dabigatran, cyclosporine, pravastatin (pravastatin dose 50%), rosuvastatin (not to exceed rosuvastatin 10 mg) · Caution with warfarin, close monitoring of the INR is recommended
Ledipasvir/Sofosbuvir (HAR) [Harvoni®] Tablet: 90/400 mg Ledipasvir NS5A inhibitor Sofosbuvir NS5B inhibitor	*Activity in genotype 1, 4, 5, 6* **Dose:** One tablet once daily with or without food **Renal dosing:** · No dose adjustment required including hemodialysis patients	· Fatigue · Headache · Nausea · Significant drug-drug interaction with acid lowering agents · Bradycardia when administered with amiodarone (not recommended) · Contraindicated with certain P-gp inducers (e.g., carbamazepine, phenytoin, phenobarbital, rifampin, rifabutin, rifapentine, tipranavir, topotecan) · Oxcarbazepine possibly lowers the concentrations of Harvoni. Alternative agent is recommended during HCV treatment · Caution with digoxin, statins, tenofovir DF · Caution with warfarin, close monitoring of the INR is recommended

Bold = Formulary

*See prescribing information for complete description of adverse effects and drug interactions.

Medications Continued

Direct Acting Oral Agents Continued

Sofosbuvir/Velpatasvir [Epclusa®] Tablet: 400/100 mg Sofosbuvir NS5B inhibitor Velpatasvir NS5A inhibitor	*Activity in all genotypes* **Dose:** One tablet once daily with or without food **Renal dosing:** · No dose adjustment required including hemodialysis patients	· Fatigue · Headache · Significant drug-drug interaction with acid lowering agents · Bradycardia when administered with amiodarone (not recommended) · Contraindicated with certain P-gp inducers (e.g., carbamazepine, phenytoin, phenobarbital, rifampin, rifabutin, rifapentine, efavirenz, tipranavir, topotecan) · Oxcarbazepine possibly lowers the concentrations of Epclusa Alternative agent is recommended during HCV treatment · Caution with digoxin, statins, tenofovir DF · Caution with warfarin, close monitoring of the INR is recommended
Sofosbuvir/Velpatasvir/Voxilaprevir [Vosevi®] Tablet: 400/100/100 mg Sofosbuvir NS5B inhibitor Velpatasvir NS5A inhibitor Voxilaprevir NS3/4A protease inhibitor	*Activity in all genotypes* **Dose:** One tablet once daily with food **Renal dosing:** · No dose adjustment required including hemodialysis patients **Hepatic impairment:** · Not recommended for patients with moderate to severe hepatic impairment (CTP B and C)	· Fatigue · Headache · Diarrhea · Nausea · Significant drug-drug interaction with acid lowering agents · Bradycardia when administered with amiodarone (not recommended) · Contraindicated with certain P-gp inducers (e.g., carbamazepine, phenytoin, phenobarbital, rifampin, rifabutin, rifapentine, atazanavir, lopinavir, tipranavir, efavirenz, topotecan) · Oxcarbazepine possibly lowers the concentrations of Epclusa Alternative agent is recommended during HCV treatment · Caution with statins, cyclosporine, digoxin · Caution with warfarin, close monitoring of the INR is recommended

Bold = Formulary

*See prescribing information for complete description of adverse effects and drug interactions.

Medications continued

HCV Agents - Other

Medication	Dosing	Adverse Effects/Interactions*
Ribavirin (RBV) **Tablet/**capsule: 200 mg	*Activity in all genotypes* **Dose:** Based on body weight (total daily dose, divided two times a day) < 75 kg: 1000 mg > 75 kg: 1200 mg **Renal dosing:** CrCl 30-50 ml/min: Alternating doses, 200 mg and 400 mg every other day CrCl < 30 ml/min: 200 mg daily Hemodialysis (HD): 200 mg daily	**Anemia:** • The primary clinical toxicity of RBV is hemolytic anemia (See anemia management, Page 19). • After about 2 weeks of RBV treatment, approximately 10% develop severe anemia; this may result in worsening of cardiac disease and has led to fatal and nonfatal myocardial infarctions. **Teratogenicity (Pregnancy):** • Due to the risk of fetal malformations and fetal death with RBV, a negative pregnancy test is required before treatment consideration. • For women of childbearing potential, ensure 2 forms of effective contraception during treatment and for 6 months after treatment. • Men whose female partners are pregnant or may become pregnant, use barrier contraception. during treatment and for 6 months after treatment. • Histamine-like side effects: nasal stuffiness, itching, skin irritation, asthma-like syndrome.

Colony Stimulating Factors (epoetin alfa)

Medication	Dosing	Adverse Effects/Interactions*
Epoetin alfa **10,000 units/ml, 20,000 units/ml,** 40,000 units/ml**, 4,000 units/ml,** 3,000 units/ml, 2,000 units/ml	**Usual Dose:** 50-100 units/kg subQ, (IV preferred if dialysis) three times weekly or 150-300 units/kg subQ once weekly (maximum 40,000 units weekly) Titrate to maintain Hgb 10-12 g/dl • Frequent Hgb monitoring is required • Avoid increase of Hgb > 1g/dl over a two week period	• Epoetin alfa does not have a U.S. Food and Drug Administration (FDA) indication for the treatment of RBV associated anemia although it is commonly used for this complication of treatment • Epoetin alfa is associated with significant toxicities, including pure red cell aplasia and cardiovascular risks such as thromboembolic events and strokes • Use with caution in patients with malignancies, hypertension (HTN), cardiovascular disease, hypercoagulable conditions, sickle cell disorders and seizures • "FDA Drug Safety Communication: Erythropoiesis-Stimulating Agents (ESAs): Epogen® states: • Health care professionals who prescribe epoetin alfa to patients with anemia from causes other than cancer chemotherapy are required to provide a copy of the Medication Guide to each patient. Please see http://www.fda.gov/downloads/Drugs/Drugsafety/ucm088988.pdf for a copy of this medication guide. • Patients need to know about increase risks of CV related conditions, stroke, death • Prior to the initiation of epoetin for the correction of anemia in the patient receiving HCV treatment, a consultation with the CCHCS HCV warmline is strongly recommended at: CDCR CPHCS HCV Questions@cdcr.ca.gov

Bold = Formulary *See prescribing information for complete description of adverse effects and drug interactions.

Management of Side Effects of HCV Treatment with Ribavirin	
Anemia (Consider Consultation with HCV Warmline at *CDCR CPHCS HCV Questions@cdcr.ca.gov*)	
Hemoglobin g/dl	**Action**
< 10 g/dl in patients with no history of cardiac disease	• Decrease RBV to 600 mg/day* • Recheck Hgb weekly
≥ 2 g/dl decrease during any 4 week period and history of stable cardiovascular disease	• Decrease RBV to 600 mg/day* • Recheck Hgb weekly
Hgb 8.6-9.0 g/dl	• RBV dose reduction to 600 mg/day if not already done • Weekly Hgb monitoring • Consider epoetin alfa if the dose has been reduced to 600 mg/day for at least two weeks with continued drop in Hgb • Careful review with patient of risks/benefits of epoetin alfa versus stopping HCV treatment.** § Provide the epoetin alfa medication guide (see page 18) • Symptomatic anemia: discontinue HCV treatment** §

Hgb 8.0-8.5 g/dl	• RBV dose reduction to 600 mg/day if not already done
	• Weekly Hgb monitoring
	• Careful review with patient of risks/benefits of epoetin alfa vs. stopping HCV treatment** §
	  • If considered clinically stable to continue HCV treatment and if the patient agrees, provide epoetin alfa medication guide (see page 18)
	  • Symptomatic anemia: Consider inpatient management and RBC transfusion and consider discontinuing HCV treatment** §

Hgb 7.5-7.9 g/dl	• Review with patient the risks of anemia and stopping HCV treatment vs. the risk of continuing HCV treatment and epoetin alfa.** § Provide epoetin alfa medication guide to patients starting epoetin alfa (see page 18). • Stop RBV (If on DAA, discontinue medication and contact the HCV warmline) • Weekly CBC monitoring • Symptomatic anemia: Discontinue HCV treatment** § and consider inpatient management and RBC transfusion
Hgb < 7.5 g/dl or symptomatic anemia	• Terminate HCV treatment§

***If RBV dose is reduced for anemia:**

- Once Hgb has increased to > 10.0 g/dl, increase the ribavirin dose by 200 mg/day at two week intervals until the initial dose is reached

****If RBV is temporarily stopped due to anemia:**

- Recheck Hgb within two weeks and at two week intervals until stable
- If Hgb is > 10.0 g/dl, restart RBV at a dose of 600 mg/day if patient's weight < 75 kg; 800 mg/day if the patient's weight is ≥ 75 kg
- If hemoglobin remains > 10.0 g/dl, increase dose by 200 mg/day at two week intervals until the initial dose is reached

§ **Consultation with the CCHCS HCV warmline is *strongly* recommended prior to stopping HCV Treatment CDCR CPHCS HCV Questions@cdcr.ca.gov.**

Drug-Drug Interactions

Multiple drug-drug interactions exist between the direct acting HCV medications and other medication classes including, but not limited to, certain antimicrobials, analgesics, antiarrhythmics, oral contraceptives, anxiolytics, lipid lowering agents, acid lowering agents, antiretrovirals, herbal preparations, corticosteroids, and anticonvulsants and specific medications such as rifampin, salmeterol, and warfarin.

The HCV Central Treatment Team at HQ will use the patient's current medication list when choosing the appropriate HCV treatment regimen for that patient. If the patient requires an addition of any medication during their HCV treatment course, the prescribing provider will need to address possible drug-drug interactions prior to prescribing.

For more information on drug-drug interactions:

- **Contact the HCV warmline at CDCR CPHCS HCV Questions@cdcr.ca.gov**
- **http://www.hep-druginteractions.org**

Using the Drug-Drug Interaction Tool on Lifeline:

1. Go to Lifeline (http://lifeline/Pages/Home.aspx).
2. Under Divisions/Programs, select Quality Management.
3. Under External Links, select Quality Management Portal.
4. Under Care Team Tools, select All Care Team Tools.
5. Under Pharmacy/Medication Management, select Drug-Drug Interaction Checker.

Or select the hyperlink below:
http://qmtools/Reports/report/QM/Tools/DrugDrugInterationSearch

Patient Education/Self Management

WHAT YOU SHOULD KNOW: HEPATITIS C VIRUS

WHAT IS HEPATITIS C?

- Hepatitis C is a virus that causes swelling and irritation of the liver.
- The liver helps with digestion and filters waste products out of the blood.
- Hepatitis C can cause serious damage to the liver.
- Hepatitis C has no vaccine, but you can be vaccinated for hepatitis A and B to prevent more damage to your liver.

HOW DO YOU GET HEPATITIS C?

You can get hepatitis C from:

- Dirty needles (tattoos or piercing)
- Snorting drugs with infected equipment
- Sharing needles to inject drugs
- Unprotected sex (rarely)
- A blood transfusion if you got one in the USA before 1992 (All blood now tested for hepatitis C before transfusion)

HOW DO YOU KNOW IF YOU HAVE HEPATITIS C?

- Most people who have hepatitis C look and feel fine.
- You can have hepatitis C for a long time and not know it.
- Usually hepatitis C is found by doing blood tests.
- If hepatitis C damages the liver, it can cause scarring. This is called cirrhosis (sir-oh-sis).
- Your health care provider may order more tests to see how much liver damage you have.
- Some people with hepatitis C can have:
  - Fatigue
  - Stomach pain
  - Joint pain
  - Night sweats
  - Loss of appetite or nausea

WHAT CAN YOU DO TO TAKE CARE OF YOURSELF?

- Get vaccinated for hepatitis A and B. Get yearly vaccinations for the flu. Talk to your doctor about whether or not you need the pneumonia shot.
- Do not drink alcohol or use illegal drugs - these will damage your liver more and snorting or injecting drugs can cause you to get infected or re-infected with hepatitis C.
- Do not take a lot of medications like acetaminophen (Tylenol®) and ibuprofen (Motrin®). Talk to your health care provider about all medications, including over-the-counter medications, vitamins, and herbs to be sure they will not damage your liver. Ask your health care provider before you take any pain medicine.
- Do not get tattoos in prison because of the risk of new infection with hepatitis C, hepatitis B, or HIV.
- Do not share your toothbrush, razor, or other personal items.
- Eat a healthy diet and try to lose weight if you are overweight.
- Drink plenty of water.
- Get plenty of rest and regular exercise.
- Quit smoking cigarettes.
- Follow your health care provider's instructions about medications for hepatitis C treatment.
- See your health care provider and dentist regularly.

CAN HEPATITIS C BE CURED?

- For many years hepatitis C treatment was difficult and took up to 12 months – the treatment is better now and many patients can be cured of hepatitis C (but if they continue to inject drugs or do other risky things, they can get it again).
- Hepatitis C treatment is not an emergency. The liver damage/scar tissue happens over many years, and some people never get much damage or scarring.
- What specific hepatitis C treatment to use, how long the treatment needs to be given, and how soon a person will be treated all depend on many things which are different for each person. Discuss your case with your health care provider.
- You can get re-infected if you are exposed to the hepatitis C virus again. Successful treatment does not provide protection from repeat infections.

Educación para el Paciente/Control personal del caso

LO QUÉ DEBE SABER: HEPATITIS C

¿QUÉ ES LA HEPATITIS C?

- La hepatitis C es un virus que produce inflamación e irritación del hígado.
- El hígado ayuda a la digestion y filtra los productos de desecho fuera de la sangre.
- La hepatitis C puede causar daños serios al hígado.
- No existe vacuna para prevenir la hepatitis C, pero usted puede vacunarse contra la hepatitis A y B para evitar dañar más su hígado.

¿CÓMO SE PUEDE CONTRAER LA HEPATITIS C?

La hepatitis C se puede contraer de las siguientes maneras:

- Agujas contaminadas (tatuajes o perforaciones).
- Inhalar drogas usando un equipo infectado.
- Compartir agujas para inyectarse drogas.
- Practicar sexo sin protección (raras veces).
- Mediante transfusion de sangre si se realizó en EE.UU. antes de 1992.
  (Actualmente, toda transfusion de sangre es sometida a la prueba de la hepatitis C antes de realizarse.)

¿CÓMO SABER SI USTED SUFRE DE LA HEPATITIS C?

- La mayoría de las personas enfermas lucen y se sienten sanas.
- Se puede sufrir de la hepatitis C por un tiempo largo y no saberlo.
- Usualmente se puede detectar la hepatitis C mediante un examen de sangre.
- Si la hepatitis C daña el hígado, puede producer cicatrices. Esto se conoce como cirrosis.
- Su medico puede indicarle otros exámenes para verificar el daño que tiene su hígado.

- Algunas personas que sufren de la hepatitis C presetan:
  - Fatiga
  - Dolor estomacal
  - Dolor en las articulaciones
  - Sudoración nocturna
  - Pérdida del apetito o náuseas

¿QUÉ PUEDE HACER USTED PARA CUIDARSE?

- Hágase vacunar contra la hepatitis A y B. Vacúnese anualmente contra la gripe. Hable con su médico sobre si necesita o no la vacuna contra la neumonía.
- No consuma alcohol ni use drogas ilícitas - estas producirán más daño al hígado.
- No ingiera gran cantidad de medicamentos como el paracetamol (Tylenol®) y el ibuprofeno (Motrin®). Consulte con su medico acerca de todos los medicamentos, incluyendo los medicamentos de venta sin prescripción, vitaminas y hierbas para evitar dañar el hígado. Consulte con su médico antes de ingerir cualquier medicamento analgésico.
- No se realice tatuajes en la prisión para evitar enfermedades de transmisión sanguínea.
- No comparta su cepillo de dientes, rasuradora u otros objetos personales.
- Trate de adelgazar si tiene sobrepeso.
- Mantenga una dieta sana.
- Ingiera abundante cantidad de agua.
- Tenga mucho descanso y realice ejercicio con regularidad.
- Abandone el hábito de fumar cigarrillos.
- Siga las instrucciones de su médico acerca de los medicamentos para tratar la hepatitis C.
- Consulte con regularidad con su doctor y dentista.

¿SE PUEDE CURAR LA HEPATITIS C?

- Durante muchos años el tratamiento de la hepatitis C era muy difícil y tomaba hasta 12 meses – el tratamiento es mejor ahora y muchos pacientes pueden ser curados de la hepatitis C (pero si continúan inyectándose drogas o haciendo otras cosas riesgosas, pueden volver a contagiarse).
- El tratamiento de la hepatitis C no es una emergencia. El daño al hígado o los tejidos de cicatriz que se forman toman muchos años para realizarse, y algunas personas nunca tienen mucho daño o muchas cicatrices
- El tratamiento específico que debe ser usado contra la hepatitis C, cuánto tiempo debe durar el tratamiento y qué tan pronto una persona debe tratarse depende de muchos factores y estos varían en cada persona. Discuta su caso con su médico.
- Puede volver a infectarse si vuelve a estar expuesto al virus de la hepatitis C. Un tratamiento que tiene éxito no protege contra las infecciones recurrentes de la hepatitis C.