Practical Advice for Developing a Hepatitis C Treatment Program in Your Clinic: The Details

Kelly Eagen, MD
Janet Grochowski, PharmD
Val Robb, RN

Disclosures

- Kelly Eagen, MD (SFDPH & UCSF Family and Community Medicine)
  - No disclosures
- Janet Grochowski, PharmD (UCSF Positive Health Program)
  - Gilead - UCSF research grant
- Val Robb, RN (UCSF Positive Health Program)
  - No disclosures

Objectives

- To review the essential components of a program to support Hepatitis C (HCV) Treatment.
- To emphasize multidisciplinary collaboration and team-based care in HCV treatment.
- To share “toolkit” items for use in programmatic development.

Getting to know the audience...

- How many of you are treating or want to treat (CURE!) patients with chronic HCV?
- From where did you come?
  - California
  - Other
- What are you most interested in learning?
  - Prescribing medications
  - Obtaining medications
  - Programmatic issues, EMR
  - Monitoring on treatment
  - Other
There's more than one way to shave a cat...

A model for clinic-based HCV treatment

Where to start...
Recommendations for when and in whom to initiate treatment
- Treatment is recommended for all persons with chronic HCV infection, except those with short life expectancies that cannot be remedied by treating HCV, by transplantation, or by other directed therapy. Patients with short life expectancies owing to their disease should be managed in consultation with an expert.

Consider your team
Even if your team is small, "dip your toe in" with one patient to start and soon you’ll be diving in!
Create a HCV registry

• Identify patients with no HCV screening
  • Consider: Baby Boomers, HIV or HBV co-infected or other populations indicated for screening
  • Review clinic’s HCV screening protocols
    - Consider HCV education for staff and patients
    - Outreach/inreach for HCV screening

• Identify patients with HCV Ab positive without viral load

• Identify chronically HCV infected patients
  • Add lab data and additional data that will help with prioritization:
    - HIV & HBV status
    - Diabetes, renal disease, extrahepatic manifestations of HCV
    - Risk for transmission (IDU, MSM, female of childbearing potential, healthcare worker, hemodialysis)
    - Lab data to calculate APRI/FIB-4

How to prioritize?

• Patients who ASK about treatment are excellent candidates!

• Patients who demonstrate control of other diseases (ie. HIV, DM)

• Yellow flags:
  - Uncontrolled chronic disease
  - Active substance use that results in patient not taking medications
  - Unpredictable hospitalizations or disappearances for long periods of time
  - < 12 month life expectancy from non-liver related disease

• Patients more appropriate for treatment by specialist may include:
  - History of decompensated liver disease or Childs Pugh score B or C
  - Cirrhosis with complex medical history
  - Chronic renal dysfunction stage 4 or 5 (CrCl < 30 mL/min)
  - Hepatocellular carcinoma
  - Chronic HBV
  - Prior failed treatment for HCV with direct acting antivirals

Sample Registry

| Patient | Provider | Location | Age | Gender | Race | Ethnicity | Financial Class | BP (Last Date) | Hepatitis C Virus Antibody (Last Value) | HCV Genotype (Last Value) | HCV Load (copies/mL) (Last Value) | HCV Load (copies/mL) (Last Date) | AST (Last Value) | AST (Last Date) | ALT (Last Value) | ALT (Last Date) | APRI/FIB-4 | HIV (eCW) (Last Value) | Hepatitis B, Chronic (eCW) (Last Value) | Diabetes (eCW) (Last Date) | HbA1c (Last Value) | HbA1c (Last Date) | Urinalysis Dipstick: Protein (Last Value) | Urinalysis Dipstick: Protein (Last Date) | Abdominal Ultrasound (Last Date) | Abdominal CT (Last Date) | Abdominal MRI (Last Date) | Hepatitis A Total Antibody (Last Value) | Hepatitis B Surface Antibody (Presence) (Last Value) | Transgender (Last Date) | 119 | 8/23/2016 | 1.127 | negative | negative | No | 5.4 | 5/5/2015 | Neg | 1/15/2014 | Positive | Negative |
|---------|---------|---------|-----|--------|------|-----------|----------------|---------------|----------------------------------------|-------------------------------|----------------------------------|----------------------------------|----------------|--------------|--------------|---------------|--------------|-----------------------|-------------------------------|------------------------|-------------------|-------------------|--------------------------------|--------------------------------|--------------------|-----------------|-----------------|------------------------|--------------------------------|-------------------|

Case

Mr. Jones is a 59 year old gentleman with chronic Hepatitis C, DM, GERD and chronic pain. He has known for at least 10 years that he has HCV but suspects he was infected 30 years ago. His most recent labs and imaging are consistent with cirrhosis (always compensated). He was told by other doctors and friends that he couldn’t have treatment because he injects heroin although he believes this does not affect his ability to care for himself. His engagement with medical care has been excellent over the years you have known him.

“Doc, my neighbor recently started that new HCV medication I keep seeing on TV. He feels like a million bucks and it’s only been a month! Do you think I might ever be treated?”
Assessing Treatment Readiness

Sample Checklist:
- Patient wants hepatitis C treatment.
- Patient generally keeps scheduled medical appointments.
- Patient has a reasonably stable social situation.
- Patient takes currently prescribed medications, and has relatively good control over other chronic diseases (HIV, HTN, diabetes, etc).
- Patient can articulate a plan to avoid hepatitis C reinfection after treatment.
- Clinic/pharmacy staff can contact patient by phone or have another reliable way to reach patient. Have at least 2 phone numbers and possibly email. Second contact may be a friend, family member or case manager.
- Patient has active substance use and/or mental health issues, these conditions are relatively stable and do not prohibit engagement in general medical care.
- Liver toxins (i.e. alcohol, high-dose acetaminophen) are minimized, and ideally eliminated.
- Patient willing to share financial information with pharmacy if patient assistance program is needed.

Active Substance Users

Despite substantial drug use during treatment, 96.5% of patients missed ≤3 doses during 12 weeks.

REINFECTION:
- 6 reinfections through week 24
- 4.6 reinfections/100py

Treating PWID

More effective when paired with opioid substitution therapy and syringe exchange

Treatment as prevention

Medi-Cal Treatment Criteria include:
- Men who have sex with men with high-risk sexual practices
- Active injection drug users
- Persons on long-term hemodialysis
- Women of childbearing age who wish to get pregnant.
- HCV-infected health care workers who perform exposure-prone procedures
### Regimen Selection

- Consult your resources
  - **AASLD guidelines** - Fantastic, readable!
    - www.HCVguidelines.org
  - By genotype, cirrhosis status, treatment naïve vs experienced, special populations
  - Local specialist (Hepatology or Infectious Disease)
  - Project ECHO
  - A friendly and skilled colleague

- Familiarize yourself with insurance formularies (if possible…)
  - These can be confusing so if you do not know what is covered prescribe what is recommended by the guidelines and insurance will let you know if another agent is preferred…

### What factors determine regimen?

- **HCV genotype (1-6)**
  - If GT1a/b will want to get “high resolution genotype”

- **Stage of liver disease**
  - No cirrhosis
  - Compensated cirrhosis (child-pugh A)
  - Decompensated cirrhosis (child-pugh B or C)

- **Prior treatment history**
  - Treatment failure (null responder at 12 weeks or relapse after completed treatment)
  - Treatment intolerance (stopped 2/2 side effects)

- **Other medications**
  - Renal disease (CrCl <30)

### Mr. Jones (cont)

- Mono-infected
- Genotype 2, treatment naïve
- HCV VL 5,000,000 IU/mL
- Engaged patient ready for treatment
- Priority candidate based on:
  - Compensated cirrhosis
  - Injection drug use (risk for transmission)
  - Well controlled diabetes
  - Meds: benazepril, metformin, pantoprazole, gabapentin, ibuprofen

- Consult www.HCVguidelines.org
  - Daily fixed-dose combination of sofosbuvir (400 mg)/velpatasvir (100 mg) for 12 weeks is a recommended regimen for treatment-naïve patients with HCV genotype 2 infection who have compensated cirrhosis.
    - Rating: Class I, Level A
    - If you read further in the guidelines, all data related to recommendations are provided.

- Document plan for treatment and choice of regimen.

- Send sofosbuvir/velpatasvir x 12 weeks to specialty pharmacy and notify your supportive team member to help obtain the medications.
Obtaining HCV Medications

Janet Grochowski, PharmD, BCPS, AAHIVP
Clinical Pharmacist
Ward 86, Positive Health Program, ZSGH

HCV Drug Interactions

University of Liverpool
http://www.hep-druginteractions.org/

AASLD IDSA HCV Guidelines
http://www.hcvguidelines.org/full-report/monitoring-patients-who-are-starting-hepatitis-c-treatment-
treatment-or-have

EASL 2016 Recommendations
Mr. Jones (cont)

- Regimen: sofosbuvir/velpatasvir x 12 weeks
- Drug-drug interaction check reveals:
  - Contraindication with PPI (pantoprazole)

Mr. Jones (cont)

- Strength of pantoprazole 20mg vs 40mg
- Trial off PPI for 2-4 weeks
- H2RA equivalent famotidine 40mg
  - Same time
  - 12 hours apart
- Omeprazole 20mg equivalent
  - SOF/VEL with food
  - PPI 4 hours AFTER
How Do I Get Hep C Drugs for my Patients?

Where to Start

Find a specialty pharmacy near you

- Prior authorizations?
- Delivery to home or clinic?

Where to Start

Organize – Simple Excel document

- Patient name
- Date reviewed
- Genotype
- Designated regimen, alternatives
- Insurance
- Where sending prior auth to (pharmacy or directly to insurance)
- Date paperwork sent
- Date approved

Tracking
**Info for PA**

**Demographics**
- Patient name
- Address
- Phone number
- Insurance information
- Drug allergies
- Current medication list
- Height & weight

**Clinical Notes**

**Candidate for Treatment**
- Stage 2 or greater fibrosis/hepatitis
- Evidence of extra-hepatic manifestations
- HIV or HBV co-infection
- Risk of transmission
  - IVDU
  - High risk sexual practices
  - Women of child bearing age
  - HCV infected healthcare worker
- DM
- Debilitating fatigue

**Genotype**

**Prior HCV Treatment History**
- Prior regimens
- Response

**Fibrosis Assessment**
- Imaging
- Biopsy
- FibroScan
- Fib 4/APRI

**Discussed with Patient**
- Risks for transmission
- Reinfection
- Importance of adherence
- Use of hepatotoxic agents (including alcohol, acetaminophen)
Likelihood of Adherence

“Based on control of other chronic conditions, Mr. X is an excellent treatment candidate and will have excellent adherence to HCV treatment.”

Info for PA Labs

- HCV Genotype
- HCV viral load
- CBC
- Metabolic panel (comprehensive)
- INR
- Imaging results
- NS5A resistance tests

* There is no hard rule on timing but general recommendations suggest HCV VL, CBC, metabolic panel within the last 6-12 months.

Mr. Jones (cont)

- With a strong team effort, Mr. Jones’ HCV medications are approved within 48 hours and will be delivered to clinic next week.

- You call him to share the good news and make a nurse or pharmacist appointment to start treatment!

Supporting patients during and after HCV treatment

Val Robb, RN
Clinical Nurse
Ward 86, Positive Health Program, ZSGH
Adherence and Monitoring

**Adherence and Monitoring Support**
- Before start of treatment
  - Medication/ADR counseling, review treatment plan including monitoring schedule, med reconciliation, adherence/transmission/reinfection counseling
  - Review/align treatment plan (if used by clinic)
- Treatment Week 0 (TW0)
  - Supply 2 weeks of medication (for some pts, 1 week in person or phone check in is helpful)
- TW2-4
  - Check in to review adherence, side effects (can be by phone)
- Ongoing visits while on treatment
  - Continue to monitor for side effects
  - Review lab results and coordinate dose changes while on treatment (if needed)

**Key Points**
- No provider visits necessary while on treatment
  - Unless needed to assess/manage side effects of treatment (rare!) or for non-HCV related issues
- Frequency of visits while on treatment determined by:
  - Level of patient independence
  - Quantity of meds shipped by insurance company
  - Ability of patient to pick up medications at pharmacy
  - Lab and b/p monitoring schedule

Removing Barriers

- Location and lab work
- Medication safety for homeless, in shelters
- Monitoring for interactions: blood pressure, kidney function, acid reflux
- Verifying medication changes: ie HIV meds, cardiac medications

Sustained Viral Response

- Check HCV viral load at 12 and 24 weeks.
- IF SVR not achieved:
  - Repeat HCV viral load to verify, genotype and resistance testing
  - Consider hepatology consult
  - Identify if behavior factors contributed to reinfection rather than viral relapse
  - Support patient
  - Retreatment is possible
Mr. Jones (cont)

- Pt given 4 week supply of meds at week zero.
- Phone check-in 2 weeks into treatment.
  - Pt denies any side effects and reports missing 1 pill.
  - Discuss the importance of adherence.
  - Remind him to avoid antacids
  - Congratulate him on completing 2 weeks.
  - Remind him of lab appointment at the end of week 4.

Mr Jones – Treatment Interruption

- Mr Jones went to visit family in the East Bay and was hospitalized for pneumonia. He assumed hospitals communicate with each other. Missed 5 days of meds in first month. Luckily still achieves undetectable viral load at 4 weeks!
- On to 12 weeks of treatment and cure...
- Emphasize to all treatment patients that if treatment interruption (hospital, jail, lost or stolen medications) for any reason, notify team immediately.

Ongoing Monitoring

- Once SVR is achieved how frequently to monitor?
  - Yearly
  - If transaminitis noted on abs
  - For MSM, same frequency as other STD monitoring
- For pts with cirrhosis, continue annual HCC screening

Pearls

- Start with easier to treat patients
- Regimens will change but you don’t need to stay on top of all the data if you know your resources!
- Define roles/responsibilities for team-based care
- Partner with a specialty pharmacy for prior authorizations
- Maintain a registry and define metrics to measure success towards elimination and to leverage future resources