

Hepatitis C:

Linkage and
Treatment in
Primary Care and
Rural Health Settings

Coinfection Fridays

Session 2

15 February 2019



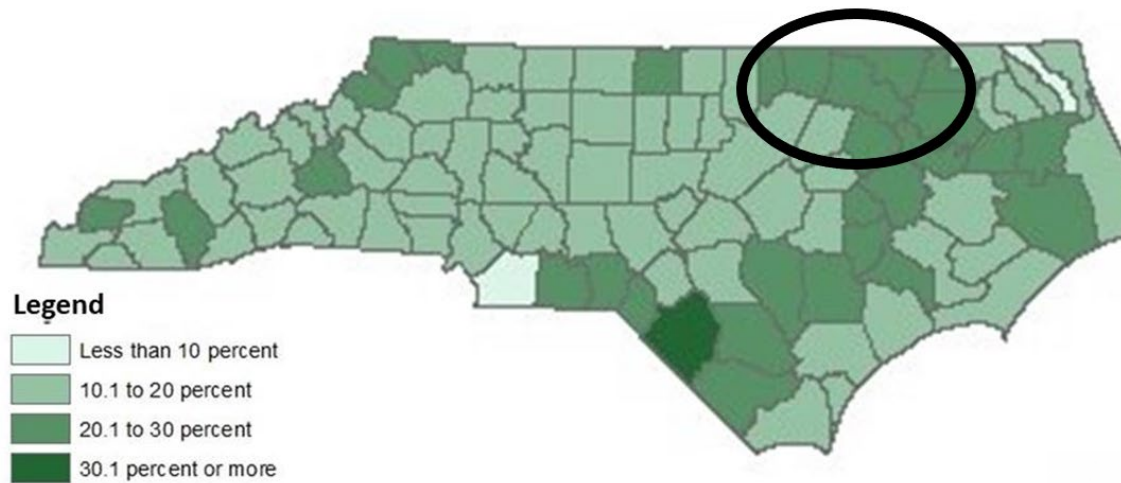
HIV/HCV Co-infection: An AETC National Curriculum

Hepatitis C: Linkage and Treatment in Primary Care and Rural Health Settings

Richard Moore II, MD, AAHIVS
Family Practitioner, HIV Specialist
Director of HIV and Viral Hepatitis programs
Rural Health Group

Goals and Objectives

1. Describe the state of Hepatitis C in the US.
2. Detail state-level initiatives aimed at expanding access to Hepatitis C treatment.
3. Discuss subsets of Hepatitis C infected individuals and specific interventions for engagement in care.
4. Identify strategies for treatment of Hepatitis C in context of people who inject drugs.



<http://www.ncjustice.org/?q=budget-and-tax/prosperity-watch-issue-73-no-1-county-snapshots-show-many-north-carolinians-are-being>

Our Health Center

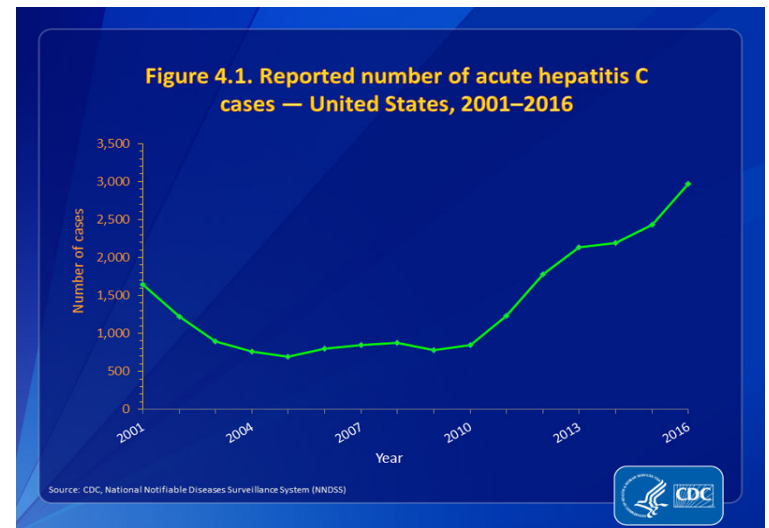
- Rural Health Group
 - 35,000 patients
 - 6 counties (Halifax, Northampton, Vance, Granville, Edgecombe, Nash)
 - 17 sites
- Hepatitis C
 - Approximately 400 patients with HCV infection at time of program initiation
 - New diagnoses ~ once every 1-2 weeks with age- and risk factor-based screening
 - Expanded number of treating providers to four as of 1/2019

Carolina Hepatitis Academic Mentorship Program (CHAMP)

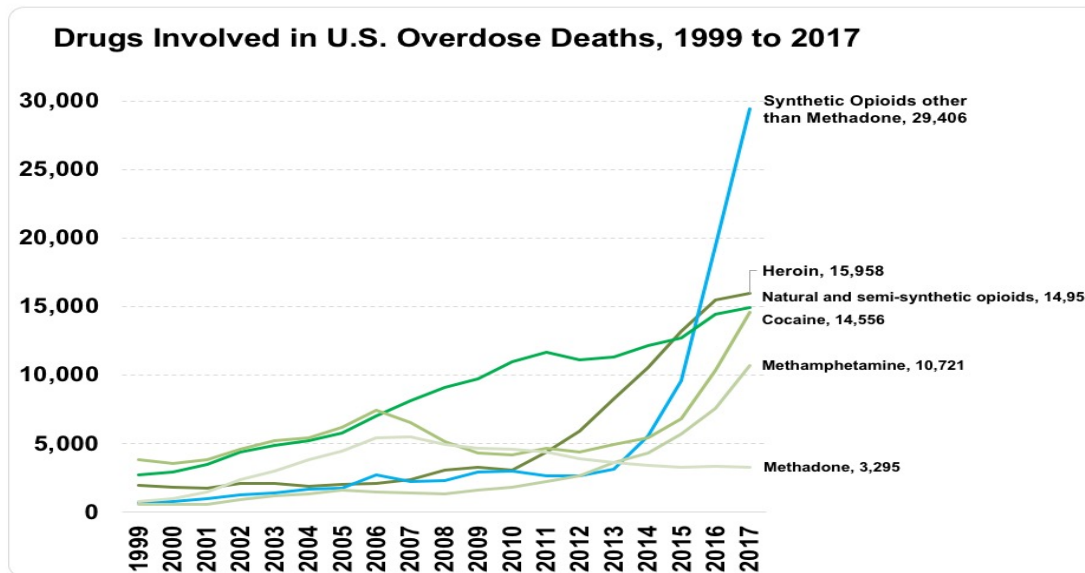
- Began 1/2015 as a collaboration between Rural Health Group and UNC Hepatologist Dr. Mike Fried
- Videoconferencing twice monthly
 - Case review
 - Assistance with workup, regimen selection, management of treatment and complications
 - Approach to treatment in context of medical comorbidities and substance abuse disorders
 - Discussions of new treatment regimens and their applications
 - 225 cures, 5 treatment failures as of 2/2019
- Expansion 1/2017 with NC Department of Public Health
 - Courses every 4-6 months, enrollees throughout the state
 - Three consulting hepatologists (UNC: Mike Fried, Jama Darling; Duke: Andrew Muir)

Hepatitis C in North Carolina

- 110,000 – 150,000 in North Carolina with HCV
 - ~ 75% unaware of the infection
- Increasing rates of acute HCV



A 9/11 Every 2.5 Weeks



<https://medium.com/homeland-security/opioid-overdoses-a-9-11-attack-every-2-5-weeks-4d60aac28e8d>

<https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>

HEALTH

A Shocking Decline in American Life Expectancy

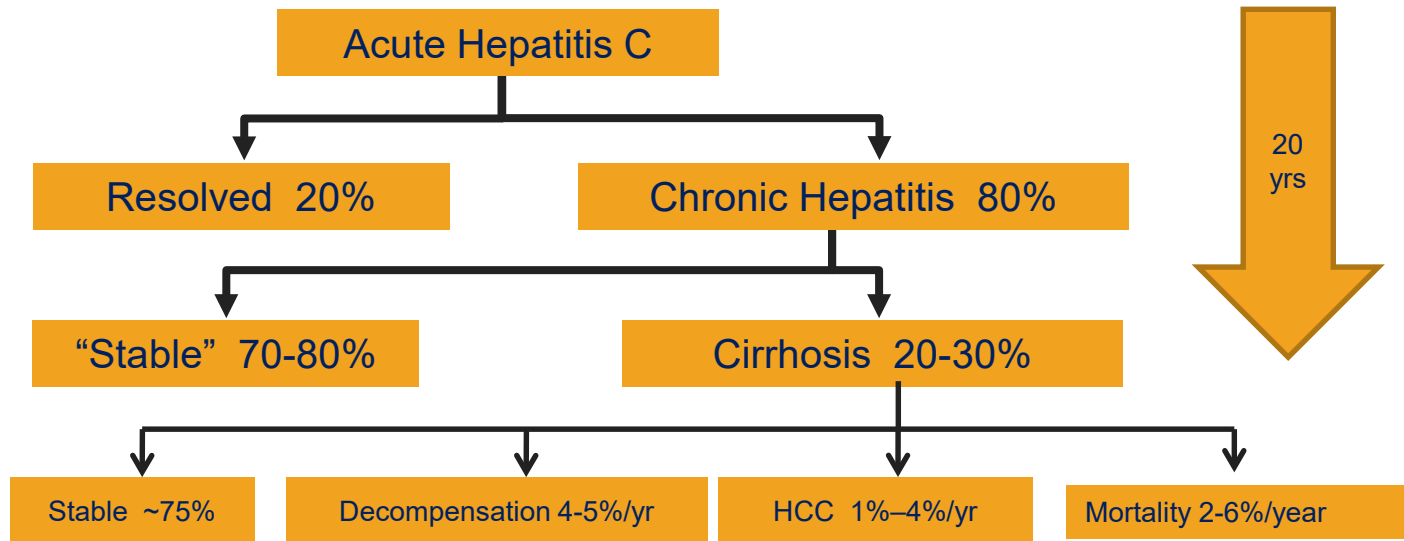
Because of the opioid epidemic, Americans have been dying younger for two years in a row.

OLGA KHAZAN DEC 21, 2017



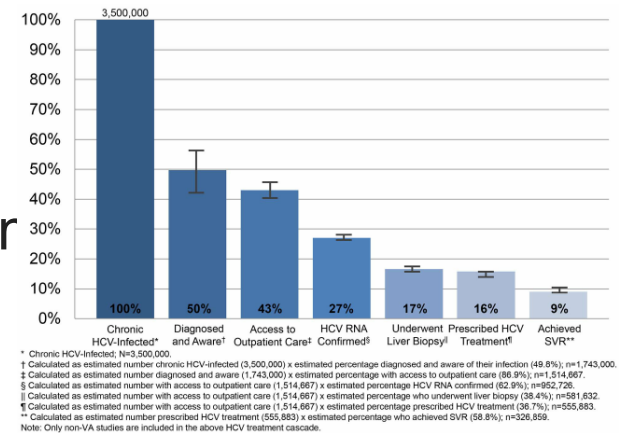
BRIAN SNYDER / REUTERS

HCV: Individual Impact



Hepatitis C: Program Goals

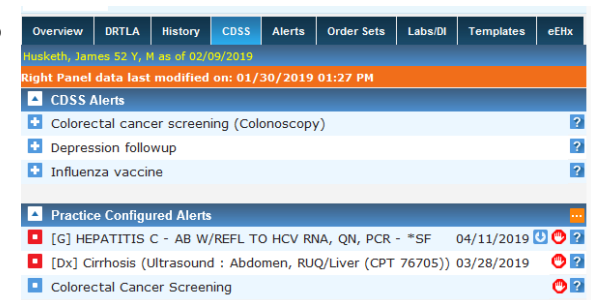
- Identification of individuals with Hepatitis C
 - Where are they receiving care?
 - Are providers implementing screening (i.e., birth cohort)?
- Linkage
 - Transportation
 - Access to local HCV care
- Treatment
 - Navigation of patient assistance program
 - Eliminating barriers / myths
- Cure



Yehia et al. PLoS One, 2014.

Identification – Case #1

- EMR alert built into system
 - Protocol in place allowing nursing to counsel patients about screening and order the lab
- Announcement to providers about internal Hepatitis C referrals
 - Included rationale for age-based screening (1945 – 1965) as well as indications for risk factor-based screening
- Reflex HCV RNA testing as test of choice
 - Avoid two-step process for diagnosis



Identification – Case #1

- Female born in 1964
 - PMH: HTN, HLD
 - Otherwise healthy
 - RFs: no hx injection drug use, transfusions prior to 1992, tattoos, or known partners with Hepatitis C
 - Previous labs: AST/ALT 31/28, Alb 4.0, TB 0.3, Plt 229
 - Positive for Hepatitis C on baby boomer screen

Case #1 – Fibrosis Work-Up

- HIV and Hepatitis B negative
- Genotype 1b
- No current alcohol or drug use
- Review of risk factors
 - Remembers transfusion with pregnancy in 1981
 - History of sexual partner who used injection drugs
- Sent for fibroscan:

Findings:	Median Liver Stiffness Score: <u>12.8</u> kilopascal (kPa)	IQR % <u>17</u>
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Estimation of the stage of liver fibrosis (Metavir Score): The results of the Liver Stiffness Score are consistent with the following liver fibrosis stage:

F0-F1 F2 F3 F4

GENERAL RECOMMENDATIONS ACCORDING TO THE STAGE OF LIVER FIBROSIS

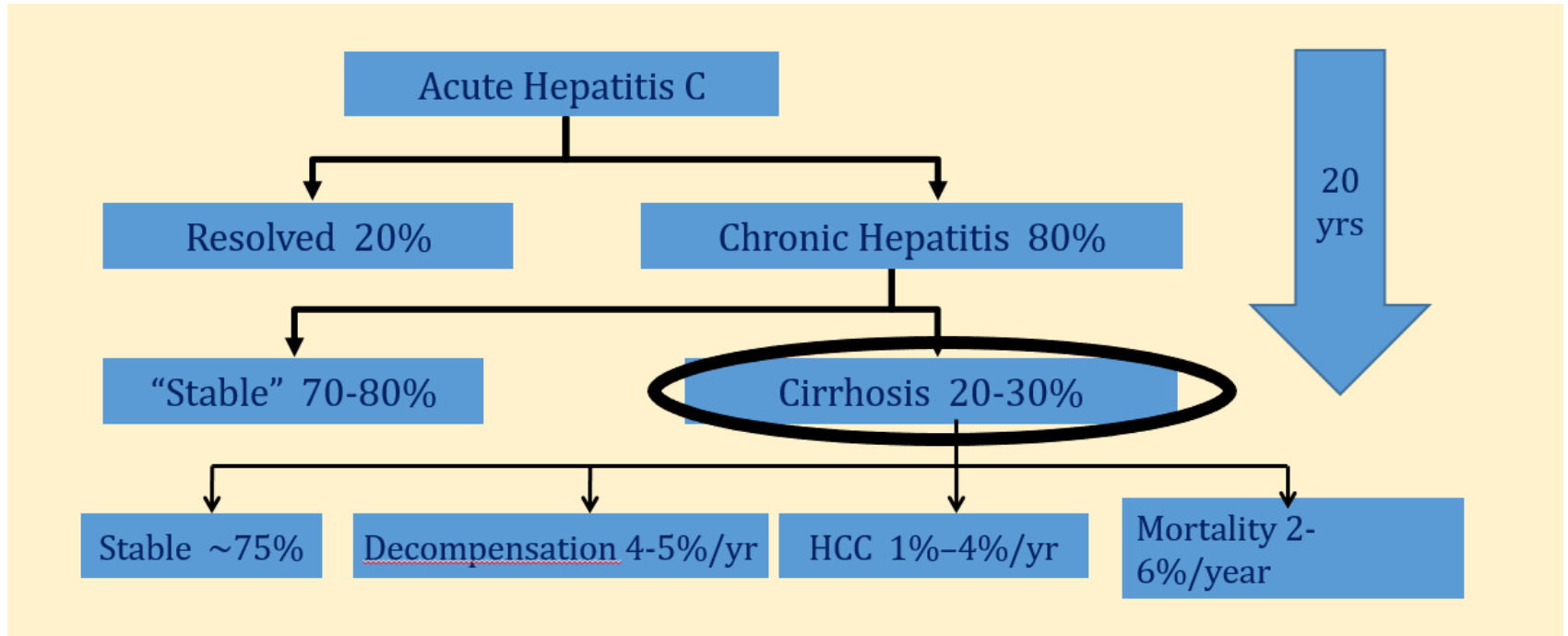
F0-F1: No-minimal fibrosis. The risk of progression to advanced fibrosis and cirrhosis is low. If the cause of liver disease is not removed, a 1-2 year follow-up study is recommended.

F2: Significant fibrosis. There is a moderate risk of progression to cirrhosis. If the cause of liver disease is not removed, a follow-up study in 12 months is recommended.

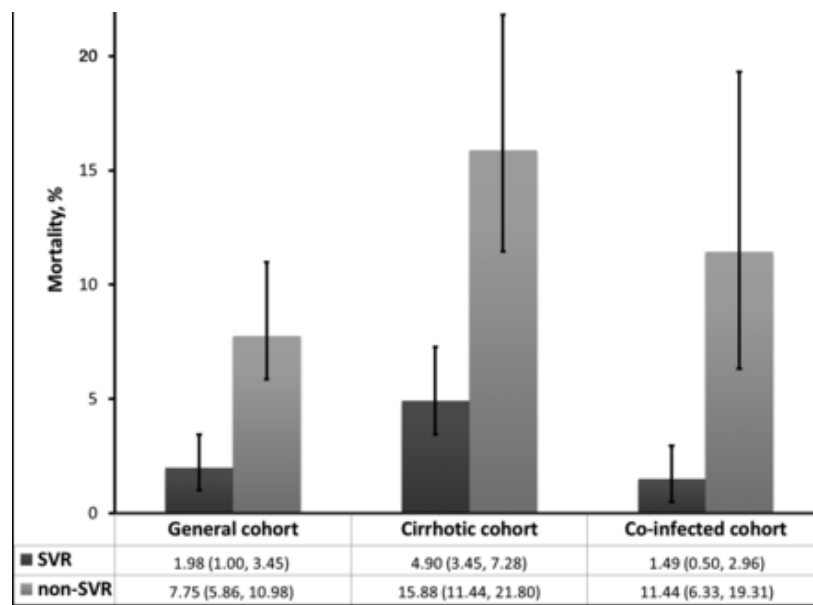
F3: Advanced (pre-cirrhotic stage). The risk of progression to cirrhosis is high. Imaging studies to rule out hepatocellular carcinoma should be considered. Efforts to remove the cause of liver disease are highly recommended.

F4: Cirrhosis. There is significant risk of portal hypertension and esophageal varices. An upper endoscopy is recommended. Imaging studies for hepatocellular carcinoma screening are recommended.

HCV: Individual Impact

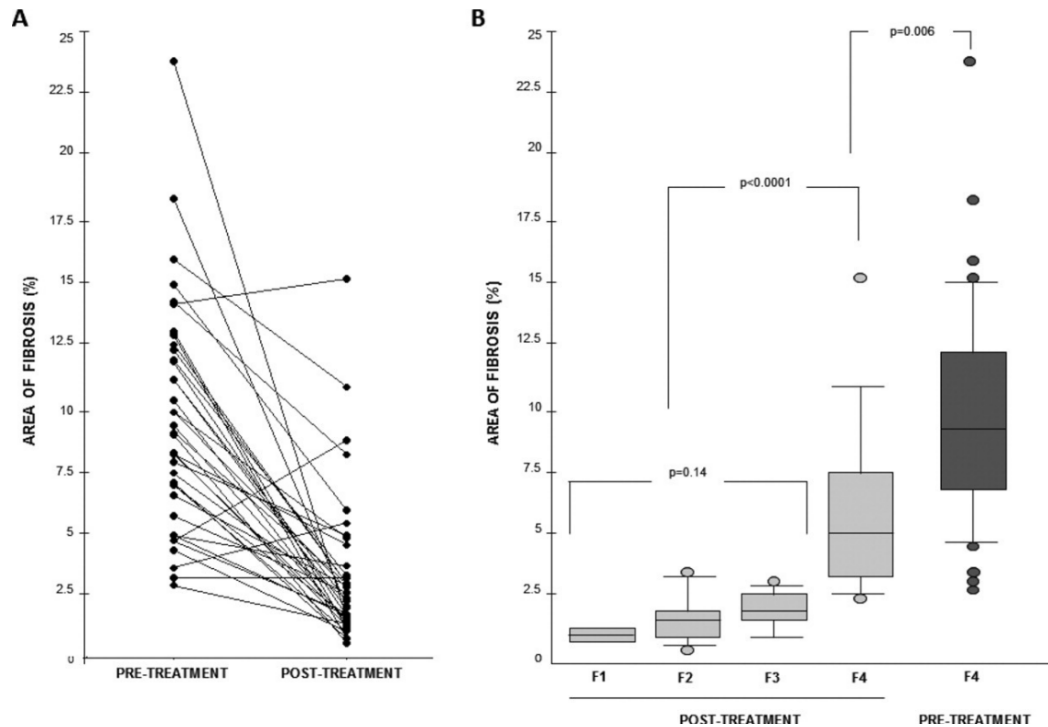


Hepatitis C Cure and Five-Year Mortality



B Simmons et al. Clin Inf Dis 2017.

SVR 12 and Regression of Fibrosis



D'Ambrosio R et al. Hepatology 2012.

Improving Identification

- EMR alerts
 - Birth cohort EMR alert increased screening rates from 1.8% to 20.2% (Federman A et al, Med Care 2018).
 - Increased from 30% to 55% in second study (Al hihi et al, BMJ 2017).
 - Combining provider education with built-in alerts
- Local treating provider availability
 - Lack of treating provider -> reduction in screening frequency
 - “Why test if we can’t treat”
 - Lack of local provider -> reduction in screening frequency
 - Travel time 1 – 3 hours to hepatologist

Identification – Case #2

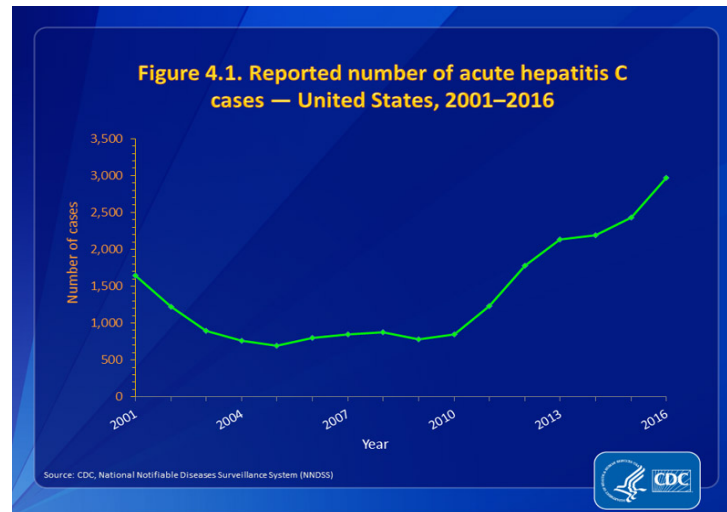
- Problem: No HIV or Hepatitis C screening done at local substance abuse treatment facilities
- Intervention: Outreach to treatment facilities
 - Offer on-site screening
 - Train staff to perform rapid testing
 - Establish point of contact for Hepatitis C treatment appointments once positive patients identified

Case #2

- 27-year-old male
 - On methadone maintenance x 3 months
 - Two episodes of illicit opiate use since treatment initiation
 - Overdose x 3 prior to methadone maintenance, no overdose since starting methadone
 - Cocaine use: occasional, improving; intranasal use only
 - Hepatitis C identified through screening partnership protocol
 - Motivated to be treated; concerns about partner and daughter

HCV Screening in Substance Abuse Treatment Facilities

- Population at high risk for HIV and viral hepatitis
- Often not linked to primary care
 - Limited access to risk factor-based screening (no on-site labs at substance abuse treatment facilities)



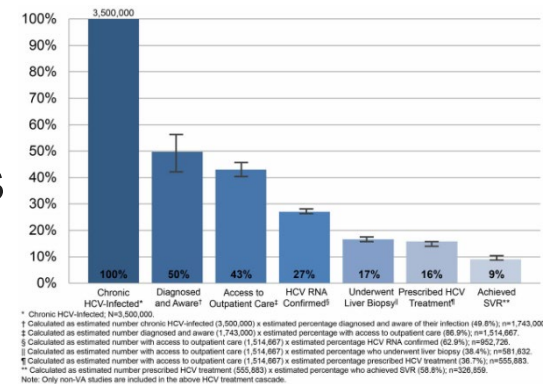
HCV Treatment in PWID

- Treatment as prevention
 - Treating individuals at risk for transmission to others to reduce the number of individuals becoming infected
- CO-STAR study
 - Treatment of individuals on opioid substitution therapy (ex. Buprenorphine/Naloxone, Methadone)
 - Rate of cure: 94%
 - Rate of reinfection: 4 per 100 person years (95% CI: 1.7 – 8)

G Dore et al. Ann Int Medicine, 2016.

Hepatitis C: Program Goals

- Identification of individuals with Hepatitis C
 - Where are they receiving care?
 - Are providers implementing screening (i.e., birth cohort)?
- Linkage
 - Transportation
 - Access to local HCV care
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 - Navigation of patient assistance programs
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- Cure



Yehia et al. PLoS One, 2014.

Linkage – Case #3

- 53-year-old female
 - Hepatitis C diagnosed five years ago
 - Other conditions: Insulin-dependent diabetes, HTN
 - Cooks for homeless shelter
 - Uninsured
 - No previous Hepatitis C treatment visits
 - Cannot afford \$104 to see specialist through charity care + cost of two hour drive



Case #3

- Labs consistent with cirrhosis on initial treatment visit
 - HIV and Hepatitis B negative, Genotype 1a
- \$10 copay per visit
 - Labs and vaccines covered
 - Lab prices negotiated to obtain at decreased cost to the health center
 - Using lower-cost fibrosis assessment (FIB-4/APRI instead of fibrosure/hepascore)
- Low-cost ultrasound through local hospital (\$0 to patient)
- Application for Ledipasvir/Sofosbuvir through patient assistance program
 - Medication arrives in one month, three treatment visits, one visit for SVR 12
 - SVR 12 negative, alert to provider to continue monitoring labs and obtain US Q6M

Linkage Opportunities

- Reduced cost visits through primary care clinic
- Reduction in transportation barriers
- Enhanced communication with referring primary care provider
 - Follow-up screening recommendations
- Improved rates of visit attendance
 - First visit kept for internal Hepatitis C referral: 90%
 - First visit kept for outside referral appointments: 50%

Linkage and Opioid Dependence

Substance Abuse Treatment in Roanoke Rapids, NC

2016 –

- two locations offering Buprenorphine-based MAT
- Closest methadone maintenance facility: 45 miles
- One SAIOP program, no MAT available through program
- No low-cost options for uninsured

1/2019 –

- five locations offering Buprenorphine-based MAT
- One methadone maintenance facility in Roanoke Rapids
- Two SAIOP programs, MAT available through one program
- Three low-cost options for uninsured

Medication-Assisted Treatment Workforce

- 20% of Americans with OUD taking Methadone, Buprenorphine, or Naltrexone (Saloner B, JAMA 2016).
- 16% of psychiatrists with DATA waiver (Creedon TB, Health Aff 2016).
- 60% of US counties with no psychiatrist (Creedon TB, Health Aff 2016).
- ASAM diplomates: just over 3000 (Creedon TB, Health Aff 2016).
- Most Methadone maintenance facilities at or near capacity (Jones, Am J Public Health 2015).

Linkage – Case #4

- 38-year-old male
 - PMH: Bipolar 2
 - Substance use history
 - Started using opiates in pill form ~ 20 years ago
 - Began using intravenously 5 years ago, now using \$60-80/day
 - Overdose x 1 one year prior
 - Cocaine use: weekly
 - Medications: Quetiapine, Lurasidone
 - Opioid substitution therapy not offered through psychiatrist
 - Allergies: Benzodiazepines (handcuffs)

Case #4

- Substance abuse treatment history
 - Attending Narcotics Anonymous
 - Detox and rehab x 7 over the last 10 years
 - Relapses whenever he returns home
 - Has friends in recovery taking Buprenorphine/Naloxone
 - Wants to get out of cycle

You see now that It's your enemy and your worst personal nightmare and the trouble It's gotten you into is undeniable and you still can't stop. Doing the Substance now is like attending Black Mass but you still can't stop, even though the Substance no longer gets you high. You are, as they say, Finished. You cannot get drunk and you cannot get sober; you cannot get high and you cannot get straight. You are behind bars; you are in a cage and can see only bars in every direction. You are in the kind of a hell of a mess that either ends lives or turns them around.

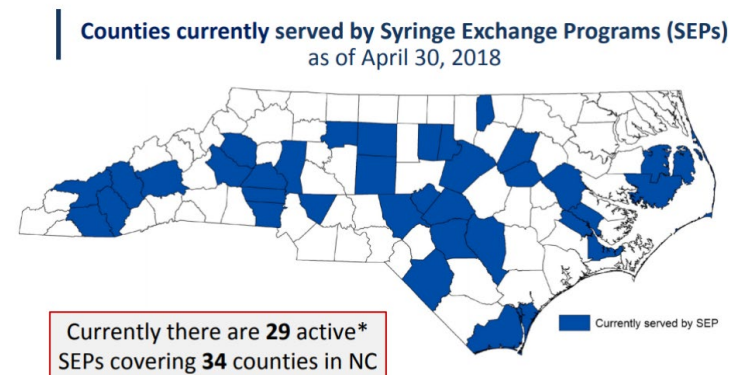
– David Foster Wallace

Case #4

- Buprenorphine/Naloxone initiated
 - Sustained opiate cessation x 4wks after being on treatment 8wks
 - Occasional cocaine use, regular marijuana use
 - Intranasal or inhaled cocaine, no injection use
 - Occasional alcohol use
- Velpatasvir/Sofosbuvir initiated through patient assistance program
 - No missed doses or treatment appointments
 - SVR 12 negative
 - Continued stability from substance abuse perspective on Buprenorphine/Naloxone

Interventions Other Than MAT

- Harm Reduction Strategies
 - Needle and syringe exchange programs
 - Prescribing Naloxone
 - Safer opioid prescribing
- Linkage to treatment facilities
 - Rehab facilities
 - Referral to MAT providers



<https://www.buncombecounty.org/common/Commissioners/20180605/Syringe%20Exchange%20%20Safe%20Sharps%20Disposal%20presentation%20for%20BOC%206-5-18.pdf>

Syringe Services Programs

How Do SSPs Benefit Communities and Public Safety?

SSPs Increase Entry Into Substance Use Disorder Treatment:

SSPs **reduce drug use**. People who inject drugs (PWID) are 5 times as likely to enter treatment for substance use disorder and more likely to reduce or stop injecting when they use an SSP.



SSPs Reduce Needlestick Injuries:

SSPs **reduce needlestick injuries** among first responders by providing proper disposal. One in three officers may be stuck with a needle during their career. Increasing safe disposal also protects the public from needlestick injuries. SSPs do not increase local crime in the areas where they are located.



SSPs Reduce Overdose Deaths:

SSPs **reduce overdose deaths** by teaching PWID how to prevent and respond to drug overdose. They also learn how to use naloxone, a medication used to reverse overdose.



3,600 HIV Diagnoses Among PWID in 2015:

SSPs **reduce new HIV and viral hepatitis infections** by decreasing the sharing of syringes and other injection equipment. About 1 in 3 young PWID (aged 18–30) have hepatitis C.



Prevention Saves Money:

SSPs **save health care dollars** by preventing infections. The estimated lifetime cost of treating one person living with HIV is more than \$400,000. Testing linked to hepatitis C treatment can save an estimated 320,000 lives.



SSPs DON'T INCREASE DRUG USE OR CRIME.

<https://www.cdc.gov/hiv/pdf/risk/cdchiv-fs-syringe-services.pdf>

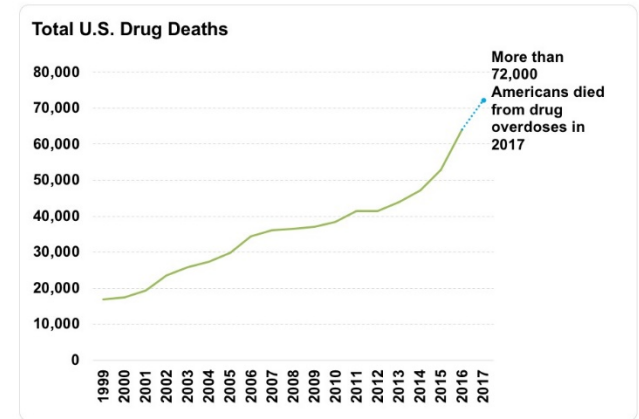
Naloxone Distribution

- Naloxone (Narcan)
 - Given intranasally or by injection (most kits intranasal)
 - Naloxone standing order in NC
 - Cost without insurance: \$20-40
 - Can take 2-5 minutes to work and lasts 30-90 minutes
 - If no response after 2-3 minutes, repeat dose
 - Reinforce need to call EMS, stay with person who overdosed ideally for three hours and, if person administering naloxone knows how, to initiate CPR if indicated



Primary Care's Imperative

- Size
 - Broad workforce will be needed
- Safety
 - B/N's low risk of side effects
- Scope



My Approach in PWID

Active/recent IV drug use, interest in initiation of MAT

- Initiate harm reduction strategies (Naloxone, education/linkage surrounding clean injection equipment)
- Initiate Buprenorphine-based therapy or refer to MAT provider for initiation of methadone or buprenorphine
 - Who I consider referring
 - Patients with uncontrolled psychiatric comorbidities
 - Polysubstance abuse
 - Use of benzodiazepines
- Counseling referral (individual, groups (SAIOP), Narcotics Anonymous)
- Prioritize substance abuse above HCV treatment
 - Goal: One month of linkage to MAT and then initiation of DAA

My Approach in PWID

Active/recent IV drug use, no interest in MAT

- Initiate harm reduction strategies (Naloxone, education/linkage surrounding clean injection equipment)
- Explore barriers to/concerns about initiation of MAT
- Counseling referral (individual, groups (SAIOP), Narcotics Anonymous)
- Consider referral for inpatient rehabilitative admission
- Maintaining appointments, able to take medications regularly? If so, offer DAA treatment

Not every story has a happy ending, ... but the discoveries of science, the teachings of the heart, and the revelations of the soul all assure us that no human being is ever beyond redemption. The possibility of renewal exists so long as life exists. How to support that possibility in others and in ourselves is the ultimate question. - Gabor Mate

Conclusions

- Enhancing local Hepatitis C treatment availability can
 - Improve identification of individuals with Hepatitis C
 - EMR alerts
 - Coordination with substance abuse treatment facilities
 - Boost linkage of identified patients
 - Lower cost
 - Shorter travel time
 - Improved provider communication
- Hepatitis C treatment in primary care is safe and effective
 - 225 cures, 5 treatment failures = 98% cure rate
- Enhancing medication-assisted treatment services can improve linkage and cure rates in a population at high risk of overdose death and transmission to others

Coinfection Fridays

March 15

April 19

May 17

June 21

**Speakers and topics
coming soon!**

Questions?

Please email me!

Richard Moore II, MD,
AAHIVS

richard.moore@rhgnc.org

