

# Addressing the Opioid and HCV Syndemic

Whitney Essex, MSN, FNP-BC  
Jorge Mera, MD  
Infectious Diseases  
Cherokee Nation Health Services

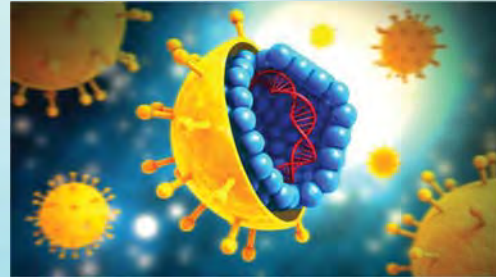


## Disclosures

- No relevant disclosures to report

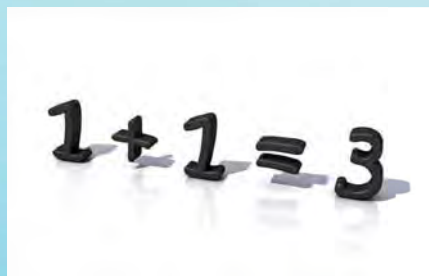
## Outline

- Opioid use/hepatitis C epidemiology in the US
- Treatment strategies for opioid use disorder and hepatitis C
- Harm reduction and treatment as prevention as they relate to elimination of hepatitis C

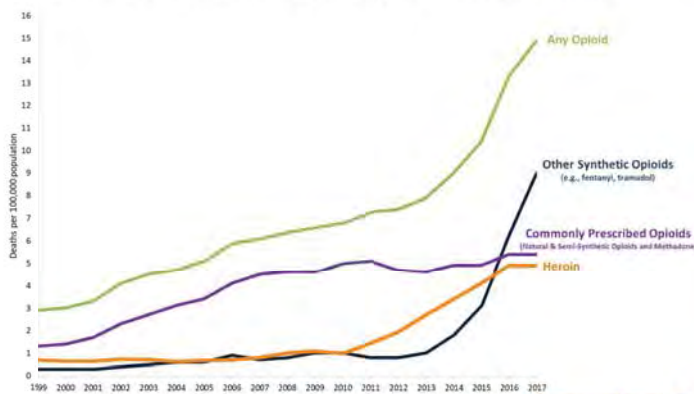


## Syndemic

- A set of linked health problems involving two or more afflictions, interacting synergistically, and contributing to excess burden of disease in a population



Overdose Death Rates Involving Opioids, by Type, United States, 2000-2017



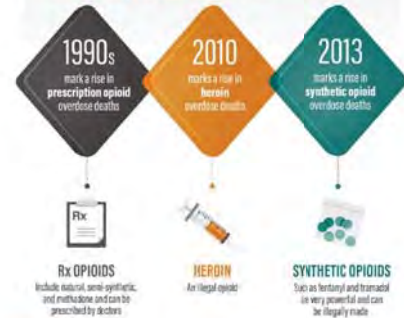
SOURCE: CDC/NCHS, National Vital Statistics System, Mortality; CDC WONDER, Atlanta, GA; U.S. Department of Health and Human Services, CDC 2018. <https://www.cdc.gov/>

[www.cdc.gov](http://www.cdc.gov)  
Your Source for Credible Health Information

## RISE IN OPIOID OVERDOSE DEATHS IN AMERICA

### A Multi-Layered Problem in Three Distinct Waves

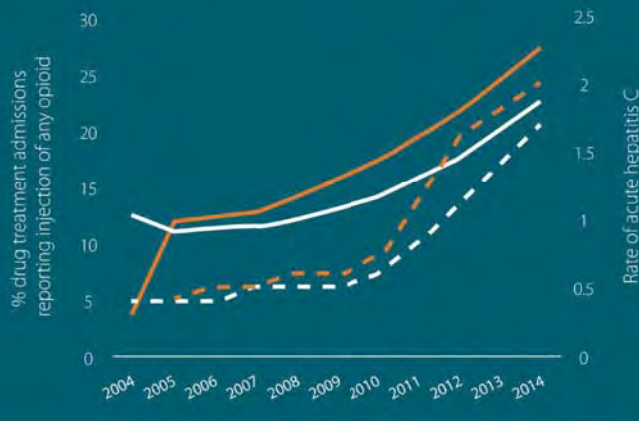
**399,000** people died  
from an opioid overdose (1999-2017)



Learn more about the evolving opioid overdose crisis: [www.cdc.gov/drugoverdose](http://www.cdc.gov/drugoverdose)

[www.cdc.gov/drugoverdose/data/analysis.html](http://www.cdc.gov/drugoverdose/data/analysis.html)

## HEPATITIS C AND OPIOID INJECTION ROSE DRAMATICALLY IN YOUNGER AMERICANS FROM 2004-2014



- Among people aged 18-29, HCV increased by 400% and admission for opioid injection by 622%
- Among people aged 30-39, HCV increased by 325% and admission for opioid injection by 83%

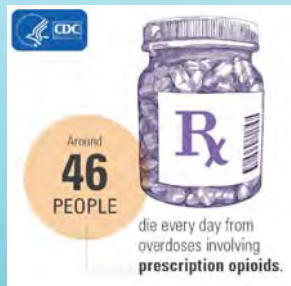
— Any Opioid Injection (18-29)  
— Any Opioid Injection (30-39)  
- - - HCV Rate (18-29)  
- - - HCV Rate (30-39)

Source: Centers for Disease Control and Prevention and Substance Abuse and Mental Health Services Administration



## Opioid use disorder

- An estimated 2 million individuals in the United States have opioid use disorder associated with prescription opioids
- An estimated \$78.5 billion in economic costs annually
  - including the costs of health care, lost productivity, addiction treatment, and criminal justice involvement



Florence CS, Zhou C, Luo F, Xu L. The economic burden of prescription opioid overdose, abuse, and dependence in the United States, 2013. *Med Care*. 2016;54(10):901-906.

Guy GP, Jr, Zhang K, Bohm MK, et al. Vital Signs: Changes in opioid prescribing in the United States, 2006–2015. *MMWR Morb Mortal Wkly Rep*. 2017;66(26) [https://www.cdc.gov/mmwr/volumes/66/wr/mm6626a4.htm?s\\_cid=mm6626a4\\_w](https://www.cdc.gov/mmwr/volumes/66/wr/mm6626a4.htm?s_cid=mm6626a4_w).

[www.cdc.gov/drugoverdose/data/analysis.html](http://www.cdc.gov/drugoverdose/data/analysis.html)

In 2017, **47,600 people** died from an **opioid-related overdose** – over **5,000 more people** than in 2016.

Drug overdose deaths **more than doubled** between 2007 and 2017.



Narcotic Overdose Mortality Rate, 2013-2016

0 - 11.5   11.6 - 17.0   17.1 - 20.0   20.1 - 25.0   25.1+



HepVu.org

SOURCE: U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION

HepVu

[www.hepvu.org/resources/opioids/](http://www.hepvu.org/resources/opioids/)

## Hepatitis C infection

- Estimated number of acute hepatitis C cases was over 41,200 in 2016
- Most people become infected with the hepatitis C virus by sharing needles or other equipment to prepare or inject drugs

New simplified treatment regimens can cure all major subtypes of hepatitis C within

**2–3 months**

with a success rate of over

**90%**



The cure leads to reductions of at least **87%** in liver-related deaths and **80%** in the risk of liver cancer due to HCV

## Hepatitis C and HIV

are often-overlooked consequences of America's **opioid crisis**.

**EIGHT IN TEN**

**new Hepatitis C infections** in the U.S. are transmitted through **injection drug use**.

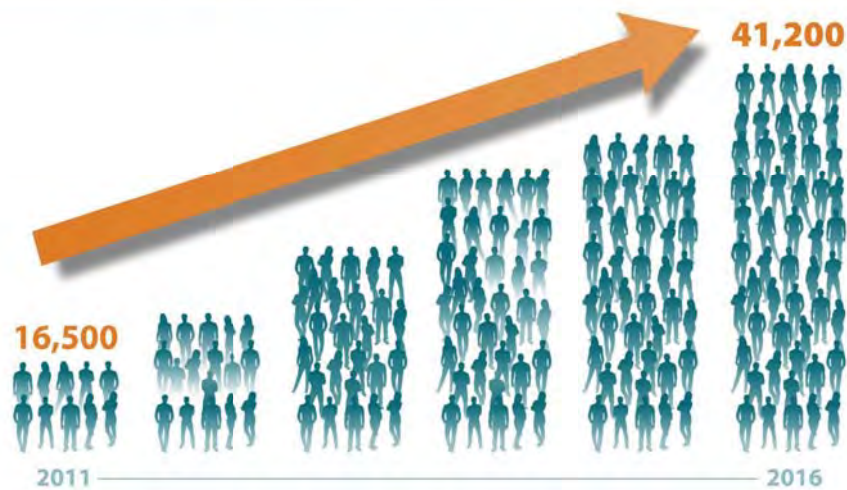


Nearly

**ONE IN TEN**

**new HIV infections** in 2015 were due to **injection drug use**.

## IN THE SHADOW OF THE OPIOID CRISIS, NEW HEPATITIS C INFECTIONS HAVE **MORE THAN TRIPLED**



Visit [www.cdc.gov/hepatitis](http://www.cdc.gov/hepatitis) for more information



**Three-quarters** of Americans living with **Hepatitis C** are **Baby Boomers** (born between 1945-1965).



However, the largest increases in **new Hepatitis C infections** over the last decade have been among **people under 40**.

This is primarily due to **increased injection drug use** associated with the **opioid crisis**.



# Treatment

## *Opioid use disorder*

- Medication-assisted treatment
  - Methadone
  - Buprenorphine
  - Naltrexone
- Counseling
- Harm reduction
- Overdose prevention

## *Chronic hepatitis C*

- Medication
  - Direct acting antivirals
- Infection control measures
- Counseling
- Harm reduction

## What is harm reduction?

Methods of reducing harm:

- Needle/syringe exchange programs
- Provision of condoms
- Education re: safe injection practices
- Overdose prevention (naloxone)
- Tobacco cessation assistance
- Medication-assisted treatment
- Screening for infectious diseases
  - Treatment as prevention
- HIV PrEP

<https://harmreduction.org/enablinghealth/>

### Safer Injecting Strategies

**Use Sterile Injection Equipment.**  
**Avoid Reusing or Sharing.**



Your blood may end up on any item you touch or use when injecting, including syringes, cookers, cottons, water, and ties. Use new, sterile equipment each time you inject.

**Have a New Spare Sterile Syringe To Split Drugs.**



Get an extra syringe for splitting drugs. Use an extra sterile syringe to split drugs, using your own cooker and cotton. Avoid drawing up from a cooker if someone else has used it. There may still be blood on it.

**If You Must Reuse Equipment, Then Mark Yours.**



Avoid sharing any injection equipment. The virus is alive in blood outside the body. If you must reuse, keep a set of works with markings on it so you know it's yours.

**If You Must Share a Syringe, Then Bleach It.**



If you must share a syringe, then clean it with bleach and sterile water.  
Step 1: Rinse the syringe with sterile water.  
Step 2: Rinse the syringe with bleach.  
Step 3: Rinse again with (new) sterile water.

# High SVR in PWID with HCV despite imperfect medication adherence: Data from the ANCHOR study

**Objective:** To understand if people who inject drugs (PWID) with HCV and active injection drug use (IDU) can adhere to DAAs and achieve SVR

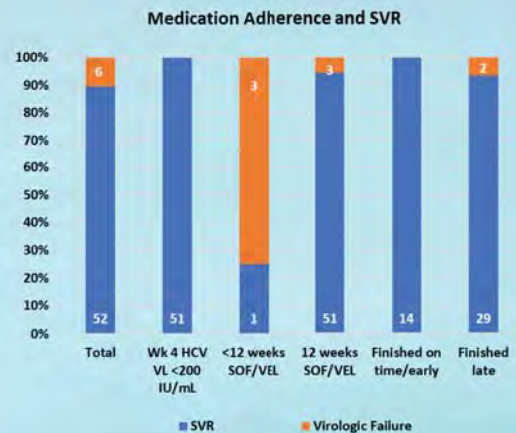
**Methods:** Single-center study of PWID with chronic HCV, opioid use disorder, and active IDU of heroin within 3 months, treated with SOF/VEL x12 weeks

**Main findings:**

- Of the patients who have reached the SVR time point and have attended the week 24 visit, 52 (90%) patients achieved SVR.
- SVR was significantly associated with HCV VL <200 IU/mL at week 4 ( $p=0.004$ ) and taking all 84 pills of SOF/VEL ( $p=0.003$ ).
- Completing treatment after 12 weeks did not impact SVR, even in patients finishing more than 14 days late.

**Conclusions:** PWID with HCV and ongoing IDU have high rates of adherence, treatment completion, and SVR. Even with imperfect adherence, patients are able to achieve high rates of SVR with completion of treatment.

Kattakuzhy S, et al., Abstract 18



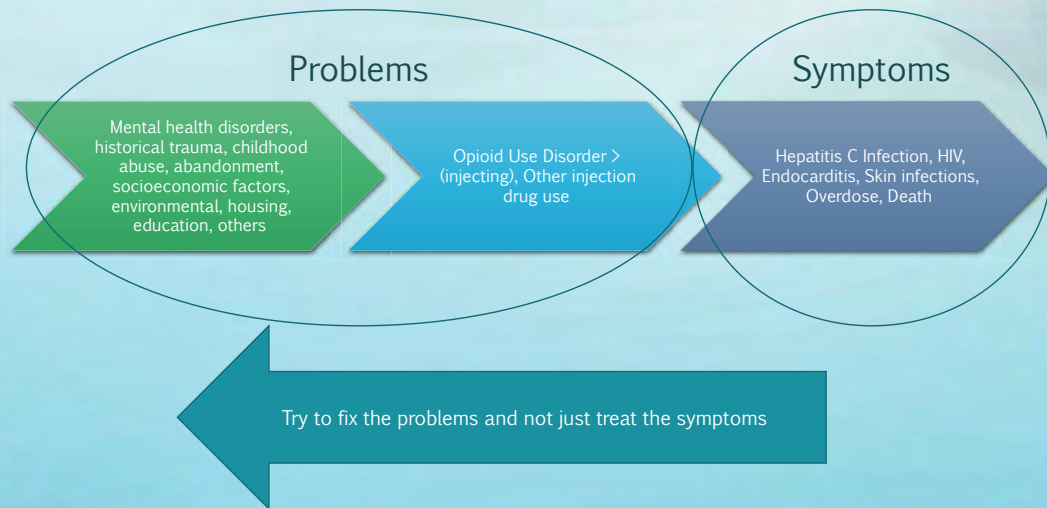
## Cherokee Nation – Treatment as Prevention

- 2015-2017
  - 52 people with HCV infection and injection drug use in previous 12 months treated for HCV
  - 47 with SVR data available
    - 45 achieved SVR: a cure rate of 96%
  - 5 people did not return for SVR lab draw
    - Similar rate as people without injection drug use in previous 12 months
- 96% cure rate!

Essex, WE & Mera, JM (2018) HCV cure rates among PWID not in medication assisted treatment in an AI/AN population presented at INHSU 2018



## One thing leads to another...



## Conclusions

- Opioid use disorder and hepatitis C infection are a devastating syndemic, caused by underlying issues that must be addressed
- Consider harm reduction at every hepatitis C encounter
- To eliminate hepatitis C, we must prevent transmission
- Treating people who inject drugs is preventing others from acquiring hepatitis C infection

## Comments

- Contact info:
  - [whitney-essex@cherokee.org](mailto:whitney-essex@cherokee.org)
  - 918-871-9327