



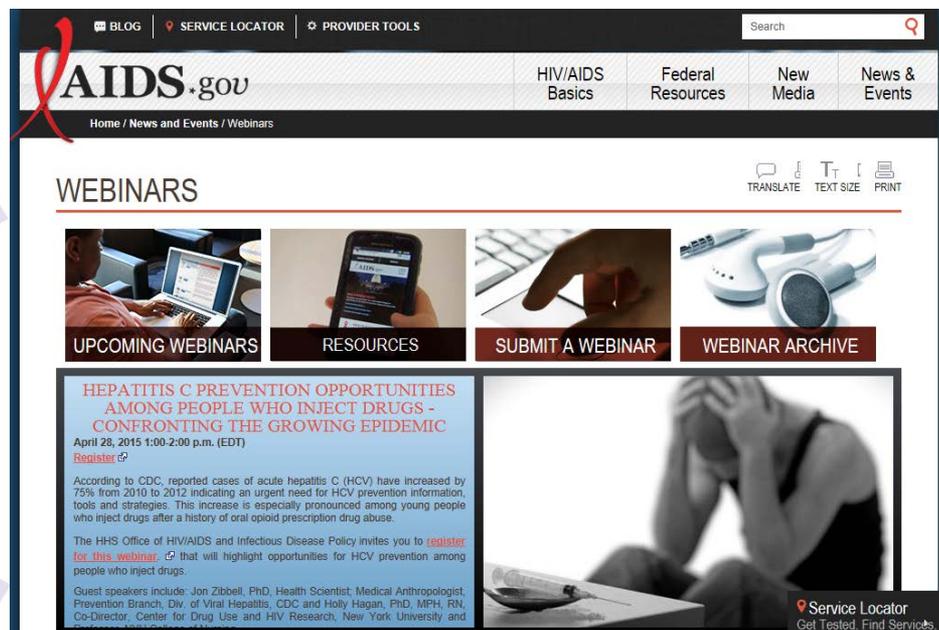
# Hepatitis C Prevention Opportunities Among People Who Inject Drugs: *Confronting the Growing Epidemic*

Hosted by the  
HHS Office of HIV/AIDS and Infectious Disease Policy

- **Moderator:** Ronald O. Valdiserri, MD, MPH
- **Presenters:**
  - Jon Zibbell, PhD, US Centers for Disease Control and Prevention
  - Holly Hagan, PhD, MPH, RN, New York University

# HCV Prevention Webinar Logistics

- ✧ In case of technical difficulties, call:
- ✧ 301-587-1600 and press “0” to be connected to Barbara Draley
- ✧ The webinar is being recorded and will be archived on AIDS.gov



The screenshot shows the AIDS.gov website interface. At the top, there are navigation links for 'BLOG', 'SERVICE LOCATOR', and 'PROVIDER TOOLS', along with a search bar. The main header features the AIDS.gov logo and a navigation menu with 'HIV/AIDS Basics', 'Federal Resources', 'New Media', and 'News & Events'. Below the header, the 'WEBINARS' section is highlighted. It includes a row of four buttons: 'UPCOMING WEBINARS', 'RESOURCES', 'SUBMIT A WEBINAR', and 'WEBINAR ARCHIVE'. The main content area features a webinar announcement for 'HEPATITIS C PREVENTION OPPORTUNITIES AMONG PEOPLE WHO INJECT DRUGS - CONFRONTING THE GROWING EPIDEMIC' on April 28, 2015. The announcement includes a 'Register' link and a brief description of the webinar's focus on HCV prevention among people who inject drugs. A 'Service Locator' link is visible in the bottom right corner of the page.



# HCV Prevention Webinar Q & A

## Got Questions?

Please type your questions into the “Questions” box throughout the webinar and we will address them during the Q & A.



# Hepatitis C Virus Infection among People who Inject Drugs in the United States

Jon E. Zibbell, PhD

Centers for Disease Control and Prevention  
Division of Viral Hepatitis  
Prevention Research Branch

# Prevalence of Current HCV Infection among U.S. Population

- ❑ ~3 million people with current infection
  
- ❑ **National Health and Nutrition Examination Survey (NHANES) prevalence estimate**
  - 2.7 million persons (2.2-3.2 million)
  - 1.0% of general U.S. population (0.8%-1.2%)
  - Civilian, non-institutionalized populations
  
- ❑ **Non-NHANES prevalence estimate**
  - 500,000 persons(360,000-840,000)
  - Incarcerated population (15-35% HCV prevalence)
  - Homeless persons



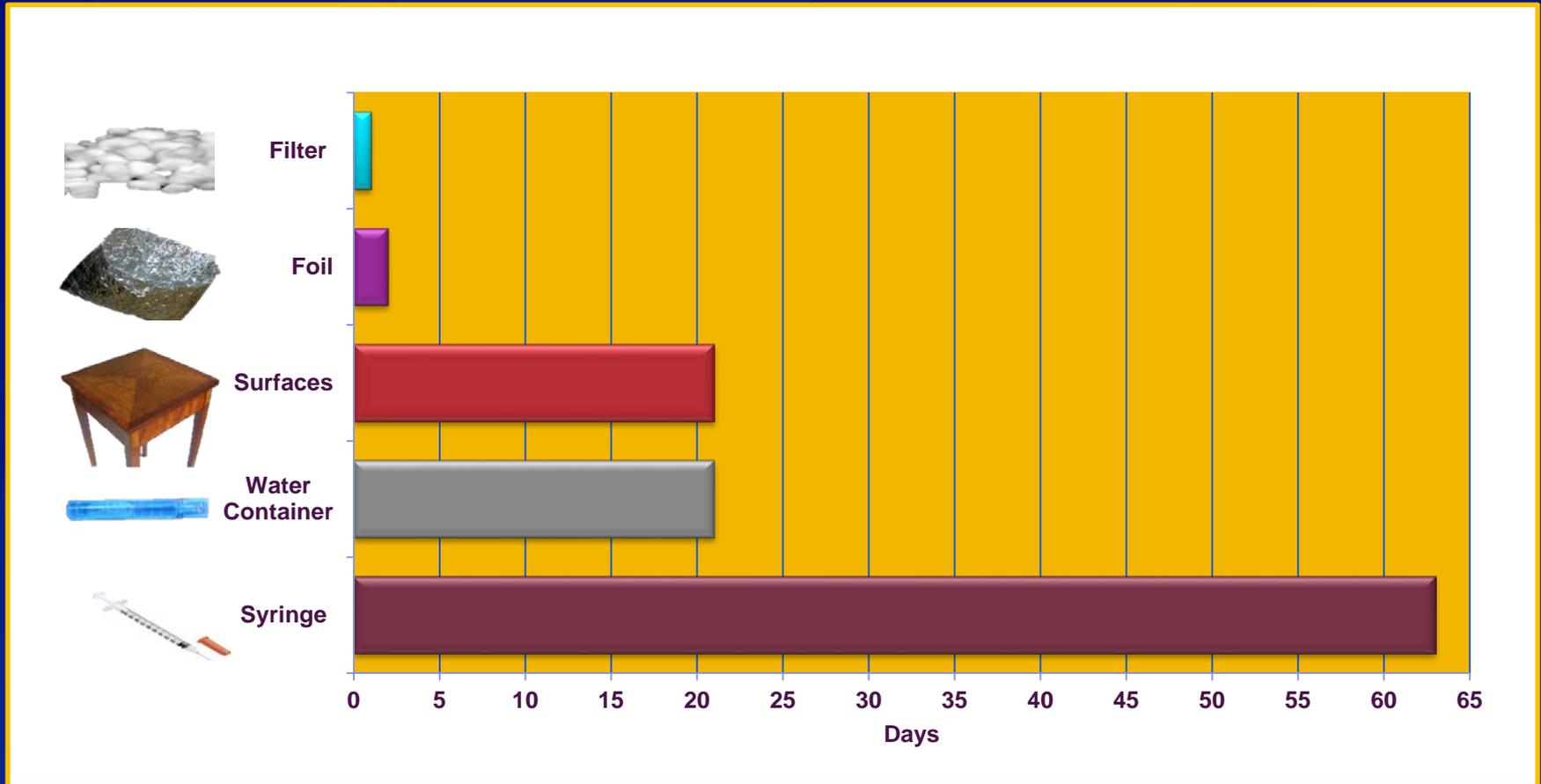
# Hepatitis C Virus (HCV) Infection in the United States

- ❑ **The most common bloodborne infection in the United States**
- ❑ **45-85% of those infected are unaware of infection**
- ❑ **HCV-related deaths doubled from 1999-2007 to over 17,000/year**
  - Expected to increase to 35,000/year without intervention
- ❑ **Leading cause of liver transplants and liver cancer [hepatocellular carcinoma (HCC)]**
  - HCC fastest rising cause of cancer-related death

# HCV Infection from Injection Drug Use Behaviors

- ❑ Injection drug use (IDU) is the principle risk factor for HCV infection
  - Most reported risk behavior in acute case reporting
- ❑ HCV prevalence among persons who inject drugs (PWID) between 30% and 70%
- ❑ HCV prevalence among younger (<30 yrs.) between 10% and 36%
- ❑ HCV incidence between 16% and 42% per year

# How long can HCV survive on inanimate objects?



HCV-contaminated solution needs to be heated for almost a **90 seconds** and reach temperatures of **144°F** for the virus to be at undetectable levels.

# Needles and Syringes



Fixed



Detachable

# Preparation Equipment



**Filters**



**Cookers**



**Water**



**Surfaces**

# Sterile Equipment for Every Injection



## HEPATITIS C & INJECTION DRUG USE

### What is Hepatitis C?

Hepatitis C is a serious liver disease caused by the Hepatitis C virus. About 80% of people who get infected develop a chronic, or lifelong, infection. Over time, chronic Hepatitis C can cause serious health problems including liver damage, liver failure, and even liver cancer. However, some people get only a short term, or acute, infection and are able to clear the virus without treatment. If someone clears the virus, this usually happens within 6 months after first infected.

### What are the symptoms?

Symptoms of Hepatitis C can include: fever, feeling tired, not wanting to eat, upset stomach, throwing up, dark urine, grey-colored stool, joint pain, and yellow skin and eyes. However, many people who get Hepatitis C do not have symptoms and do not know they are infected. If symptoms occur with acute infection, they can appear anytime from 2 weeks to 6 months after infection. Symptoms of chronic Hepatitis C can take decades to develop, and when symptoms do appear, they often are a sign of advanced liver disease.

### Should I get tested?

Yes. If you have ever injected drugs, you should get tested for Hepatitis C. If you are currently injecting, talk to your doctor about how often you should be tested.

The Hepatitis C Antibody Test is a blood test that looks for antibodies to the Hepatitis C virus. A reactive or positive Hepatitis C Antibody Test means that a person has been infected at some point in time. Unlike HIV, a reactive antibody test **does not** necessarily mean a person still has Hepatitis C. An additional blood test called a RNA test is needed to determine if a person is currently infected with Hepatitis C.



All equipment used to prepare and inject drugs can spread Hepatitis C when contaminated and shared.

### How is Hepatitis C spread among people who inject drugs?

The Hepatitis C virus is very infectious and can easily spread when a person comes into contact with surfaces, equipment, or objects that are contaminated with infected blood, even in amounts too small to see. The virus can survive on equipment and surfaces for up to 3 weeks. People who inject drugs can get Hepatitis C from:

- **Needles & Syringes.** Sharing or reusing needles and syringes increases the chance of spreading the Hepatitis C virus. Syringes with detachable needles increase this risk even more because they can retain more blood after they are used than syringes with fixed-needles.
- **Preparation Equipment.** Any equipment, such as cookers, cottons, water, ties, and alcohol swabs, can easily become contaminated during the drug preparation process.
- **Fingers.** Fingers that come into contact with infected blood can spread Hepatitis C. Blood on fingers and hands can contaminate the injection site, cottons, cookers, ties, and swabs.
- **Surfaces.** Hepatitis C can spread when blood from an infected person contaminates a surface and then that surface is reused by another person.

Continued on next page

### Are there other ways Hepatitis C can spread?

Hepatitis C can also spread when tattoo, piercing, or other equipment is contaminated with the Hepatitis C virus and used on another person. Although rare, Hepatitis C can be spread through sex. Hepatitis C seems to be more easily spread through sex when a person has HIV or an STD. People who have rough sex or numerous sex partners are at a higher risk of getting Hepatitis C.

### How can Hepatitis C be prevented?

The best way to prevent Hepatitis C is to stop injecting drugs, including methadone or buprenorphine, can lower your risk for Hepatitis C and will no longer be a need to inject.

If you are unable or unwilling to stop injecting, there are steps you can take to reduce your risk of becoming infected.

Use sterile needles, syringes and other equipment—cookers, cottons, water, and alcohol swabs—for each injection.

Wash the injection surface **before** placing down your equipment.

Do not share drug solution with anyone who has already been used.

Use syringes with detachable needles to reduce the amount of blood remaining in the syringe.

Wash hands with soap and water before and after injecting to remove blood or other fluids.

Use alcohol or soap-and-water to clean the injection site.

Use a clean person.

Use a clean injection site with a sterile pad to clean the skin before injecting.

Use clean injection equipment. If you are unable to stop injecting, separate your equipment to avoid accidental sharing.

### Cleaning equipment does not kill the Hepatitis C virus.

Bleaching, boiling, burning, or using common household cleaning fluids, alcohol, or peroxide will **not** kill the Hepatitis C virus. The Hepatitis C virus is difficult to kill. So although cleaning equipment may reduce the amount of virus, it does not eliminate it.

### Can Hepatitis C be treated?

Yes. New and improved treatments are available that can cure Hepatitis C for most people. Most of the new treatments are taken as pills and do not require interferon injections. However, treatment for Hepatitis C depends on many different factors, so it is important to talk to a doctor about options.

### Can someone get re-infected with Hepatitis C?

Yes. Someone who clears the virus, either on their own or from successful treatment, can become re-infected again.



People who inject drugs should get vaccinated for Hepatitis A and B.

### Does injecting put you at risk for other types of hepatitis?

Yes. People who inject are more likely to get Hepatitis A and Hepatitis B. Getting vaccinated for Hepatitis A and B will prevent these types of hepatitis. There is currently no vaccine for Hepatitis C.

### For More Information

Talk to your health professional, call your health department, or visit [www.cdc.gov/hepatitis](http://www.cdc.gov/hepatitis).

[www.cdc.gov/hepatitis](http://www.cdc.gov/hepatitis)



U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention

# Increases in New HCV Infections

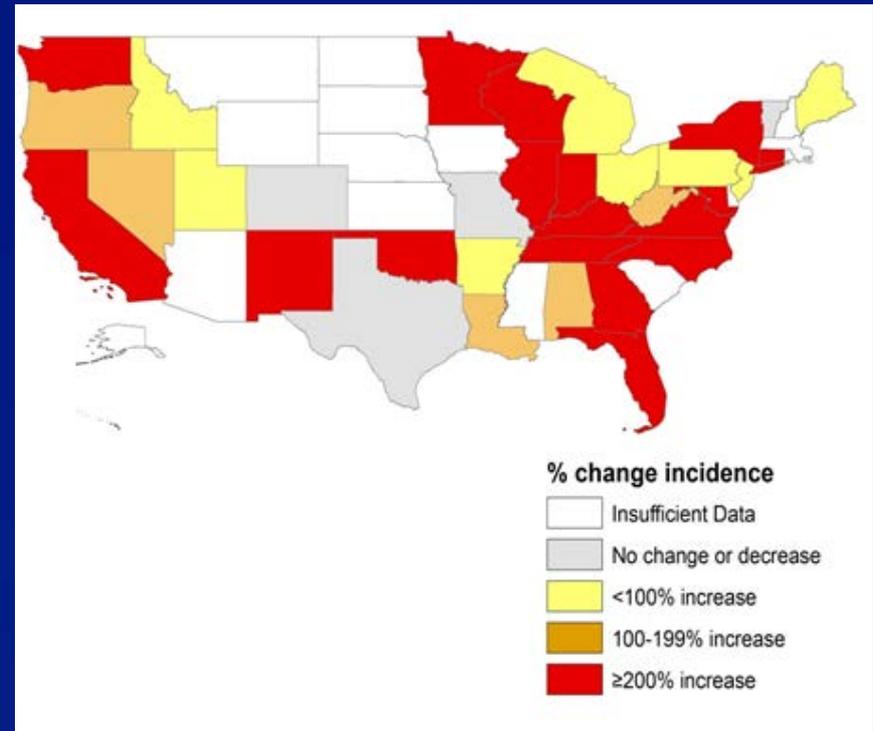
□ **50% increase in national reporting**

**2007-2012**

□ **200% increase in 17 states**

□ **Recent studies show**

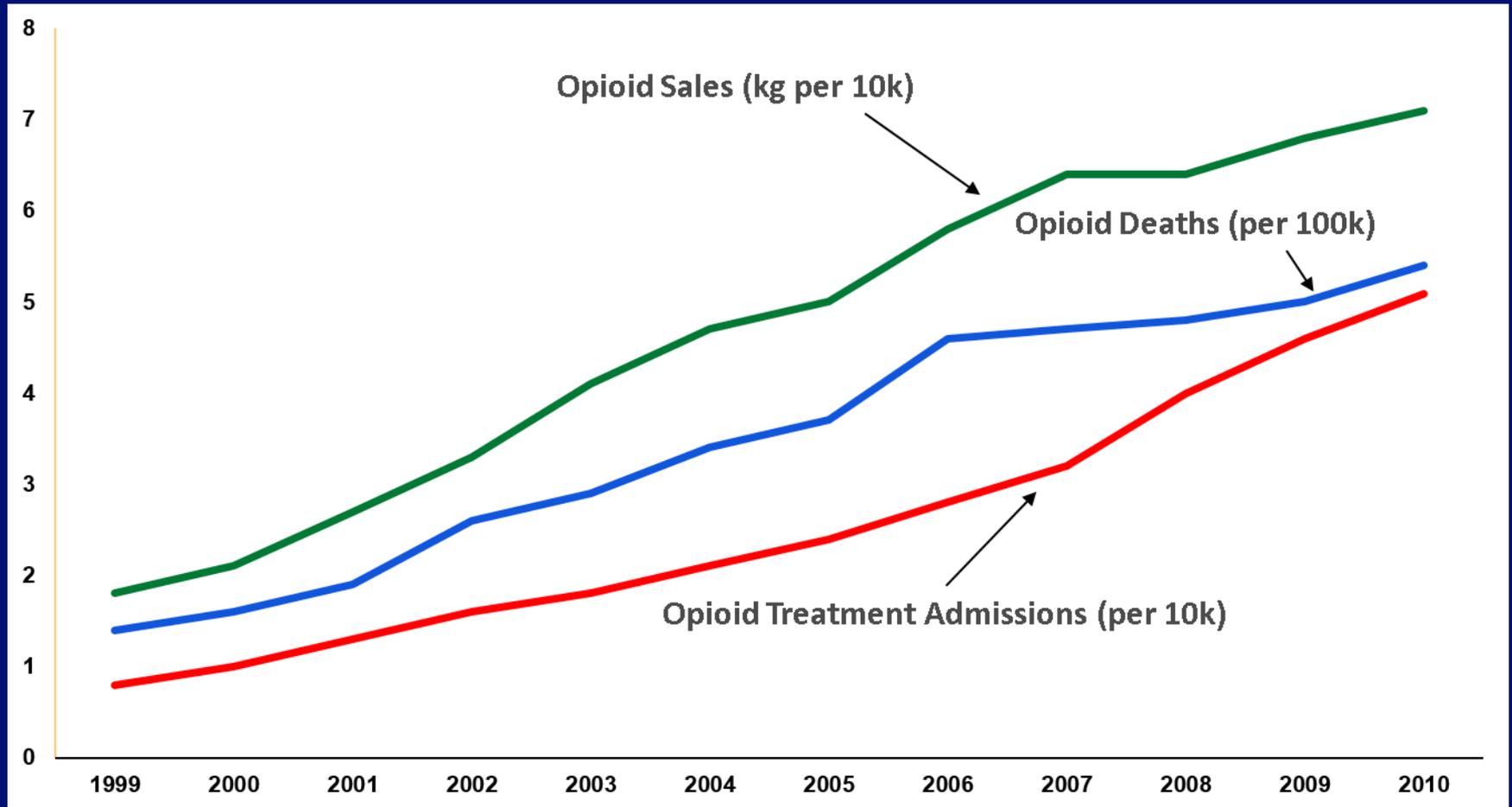
- ~70% report IDU
- Ages 18 to 29 years
- Predominantly white
- Equally female and male
- Non-urban and urban
- Antecedent presc opioid misuse



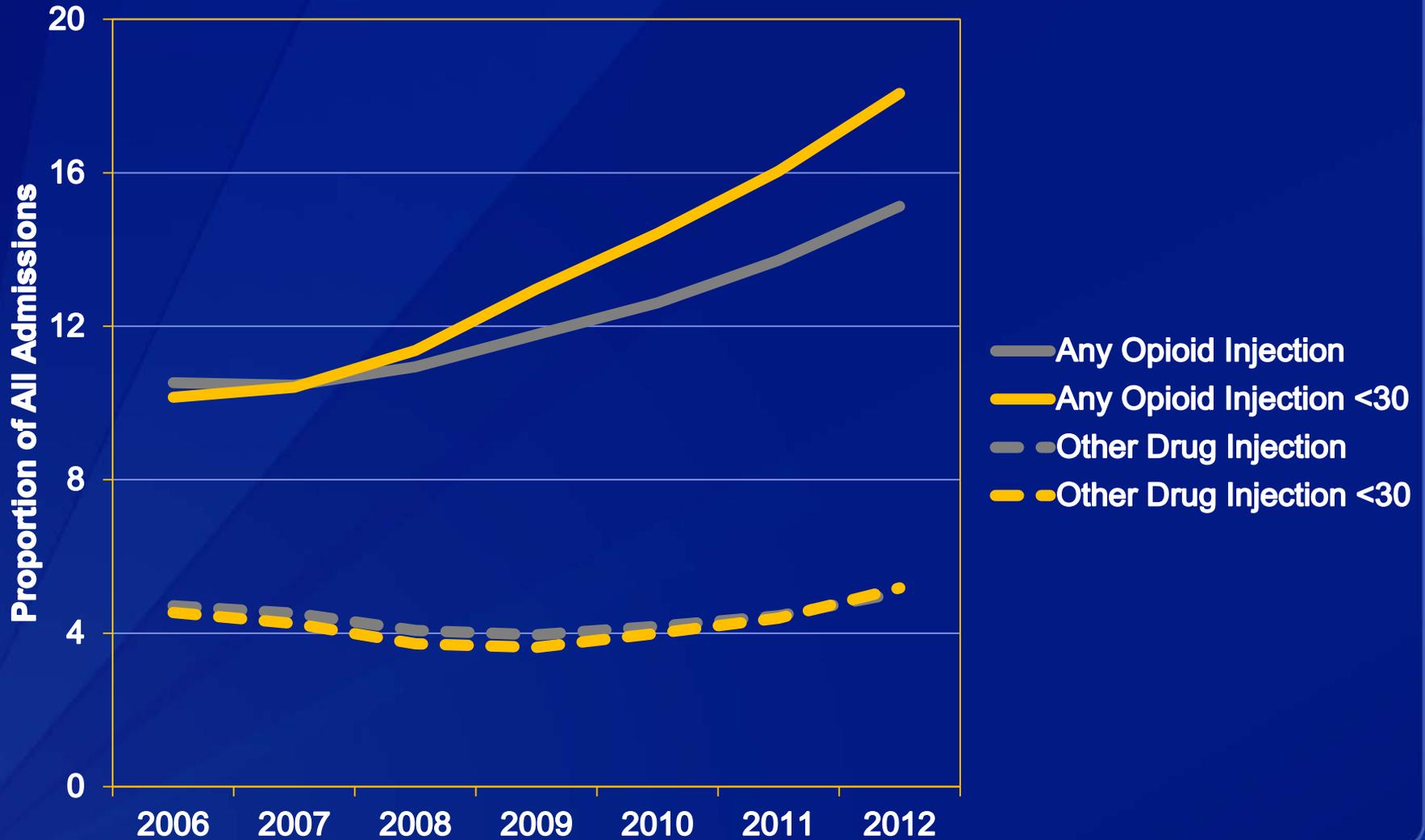
# Injection Behavior and Drugs Used by Persons 18-29 Years of Age with Acute HCV Infection

- 1202 cases of acute HCV investigated
  - 52% female
  - 85% white
  - 77% persons injected drugs
    - 57% shared needles/syringes
    - 82% shared equipment
- Percent use and mean age of drug use initiation
  - Powder cocaine: 71%, : 17.4 yrs.
  - Prescription opioids 76% : 17.9 yrs.
  - Heroin: 61%: 19.7 yrs.

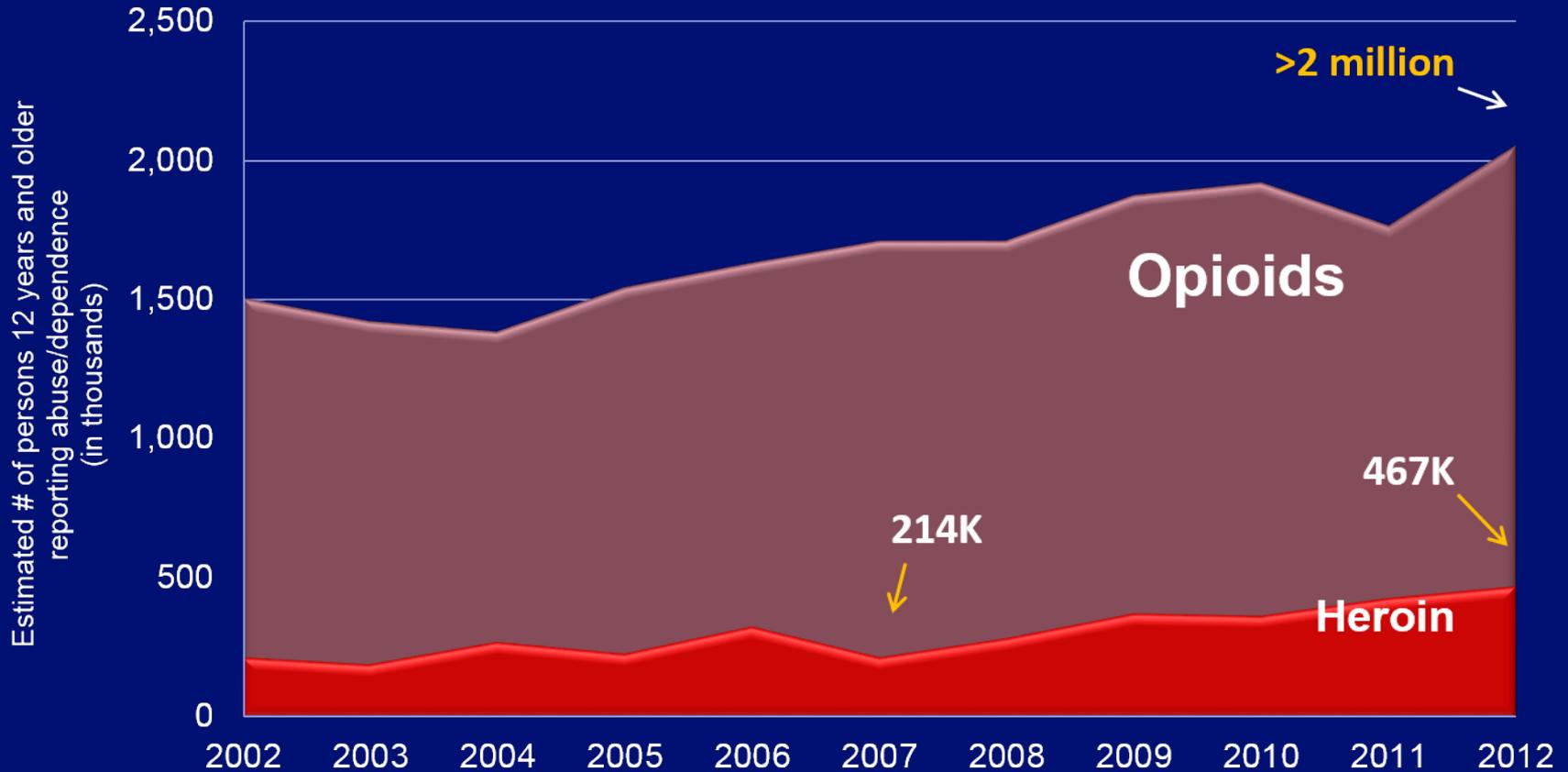
# Prescription Opioid Sales, Opioid-Related Deaths, and Opioid Treatment Admissions Have Increased in Lock Step



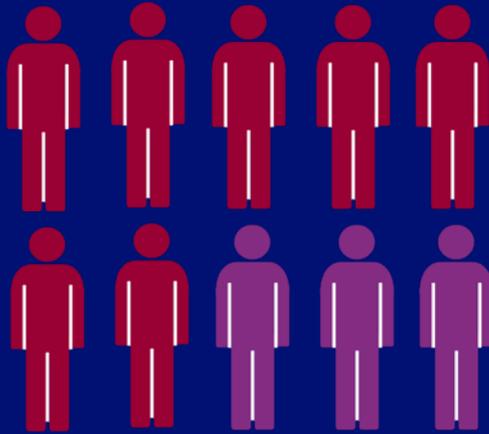
# National Injection Trends Among Persons in Substance Abuse Treatment Programs : All ages vs. <30



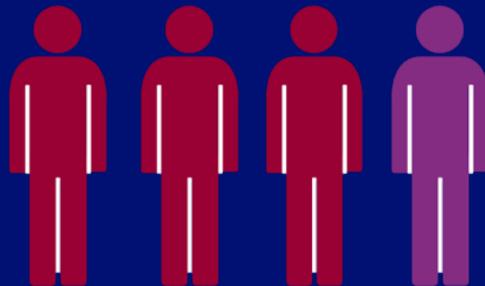
# Prescription Opioid Misuse and Heroin Dependency is also increasing



## Increased heroin use correlated with prescription opioid epidemic



**7 out of 10 people** who used heroin in the past year also misused opioids in the last year.



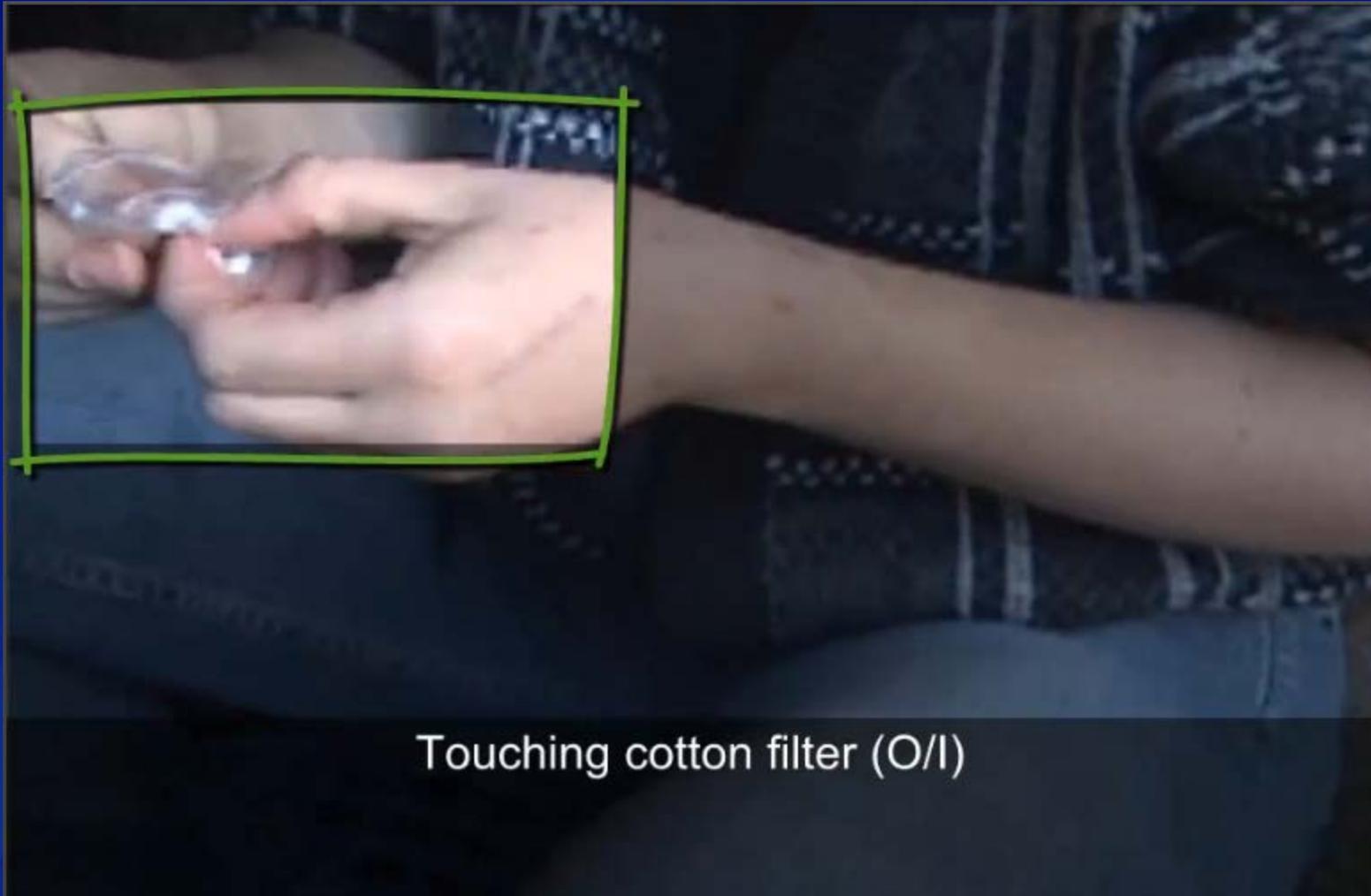
**3 out of 4 people** who used both heroin and opioids in the last year misused opioids first.



# Bloody Fingers

# fingers on cooker and in solution

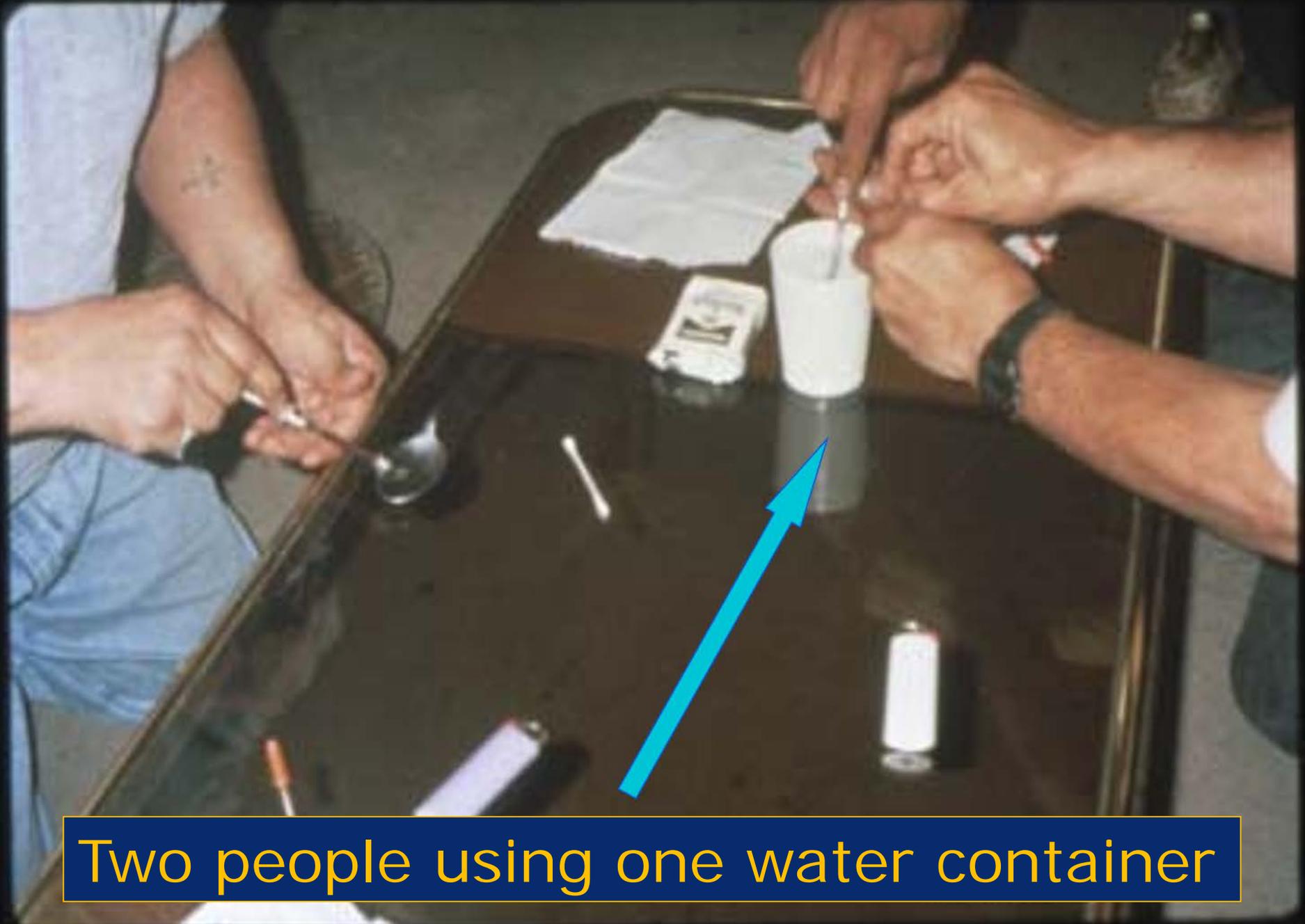




Touching cotton filter (O/I)



## “Fishing” for a Vein



Two people using one water container

# Special Thanks:

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Emily Winkelstein, MSW  
William Zule, PhD

# HCV PREVENTION IN PEOPLE WHO INJECT DRUGS

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Holly Hagan, PhD

Professor

New York University College of Nursing

STRATEGIES THAT PREVENT HIV  
INFECTION IN PWID ARE LESS  
EFFECTIVE AGAINST HCV

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# Infection control strategies target the **Agent**, **Host** and **Environment**

## AGENT: HCV

- Efficiently transmitted via parenteral exposure
- Survives on surfaces outside the body
- 75-80% of infections become chronic

## HOST: PWID

- Decreased syringe sharing
- Equipment sharing persists
- 40-60% may be HCV-infectious

## ENVIRONMENT: SETTINGS

- Injection settings
  - A high prevalence of infectious PWID
  - A range of contaminated equipment
- Poor access to harm reduction & health services for PWID in many regions of US

# HCV Prevention Research

- Individually, syringe access programs and opiate substitution treatment (OST) have been shown to reduce **HIV** infections in PWID
  - However, *by themselves*, these programs do not reduce HCV transmission in PWID
- When **combined**, syringe access and OST are **highly effective** at preventing spread of HCV
  - Combined = an individual PWID is in OST and uses sterile injecting equipment
  - Under these conditions, they may reduce new HCV infections by **75-80%**

# Why would PWID in OST need sterile injecting equipment?

- Some PWID are not ready to become abstinent but would like to have more control of their drug use
- Low-threshold OST:
  - Abstinence not required
  - No penalties for ongoing drug use
  - Reduces injection frequency, injection risk behavior, criminality, mortality
  - Higher retention rates than traditional high-threshold OST
- These active injectors with chronic HCV infection are at risk of transmitting
  - This is the majority of PWID in the US
- Engaging active injectors in combined HCV prevention essential to HCV control

# What about HCV Treatment as prevention?

- New treatments may cure more than 85% of patients
  - They are well-tolerated and safe, and treatment is only 8-24 weeks
  - New treatments are expensive, but studies have shown that they are cost-effective
- However, currently only **1-2%** of PWID with chronic HCV infection are treated each year
- Curing HCV infection in PWID will help prevent new HCV infections
  - It will reduce the number of infectious carriers
  - With fewer carriers, syringe access and OST programs will be more effective
- However, HCV treatment alone will not control HCV infection in PWID
  - Combined HCV prevention – syringe access and OST – must be continued (and expanded)

# Framework of a model HCV control strategy for PWID

## Prevent new infections

### HCV prevention activities

- Access to syringes & other equipment
- OST
- Safe injection education
- Outreach to those not engaged

## Detect and care for existing infections

### Screening and diagnosis

- Antibody screening
- RNA test to confirm infection
- Clinical evaluation to determine disease stage
- Monitoring disease progression
- Reduce alcohol use

## Reduce chronic infections

### HCV care and treatment

- Treat to cure infection
- Support adherence to treatment
- Support post-cure to prevent reinfection

**Co-locating these services increases their impact on HCV control**

# Special topics in HCV prevention

- Young injectors (aged 18-29)
  - Highest rate of new HCV infections
  - Great difficulty accessing youth and engaging them in harm reduction
  - Preventing transition to injection among prescription opioid misusers a high priority
- Rural injectors
  - Large swaths of the US with no harm reduction services
  - Can be reached via peers who distribute syringes and injection equipment, and teach them safe injection practices
  - Can't deliver OST in this manner, though
- Stigma
  - HCV is stigmatized because of its association with drug use
  - A barrier to accessing services – HCV infection suggests they are drug users

# Summary of HCV prevention in PWID

- Must continue and expand effective harm reduction services
  - Increase access to sterile syringes and injection equipment (drug cookers, filtration cotton, rinse water)
  - OST (including active injectors) to reduce unsafe injections
- HCV treatment is highly effective and if a large proportion of PWID are cured, the prevalence of infectious carriers will decline
  - But treatment alone will not control HCV
  - It is cost-effective but expensive
- Challenges remain, but there is compelling evidence showing that we can prevent HCV infection in PWID

# Resources

- New York University Center for Drug Use and HIV Research HCV brief:
  - <http://cduhr.org/docs/reports/CDUHR-HCV-Implementation-Brief-Nov2014.pdf>
- Harm Reduction Coalition information on HCV prevention
  - <http://harmreduction.org/syringe-access/syringe-access-tools/seps-and-hepatitis-c/>
- The HCV Advocate
  - [http://www.hcvadvocate.org/hepatitis/factsheets\\_pdf/Harm\\_Reduction\\_Overview.pdf](http://www.hcvadvocate.org/hepatitis/factsheets_pdf/Harm_Reduction_Overview.pdf)
- National Viral Hepatitis Roundtable
  - <http://nvhr.org/content/navigating-hepatitis-c-what-patients-need-know-0>
  - <http://nvhr.org/content/new-report-hcv-treatment-access-restrictions>
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# Hepatitis C Prevention Opportunities Among People Who Inject Drugs *Confronting the Growing Epidemic*

## Q & A

Enter questions into the  
**GotoWebinar chat box**



**Hepatitis C Prevention Opportunities  
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**Thank You!**