CROSSROADS: INFECTIOUS DISEASES & OPIOIDS

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DISCLOSURES

• No relevant financial disclosures

• I am not an addiction specialist nor a neurobiologist

• I treat infectious diseases (mostly HIV, HBV, HCV) in the outpatient setting
TODAY’S AGENDA

• Definitions
• Epidemiology
• Infectious Diseases & Opioids
• The Role of Healthcare Professionals
• Call to Action
• Resources
DEDICATED TO JENNY AND SAM AND BETSY
“Opiates” vs. “opioids”

Although these terms are often used interchangeably they are different.

**Opiates** refer to natural opioids such as heroin, morphine and codeine.

**Opioids** refer to all natural, semisynthetic, and synthetic opioids.
CLASSES OF OPIOIDS

Natural/Semi-synthetic opioids

heroin
morphine, codeine (natural)
oxycodone, hydrocodone, hydromorphone, oxymorphone (semi-synthetic)

Synthetic opioids

fentanyl, methadone, tramadol

Prescription opioids (aka opioid analgesics) – include methadone, natural, and semi-synthetic opioids
POTENTIAL BENEFITS OF OPIOIDS

Euphoria, Feeling Good

Feeling Better
  - Avoidance of Withdrawal
  - Self-medication/coping mechanism

Acknowledgement of pain & suffering

Analgesia

Palliative therapy

Select medical conditions
POTENTIAL ADVERSE EFFECTS OF OPIOIDS

Sedation
Nausea, vomiting
Constipation
Dysphoria
Confusion, hallucinations
Urinary retention
Dizziness
Pruritus
Decrease in immune function
Respiratory depression

Risk of abuse, misuse, SUD, OD
Opioid-induced hyperalgesia
Disruption of hypothalamic pituitary access
CNS hyper-excitability
Impairment of bone health, increased risk of fractures
Increased risk of cardiovascular events
Increased risk of exposure to infectious diseases
Death

EPIDEMIOLOGY
THE LATE 20\textsuperscript{TH} CENTURY

- 1999-2010: US opioid Rx is up by 300%
- Americans consume 80% of the global supply of all opioids (99% of worldwide hydrocodone supply)
- Drug poisoning: the leading cause of accidental deaths in the US
- 1999-2002: # opioid analgesic poisonings on death certificates increased 91.2% vs heroin (12.4%) and cocaine (22.8%)

https://www.cdc.gov/drugoverdose/epidemic/index.html
- 2011 data estimated that 4-6% who misuse Rx opioids switch to heroin and ~80% of people who used heroin first misused Rx opioids

- More recent data suggest that heroin is frequently the 1st opioid people use. In a study of those entering treatment for OUD, ~1/3 reported heroin as the first opioid they used regularly to get high.

>70,200 drug overdose deaths. 47,600 (~70%) involved opioids.

Sharpest increase (45.2%) occurred among deaths involving fentanyl

https://www.cdc.gov/drugoverdose/epidemic/index.html
NAS or neonatal opioid withdrawal syndrome (NOWS)

One baby born with symptoms of NAS/NOWS every 15 minutes in the United States.

- 5-fold increase in NAS/NOWS incidence between 2004-2014 (1.5 cases/1,000 hospital births to 8.0 cases/1,000)

- There is no recent available data on the rate or number of babies born with NAS/NOWS in the state of Delaware.
• DE age-adjusted rate of drug OD deaths increased by 20% from 2016 (30.8/100K) to 2017 (37.0/100K)*

The opioid Rx rate in DE decreased by >30% from 101.1 Rxs/100 persons in 2010 to 68.3 Rxs/100 persons in 2017

FIGURE. Age-adjusted rates* of drug overdose deaths and deaths involving synthetic opioids other than methadone,† by state§ — United States, 2013 and 2017¶

DE ranks #6

https://www.cdc.gov/mmwr/volumes/67/wr/mm675152e1.htm?s_cid=mm675152e1_w#F1_down
3 Waves of the Rise in Opioid Overdose Deaths

Other Synthetic Opioids
- e.g., Tramadol and Fentanyl, prescribed or illicitly manufactured

Commonly Prescribed Opioids
- Natural & Semi-Synthetic Opioids and Methadone

Heroin

Deaths per 100,000 population


Wave 1: Rise in Prescription Opioid Overdose Deaths
Wave 2: Rise in Heroin Overdose Deaths
Wave 3: Rise in Synthetic Opioid Overdose Deaths

Heimer R, Hawk K, Vermund SH.

Prevalent Misconceptions About Opioid Use Disorder in the United States Produce Failed Policy and Public Health Responses.

CID 2019:69 (1 Aug);546-551.
THE PERFECT STORM

• Historical Context
  • Prior periods of increasing opioid usage
  • This is NOT the 1st turn of the screw

• The Market
  • Pharmaceutical industry
  • International drug trafficking

• The Medical Profession
  • Pain as 5th vital sign
  • The isolation of methadone
  • Barriers to MAT Rx
  • Increasing complexity, decreasing time

• Misconceptions
  • Increase in opioid Rx alone drove current opioid epidemic
  • Addiction as moral failure
  • Abstinence-based recovery as king
• Hypodermic syringes invented

• Unregulated opioids included in patent medicines

The First Crisis
1865-1913

Civil War - Pure Food and Drug Act (1906)

The Second Crisis
1960-1975

Vietnam, youth disenchantment

The Third Crisis
1990-Present

“Patient-centered” care, pain as a vital sign (2004)

Morphine → semi-synthetic → fully synthetic → fentanyl & fentanyl analogues

1865-1913: The First Crisis
- Hypodermic syringes invented
- Unregulated opioids included in patent medicines

1865-1913: Civil War - Pure Food and Drug Act (1906)

1960-1975: The Second Crisis
- Pre-1960, heroin smuggling into big cities
- Methadone scale up & move to isolated, highly-regulated clinics
- Return to abstinence-based approaches

1960-1975: Vietnam, youth disenchantment

1990-Present: The Third Crisis
- Increased opioid Rx (short-acting)
- Expanded formulations, false claims about abuse potential, aggressive marketing
- Experimentation > chronic pain Rx

1914: Harrison Narcotics Tax Act and downstream court rulings: enforced opioid abstinence
- Addiction as medical disease requiring treatment → Addiction turned to be viewed as a moral failure

1962: Court rules addiction = disease and not an “act”

1970: Controlled Substances Act

2000: Drug Abuse Treatment Act- requirement for physician buprenorphine waiver

2011: Pill Mill Crack Down Act
THE SAD MATH OF TODAY

History +
Misconceptions +
Barriers to SUD Tx AND harm reduction strategies +
Increasing social isolation +
Decreased access to pharmaceutical opioid Rx +
Increasing circulation of more potent opioids in illicit market

______________________________

Alarmingly increasing rates of opioid overdoses, fatalities, and ID (HIV, HCV, HAV) outbreaks
OUD IN THE MEDICAL FIELD

- Affects trainees, providers, clinical staff, public health sector
  - Estimated >1900 of 91,391 US medical students may be affected
- Physicians have much to lose in the current environment
  - Physician health programs for OUD routinely mandate abstinence-based models as condition for maintenance of professional licensure
- ~25% of physicians (& a higher proportion of nurses) are not “successful” in recovery
- Lack of research about effects of averted fatal ODs, suicides, lost licenses with increasing access to OAT

PARAMOUNT TO THE PREVENTION OF INFECTIOUS COMPLICATIONS OF INJECTING OPIOIDS IS ADDRESSING THE EPIDEMIC OF INJECTING OPIOIDS."

— Anthony Fauci,
JAMA 9/17/2019
THE CROSSROADS

- HIV
- HAV
- HBV
- HCV

Pulmonary:
- Tuberculosis
- CAP, *Pneumococcal* PNA/invasive dx

STIs:
- Syphilis
- Gonorrhea, Chlamydia

SSTIs: abscesses, cellulitis

Bloodstream Infections
- Bacterial (*S. aureus*, GAS), Fungal (*Candida*)
- CV: Infective endocarditis, lymphedema
- Septic emboli: pulmonary emboli, osteomyelitis, epidural, renal, splenic, psoas, CNS abscesses, septic thrombophlebitis/arthritis

Other
- Violence, trauma
- Opioid-induced immunosuppression - Impaired innate & adaptive immune systems
- *C. diff*
- Pseudo-aneurysms
- DVT
- Fe-deficiency anemia
- AA (secondary) Amyloidosis
MECHANISMS OF EXPOSURE

• Percutaneous
  • High risk injection practices
    • Contaminated injection equipment, re-use, improper or inadequate cleaning, use of high dead-space syringes
  • Skin breakdown

• Fecal-oral route – due to sub-optimal hygiene
  • Limited access to running water and/or showers

• Sexual
  • High-risk sexual behaviors
    • Transactional sex, sex with multiple partners, unprotected sex, chemsex

• Peri-natal

MODES OF INJECTION DRUG USE

Intravenous or intra-arterial – “mainlining”
Subcutaneous or intradermal – “skin popping”
Intramuscular – “muscle popping” or “muscling”
BACTERIAL & FUNGAL INFECTIONS IN PWID

• Bacteria or fungi on skin, in saliva, in the drug itself, or in diluents or filters used to prepare drugs for injection may be introduced into SC tissues, muscles, or the bloodstream

• 16.3X more likely to develop invasive MRSA infections compared to the general population

• US hospitalizations for serious bacterial infections (SSTI, IE, epidural abscesses, osteomyelitis) are increasing in PWID

• *Staph aureus* most common cause of IE among PWID (68% vs 28% of cases in general population) and more often involves right-sided valves.

• Higher rates of reinfection and valve-related complications

• SSTI: most common medical complication in PWID and THE top reason for hospitalization in PWID

• 6-32% PWID have an active SSTI at any time. Risk factors: female sex, frequent injection, inadequate skin cleaning, subcutaneous or intramuscular injecting, HIV infection, and needle sharing
HIV IN PWID

Dates back to first reports of AIDS in 1981.

HIV attributable to IDU reached a high of 30% in early 1990s.

HIV ATTRIBUTABLE TO IDU

**Delaware:** Estimated % of male vs. female with new HIV diagnoses, by transmission category, 2016. Source: CDC and www.AIDSVU.org.

Nationally: 2016, 9% (3,480) of new HIV diagnoses
Males: 6.3% (2,530) with IDU, Females: 2.3% (950)
Increase access to HIV prevention and treatment services:
- Rapid care engagement, ART initiation, retention in care
- PrEP (USPSTF Grade A rec)
- **Access to & expansion of needle & syringe service programs (SSPs) & access to SUD treatment**
- **Focus on demographic and geographic hot spots**
  - Recent HIV outbreaks in Lawrence & Lowell, MA (~125), Scott County, Indiana (>200)
HIV treatment has dramatically increased QOL and life expectancy in individuals living with HIV.

Consistent HIV viral suppression prevents sexual transmission of HIV to uninfected partners.

Unknown but likely also reduces transmission via sharing syringes and other drug injecting equipment.
**OPIOID EPIDEMIC DISPROPORTIONATELY AFFECTS PLWHA**

- Overall mortality of PLWHA was 12.7% less in 2015 (1630.6/100K) than in 2011 (1868.8/100K)

- The opioid OD death rate among PLWHA was 42.7% greater in 2015 (33.1/100K) than in 2011 (23.2/100K). Extends to all subgroups: age, sex, race/ethnicity, transmission category, US Census region of residence at death (exception: West US Census region)

- Deaths were highest among PLWHA aged 50–59 years at death (41.9/100K), females (35.2/100K), whites (49.1/100K), PWID (137.4/100K), and the NE US Census region (60.6/100K)
HCV MODES OF TRANSMISSION

Percutaneous - exposure to HCV-infected blood “through the skin”

Sexual – MSM > heterosexual

Perinatal

Other: chronic hemodialysis, solid organ transplantation

HCV PERCUTANEOUS EXPOSURE

- **EVER IDU (>60%)** – any drug/substance
  - Includes sharing of needles, syringes, cotton filters, cookers – ANY injection paraphernalia
  - ~1/3 rd PWID HCV-infected w/i 2y AND 50% w/i 5y

- **EVER Intranasal drug use**

- Uncertified tattoos or piercings

- Unsafe healthcare: needle stick injuries, the reuse or inadequate sterilization of medical equipment

- Remote transfusion of unscreened blood or blood products

HCV & PWID

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

Visit www.cdc.gov/hepatitis for more information
From 2004-2014, HCV and Opioid Injection Drug Use Increased Significantly Among People Aged 18-39 Years\(^1,2\)

The national increase in acute HCV infection is associated with the nation’s opioid epidemic.\(^1\)

Age Distribution of New HCV Infections in the US Skews Toward Adolescents and Young Adults

These data may be indicative of emerging trends in HCV transmission in other regions of the US.

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*Excludes 915 cases with missing age or sex information.

*Excludes 362 cases with missing age or sex information.

Data are current as of Nov 15, 2016 and are subject to change.

Acute HCV Among Persons Aged ≤ 30 Years
Kentucky, Tennessee, Virginia, and West Virginia, 2006-2012

Incidence of acute HCV infection among persons aged ≤ 30 y and by urbanicity

Percentage of all admissions to substance abuse treatment centers by persons aged 12 to 29 y (N = 217,789) attributed to the injection of opioids and other drugs

*95% CI.

†Any opioids include heroin and prescription opioids.
‡Other drugs include cocaine/crack, alcohol, phencyclidine, other hallucinogens, methamphetamine, other amphetamines, other stimulants, benzodiazepines, other nonbenzodiazepine tranquilizers, barbiturates, other nonbarbiturate sedatives or hypnotics, OTC medications, and other drugs not listed.

A new population of young HCV cases has emerged in Philadelphia
Prevalence of HIV/HCV Coinfection is High

- Shared routes of transmission
  - 30% of HIV+ are coinfected
  - ~400,000 HIV/HCV + in U.S.

- Prevalence of HCV in individuals who are HIV+ varies based on likely mode of acquisition
  - ~90% in IDU
  - 60-85% in hemophiliacs
  - 4-8% in MSM
92.3% of diagnosed HIV cases co-infected in with HCV
Adherence Rates with DAA Therapy Among PWID/PWUD are High\textsuperscript{1-3}

- The PWID/PWUD population included individuals who were actively using or injecting drugs, receiving MAT, HCV/HIV coinfected, and/or housing unstable.\textsuperscript{1-3}

> **Regardless of active drug or injection drug use, studies have shown PWID/PWUD to be adherent to HCV therapy.** \textsuperscript{1-3}

\textsuperscript{a}Three clinical trials or post-hoc analyses, including a study of 301 treatment-naïve subjects with HCV GT 1, GT 4, or GT 6, who were ≥80% adherent to opioid agonist therapy (C-EDGE CO-STAR); a study of 149 GT 1 subjects (58 with a history of injection drug use) receiving OST from a post-hoc analysis of 12 Phase 2 and 3 clinical trials of a DAA; and a study of 100 subjects with chronic HCV and recent opioid injection use (≤3 months) treated for 12 weeks with a DAA (ANCHOR). In the C-EDGE CO-STAR study, adherence was monitored by electronic diary. Subjects were considered adherent if they reported taking ≥95% of their pills. In the post-hoc analysis, adherence was calculated by dividing the number of total pills received by the total expected number of pills. Subjects were considered adherent if they had taken ≥90% of their expected pills. In the ANCHOR study, adherence was calculated based on the number of pill bottles used. Adherent subjects were those who completed 3 bottles.\textsuperscript{1-3}

DA, direct-acting antiviral; GT, genotype; MAT, medication-assisted therapy.

## Outcomes of PWID with HCV Treatment

### Adherence

<table>
<thead>
<tr>
<th></th>
<th>IFN-era</th>
<th>DAA-era</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWUD</td>
<td>80/80/80</td>
<td>82%(^1)</td>
</tr>
<tr>
<td>PWID ≥80%</td>
<td>93–100%(^2\–(^4)</td>
<td></td>
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</table>

### Discontinuation

<table>
<thead>
<tr>
<th></th>
<th>IFN-era</th>
<th>DAA-era</th>
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<tbody>
<tr>
<td>PWUD</td>
<td>22%(^1)</td>
<td></td>
</tr>
<tr>
<td>PWID</td>
<td>1–4%(^2\–(^7)</td>
<td></td>
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</tbody>
</table>

### SVR

<table>
<thead>
<tr>
<th></th>
<th>IFN-era</th>
<th>DAA-era</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWID only</td>
<td>61%(^1)</td>
<td></td>
</tr>
<tr>
<td>All genotypes</td>
<td>91–96%(^2\–(^7)</td>
<td></td>
</tr>
</tbody>
</table>

### Reinfection (estimated risk)

<table>
<thead>
<tr>
<th></th>
<th>IFN-era</th>
<th>DAA-era</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWUD</td>
<td>2.4 per 100 person-years(^1)</td>
<td></td>
</tr>
<tr>
<td>PWID</td>
<td>2.5 per 100 person-years(^7)</td>
<td></td>
</tr>
</tbody>
</table>

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Data from IFN era was from a meta-analysis of pooled data (January 2002–January 2012) of pegylated-interferon + ribavirin. *Adherence for IFN defined as proportion of I patients who received 80% of PEG-IFN cumulative dose with 80% RBV cumulative dose for 80% of the time and adherence for DAA was defined as a proportion of number of doses taken over the total number of doses for the full course of treatment; †The estimated risk of reinfection was for patients who had persistent viraemia.

DAA, direct-acting antiviral agents; PWID, people who inject drugs; PWUD, people who use drugs

7. Dore et al. AASLD 2016; Oral #871
Reinfection after DAA therapy among PWIDs

Recurrence of HCV in IDU/non-IDU patients After SVR 12 from international open-label trials from 25 sites in 8 countries

<table>
<thead>
<tr>
<th>Baseline</th>
<th>DAA treatment (12 weeks) N = 179</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current opioid substitution therapy, n (%)</td>
<td>108 (60%)</td>
</tr>
</tbody>
</table>

Injecting following EOT

| Any injecting drug use             | 124 (69%)                        |
| Daily or greater injecting         | 52 (29%)                         |
| Heroin injecting                  | 82 (46%)                         |
| Methamphetamine injecting         | 52 (29%)                         |
| Other opioid injecting            | 43 (24%)                         |
| Cocaine injecting                 | 34 (19%)                         |

- 6 monthly follow up for re-infection after SVR24 up to 108W post treatment.
- **Overall reinfection rate was 3.6 (1.6-8.0)/100py including non injecting and injecting patients**

Reinfection rates according to injection behaviour

<table>
<thead>
<tr>
<th>Patient Profile</th>
<th>Reinfection rate</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Injecting</td>
<td>0.0 cases/100 py</td>
<td></td>
</tr>
<tr>
<td>&lt;Daily injecting</td>
<td>1.5 cases/100 py</td>
<td>(0.2-10.3)</td>
</tr>
<tr>
<td>≥ Daily Injecting</td>
<td>8.9 cases/100 py</td>
<td>(3.7-21.4)</td>
</tr>
</tbody>
</table>

Reinfection following successful HCV DAA therapy occurs predominantly in people with ongoing injecting
Major Organizations Recommend HCV Treatment for PWID

AASLD/IDSA

“Scaling up HCV treatment in PWID is necessary to positively impact the HCV epidemic in the US and globally.”

Active alcohol and/or drug use should not in itself exclude any person from receiving treatment for their HCV infection.”

American Society of Addiction Medicine

“Treatment for HCV infection is both efficacious and cost-effective in PWID and therefore WHO recommends that all adults and children with chronic HCV infection, including PWID, should be assessed for antiviral treatment.”

World Health Organization

“A combination prevention strategy including hepatitis C treatment as prevention and increased coverage of harm reduction interventions is critical for achieving reductions in hepatitis C prevalence/incidence among PWID.”

International Network on Hepatitis in Substance Users

“Scaling up HCV treatment in PWID is necessary to positively impact the HCV epidemic in the US and globally.”

Active alcohol and/or drug use should not in itself exclude any person from receiving treatment for their HCV infection.”

“A combination prevention strategy including hepatitis C treatment as prevention and increased coverage of harm reduction interventions is critical for achieving reductions in hepatitis C prevalence/incidence among PWID.”

References:
HBV & PWID

- 2015: WHO estimates 257M cases of chronic HBV.
- ~1% of persons living with HBV (2.7M) are co-infected with HIV.
- The global prevalence of HBV infection in HIV-infected persons is 7.4%
- Shared risk factors as HCV and HIV for transmission
- Unlike HIV & HCV, HBV is vaccine preventable
- US, 2016: 862,000 cases. Percutaneous & sexual transmission account for majority of cases.

  - 2016: ~1/3rd of people with newly reported, acute HBV infections & complete risk information, reported IDU
  - HBV prevalence (core Ab+) among adults with a history of IDU is more than 4X higher than general population

[Shing JZ. Prevalence of Hepatitis B Infection Among US Adults Age 20-59 Years with a History of Injection Drug Use. CID, 27 July 2019.]
ACTUAL NUMBER OF ACUTE HEPATITIS B CASES SUBMITTED TO CDC BY STATES AND ESTIMATED* NUMBER OF ACUTE HEPATITIS B CASES — UNITED STATES, 2010–2017.

Source: CDC, National Notifiable Diseases Surveillance System.
FIGURE 3.6. AVAILABILITY OF INFORMATION ON RISK BEHAVIORS/EXPOSURES* ASSOCIATED WITH REPORTED CASES OF ACUTE HEPATITIS B — UNITED STATES, 2017

- Risk identified*: 1011 (29.7%)
- No risk identified: 1121 (32.9%)
- Risk data missing: 1275 (37.4%)

Source: CDC, National Notifiable Diseases Surveillance System.
| Risk Behavior/Exposure                  | Yes | No  | Missing
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Injection drug use</td>
<td>715</td>
<td>1,213</td>
<td>1,479</td>
</tr>
<tr>
<td>Multiple sex partners</td>
<td>190</td>
<td>505</td>
<td>2,712</td>
</tr>
<tr>
<td>Surgery</td>
<td>125</td>
<td>1,315</td>
<td>1,967</td>
</tr>
<tr>
<td>Sexual contact</td>
<td>61</td>
<td>914</td>
<td>2,432</td>
</tr>
<tr>
<td>Needle stick</td>
<td>54</td>
<td>817</td>
<td>2,536</td>
</tr>
<tr>
<td>Men who have sex with men¶</td>
<td>27</td>
<td>215</td>
<td>1,852</td>
</tr>
<tr>
<td>Household contact</td>
<td>14</td>
<td>961</td>
<td>2,432</td>
</tr>
<tr>
<td>Occupation</td>
<td>11</td>
<td>1,731</td>
<td>1,665</td>
</tr>
<tr>
<td>Transfusion recipient</td>
<td>4</td>
<td>1,483</td>
<td>1,920</td>
</tr>
<tr>
<td>Dialysis patient</td>
<td>1</td>
<td>1,489</td>
<td>1,917</td>
</tr>
</tbody>
</table>

Source: CDC, National Notifiable Diseases Surveillance System.
HAV & PWID

- HAV is transmitted via the fecal-oral route including person-to-person due to close contact with infected cases & behaviors associated with IDU
- Percutaneous transmission also occurs
- HAV is vaccine preventable. 1 dose of HAV vaccine is up to 95% seroprotective for over a decade.
- 28K cases, > 60% hospitalizations, >280 deaths

State-Reported Hepatitis A Outbreak Cases as of November 8, 2019
MAKING THE DX OF HAV

Most older children & adults will be symptomatic

Incubation period: 15-50 days (average: 1m)

Diagnostic Test: HAV IgM OR HAV RNA

Fever
Fatigue
Loss of appetite
Nausea
Vomiting
Abdominal pain

Dark urine
Diarrhea
Clay-colored stool
Joint pain
Jaundice

https://www.cdc.gov/hepatitis/hav/havfaq.htm
1. VACCINATE AGAINST HAV
2. CLEAN UP & DISINFECT SURFACES
3. HAND HYGEINE

Scientific experts from the U.S. Centers for Disease Control and Prevention (CDC) helped to develop this poster. For more information on Hepatitis A prevention, please see https://www.cdc.gov/hepatitis/hav/

Posters are available for download at www.waterandhealth.org/resources/posters
IDU associated with increased rates of HIV and other STIs, including syphilis > gonorrhea & chlamydia

Largely driven by exposure to sexual partners with STIs > parenteral exposure

SCREENING FOR PWID

- HIV – 4th generation HIV Ag/Ab test
- HAV – Hep A IgG
- HBV – Hep B surface Ag, core Ab (total), surface Ab
- HCV (intranasal drug use as well) – HCV Ab
- Additional STI testing for gc, chl, syphilis
- LTBI

ALL PWID should be:

- Evaluated for HIV-1 PrEP
- Appropriately vaccinated against HAV and HBV, in addition to age-appropriate vaccines, UTD tetanus vaccination
  - ** Do NOT delay HAV vaccine if serology not available
- Rescreened for HIV, HBV, HCV at least annually
- Offered MAT, Rx’d naloxone, and have access to harm reduction services

HCV Treatment Engagement in Care Opportunities for PWID

- Corrections
- Mental Health Clinic
- Hospital
- Inpatient Rehab
- Street medicine
- Drug Clinic
- Prison
- Primary Care
- Specialty Clinic
- Homeless Shelter
- SNF
- Syringe Exchange Program

integration.samhsa.gov
Federal funding for syringe exchange was banned until 2016

Sterile Syringe Exchange Programs: Has Syringe Exchange Program?, 2018

Source: Kaiser Family Foundation’s State Health Facts.

SAFE INJECTING PRINCIPLES

Wash hands, clean area to be injected with alcohol swab.

Use individual equipment & works. Label, take charge of prepping & injecting yourself.

ONE and DONE: 1 syringe, 1 injection, done.

Low dead-space needles (fixed needles) >> high-dead space needles (detachable needles).

Use sterile or boiled water.

Store water/works in glass >> plastic or aluminum.

Vein in arms > legs. Use different veins in different arms.

Bleach is best. Clean surfaces too.

Syringe Disinfection

- If possible, always use a new, sterile syringe* and never share any injection equipment.
- A disinfected syringe is not as good as a new, sterile syringe, but it can greatly reduce your risk for HIV and viral hepatitis.
- Wash your hands before cleaning your syringes.
- You will need three clean containers (cup, bowl, jar, etc.), clean water, and bleach.

To clean a syringe correctly, you must do all nine steps below:

**A. Rinse with clean water**
- In first container, fill up syringe (rig) with clean water.
- Tap or shake syringe for 30 seconds.
- Discard water from syringe.

**B. Disinfect with pure bleach**
- In second container, fill up syringe (rig) with bleach.
- Tap or shake syringe for 30 seconds.
- Discard bleach from syringe.

**C. Rinse with clean water**
- In third container, fill up syringe (rig) with new, clean water.
- Tap or shake syringe for 30 seconds.
- Discard water from syringe.

Because viral hepatitis can survive on surfaces (even if you can't see blood), cookers (like a spoon) should also be cleaned with water and bleach.

For more information please visit www.cdc.gov/hiv

*In this fact sheet, the term syringe includes a syringe and the needle as a single unit.

https://www.cdc.gov/hiv/risk/idu.html Accessed August 9, 2019
Naloxone hydrochloride (Narcan®)

- Opioid antagonist that works by binding to opioid receptors.
- Reverses the effects of opioids
- Induces rapid opioid withdrawal
- Repeat doses may be required.
- Not a substitute for emergency medical care.
Locating Medication-Assisted Substance Abuse Treaters

It is challenging to find lists that are current; practices may be full or providers may have changed the insurance plans that they accept.

www.suboxone.com

www.vivitrol.com

http://dpt2.samhsa.gov/treatment/directory.aspx
**TAKING ACTION**

**LISTEN.** To our colleagues, patients, family, friends.

**TAKE CAUTION** when tapering patients from chronic opioids Rxs.

**LEARN** to identify individuals suffering from OUD.

**SCREEN ALL** for OUD. Then screen those with OUD for ID.

**VACCINATE** against HAV, HBV.

**CENTRALIZE MAT** where patients are receiving other medical care. Meet the individual where he/she is now.

**CONSIDER PrEP** for prevention of HIV-1 infection.

**HARM. REDUCTION. COUNSELING.**

**PRESCRIBE AND CARRY** Narcan . . . Know how to use it

**OBTAIN** your buprenorphine waiver

**ADVOCATE.** For increased services, syringe exchange services, safe injection sites, easier access to Narcan, removal of requirements for buprenorphine waiver, your patients & your colleagues.

**REMEMBER** that NO ONE is immune to opioid dependence
IN REMEMBRANCE

Jenny G, 1980 – 2013
Sam J, 1982 – 2016
Betsy K, - 2018
Our Patients & Our Colleagues
READING LIST

1. Dreamland: The True Tale of America’s Opioid Epidemic by Sam Quinones
2. The Tennis Partner by Abraham Verghese
3. Beautiful Boy by David Sheff
4. Requiem for a Dream by Hubert Selby Jr.
5. And the Band Played On by Randy Shilts