

Potential Sequelae of Injection Drug Use

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KENTUCKY
HARM
REDUCTION
SUMMIT

Faculty Disclosure

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Educational Need/ Practice Gap

- 59.3 million Americans age 12 years old or older participated in use of an illicit substance in 2020.
- Various infections, overdose, and mental unhealth are potential sequelae of injection drug use.
- Screening for substance use disorders in all settings is vital to delivering patient-centered, high quality healthcare.

Upon completion of this activity, participants will be able to:

- Describe why it is vital for all healthcare providers to screen for substance use disorders.
- Identify potential health sequelae of injection drug use.
- Develop holistic patient-centered treatment plans for persons who inject drugs (PWID).

Expected Outcome

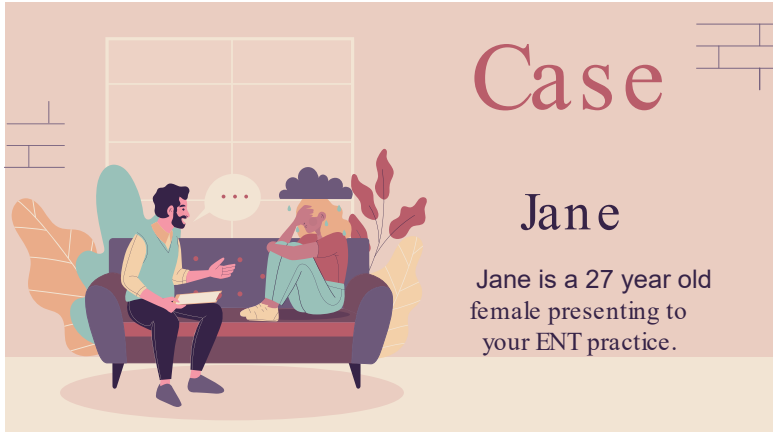
- Participants will identify potential sequelae of injection drug use.
- Participants will commit to integrating screening for substance use disorders into their practice.



Case

Jane

Jane is a 27 year old female presenting to your ENT practice.



Jane

- Chief complaint: Epistaxis
- Location: left nares
- Frequency: daily
- Duration: Epistaxis lasts less than 15 minutes
- Medications: claritin 10 mg. as needed, nextstellis daily, lexapro 20 mg. daily
- Click [here](#) to share your thoughts on differential diagnoses



Jane

- Vital signs: 98.6 (oral), 137/80, 20, 75
- Physical exam: AOx3, NAD. RRR. CTAB. PERRLA. Absence of erythema of ear canals bilaterally. Absence of septal perforation. Absence of nasal polyps.



Jane

- [Click here](#) to share your thoughts on differential diagnoses.
- You next screen for substance use and Jane shares she has been using cocaine intranasally for 1 year and started injecting heroin 7 months ago. Jane's husband recently lost his job after his business closed due to COVID. Her anxiety is increasing and she is experiencing difficulty falling asleep.

Today's Agenda

Why?

Who?

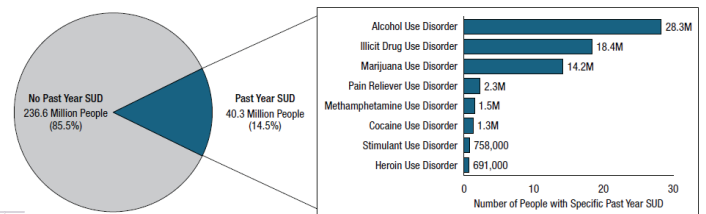
What?

How?

Why?



Figure 27. People Aged 12 or Older with a Past Year Substance Use Disorder (SUD); 2020



Note: The estimated numbers of people with substance use disorders are not mutually exclusive because people could have use disorders for more than one substance.

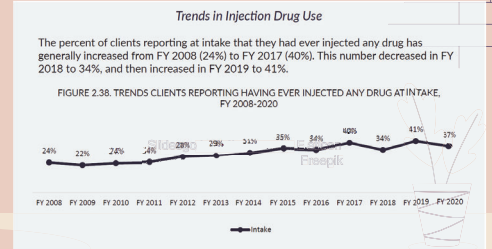
Persons living with SUD

Background

- 14.2 million people across the world use substances intravenously.



What about close to home?



Who?



Risk factors

- Adverse Childhood Experiences (ACEs)



What?



Potential Sequelae

Let's do this from head to toe:

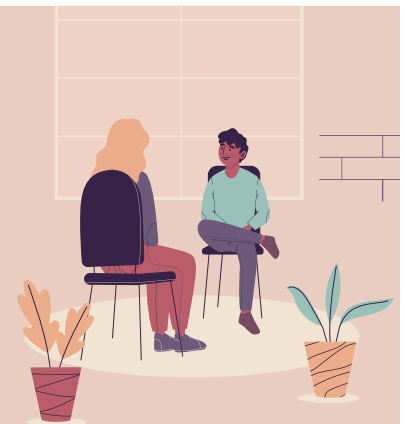
- Mental unhealth
- Cardiovascular
- Pulmonary
- Infections



Mental Unhealth

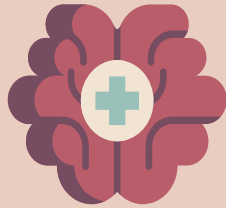
Mental Unhealth

- Chicken or the egg?
- Major depression
- Antisocial personality disorder
- Borderline personality disorder
- Alcohol dependence



Mental unhealth

- PWID with mental unhealth are more likely to:
 - Inject substances more frequently
 - Use another's syringe to inject
 - Share equipment to use substances



Cardiovascular

- Endocarditis



Symptoms of endocarditis

- Fever
- Weakness
- Fatigue
- Loss of appetite
- Cough
- SOA
- Chest pain
- New swelling in feet, legs, and/or abdomen



Endocarditis

- Physical exam findings:
 - New murmur
 - Pulmonary crackles
 - Skin findings



Pulmonary



Pulmonary Symptoms

- Fever
- Changes in mental status
- Tachypnea
- Tachycardia
- Hypoxemia
- SOA
- Cough
- Increased sputum production



Pulmonary Sequelae

- Pneumonia
- Tuberculosis
- Noncardiogenic pulmonary edema
- Septic emboli
- Emphysema
- Interstitial lung disease
- Pneumothorax
- Pneumomediastinum
- Asthma
- Foreign body granulomatosis



Infectious

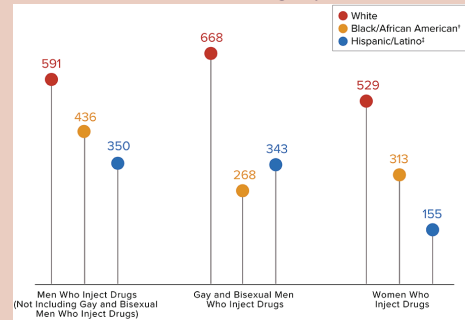
- Blood borne
- Skin infections
- Internal infections



Blood borne infections

- HIV
- HCV
- HBV

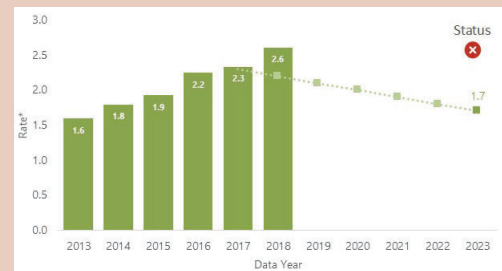
New HIV Diagnoses Among People Who Inject Drugs in the US and Dependent Areas by Sex, Race/Ethnicity, and Transmission Category, 2018



Symptoms of HIV

- Perhaps nothing!
- 10-60% of patients recently infected are asymptomatic
- Fever
- Lymphadenopathy
- Sore throat
- Rash
- Muscle aches
- Joint aches
- Diarrhea
- Weight loss
- Headache
- Mucocutaneous ulcers

Incidence rate of acute HCV among people who use injection drugs age 18-40 years old

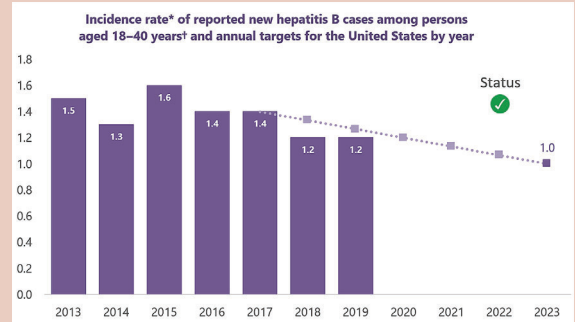


Symptoms of HCV

- Asymptomatic
- Jaundice
- Nausea
- Dark urine
- RUQ pain

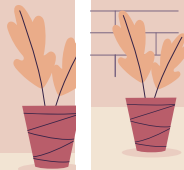


Incidence rate of acute HBV among people who use injection drugs age 18-40 years old



Symptoms of HBV

- Fever
- Rash
- Arthralgia
- Loss of appetite
- Nausea
- Jaundice
- RUQ discomfort
- Fatigue



Skin Infections

- Abscess
- Ulcers
- Necrotising fasciitis

Risk Factors

- Bacteria
- Skin popping
- Extravasation
- Necrosis

Skin Infections in PWID

- Lymphoedema
- Enlarged lymph glands
- Scarring
- Darkened pigmentation
- +/- fever

Picture Warning!



Abscess

- Symptoms:
 - Raised
 - Red
 - Swollen
 - Tender/painful
 - Warm to touch



Fig. 1: An open abscess. Photo by Ali Dain, 2015.



Fig. 2: An abscess that has spontaneously opened and is draining clear fluid. Photo: Centers for Disease Control and Prevention/ Public Health Image Library, public domain, 2014.



Fig. 3: An open abscess. Photo: Centers for Disease Control and Prevention/ Public Health Image Library, public domain, 2014.

Ulcers

- Symptoms:
 - Open wound
 - Edges thicker/raised
 - Color change
 - Erythema
 - Inflammation



Fig. 18: Venous leg ulcer. Photo from Google Images, unattributed, November 9, 2014.



Fig. 19: Large venous stasis ulcer. Photo: Milorad Dinić MD, 2009, licensed under the Creative Commons, retrieved from Wikimedia Commons.

Necrotising fasciitis

- Symptoms:
 - Erythema
 - Edema
 - Tenderness/pain
 - Fever
 - +/- crepitus



Fig. 24: Advanced necrotising fasciitis. Photo: Smuzkiewicz, P., Trejtanowska, L., and Tomczak, H., 2008.

Internal Infections

- Osteomyelitis

Symptoms of Osteomyelitis

- Fever/chills
- Malaise
- Weakness
- Pain
- Changes in function
- Edema
- Deformity



Overdose



- 2,083 Kentuckians died by overdose in 2020.



Symptoms of Overdose

- Not responding to touch
- Not responding to voice
- Abnormal breathing
 - Too slow
 - Not breathing
- Constricted pupils
- Blue lips
- Blue nose



How?

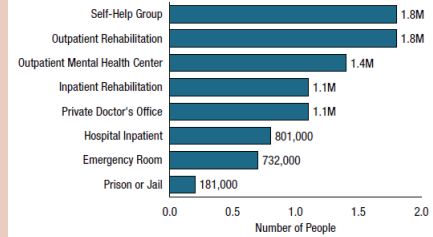


Next Steps

- Screen
- Motivational Interviewing
- Connect to Resources



Figure 42. Locations Where Substance Use Treatment in the Past Year Was Received: Among People Aged 12 or Older; 2020



Note: Locations where people received substance use treatment are not mutually exclusive because respondents could report that they received treatment in more than one location in the past year.


Let's think outside the box...what other resources can we provide?



Case


Let's check back in on Jane






What are your next steps for Jane? Click [here](#) to share.


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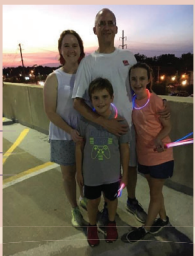


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Thank you for inviting me!



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