



Methamphetamine use and infectious disease

Dr. Tim Menza and Melissa Cross, RN



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Zoom Webinar Logistics

- Only panelists and hosts can share video and audio.
- Please enter your comments and questions in the chat and Q&A.
- Be respectful and curious.
- Webinar is being recorded and will be shared here by tomorrow: <https://adai.uw.edu/cedeer/focus-on-meth/>



Focus on Meth 2025–Be part of the conversation

January 23, *Latest Overdose Trends and Reasons for ED Visits*, Dr. Lauren Whiteside and Dr. Caleb Banta-Green. Recording available.

February 26, 12–1

- *Harm Reduction at SSPs and in Primary Care*, Christina Muller-Shinn, Mason County Department of Health and Dr. Sarah Leyde, UW Harborview. Recording available.

March

- **March 12, 12–1 PT:** *What's in the Meth? Results from the WA Community Drug Checking Network*. Recording available
- **March 27, 1–2 PT:** *Syphilis, HIV, hepatitis C, and other infectious diseases*. Dr. Tim Menza, UW, and Melissa Cross, Blue Mountain Heart to Heart

April 17, 11–12 PT: *Meth Use among Men who have Sex with Men*, Peter Cleary, Project NEON, and Mike Barry, UW Epidemiology PhD candidate.

June 12: *Methamphetamine Symposium*

Coming Soon!

State Opioid Response TA Team will host webinars focused on clinical care for people who use methamphetamine
<https://adai.uw.edu/ceder/focus-on-meth/>

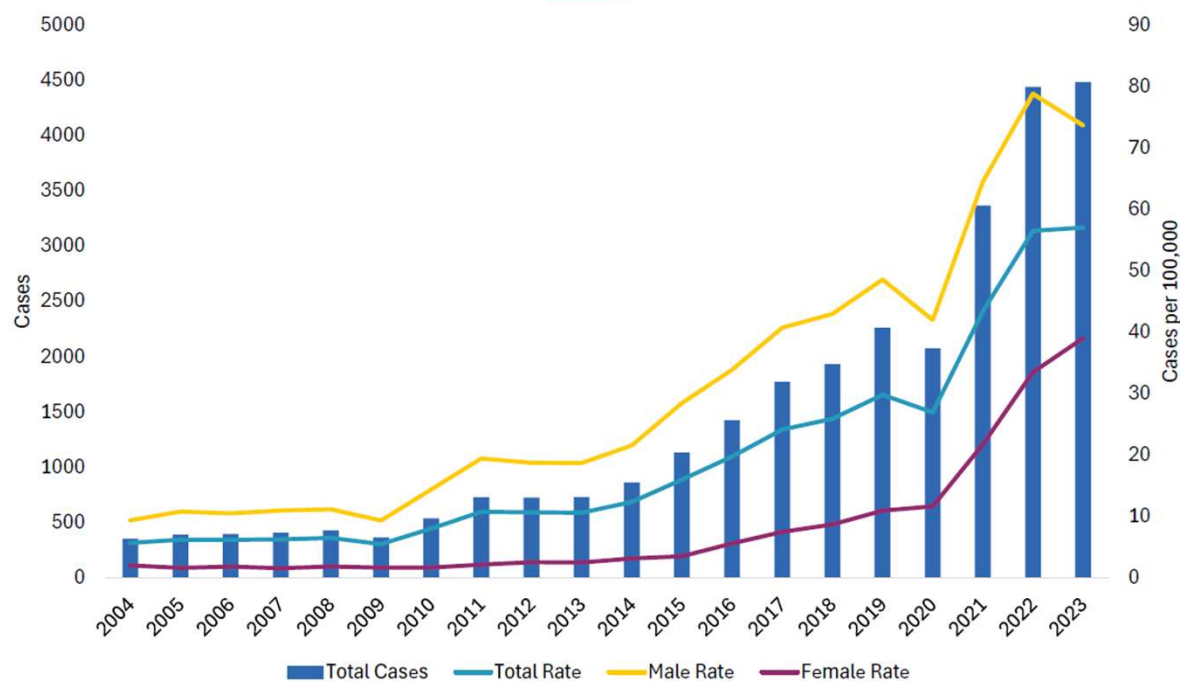


Presenters

- Dr. Tim Menza, Sexual Health Clinic, Public Health–Seattle & King County, UW Harborview
- Melissa Cross, RN, Blue Mountain Heart to Heart

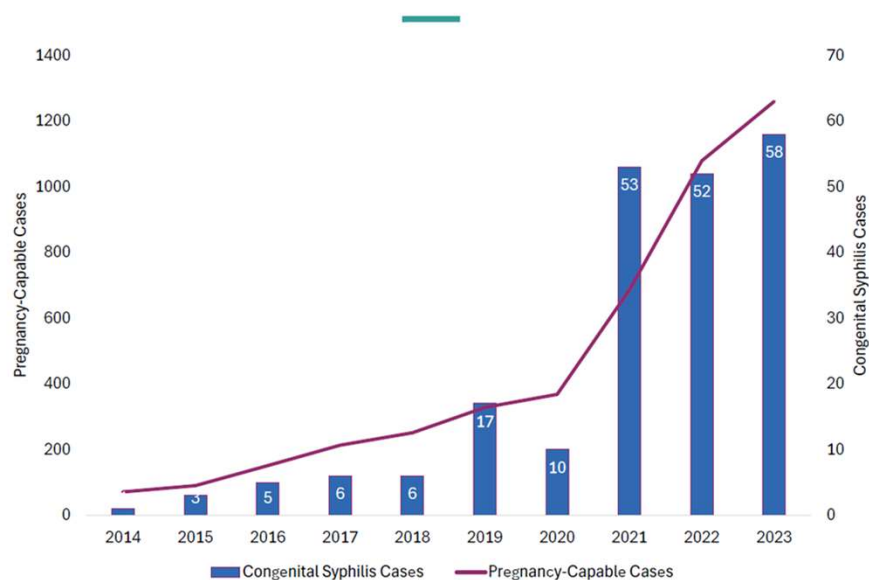
Since 2020, syphilis has increased dramatically in Washington State (and everywhere else!)

Reported Syphilis (All Stages) Cases and Rates, WA State, 2004-2023

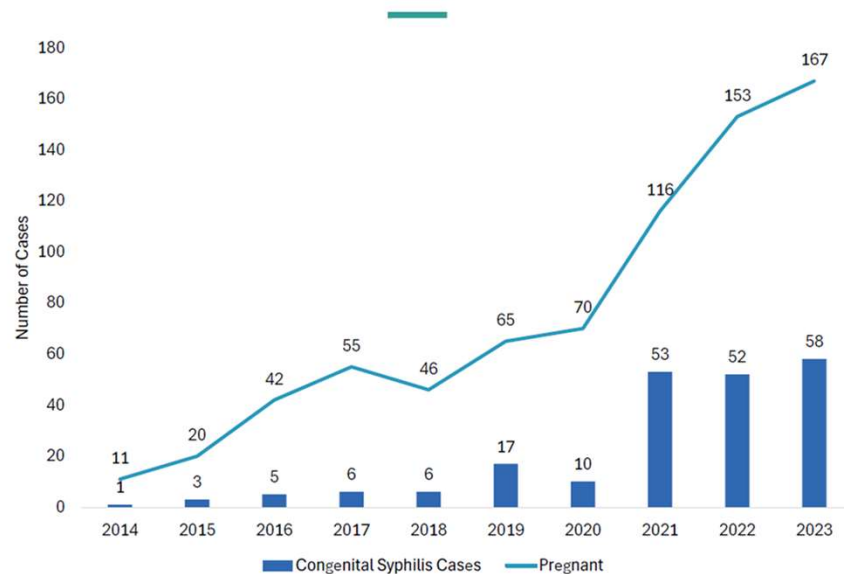


Syphilis among pregnancy-capable and pregnant people and congenital syphilis have increased exponentially in Washington State

Syphilis in Pregnancy-Capable People and Congenital Syphilis Cases, 2014-2023

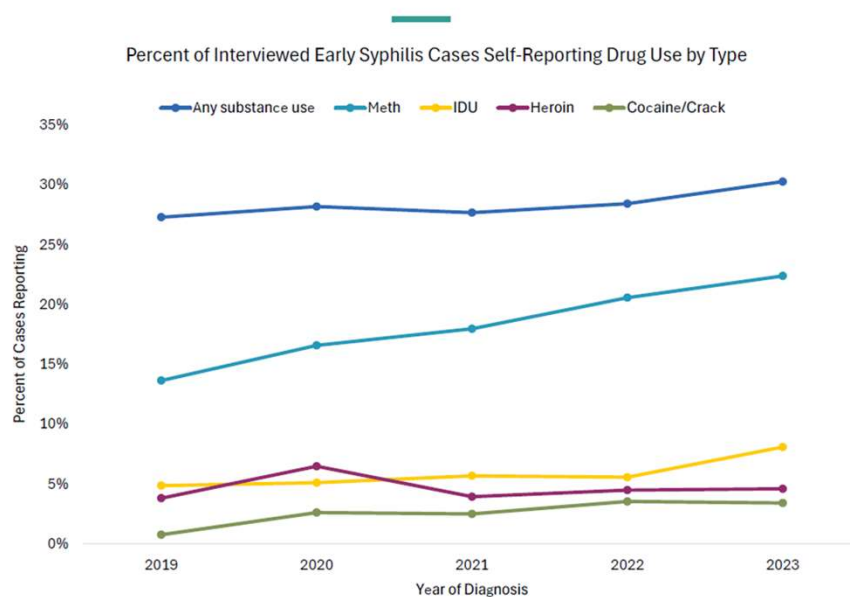


Congenital Syphilis and Pregnant Syphilis Cases, WA State, 2014-2023



~20% of people diagnosed with early syphilis report methamphetamine use in Washington State

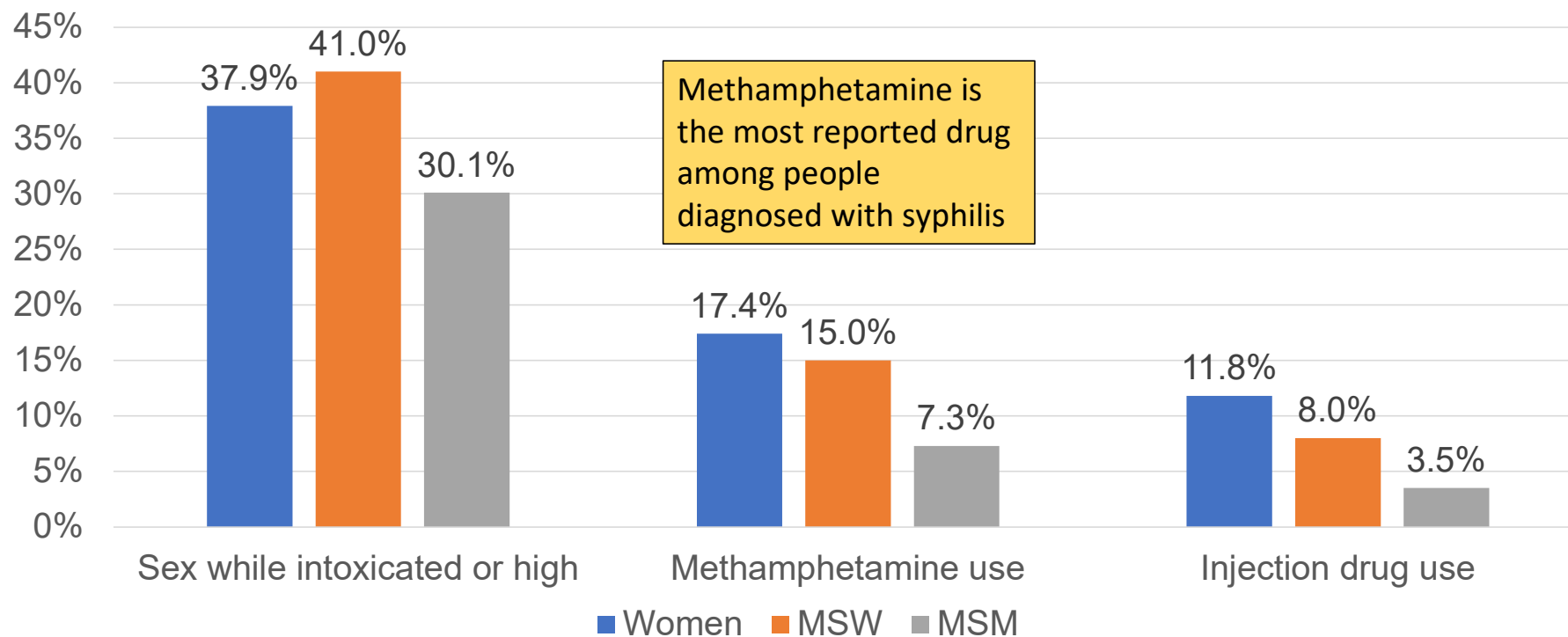
Substance Use and Early Syphilis, WA State, 2019-2023



In King County:

- **37%** of heterosexual people diagnosed with syphilis in 2024 reported methamphetamine use
- **43%** of cisgender women newly diagnosed with HIV between 2019-2023 reported methamphetamine use

Substance use among people diagnosed with primary and secondary syphilis in the U.S., 2022



Sexualized drug use (chemsex, PnP)

- Refers to drug use before or during sex
- Can be used to
 - Enhance the sexual experience
 - Expand sexual boundaries
 - Increase a sense of connection, intimacy
 - Increase sexual confidence, energy
 - Reduce intrusive thoughts or feelings during sex
 - Cope with negative experiences, trauma
- Outside of Europe, data is sparse, especially among women
- Communities most impacted include gay, bisexual, and other men who have sex with men, sex workers

Sexualized drug use: commonly used drugs

Crystal
methamphetamine

Gamma
hydroxybutyrate
(GHB)/gamma
butyrolactone (GBL)

Alkyl nitrites
(poppers)

Ketamine

MDMA

Mephedrone

Methamphetamine and sex

Benefits

- Increased energy
- Increased sexual stamina
- Sense of euphoria plus considerable sexual arousal
- Increased sensitivity to touch, perception
- Delayed ejaculation, prolonged orgasms
- Sexual confidence
- Reduces fears, insecurities, worries that can hamper sexual experiences and performance

Potential Harms

- Overamping
- Paranoid thoughts, delusions, hallucinations, anxiety, depression, aggression, violence
- Multiple days without sleep, rest
- Boundary-expanding effects may lead people to engage in behaviors they later regret
- Sex without meth is hard
- Dehydration
- Decrease saliva production

Sexualized drug use: routes of administration

Slamming

- Fastest onset, most intense effect
- Injection-related risks

Smoking

- Quick onset
- Smoking supplies often reused, burns are common

Snorting

- More gradual effect compared to slamming and smoking
- Ketamine, cocaine > crystal

Ingestion

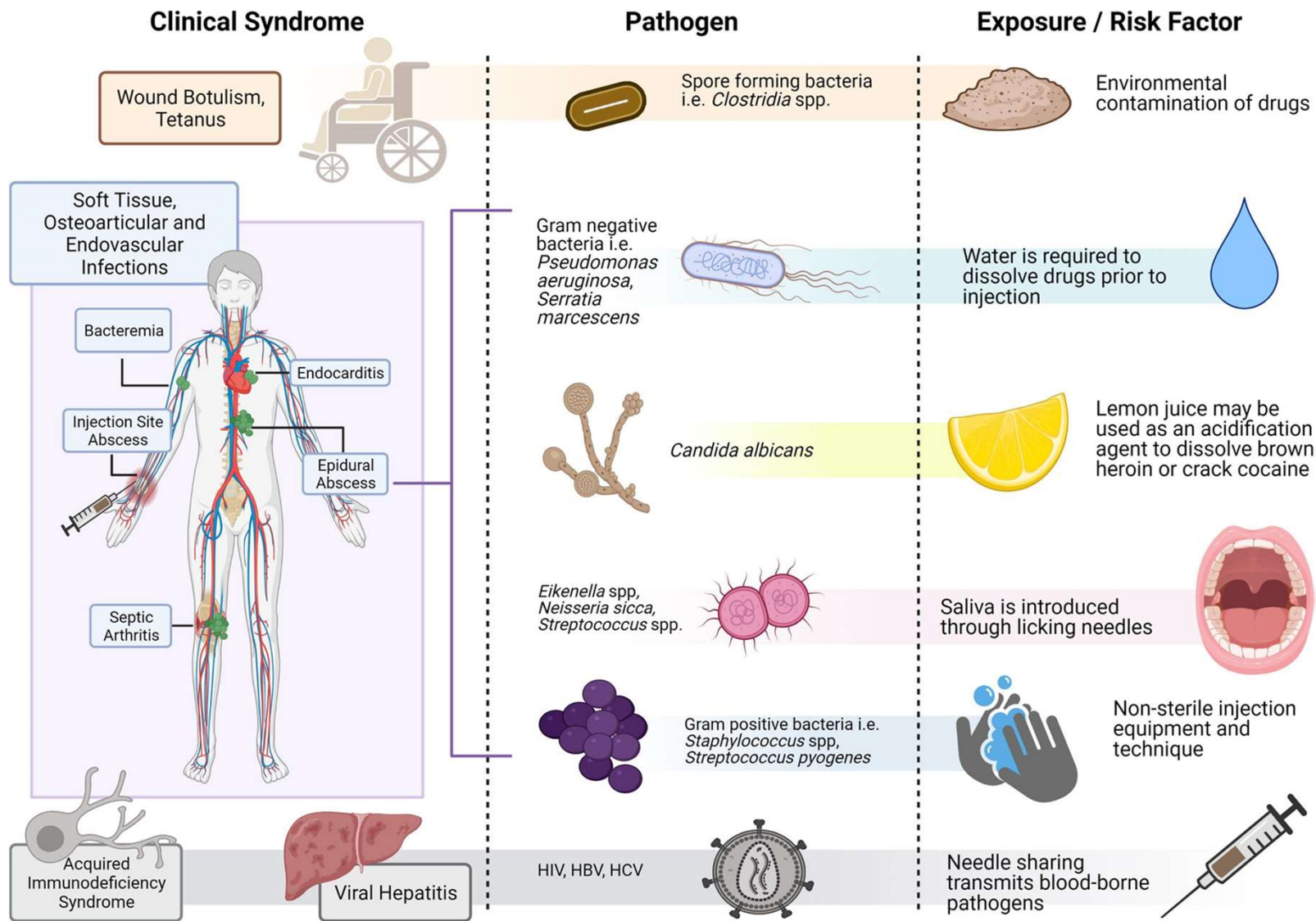
- GHB/GBL, mephedrone
- Keeping track of timing and dosing is important

Nasal insufflation

- Poppers (do not drink, can burn the skin)

Booty bumping

- Gradual but substantial absorption through mucosal capillaries; may lead to overdose/overamping



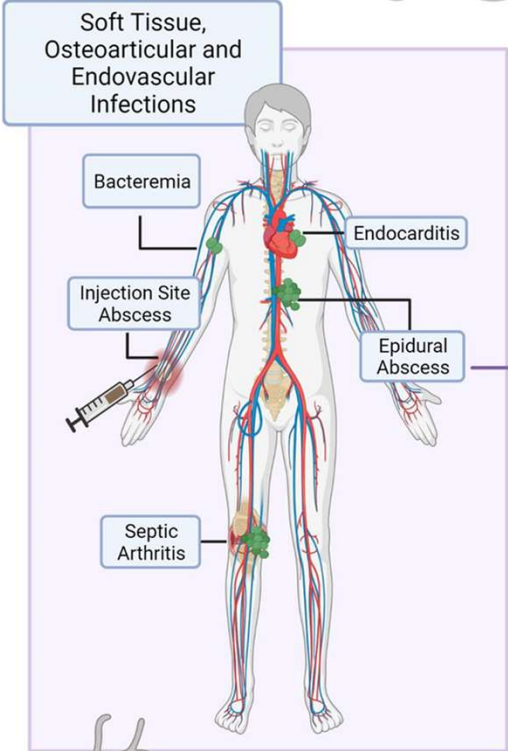
Wound Botulism, Tetanus



Spore forming bacteria i.e. *Clostridia* spp.



Environmental contamination of drugs



Gram negative bacteria i.e. *Pseudomonas aeruginosa*, *Serratia marcescens*



Water is required to dissolve drugs prior to injection

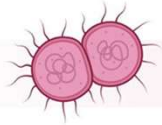


Candida albicans



Lemon juice may be used as an acidification agent to dissolve brown heroin or crack cocaine

Eikenella spp, *Neisseria sicca*, *Streptococcus* spp.



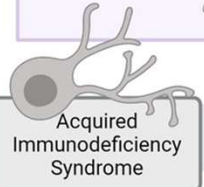
Saliva is introduced through licking needles



Gram positive bacteria i.e. *Staphylococcus* spp, *Streptococcus pyogenes*



Non-sterile injection equipment and technique



HIV, HBV, HCV



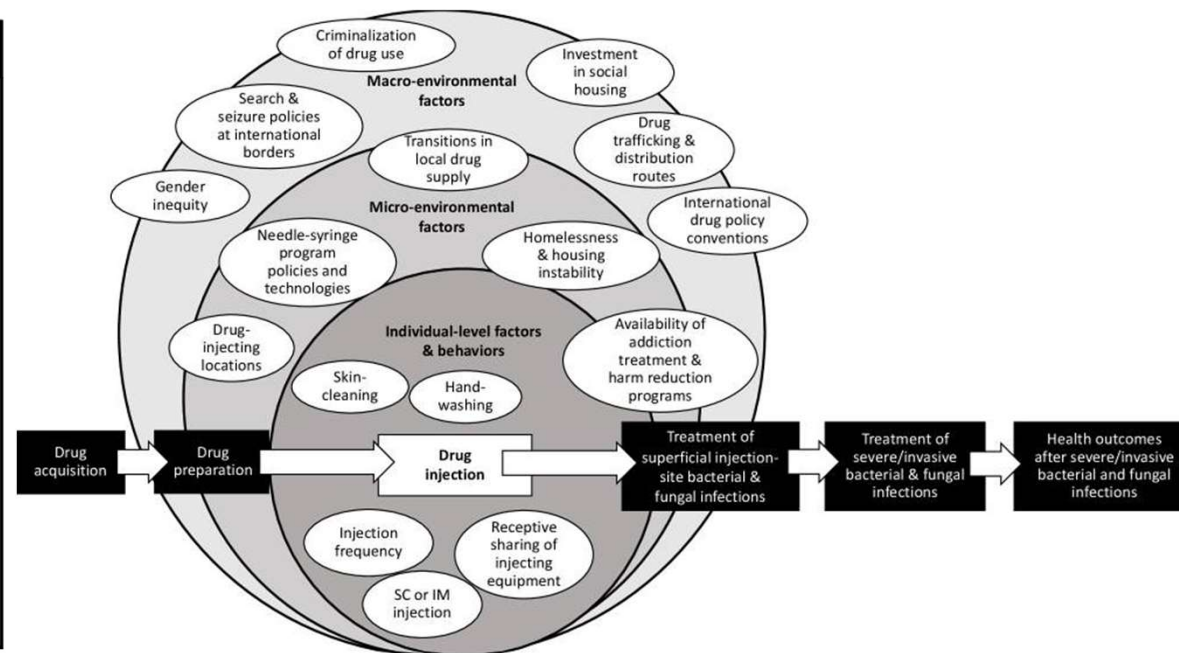
Needle sharing transmits blood-borne pathogens



Pathogen-specific harm reduction and SDOH of infections related to injection

Brothers et al. *BMJ Open*, 2021

Table 1 Common pathogens and targeted harm reduction practices	
Pathogen	Recommended Harm Reduction Practice
<i>Eikenella corrodens</i> , <i>Haemophilus parainfluenzae</i> , <i>Neisseria spp.</i> , <i>Prevotella spp.</i> , <i>Streptococcus spp.</i>	<ul style="list-style-type: none"> • Avoid introducing saliva into the injection process • Avoid reuse of needles
<i>Staphylococcus spp.</i> , <i>Streptococcus pyogenes</i> ,	<ul style="list-style-type: none"> • Clean injection sites with alcohol swabs before injection • Discard any used injection paraphernalia, particularly if materials were injected into a site with active infection
<i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i> ,	<ul style="list-style-type: none"> • Inquire about the use of tripelethamine and pentazocine. • Encourage the use of sterile water
<i>Clostridia spp.</i>	<ul style="list-style-type: none"> • Provide tetanus vaccine/booster • Avoid injecting into the muscle
<i>Candida spp.</i>	<ul style="list-style-type: none"> • Encourage the use of sterile acidification agents such as ascorbic acid (available at many needle exchange facilities)
Human Immunodeficiency Virus (HIV) Hepatitis B virus (HBV) Hepatitis C virus (HCV)	<ul style="list-style-type: none"> • Avoid sharing needles • Link patients to nearest needle exchange facility • Immunize against HBV if nonimmune • Offer pre-exposure prophylaxis for HIV



Comprehensive care for people who use methamphetamine

Table 3 Recommendations for comprehensive care of PWIDs admitted with IDU-related infections	
Recommendations	
Screening Tests	
Human Immunodeficiency Virus (HIV)	HIV ½ Ab + P24 Ag at initial visit, screen every 3 mo if ongoing substance use.
Hepatitis B Virus (HBV)	HBV surface Ag at initial visit. Evaluate immunity with HBV surface antibody and core antibody. Immunize if nonimmune. Link patients with active HBV to infectious diseases care.
Hepatitis C Virus (HCV)	HCV Ab at initial visit. If positive, obtain HCV RNA and link to HCV treatment for viremic patients.
Syphilis	RPR or T pallidum (as determined by hospital syphilis algorithm testing protocols) should be assessed at initial visit. Additional testing as indicated by sexual health history.
Gonorrhea and Chlamydia	Gonorrhea and chlamydia nucleic acid amplification testing (urine) at initial visit. Additional testing (throat and rectum) can be considered based on sexual health history. Consider testing for other infections such as Trichomonas, bacterial vaginosis
Tuberculosis	Assess for latent infection at initial visit with periodic rescreening based on individual risk.

Immunizations and Preventative Health Care	
Pre-exposure Prophylaxis (PrEP) for HIV	All PWIDs are eligible for PrEP. Uninsured PWIDs can access PrEP through the US Department of Health and Human Services' "Ready, Set, PrEP" program
Hepatitis A and B	Immunize all PWIDs against hepatitis A and B
Influenza	Offer yearly
SARS-CoV-2 (COVID-19)	Assist patients with signing up for COVID-19 immunizations if eligible under local regulations
Tetanus	Immunize at initial visit and then every 10 y, or every 5 y for patients with necrotizing skin and soft tissue infections
Substance Use Disorder Interventions	
Overdose Education	Provide take-home naloxone and education on opioid overdose prevention
Harm Reduction Counseling	Educate on safer injection techniques including cleaning injection sites, use of sterile works, and location of needle exchange facilities
Offer medications for opioid use disorder (MOUD)	All PWIDs with opioid use disorder should offer initiation of MOUD (methadone, intramuscular naltrexone, or buprenorphine) and linkage to ongoing outpatient care
And methamphetamine	

Abbreviations: IDU, injection drug use; PWIDs, persons who inject drugs; RPR, rapid plasma reagin.

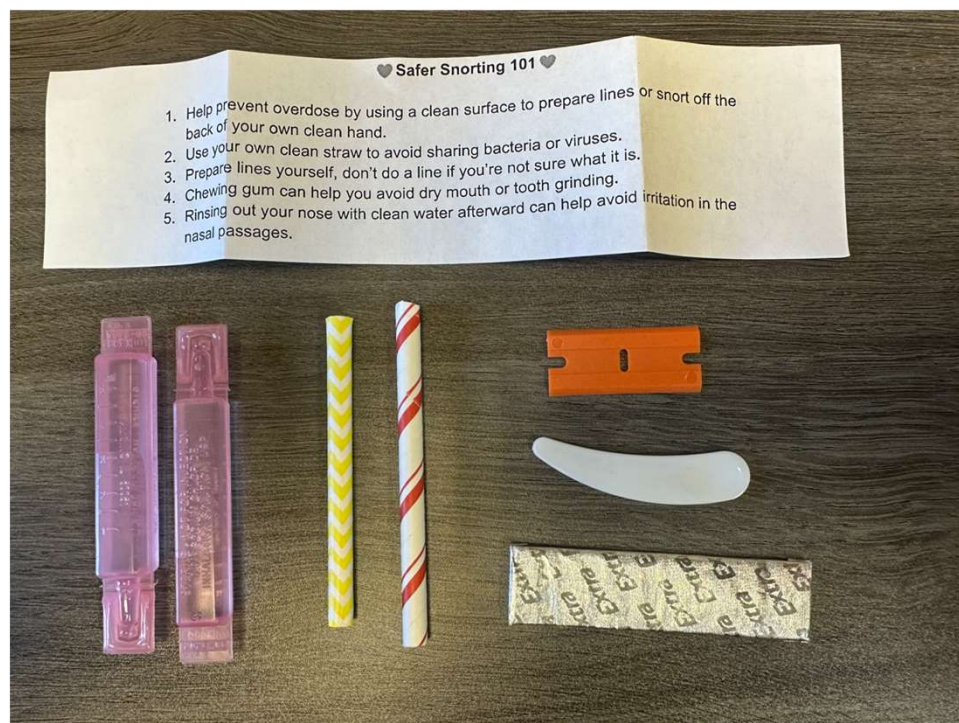
Harm Reduction Principles

1. Pragmatism
2. Human Rights & Dignity
3. Focus on Harms, Not Use
4. Evidence Based Strategies
5. Non-Coercion
6. Community Involvement
7. Accessibility & Inclusivity
8. Holistic Approach



Safer Use Kits





Sexualized drug use is associated with STI, HCV, and HIV acquisition

[Guerra et al. Drug Alcohol Depend, 2020.](#)

- Meta-analysis of 19 English-language studies from Europe and North America

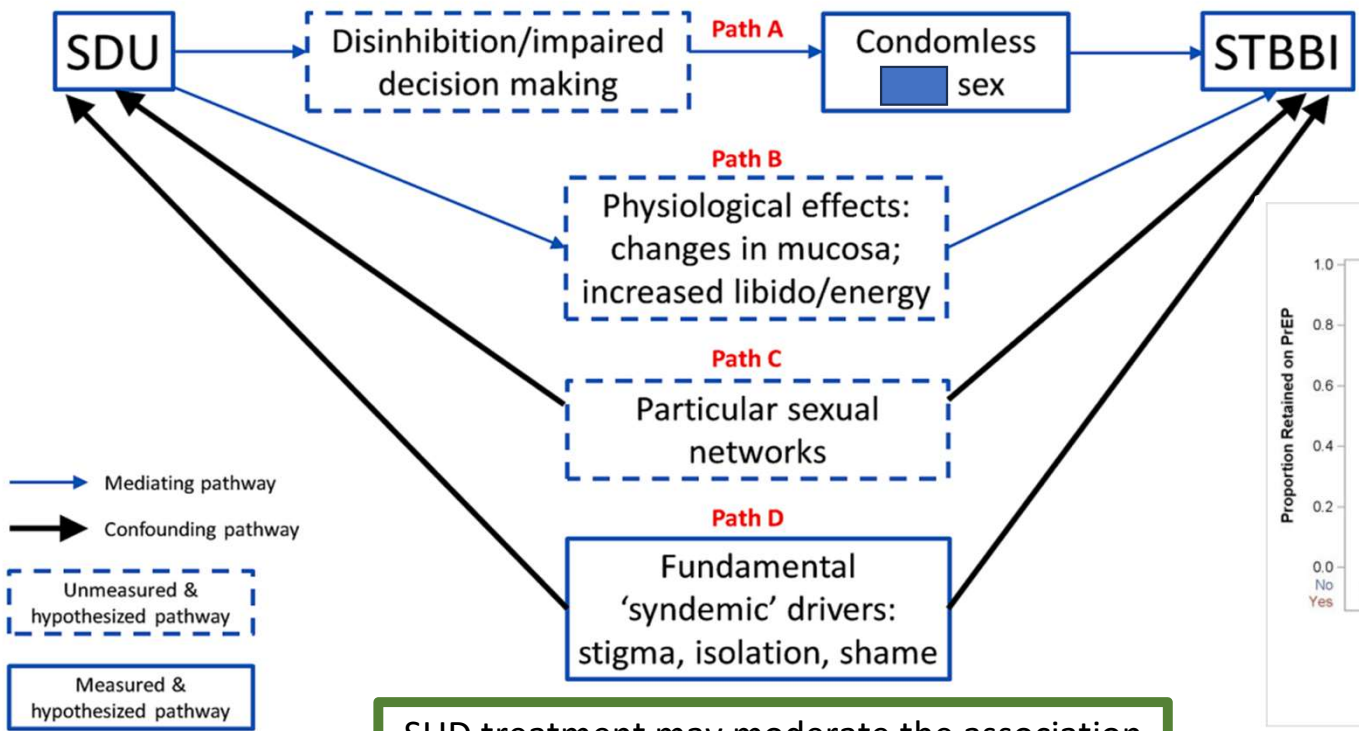
Outcome	Adjusted odds ratio	95% confidence interval
Bacterial STI (GC, CT, syphilis)	2.17	1.51, 3.14
HCV	6.07	2.46, 15.0
HIV	3.02	0.96, 9.53

- Methamphetamine use is consistently associated with not sticking to an HIV treatment plan and lower rates of viral suppression
- Data are mixed regarding the effects of chemsex on PrEP adherence

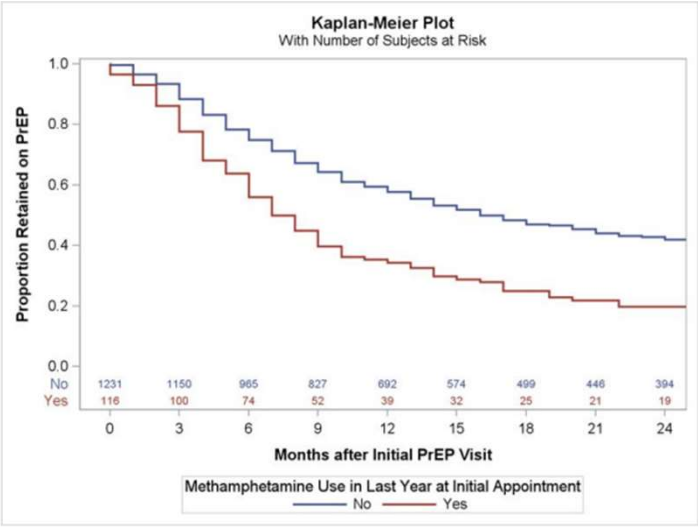
Potential pathways between sexualized drug use and STI, HCV, HIV

Guerra et al. Drug Alcohol Depend, 2020.
 Sherman et al. STI, 2021.

Difficulty keeping up with ART, PrEP, doxyPEP
 Decreased healthcare access and utilization



SUD treatment may moderate the association between meth use and STI/HIV risk



Language Matters: Decreasing Stigma



SAY THIS...	NOT THIS...
person with a *substance use disorder, person with opioid/alcohol/stimulant use disorder, person who uses drugs	addict, junkie, crackhead, tweaker, substance abuser, pill-popper, alcoholic
substance use disorder	substance abuse or dependence, drug habit
risky or unhealthy alcohol or drug use	misuse, abuse
recurrence of use, recurrence of disease	relapse
person in long-term recovery	recovering addict
in recovery, disease in remission	clean
using prescribed medication not as directed or more than prescribed	prescription drug abuser
negative or positive urine drug screen or test, in active use	dirty or clean urine drug screen
neonatal abstinence syndrome (NAS), newborn with substance exposure	addicted baby, crack baby
intoxicated	wasted, strung out, high
altered perception of reality	delusional, nuts, crazy, tweaking
protective behaviors, trauma response	violent, aggressive, monsters, tweaking

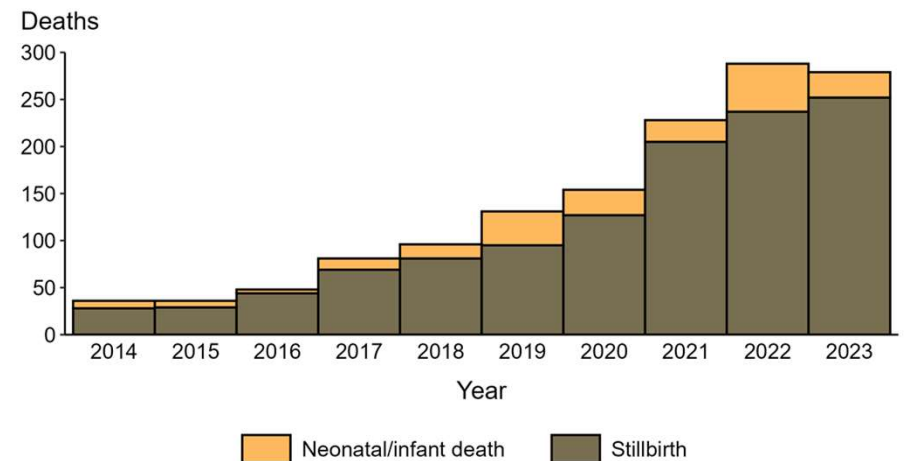
Sexualized drug use: (some) harm reduction strategies

- Set and discuss personal guidelines and boundaries before using
- Note timing of intake to avoid stacking doses
- Adhere to a maximum time, dose per occasion
- Use test doses, avoid using multiple substance at the same time
- Use only sterile syringes, needles, and works
- Set timers to take breaks, eat, and hydrate
- Schedule a session at the start of a weekend to allow recovery before the work week
- Stick to a regular sexual network
- Make time for medical check-ups and regular testing
- Work in taking PrEP, HIV meds, doxyPEP
- Clean teeth and gums

Congenital syphilis is a public health emergency

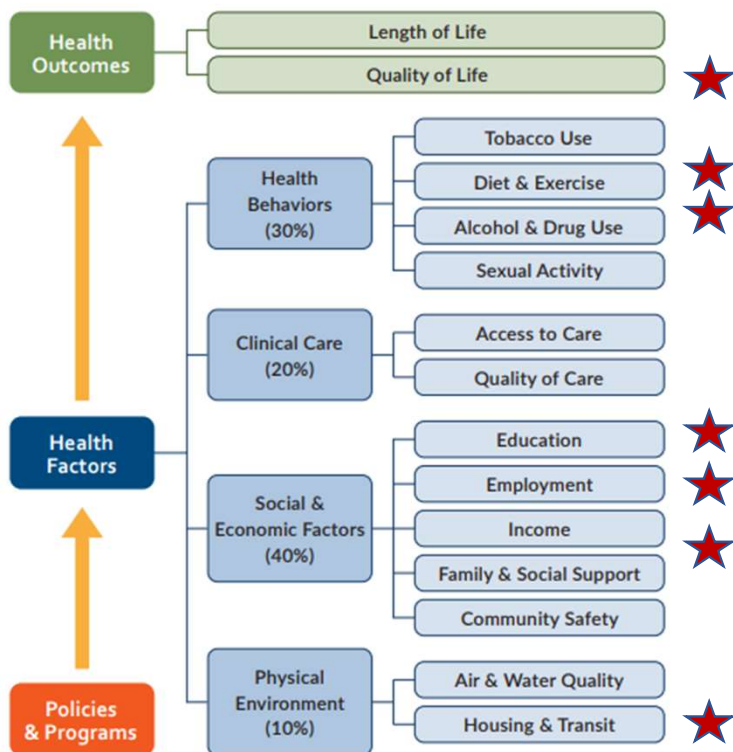
- The increase in syphilis in pregnant people and congenital syphilis is a **public health emergency**
- Not one case of congenital syphilis is acceptable in a modern healthcare system

Infant deaths and stillbirths due to syphilis, United States, 2014-2023



Analysis of individual- and county-level predictors of CS, Oregon, 2013-2021

County Health Rankings Model



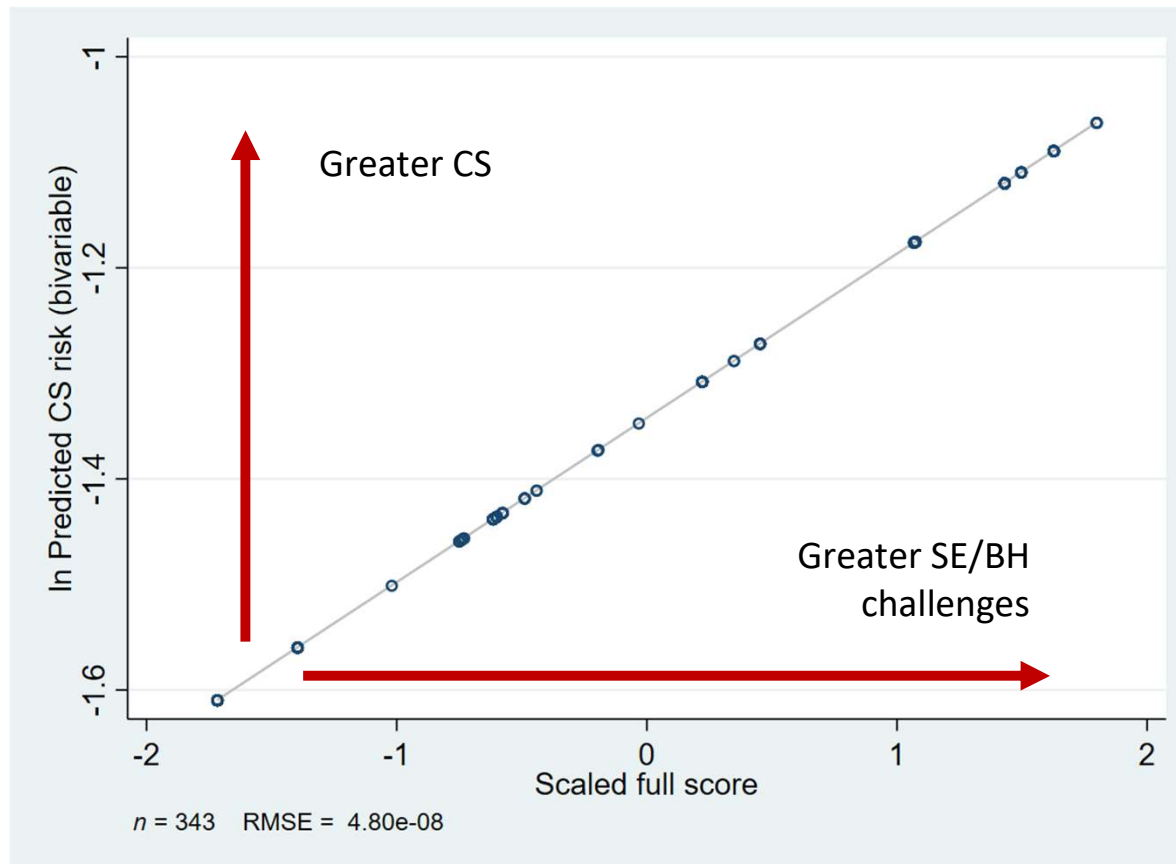
County Health Rankings model © 2014 UWPHI

- Quality of life
 - Mental health
- Health behaviors
 - Food insecurity
 - Methamphetamine overdose
- Social and economic factors
 - Unemployment
 - Poverty, income inequality
 - Adverse childhood experiences
 - Violent crime
- Physical environment
 - Houselessness

Measuring county-level socioeconomic and behavioral health challenges

County-level metric	Source	Year
Average number of poor mental health days	BRFSS	2020
% food insecurity	Map the Meal Gap	2020
Methamphetamine overdose death rate	OHA Overdose Dashboard	2019
% unemployed	Bureau of Labor Statistics	2020
% population in poverty	ACS 5-Year Estimates	2016-2020
Income inequality ratio	ACS 5-Year Estimates	2016-2020
% population with at least 1 adverse childhood experience	BRFSS	2017-2021
Violent crime rate	FBI Crime Data	2014 & 2016
Houseless rate	Oregon PIT Count	2019

CS was more likely in counties with greater socioeconomic/behavioral health challenges



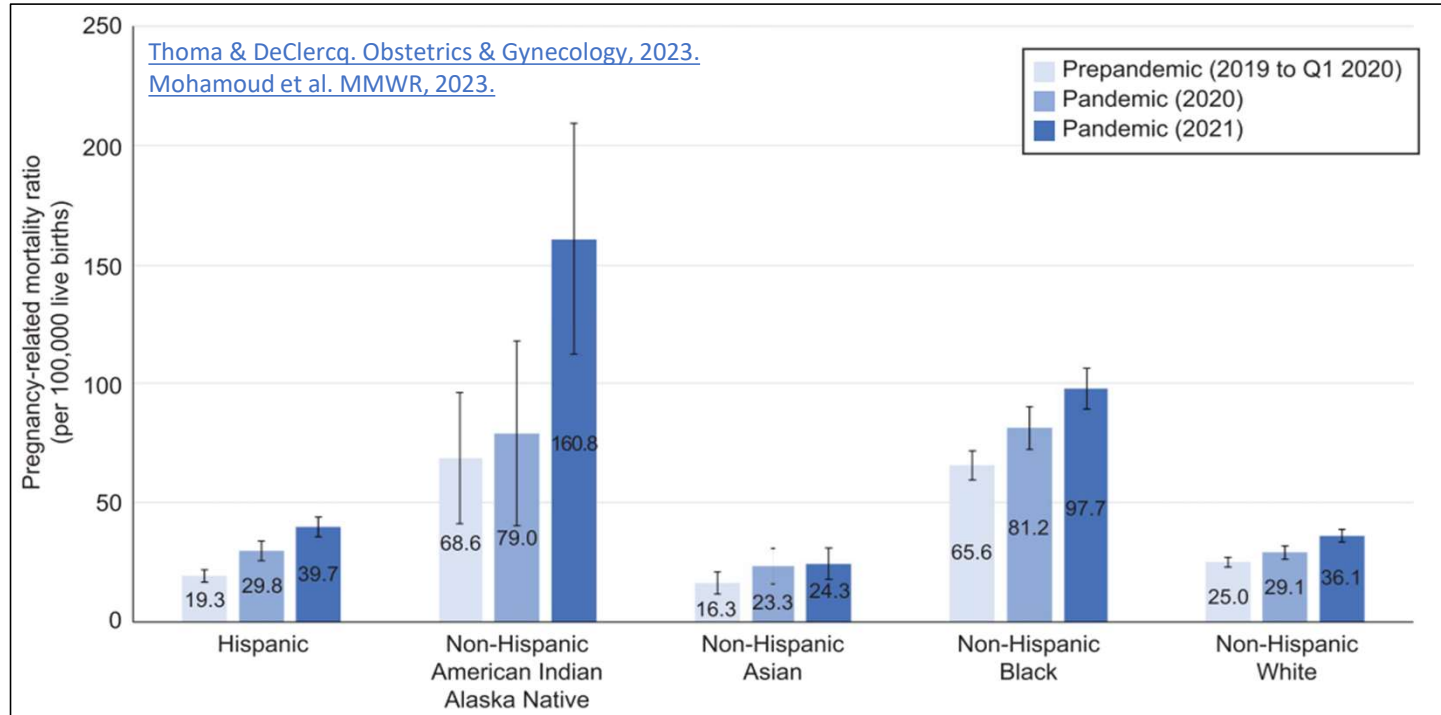
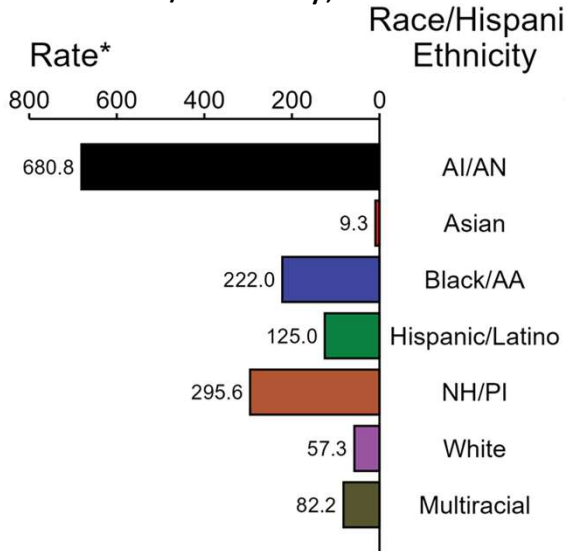
CS was more likely among pregnant people who resided in counties with greater socioeconomic/behavioral health challenges, used injection drugs, and had ever been in custody

	Increase in proportion of pregnant people associated with a case of CS
Residing in a county with greater socioeconomic/behavioral health challenges	↑ 22%
Injection drug use, ever	↑ 88%
Carceral system involvement, ever	↑ 43%

Congenital syphilis is a symptom of systemic failure

- Syphilis in pregnancy and congenital syphilis is part of the **larger crisis of morbidity and mortality among birthing people and infants in the United States**, especially in Black and Indigenous communities
- Congenital syphilis is a **symptom of an under-resourced public health infrastructure and workforce**.
- Congenital syphilis occurs at the nexus of **poverty, homelessness, structural racism, trauma, substance use, and mass incarceration**.
- A response that only focuses on congenital syphilis will not end congenital syphilis (**all policy is health policy**).

Rate of Congenital Syphilis by Race/Ethnicity, 2023



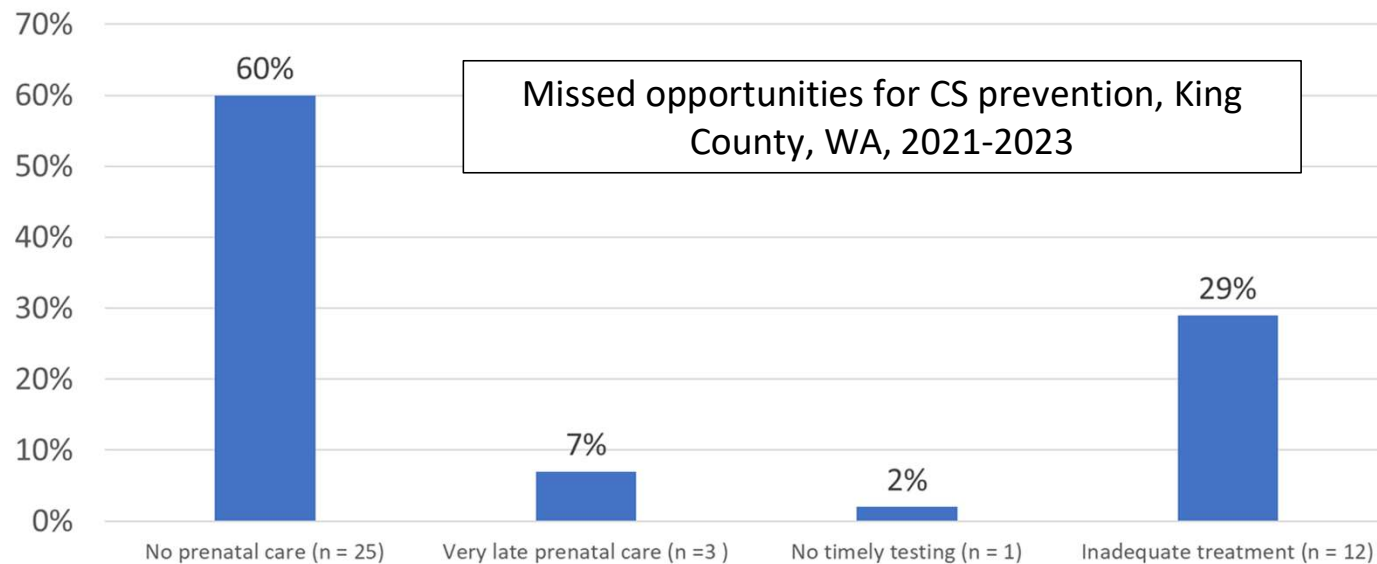
	Hispanic	AI/AN + NH/PI	Asian	Black	White
Mistreatment	29.3%	20.0%	14.8%	30.0%	17.8%
Shouted at/scolded	7.7%	8.6%	5.2%	9.0%	6.2%
Ignored	13.0%	5.7%	4.4%	11.7%	9.0%
Physical abuse	7.0%	2.9%	3.5%	6.5%	2.8%
Discrimination	36.6%	31.4%	22.6%	40.1%	26.0%

Medicine and public health use the carceral system to criminalize pregnant people

- The carceral system should not exist
- The carceral system is a racialized, destructive form of social control that extends the legacies of chattel slavery (e.g., [CA Prop 6](#)) and Jim Crow (e.g., [The New Jim Crow](#) by Michelle Alexander)
- Mandatory reporting laws, child protective services and other forms of family policing are extensions of this system
- Medical care, reproductive health care have been/are used to criminalize and incarcerate pregnant and birthing people (e.g., [Killing the Black Body](#) by [Dorothy Roberts](#))

The threat of the carceral system impedes prenatal care access

- Thus, for good reason, pregnant people who use drugs are less likely to access care that would result in further stigmatization, discrimination, and (re)-criminalization.



Engagement in Healthcare Services



BARRIERS	FACILITATORS
Stigma & Judgement	Patient-Provider Relationship
No Insurance or High Cost of Services	Health Insurance & Free/Low Cost Services
Lack of Transportation	Co-Location of Services
Structural Violence & Oppression	Peer Support
Cultural Mythology (Distrust)	Scientific Literacy

Pregnant and postpartum people's perspectives on meth use

O'Connor et al., Women & Birth, 2021

Methamphetamine blocks my pain and trauma, all my life since I was a young child watching my mum, my aunties use drugs and having violence across all my family, no place to stay that was safe, scared that someone would remove me from my mum. I experienced so many traumas but the worst was watching my mum die as a result of violence..... Meth helps to stop the dreams and flashback of trauma. It helps me cope with normal life (C, age 29).

My children are all in the care of the department (CPFS). I am working with them in order to take this baby home with me. It is not looking good for me. CPFS have informed me that they are going to take an order and that my baby will go into the care of my mother or general foster care... I have no fucking hope now of getting my baby back into my care. CPFS are starting a whole new 'stolen generation" (B, age 32, Indigenous).



Thank you!!! And Q & A

Huge thank you to our wonderful speakers!!!

And please put your questions in the chat or Q & A



Resources

- [WA State methamphetamine overdose death data](#)
- [Methamphetamine Overdose/Overamping](#)
- [What is Stimulant Use Disorder?](#)
- [Overview of Treatment for Stimulant Use Disorder](#)
- [Results from the 2023 WA State Syringe Services Program Health Survey](#)
- [Perspectives of People Who Use Methamphetamine on Reducing or Stopping Their Use, qualitative interviews from 2021](#)
- [WA State Community Drug Checking Network data on methamphetamine](#)



Resources shared during webinar

- [First Clinic](#)
- [King County Telebup hotline](#)
- UW FOCUS Program can assist in linking patients to hep C Treatment and PrEP 206.657.6444
- [Pregnancy Justice](#)
- [WA State Syringe Services Program Directory](#)
- [WA Dept of Health Hep C Hub](#)
- [A New Syndemic Approach: Domestic Violence, Homelessness and Harm Reduction](#)