

Harm Reduction: the State of the Evidence

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Disclosures and Reflections

No financial disclosures

Personal and life experiences -> biases

Session Agenda

1. Describe the origins of harm reduction.
2. Define harm reduction.
3. List at least 3 harm reduction interventions that have been shown to reduce morbidity and mortality associated with drug use.

Harm Reduction Origins

- Forces that Prompted Harm Reduction efforts:
 - Criminalization
 - Stigma
 - Preventable Death



Photo Credit: Doug Wilson, NYT

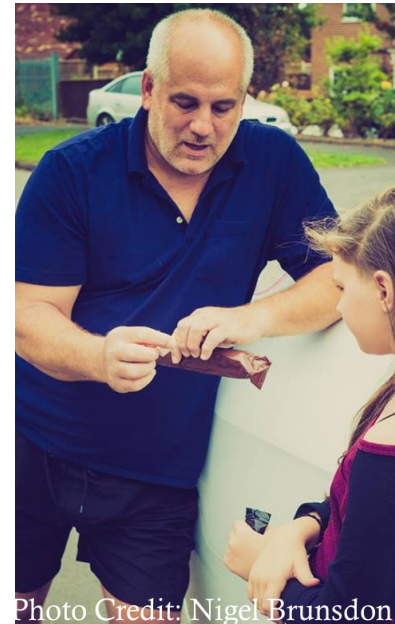


Photo Credit: Nigel Brunson

Harm Reduction Defined

“Harm reduction is a set of practical strategies and ideas aimed at reducing negative consequences associated with drug use. Harm Reduction is also a movement for social justice built on a belief in, and respect for, the rights of people who use drugs.”

-Harm Reduction Coalition

Harm Reduction as a Continuum



Abstinence

Harm Reduction

Abstinence


Reduced
Use

Safer Use

Safer
environ-
ment

Safer
supply

Prevent
death



“We're talking for the first time about affirming and even rejoicing in improvement—not perfection. Humans are really good at improvement. We are not so good at perfection.”

-Dan Bigg

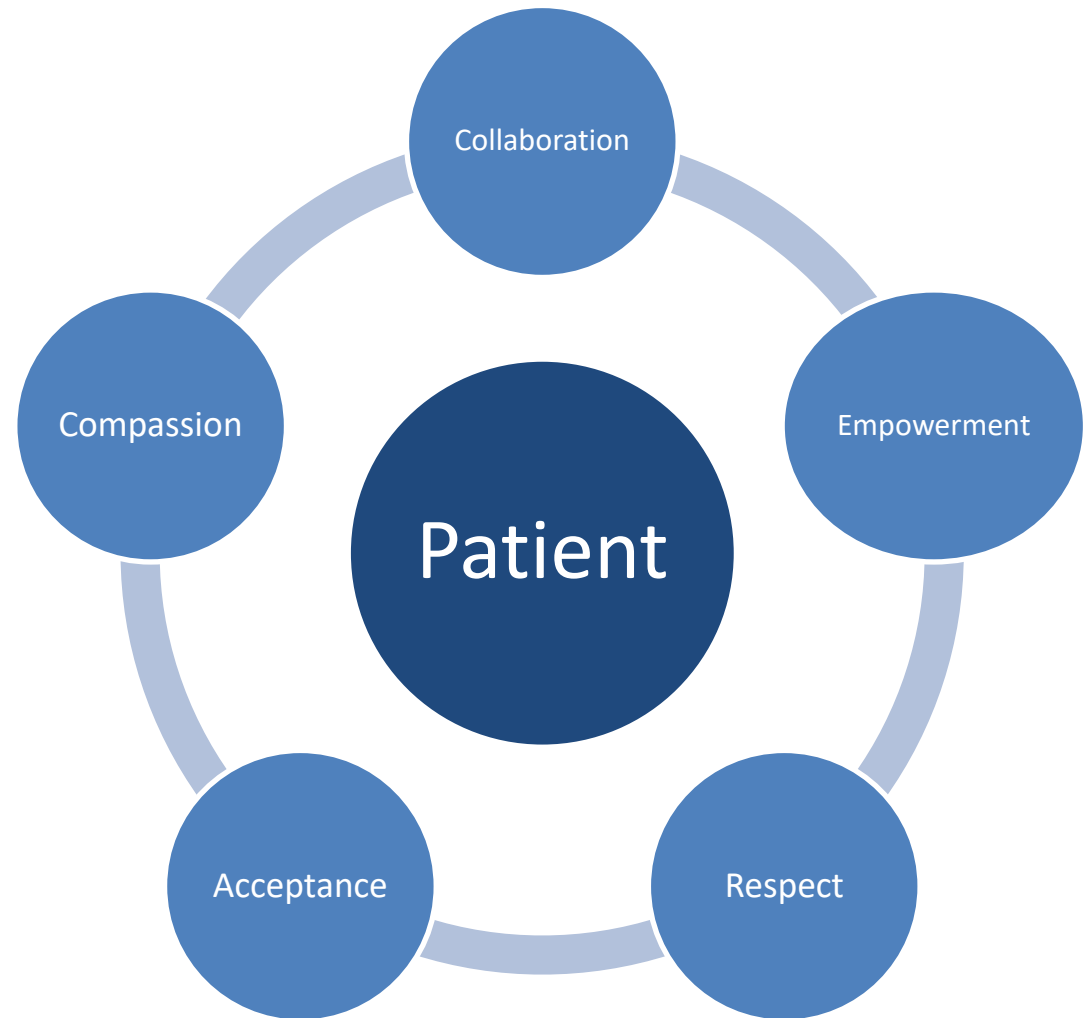


Harm reduction is the philosophy of assisting a person in ***any positive change***, as they define it for themselves.

Harm Reduction in Clinical Care

Key Elements

1. Pragmatic
2. Prioritizes trust and therapeutic alliance
3. Engagement is the primary goal
4. Balances risk and benefits
5. Celebrates any positive step
6. Supports patients' goals of care
7. Focuses on reducing negative consequences of ongoing use



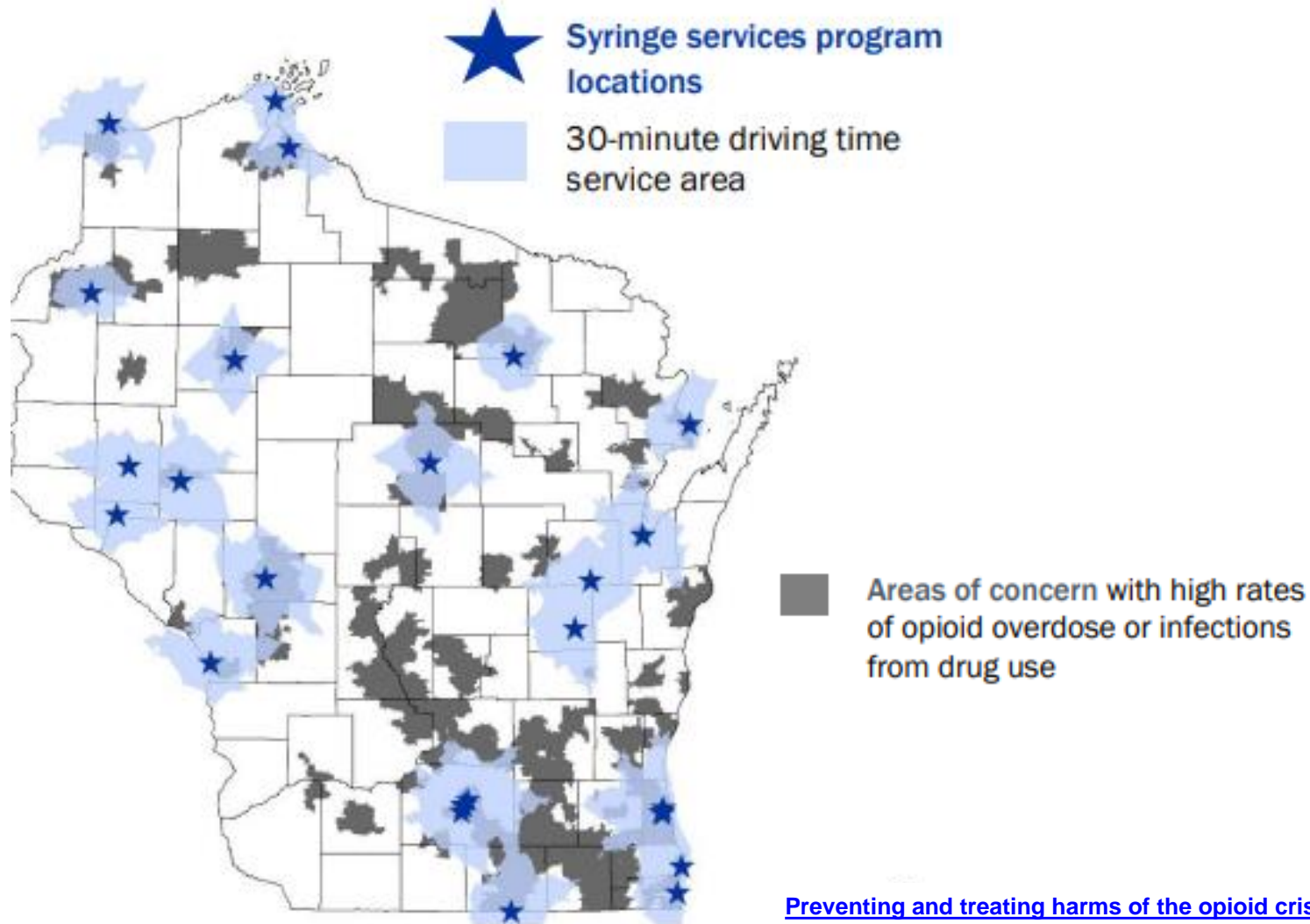
HARM REDUCTION SERVICES: WHAT'S THE EVIDENCE?

- Syringe service programs
- Drug checking services
- Overdose prevention sites
- Good Samaritan Laws

Syringe Service Programs

- Started in the U.S. during the height of the AIDS crisis in the late 1980s as a means for reducing HIV transmission.
- Community-based public health programs that can provide comprehensive services:
 - Sterile needles, syringes, and other injection equipment
 - Safe disposal containers for needles and syringes
 - HIV and hepatitis testing and linkage to treatment
 - Overdose prevention education/naloxone distribution
 - Referral to substance use disorder treatment
 - Referral to medical, mental health, and social services
 - Tools to prevent HIV, sexually transmitted infections, and viral hepatitis

Areas of Concern for Injection-Related Infectious Outbreaks in WI (2020)



Syringe Service Programs – Individual Benefit

- SSPs are associated with a **50% reduction in HIV and HCV incidence.**
 - Majority of new hepatitis C infections are due to injection drug use
 - US has seen a 3.5-fold increase in HCV cases from 2010 to 2016.
- SSPs are associated with **reductions in a variety of infections** (including soft tissue infections and endocarditis).
- Compared to people who use drugs but don't use the program, new users of SSPs are:
 - **5 times more likely to enter drug treatment, and**
 - **3 times more likely to stop using drugs.**

Syringe Service Programs – Community Benefit

- **Do not increase illegal drug use or crime**
- **Improve public safety** by facilitating safe disposal of used needles and syringes
 - Reduce community presence of needles
 - Reduce needle stick exposures among law officers
 - CDC research has found that the more syringes distributed at SSPs per people who inject drugs (PWID) in that region, the more likely PWID were to report safe disposal of used syringes
- **Reduce overdose deaths** by providing education and naloxone
- **Save health care dollars** by preventing infections (HIV, HCV, soft tissue infections, endocarditis)

CDC SSP Fact Sheet



Syringe Services Programs (SSPs) Fact Sheet

Helps prevent transmission of blood-borne infections

Helps support public safety

SSPs have partnered with law enforcement, providing naloxone to local police departments to help them respond and prevent death when someone has overdosed.¹³

SSPs also protect first responders and the public by providing safe needle disposal and reducing the presence of discarded needles in the community.¹⁴⁻¹⁹

In 2015, CDC's National HIV Behavioral Surveillance System found that the more syringes SSPs distributed per the number of people who inject drugs in a geographic region, the more likely the people who inject drugs in that region were to dispose of used syringes safely.²⁰

Studies in Baltimore²¹ and New York City²² have also found no difference in crime rates between areas with and areas without SSPs.

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6 reduction in HIV and HCV ns that treat opioid dependence ant), HCV and HIV transmission is

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

CDC 3201158-02 July 18, 2018

Community Drug Checking

- What is it?
 - Allows the public to submit unregulated drug samples for chemical analysis
- Goals:
 - Tool that empowers PWUD with information about unregulated substances
 - Can inform policy and harm reduction messaging at the population level if data is collected and analyzed
- History:
 - Originated in CA in the 60s/70s for psychedelics
 - Adopted in Europe in the 90s- primarily in response to dance events and MDMA testing
 - More recently in Americas, Australia, and the UK with a greater focus on new psychoactive substances including fentanyl

Community Drug Checking- Technologies

- Drug checking tools/services
 - Reagent testing (typically used at festivals to confirm psychedelics)
 - Immunoassay test strips (Fentanyl, xylazine) →
 - Comprehensive drug checking technologies (spectrometry)



Handheld high-pressure mass spectrometer (HPMS) MX 908



TruNarc™ Raman spectrometer, Thermofisher Scientific, Waltham, MA USA



Bruker Alpha™ Fourier-Transform Infrared (FTIR), Bruker Optics, Billerica, MA USA

Community Drug Checking: the Evidence

- Most available studies are from Europe
 - 9 studies from the US which included a mix of reagent testing, FTS, and one with spectrometry
- Overall, studies found that drug checking influenced intended behavior to increase safety
- Few studies measured actual behavior change, but those that did found positive impact
- One study (Canada, 2017) looked at health outcomes associated with drug checking at an overdose prevention site and found that when fentanyl was detected, people reported intention to use less of the substance
 - Those who reported intending to use less were less likely to overdose

Potential Impacts of Community Drug Checking

- Individual level: Provide PWUD information about unregulated drug supply -> allows individuals to make informed decisions about use -> improved health and wellness
- Drug Markets: increase quality control, improve supply
- Community Level: engage people with lived experience, shift attitudes
- Policy Level: conversations about safer supply, regulation of substances, reduce harms of criminalization

Community Drug Checking: Legality

- CDC and SAMHSA now permit federal funding to be used to purchase FTS
 - CDC OD2A money is being used to purchase xylazine test strips & SAMHSA SOR money approved on case-by-case basis
- State paraphernalia laws can get in the way
 - Most are based on a model law created in the late 1970s by the Drug Enforcement Administration
 - They typically classify nearly every object used in conjunction with illicit drugs—including those used for “testing” or “analyzing” those drugs—as drug paraphernalia
 - Many prohibit the possession or distribution of such “paraphernalia”

WI Paraphernalia Laws

- **Wisconsin criminalizes the use or possession with primary intent to use drug paraphernalia**
 - *No person may use, or possess with the primary intent to use, drug paraphernalia to...test, analyze...a controlled substance or controlled substance analog in violation of this chapter.*
 - Paraphernalia definition includes “[a]ll equipment...used for...testing, analyzing” with “testing equipment” listed explicitly.
- **Wisconsin explicitly criminalizes the act of giving away drug paraphernalia:**
 - *“No person may deliver, possess with intent to deliver, or manufacture with intent to deliver, drug paraphernalia, knowing that it will be primarily used to...test, analyze...a controlled substance or controlled substance analog in violation of this chapter.”* Wis. Stat. § 961.574(1).
- As of March 18, 2022, “Any materials used or intended for use in testing for the presence of fentanyl or a fentanyl analog in a substance” are excluded from the definition of drug paraphernalia See Wis. Stat. § 961.571(1)(b)(3).

Fentanyl Test Strips (FTS)

- Immunoassay on a paper strip
- Rapid results (<5 min)
- Positive or negative result
 - 2-4% false negative rate
 - 5-10% false positive rate
- Instructions on how to dissolve are important and impact validity of results



Image used with permission from Suzanne Carlberg-Racich

Peiper et al. (2018). International Journal of Drug Policy. doi.org/10.1016/j.drugpo.2018.08.007

Park et al. (2021). International Journal of Drug Policy. doi.org/10.1016/j.drugpo.2021.103196

Kreiger et al. (2018). International Journal of Drug Policy. doi.org/10.1016/j.drugpo.2018.09.009

Green et al. (2020). International Journal of Drug Policy. doi.org/10.1016/j.drugpo.2020.102661

FTS Distribution Findings in Wisconsin

- Examined the association between fentanyl test strip use and overdose risk behaviors
- Surveys conducted at syringe service program sites (n=341)
- Compared people who use FTS to those who don't use FTS and found:
 - People who use FTS reported increasing both safer and riskier behaviors
- Among people who use FTS:
 - A positive fentanyl test result may promote more risk reducing behaviors and fewer risk enhancing behaviors than a negative test result (results did not meet statistical significance in adjusted models)

Xylazine Test Strips

- Used in similar way to FTS
- Rapid result (<5 min)
- Positive or negative result
- Preliminary testing shows false positives with a variety of substances
- No published studies on how xylazine test strips may influence use patterns

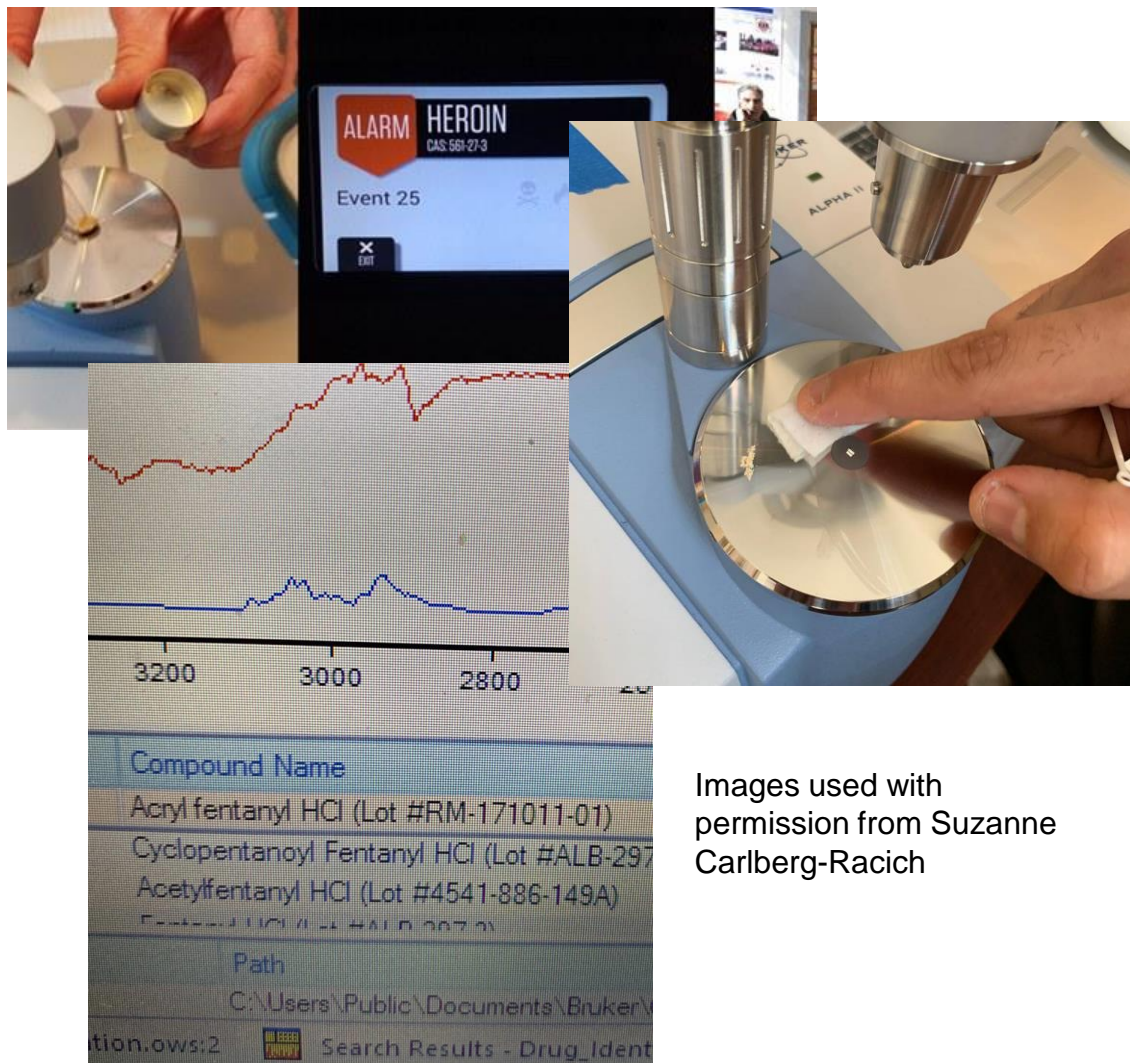


Fourier-Transform Infrared (FTIR) Spectrometer

- Results in 5-30 min
- Provides more information than FTS (multiple substances, cuts, etc)

BUT:

- More expensive
- Requires trained operator
- Clients must bring drugs to the machine (3-5mg substance)
- Not good for distinguishing fentanyl analogs



Overdose Prevention Sites (OPS)

Facilities where people can go to consume drugs obtained elsewhere in a hygienic environment with appropriate equipment without fear of arrest under trained supervision.



Primary goals of OPS

- Reduce harms from drug use (HIV, HCV, skin infections)
- Improve health—prevent deaths, and link to treatment and other services
- Reduce public disorder

Sherman S, et al. Safe Drug Consumption Spaces: A Strategy for Baltimore City. Published by Abell Foundation. February 2017.

Kilmer et al. Considering Heroin Assisted treatment and Supervised Drug Consumption Sites in the United States. RAND Research Report. 2018.

Hedrich D. European Report on Drug Consumption Rooms, Lisbon, Portugal: European Monitoring Centre for Drugs and Drug Addiction, February 2004.

Left Bottom Photo Credit: Nigel Brundson (used with permission)

OPS Evidence Base (from outside of US)

- Reduce fatal and nonfatal overdoses
- Reduce ambulance calls for suspected overdoses
- Reduce risk of disease transmission and other harms associated with unhygienic drug use practices (e.g., HIV, HCV, soft tissue infections)
- No increases in injection behaviors, drug trafficking, or crime in area around the SCS (some studies found reduction in crime)
- Some studies found reduced public injection and reduced discarded syringes/injection materials (some found no effect)

Sherman S, et al. Safe Drug Consumption Spaces: A Strategy for Baltimore City. Published by Abell Foundation. February 2017.

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Insight, Vancouver BC

Increases Treatment and Recovery

Of people who received services,

- 57% started additional treatment;
- 23% stopped using drugs altogether;
- 75% reported reduced public drug use and increased safer injection practices; and
- The main motivations reported for using services were a *desire to inject safely and quietly, to avoid public spaces, and to prevent overdose.*



Photo Permissions and Credit: Sharon Stancliff, MD

Nation's First Supervised Drug- Injection Sites Open in New York

During the first official day in operation at the two Manhattan facilities, trained staff reversed two overdoses, officials said.



People can use drugs in what is called a narcotic consumption booth inside the injection sites. David Dee Delgado for The New York Times

First 2 Months of Operation at First Publicly Recognized Overdose Prevention Centers in US

Alex Harocopos, PhD, MSc; Brent E. Gibson, PhD; Nilova Saha, LCSW; Michael T. McRae, PhD; Kailin See; Sam Rivera; Dave A. Chokshi, MD, MSc

- November 30, 2021 to January 31, 2022
- Who is using services?
 - 613 individuals used OPC services 5975 times across 2 sites.
 - 55.3% identified as Hispanic, Latino, or Latina.
 - Average age was 42.5 years.
 - 36.9% reported being street homeless
 - Less than 20% were living in their own rooms or apartments.
 - 75.9% reported that they would have used their drugs in a public or semipublic location if OPC wasn't available.
 - Majority (73%) of people using heroin/fentanyl.
 - Majority (63%) injecting drugs.

First 2 Months of Operation at First Publicly Recognized Overdose Prevention Centers in US

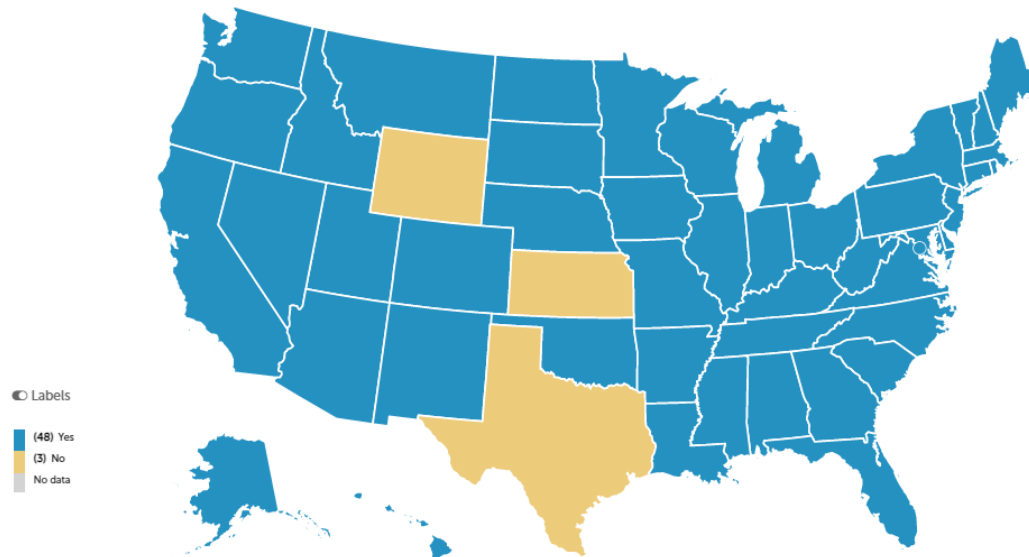
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- Outcomes in first two months:
 - Staff responded 125 times to mitigate overdose risk. In response to opioid-involved symptoms of overdose
 - Naloxone was administered 19 times
 - Oxygen 35 times,
 - Respiration or blood oxygen levels were monitored 26 times.
 - Staff intervened 45 times in response to stimulant-involved symptoms of overdose: hydration, cooling, and de-escalation
 - Emergency medical services responded 5 times,
 - Participants were transported to ED 3 times.
 - No fatal overdoses occurred in OPCs or among individuals transported to hospitals

What are Good Samaritan Laws?

Provide legal protections during the event of an overdose

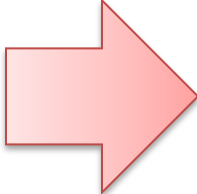
5/31/21 Does the jurisdiction have a drug overdose Good Samaritan Law?



Why do we need Good Samaritan Laws?

To encourage people to call for medical help in the event of an overdose.

Without Good Samaritan Laws:

- Person calling 911 can be arrested, charged and prosecuted
 - Person experiencing overdose can be arrested, charged and prosecuted
- 
- Overdose victim less likely to get medical attention/be linked to services
 - Increased risk of death
 - Harms of incarceration and prosecution

Are they effective?

- Review of strength of GSLs in 45 states and DC through 2018
 - Compared GSLs with stronger immunity (those that grant immunity from arrest) with states with more limited protection.
 - **Stronger immunity laws** were associated with a **10% reduction in opioid related overdose death** 2 years after enactment.

WI Good Samaritan Protections	2013	2017	2020-present
Aider- immunity from arrest or charges- paraphernalia & possession of controlled substance			
Aider- immunity from prosecution- paraphernalia & possession of controlled substance	X	X	X
Aider- immunity from parole, probation or extended supervision revocation		X	
OD Survivor-immunity from arrest or charges- paraphernalia & possession of controlled substance			
OD Survivor- immunity from prosecution- paraphernalia & possession of controlled substance*		X	
OD Survivor- immunity from parole, probation or extended supervision revocation*		X	

* Immunity is only granted if completion of mandatory substance use treatment program; if not feasible, completion of ≥ 15 days in county jail

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OD Survivor- immunity from parole, probation or extended supervision revocation*		X	

* Immunity is only granted if completion of mandatory substance use treatment program; if not feasible, completion of ≥ 15 days in county jail

It's time to save lives

No one should ever fear calling 911 to save a life.



<https://wigooodsamaritancoalition.com/>

Key Takeaways on State of the Evidence:

- SSPs- Evidence related to transmission of infectious disease, costs associated with infections, community safety.
- Drug checking- Newer service. Not a lot of research (yet) on health outcomes associated with drug checking services. Lots of potential for benefit in a highly volatile drug market.
- Overdose prevention sites- good evidence from outside the US related to reduced overdose and transmission of infectious diseases among those who use service. Expect more US-based research in upcoming years!
- Good Samaritan Laws- evidence of reducing overdose death when law is written well. (Wisconsin's law is not!)

Questions, Feedback & Discussion



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