

Community Expansion of Evidence-Based Harm Reduction Strategies for People Who Use Drugs

Harm reduction is a practical and transformative approach that incorporates community-driven public health strategies – including prevention, risk reduction, and health promotion that empower people who use drugs (PWUD) with the choice to live healthier, self-directed, and purpose-filled lives. This approach enables harm reductionists, others engaging with PWUD, and PWUD themselves to respond to a person’s individual goals and motivations and opens the door for people to make positive change in their lives.

The lived and living experience of PWUD is at the center of harm reduction activities. This aspect of harm reduction is particularly important among those living in underserved communities who are often marginalized yet could benefit from services tailored to their needs. The harm reduction approach calls for understanding and acceptance that drug use and other behaviors carry risk, and it promotes a compassionate and life-preserving response. Harm reduction promotes safety while reducing negative impacts of substance use and other risk behaviors. It meets people where they are and assists—rather than directs—them toward positive change, as they define it. Harm reduction recognizes there are many pathways to wellness; abstinence is neither required nor discouraged.

Participation in harm reduction is always non-coercive, voluntary, and free. Services are provided without judgment, in a manner that is respectful, humanistic, and empathetic. Harm reductionists also seek to mitigate the negative effects of stigma, mistreatment, discrimination, and harsh punishment of PWUD, especially those who are Black, Indigenous, and other People of Color. They recognize that intersectionality—such as race, sexual orientation and gender identity, disabilities, and geographic location—affect how people experience these harmful impacts.

This advisory provides a brief background and history of harm reduction and elaborates on the evidence base underlying common harm reduction services, including:

- Syringe services programs (SSPs)
- Overdose education and naloxone distribution (OEND)
- Drug checking (Fentanyl and Xylazine test strips)
- Safer smoking supplies/distribution

The advisory also provides real-life examples of harm reduction programs, and resources to assist with implementing these services. Additional information can be found in [SAMHSA's harm reduction framework](#).

Key Messages

- Harm reduction incorporates community-driven public health strategies—including prevention, risk reduction, and health promotion—to empower PWUD to live healthier, self-directed, and purpose-filled lives.
- Harm reduction saves lives and prevents disease. Research has shown:
 - SSPs reduce human immunodeficiency virus (HIV) and Hepatitis C (HCV) infection by 33 percent and 21 percent, respectively.¹
 - OEND reduces opioid overdose mortality by 40 percent.^{2,3,4,5}
 - FTS lessen substance use risk behavior by 43 percent.⁶
 - Education on safer smoking supplies/distribution^a reduces risk of HIV and HCV infection.⁷
 - Individuals newly engaging with SSPs were five times more likely to enter drug treatment than those who never engaged with SSPs.⁸

Definitions

- **Harm reduction:** A practical and transformative approach that incorporates community-driven public health strategies — including prevention, risk reduction, and health promotion — to empower PWUD and their families with the choice to live healthier, self-directed, and purpose-filled lives. Harm reduction centers the lived and living experience of PWUD, especially those in underserved communities, in these strategies and the practices that flow from them.
- **Harm reductionists:** Individuals—including PWUD, practitioners, physicians, clinicians, peer specialists, and others—who provide harm reduction services.
- **Under-served communities:** Populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied full opportunity to participate in aspects of economic, social, and civic life, such as: Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders, and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, queer, intersex, asexual persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.⁹

Background

Harm reduction programs have existed for years. Three examples of practices that have a harm reduction philosophy at their core include:

- Preventing harm from underage drinking¹⁰
- Offering infectious disease testing for PWUD¹¹
- Promoting retention in care for PWUD who are at risk for HIV¹²

Moreover, core tenets of harm reduction, such as respect for the autonomy, dignity, and worth of a person, directly align with medical and professional codes of ethics. They are also congruent

^a As permitted by law. No federal funding is used directly or through subsequent reimbursement of grantees to purchase pipes. Grants include explicit prohibitions of federal funds to be used to purchase drug paraphernalia.

with evidence-based, person-centered care practices, which have demonstrated success in engagement and outcomes in substance use services.^{13,14}

As one example, the harm reduction approach taken during the rise of the HIV epidemic in the 1980s employed SSPs and other interventions to reduce needle sharing among people who inject drugs. With the continued rise of opioid use in the 2000s and the growing prevalence of injection drug use (IDU) and illicit fentanyl exposure, communities incorporated strategies such as OEND and drug checking using FTS to decrease overdose deaths.

As evidence supporting harm reduction strategies accumulated, federal constraints on implementing these strategies changed. Agencies began implementing evidence-based harm reduction policies for people who use opioids, stimulants, alcohol, and other substances, including polysubstance use. Some key statutes supporting harm reduction include:

- Since 2007, 40 states and the District of Columbia have enacted Good Samaritan policies, which have been shown to encourage calls for emergency response during an overdose and reduce overdose deaths.¹⁵ These laws provide immunity to the individual reporting an overdose from consequences related to possession of controlled substances and, in certain instances, protect the individual experiencing an overdose.
- The Comprehensive Addiction and Recovery Act,¹⁶ passed in 2016, authorized new grant programs to expand availability of naloxone to community members, law enforcement agencies and other first responders, as well as resources to identify and treat individuals who are incarcerated and live with SUDs.
- In 2021, as the overdose crisis continued to escalate and the evidence base around harm reduction practices grew, Congress allotted \$30 million to SAMHSA via the

Federal Grant Programs Address Harm Reduction Practices in Multiple Topic Areas

- [Housing First within the HOPWA program](#)
- [Expanding early screening for substance misuse](#)
- [Expanding access to medication for opioid use disorder \(MOUD\)](#)
- [Grants to expand substance use disorder treatment capacity in family and adult drug courts](#)
- [Providing comprehensive treatment for pregnant and postpartum women with SUD](#)
- [Increasing engagement in care for those with SUD who are at risk for HIV/HCV](#)
- [First responders -- Comprehensive addiction and recovery act grants](#)

American Rescue Plan Act to fund grants aimed at preventing and controlling the spread of infectious diseases and the consequences of such diseases for individuals with SUDs. Through SAMHSA's Harm Reduction Grant Program, organizations manage and expand SSPs; distribute opioid overdose reversal medications and FTS to individuals at risk of overdose; connect individuals at risk for, or with, SUD to overdose education, counseling, and health education; and encourage such individuals to take steps to reduce the negative personal and public health impacts of substance use or misuse.^{b17}

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More information on the history of harm reduction can be found in [SAMHSA's harm reduction framework](#).

What Are Evidence-Based Harm Reduction Services?

Harm reductionists tailor programs to best meet the needs of their communities and are directly informed by PWUD, often integrating several evidence-based practices into a comprehensive program. By being community- and person-focused, four common harm reduction practices—SSPs, OEND, drug checking, and safer smoking supplies/distribution—have positive effects on reducing harm caused by substance use in diverse settings across the United States. This section describes each of these four practices, including information on intended recipients, a description of the practice, and an overview of the evidence base.

When implementing these practices, harm reductionists should be mindful of adjacent supports that could increase successful outcomes for PWUD. These include providing support that is trauma-informed and stigma-free, providing access to safe environments for individuals to practice safer use, providing low-barrier access to medications like buprenorphine and methadone, and coordinating warm handoffs to providers for integrated HIV, HCV, and other healthcare services.

Syringe Services Programs (SSPs)

Intended Recipient: People who inject substances.

IMPACT

SSPs reduce HIV infection by 33 percent.¹



Description: SSPs provide access to sterile syringes and serve as a means to dispose of syringes after use.¹⁸ SSPs can also provide access to wound care, vaccination, testing for HIV and HCV, and linkage to care for treatment of infectious diseases and co-occurring mental illness and SUD. SSPs will often coordinate community clean-up events to identify and dispose of used syringes. Even with strong data to support their use, some states and local jurisdictions restrict or prohibit SSPs.

More information on SSP availability can be found at the [Centers for Disease Control and Prevention's website](#). Links to laws surrounding SSP implementation and a detailed implementation guide can be found in the [Resources](#) section.

Evidence Base: SSPs demonstrate the following positive outcomes:

- *Positively affect the health and safety of people who inject substances:* SSPs protect individuals from infection with blood-borne pathogens;^{19,20,21,22} and research shows a reduction of HIV and HCV infection by approximately 33 percent and 21 percent, respectively.¹
- *Protect the entire community:* SSPs increase the likelihood that individuals who inject substances in that region will dispose of used syringes safely.¹⁹
- *Increase the likelihood of entering treatment and discontinuing use:* New participants to SSPs are five times more likely to enter substance use treatment and approximately three times more likely to stop using substances than those who do not use the programs.¹⁹

- *Are cost effective*^{23,24}: The annual estimated cost of serving one person who uses heroin at a harm reduction site that offers syringe exchange is between \$700 and \$2,000, compared to \$39,000–\$94,500 for a 12-week treatment of antiviral drugs,²⁵ or \$50,799^c in annual estimated societal costs (e.g., criminal justice, health care, loss of productivity/employment).²⁶

HARM REDUCTION IN ACTION

Homeless Outreach Program Integrated Care System (HOPICS) Harm Reduction Program (HRP)

HOPICS serves low-income individuals and families, including those experiencing homelessness, in the Los Angeles communities of South Los Angeles, Compton, Watts, Lynnwood, and Paramount. The HRP provides low-barrier services, including a syringe exchange, distribution of naloxone, FTS, and safer smoking supplies/distribution, as well as education on overdose. It also provides wound kits and referrals to a range of medical, behavioral health, and wrap-around services.

HOPICS HRP often hires peers with lived experience who meet participants “where they are,” providing services with a non-judgmental, client-centered approach via outreach at encampments, hotspots, and a fixed mobile site embedded within an MOUD clinic.

Data show that this approach works. From July 2021 through July 2022—the program’s first year—HOPICS HRP reported the following outcomes:

- 1,732 naloxone units distributed, and 110 overdose reversals conducted, via participant report
- 1,910 encounters conducted, and 4,135 harm reduction kits distributed
- 7,696 used needles safely removed (disposed of) from the community
- 319 participants expressed interest in additional HOPICS services
- 8 participants moved to permanent housing and many more transitioned to interim housing

Overdose Education and Naloxone Distribution (OEND)

Intended Recipient: People who use opioids, as well as community and family members.

Description: OEND programs offer a range of services that often include overdose prevention education materials (e.g., pamphlets, links to multimedia materials) with information about overdose risk and use of naloxone and other opioid overdose reversal medications.

In addition, these programs may distribute naloxone and other opioid overdose reversal medications. Naloxone and other opioid overdose reversal medications (i.e., nalmefene) are not controlled substances, have no potential for misuse, and can be administered with minimal training. These medications are safe for people of all ages, from infants to older adults, and are not harmful if given to someone who is not overdosing.²⁷ These characteristics make them ideal to distribute and administer in the community and to family members and caregivers who may witness an overdose.

^c The annual estimated societal cost per individual is based on 2015 U.S. dollars.

Typically, healthcare professionals, substance use disorder treatment facility staff, and community-based organizations distribute naloxone and other opioid overdose reversal medications to community members who may witness an overdose. Access to these medications for non-medical bystanders is critical: approximately 80 to 90 percent of overdose reversals with naloxone in the United States are carried out by individuals who also use substances.^{5,28,29} More information on OEND can be found in the [Resources](#) section.

Evidence Base: OEND distribution demonstrates the following positive outcomes:

- *Decreases mortality:* Communities that have access to OEND reduce mortality from opioid-related overdose by 15 to 40 percent.^{2,3,4,5}
- *Is cost effective:* Some statistical models show that naloxone distribution can provide a \$2,742 benefit for every dollar spent on a program;²⁸ other models demonstrate an incremental cost-effectiveness ratio of \$323 per quality-adjusted life year for naloxone distribution alone (higher when combined with addiction treatment).³¹

IMPACT

Despite the challenges to service delivery presented by COVID-19, 12,392 overdose reversals using program distributed naloxone were reported to the 42 registered syringe services programs across North Carolina from July 1 2020 to June 30 2021. For the same time period, SSPs in NC served 25,596 unique individuals.³⁰

HARM REDUCTION IN ACTION

[Los Angeles County Department of Correctional Health Services \(LA CHS\)](#)

LA CHS is the nation's largest county-run correctional health service. LA CHS implements a system-wide naloxone program that gives naloxone to custody personnel and trains them to reverse an overdose with the naloxone. Between September 2018 and December 2020, jail personnel successfully reversed 122 overdoses.

Since May 2021, the LA CHS has made naloxone available to incarcerated individuals in the jail. Within the first month of expanding access, two overdoses were successfully reversed by individuals who were incarcerated within the jail.

Drug Checking (Fentanyl Test Strips (FTS) and Xylazine Test Strips (XTS))

Intended Recipient: People who use substances in injectable, powder, and pill forms.

Description: Fentanyl, a synthetic opioid up to 50 times more potent than heroin and 100 times stronger than morphine, is a major contributor to fatal and nonfatal overdoses in the United States. It is cheap to produce and often mixed with other substances, such as heroin, methamphetamine, cocaine, and xylazine, a non-opioid sedative that is approved by FDA for animal use, but not for people, is also increasingly being found in the illicit drug supply.

IMPACT

When FTS are made available, people are often willing to utilize them (81 percent of study participants).⁶

Exposure to xylazine can cause drowsiness, amnesia, and slow breathing, heart rate, and blood pressure. People are often exposed unintentionally as a result of contaminated illicit drug supplies which can lead to fatal and non-fatal overdoses. The fentanyl-xylazine combination has become increasingly prevalent in the illicit drug supply and poses high risk for overdoses.

Drug checking programs (typically run by community organizations offering other harm reduction services, including SSPs) provides test strips to anyone in need, allowing an individual to test injectable substances, powders, and pills for the presence of fentanyl prior to use. More information on FTS and Xylazine test strip (XTS) distribution and use can be found in the [Resources](#) section.

Evidence Base: FTS and XTS demonstrate the following positive outcomes:

- *Have high utilization rates:* FTS have utilization rates of up to 81 percent.⁶
- *Reduce risk behavior associated with substance use:* After using FTS, up to 43 percent of individuals change substance use behavior.⁶
- *Increase perceived safety:* Individuals report a 77 percent increase in perceived safety from overdose when using FTS.⁶
- *Lessen risk behavior associated with substance use in young adults:* 50 percent of the participants in one study who used FTS received at least one positive result, which was significantly associated with a positive change in overdose risk behavior; 95 percent of participants wanted to use the test strips again in the future.³²
- While the evidence-base for XTS is limited, their distribution is consistent with efforts to inform PWUD about substances in the drug supply.

Safer Smoking Supplies/Distribution

Intended Recipient: People who inject substances.

Description: IDU can introduce harm such as transmission of infectious diseases due to use of nonsterile syringes, sharing equipment with others, and improper disposal. Safer smoking supplies/distribution services provide education on the harms of IDU, as well as encourage and provide access to relatively safer methods of administration (as allowed under law), such as smoking instead of injecting drugs. Underscoring the importance of reaching individuals who are smoking illicit substances, from January–June 2020 to July–December 2022, the number and percentage of overdose deaths with evidence of smoking increased 109.1% (from 2,794 to 5,843) and 73.7% (from 13.3% to 23.1%), respectively.³³ Programs distributing safer smoking supplies have an opportunity to engage people and provide them with OEND and access to treatment. This service is often a primary component of an effective SSP or other harm reduction program.

IMPACT

Access to safer smoking supplies enables someone who uses stimulants to choose safer ways of using substances in lieu of injection.⁷

Evidence Base: Safer smoking supplies/distribution demonstrate the following positive outcomes:

- *Reduce risk behavior associated with substance use:* In a study that provided safer smoking supplies at SSPs in Ottawa found the proportion of people who reported injection use decreased from 96% to 78%.⁷
- *Help avoid harm of HIV and HCV* Ten studies found that when people who use drugs were provided with safer smoking materials, they engaged in fewer risky drug use behaviors.^{34 7}
- *Reduce bacterial infections related to IDU:* Education on IDU resulted in reduced injection intensity and was associated with a 36 percent reduction of bacterial infection at 3 months, and a 26 percent reduction at 6 months.³⁵

HARM REDUCTION IN ACTION

[Visiting Nurse Association of Central New Jersey \(VNA\)](#) [Community Health Center at Asbury Park](#)

The VNA Community Health Center at Asbury Park provides SSPs, distribution of naloxone, FTS, and safer smoking supplies,^d as well as education on overdose and safer smoking in a diverse New Jersey community. They also provide basic hygiene products, HIV and STI testing, pre-exposure prophylaxis (PrEP) counseling, community education, and referrals to a range of medical, behavioral health, and wrap-around services.

VNA does not ask clients for their contact information; all harm reduction services are provided anonymously and in a compassionate, stigma-free environment. VNA's position is that providing no-barrier harm reduction services has helped many clients with SUD who previously experienced stigma and trauma in healthcare settings and were reluctant to seek support. In instances where recipients express a desire to work toward recovery, VNA provides the option of low-threshold buprenorphine treatment.

Resources

The following resources provide additional information on harm reduction services, laws and regulations, and tips for implementing services for PWUD.

Resources for General Harm Reduction Implementation	
National Harm Reduction Coalition	The National Harm Reduction Coalition provides information and resources on harm reduction services and strategies.
Harm Reduction at SAMHSA	This page provides an overview of SAMHSA's approach to harm reduction as well as links to SAMHSA's Harm Reduction Framework.

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Resources for Implementing an SSP	
Syringe Access State Policy Landscape	This National Harm Reduction Coalition guide provides facts on criminalization and authorization policies for SSPs in each U.S. state.
Peer Delivered Syringe Exchange (PDSE) Toolkit	This National Harm Reduction Coalition toolkit provides examples, policies, and practices for the incorporation of peers into SSPs, recognizing that peers are uniquely positioned to provide resources to harder-to-reach PWUD communities.
Guide to Developing and Managing Syringe Access Programs	This 2010 manual from the National Harm Reduction Coalition is designed to outline the process of developing and starting an SSP.
SSP Technical Package	This CDC package provides evidence on the effectiveness of strategies and approaches for supporting successful planning, design, implementation, and sustainability of SSPs.
Resources on Overdose Prevention and Response and for Implementing a Naloxone and other Opioid Overdose Reversal Medication Distribution Program	
SAMHSA Overdoses Prevention and Response Toolkit	This toolkit provides guidance to a wide range of individuals on preventing and responding to an overdose. The toolkit also emphasizes that harm reduction and access to treatment are essential aspects of overdose prevention.
Implementing a Community Take-Home Naloxone Distribution Program for Lay Responders	This Project DAWN/Ohio Department of Health manual provides detailed guidance on developing a program that provides training to professionals and lay responders about opioid overdose prevention and response and gives the trainees a kit containing one or more doses of naloxone to take home. The manual is for use in Ohio but can be adapted for use in other states.
Naloxone Distribution Program Implementation Resources	This Ohio Department of Health website provides resources, such as sample intake forms and naloxone distribution protocols, which could be adapted for use by others.
Guide to Developing and Managing Overdose Prevention and Take-Home Naloxone Projects	This National Harm Reduction Coalition training guide outlines the process of developing and managing an overdose prevention and education program, with or without a take-home naloxone component.
Resources for FTS Distribution and Use	
Fentanyl Test Strip Pilot	This National Harm Reduction Coalition fact sheet documents how FTS can help and provides important implementation considerations.
Fentanyl Use and Overdose Prevention Tips	This National Harm Reduction Coalition fact sheet provides information on how to use fentanyl more safely.
How To Test Your Drugs Using Fentanyl Test Strips	This NYC Health brochure provides guidance to people who use substances on why and how to use FTS.
What You Should Know About Xylazine Drug Overdose CDC Injury Center	This resource describes xylazine's increasing prevalence in the US illicit drug supply and its risks.
Fentanyl and Xylazine Test Strips SAMHSA	This resource provides information to SAMHSA grantees regarding the use of federal funding for FTS and XTS in their programs.

Resources for Reducing Harm Related to Stimulant Use	
Strategies to Support Parents with Methamphetamine Use Disorder and Their Families	This National Center on Substance Abuse and Child Welfare tip sheet provides facts about methamphetamine use and the effectiveness of treatment and offers strategies for child welfare workers and other professionals to improve outcomes for parents who use methamphetamine and their children and families.
Supporting Children Affected by Parental Methamphetamine Use	This National Center on Substance Abuse and Child Welfare tip sheet explores the effects that parental methamphetamine use can have on a child's health and well-being. It includes strategies for child welfare staff and other professionals who work with families affected by parental methamphetamine use.
Harm Reduction for Stimulant Use	This Harm Reduction International brief provides an overview of different methods of harm reduction for stimulant use.
Stimulant Guide Feature Topics Drug Overdose (cdc.gov)	This guide from the CDC offers an overview of the risks of stimulant use, including overdoses. It includes sections of overdose, safer use, and other frequently asked questions.
Stimulant Overamping Basics Training Guide	This National Harm Reduction Coalition training guide provides an overview of "overamping" (i.e., a negative reaction to using stimulants that can be life-threatening) and strategies to prevent, recognize, and respond to overamping.
Resources for Utilizing Person-Centered and Motivational Approaches	
The Humanistic Roots of Harm Reduction	This article from the Society for Humanistic Psychology focuses on tools that practitioners can implement to assist people using substances in a person-centered manner with new harm reduction philosophies and techniques.
A Pocket Guide to Motivational Interviewing	This Motivational Interviewing Network of Trainers pocket guide summarizes the core components and skills of motivational interviewing and how to use them.
TIP 35: Enhancing Motivation for Change in Substance Use Disorder Treatment	This SAMHSA Treatment Improvement Protocol (TIP) shows how SUD treatment providers can influence positive behavior change by developing a therapeutic relationship that respects and builds on the client's autonomy and describes different motivational interventions that can be applied throughout the stages of change model related to substance misuse and recovery.

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