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HARM REDUCTION: AN EVIDENCE-BASED APPROACH TO THE DRUG WAR

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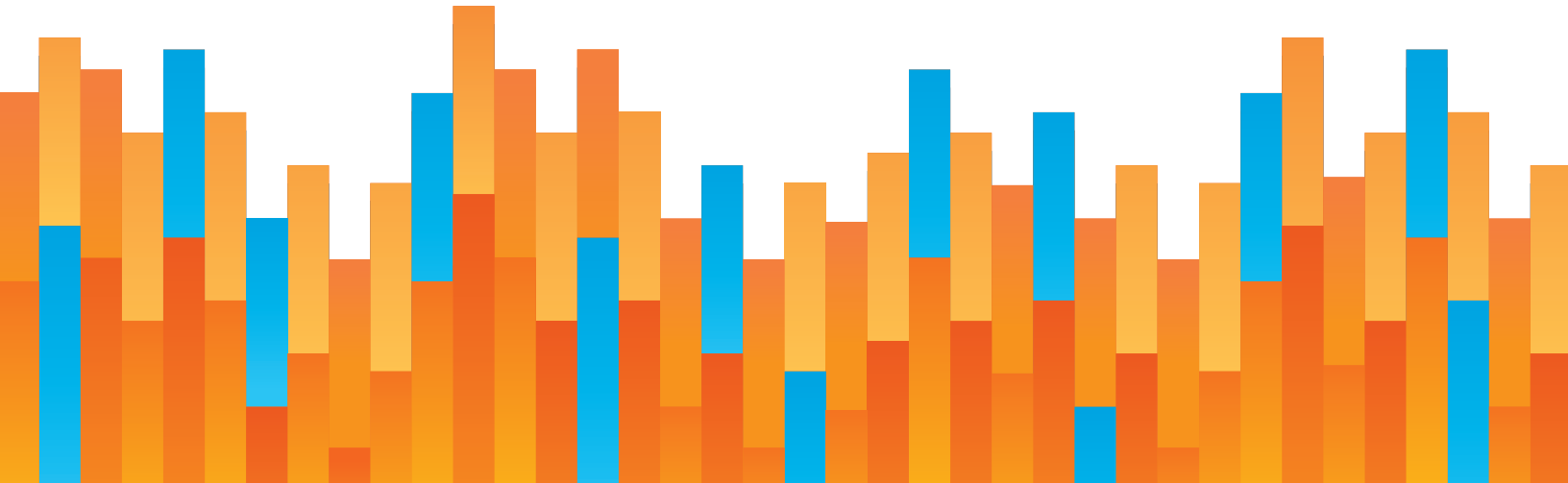

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EXECUTIVE SUMMARY

Despite 2.7 trillion dollars in public spending to address the overdose crisis, the United States continues to experience alarmingly high death rates, strained emergency systems, and ineffective intervention pathways. Current strategies that are largely centered on enforcement and abstinence-only treatment are not meeting the scale or complexity of the problem. Public systems remain reactive rather than preventative, leaving taxpayers to fund a revolving door of crisis care that fails to produce meaningful or lasting outcomes.

This policy brief presents a case for integrating harm reduction into the federal response—not as a replacement for treatment, but as a pragmatic complement. Harm reduction includes proven tools like naloxone distribution, syringe service programs, fentanyl test strip access, and supervised consumption sites. These interventions reduce healthcare costs, lower disease transmission, and improve individual and community outcomes without requiring drug abstinence. They represent low-cost, high-impact strategies that support public health and public safety alike.

To assess the current policy landscape, the brief includes a 50-state matrix evaluating implementation of five core harm reduction policies, including: syringe service programs (SSPs), naloxone access, legality of fentanyl test strips, Good Samaritan laws, and supervised consumption sites (SCSs). While two states meet all five benchmarks, others fall short due to outdated paraphernalia laws, inconsistent naloxone access, and surveillance practices that discourage participation. These gaps reduce effectiveness, create preventable costs, and deter early intervention by eroding trust in care systems.

Key policy recommendations include decriminalizing essential health tools, strengthening "Good Samaritan" protection laws, limiting surveillance in service delivery, and funding flexible, community-led initiatives. These reforms do not expand federal authority or create new regulatory structures. They promote local autonomy and make room for innovation by empowering the organizations best positioned to serve people on the ground.

> *Harm reduction is a public health approach that prioritizes safety, dignity, and evidence-based care—aiming to build trust in healthcare systems and ensure public resources are used effectively.*

Harm reduction is a public health approach that prioritizes safety, dignity, and evidence-based care—aiming to build trust in healthcare systems and ensure public resources are used effectively. It's a practical path forward that aligns with the core principles of reducing government waste, investing in what works, and protecting individual liberty.

Based on the existing evidence, Reason Foundation concludes that expanding access to harm reduction services may be one of the most cost-effective, community-driven uses of funds designated to reduce the harms of the opioid crisis.

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PART 1

INTRODUCTION

The United States is confronting a multifaceted drug crisis that carries not only a significant economic burden but a devastating human toll as well. Opioid overdoses alone are projected to claim between 543,000 and 842,000 lives between 2020 and 2032.[1] Beyond the personal loss, these deaths strain emergency response systems, drive up healthcare costs, and contribute to lost productivity and long-term societal expense. Although treatment options exist, access remains uneven, and relapse rates continue to hover between 40% and 60%.[2] Despite these challenges, many policies continue to prioritize a one-size-fits-all rehabilitation model—often centered around abstinence—which is not sufficient to meet the diverse needs of individuals struggling with substance use disorders.

Traditional treatments for substance use disorders include psychological therapies such as cognitive behavioral therapy, motivational interviewing, contingency management, and family therapy. Medication-assisted treatments (MAT) like methadone, buprenorphine, and naltrexone also offer effective options, as do mutual support groups. However, psychological therapies have an average dropout rate of 30%, and medication-assisted

1 Augustine Kang and Rosemarie Martin, "Serving justice-involved persons and the opioid epidemic," *The Lancet Regional Health – Americas* 38 (2024).

2 Nilofar Vafaie and Hedy Kober, "Association of Drug Cues and Craving With Drug Use and Relapse: A Systematic Review and Meta-analysis," *JAMA Psychiatry* 79, no. 7 (2022). 641–650.

treatments often suffer from limited accessibility and a lack of coordination with psychological or peer-based support systems.[3]

This current system is inefficient, as it fails to reach or retain many of the individuals most in need at great financial cost. For example, among those who inject drugs, preventable infections like HIV and hepatitis C are common due to unsafe injection practices like sharing needles. The average lifetime medical cost of one HIV infection is over $261,000, while hepatitis C treatment can exceed $38,000 per case.[4,5] Preventable hospitalizations due to abscesses, infections, or overdoses also drive-up costs, with each non-fatal overdose costing thousands in emergency department use alone.

In addition to their limitations in efficacy and accessibility, these approaches can unintentionally reinforce harmful stereotypes about people who use drugs. Abstinence-centered rehabilitation often assumes complete sobriety as the only path to recovery. This misconception promotes the false idea that one-size-fits-all treatment works for everyone. It shapes public opinion of substance use disorder as a moral failing instead of a health issue. It also drives policy and healthcare decisions that discriminate against people who use drugs and restrict access to harm reduction and treatment programs. The persistent ethical condemnation of drug use exacerbates the challenges of treating substance use disorder and prevents people from receiving or even seeking the assistance they need.

Substance use exists on a spectrum. Research shows that most drug use is occasional, short-term, and not associated with addiction.

[3] Sara N. Lappan, Andrew W. Brown, and Peter S. Hendricks, "Dropout Rates of In-Person Psychosocial Substance Use Disorder Treatments: A Systematic Review and Meta-analysis," *Addiction* 115 (2019). 201–217.

[4] Healthline Editorial Team, "Cost of Hepatitis C Treatment: 5 Things to Know," Healthline, Healthline Media, August 23, 2023. https://www.healthline.com/health/hepatitis-c/treatment-costs (9 April 2025).

[5] Clinicalinfo Editorial Staff, "Antiretroviral Therapy: Cost Considerations," Clinicalinfo, U.S. Department of Health and Human Services, Sept. 21, 2022. https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-arv/antiretroviral-therapy-cost-considerations (9 April 2025).

Substance use exists on a spectrum. Research shows that most drug use is occasional, short-term, and not associated with addiction.[6] A clinical diagnosis of substance use disorder requires meeting specific criteria outlined in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (*DSM-5*), which classifies most drug use as "transient." Unfortunately, treatment protocols often fail to reflect this definition, sidelining evidence-based approaches that could better align with actual patterns of use in communities.[7]

Current research also supports the idea that addiction is not solely the result of individual behavior, but a complex condition influenced by biological, psychological, social, and environmental factors—including physical dependence.[8] For many people with opioid use disorder, quitting abruptly can be dangerous. Unlike illnesses such as diabetes or cancer, which manifest with relatively uniform effects, the effects of addiction vary significantly from person to person. This complexity undermines the effectiveness of uniform treatment strategies. It also reinforces the importance of broadening public health responses to include harm reduction—a practical, compassionate approach that prioritizes health, safety, and human dignity without imposing immediate or total abstinence.

Harm reduction offers a pragmatic complement to existing treatment approaches. It prioritizes reducing the negative health consequences of drug use, particularly among individuals who are not yet ready or able to pursue abstinence. These programs include syringe service initiatives, naloxone distribution, and access to medication-assisted therapy—all of which have been shown to reduce emergency room visits, lower disease transmission, and improve long-term outcomes.

One illustrative example is Taiwan's 2005 needle exchange program, launched during a surge in HIV among intravenous drug users. Despite the country's strict anti-drug policies, the program reduced new HIV infections by 90% within four years—demonstrating the public health and fiscal power of targeted harm reduction policies. Similar evidence from cities like Vancouver and Lisbon supports this trend, showing how such approaches can relieve public health systems while improving quality of life for individuals and families.[9]

6 Anne Schlag, "Percentages of Problem Drug Use and Their Implications for Policy Making: A Review of the Literature," *Drugs and Alcohol Today* 20, no. 4 (2020). 289–300.

7 Addiction Policy Forum, "DSM-5: Facts and Figures," Addiction Policy Forum, May 28, 2020. https://www.addictionpolicy.org/post/dsm-5-facts-and-figures (9 April 2025).

8 Reinout W. Wiers and Paul Verschure, "Curing the broken brain model of addiction: Neurorehabilitation from a systems perspective," *Addictive Behaviors* 112 (January 2021). 1-10.

9 Jiashin Chen, "Harm reduction policy in Taiwan: Toward a comprehensive understanding of its making and effects," *Harm Reduction Journal* 13, no. 1 (2016). 1-8.

> *Despite [Taiwan's] strict anti-drug policies, the program reduced new HIV infections by 90% within four years—demonstrating the public health and fiscal power of targeted harm reduction policies.*

Despite the extensive data supporting harm reduction in mitigating drug-related harm, ongoing misinformation about drugs and those who use them continues to hinder widespread acceptance of these strategies in the United States. However, other nations such as Portugal, Uruguay, the Netherlands, Canada, and Mexico have shifted towards more effective policies for mitigating the potential dangers of drug use. An international trend is emerging, with more nations adopting harm reduction approaches that uphold individual freedom and recognizing the right of people to make informed decisions about drug use and treatment. American policymakers should similarly refocus drug policies from the supply to the demand side and work primarily to reduce he harmful effects of drug use.

PART 2

WHAT IS HARM REDUCTION AND HOW IS IT USED?

"Harm reduction" refers to any program or strategy that provides services designed to protect drug users from disease or harm, without requiring them to stop using substances.[10] Rather than requiring abstinence as a precondition for support, harm reduction helps individuals even if they continue to use—offering support, tools, and services that reduce risk and increase stability. Some core principles of harm reduction programs include: reducing the negative health, social, and legal impacts of drug use; respecting the human rights and dignity of drug users; and prioritizing public health over criminalization.[11]

Despite its proven effectiveness, harm reduction is often met with significant resistance, primarily due to the misconception that it "enables" drug use, a claim that is simply untrue. Although often discussed in the context of substance use, harm reduction is a well-established public health principle found across many areas of society. Laws

10 R. Corey Waller, Kelly J. Clark, Alex Woodruff, Jean Glossa, and Andrey Ostrovsky, "Guide for Future Directions for the Addiction and OUD Treatment Ecosystem," *NAM Perspectives* 2021, National Academy of Medicine. www.ncbi.nlm.nih.gov/pmc/articles/PMC8406500 (17 July 2025).

11 Harm Reduction Coalition, "Principles of Harm Reduction," *Harm Reduction*, National Harm Reduction Coalition, n.d. https://harmreduction.org/about-us/principles-of-harm-reduction/ (17 July 2025).

requiring seatbelts, campaigns promoting designated drivers, gambling problem hotlines and initiatives like tobacco cessation programs all aim to reduce the risks associated with certain behaviors—without banning the behaviors outright. Harm reduction is a practical extension that follows that same principle of public safety.

> *Despite its proven effectiveness, harm reduction is often met with significant resistance, primarily due to the misconception that it "enables" drug use, a claim that is simply untrue.*

Harm reduction empowers drug users to make informed decisions about their health, cultivates trust, fosters a community that supports the person behind the substance use disorder, and ultimately saves lives. These programs acknowledge the reality that both licit and illicit drug use exists in society, and it aims to minimize death, disease, and harm throughout the entire spectrum of drug-using behaviors.

2.1 COMMON PRACTICES AND TOOLS WITH IMPLEMENTATION EXAMPLES

NALOXONE

Naloxone, a medication that reverses opioid overdoses, is available in nasal spray and injectable forms and can be administered by laypeople. It has no potential for abuse and a 75-100% efficacy rate for saving lives.[12] By expanding its accessibility to the public, naloxone has played a critical role in reducing opioid overdose deaths. Between 1996 and 2014, individuals without any formal medical training in the United States successfully reversed at least 26,500 opioid overdoses using naloxone.[13]

12 Rachael Rzasa Lynn and J.L. Galinkin, "Naloxone dosage for opioid reversal: current evidence and clinical implications," *Therapeutic Advances in Drug Safety* 9 (2018). 63–88.

13 Eliza Wheeler, T. Stephen Jones, Michael K. Gilbert, and Peter J. Davidson, "Opioid Overdose Prevention Programs Providing Naloxone to Laypersons — United States, 2014," Centers for Disease Control and Prevention, June 19, 2015. pp. 631–636.

A notable example of this success is the Baltimore Student Harm Reduction Coalition (BSHRC).[14] The BSHRC Overdose Education and Naloxone Distribution program (OEND) focused on distributing naloxone to individuals with opioid use disorders; it also targeted those closest to potential overdose victims, equipping them with the tools and knowledge to respond to an overdose emergency.

OEND was Maryland's first community-based, state-authorized training program that allowed third-party naloxone prescriptions. Since the evaluation of the OEND of the BSHRC conducted in 2016, all states have permitted third-party naloxone prescriptions, although access can still be hindered by bureaucratic barriers such as insurance issues and physician discretion over co-prescription with opioids. These challenges remain especially critical for individuals who may not have access to substance-use-disorder specialists in their area.[14]

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MEDICATION-ASSISTED THERAPY (MAT)

MAT involves the use of Food and Drug Administration (FDA)-approved medications like methadone, buprenorphine, and naltrexone—in combination with behavioral therapies and counseling—to reduce withdrawal symptoms and cravings. Medication for opioid use disorder (MOUD) is considered the gold standard in treatment by the American Society of Addiction Medicine and is recommended for individuals at any severity level of opioid use disorder. It is important to note that only three currently available medications have received this designation, in part, due to the FDA's lengthy approval processes.

Other possible treatment options, like ibogaine and glucagon-like peptide-1 agonists (GLP-1s), show a great deal of promise. Ibogaine is a naturally occurring psychedelic with the

[14] Dinah A. Lewis, "Evaluation of the Overdose Education and Naloxone Distribution Program of the Baltimore Student Harm Reduction Coalition," *American Journal of Public Health* 106 (2016). 1243–1246.

potential to reduce both physical withdrawal symptoms from opioid addiction and psychological dependence without the need for ongoing medication. Early trials in Mexico have shown 75% of opioid-addicted individuals were able to remain abstinent from opioids for a full year following a single ibogaine treatment. However, ibogaine is a Schedule I drug in the United States and not yet approved by the FDA for the treatment of opioid use disorder. As such, it is not a legally available option in the United States despite interest from states in financing FDA-supervised clinical trials. Therefore, this therapy is inaccessible to individuals who cannot afford to travel to foreign jurisdictions and pay cash for a costly treatment, despite its promising efficacy in addressing opioid use disorder.[15]

GLP-1 medications, such as Ozempic (semaglutide), mimic a natural hormone released by the small intestine after eating. By slowing the movement of food through the gut and boosting insulin production, they increase feelings of fullness and suppress appetite. Early trials have also shown that GLP-1s can reduce opioid cravings by up to 40% and lower the risk of opioid overdose by 40% compared to those not taking the medication. While GLP-1s are FDA-approved for conditions like diabetes and obesity, they are not approved for treating addiction, which means insurance does not cover them—putting the treatment out of reach for many.[16] For now, the three existing FDA-approved treatments present the best available option of MOUD for most Americans.

While GLP-1s are FDA-approved for conditions like diabetes and obesity, they are not approved for treating addiction, which means insurance does not cover them—putting the treatment out of reach for many.

15 Madison Carlino, *Ibogaine Treatment for Opioid Use Disorder*, (Washington, DC: Reason Foundation, March 2024). pp. 12–19.

16 Mark Conley, "Five things to know about GLP-1s and addiction," Weblog post, Insights by Stanford Medicine, Stanford University School of Medicine, 25 April 2025. https://med.stanford.edu/news/insights/2025/04/ozempic-addiction-glp-1s-mounjaro-lembke.html (29 July 2025).

Despite its designation as an evidence-based, high-quality treatment option, significant barriers to accessing MOUD remain. For example, long-term methadone dispensing requires patients to visit outpatient methadone clinics daily, which—due in no small part to the stigma surrounding drug use—are often located in remote areas and operate limited hours, imposing significant and sometimes insurmountable burdens on patients who may not have reliable transportation. In contrast, buprenorphine can be dispensed at local pharmacies, and any physician is able to prescribe it. This wasn't always the case, but with the removal of the x-waiver (which required doctors to receive a special Drug Enforcement Administration (DEA) waiver to prescribe buprenorphine for the treatment of opioid use disorder), prescribing privileges have expanded.

However, despite these advancements in buprenorphine accessibility, much work remains to ensure patient access to effective treatments.[17] In addition to barriers such as medication availability and prior authorization requirements, patients and physicians are also often wary of MAT. Many individuals hesitate to pursue medications like methadone or buprenorphine due to concerns about how they'll be perceived by their communities or employers. While these medications significantly reduce overdose risk when used as prescribed, one potential concern is that relapse after a period of MAT can increase the likelihood of overdose, as individuals may incorrectly assume they can tolerate the same doses as before treatment. This hesitation—combined with regulatory and logistical hurdles—helps explain why only about 20% of those who could benefit from medication-assisted treatment ever initiate care.[18] Although more physicians are now permitted to prescribe buprenorphine, many receive little to no training in medication-assisted treatment unless they specialize in addiction medicine—leading to hesitation and underutilization.

Moreover, when buprenorphine is ordered through an electronic medical record system, the Suspicious Orders Report System (SORS)—a centralized database established under the Substance-Use Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act (SUPPORT ACT)—flags orders as "suspicious" to adhere to

17 Laura Wooster, "The X-Waiver is Gone… But There is a Lot More Work to do to Increase Access to Opioid Use Disorder Treatment," Blog post, Regs & Eggs, American College of Emergency Physicians, March 23, 2023. https://www.acep.org/federal-advocacy/federal-advocacy-overview/regs--eggs/regs--eggs-articles/regs--eggs---march-23-2023 (17 July 2025).

18 National Institute on Drug Abuse, "Only 1 in 5 U.S. Adults with Opioid Use Disorder Received Medications to Treat It in 2021," Blog post, NIDA News, National Institute on Drug Abuse, August 3, 2023. https://nida.nih.gov/news-events/news-releases/2023/08/only-1-in-5-us-adults-with-opioid-use-disorder-received-medications-to-treat-it-in-2021 (17 July 2025).

DEA regulations. However, the law does not specify how much buprenorphine should be considered suspicious, leaving distributors to define the thresholds themselves, which fosters uncertainty in prescribing decisions and more conservative dispensation of MAT. Expanding access to MAT and reshaping the understanding of MAT are essential steps to maximize the effectiveness of MAT and MOUD and ensure individuals who need treatment can receive it.

SYRINGE SERVICE PROGRAMS

Syringe service programs (SSPs) are another essential harm reduction effort aimed at preventing the spread of infectious diseases like HIV and hepatitis C. These programs allow individuals to exchange used syringes and needles for sterile ones while also providing other sterile injecting equipment, such as sterile water, cookers, filters, ascorbic acid, alcohol swabs, and tourniquets. More than three decades of research demonstrated that SSPs are not only cost-effective but also highly effective in reducing blood-borne infections such as HIV and hepatitis C.[19]

Despite robust evidence supporting SSPs, these programs often face restrictive policies fueled by the misconception that they "enable" drug use.

Despite robust evidence supporting SSPs, these programs often face restrictive policies fueled by the misconception that they "enable" drug use. Many syringe service programs in the U.S. operate under a one-for-one exchange model, requiring individuals to return a used syringe to receive a clean one. While this policy is intended to promote accountability and reduce environmental waste, it can also limit the ability of frontline providers to prevent the spread of infectious diseases, particularly among individuals who are not consistently engaged in services.

[19] Centers for Disease Control and Prevention, "CDC Resources on the Safety and Effectiveness of SSPs," Blog post, Syringe Services Programs, Centers for Disease Control and Prevention, June 7, 2023. https://www.cdc.gov/syringe-services-programs/php/safety-effectiveness.html (17 July 2025).

Vancouver, Canada—home to one of the largest syringe distribution programs in the world—originally followed a strict one-for-one exchange model. In the early 2000s, public health authorities, working in coordination with local service providers, transitioned to a needs-based model that allowed individuals to receive a sufficient number of syringes without returning an equal amount. This shift enabled greater flexibility in service delivery, expanded the number of access points—including those based in housing facilities—and contributed to a 40% decline in syringe sharing and HIV transmission rates among people who inject drugs.[20, 21] A study in California found that those involved in a needs-based exchange were 57% percent less likely to reuse needles when compared to those in more restrictive programs.[22]

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SUPERVISED CONSUMPTION SITES

In recent years, supervised consumption sites (SCSs) have emerged as a locally driven response to rising overdose deaths and public drug use. While these facilities remain the subject of policy debate, early pilot programs—such as those in New York City and

20 Koharu Loulou Chayama, Cara Ng, Taylor Fleming, Will Small, Kimberly L. Sue, and Ryan McNeil, "Housing-based syringe services programs to improve access to safer injecting equipment for people who inject drugs in Vancouver, Canada: a spatially oriented qualitative study," *Harm Reduction Journal* 20 (2023). 1–10.

21 "Syringe Service Program and Syringe Access Recommendations," Washington State Department of Health, doh.wa.gov, September 2019. https://doh.wa.gov/sites/default/files/legacy/Documents/Pubs/150-122-WADOHSyringeAccessRecommendation2019.pdf (29 July 2025).

22 "CDPH Syringe Exchange Program Distribution Policy Issue Brief," California Department of Public Health, cdph.ca.gov, May 2020. https://www.cdph.ca.gov/Programs/CID/DOA/CDPH%20Document%20Library/CDPH%20SEP%20Distribution%20Policy%20Issue%20Brief%20(Approved%20w%20Logos).pdf (29 July 2025).

internationally—have shown promise in reducing fatal overdoses and easing the burden on emergency response systems.[23]

At their core, SCSs are designed to prevent loss of life by allowing individuals to use pre-obtained substances in a monitored setting, where trained personnel can intervene immediately in the event of an overdose. While their immediate purpose is to prevent overdose deaths, SCSs also serve as a point of contact for people who are often disconnected from the healthcare system. On-site staff can offer clean supplies, test for dangerous contaminants like fentanyl, and provide direct referrals to medical care, treatment programs, or housing support.

> *In the U.S., implementation of SCSs has faced legal challenges under 21 U.S. Code § 856—commonly referred to as the "crack house statute"—which prohibits maintaining any place for the purpose of using illegal drugs.*

Research from international pilot sites—including Vancouver, Canada, and Barcelona, Spain—demonstrates that supervised consumption sites can lead to measurable reductions in overdose deaths and the spread of infectious diseases. In Canada, supervised sites have overseen more than 49,000 overdose interventions with no on-site deaths, and a 2023 study in Toronto found a 67% decrease in overdose mortality in neighborhoods near newly established facilities. Vancouver's Insite site also demonstrated a 35% drop in local overdose deaths, compared to just 9% citywide—highlighting the localized impact of these services.[24] Similarly, the supervised injection site in Barcelona was associated with a 50%

[23] Layal Bou Harfouch, "Reducing Harm, Saving Lives: The Case for Supervised Drug Consumption Sites," Reason Foundation, 2025. www.reason.org/commentary/reducing-harm-saving-lives-the-case-for-supervised-drug-consumption-sites (20 July 2025).

[24] Paige Peacock, "PC decision to abandon safe injection sites amid opioid crisis could have deadly implications; Peel's plan up in the air," Blog post, The Pointer, The Pointer Group Incorporated, August 24, 2024. www.thepointer.com/article/2024-08-24/pc-decision-to-abandon-safe-injection-sites-amid-opioid-crisis-could-have-deadly-implications-peel-s-plan-up-in-the-air (20 July 2025).

decline in overdose deaths over a 17-year period, suggesting a potential role in reducing fatal overdoses through safer use and immediate medical intervention.[25]

In the U.S., implementation of SCSs has faced legal challenges under 21 U.S. Code § 856—commonly referred to as the "crack house statute"—which prohibits maintaining any place for the purpose of using illegal drugs. Regardless of the current regulations, several jurisdictions, including New York City, Philadelphia, and Rhode Island, are currently piloting or exploring such programs under state or local authority, often in partnership with public health agencies.[26, 27]

In 2021, New York City became the first jurisdiction in the United States under Mayor Bill de Blasio to open city-authorized SCSs, operated by OnPoint NYC in East Harlem and Washington Heights. These sites provide a supervised environment for individuals to use pre-obtained substances under the observation of trained staff equipped to respond in the event of an overdose. In their first year of operation, the centers recorded more than 48,500 visits by approximately 2,800 clients, with 636 on-site overdose interventions and no reported fatalities. Emergency medical services were required in less than 0.05% of visits, and it's estimated the sites prevented more than 39,000 instances of public drug use.[28]

INTEGRATED SERVICE HUBS

Some harm reduction models have evolved into integrated service hubs. Programs like Boston's Access, Harm Reduction, Overdose Prevention and Education (AHOPE) initiative take a strategic approach by pairing syringe exchange and naloxone distribution with direct access to primary care and addiction treatment. Similarly, mobile initiatives such as the Community Care in Reach program deliver medical and behavioral health services to areas identified as opioid overdose "hotspots," ensuring that resources are deployed where they

25 Jorge Finke and Jie Chan, "The Case for Supervised Injection Sites in the United States," *American Family Physician* 105 (2022). 454–456.

26 Mary Crevello, "The War on Drugs or the War on Drug Users? Supervised Consumption Site in the United States as a Harm Reduction Strategy to Fight the Opioid Epidemic," *Marquette Benefits and Social Welfare Law Review* 25 (2023): Article 9.

27 Jeffrey A. Singer, "New York City, Rhode Island, and Now Minnesota Defy the 'Crack House' Statute," Cato Institute, 2023. www.cato.org/blog/new-york-city-rhode-island-now-minnesota-defy-crack-house-statute (20 July 2025).

28 Tara Haelle, "U.S. Opioid Deaths Are Out of Control. Can Safe Injection Sites Help?", *ScienceNews*, February 14, 2024. www.sciencenews.org/article/overdose-prevention-opioid-safe-injection-harm-reduction (20 July 2025).

are most needed.[29, 30] These models consolidate multiple services in one location, making it easier for individuals to connect with care—particularly those who face logistical or economic challenges.

DECRIMINALIZATION

In 2001, Portugal implemented a new approach to low-level drug possession, treating it as a public health concern rather than a criminal offense. Personal use remained prohibited but was no longer prosecuted, and individuals were redirected to dissuasion panels with the option of treatment referrals or civil fines. This policy was coupled with significant investment into recovery services and harm reduction infrastructure.

> *… Portugal experienced declines in overdose deaths, HIV transmission, and drug-related incarceration by up to 90%—demonstrating that a health-oriented model can yield measurable improvements in both public safety and individual outcomes.*

In the years that followed, Portugal experienced declines in overdose deaths, HIV transmission, and drug-related incarceration by up to 90%—demonstrating that a health-oriented model can yield measurable improvements in both public safety and individual outcomes. However, Portugal's experience also illustrates that long-term success depends on sustained investment and program oversight. During the COVID-19 pandemic, the country experienced a sharp drop in funding for drug treatment and harm reduction services—from €76 million to €16 million—as operations were decentralized and public health budgets reallocated to other uses. These changes contributed to longer wait times for care and a visible resurgence in public drug use in some urban areas. While Portugal's

[29] Katie Cavender, "Harm Reduction as an End in Itself," Blog post, OCCME News, Harvard Medical School Office for Community-Centered Medical Education, Dec. 11, 2024. https://occme.hms.harvard.edu/news/harm-reduction-end-itself (20 July 2025).

[30] Center for Community Health Improvement, "Boston Health Care for the Homeless Program (BHCHP)," Boston Health Care for the Homeless Program, Massachusetts General Hospital, n.d. www.massgeneral.org/community-health/cchi/programs/boston-health-care-for-the-homeless (20 July 2025).

early outcomes remain instructive, its more recent challenges serve as a reminder that policy shifts alone are not enough—without stable infrastructure and local accountability, even effective reforms can falter.[31, 32]

2.2 IS HARM REDUCTION A SAFE PRACTICE?

Safety is the cornerstone of harm reduction efforts, particularly in the treatment of OUD. Harm reduction prioritizes minimizing the risks associated with opioid misuse, withdrawal, and relapse while supporting long-term recovery. It is often described as a comprehensive approach because harm reduction integrates evidence-based medications with counseling, support services, and built-in safety mechanisms to effectively manage OUD and reduce harm.

> *Newcomers to MAT often perceive this approach as merely replacing one substance with another. However, this view overlooks the important safeguards embedded in the mechanism of these medicines.*

MAT is considered the gold standard of treating OUD, involving the three primary medications currently permitted by the FDA—methadone, buprenorphine, and naltrexone. Newcomers to MAT often perceive this approach as merely replacing one substance with another. However, this view overlooks the important safeguards embedded in the mechanism of these medicines. Methadone is a full opioid agonist that reduces withdrawal symptoms and cravings while also reducing overdose risk when administered in controlled settings. Buprenorphine, a partial opioid agonist, has a "ceiling effect" that reduces the risk of respiratory depression and overdose compared to full agonists, making it harder for individuals to overdose, even with misuse. Naltrexone, an opioid antagonist, blocks opioid

31 Gregory Shea, "Is Portugal's Drug Decriminalization a Failure or Success? The Answer Isn't So Simple," Blog post, Knowledge at Wharton, University of Pennsylvania, September 5, 2023. https://knowledge.wharton.upenn.edu/article/is-portugals-drug-decriminalization-a-failure-or-success-the-answer-isnt-so-simple/ (20 July 2025).

32 Transform Drug Policy Foundation, "Drug Decriminalisation in Portugal: Setting the Record Straight," Transform Drug Policy Foundation, 2023. www.transformdrugs.org/blog/drug-decriminalisation-in-portugal-setting-the-record-straight (20 July 2025).

receptors in the brain, preventing opioids from producing their effects and reducing the risk of relapse. Unlike opioid agonists methadone or buprenorphine, which activate these receptors to reduce withdrawal and cravings, naltrexone completely blocks them, eliminating any opioid effect. With no misuse potential and minimal regulatory requirements, naltrexone is a safe and accessible treatment option for many patients.

Naloxone, a life-saving medication that reverses opioid overdose, is central to harm reduction strategies. Its distribution is facilitated through community-based opioid education and naloxone distribution programs, as well as community pharmacies using standing orders or statewide protocols. These initiatives demonstrably expand access and reduce overdose rates.[33]

Innovative naloxone distribution models—such as vending machines, kiosks, and mail-order programs—have emerged as promising tools to broaden access, reduce stigma, and overcome logistical barriers. These models offer anonymous, 24/7 availability, making them especially effective for reaching individuals who may be disconnected from formal healthcare systems. However, reports from several jurisdictions show that these machines are often emptied within hours of being stocked, raising concerns about overuse, hoarding, and supply chain disruptions. To ensure naloxone is available when it's most needed, some localities have started implementing limits per user, tracking replenishment data, or integrating optional registration to balance privacy with accountability. When paired with responsible supply management and community engagement, these tools remain a critical component in the effort to reduce fatal overdoses and bring life-saving interventions closer to those at risk.[34]

Syringe service programs, another key harm reduction strategy, often face misconceptions linking them to increased crime and violence. However, research shows no significant rise in crime in areas with SSPs. In fact, these programs improve community safety by reducing syringe litter and connecting those who use drugs to other essential services, such as naloxone distribution and treatment referrals. SSPs address safety concerns by offering safe disposal options, which mitigate public health risks like needlestick injuries. Additionally,

[33] Robert M. Bohler et al., "The policy landscape for naloxone distribution in four states highly impacted by fatal opioid overdoses," *Drug and Alcohol Dependence Reports* 6 (2023) Elsevier. www.ncbi.nlm.nih.gov/pmc/articles/PMC9838196 (16 April 2025).

[34] "Naloxone Vending Machines: Considerations for Implementation," Prevention Technology Transfer Center Network, Great Lakes PTTC, May 27, 2022. www.pttcnetwork.org/wp-content/uploads/2022/06/Vending-Machine-Brief_05_27_2022_FINAL_0.pdf (16 April 2025).

they provide critical overdose prevention tools, such as fentanyl test strips, and expand access to medication assisted treatments, significantly improving public health outcomes.[35]

> *Syringe service programs, another key harm reduction strategy, often face misconceptions linking them to increased crime and violence. However, research shows no significant rise in crime in areas with SSPs.*

The adaptability of harm reduction strategies was evident during the COVID-19 lockdown. Emergency measures that allowed MAT patients to take home up to 28 days of methadone doses reduced exposure to COVID-19 while maintaining treatment continuity. Telemedicine emerged as an essential tool for initiating buprenorphine treatment, bypassing traditional in-person requirements and expanding access without compromising safety. Similarly, virtual OEND programs ensured continued naloxone distribution, exemplifying adaptability and trust in addressing public health crises.[36]

The emphasis on safety within MAT, naloxone distribution, and SSPs aligns with the broader objectives of harm reduction. By reducing cravings, withdrawal symptoms, and overdose risks, these interventions provide patients with a stable foundation for long-term recovery. Structured delivery systems, rigorous oversight, and adaptive policies ensure these programs remain safe, effective, and accessible. By prioritizing safety as a core principle in the development and implementation of treatment programs, harm reduction offers evidence-based solutions that address the complexities of opioid use disorder while protecting and empowering the individuals they serve.

[35] National Association of Counties. "Syringe Services Programs: A NACo Opioid Solutions Strategy Brief." January 23, 2023. www.naco.org/resource/syringe-services-programs-naco-opioid-solutions-strategy-brief (16 April 2025).

[36] Kimberly J. Beiting et al., "Targeted virtual opioid overdose education and naloxone distribution in overdose hotspots for older adults during COVID-19," *J Am Geriatr Soc* 70 (2022): E26–E29. Wiley Online. https://agsjournals.onlinelibrary.wiley.com/doi/10.1111/jgs.18037 (21 July 2025).

2.3 CLINICAL GUIDELINES AND BEST PRACTICES

Central to the harm reduction philosophy is the recognition that small, incremental improvements in health and well-being are meaningful progress. By prioritizing support and resources, harm reduction empowers individuals to make informed choices about their health while fostering trust and engagement in the clinical setting.

NALOXONE AS A BEST PRACTICE

Naloxone exemplifies on of the best clinical practices in harm reduction. Distribution programs supply naloxone kits and provide education on recognizing and responding to overdoses, empowering individuals, peers, and families to intervene effectively in life-threatening situations. The Centers for Disease Control (CDC) emphasizes the importance of co-prescribing naloxone alongside opioid medications that mitigate overdose risks for at-risk patients, such as those on high-dose opioids or those using concurrent benzodiazepines.[37]

INFECTIOUS DISEASE PREVENTION

Effective harm reduction programs follow clinical best practices to not only reduce fatalities but also prevent the spread of infectious disease. This includes the distribution of low dead-space syringes, which retain less blood than traditional syringes and are associated with a significantly lower risk of HIV and hepatitis C transmission when sharing occurs. One UK-based study found that people who inject drugs and used only LDSS were 76% less likely to contract HCV compared to those using detachable syringes, while another found that introducing detachable LDSS not only reduced new HCV infections by an estimated 30% over ten years but also generated over £4 million in healthcare savings and 1,000 additional quality-adjusted life years.[38, 39]

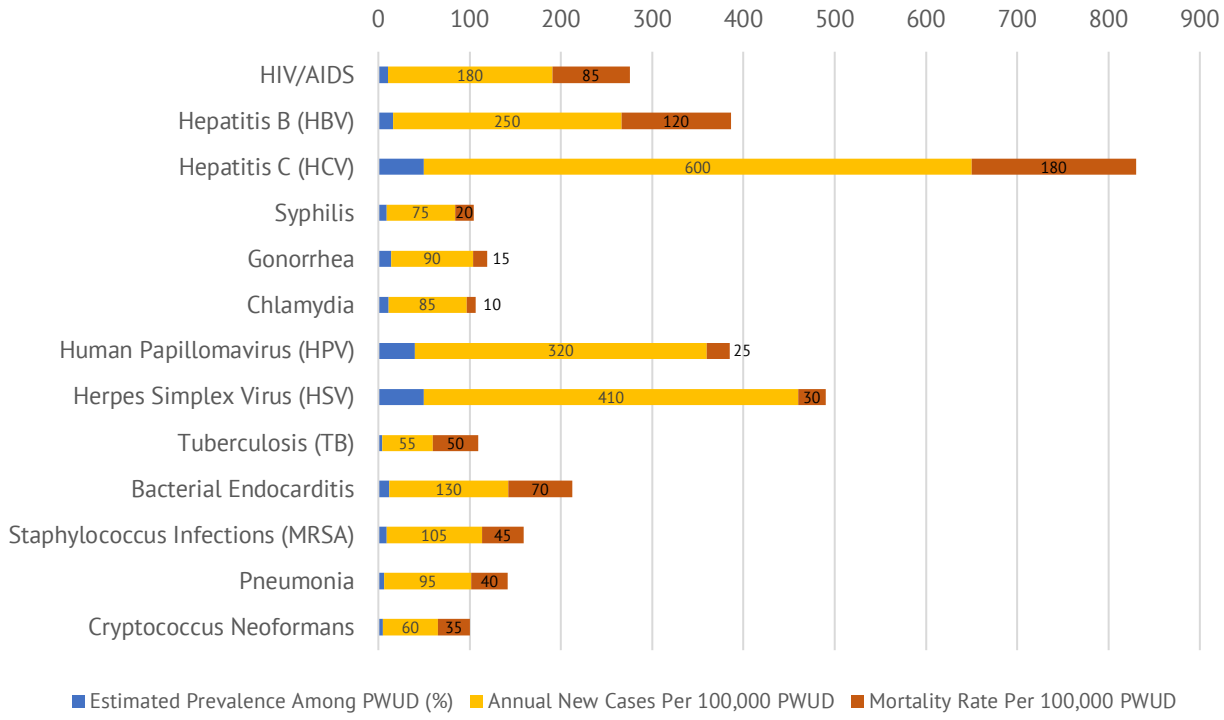
Programs also co-locate services in accordance with CDC guidance, combining syringe access with on-site testing for HIV, hepatitis C, and sexually transmitted infections, and linking individuals to same-day or rapid-start treatment when possible. On-site

[37] "Lifesaving Naloxone," Centers for Disease Control and Prevention, Stop Overdose, 3 Oct. 2023. www.cdc.gov/stop-overdose/caring/naloxone.html (16 April 2025).

[38] Elizabeth Hancock et al., "Detachable low dead space syringes for the prevention of hepatitis C among people who inject drugs in Bristol, UK: an economic evaluation," *Addiction* 115 (2019). 702–713.

vaccinations for hepatitis A and B target preventable infections commonly affecting at-risk populations, such as drug users. By ensuring rapid linkage to care for individuals with positive results, harm reduction programs enhance both individual health outcomes and broader public health efforts.[39, 40, 41, 42, 43]

FIGURE 1: PREVALENCE AND IMPACT OF COMMUNICABLE DISEASES AMONG PEOPLE WHO USE DRUGS



39 Amy Trickey et al., "The Effectiveness of Low Dead Space Syringes for Reducing the Risk of Hepatitis C Virus Acquisition Among People Who Inject Drugs: Findings From a National Survey in England, Wales, and Northern Ireland," *Clinical Infectious Diseases* 75 (2022). 1073–1077.

40 "Safety and Effectiveness of Syringe Services Programs (SSPs)," Centers for Disease Control and Prevention, CDC.gov, 25 July 2023. www.cdc.gov/syringe-services-programs/php/safety-effectiveness.html (1 Aug. 2025).

41 "Implementing HIV Testing in Nonclinical Settings: A Guide for HIV Testing Providers," Centers for Disease Control and Prevention, CDC.gov, November 2024. www.cdc.gov/hivpartners/media/pdfs/2024/11/CDC_HIV_Implementing_HIV_Testing_in_Nonclinical_Settings.pdf (1 Aug. 2025).

42 "Rapid ART Initiation," Clinical Guidelines Program, New York State Department of Health, HIVGuidelines.org, 16 January 2024. www.hivguidelines.org/guideline/hiv-art-rapid/ (accessed 1 Aug. 2025).

43 "People Who Inject Drugs and Viral Hepatitis," Centers for Disease Control and Prevention, CDC.gov, 17 April 2023. www.cdc.gov/hepatitis/hcp/populations-settings/pwid.html (accessed 1 Aug. 2025).

Trauma-Informed Responses

Recognizing the influence of adverse experiences on substance use, harm reduction programs adopt trauma-informed frameworks that emphasize safety and trust. A trauma-informed framework is an approach to care that acknowledges the widespread impact of trauma, actively works to avoid retraumatization, and prioritizes physical and emotional safety, choice, collaboration, and empowerment. Employing staff with experience using drugs or with someone who uses drugs enhances relatability, reduces stigma, and strengthens the effectiveness of service delivery. These programs also provide written educational materials on safer drug use practices, overdose prevention, and strategies for mitigating infectious diseases. Individuals are empowered with techniques to minimize risks, such as using sterile supplies, avoiding polysubstance use, and testing substances for contaminants like fentanyl.[44]

By reducing barriers to entry, such as ID requirements or mandatory appointments, these programs ensure services are accessible and inclusive. The CDC further emphasizes the need for flexibility and individualized care in clinical decision-making. Trauma-informed care recognizes that rigid policies can retraumatize patients and lead to harmful consequences, including withdrawal symptoms, unmanaged pain, and heightened overdose risk.[45]

“Trauma-informed care recognizes that rigid policies can retraumatize patients and lead to harmful consequences, including withdrawal symptoms, unmanaged pain, and heightened overdose risk.”

[44] “Practical Guide for Implementing a Trauma-Informed Approach,” Substance Abuse and Mental Health Services Administration, *SAMHSA Publications, 2023*. https://library.samhsa.gov/sites/default/files/pep23-06-05-005.pdf (16 April 2025).

[45] Deborah Dowell, “CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022,” Centers for Disease Control and Prevention, Nov. 4, 2022. 1–95. www.cdc.gov/mmwr/volumes/71/rr/rr7103a1.htm (16 April 2025).

PART 3

TRADITIONAL THOUGHTS SURROUNDING HARM REDUCTION

The evolution of U.S. drug policy shows a clear shift toward punitive measures, beginning in the early 20th century. The Harrison Narcotics Tax Act of 1914 criminalized the "non-medical" use of opium and cocaine, marking a pivotal change in how addiction was viewed—transforming it from a public health issue to a criminal justice matter. This law paved the way for subsequent policies like the Boggs Act of 1951 and the Narcotics Control Act of 1956, both of which imposed mandatory minimum sentences and intensified enforcement efforts. These approaches failed to address the underlying social and psychological drivers of substance use, inadvertently fueling the growth of underground drug markets and contributing to the cycle of criminalization.[46]

In the 1970s, President Richard Nixon's War on Drugs marked a sharp turn toward a supply-side approach to drug control, framing drug use as "public enemy number one." The Controlled Substances Act of 1970 categorized drugs based on their potential for abuse—

[46] Jennifer D. Oliva and Taleed El-Sabawi, "The 'New' Drug War," *Virginia Law Review* 110, no. 5 (2024), Virginia Law Review Online. https://virginialawreview.org/articles/the-new-drug-war/ (12 July 2025).

often conflating this with so-called "addictiveness"—and prioritized enforcement and criminal penalties over treatment. Although early harm reduction tools began to emerge during this period, such as federally authorized methadone maintenance programs operated by private and nonprofit providers, the dominant policy orientation remained punitive. These early programs were permitted under federal guidelines but were limited in scope and heavily regulated, reflecting broader skepticism toward health-based interventions. This era set the stage for decades of enforcement-first drug policy that often sidelined more effective, evidence-based alternatives.[46]

The War on Drugs dramatically escalated during the 1980s under President Ronald Reagan. The Anti-Drug Abuse Act of 1986 established mandatory minimum prison sentences for drug offences and created a 100:1 sentencing disparity between crack and powder cocaine, whereby an individual caught with 5 grams of crack cocaine faced the same sentence as someone caught with 500 grams of powdered cocaine. This policy disproportionately punished individuals involved with crack, despite its chemical similarity to powder cocaine, fueling racial disparities in drug-related incarceration. During this period, federal, state, and local governments also significantly boosted funding for interdiction and law enforcement, further entrenching the punitive approach. Public rhetoric, epitomized by campaigns like "Just Say No," engendered stigma toward drug users as dangerous criminals and framed addiction as a moral failing.[46]

"Public rhetoric, epitomized by campaigns like "Just Say No," engendered stigma toward drug users as dangerous criminals and framed addiction as a moral failing."

The "tough-on-crime" policies of the 1990s further entrenched the punitive approach. The Violent Crime Control and Law Enforcement Act of 1994 increased funding for law enforcement and prisons, resulting in a dramatic rise in incarceration rates for non-violent drug offenses. At the same time and not coincidentally, synthetic drugs like methamphetamine emerged, highlighting the shortcomings of supply-side policies in responding to shifting drug markets. While some public health initiatives aimed at supporting people who use drugs and reducing harm began to gain traction through

increased advocacy and implementation, they were overshadowed by a persistent focus on punishment and control.[46]

The 2000s saw the onset of the opioid epidemic, fueled by the overprescription of painkillers and a subsequent rise in heroin and fentanyl use. Notably, the fentanyl crisis itself is a direct consequence of prohibitionist drug policies, including aggressive crackdowns on prescription opioids. which have driven the illicit drug market toward increasingly potent and dangerous substances. As access to legal pain medications became restricted, many individuals turned to illicit markets for relief. The lack of regulation in these markets, combined with the ease of synthesizing fentanyl, led to a rapid surge in overdose deaths—tripling between 2010 and 2015. This phenomenon, colloquially known as the Iron Law of Prohibition, has been well-documented in historical drug policy—where strict enforcement leads to the emergence of more concentrated and hazardous drug formulations.[47]

In the wake of the opioid crisis's expansion into suburban and rural communities, policymakers introduced legislation like the Comprehensive Addiction and Recovery Act (CARA) of 2016, aiming to address the epidemic through prevention and treatment initiatives.

Although CARA authorized over $181 million in annual funding for these programs, Congress often failed to allocate the full amount during the budgeting process. As a result, many of the initiatives envisioned under the law were underfunded or delayed, limiting its overall impact.[47] Simultaneously, the government continued to invest heavily in enforcement-centric policies, such as drug-induced homicide laws and broad scheduling of fentanyl analogs. These measures, intended to deter drug distribution, have shown limited effectiveness in reducing overdose deaths and may inadvertently hinder public health efforts by discouraging individuals from seeking emergency assistance during overdoses. This approach raises concerns about the efficient allocation of funding and highlights the need for strategies that prioritize both public safety and health outcomes.[48]

Despite over a trillion dollars being spent on enforcement since the 1980s, drug availability has not decreased. In fact, punitive policies created incentives for the production of more

47 Leo Beletsky and Corey S. Davis, "Today's Fentanyl Crisis: Prohibition's Iron Law, Revisited," *International Journal of Drug Policy* 46 (2017) Elsevier. https://doi.org/10.1016/j.drugpo.2017.05.050 (20 July 2025).

48 "Progress of Four Programs from the Comprehensive Addiction and Recovery Act," National Academies of Sciences, Engineering, and Medicine, *National Academies Press*, March 23, 2021. www.ncbi.nlm.nih.gov/books/NBK575704/ (21 July 2025).

potent substances, such as synthetic opioids like fentanyl, which have only worsened the overdose crisis. In 2021 alone, nearly 106,000 overdose deaths were recorded—a grim testament to how supply-side strategies have failed to address the root causes of substance abuse.[49, 50]

> *Despite over a trillion dollars being spent on enforcement since the 1980s, drug availability has not decreased.*

The persistence of enforcement-heavy policies, alongside emerging public health initiatives, highlights the contradictions within U.S. drug policy. While initiatives like naloxone distribution and syringe service programs demonstrate progress, they are frequently underfunded, resisted, and limited in scope, hindered by the enduring influence of stigma and the legacy of punitive approaches. Understanding this historical context is essential to charting a new path forward—one that prioritizes evidence-based harm reduction strategies that can provide tangible benefits over failed enforcement models.

3.1 STIGMA AND DRUG POLICY

Public views on harm reduction are shaped by a mix of social norms, cultural beliefs, and political messaging—often resulting in polarized opinions that influence both funding decisions and implementation. Despite decades of research demonstrating their effectiveness in reducing overdose deaths, infectious disease transmission, and emergency service use, harm reduction programs continue to face skepticism. Much of this resistance stems from persistent misconceptions: that these services condone drug use or undermine personal responsibility. In reality, they are evidence-based strategies that improve both individual outcomes and community stability.[51]

49 Jennifer J. Carroll *et al.*, "Drug Induced Homicide Laws May Worsen Opioid Related Harms: An Example from Rural North Carolina," *International Journal of Drug Policy* 97 (2021) Elsevier. www.doi.org/10.1016/j.drugpo.2021.103406 (21 July 2025).

50 Peter Reuter, "Setting Priorities: Budget and Program Choices for Drug Control," *University of Chicago Legal Forum* 1994 (1994). 145–173. https://chicagounbound.uchicago.edu/uclf/vol1994/iss1/7/ (21 July 2025).

51 "Drug Overdose Death Rates," National Institute on Drug Abuse, National Institutes of Health, Aug. 21, 2023. www.nida.nih.gov/research-topics/trends-statistics/overdose-death-rates (21 July 2025).

In a 2023 study conducted by researchers at the Recovery Research Institute, 40% of people who use drugs reported not seeking medical care in the past year. Among them, 34% said they avoided care specifically because they feared being mistreated by healthcare providers due to their drug use.

Stigma remains a major barrier in policy and in healthcare access. In a 2023 study conducted by researchers at the Recovery Research Institute, 40% of people who use drugs reported not seeking medical care in the past year. Among them, 34% said they avoided care specifically because they feared being mistreated by healthcare providers due to their drug use.[52] This stigma is no different when dealing with government. In Indiana, political pressure led to the closure of multiple county-run syringe service programs in 2021, despite rising hepatitis C rates and strong evidence of their public health benefits. Before the closures, Scott County's program had helped drive down HIV transmission dramatically—from 235 new cases in 2015 to just a single new case in 2016.[53]

Skepticism off harm reduction policies carry real consequences, particularly for people on the margins—those who may be in the early stages of problematic use but haven't yet experienced a full-blown crisis. Many begin using substances to cope with trauma, chronic pain, or mental health conditions. Stigma, in these cases, can prevent individuals from seeking help at the most critical window: early on, when simple, low-barrier interventions might have redirected their course. Instead, silence and shame often lead to further isolation, more dangerous patterns of use, and costly public interventions down the line.

52 Steven M. Sylvester et al., "Just Say No? Public Attitudes about Supportive and Punitive Policies to Combat the Opioid Epidemic," *Journal of Public Policy 42 no.2*, (2022) *Cambridge University Press*. https://www.cambridge.org/core/journals/journal-of-public-policy/article/just-say-no-public-attitudes-about-supportive-and-punitive-policies-to-combat-the-opioid-epidemic/F606B431943BB3775569FE1434A64426 (21 July 2025).

53 "Healthcare Experiences Among People Who Use Drugs Highlight Mistreatment & Stigma," Weblog post, Recovery Research Institute, Massachusetts General Hospital, 6 July 2023. www.recoveryanswers.org/research-post/healthcare-experiences-among-people-use-drugs-highlight-mistreatment-stigma/ (1 Aug. 2025).

The results are personal harm, missed opportunities for early action, and greater strain on already overburdened systems.[54, 55]

People's beliefs about drug use tend to shape what kinds of policies they support. If drug use is seen as inherently dangerous in all forms, punishment often seems like the only logical response. But not everyone who uses drugs has the same motivations. Some are already in crisis—but many are early in their struggle, trying to cope with pain, trauma, or other stressors. For those people, small, timely interventions can make a real difference before things spiral. Syringe service programs are a good example. When clean syringes aren't available, the risk of HIV and hepatitis C spreads quickly—not just among users, but across emergency rooms and public health systems.

Programs like these reduce those risks, lower long-term healthcare costs, and often serve as the first point of contact for someone who might eventually seek treatment. They are about managing risk, protecting public health, and making sure that bad situations don't become worse—for the individual and for the community around them, without forcing them to hit rock bottom first.[56, 57]

> *"Addressing stigma in this context is about removing preventable barriers to care. The earlier people access support, the more likely they are to stabilize without ever entering high-cost crisis systems."*

54 Mitch Legan**,** "Indiana Needle Exchange That Helped Contain an HIV Outbreak May Be Forced to Close," NPR, 1 June 2021. NPR.org. www.npr.org/sections/health-shots/2021/06/01/1001278712/indiana-needle-exchange-that-helped-contain-an-hiv-outbreak-may-be-forced-to-close (1 Aug. 2025).

55 Michelle Schwartzmier, "My Daughter Died From an Overdose. I'm Sharing Her Story to Help Others," blog post, Partnership to End Addiction, Partnership to End Addiction, August 2017. https://drugfree.org/parent-blog/my-daughter-died-from-an-overdose-im-sharing-her-story-to-help-others/ (21 July 2025).

56 Jenni Savonen et al., "The Perceived Risk of Illicit Drug Use and Views on Drug Policy in the General Population," Journal article, *Drugs: Education, Prevention and Policy*, Taylor & Francis Online, 26 Oct. 2021. https://doi.org/10.1080/09687637.2021.1970114 (21 July 2025).

57 Irene Falgas-Bague et al., "Uncovering Barriers to Engagement in Substance Use Disorder Care for Medicaid Enrollees," *Psychiatric Services* 74, no. 11 (2023), Psychiatric Services Online. https://doi.org/10.1176/appi.ps.20220193 (21 July 2025).

Addressing stigma in this context is about removing preventable barriers to care. The earlier people access support, the more likely they are to stabilize without ever entering high-cost crisis systems. Framing these programs not as ideological statements, but as pragmatic tools that reduce risk, save lives, and conserve public resources, makes it possible to build consensus where it's most needed.

PART 4

THE FISCAL BENEFITS OF HARM REDUCTION

As policymakers look for cost-effective ways to address the consequences of substance use, harm reduction offers a broad set of tools to prevent avoidable public costs. For example, research published in the *International Journal of Drug Policy* found that use of supervised consumption services was associated with a 35% reduction in the likelihood of experiencing a recent non-fatal overdose among people who inject drugs—highlighting how these sites contribute directly to improving individual and public health outcomes. In addition, these sites provide sterile supplies and health monitoring that can prevent complications related to unsafe injection practices, such as abscesses and endocarditis, ultimately reducing hospital admissions. When implemented together, harm reduction strategies like these can generate substantial public savings while improving safety and service access at the community level.[58]

Naloxone availability and use is a practical and cost-effective intervention that enables timely response to overdoses, often eliminating the need for emergency services. While naloxone can be administered in community settings by lay responders, SCSs offer a more structured environment for overdose intervention and naloxone administration. A study

[58] Valerie A. Earnshaw, "Stigma and Substance Use Disorders: A Clinical, Research, and Advocacy Agenda," *American Psychologist* 75, no. 9 (2020): 1300–1311. American Psychological Association. https://doi.org/10.1037/amp0000744 (21 July 2025).

evaluating an SCS in Toronto estimated that each overdose managed on-site resulted in approximately $1,600 CAD in cost savings by avoiding ambulance and emergency department services. Over the program's duration of two years and three months, this amounted to over $2.3 million CAD in savings.[59]

> *Preventing a single HIV infection can result in an estimated $229,800 to $450,000 in lifetime medical cost savings, depending on treatment complexity and comorbidities.*

Preventing a single HIV infection can result in an estimated $229,800 to $450,000 in lifetime medical cost savings, depending on treatment complexity and comorbidities. For hepatitis C, the cost of treatment varies widely. While antiviral regimens can cost between $40,000 and $100,000, cases that progress to liver failure or require transplantation can exceed $500,000 in total medical expenses. These cost ranges reflect the importance of early intervention through harm reduction services, which are designed to prevent infections before they escalate into more severe—and far more expensive—health outcome.[60, 61, 62]

MAT plays a key role in reducing both overdose fatalities and the overall cost burden on healthcare systems. At first glance, it may seem counterintuitive that preventing a fatal overdose results in cost savings—after all, a person who dies no longer needs healthcare services. However, most overdose deaths are not instantaneous. They are often preceded by

59 Ayden I. Scheim et al., "Supervised Consumption Service Use and Recent Non-Fatal Overdose Among People Who Inject Drugs in Toronto, Canada," *International Journal of Drug Policy* 76 (2020) Elsevier. www.sciencedirect.com/science/article/abs/pii/S0955395920303315 (20 July 2025).

60 Shahreen Khair, Cathy A. Eastwood, Mingshan Lu, and Jennifer Jackson, "Supervised Consumption Site Enables Cost Savings by Avoiding Emergency Services: A Cost Analysis Study," *Harm Reduction Journal* 19 (2022) Harm Reduction Journal Online. https://harmreductionjournal.biomedcentral.com/articles/10.1186/s12954-022-00609-5 (20 July 2025).

61 Bruce R. Schackman et al., "The Lifetime Medical Cost Savings From Preventing HIV in the United States," *Medical Care* 53 (2015). 293–301.

62 "Overview of Cost, Reimbursement, and Cost-Effectiveness Considerations for Hepatitis C Treatment Regimens" American Association for the Study of Liver Disease, HCV Guidance, 2022. www.hcvguidelines.org/evaluate/cost (21 July 2025).

multiple non-fatal overdoses, each requiring expensive interventions such as ambulance dispatch, emergency room visits, intensive care unit (ICU) stays, and extended hospitalizations. By stabilizing individuals earlier, MAT can prevent this costly cycle of repeated emergency responses. Estimates suggest that preventing a single fatal overdose—particularly in high-using populations—can save between $109,813 and $837,512 in healthcare spending, primarily by reducing the frequency and severity of acute care episodes. Much of this spending is publicly financed through programs like Medicaid, highlighting the potential for significant savings to state and federal healthcare budgets. When MAT is offered through harm reduction centers, it supports long-term recovery and reduces avoidable costs in the short term—allowing public systems to allocate funding more effectively.[63]

“Estimates suggest that preventing a single fatal overdose—particularly in high-using populations—can save between $109,813 and $837,512 in healthcare spending, primarily by reducing the frequency and severity of acute care episodes.”

4.1 FUNDING SOURCES AND SUSTAINABILITY

Harm reduction programs are typically funded through a mix of government grants, private donations, and nonprofit support. While public funding—particularly at the state and local levels—can help launch these services, relying solely on government dollars often proves unsustainable. Federal grants are frequently temporary, fragmented, or tied to shifting political priorities, leaving many programs vulnerable to funding gaps and service disruptions.[64]

63 T. Scott Bentley and Steven J. Phillips, “2017 U.S. Organ and Tissue Transplant Cost Estimates and Discussion,” *Milliman*, 2017. www.milliman.com/en/insight/2017-us-organ-and-tissue-transplant-cost-estimates-and-discussion (21 July 2025).

64 Catherine Cook and Charlotte Davies, “The Lost Decade: Neglect for Harm Reduction Funding and the Health Crisis Among People Who Use Drugs,” Harm Reduction International, 2018. www.drugsandalcohol.ie/29391/1/The_lost_decade_funding_report_2018.pdf (21 July 2025).

TABLE 1: COMPREHENSIVE HARM REDUCTION PROGRAM: ANNUAL COST VS ESTIMATED PUBLIC SAVINGS[65,66,67,68,69,70,71,72]

Program Component	Annual Cost	Estimated Annual Public Savings
Supervised Consumption Site	$1.6M – $2.5M per site	$3.6M – $4.2M per site
Naloxone Distribution Program	$19–$25 per kit; ~$1.6M/year for 5,000 kits	$2.7B per $1M invested (based on value of statistical life)
Syringe Service Program	$200K – $400K per program	$1.6M – $1.8M per program
Integrated Outreach (Mobile Units, etc.)	$500K – $900K per unit	Variable; depends on services provided and population reached
Total Estimated Annual Cost	$2.6M – $4.3M	$7.9M – $9.0M
Estimated Net Public Benefit	$3.6M – $6.4M	

Private philanthropy, nonprofit organizations, and community-based groups play a critical role in keeping these programs operational, especially when public funding falls short. Many harm reduction initiatives emerge organically through civic engagement once the legal barriers to these efforts are removed. Advocacy groups like the National Harm Reduction Coalition and local nonprofits provide essential resources such as naloxone, medication-assisted treatment, and syringe exchange services.[73] Their contributions allow for greater flexibility and responsiveness—attributes often lacking in bureaucratic systems. Public-private partnerships have also shown promise, combining the infrastructure of

65 David J. Swenson et al., "Novel Emergency Department High Utilizer Surveillance in New Hampshire," *ISDS Annual Conference*, December 2012, San Diego, CA. Unpublished conference paper, State of New Hampshire, Concord, NH (2025).

66 Laura C. Chambers et al., "The Estimated Costs and Benefits of a Hypothetical Supervised Consumption Site in Providence, Rhode Island," *International Journal of Drug Policy* 108 (2022).1-10.

67 Eric Armbrecht et al., "Supervised Injection Facilities and Other Supervised Consumption Sites: Effectiveness and Value," *Institute for Clinical and Economic Review*, 2021. https://icer.org/wp-content/uploads/2020/10/ICER_SIF_Final-Evidence-Report_010821.pdf (21 July 2025).

68 Jorge Finke and Jie Chan, "The Case for Supervised Injection Sites in the United States," *American Family Physician* 105 (2022): 454–456.

69 David P. Wilson, "The Cost-Effectiveness of Harm Reduction," *International Journal of Drug Policy* 26, Supplement 1 (2015). S5–S11.

70 Tarlise Townsend *et al.*, "Cost-Effectiveness Analysis of Alternative Naloxone Distribution Strategies: First Responder and Lay Distribution in the United States," *International Journal of Drug Policy* 75 (2020) *International Journal of Drug Policy* Online. www.sciencedirect.com/science/article/abs/pii/S0955395919302099 (20 July 2025).

71 Bruce R. Schackman et al., "The Lifetime Medical Cost Savings From Preventing HIV in the United States," *Medical Care* 53 (2015). 293–301.

72 "HCV Testing and Linkage to Care," U.S. Department of Health and Human Services, HCV Guidelines, 2023. *www.hcvguidelines.org/evaluate/cost* (21 July 2025).

73 National Harm Reduction Coalition, 2024. https://harmreduction.org/ (21 July 2025).

public health agencies with the innovation and efficiency of private sector involvement to scale services more effectively and at lower cost.[74]

Rather than relying on expanding federal authority or large, centralized funding mechanisms, many advocates point to the value of empowering local jurisdictions to direct existing resources toward approaches that demonstrate clear, measurable results.

Rather than relying on expanding federal authority or large, centralized funding mechanisms, many advocates point to the value of empowering local jurisdictions to direct existing resources toward approaches that demonstrate clear, measurable results. In New York City, for example, modeling suggests that supervised consumption sites could prevent between 68 and 131 overdose deaths annually while reducing healthcare spending by $2.9 to $5.7 million per year, primarily through decreased use of ambulances, emergency departments, and hospital beds.[75]

The long-term sustainability of harm reduction efforts often depends on the strength of community-led initiatives. Grassroots organizations are typically more attuned to local needs than distant agencies and are better positioned to deliver targeted, low-barrier services efficiently. In cities like Tacoma, Oakland, and Vancouver, it was local advocates—

74 Aaron D. Fox et al., "Harm Reduction Agencies as a Potential Site for Buprenorphine Treatment," *Substance Abuse* 36, no. 2 (2015): 155–160. Substance Abuse Online. https://journals.sagepub.com/doi/10.1080/08897077.2015.1011820 (21 July 2025).

75 Czarina N. Behrends et al., "Estimated Impact of Supervised Injection Facilities on Overdose Mortality and Healthcare Costs in New York City," *Journal of Substance Abuse Treatment* 106 (2019): 79–88. Elsevier. https://www.jsatjournal.com/article/S0740-5472(19)30080-7/fulltext (21 July 2025).

not top-down programs—who advanced harm reduction efforts in the face of political and legal resistance.[76, 77, 78]

[76] Ricky N. Bluthenthal, "Syringe Exchange as a Social Movement: A Case Study of Harm Reduction in Oakland, California," *Substance Use & Misuse* 33 (1998) Substance Use & Misuse Online. https://doi.org/10.3109/10826089809062212 (21 July 2025).

[77] Amanda Sharp, Joshua T. Barnett, and Enya B. Vroom, "Community Perceptions of Harm Reduction and Its Implications for Syringe Exchange Policy," *Journal of Drug Issues* 50 (2020) Journal of Drug Issues Online. https://doi.org/10.1177/0022042620932289 (21 July 2025).

[78] Ben Nelms, "North America's First Legal Supervised Injection Site Marks 20th Anniversary in Vancouver," CBC News, 14 Sept. 2023. CBC.ca. https://www.cbc.ca/news/canada/british-columbia/insite-20-year-anniversary-1.6966605 (accessed 21 July 2025).

PART 5

THE STATE OF HARM REDUCTION IN THE UNITED STATES

The legislative and regulatory framework governing harm reduction in the United States remains complex, with progress in some areas and persistent barriers in others. Although harm reduction has gained recognition as a critical public health approach, significant legal, cultural, and structural challenges persist, limiting its effectiveness. Overcoming these obstacles requires a nuanced understanding of how legislation, systemic inefficiencies, stigma, and implementation challenges intersect to shape the harm reduction landscape.

Drug Paraphernalia Laws: Restrictive laws and enforcement practices continue to present major obstacles to harm reduction efforts. Many states maintain drug paraphernalia laws that criminalize essential harm reduction tools, like sterile syringes and fentanyl testing strips, deterring their use and limiting access, leaving people who use drugs vulnerable to preventable health crises. For instance, drug testing services that allow individuals to test their substances for harmful adulterants, such as fentanyl, remain underutilized by drug users fearful of criminalization and police surveillance. Confidentiality and anonymity are critical to encouraging uptake of these services, yet the risk of legal consequences often deter those who use drugs from accessing them. Advocates have called for

decriminalization and the establishment of government-supported harm reduction services to improve access and mitigate risks associated with criminalization.[79, 80]

Naloxone Access: Naloxone, with its ability to instantly reverse opioid overdose, is a cornerstone of harm reduction efforts. However, legal and logistical barriers continue to hinder its widespread distribution. SSPs are ideally positioned to serve as distribution hubs for naloxone, yet many programs face legal and logistical challenges that limit their reach. Barriers within the naloxone distribution process include inadequate participant screening to identify those most at risk of overdose, low retention rates among individuals trained to administer naloxone, and insufficient systems for refilling naloxone prescriptions or supplies. These gaps highlight the urgent need for policy reforms that streamline naloxone distribution and ensure that those who need it most can access it reliably.[80]

“Barriers within the naloxone distribution process include inadequate participant screening to identify those most at risk of overdose, low retention rates among individuals trained to administer naloxone, and insufficient systems for refilling naloxone prescriptions or supplies.”

Systems Analysis and Improvement Approach for Naloxone (SAIA-N): One organizational-level initiative aimed at improving naloxone distribution is the Systems Analysis and Improvement Approach for Naloxone (SAIA-N). This research-based intervention broadens the focus beyond supply issues and into system-level bottlenecks like gaps in screening, missed opportunities during client visits, or inefficient referral processes. It does this by blending process mapping, real-time data review, and rapid cycle testing of workflow changes like adjusting client flow or expanding staff roles in naloxone education and distribution. Studies evaluating SAIA-N found that targeted process improvements led to a

79 Drug Policy Alliance, “Drug-Induced Homicide Laws,” Drug Policy Alliance, 2024. www.drugpolicy.org/wp-content/uploads/2024/08/DPA-DIHLawFactSheet-InDesign-Interactive.pdf (21 July 2025).

80 Kasey Claborn *et al.*, “We Do It Ourselves: Strengths and Opportunities for Improving the Practice of Harm Reduction,” *Harm Reduction Journal* 20 (2023) BioMed Central. https://harmreductionjournal.biomedcentral.com/articles/10.1186/s12954-023-00809-7 (16 April 2025).

37% increase in participants receiving naloxone and a 105% rise in doses distributed per week.[81]

Good Samaritan Laws (GSLs), now enacted in nearly every state, are designed to protect individuals who help others in emergency situations, such as seeking medical assistance in the event of an overdose. However, the scope and application of these laws vary significantly from state to state. Many GSLs fail to cover related charges, such as drug paraphernalia possession, and often exclude individuals on probation or parole. These limitations undermine the effectiveness of GSLs in preventing overdose deaths, discouraging those who might otherwise seek help from doing so, especially in areas with harsh enforcement practices. Strengthening GSLs and standardizing their applications across the states is a critical step toward reducing overdose fatalities.[82]

“Many drug users avoid services that demand personal information, fearing arrest or incarceration. In some cases, health data collected through harm reduction programs has been shared with law enforcement…”

Surveillance Practices: The legislative landscape is further complicated by the growing integration of surveillance practices into harm reduction programs. Requirements such as mandatory data collection, wellness checks, and identification protocols conflict with the principles of low-threshold access. Many drug users avoid services that demand personal information, fearing arrest or incarceration. In some cases, health data collected through harm reduction programs has been shared with law enforcement, as occurred in Connecticut, where overdose surveillance data was used to target individuals for arrest. To

81 Christopher F. Akiba *et al.*, “Systems Analysis and Improvement Approach to Improve Naloxone Distribution Within Syringe Service Programs: Study Protocol of a Randomized Controlled Trial,” *Implementation Science* 18 (2023) BioMed Central. https://implementationscience.biomedcentral.com/articles/10.1186/s13012-023-01288-x (16 April 2025).

82 Leah Hamilton *et al.*, “Good Samaritan Laws and Overdose Mortality in the United States in the Fentanyl Era,” *International Journal of Drug Policy* 97 (2021) Elsevier. www.sciencedirect.com/science/article/abs/pii/S0955395921002000 (16 April 2025).

maintain confidentiality and accessibility, legislative protections are urgently needed to safeguard privacy within harm reduction services.[83]

Harm Reduction Funding: The effectiveness of harm reduction programs is further hampered by chronic underfunding. Many initiatives depend on unstable funding streams, forcing them to scale back services or rely heavily on community-based organizations to fill gaps. Ensuring sufficient and consistent funding for harm reduction programs and initiatives is essential for their sustainability. Moreover, addressing funding shortages in rural and underserved areas is vital to expanding access to harm reduction services for populations disproportionately impacted by the overdose crisis.[84]

Decriminalization: Broad decriminalization reforms are pivotal for enhancing legislative frameworks that support harm reduction. Criminalizing drug use and associated harm reduction tools fosters fear, perpetuates stigma, and restricts access to essential services, ultimately undermining public health objectives. Legislative actions aimed at decriminalizing personal drug use, safeguarding harm reduction services from legal interference, and expanding comprehensive Good Samaritan protections are essential for cultivating an environment conducive to effective harm reduction efforts.

> *Measure 110 was built on a reinvestment model: Funds saved from reduced enforcement and incarceration were intended to support harm reduction and treatment services. But that financing stream was disrupted before it could take effect.*

Oregon's Measure 110: Critics frequently cite Oregon's Measure 110 as evidence against decriminalization. However, a closer examination reveals that the challenges faced were largely due to implementation shortcomings rather than the policy's core principles.

[83] Liam Michaud *et al.*, "Between Care and Control: Examining Surveillance Practices in Harm Reduction," *Contemporary Drug Problems* 50 (2023) Sage. https://pmc.ncbi.nlm.nih.gov/articles/PMC9885017/ (16 April 2025).

[84] Umedjon Ibragimov et al., "Understanding rural risk environments for drug-related harms: Progress, challenges, and steps forward," *International Journal of Drug Policy* 85 (2020) Elsevier. https://doi.org/10.1016/j.drugpo.2020.102926 (18 April 2025).

Measure 110 was built on a reinvestment model: Funds saved from reduced enforcement and incarceration were intended to support harm reduction and treatment services. But that financing stream was disrupted before it could take effect. The Oregon Health Authority missed key deadlines, canceled essential planning meetings, and delayed the rollout of Behavioral Health Resource Networks, severely limiting service delivery. Additionally, the state's failure to adequately promote the treatment hotline resulted in minimal engagement, with only 1% of cited individuals seeking help through this channel in the first year. These administrative and logistical failures contributed to public dissatisfaction and perceptions of policy ineffectiveness.[85, 86, 87]

Despite these setbacks, it's important to acknowledge the positive strides made under Measure 110. The initiative led to a significant reduction in drug possession arrests and expanded access to harm reduction services, such as the distribution of naloxone kits and the provision of peer support programs. Furthermore, studies have indicated that the decriminalization policy did not lead to an increase in fatal drug overdoses, countering some of the criticisms leveled against it.[88, 89]

5.1 WHERE STATES ARE LEADING

States like Maryland, Vermont, and Utah exemplify how pragmatic, community-driven strategies can effectively address the opioid crisis. These states are notable because they demonstrate that harm reduction strategies can successfully save lives in states that are diverse in terms of urbanicity, political alignment, and regional diversity.

85 Nathan Daigneault, "Drug Decriminalization in Oregon: Measure 110's Impacts Compared to Other Countries' Systems," Reason Foundation, 2025. www.reason.org/policy-study/drug-decriminalization-oregon-measure-110-impacts-compared-other-countries (16 April 2025).

86 Emily Green, "Money for Measure 110 Addiction Services Finally Arrives; Oregon Auditors Spot Problems," Oregon Public Broadcasting, 2 June 2022. OPB.org. www.opb.org/article/2022/06/02/oregon-measure-110-funding-addiction-treatment-audit/ (16 April 2025).

87 Andrew Selsky, "Oregon's drug decriminalization gets poor marks on audit," *Coast Reporter*, 19 Jan. 2023. www.coastreporter.net/health/oregons-drug-decriminalization-gets-poor-marks-on-audit-6407935 (accessed 16 April 2025).

88 Emily Green, "More people accessing help under Measure 110 but gaps in services, data remain," *The Lund Report*, 28 June 2023. www.thelundreport.org/content/more-people-accessing-help-under-measure-110-gaps-services-data-remain (16 April 2025).

89 Haley Weiss, "Decriminalizing drug possession doesn't lead to more fatal overdoses," *TIME*, 28 Sept. 2023. www.time.com/6318102/decriminalizing-drugs-overdose-study/ (16 April 2025).

MARYLAND

Maryland's Center for Harm Reduction Services (CHRS), established in 2019, now known as the Office of Harm Reduction (OHR), operates as a centralized hub, coordinating naloxone distribution, syringe services, and technical assistance. The CHRS reviews applications for all syringe service programs and overdose prevention programs, ensures operating programs follow guidance and reporting requirements, and manages naloxone and fentanyl test strip distribution across the state. The center also partners with Maryland's Harm Reduction Training Institute to support harm reduction workforce across the state.

In 2021, Maryland had over 2,800 fatal overdoses and in 83.8% of both fatal and nonfatal overdoses naloxone was not administered. In 2022, entities authorized under the Overdose Response Program distributed over 200,000 doses of naloxone to community members through targeted outreach programs, resulting in over 55% of jurisdictions meeting saturation goals.[90], [91] The enactment of the Statewide Targeted Overdose Prevention (STOP) Act of 2022 expanded these efforts by mandating certain healthcare facilities offer naloxone to at-risk individuals, thereby enhancing the state's capacity to prevent overdose fatalities.[92, 93]

> *Maryland reported 2,513 fatal overdoses in 2023—a 2.5% decline from the previous year. Preliminary data from 2024 suggests the trend is continuing…*

These efforts are translating into results. Maryland reported 2,513 fatal overdoses in 2023—a 2.5% decline from the previous year. Preliminary data from 2024 suggests the trend is continuing, with Baltimore City experiencing a particularly notable decrease: overdose deaths fell from 1,043 in 2023 to 680 in 2024. As harm reduction services expand and

90 "STOP Act," Maryland Department of Health, Website, 2023. https://health.maryland.gov/pha/NALOXONE/Pages/STOP-Act.aspx (16 April 2025).

91

92 "Data-Informed Overdose Risk Mitigation (DORM) 2022 Annual Report," Maryland Department of Health, Website, August 15, 2023. https://dlslibrary.state.md.us/publications/Exec/MDH/HG7.5-701_2022.pdf (16 April, 2025).

93 Senate Bill 394: Overdose Prevention Sites, Maryland General Assembly, mgaleg.maryland.gov, 2022. www.mgaleg.maryland.gov/2022RS/bills/sb/sb0394f.pdf (1 Aug. 2025).

multiply, the overdose deaths in the state decrease. These improvements mirror that of the national landscape and underscore how focused, statewide coordination can yield meaningful public health gains.[94]

VERMONT

Vermont employs data-informed strategies to identify service gaps and deliver targeted support. The state's annual Social Autopsy Reports analyze trends in how individuals who died of a drug overdose previously engaged with state systems, identifying opportunities for intervention. In 2021, 99% of the 231 Vermonters who died of an overdose had interacted with at least one state agency prior to death, and 77% had interacted with three or more agencies.[95]

Innovative initiatives include funding a telehealth pilot program for wound care, enabling individuals who inject drugs to consult with healthcare professionals remotely. This approach aims to reduce complications from injection-related wounds and decrease costly emergency room visits.[96] Additionally, the state has implemented publicly available drug-checking services, enhancing community access to harm reduction tools. These services allow individuals to test substances for the presence of fentanyl and other adulterants, potentially reducing the risk of overdoses.[97]

These efforts contributed to a 5% decrease in opioid-related deaths in 2023, the first year-over-year decline since 2019.[98]

94 "Maryland Launches Improved Overdose Data Dashboard," Maryland Department of Health, MyMCMedia.org, April 5, 2024. www.mymcmedia.org/maryland-launches-improved-overdose-data-dashboard (9 April 2025).

95 "2021 Social Autopsy Report: Data Analysis of Vermonters Who Died of a Drug Overdose," Vermont Department of Health, August 2023. www.healthvermont.gov/sites/default/files/document/dsu-2021-Vermont-social-autopsy-report.pdf (16 April 2025)

96 Health Recovery Solutions, "Revolutionizing Wound Care: The Impact of Telemedicine," blog post, Health Recovery Solutions Blog, Health Recovery Solutions, n.d. https://www.healthrecoverysolutions.com/blog/revolutionizing-wound-care-the-impact-of-telemedicine (17 April 2025).

97 "Opioid and Stimulant Response Initiatives," Vermont Department of Health, www.healthvermont.gov, August 2023. https://www.healthvermont.gov/sites/default/files/document/DSU-OpioidStimulantResponseInitiatives.pdf (17 April 2025).

98 WCAX News Staff, "Opioid overdose deaths declined in 2023, VT health officials say," WCAX, 8 May 2024. WCAX.com. https://www.wcax.com/2024/05/08/opioid-overdose-deaths-declined-2023-vt-health-officials-say/ (17 April 2025).

UTAH

Utah's response to the opioid crisis serves as a model of how states can take decisive, community-centered action without expanding bureaucracy. Through a combination of targeted investment, local empowerment, and bipartisan collaboration, Utah has demonstrated that practical harm reduction simply needs to be effective.

At the core of this effort is the state's "Stop the Opidemic" campaign, intentionally spelled to combine "opioid" and "epidemic." It is a public awareness initiative that reframes opioid misuse as a shared challenge requiring local solutions. The campaign features personal stories, training modules, and educational resources that have reached more than one in four Utahns to date. By leveraging trusted messengers—including local health departments, law enforcement, and people with lived experiences—Utah has built grassroots buy-in while reducing stigma and misinformation.[99]

"By leveraging trusted messengers—including local health departments, law enforcement, and people with lived experiences—Utah has built grassroots buy-in while reducing stigma and misinformation."

A prime example of this low-cost, high-impact strategy is Utah's investment in naloxone distribution. Between 2016 and early 2025, Utah Naloxone and its partners distributed over 12,500 naloxone kits statewide, resulting in thousands of documented overdose reversals. Importantly, more than 1,000 of those reversals were carried out by law enforcement, underscoring the value of equipping first responders with the right tools. These numbers reflect lives saved, and significant cost avoidance in emergency response, hospital admissions, and downstream criminal justice involvement.[100]

99 "Stop the Opidemic," Utah Department of Health and Human Services, Opidemic.utah.gov, 2024. www.opidemic.utah.gov (17 April 2025).

100 Gabriela Fletcher, "Community health organizations join in fight against opioid overdose, provide naloxone kits," KSL, 5 April 2025. KSL.com. https://www.ksl.com/article/51289403/community-health-organizations-join-in-fight-against-opioid-overdose-provide-naloxone-kits (17 April 2025).

PART 6

POLICY RECOMMENDATIONS

State-level implementation reveals both promising models and critical areas for growth. While some states have developed robust, locally tailored harm reduction strategies, others continue to restrict or underutilize tools that could reduce overdose deaths, disease transmission, and public service strain.

6.1 WHERE GAPS REMAIN:

While all 50 states have enacted laws permitting naloxone access and some form of Good Samaritan protection, significant gaps persist in implementation and impact. In states like Florida and Tennessee, inconsistent pharmacy participation and limited public awareness continue to restrict practical access. Moreover, although Good Samaritan statutes exist in every state, the scope and clarity of protections vary. Some laws narrowly define who is protected or fail to shield those with prior offenses, creating legal uncertainty and discouraging individuals from calling for emergency help in overdose situations.[101]

[101] "Most States Have Good Samaritan Laws and Research Indicates They May Have Positive Effects," U.S. Government Accountability Office, gao.gov, March 2021. www.gao.gov/assets/gao-21-235.pdf (17 Apr. 2025).

TABLE 2: STATE HARM REDUCTION POLICY IMPLEMENTATION MATRIX

State	Syringe Service Programs	Naloxone Access	Fentanyl Test Strips Legal	Good Samaritan Law	Supervised Consumption Sites	Total Score
Alabama	No	Yes	No	Yes	No	2
Alaska	Yes	Yes	Yes	Yes	No	4
Arizona	Yes	Yes	Yes	Yes	No	4
Arkansas	Limited	Yes	Limited	Yes	No	3
California	Yes	Yes	Yes	Yes	No	4
Colorado	Yes	Yes	Yes	Yes	No	4
Connecticut	Yes	Yes	Yes	Yes	No	4
Delaware	Yes	Yes	Yes	Yes	No	4
Florida	Yes	Yes	Yes	Yes	No	4
Georgia	Yes	Yes	Yes	Yes	No	4
Hawaii	Yes	Yes	Yes	Yes	No	4
Idaho	Limited	Yes	Yes	Yes	No	3.5
Illinois	Yes	Yes	Yes	Yes	No	4
Indiana	Limited	Yes	No	Yes	No	2.5
Iowa	No	Yes	No	Yes	No	2
Kansas	No	Yes	Yes	Yes	No	3
Kentucky	Limited	Yes	Yes	Yes	No	3.5
Louisiana	Yes	Yes	Yes	Yes	No	4
Maine	Yes	Yes	Yes	Yes	No	4
Maryland	Yes	Yes	Yes	Yes	No	4
Massachusetts	Yes	Yes	Yes	Yes	No	4
Michigan	Yes	Yes	Yes	Yes	No	4
Minnesota	Yes	Yes	Yes	Yes	No	4
Mississippi	No	Yes	Yes	Yes	No	3
Missouri	Limited	Yes	Yes	Yes	No	3.5
Montana	Limited	Yes	Yes	Yes	No	3.5
Nebraska	No	Yes	Yes	Yes	No	3
Nevada	Yes	Yes	Yes	Yes	No	4
New Hampshire	Yes	Yes	Yes	Yes	No	4
New Jersey	Yes	Yes	Yes	Yes	No	4
New Mexico	Yes	Yes	Yes	Yes	No	4
New York	Yes	Yes	Yes	Yes	Yes	5
North Carolina	Yes	Yes	Limited	Yes	No	3.5
North Dakota	No	Yes	No	Yes	No	2
Ohio	Yes	Yes	Yes	Yes	No	4
Oklahoma	Yes	Yes	Yes	Yes	No	4
Oregon	Yes	Yes	Yes	Yes	No	4
Pennsylvania	Yes	Yes	Yes	Yes	No	4
Rhode Island	Yes	Yes	Yes	Yes	Pilot	4.5
South Carolina	Limited	Yes	Yes	Yes	No	3.5
South Dakota	No	Yes	Yes	Yes	No	3
Tennessee	Yes	Yes	Yes	Yes	No	4
Texas	Limited	Yes	No	Yes	No	2.5
Utah	Yes	Yes	Yes	Yes	No	4
Vermont	Yes	Yes	Yes	Yes	No	4
Virginia	Yes	Yes	Yes	Yes	No	4
Washington	Yes	Yes	Yes	Yes	No	4
West Virginia	Yes	Yes	Yes	Yes	No	4
Wisconsin	Yes	Yes	Yes	Yes	No	4
Wyoming	No	Yes	Yes	Yes	No	3

Syringe service programs, which are shown to reduce the transmission of HIV and hepatitis C without increasing substance use, remain inaccessible in key regions. States like Texas, Mississippi, and South Dakota still lack any authorized SSPs, leaving entire populations without basic, evidence-backed tools to prevent the spread of infectious disease.[102] These gaps drive-up long-term healthcare costs and limit early intervention opportunities for individuals who might otherwise engage with care.

Syringe service programs, which are shown to reduce the transmission of HIV and hepatitis C without increasing substance use, remain inaccessible in key regions.

Fentanyl test strips (FTS)—a simple, low-cost measure that allows users to test substances for deadly contaminants—have been legalized in most states. However, laws in parts of the Southeast and Midwest, including Indiana, Wyoming, and Alabama, still categorize them as drug paraphernalia.[103, 104] This classification discourages possession and distribution, hindering harm reduction programs from fully incorporating one of the most scalable overdose prevention tools available.

Supervised consumption sites (SCSs), despite robust international evidence showing their effectiveness in preventing overdose fatalities and connecting individuals to care, remain authorized in only a handful of jurisdictions—including New York City and Rhode Island. Federal legal ambiguity surrounding 21 U.S.C. § 856, often referred to as the "Crack House Statute," has created considerable hesitation at the state level. Federal law currently prohibits supervised consumption sites, and while the legal stance is unambiguous, enforcement has been inconsistent. This patchwork approach creates uncertainty for local

102 "Syringe Services Programs: Summary of State Laws," Legislative Analysis and Public Policy Association, 2025. www.legislativeanalysis.org/wp-content/uploads/2025/04/Syringe-Services-Programs-Summary-of-State-Laws.pdf (17 April 2025).

103 "50-State Drug Checking Equipment Fact Sheet," Network for Public Health Law, Website, November 2023. www.networkforphl.org/wp-content/uploads/2023/11/50-State-DCE-Fact-Sheet-2023-2.pdf (17 April 2025).

104 Jeffrey A. Singer and Sophia Heimowitz, "Drug Paraphernalia Laws Undermine Harm Reduction," Cato Institute, 2022. www.cato.org/sites/cato.org/files/2022-06/PA_929.pdf (17 Apr. 2025).

jurisdictions, discouraging broader adoption—even as international models show these sites can improve public health and safety in a cost-effective way.[105, 106]

Together, these gaps highlight the continued tension between statutory progress and operational readiness. While the legal framework exists in many cases, uneven implementation, lack of federal clarity, and lingering cultural resistance still prevent life-saving harm reduction tools from reaching their full potential.

6.2 RECOMMENDATIONS:

The state-by-state matrix reveals that harm reduction strategies are already delivering measurable results across the political spectrum. In conservative-led states, these approaches thrive under frameworks that emphasize local leadership, fiscal discipline, and outcome-oriented governance. In more progressive states, they align with goals of equity, inclusion, and public health reform. What unites successful models is implementation: When harm reduction efforts are backed by clear policy, community buy-in, and consistent execution, they work.

Yet, significant opportunities remain for policymakers seeking to close gaps and scale success. The following recommendations reflect both national trends and lessons learned from states leading in this space:

- **Legalize and expand access to fentanyl test strips.** FTS are a low-cost, evidence-backed tool that help prevent fatal overdoses. Reclassifying them from "drug paraphernalia" and formally integrating them into public health strategies would empower both users and providers with a critical early-warning mechanism.
- **Strengthen Good Samaritan law enforcement through public education and training.** While these protections are now statutory in all 50 states, inconsistent awareness—particularly among law enforcement—limits their impact. States should mount public campaigns to make it clear that individuals are legally allowed to save the lives of their neighbors during an overdose without fear of arrest or prosecution.

105 Quinn MacRae, "The Legal Status of Safe Consumption Sites," blog post, Berkeley Journal of Criminal Law Blog, Berkeley Law, 17 Jan. 2024. www.bjcl.org/blog/the-legal-status-of-safe-consumption-sites (21 July 2025).

106 Chelsea Boyd and Mazen Saleh, "Overdose Prevention Centers and the Federal 'Crack House' Statute," R Street Institute, 2022. www.rstreet.org/research/overdose-prevention-centers-and-the-federal-crack-house-statute/ (21 July 2025).

- **Redistribute funds to support robust syringe service program infrastructure.** SSPs have been shown to reduce HIV and hepatitis C transmission by more than 50% while connecting individuals to treatment. Expansion should prioritize counties with high rates of bloodborne infections and low access to care, especially in rural or underserved areas.
- **Support pilot supervised consumption sites (SCS) in high-risk communities.** Early pilots in New York and Rhode Island, as well as ample international experience, have shown promise in reducing public drug use and connecting individuals to care. States with high overdose mortality should consider small-scale, data-driven SCS pilots that prioritize safety, transparency, and local input.
- **Enhance cross-agency coordination.** Successful harm reduction systems depend on collaboration between state agencies, local providers, and community groups. Community organizations and peer workers are often the first point of contact, delivering trusted, culturally responsive care. Healthcare providers enhance continuity by integrating harm reduction into clinical settings, while public health agencies help scale and coordinate services. Policymakers and law enforcement influence the legal and operational environment—supporting or hindering access depending on their approach. Academic institutions and researchers generate critical evidence to refine programs. To succeed, these partnerships must center trust, confidentiality, and the voices of people with lived experience. Maryland exemplifies this approach, with data-sharing frameworks that enable strategic resource deployment and continuous program improvement.

Ongoing evaluation and policy adaptability are critical. Harm reduction must be treated as a practical toolkit—adjustable to evolving needs, local contexts, and emergent risks such as synthetic drug contamination or changing patterns of use.

PART 7

WHAT'S NEXT FOR HARM REDUCTION

As the overdose crisis evolves, so must the strategies used to address it. A growing body of evidence demonstrates that emerging technologies—when integrated into local harm reduction and public health systems—can meaningfully expand access, reduce costs, and improve outcomes. These tools represent practical extensions of existing frameworks that enhance efficiency without requiring large-scale structural expansion.

Telehealth stands out as one of the most effective innovations in this space, particularly for expanding access to medication-assisted treatment for opioid use disorder. Regulatory waivers during the COVID-19 pandemic permitted the initiation of buprenorphine treatment via telemedicine, eliminating in-person requirements that had historically limited access—especially in rural or underserved communities. The results are compelling: Studies in Kentucky and Ohio found that patients who began buprenorphine treatment through telehealth were more likely to remain engaged in care after 90 days, with no reduction in treatment quality.[107]

[107] University of Kentucky Center for Clinical and Translational Science, "Findings: Telehealth Supports Retention for Treatment of Opioid Use Disorder," CCTS News, 1 Nov. 2023. www.ccts.uky.edu/news/findings-telehealth-supports-retention-treatment-opioid-use-disorder (17 April 2025).

Telemedicine has also demonstrated strong utility in correctional settings, where linking individuals to medication-assisted treatment prior to release can significantly reduce the risk of relapse. Research shows that telehealth services helped build early rapport between incarcerated individuals and their future treatment teams, promoting continuity of care during the critical post-release period.[108] Similarly, community-based initiatives like Infectious Disease Elimination Act Miami have combined peer-led outreach with telehealth to engage people who inject drugs, resulting in a 58.7% retention rate at three months. These flexible, low-barrier models underscore how technology can eliminate logistical obstacles while maintaining high standards of care.[109]

Wearable biosensors, like the Spire Health Tag, represent the next frontier of overdose prevention. These devices monitor respiratory and heart rates in real time and, when integrated with automated naloxone systems or emergency alerts, can initiate life-saving action—even when someone is using alone.

Wearable biosensors, like the Spire Health Tag, represent the next frontier of overdose prevention. These devices monitor respiratory and heart rates in real time and, when integrated with automated naloxone systems or emergency alerts, can initiate life-saving action—even when someone is using alone. Early user feedback indicates that these devices are accepted as discreet and non-intrusive, especially when paired with mobile platforms that can notify caregivers or providers in the event of respiratory distress. This kind of biomedical innovation offers scalable protection with minimal overhead.[110]

108 Esther Jie Tian et al., "The impacts of and outcomes from telehealth delivered in prisons: A systematic review," *Plos One (2021) Plos One* online. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0251840 (21 July 2025).

109 Edward Suarez Jr. et al., "Adaptation of the Tele-Harm Reduction intervention to promote initiation and retention in buprenorphine treatment among people who inject drugs: a retrospective cohort study," *Annals of Medicine* 55 (2023) Taylor & Francis Online. www.tandfonline.com/doi/full/10.1080/07853890.2023.2182908 (21 July 2025).

110 Alexis M. Roth et al., "Wearable biosensors have the potential to monitor physiological changes associated with opioid overdose among people who use drugs: A proof-of-concept study in a real-world setting," *Drug and Alcohol Dependence* 229 (2021) Elsevier. www.sciencedirect.com/science/article/abs/pii/S0376871621006335 (21 July 2025).

Mobile applications are also filling critical gaps in medication adherence and community response. The UnityPhilly app connects overdose witnesses to trained responders through GPS-enabled technology, reducing EMS burden and improving survival odds.[111] Meanwhile, Medisafe, a MAT adherence app, has shown significant improvements in medication compliance by providing customized reminders and progress dashboards—demonstrating how digital tools can enhance personal accountability without added clinical touchpoints.[112]

Another fast-emerging space is electronic harm reduction interventions (e-HRIs), including virtual overdose monitoring and remote supervised consumption services. These platforms allow users to connect with trained staff or peer monitors during substance use, creating a safety net in areas where brick-and-mortar services are either unavailable or underutilized due to stigma. These services are particularly well-suited to rural and exurban environments, where overdose risk remains high but infrastructure remains limited.[113]

Cost-effectiveness is a consistent theme across these innovations. Studies show that telehealth-based buprenorphine programs are less expensive than traditional in-person MAT while maintaining or improving clinical outcomes. Similarly, automated naloxone vending machines—now operational in several states—ensure 24/7 access to medication, reduce stigma, and eliminate administrative bottlenecks, all at a fraction of the cost of emergency room visits.[114] These tools don't just help individuals; they also support law enforcement, EMS, and health departments by preventing avoidable crises before they occur. Their success relies on local implementation, nimble legislation, and a willingness to modernize outdated systems.

111 David Schwartz et al., "Empowering Communities With a Smartphone-Based Response Network for Opioid Overdoses," *IEEE Pervasive Computing* 19 (2020) IEEE Xplore. https://dl.acm.org/doi/abs/10.1109/MPRV.2020.3019947 (21 July 2025).

112 Christa Hartch, "Medisafe Demonstrates Significant Impact on Medication Adherence in Medically Underserved Populations," Blog post, Medisafe, Medisafe, 4 Feb. 2025. www.medisafe.com/education-resources/medisafe-demonstrates-significant-impact-on-medication-adherence-in-medically-underserved-populations/ (21 July 2025).

113 Alexandra Loverock et al., "Electronic Harm Reduction Interventions for Drug Overdose Monitoring and Prevention: A Scoping Review," *Drug and Alcohol Dependence* 250 (2023) Elsevier. https://www.sciencedirect.com/science/article/pii/S037687162301116X?via%3Dihub (21 July 2025).

114 Hossam Mahmoud et al., "Telehealth-Based Delivery of Medication-Assisted Treatment for Opioid Use Disorder: A Critical Review of Recent Developments," *Current Psychiatry Reports* 24 (2022): 375–386. Springer. https://link.springer.com/article/10.1007/s11920-022-01346-z (21 July 2025).

PART 8

CONCLUSION

Harm reduction is more than a collection of strategies or tools—it is a philosophy rooted in personal freedom, autonomy, and empowerment from the ground up. It recognizes the humanity of individuals often marginalized and stigmatized, creating pathways to safety, health, and opportunity.

While this paper has explored the integration of emerging technologies into harm reduction frameworks, the true strength of harm reduction lies in its adaptability and its capacity to bridge gaps—whether in access, trust, or understanding. Syringe service programs, naloxone distribution, and supervised consumption sites have long shown that meeting peoples' basic, immediate needs can have far-reaching effects, building relationships and opening doors to care. It also reflects efficiency and cost savings by addressing the root causes of addiction proactively—rather than reacting through arrests and coercive treatment which has yet to create optimal results. Syringe service programs reduce HIV and hepatitis C transmission by up to 50%. Naloxone access lowers overdose fatality rates. Supervised consumption sites connect people to treatment and reduce public drug use without increasing crime. These are measurable outcomes that create lasting positive impact across the board.

As policymakers look for solutions to the overdose crisis, the data is clear: harm reduction saves lives, reduces long-term healthcare costs, improves community safety, and builds a pathway to recovery for those most at risk. If the goal is to turn the tide of this epidemic, harm reduction must be part of the strategy.

ABOUT THE AUTHOR

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Bou Harfouch's experience spans multiple facets of addiction treatment and drug policy, informed by her extensive background in translational health research and clinical coordination. Bou Harfouch previously coordinated multisite clinical trials in addiction at Johns Hopkins University School of Medicine, Division of Addiction Medicine, where she served as a senior clinical research coordinator testing a monthly injectable formulation of buprenorphine. She most recently held a position as a research coordinator at the Adolescent Addiction Recovery Center at Detroit Medical Center, where she analyzed clinic outcomes and success rates. Bou Harfouch is a current doctor of philosophy candidate in Evidence-Based Healthcare at the University of Oxford. She holds an M.S. in Biotechnology from Johns Hopkins University and a B.S. in Kinesiology with a minor in Substance Use Disorder Prevention, Intervention, and Treatment from Central Michigan University.