

APA Resource Document

Resource Document on Harm Reduction

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Prepared by the Council on Addiction Psychiatry

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Harm Reduction Resource Document

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Introduction/Background

According to the DSM-5-TR, “the essential feature of a substance use disorder is a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems.”¹ These “problems” are invariably harmful to the individual experiencing them and are so central to the experience of patients suffering from substance use disorders that they make up half of the diagnostic criteria:

1. Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home.
2. Continued substance use despite having persistent or recurrent social or interpersonal problems.
3. Important social, occupational, or recreational activities are given up or reduced due to substance use.
4. Recurrent substance use in situations in which it is physically hazardous.
5. Substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.

Why do patients continue to use substances despite seemingly obvious, consequential, and ego-dystonic sequelae? At its core, addiction is the malfunction of brain circuitry that regulates decision-making, control, and mood. The DSM mentions this in passing, but it is critical for the

¹ American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev. p.483). <https://doi.org/10.1176/appi.books.9780890425787>

psychiatrist to know that there is an incredible body of knowledge that delineates the circuits and processes that mediate all stages of addiction: euphoria/dysphoria, compulsivity/impulsivity, craving, and withdrawal.^{2,3,4,5}

Substance use disorder is one of the most well-understood psychiatric diagnoses, with some of the most efficacious behavioral and pharmacological interventions. Yet, in the United States, we have experienced wave after wave of opioid crises driven by more potent (lethal) prescription and illicit substances, highly engineered and inexpensive vaporized nicotine delivery vehicles, and skyrocketing rates of alcohol addiction. With such a robust knowledge base and interventional toolbox, why have the numbers of substance-related fatalities continued to climb exponentially, peaking now at more than 100,000 deaths per year?⁶ The answers to this question are not surprising, considering that they parallel the natural history of all other mental health diagnoses:

1. Substance use disorder is a chronic disease with a continuum that spans stability and illness.
2. Patients develop insight into the disease over time, often in parallel with a motivation to engage in treatment.
3. Access to treatment is limited.

Considering the high prevalence of substance use disorders and comorbidity with other psychiatric diseases, a psychiatrist will necessarily have myriad opportunities to provide therapeutic intervention to patients with addiction. A critical facet of treatment that builds directly from the above is “**harm reduction.**” Harm reduction is an evidence-based, standard-of-care approach that aims to reduce the harm that patients experience while using substances. It recognizes that the use of substances is an inherent component of substance use disorder and that some ways of using illicit substances are less harmful to patient medical, social, and psychological health than others. For some patients, harm reduction interventions may reduce or prevent harm while they build motivation toward further treatment goals, while others may never be interested in further treatment – these patients (and others whom they interact with) will still benefit from harm reduction.

² American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev. p.483, n1). <https://doi.org/10.1176/appi.books.9780890425787>

³ Koob, G., Volkow, N. Neurocircuitry of Addiction. *Neuropsychopharmacology* 35, 217–238 (2010). <https://doi.org/10.1038/npp.2009.110>

⁴ Owens, B. Addiction. *Nature* 522, S45 (2015). <https://doi.org/10.1038/522S45a>

⁵ Koob, G., & Volkow, N. (2016). Neurobiology of addiction: a neurocircuitry analysis. *The lancet. Psychiatry*, 3(8), 760–773. [https://doi.org/10.1016/S2215-0366\(16\)00104-8](https://doi.org/10.1016/S2215-0366(16)00104-8)

⁶ Centers for Disease Control and Prevention. *CDC Wonder*. <https://wonder.cdc.gov/>

Harm reduction approaches not only provide additional treatment goals for psychiatrists and patients but also improve retention in treatment and eliminate the reductionism of “abstinence-only.” Harm reduction is a pillar of the White House drug treatment strategy. Harm reduction approaches are funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), and harm reduction is a core treatment modality promoted by the American Society of Addiction Medicine. This first edition of the *American Psychiatric Association Harm Reduction Background Document* aims to distill the wealth of information available on harm reduction into an overview and reference document for psychiatrists, to support their treatment of substance use disorder as a primary or co-occurring diagnosis in the clinical setting and further support the American Psychiatric Association’s (APA’s) position statement supporting harm reduction.

Syringe Services and Safer Consumption Supplies

Syringe services programs (SSPs), also known as syringe exchanges, are community-based prevention programs that offer a variety of services including sterile syringes, safe disposal of syringe needles, vaccination, naloxone, testing, and access to treatment for infectious diseases.⁷ Additional injection equipment is provided at SSP sites such as alcohol swabs, cotton balls, tourniquets, cookers, and more.

These services aim to reduce the impact of infectious diseases such as Human Immunodeficiency Virus (HIV), viral hepatitis, and more, protecting both the public and first responders.⁸ SSPs were also created to combat additional risks of intravenous drug use including death and/or injury from overdose. More comprehensive programs also offer access to substance use disorder treatment, including medication, directly or through referral.⁹ Over 30 years of research conducted by agencies such as the National Institution of Drug Abuse has shown syringe service programs to be safe, effective, and cost reducing.¹⁰ Research has also shown that SSPs do not increase the usage of illegal drugs or increase crime in the areas where they are provided.¹¹ Furthermore, studies have found that those who participate in SSPs are “five times more likely to enter drug treatment and about three times more likely to stop doing drugs than those who don’t use the programs.”¹²

In the United States, only 38 states along with the District of Columbia (D.C.) and Puerto Rico explicitly or implicitly authorize SSPs (as of July 2023).¹³ There are over 500 operational SSPs

⁷ Summary of Information on the Safety and Effectiveness of Syringe Services Programs (SSPs), CTR. FOR DISEASE CONTROL AND PREVENTION (last reviewed May 23, 2019), <https://www.cdc.gov/ssp/syringe-services-programssummary.html>

⁸ Ibid.

⁹ LAPP (2023). *Syringe Services Programs: Summary of State Laws*. LAPP. <https://legislativeanalysis.org/syringe-services-programs-summary-of-state-laws/>

¹⁰ NIDA, Syringe Service Programs, <https://nida.nih.gov/research-topics/syringe-services-programs#are-syringe-services>

¹¹ LAPP (n 13).

¹² CDC (n 11).

¹³ LAPP (n 13).

located in 45 states, D.C., and Puerto Rico.¹⁴ The laws regarding SSPs vary across the states, with some laws creating barriers for those seeking to utilize these programs. For example, “as of July 2023, seven states (Delaware, Maine, Maryland, New Jersey, New Mexico, New York, and Rhode Island) require that participants register with, or otherwise be identified as a participant of, the SSP.”¹⁵

OPCs (Supervised Consumption)

Overdose Prevention Centers (OPCs), also referred to as Supervised Consumption Sites, are designated spaces in the community that provide a safe and nonjudgmental space for people who use drugs (PWUD) while significantly reducing the risk of fatal overdoses and diseases associated with unhygienic drug use. These sites commonly offer sterile syringe exchanges, naloxone distribution, proper disposal of used needles/syringes, and referral to physicians. While these centers are highly functional in countries such as Switzerland, Spain, Germany, and Australia, the U.S. federally abides by the “crack house” statute, which makes it illegal to operate an OPC.¹⁶ Currently, some states, e.g., Minnesota, Rhode Island and Vermont, provide state funding for the operation of these sites. OnPoint NYC became the first legally recognized OPC in the U.S. and has intervened in over 1,200 overdoses.¹⁷

There are three different types of OPCs: integrated, specialized, and informal. An integrated OPC operates as a “physically co-located service, integrated within a healthcare facility such as a community-based harm reduction center.”¹⁸ Integrated OPCs are considered a holistic approach to substance use disorders because of the wide spectrum of services they offer, including counseling, medical support, showers, laundry, and referrals to treatment programs. Specialized OPCs are run as stand-alone facilities but still connect participants to a network of health and social services. Generally, these specialized facilities focus on supervised consumption and may provide education on safe consumption practices, safe sex practices, and the safe disposal of needles. Informal OPCs are run by PWUD; they operate without official authorization but are tolerated by the authorities or operate by evading detection.¹⁹

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Maintaining drug-involved premises. 21 U.S.C. § 856 (2003).

¹⁷ Smith, T. Study finds overdose prevention centers cause no significant changes to crime or quality of life in NYC neighborhoods. *Drug Policy Alliance*. November 14, 2023. (2023) Retrieved from <https://drugpolicy.org/news/study-finds-overdose-prevention-centers-cause-no-significant-changes-to-crime-or-quality-of-life-in-nyc-neighborhoods/>

¹⁸ Joint Report by the EMCDDA and C-EHRN. Drug consumption rooms. *European Monitoring Centre for Drugs and Drug Addiction*. December 2023. (2023).

¹⁹ Fisker, CE MD, et al. (2021). APA Resource Document of Safe Consumption Facilities.

Infectious Disease Testing and Other Labs

In 2018, there were an estimated 3.69 million people who injected drugs in the United States.²⁰ People who inject drugs (PWID) are at higher risk of acute infectious processes including cellulitis, abscess, myositis, necrotizing fasciitis, osteomyelitis, and septic arthritis.²¹ This group is also at risk of acquiring HIV, tuberculosis, hepatitis B virus (HBV), and hepatitis C virus (HCV).²² Nearly 40% of PWID are HCV positive – nearly one in three HCV-attributable deaths are attributed to needle-borne drug use.²³ HIV can be managed as a chronic disease and with post-exposure prophylaxis. HBV is vaccine-preventable, and HCV is curable with antiviral medications. CLIA (Clinical Laboratory Improvement Amendments)-waived, point-of-care HCV viral load testing is now approved in the United States, enabling outpatient testing in diverse settings without the need for referral to a clinical laboratory.²⁴ This enables rapid initiation of treatment, or referral to treatment, with up to 70% reduction in wait time between initial patient encounter and initiation of treatment. Referring PWID for testing and treatment in the outpatient setting, or utilizing psychiatric hospitalization as an opportunity to screen for HCV, is an effective, low-cost intervention to reduce not only individual patient mortality but also population transmission.^{25,26} This includes patients with serious mental illness, who complete HCV treatment at similar rates as other patients and patients with continued injection drug use, which is specifically excluded as a contraindication to treatment in United States and European treatment guidelines.^{27,28,29} Reducing HCV-related mortality and morbidity in mental health patients requires testing and referral to care and represents a key opportunity for community, academic, and hospital psychiatry.

It is also well-established that people who use both injectable illicit drugs and non-injectable drugs bear a higher risk of contracting sexually transmitted infections such as gonorrhea,

²⁰ Bradley, Heather, et al. “Estimated number of people who inject drugs in the United States.” *Clinical Infectious Diseases* 76.1 (2023): 96–102.

²¹ Delaney, Francis T., Emma Stanley, and Ferdia Bolster. “The needle and the damage done: musculoskeletal and vascular complications associated with injected drug use.” *Insights into Imaging* 11 (2020): 1–14.

²² U.S. Department of Health and Human Services (n.d.). *Viral hepatitis*. National Institutes of Health. <https://nida.nih.gov/research-topics/viral-hepatitis>

²³ World Health Organization. (n.d.). People who inject drugs. World Health Organization. <https://www.who.int/teams/global-hiv-hepatitis-and-stis-programmes/populations/people-who-inject-drugs>

²⁴ FDA (2024). FDA permits marketing of first point-of-care hepatitis C RNA test: Test enables single-visit testing and treatment for hepatitis C. <https://www.fda.gov/news-events/press-announcements/fda-permits-marketing-first-point-care-hepatitis-c-rna-test>

²⁵ Braude, Michael, et al. “Integrating Hepatitis C Virus Treatment Programs Within Community Mental Health.” *Psychiatric Services* 73.8 (2022): 946–949.

²⁶ Mandel, Erin, et al. “Evaluation of Hepatitis C Screening and Treatment Among Psychiatry Inpatients.” *The Journal of Clinical Psychiatry* 84.5 (2023): 48236.

²⁷ Travaglioni, Letitia E., et al. “Access to direct-acting antiviral treatment for hepatitis C virus among veterans with serious mental illness.” *Psychiatric Services* 71.2 (2020): 192–195.

²⁸ AASLD/IDSA HCV Guidance Panel, et al. “Hepatitis C guidance: AASLD-IDSA recommendations for testing, managing, and treating adults infected with hepatitis C virus.” *Hepatology* 62.3 (2015): 932–954.

²⁹ Pawlotsky, Jean-Michel, et al. “EASL recommendations on treatment of hepatitis C 2018.” *Journal of hepatology* 69.2 (2018): 461–511.

chlamydia, syphilis, and herpes.^{30,31} Reasons people using substances may be at higher risk of sexually transmitted disease include limited access to healthcare, delays in seeking healthcare, higher rates of severe mental illness, and/or exchanging drugs for sex or vice versa.³² Because not all sexually transmitted infections are symptomatic, individuals may not be aware that they have a transmissible infection. Psychoactive drugs such as methamphetamine, mephedrone, and gamma hydroxybutyrate (GHB) can be used recreationally to enhance or facilitate sexual intercourse in a phenomenon known as “chemsex.”³³ Use of mind-altering substances can make it difficult to take stock of high-risk sexual behavior.

Psychiatric providers may be unaware of the intersectionality of drug use and high-risk sexual behavior for patients who use substances. Thus, clinicians should take a sexual history during clinical visits for general health maintenance and refer female patients to primary care for cervical cancer screening. It is imperative that patients who use substances be administered sexually transmitted infection testing; many tests can be performed noninvasively with a urine or blood sample.

Notably, people who use substances may perceive that they are stigmatized in healthcare settings and therefore rely on psychiatry appointments as their primary form of healthcare. This makes attention to an individual’s medical comorbidities, risks, and testing all the more important.

Opioid Overdose Reversal Medication (OORM)

Naloxone is an opioid antagonist and the most used opioid overdose reversal medication (OORM).³⁴ Naloxone is frequently available in the intranasal form “Narcan” and can restore breathing in patients with apnea secondary to opioid intoxication, though there are several U.S. Food and Drug Administration (FDA)-approved formulations.³⁵ These medications should be given as soon as opioid intoxication with respiratory depression is suspected. If the person’s breathing does not improve within two to three minutes, additional naloxone or other opioid antagonists should be administered every two to three minutes until breathing is restored.

³⁰ Khan, Maria R., et al. “Non-injection and injection drug use and STI/HIV risk in the United States: the degree to which sexual risk behaviors versus sex with an STI-infected partner account for infection transmission among drug users.” *AIDS and Behavior* 17 (2013): 1185–1194.

³¹ Haider, Mohammad Rifat, et al. “Illicit drug use and sexually transmitted infections among young adults in the US: evidence from a nationally representative survey.” *International journal of STD & AIDS* 31.13 (2020): 1238–1246.

³² Murali, Vijaya, and Sabitha Jayaraman. “Substance use disorders and sexually transmitted infections: a public health perspective.” *BJPsych Advances* 24.3 (2018): 161–166.

³³ Giorgetti, R., et al. “When ‘chems’ meet sex: a rising phenomenon called ‘chemsex.’” *Current neuropharmacology* 15.5 (2017): 762–770.

³⁴ SAMHSA Overdose Prevention and Response Toolkit, revised 2024. <https://store.samhsa.gov/sites/default/files/overdose-prevention-response-kit-pep23-03-00-001.pdf>

³⁵ Green TC, Heimer R, Grau LE. Distinguishing signs of opioid overdose and indication for naloxone: an evaluation of six overdose training and naloxone distribution programs in the United States. *Addiction*. 2008 Jun;103(6):979-89. doi: 10.1111/j.1360-0443.2008.02182.x. Epub 2008 Apr 16. PMID: 18422830; PMCID: PMC3163671.

Death from respiratory depression can be rapid, so opioid antagonists should not be withheld. There is ample research that shows that the use of opioid antagonists, regardless of formulation, reduces opioid-related mortality.³⁶

Given the effectiveness of naloxone, there have been several successful efforts to increase access and limit barriers to care for naloxone. Naloxone is available in every state in the U.S., and in 2023 the FDA approved an over-the-counter, nonprescription formulation (RiVive).³⁷ As of 2023, naloxone has been made available over the counter, although the out-of-pocket cost may be prohibitive for many patients, making continued low- or no-cost distribution critical. Services to locate free naloxone include:

- [Narcan Finder](#), which can be used to find local resources based on location
- [Next Distro](#), which can be used to have Narcan delivered to you

Bystander Laws and Good Samaritan/Medical Amnesty

In 2022, drug overdoses, many of which involved opioids, claimed nearly 110,000 lives in the United States.³⁸ Most states in America have responded by enacting Good Samaritan laws, which provide legal protections from criminal penalties to individuals who call for emergency assistance to report an opioid overdose. According to the U.S. Government Accountability Office, 48 jurisdictions (47 states and D.C.) have passed Good Samaritan and naloxone access laws, the latter of which expand access to the overdose reversal agent naloxone.³⁹

Good Samaritan laws vary state to state in the level of protections from prosecution, typically applying to low-level offenses such as possession of drugs and drug paraphernalia. Fear of law enforcement/police involvement is cited as the number one reason that people do not contact 9-1-1 during an overdose, so protections from prosecution may alleviate fear of contacting emergency services.⁴⁰ Two years after enactment, Good Samaritan laws with protections from arrest in conjunction with improved naloxone access were found to be associated with a 7% reduction in overdose fatalities.⁴¹ It is thus advisable for jurisdictions to adopt both Good Samaritan laws with protections from arrest and laws enhancing access to naloxone.

³⁶ Gould, Kathleen Ahern, RN, MSN, PhD, Dimensions of Critical Care Nursing, Got Narcan?

https://journals.lww.com/dccnjournal/fulltext/2019/01000/got_narcan_.1.aspx

³⁷ FDA Announces First Over the Counter Naloxone Nasal Spray, March 29, 2023, <https://www.fda.gov/news-events/press-announcements/fda-approves-first-over-counter-naloxone-nasal-spray>

³⁸ Mann, B. U.S. drug overdose deaths hit a record in 2022 as some states see a big surge. National Public Radio. 18 May 2023.

<https://www.npr.org/2023/05/18/1176830906/overdose-death-2022-record>

³⁹ U.S. Government Accountability Office. Drug Misuse: Most States Have Good Samaritan Laws and Research Indicates They May Have Positive Effects. March 29, 2021: <https://www.gao.gov/products/gao-21-248>

⁴⁰ Texas Center for Justice and Equity. Harm Reduction Facts. <https://texascje.org/harm-reduction-facts#:~:text=In%202021%2C%20the%20Texas%20Legislature,because%20they%20fear%20jail%20time.>

⁴¹ Hamilton, Leah, et al. "Good Samaritan laws and overdose mortality in the United States in the fentanyl era." *International Journal of Drug Policy* 97 (2021): 103294.

Fentanyl Testing Strips

Synthetic opioids (e.g., fentanyl) are increasingly present in illicit substances. Unintentional exposure to high-potency opioids present as a contaminant in other drugs represents a real risk of accidental overdose to the user. Being able to test a small quantity of drug for the presence of fentanyl prior to use provides the user with a rapid, reliable, and cost-effective approach to reduce the risk of unintentional fentanyl exposure.

Fentanyl testing strips (FTS) use a common “lateral flow immunoassay” technology – the same approach as that used for at-home testing for pregnancy and COVID-19. The paper strips are coated with antibodies that are specific to fentanyl. If a solution containing fentanyl is applied to the strip, the antibodies will bind to the fentanyl and be carried along the strip as the solution wicks its way through the paper. A separate control and test area further down the paper strip contains additional, immobilized antibodies that then bind to the mobile fentanyl/antibody conjugate, giving a positive result. In practice, to test a sample for fentanyl, a small amount of water and drug are mixed, and the strip is placed in the water to apply the sample. Then the user waits a few minutes to allow the reaction to resolve and reads the result.

While fentanyl testing strips have long been used to detect fentanyl and norfentanyl (major metabolite) in urine samples, there is less known about using FTS to detect the substances’ presence in drug samples. Two studies investigating the sensitivity and specificity of FTS for drug samples found high sensitivity for fentanyl (>95% in most studies for most of the strips examined), but for analogs, such as carfentanil, the data were more mixed.

	Fentanyl		Fentanyl Analogs
	Sensitivity	Specificity	
Park, et al. (2022)	98.5%	89.2%	Analogs included in fentanyl results; carfentanil not detected
Bergh, et al. (2021)	All clearly positive	Mixed results	Carfentanil not detected
Ti, et al. (2020)	87.5%	92.5%	
Green, et al. (2020)	96.3%–100%	90.4%–98.1%	Also identified 2 analogs tested

Interestingly, adulterants (such as methamphetamine, MDMA, and diphenhydramine) can also trigger false positives in studies.⁴² Also of note, these procedures do require using a solution to dissolve the drug in – it is possible that affected parts of a pressed pill, for example, may be missed if the sample is taken from another section. This phenomenon is known as the chocolate chip cookie effect (see further explanation from the CDC).⁴³

⁴² Lockwood TE, Vervoordt A, Lieberman M. High concentrations of illicit stimulants and cutting agents cause false positives on fentanyl test strips. *Harm Reduct J.* 2021 Mar 9;18(1):30. doi: 10.1186/s12954-021-00478-4. PMID: 33750405; PMCID: PMC7941948

⁴³ CDC, What you can do to test for fentanyl, https://www.cdc.gov/stop-overdose/safety/?CDC_AAref_Val=https://www.cdc.gov/stopoverdose/fentanyl/fentanyl-test-strips.html

Xylazine

In November 2022, the FDA alerted healthcare professionals to the risks posed by xylazine, a veterinary anesthetic and deadly adulterant now found in fentanyl, heroin, and stimulant drugs.⁴⁴ Because xylazine causes life-threatening effects, some of which are similar to those of opioid intoxication and withdrawal, it can be challenging to differentiate opioid and xylazine exposure. Xylazine can be inhaled, ingested, or injected intravenously or intramuscularly, and has been associated with significant sedation, hypotension, and bradycardia with potential loss of⁴⁵ It is thought that xylazine is added to the drug supply to enhance the central nervous system (CNS) depressant effects of opioids like fentanyl. The sedative properties of xylazine place those who use it at risk of physical and sexual assault while unconscious.⁴⁶

Xylazine may also cause peripheral wounds that become necrotic. It has potent vasoconstrictive and sedative effects and can increase the risk of pressure injuries when individuals are under its influence.⁴⁷ These wounds, which do not always occur at the site of injection, may require surgical intervention and even amputation. Individuals with wounds may also be less likely to seek treatment due to provider bias and stigma.⁴⁸ It is important for every clinician to perform a skin exam of patients who are deemed high risk, including those who use intravenous drugs and have conditions like infective endocarditis.⁴⁹ Patients who use drugs intravenously should be counseled not to inject drugs into wound sites, and those with wounds should seek medical care immediately. Wound sites should be kept clean with soap and water and moist with dressings.⁵⁰

The absence of an FDA-approved reversal agent to xylazine is an ongoing challenge. Yohimbine hydrochloride and tolazoline hydrochloride are reversal agents used in veterinary medicine that have yet to be studied in humans⁵¹ There is also no consensus on how to treat xylazine withdrawal, characterized by anxiety, insomnia, dysphoria, and jitteriness.⁵²

⁴⁴ <https://www.fda.gov/drugs/drug-safety-and-availability/fda-alerts-health-care-professionals-risks-patients-exposed-xylazine-illicit-drugs>

⁴⁵ Sanchez, Roberto & Noah Capurso. Xylazine: An Emerging Threat in the Opioid Epidemic. The Carlat Addiction Treatment Report. Carlat Publishing: October 31, 2023.

<https://www.thecarlatreport.com/articles/4521-xylazine-an-emerging-threat-in-the-opioid-overdose-epidemic>

⁴⁶ Louisiana Department of Health. Emerging Threat of Xylazine in Combination with Fentanyl. May 11, 2023: <https://lsbme.la.gov/emerging-threat-of-xylazine-in-combination-with-fentanyl>

⁴⁷ Sanchez, Roberto & Noah Capurso. (n 45)

⁴⁸ D'Arrigo, Terri. Xylazine Presents Unique Challenges. Psychiatric News: American Psychiatric Association. 20 Oct 2023. <https://psychnews.psychiatryonline.org/doi/10.1176/appi.pn.2023.11.11.3>

⁴⁹ Sanchez, Roberto & Noah Capurso. (n 45)

⁵⁰ California Department of Public Health. Xylazine Wound Care Factsheet. November 2023. <https://www.cdph.ca.gov/Programs/CCDPHP/sapb/CDPH%20Document%20Library/xylazine-wound-care-factsheet.pdf>

⁵¹ Papudesi, Bhavani Nagendra, Srikrishna Varun Malayala, and Angela C. Regina. "Xylazine toxicity." Study Guide from StatPearls Publishing. December 20, 2023. <https://europepmc.org/article/NBK/nbk594271>

⁵² Ibid.

Patients are advised to test their drugs for the presence of xylazine and fentanyl to reduce the chances that these substances have been unexpectedly mixed into a drug supply. It is also important to educate patients that xylazine does not appear on standard urine drug screens. In some states, xylazine and fentanyl test strips are not legal, as they are considered drug paraphernalia (see the Fentanyl Testing Strips section above), while in other states, test strips have been decriminalized.⁵³ In cases of suspected xylazine and opioid overdose, naloxone must be administered to reverse the opioid-related part of the overdose. Patients exposed to xylazine should also be referred to safe syringe/needle exchange programs and safe consumption sites if these programs are available in the place of practice.

Kratom

Kratom, derived from *Mitragyna speciosa*, a tree native to Southeast Asia, refers to herbal products and supplements produced from the plant's leaves.⁵⁴ Kratom leaves contain several bioactive alkaloids, chief among them mitragynine and 7-hydroxymitragynine.⁵⁵ It is administered as a tablet, capsule, extract, or powdered tea.⁵⁶ Since it is characterized as a supplement, kratom is not subject to regulation from the FDA. Individuals use kratom products to reduce opioid withdrawal symptoms, for mood enhancement, and for pain management. An estimated 1.7 million Americans aged 12 and older used kratom in 2021, according to the Substance Abuse and Mental Health Services Administration National Survey on Drug Use and Health.⁵⁷ Kratom products are known for their stimulant properties at low doses and opioid-like properties at higher doses. Kratom bears a risk of dependence, and the Drug Enforcement Agency (DEA) has listed kratom as a “drug of concern.”⁵⁸

As noted above, kratom is not regulated by the FDA, and yet kratom products have been associated with heavy metal and bacterial contaminants.⁵⁹ Adverse effects range from nausea, constipation, and dizziness to drowsiness and, in severe cases, confusion, tremors, and seizures.⁶⁰ Individuals with chronic kratom use are also at elevated risk for psychotic symptoms such as hallucinations and delusions.⁶¹ Long-term use is associated with serious liver dysfunction, and there have been reports of lethal kratom overdoses, particularly in individuals

⁵³ McClure, Joanne & Victoria Pless. How the Emergence of Xylazine Impacts Overdose Prevention Policy. Association of State and Territorial Health Officials (ASTHO). December 8, 2023: <https://www.astho.org/communications/blog/how-the-emergence-of-xylazine-impacts-overdose-prevention-policy/>

⁵⁴ Abdullah, Bin, and Mohammad Farris Iman Leong. “Kratom dependence and treatment options: a comprehensive review of the literature.” *Current drug targets* 21.15 (2020): 1566–1579.

⁵⁵ Ibid.

⁵⁶ Department of Justice/Drug Enforcement Administration. Kratom Drug Fact Sheet. April 2020: https://www.dea.gov/sites/default/files/2020-06/Kratom-2020_0.pdf

⁵⁷ FDA News, <https://www.fda.gov/news-events/public-health-focus/fda-and-kratom>

⁵⁸ National Institute on Drug Abuse. “Kratom.” March 2022. <https://nida.nih.gov/research-topics/kratom>

⁵⁹ Prozialeck, Walter, Alexandra Fowler, and Joshua Edwards. “Public health implications and possible sources of lead (Pb) as a contaminant of poorly regulated kratom products in the United States.” *Toxics* 10.7 (2022): 398.

⁶⁰ Department of Justice/Drug Enforcement Administration. (n 53)

⁶¹ Nunez, Maxsaya Baez, et al. “Kratom’s rising role in the potential exacerbation of mental health disorders: A case report and review of the literature.” *Psychiatry Research Case Reports* 1.2 (2022): 100069.

using other substances concurrently.⁶² Neonatal abstinence syndrome has also been detected in infants born to women who use kratom.⁶³

For those with disordered use, sublingual buprenorphine-naloxone (Suboxone) is a promising treatment for detoxification and maintenance therapy.⁶⁴ It is prudent to provide Narcan to those using kratom due to increased risk of overdose, particularly when kratom is co-administered with other CNS depressants.

Training

The insufficient emphasis on harm reduction training for psychiatrists in the context of substance use disorder is a concerning gap in medical education. Despite the high prevalence of substance use disorder as a comorbidity with other psychiatric diagnoses, psychiatrists frequently receive limited education on practice strategies to minimize the negative consequences associated with substance use.

Though training opportunities have historically been limited, SAMHSA and the CDC have collaborated to create the National Harm Reduction Technical Assistance Center (NHRTC), which provides assistance to syringe service programs, health departments, treatment and recovery programs, and individuals. The National Harm Reduction Coalition also offers comprehensive and individualized training across the country. Beyond these national organizations, community leaders have also implemented harm reduction training in both statewide and districtwide capacities through community harm reduction centers, police departments, and local pharmacies.^{65,66}

Harm reduction training within undergraduate and graduate medical school curricula remains underrepresented.⁶⁷ “Most programs emphasize foundational substance use knowledge and introductory harm reduction skills without employing harm reduction as a framework.”⁶⁸ Key missing topics include polysubstance use, adulteration of the unregulated drug supply with fentanyl and xylazine, and harm reduction strategies for non-opioid substances.⁶⁹ Focusing on the harm reduction principles set forth by the National Harm Reduction Coalition is

⁶² Department of Justice/Drug Enforcement Administration. (n 53)

⁶³ Department of Justice/Drug Enforcement Administration. (n 53)

⁶⁴ Broyan, Viktoriya R., et al. “Long-term buprenorphine treatment for kratom use disorder: a case series.” *Substance Abuse* 43.1 (2022): 763–766.

⁶⁵ Scott M. Sexton, Macary Weck Marciniak, Ouita Gatton, Penny Shelton, (2023) Impact of a statewide community pharmacy approach to opioid harm reduction, *Journal of the American Pharmacists Association*, Volume 63, Issue 1, 2023, Pages 389–395.e1, ISSN 1544-3191, <https://doi.org/10.1016/j.japh.2022.10.020>.

⁶⁶ Khorasheh, T., MPH, Naraine, R., MPH, Watson T.M., PhD, Wright, A. Kallio, N., MA, Strike, C., PhD. (2019) A scoping review of harm reduction training for police officers. *Drug and Alcohol Review*. Volume 23, Issue 2. P 131–150. <https://doi.org/10.1111/dar.12904> (2019)

⁶⁷ Smith, K.R., Shah, N.K., Adamczyk, A.L., et al. Harm reduction in undergraduate and graduate medical education: a systematic scoping review. *BMC Med Educ* 23, 986 (2023). <https://doi.org/10.1186/s12909-023-04931-9>

⁶⁸ Ibid.

⁶⁹ Ibid.

recommended as a bedrock for building more comprehensive trainings for healthcare workers.⁷⁰

Patient Protection Laws

Historically, laws across the United States have been punitive to PWUD, including those relating to possession of drug checking equipment known to prevent the transmission of disease or overdose. Laws have also been designed to punish those who witness an overdose, leading to confusion and the fear of calling for medical help during an emergency. While there is still a range within the legal landscape across states, there has been a movement to ease the punitive nature of laws regarding the possession and distribution of drug equipment including drug checking equipment, naloxone access, and Good Samaritan overdose protections. Nearly every jurisdiction (49 states, Washington, D.C., and Puerto Rico) provides laypersons with liability protections for administering naloxone to a person experiencing an overdose.⁷¹

Equity of Access

Community-Based Harm Reduction Programs (CHRP) are often the best-placed organizations to respond to communities or individuals on racial justice and health equity issues, and provide services for Black, Latino, American Indian, Alaska Native, Asian American, Native Hawaiian, Pacific Islander persons, and other persons of color; members of religious minorities; LGBTQI+ persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely impacted by persistent poverty or inequity.⁷² These programs are led by people with lived and living experience, provide the lowest barrier to core harm reduction practices, and are often integrated into other treatment services that meet the needs of the community.⁷³ These programs must also take into consideration culturally tailored services and resources to reduce the stigma and mistrust that can overshadow the lifesaving services being offered.

Continued work must be done to change policy and legislative barriers in order to ensure funding for equitable access to the full range of harm reduction interventions for patients. Barriers to access can be attributed to attitudes toward, knowledge of, and education about services. Stigma, lack of acceptance, cost, space, and perceived liability and safety are all barriers that can be overcome to increase access and save lives.

⁷⁰ Ibid.

⁷¹ <https://www.astho.org/globalassets/report/legal-mapping-of-harm-reduction-laws-and-overdose-prevention-center-legislation.pdf>

⁷² SAMHSA Harm Reduction Framework, <https://www.samhsa.gov/sites/default/files/harm-reduction-framework.pdf>

⁷³ SAMHSA Harm Reduction Framework, <https://www.samhsa.gov/sites/default/files/harm-reduction-framework.pdf>

Conclusion

Harm reduction is an evidence-based, core strategy for the treatment of substance use disorder. It aims to reduce the medical, social, and psychological sequelae of addiction while at the same time promoting patient autonomy and providing an alternative treatment framework to the reductionist lens of total abstinence. Psychiatrists are frontline providers to patients who struggle with substance dependence, and they play a key role in the treatment of addiction, including the provision of harm reducing interventions. This document provides an overview of some high-impact harm reduction topics but is written as an introduction and reference rather than as a comprehensive encyclopedia. It is worth noting that treating substance dependence and addiction also promotes patient health in other psychiatric domains, including medication adherence, retention in treatment, and reduced mood and thought symptom burden – directly aligning with core goals of all psychiatric patient care.

As more data are accumulated, state and federal laws are revised, and novel interventions are approved, harm reduction standards of care will continue to evolve. Beyond this document, further information on harm reduction can be found from these reliable sources:

Substance Abuse and Mental Health Services Administration (SAMHSA;
<https://www.samhsa.gov/>)

American Society of Addiction Medicine (ASAM;
<https://www.asam.org/>) National Institute on Drug Abuse
(NIDA; <https://nida.nih.gov/>)

American Academy of Addiction Psychiatry (AAAP; <https://www.aaap.org/>) National
Harm Reduction Coalition (<https://harmreduction.org/>)