

# Addressing Social Determinants of Health in Overdose Prevention

Magdalena Cerdá,<sup>1</sup> Bennett Allen,<sup>1</sup> Kelly R. Knight<sup>2</sup>

<sup>1</sup>Center for Opioid Epidemiology and Policy, NYU Grossman School of Medicine

<sup>2</sup>School of Medicine, University of California – San Francisco (UCSF)

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# Overview and Summary

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## The Overdose Crisis

More than 100,000 people died in the United States from a drug overdose in 2021, the highest number ever recorded in one year.<sup>1</sup> Most of these overdoses involved opioids, and many involve multiple drugs. Black and Native American and indigenous people have experienced the highest rise in opioid overdose deaths in 2013–20, with current overdose rates surpassing those of white Americans.<sup>2,3</sup> Since 2020, the greatest increase in overdose was observed in poor, urban communities with greater concentration of racial/ethnic minoritized groups such as Black and Hispanic people.<sup>4,5</sup>

### **The Intersection of Social Determinants of Health with the Overdose Crisis**

Social Determinants of Health (SDOH) are defined in Healthy People 2030 as “the conditions in the environments where people are born, live, learn, work, play, worship and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.”<sup>6</sup> Examples of SDOH include poverty, unemployment, housing, working conditions, transportation, and food insecurity, among others. Critical to this definition is the idea that resources and services needed to promote health and prevent illness are impacted by social structures, policies, and economic systems that shape inequities in health and healthcare. Social structural factors that influence the distribution of resources, services, and community and individual vulnerability include structural racism, structural violence, sexism, ableism, homophobia and other beliefs and practices, both historic and contemporary, that result in diminished opportunities for well-being in the US.

SDOH such as structural racism, criminalization of substance use, deindustrialization, limitations to employment opportunities, and the increasing concentration of poverty have contributed to the disparate rise in overdose in poor communities and among racial/ethnic minoritized groups. SDOH also shape who can access and benefit from services that improve the health of people who use drugs. In order to effectively respond to this public health crisis, we must enact policies that address the social determinants of overdose risk.

We focus on strategies that address the continuum of overdose risk, from opioid use initiation and active opioid use, to opioid use disorder, to nonfatal and fatal overdose.<sup>7</sup> This document is aimed at policymakers at all levels of government, as well as representatives of government agencies such as health and human services, public safety, and education.

Priorities for action were developed by a group of experts convened by the Interdisciplinary Association of Population Health Sciences to support the National Academy of Medicine Medicine’s Action Collaborative on Countering the U.S. Opioid Epidemic in integrating a social determinants of health perspective into their work. Priorities reflected in this document arose from a learning curriculum developed by the expert group, including a review of the literature and a series of

closed workshops that convened academics, advocates, people with lived experience of opioid use, clinicians, policymakers, health systems leaders and payers, to examine the intersection of social determinants of health with the overdose crisis at the policy and service levels. The work of this group was funded by the Robert Wood Johnson Foundation.

## Summary of Priorities for Action

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We provide evidence-based and evidence-informed actionable policy-level strategies to address social determinants of health in each of the four federal overdose prevention strategy priorities: primary prevention, harm reduction, evidence-based treatment, and recovery support.<sup>8</sup> When available, we provide case studies to illustrate how the strategies can be implemented. These actionable strategies are intended to guide policymakers at all levels of government as they implement their response to the overdose crisis.

In the area of primary prevention, strategies focus on social drivers of important precursors of opioid use initiation and progression to active opioid use disorder. These include: (1) tackling the increasing prevalence of pain and stigma associated with pain; (2) investing in early intervention and horizontal prevention programs to promote healthy development and reduce the risk of adverse childhood events; (3) expanding social and economic policies that strengthen household financial security and buffer against job and housing loss; and (4) decriminalizing drug use and de-carceration of people with drug-related offenses, to reduce stigma and adverse childhood events.

In the area of harm reduction, strategies focus on actionable policy strategies to address legal, economic, and social barriers to access and use of harm reduction services. These include: (1) legal protections for harm reduction services; (2) provision of funding to integrate wraparound services that address housing, nutrition, employment and other health needs in harm reduction service facilities; (3) adoption of overdose crisis intervention strategies led by social work and mental health professionals rather than law enforcement; (4) mandates to ensure naloxone saturation in permanent supportive housing, carceral settings and other spaces with overdose vulnerability; and (5) funding for mail-order harm reduction services.

In the area of evidence-based treatment, strategies focus on policy and regulatory levers at the federal and state levels to increase access to care and close racial and socioeconomic gaps in access and outcomes. These strategies include: (1) regulatory reform to allow delivery of methadone and buprenorphine through community pharmacy settings; (2) changes to methadone reimbursement structure to decouple clinical care from financial incentives and increase accessibility through methadone delivery to patients; (3) expansion of evidence-based treatments to new types of providers and settings to close racial/ethnic gaps in care access and engagement; (4) policies to ensure continuity of evidence-based treatment for justice-involved persons during and after incarceration; (5) adoption of telehealth models to expand buprenorphine access in rural jurisdictions with limited health care infrastructure; (6) support for non-stigmatizing and non-punitive models of clinical care for pregnant people with opioid use disorder; and (7) investment in economic and workforce development for people with opioid use disorder.

In the area of recovery support, strategies focus on policies and programs to facilitate individualized and non-punitive recovery pathways for persons with opioid use disorder across diverse sectors. These include: (1) sustained employment opportunities for individuals during and throughout the recovery process; (2) development of holistic, community-based recovery models to improve behavioral health outcomes; (3) integration of non-punitive recovery services into transitional and supportive housing environments to prevent loss of housing or returns to homelessness; and (4) removal of employment, social entitlement, and housing policies that discriminate against formerly incarcerated persons to ensure service access at all junctures of the recovery process.

# PRIORITY AREA 1: Primary Prevention

Primary prevention is a term that embodies strategies across the lifespan that can reduce drivers of opioid use initiation and progression to active opioid use disorder. By reducing rates of problematic drug use, the strategies play an important role in reducing the occurrence of overdose. Strategies include population-wide policies as well as interventions targeting high-risk populations. Investment in the following social and economic policies is critical to address the root causes of opioid use initiation, active opioid use, opioid use disorder, and overdose.

## 1. Tackling the increasing prevalence of pain, and associated stigma, would address one of the root causes of opioid misuse.

The prevalence of pain is rising with every cohort in the United States.<sup>9</sup> This is particularly marked for people without a bachelor's degree, for whom drivers include unemployment<sup>10</sup> and physically demanding and hazardous jobs combined with increasing obesity.<sup>11</sup> Stigma associated with chronic pain and with opioid use disorder has substantially hindered the adoption of evidence-based policies and treatment; this issue is particularly marked for racially minoritized populations.<sup>12</sup>

Investment in equitable access to patient-centered care: Patients need access to humane, non-stigmatized, comprehensive and evidence-based care for pain. Payers and policymakers should make available and provide insurance coverage and reimbursement for the range of pharmacologic and non-pharmacologic non-opioid pain treatment alternatives that have evidence of effectiveness.

**CASE EXAMPLE:** The updated [CDC Clinical Practice Guideline for Prescribing Opioids for Pain](#) provides specific recommendations for non-opioid treatments for acute and chronic pain, and call for investment in patient-centered care.

Interventions to reduce stigma associated with pain and with opioid use disorder: Interventions targeting public institutions such as the media, as well as health care systems and the clinicians who provide care, could reduce public stigma and may contribute to a shift in policy agendas relating to people with chronic pain and people with opioid use disorder.

**CASE EXAMPLE:** The Australian [Mindframe Media and Mental Health Project](#) offers an illustrative example of the potential of interventions targeting public stigma. They implemented a national dissemination strategy to support journalists in their understanding and use of guidelines to ensure sensitive and responsible coverage of mental illness, alcohol and other drug use, and suicide.<sup>13</sup>

**CASE EXAMPLE:** The Action Lab at the Northeastern University Center for Health Policy and Law implemented a [Changing the Narrative](#) initiative. They convened a network of journalists, researchers, academics and advocates with the aim of helping journalists and opinion leaders provide accurate and humane information on drug use and addiction.

## 2. By building healthy environments and developing life skills, investment in early intervention and horizontal prevention programs can have cross-cutting benefits across multiple forms of drug use.

Early intervention programs during pregnancy and early childhood: Early intervention programs prevent adverse childhood experiences (ACEs), which are associated with substance use disorders among adolescents and adults.<sup>14</sup> Home visitation programs during pregnancy and early childhood are associated with reduced rates of child abuse and neglect<sup>15,16</sup>—two primary ACEs—and future criminal justice involvement.<sup>17</sup> Child abuse and neglect and criminal justice involvement are risk factors for substance use. Home visitation programs support caregivers and provide training in child health and development in order to build a safe, stable and supportive environment. Further, preschool enrichment programs that actively engage and support families can also improve physical, social, emotional and cognitive development, improve school readiness and reduce child abuse and neglect.<sup>18,19</sup> Finally, childcare subsidies will help ensure children have access to higher quality childcare and reduce parental stress and depression, thus reducing risk of ACEs and improving child development.<sup>20</sup> Support for early intervention programs should be implemented in a way that avoids their use to disproportionately police families from racialized minority communities and remove racially minoritized children from their families.

**CASE EXAMPLE:** The [Nurse Family Partnership Program](#) works with first-time mothers on prenatal and parenting practices during pregnancy through the first two years of the child's life. Randomized controlled trials in Elmira, NY, Memphis, TN, and Denver, CO found reductions in domestic violence and child abuse and neglect, and children's substance use and mental health problems in adolescence.<sup>21,22</sup>

Horizontal life skills programs for school-aged children: Universal psychosocial interventions for children and youth are associated with improved adolescent mental health, reduced risk behaviors, and reduced substance use,<sup>23,24</sup> which can have downstream effects on adolescent and adult overdose risk. School-based programs (i.e., curricula integration), such as social-emotional learning<sup>25</sup> also have demonstrated positive impacts on youth and young adult mental health and substance use, positioning these as a promising primary prevention strategy.<sup>26</sup>

**CASE EXAMPLE:** [The Positive Action Program](#) is a school-based program to promote socio-emotional learning for students in elementary and middle schools. It aims to increase positive behavior, reduce negative behavior, promote social and emotional learning and a positive school climate. Randomized controlled trials in Hawaii and Chicago, among others, have shown improvements in school quality, social skills, mental health, school achievement and substance use, leading to its certification as a [Blueprints for Healthy Youth Development Certified Model Program](#).

**RESOURCES:** The Centers for Disease Control and Prevention provides [evidence-based recommendations of strategies to prevent ACEs](#), that have the potential to produce downstream benefits for the prevention of substance misuse. [Blueprints for Healthy Youth Development](#) also provides information on primary prevention programs targeted at children, adolescents, schools and families with demonstrated impact on substance misuse.

### 3. Expanding social and economic policies that strengthen household financial security and buffer against job and housing loss in poor and working-class communities can reduce opioid misuse, reducing the risk for overdose.

Income assistance and minimum wage: Unconditional income assistance programs such as guaranteed income (which targets certain sectors of society based on financial need), and earned income tax credits, as well as more generous minimum wage limits, could function as policy levers to reduce the risk of substance misuse and substance use disorders,<sup>27,28</sup> which may secondarily impact overdose risk.

**CASE EXAMPLE:** Unconditional income assistance programs such as guaranteed income can reduce financial insecurity and thus alleviate economic sources of stress that contribute to mental illness and indirectly to drug use. Experiments on guaranteed income have observed reductions in hospitalizations, particularly those involving mental health problems and unintentional injuries.<sup>29,30</sup> Counties in states with higher minimum wage limits were less likely to experience a rise in overdose deaths following labor automation.<sup>31</sup>

Unemployment benefits: Counties with higher rates of unemployment experienced a greater rise in opioid overdose deaths<sup>32,33,34</sup> Adoption of more generous state unemployment insurance benefits reduced the harmful effects of mass job layoffs on overdose.<sup>33</sup>

**CASE EXAMPLE:** With every \$1,000 increase in state unemployment insurance benefits, the number of opioid overdose deaths per 100,000 decreased by 0.13 percentage points in U.S. counties.<sup>33</sup>

Medicaid expansion: Adoption of more generous state income eligibility thresholds for Medicaid coverage can buffer communities from the adverse effects of deindustrialization and job loss on overdose risk. States that expanded Medicaid coverage experienced lower rates of all-cause and overdose deaths.<sup>35,36</sup>

**CASE EXAMPLE:** State Medicaid generosity substantially mitigated the increase in overdose deaths associated with automation of labor.<sup>31</sup>

Housing eviction moratoria and supportive housing programs: Counties with high eviction rates have higher overdose death rates and housing instability is associated with increased risk of fatal overdose<sup>37</sup> and other drug-related harms such as unsafe injection practices.<sup>38</sup> State eviction moratoria during the COVID-19 pandemic were associated with improved mental health among renters.<sup>39</sup> Supportive housing programs such as Housing First can also improve mental health,<sup>40-42</sup> thus addressing a key precursor to opioid initiation and active opioid use. Equitable access to safe, affordable housing is critical for all areas of health.

**CASE EXAMPLE:** The Substance Abuse and Mental Health Services Administration ([SAMHSA](#)) [recommended Housing First](#) as a primary housing intervention for individuals experiencing mental health and substance use disorders at the federal level.

#### **4. Decriminalization of drug use and de-carceration of people with drug-related offenses can reduce stigma and adverse childhood events, two of the root causes of opioid use and overdose.**

Decriminalization of drug use: Criminalization of drug use is a major contributor to the stigma surrounding substance use.<sup>43-45</sup> Further, incarceration of people who use and sell drugs is an important risk factor for future drug use and overdose for currently and formally incarcerated people<sup>46-48</sup> and for their children.<sup>49</sup> Criminalization of drug use during pregnancy prevents pregnant people from getting the care they need during pregnancy.<sup>50</sup> Decriminalization of drug possession for personal use in Portugal decreased drug-related stigma,<sup>51</sup> overdose mortality and HIV incidence.<sup>52,53</sup>

**CASE EXAMPLE:** [Oregon's Measure 110](#) is intended to reduce incarceration and stigma among people who use drugs.

De-carceration of people with drug-related offenses: Incarceration has cascading effects beyond the individual. For example, over 60% of women incarcerated have custody of minor children,<sup>54</sup> reproducing the adverse childhood experiences associate with future substance use and risk behavior.<sup>55</sup> The presence of a criminal record is also associated with future discrimination across an array of social systems (e.g., education, housing, and health care), thus increasing exposure to key social drivers of substance misuse and overdose.<sup>56</sup>

**CASE EXAMPLE:** Brooklyn [CLEAR](#) (Collaborative Legal Engagement Assistance Program) offers pre-arraignment diversion to treatment and other community-based social and health care services—including overdose prevention—for individuals arrested for drug possession.



# PRIORITY AREA 2: Harm Reduction

Harm reduction refers to strategies that aim to reduce negative consequences of drug use by meeting people who use drugs where they are, whether that is active use, seeking treatment, or maintenance of recovery. Evidence-based best practices in harm reduction include expanding access to naloxone,<sup>57-60</sup> providing access to products, such as fentanyl test strips, that test the drug supply for potentially lethal contaminants,<sup>61-68</sup> expanding the reach and availability of syringe service programs,<sup>69-72</sup> and allowing for the operation of overdose prevention centers.<sup>73,74</sup> Below, we propose actionable policy strategies to address legal, economic, and social barriers to access and use of such harm reduction services. We ground actionable strategies in evidence on measures that have been shown to be effective at increasing use, retention and outcomes associated with the use of harm reduction services, and illustrate with specific examples for each actionable strategy.

## 1. Legal protections for harm reduction efforts are a critical driver of harm reduction service access.

Decriminalization of drug paraphernalia. Laws restricting the possession of drug paraphernalia—including, but not limited to, syringes, pipes, and fentanyl test strips—restrict the operations of syringe service programs (SSPs).<sup>75</sup> Authorizing SSP operation, decriminalizing possession and distribution of drug paraphernalia, and allocating funding for SSP operations should be a state and municipal priority in their overdose response efforts. Options to increase access to syringes and other paraphernalia include pharmacy distribution, secondary exchange (i.e., PDSE), and mail distribution.<sup>76</sup>

**CASE EXAMPLE:** Biden Administration-supported [model legislation](#) for states to authorize syringe service programs, decriminalize syringe possession, and directly fund SSP operations through state mechanisms.

Authorization of overdose prevention centers. While new to the United States, overdose prevention centers (OPCs) are an established harm reduction strategy in Europe, Canada and Australia. While two publicly recognized sites are in operation in New York City,<sup>71</sup> their legal status remains tenuous without state or federal legislative approval or federal regulatory authorization.<sup>72,77</sup> In 2021, Rhode Island became the first and currently only state to authorize OPCs through state legislation, offering a national model in the absence of federal action.<sup>78</sup>

**CASE EXAMPLE:** [Rhode Island OPC legislation](#) allows the use of state and local public funds to support OPC services.

## **2. Funding for wraparound services can address critical housing, nutrition, employment and other health needs of people who use drugs and attend harm reduction service facilities**

Harm reduction is a broad intervention strategy to promote physical and mental health and wellbeing, as well as social integration, among often highly marginalized communities of people who use drugs.<sup>79,80</sup> Funding is thus needed to allow harm reduction programs to integrate wraparound services into harm reduction, including housing referrals, nutrition assistance, employment referrals or training, and substance use disorder treatment.<sup>81</sup>

**CASE EXAMPLE:** [OnPoint NYC](#) includes a broad array of wraparound services above and beyond what is typical of SSPs in the US. This model closely aligns with the Biden Administration’s model SSP legislation.

## **3. Overdose crisis intervention strategies led by social work and mental health professionals can improve outcomes**

Black, Hispanic and Native American and indigenous people with behavioral health problems are most likely to experience excessive use of force by the police.<sup>82,83</sup> Non-police behavioral health crisis responses will reduce negative consequences of encounters between police and people who use drugs.<sup>84-86</sup> Mobile teams can respond to a range of issues for which law enforcement is not needed, ranging from transportation to social or medical services, and public assistance. They can assist in physical and behavioral health services including overdose response and reversal, and provide transportation to substance use treatment facilities. The team can include a medic and a crisis worker with experience in behavioral health services, including substance use. Peers can be critical members of a crisis intervention team, as they can instill feelings of trust, comfort and safety, and engagement with referral services.<sup>87</sup> The Biden Administration’s American Rescue Plan includes \$1.1 billion in dedicated funding for a public health-led psychiatric crisis response,<sup>88</sup> which could be leveraged to build new models for overdose response.

**CASE EXAMPLE:** Non-police 911 dispatch: the [CAHOOTS](#) model (Eugene, OR) has reduced public safety spending in Eugene, OR, by an estimated \$8.5 million annually, with mental health teams responding to approximately 17% of annual 911 calls.<sup>89</sup> Non-police models are now also implemented in NYC ([B-HEARD](#)) and San Francisco ([Street Crisis Response Teams](#)).

## **4. Federal, state and local mandates can ensure naloxone saturation in permanent supportive housing, carceral settings, and additional spaces with significant overdose vulnerability**

Availability of naloxone in high-risk environments—including supportive housing and carceral settings—is needed to mitigate elevated overdose risk among unstably housed and incarcerated populations. Supportive housing environments can successfully integrate overdose prevention interventions.<sup>90-92</sup> SAMHSA has prioritized overdose prevention integration with housing programs through its Homeless and Housing Resource Center.<sup>93</sup>

Likewise, the time following release from incarceration is a period of elevated overdose risk for formerly incarcerated people with opioid use disorder.<sup>94</sup> Research indicates that naloxone at the point of release has successfully been integrated into jail and prison systems nationwide and can reach individuals likely to experience or witness an overdose.<sup>95-98</sup> Take-home naloxone reaches individuals who are themselves leaving a carceral facility, as well as visitors who may be likely to witness an overdose in the community.<sup>95-98,99,100</sup>

**CASE EXAMPLE:** [SF County Jail Overdose Education and Naloxone Distribution Program](#) is a post-release naloxone distribution program to reach individuals at elevated risk of overdose, as well as interested people who are incarcerated may witness overdoses within their social networks upon release.

**CASE EXAMPLE:** [SAMHSA Homeless and Housing Resource Center](#): as a national coordinating center for supportive housing providers to engage OEND training, SAMHSA could leverage regulatory authority and funding streams to scale naloxone distribution in housing facilities to ensure saturation.

**CASE EXAMPLE:** The [SRO Project](#) in San Francisco offers a model for a tenant-led overdose prevention training and response program in supportive housing.

**5. Funding for mail-order harm reduction supplies can help reduce geographic inequities in access to harm reduction services.**

Availability of harm reduction services such as naloxone and fentanyl test strips is highly unequal across the United States. For example, a study of SSPs found that the majority of naloxone distribution, in terms of people served and doses distributed, occurred in 14 SSPs across the country.<sup>101</sup> People who identify as Black, and people who are unhoused, have a lower likelihood of accessing naloxone.<sup>102-104</sup> Investment in mail-order services may increase access to harm reduction services to historically underserved populations.

**CASE EXAMPLE:** [NEXT Distro](#) is a mail-order, online harm reduction service, that aims to provide a national network of mail-based syringe and naloxone access providers to people who use drugs and that cannot access resources in person. They operate in New York, California, Michigan, Wisconsin, Oklahoma, and Nevada. In 2017-2019, they sent naloxone to 3609 people and mailed 1230 packages of sterile syringes and supplies; 335 overdose reversals were reported to have used naloxone provided by NEXT Distro.<sup>105</sup> [The Remedy Alliance for the People](#) is an online naloxone distribution and technical assistance program that specifically serves isolated and under-resourced harm reduction programs throughout the US to ensure equitable access to life saving harm reduction supplies.

# PRIORITY AREA 3: Evidence-Based Treatment

Evidence-based treatments are modalities for which clinical and population health research have documented improved outcomes across the spectrum of opioid use disorder (OUD) health and recovery, including reduced overdose death, alleviation of withdrawal symptoms, reduced opioid cravings, improved social functioning, and increased long-term cessation of problem substance use.<sup>106,107</sup> Several medications for opioid use disorder (MOUD) robustly meet these criteria, including methadone,<sup>108-112</sup> buprenorphine,<sup>109,113-115</sup> and naltrexone.<sup>116-119</sup> However, strict regulations and provider stigma have hampered patient access to these lifesaving treatments,<sup>120</sup> with pronounced disparities along lines of race and ethnicity,<sup>121,122</sup> socioeconomic status,<sup>123</sup> and geography.<sup>124</sup> Below, we propose a series of actionable strategies for policymakers to address legal, economic and social barriers to equitable patient access to evidence based OUD treatments, while prioritizing reductions in overdose risk. These strategies are guided by available evidence and illustrated using case examples across levels of government and community.

## 1. Reforming regulations to expand access to methadone and buprenorphine in community pharmacy settings can improve retention in care and patient satisfaction

Methadone and buprenorphine are highly effective treatments for opioid use disorder that reduce the risk of overdose death.<sup>108,109,125</sup> However, strict regulations on MOUD distribution in the US have limited their potential reach as a treatment and an overdose prevention strategy.<sup>126,127</sup>

At the start of the COVID-19 pandemic, SAMHSA issued an emergency guidance authorizing states to implement a range of novel models for methadone distribution, including expanded take-home doses,<sup>128</sup> increased use of telehealth treatment and behavioral health services delivery,<sup>129</sup> and medication delivery to patients experiencing COVID isolation.<sup>130</sup> The relaxation of take-home policies was associated with increased utilization of take-home dosing without discernable increases in adverse events,<sup>131,132</sup> and may have mitigated the impact of the COVID-19 pandemic on methadone-involved overdose deaths, which remained stable nationally while other opioid-involved overdose deaths increased.<sup>133</sup> Qualitative studies have documented numerous patient benefits of expanded access,<sup>134-136</sup> reflective of the downstream impacts of expanded access to MOUD on individuals' lives and wellbeing.

**CASE EXAMPLE:** [SAMHSA expanded methadone take-home policy](#) is a starting point. SAMHSA and the DEA could, without legislation, revise federal regulations to expand access to methadone through a variety of mechanisms: expanded eligibility for take-home dosing, relaxed restrictions on patient urine drug screening, and pharmacy distribution, which has been [proposed by federal legislators](#).

**CASE EXAMPLE:** Leveraging the Public Readiness and Emergency Preparedness (PREP) Act to authorize pharmacists nationwide to initiate buprenorphine for the treatment of OUD could both reach new populations of patients and allow existing methadone patients to transition from methadone to buprenorphine.

## **2. Restructuring evidence-based treatment funding streams can decouple clinical decision-making from financial incentives and relink care delivery to best practices for MOUD**

Funding and reimbursement structures of methadone treatment may impact the implementation of treatment guidance, including expanded take-home distribution guidance issued during COVID-19.<sup>137</sup> The fee-for-service structure of methadone may incentivize for-profit treatment providers to maximize the number of patient in-person encounters, limiting the implementation of take-home dosing. One survey of opioid treatment program (OTP) administrators found that fewer than half implemented the COVID-19 take-home dosing policy.<sup>128</sup> These findings indicate a crucial need to decouple clinical decision-making from financial incentives and to increase access to diversified MOUD programming in locations with limited access.

**CASE EXAMPLE:** Bringing [methadone into primary care settings](#) could benefit patients, increasing equity in access to care, and undermine the for-profit provider incentives that keep current regulations in place.

## **3. Expanding the types of providers and settings where MOUD can be provided can help close racial and ethnic OUD treatment gaps**

A growing body of literature has documented racial and ethnic disparities in access to MOUD across methadone, buprenorphine, and naltrexone<sup>121,138-140</sup> including in the Medicaid population.<sup>141</sup> Disparities in the duration of treatment episodes have been observed across methadone and buprenorphine, with white patients experiencing longer retention in care than Black patients.<sup>142,143</sup> Leveraging the health care work force to build on recent legislative progress expanding prescriber eligibility<sup>144</sup> will support increased patient care and engagement with more providers.

**CASE EXAMPLE:** [Massachusetts Collaborative Care Model \(MCCM\)](#) to integrate buprenorphine treatment into federally qualified health centers can fill the buprenorphine provider gap in communities of color, low-income communities, and rural communities. The MCCM uses nurse care managers to support buprenorphine screening, induction, stabilization, and maintenance.

**CASE EXAMPLE:** The [California Advancing and Innovating Medi-Cal \(CalAIM\)](#) program shifts Medi-Cal in all domains to more easily provide care and supports for individuals outside of traditional health care settings. With respect to substance use disorder (SUD) treatment, CalAIM advances the use of peer support specialists to serve high risk and low resourced communities, as well as building out evidence-based models of care, such as contingency management.

#### **4. Ensuring continuity of MOUD treatment for justice-involved populations during and after incarceration can reduce overdose risk**

Most correctional facilities in the US do not offer MOUD,<sup>145</sup> despite an overrepresentation of individuals with OUD among incarcerated populations.<sup>146</sup> The time immediately after release from jail or prison is exceptionally risky for overdose for formerly incarcerated people with OUD.<sup>147,148</sup> For incarcerated persons, treatment with MOUD is associated with positive outcomes, including reduced non-medical opioid use, reduced injection drug use, increased engagement with community treatment, and reduced recidivism.<sup>149,150</sup> Given these established benefits, bioethical scholarship has identified an obligation by health professionals to ensure adequate OUD treatment for people who are incarcerated.<sup>151,152</sup>

**CASE EXAMPLE:** [New York State bill A.533/S.1795](#), which mandates that patients with OUD have access to MOUD—including methadone and buprenorphine—at any point during their incarceration should serve as a national model for states seeking to reduce opioid overdose mortality among high-risk justice-involved populations.

#### **5. Reducing transportation barriers to MOUD treatment programs can increase treatment access for rural and underserved areas and improve retention in care**

Persistent disparities in access have been identified by region and geography, with poorer access across the Midwest and Western US compared with other regions.<sup>153</sup> Rural areas, in particular, are particularly prone to have little or no MOUD access.<sup>154,155</sup> Driving time has been established as a crucial factor, as increased drive time is inversely associated with treatment retention.<sup>124</sup> For rural areas where access is available, this access remains fragile, with variability in distance between the nearest and next nearest provider for underserved areas.<sup>156</sup> Telehealth for buprenorphine therapy has been identified as a key strategy to improve treatment availability for rural populations and is associated with comparable rates of retention in care and higher patient satisfaction than office-based care.<sup>157-160</sup>

However, regulatory barriers to telehealth payments, including restrictions on telehealth reimbursements under Medicare and Medicaid and limited coverage by private payers, have limited reach to low-income and underinsured patients.<sup>161</sup> During the COVID-19 pandemic, the US Centers for Medicare and Medicaid Services (CMS) used emergency authorizations to expand reimbursement for telehealth under Medicare, including reimbursement for audio-only services to support access among rural and low-income populations.<sup>162</sup> CMS also established a bundled payment category for OTPs under Medicare in 2020, generating a new reimbursement stream for MOUD.<sup>163</sup>

**CASE EXAMPLE:** [HRSA Rural Communities Opioid Response Program](#) is a \$65m investment in OUD prevention, treatment, and recovery in rural communities in FY22. Legislation could make these investments permanent while prioritizing broadband access to ensure feasibility of telehealth initiatives.

**CASE EXAMPLE:** [CMS emergency telehealth authorization policy](#) should become permanent.

SAMHSA-CMS interagency MOUD coordination could prioritize OTP expansion through telehealth—i.e., integrating take-home and telehealth reimbursement policies to maximize reach through, for example, a task force.

## **6. Ensuring access to non-stigmatizing and non-punitive OUD care for pregnant people with OUD can improve perinatal and maternal outcomes**

For pregnant people with OUD, evidence indicates that non-punitive MOUD is associated with improved perinatal and maternal outcomes.<sup>164,165</sup> The use of non-stigmatizing, MOUD during pregnancy is the official position of the American College of Obstetricians and Gynecologists, which also recommends universal OUD screening, medication-based referrals, and multidisciplinary medical and psychosocial follow-up without criminal sanction or punitive child welfare engagement.<sup>166</sup> Stigma remains a major barrier to MOUD access during pregnancy.<sup>167</sup> Training in OUD throughout medical education to ensure comfort and non-stigmatizing care and referrals from both obstetric and non-obstetric clinicians can ensure supportive OUD management during pregnancy.

**CASE EXAMPLE:** [CMS Maternal Opioid Misuse \(MOM\) Model](#) is a \$50m investment across 10 states to coordinate perinatal, maternal, and pediatric care for pregnant and parenting persons with OUD. We recommend legislation to make these investments permanent and improve access across states. Adapting [MOM model coordination centers](#) into the CDC [OD2A](#) funding stream could allow for allocation of funds to local jurisdictions to prioritize racial and economic health equity, as well as reduce rural/urban disparities in treatment access for pregnant/parenting OUD patients.

## **7. Investment in local economic development and workforce training can support long-term recovery for people with OUD.**

Workforce development training, employment skills training, and vocational counseling interventions are associated with reduced substance use among individuals with substance use disorder.<sup>168-170</sup> This suggests that such interventions will reduce overdose risk by reducing overall substance use.

**CASE EXAMPLE:** [EPRA-NY](#) contracts with New York City and New York State government agencies to provide vocational training for individuals with substance use disorders.

**CASE EXAMPLE:** As of 2021, 37 states had adopted “Ban the Box” legislation to prohibit public-sector employers from inquiring about applicant criminal history prior to extending a conditional offer of employment.<sup>171</sup> Only 15 of these states, however, also extended this policy to private-sector employers, limiting the reparative potential of this intervention for people with prior criminal legal involvement and substance use disorders.



# PRIORITY AREA 4: Recovery Support

Recovery, broadly defined, refers to overall improvements, increased quality of life, and deepened social integration associated with the effective treatment of opioid and other substance use disorders (SUDs).<sup>172</sup> Different individuals will approach recovery in different ways. Individuals' recovery processes may include engagement with a range of supportive services, including harm reduction and evidence-based treatment, and, for some persons, may involve reductions or abstentions in some or all substance use.<sup>173</sup> Critically, recovery is a deeply personal process,<sup>174</sup> and policies, systems, and services should strive to support individuals as they move through and toward recovery. The actionable policy strategies presented here aim to help structure key facets of the workforce, housing, healthcare, and justice sectors to support individual recovery. Case examples illustrate forms these supportive policies can take to encourage and sustain health and wellbeing for people with OUD.

## 1. Bolstering workforce development training, including new and sustained employment opportunities, can support individuals in recovery

Unemployment is a risk factor for recurrent substance use and may impede individual pathways to recovery.<sup>175</sup> Racial and gender disparities exist in employment while recovering, with white and male people in recovery more likely to obtain employment during recovery,<sup>176</sup> making racialized drug use stigma a critical consideration for workforce development programs.<sup>177</sup> Workplace protections ensuring individuals with SUD who are employed can receive treatment without fear of job loss are crucial,<sup>178</sup> as well as comprehensive occupational health plans to minimize employee risk of SUD.<sup>179</sup> The effectiveness of employee assistance programs (EAPs) in supporting workers with SUD remains mixed,<sup>180</sup> emphasizing the need to prioritize the integration of evidence-based treatment modalities and psychosocial supports into EAPs while minimizing stigma associated with drug testing.<sup>181</sup> For persons in recovery re-entering the workforce, additional supports may be necessary to build stability.<sup>182</sup>

**CASE EXAMPLE:** [New Hampshire Recovery Friendly Workplace](#) is a program sponsored by the New Hampshire Governor's Office that supports private employers to incorporate supportive treatment, prevention, and recovery strategies into their workplaces and employee assistance programs.

## 2. Prioritizing holistic, community-based recovery needs (e.g., "recovery capital") can support recovery and improve behavioral outcomes for people with OUD

Recovery capital, a framework for considering the holistic clinical, behavioral, and social support needs of individuals with SUD, has emerged as a critical lens for recovery support providers.<sup>183</sup> A "greater" recovery capital is associated with improved recovery and behavioral outcomes among people with SUD,<sup>184</sup> including individuals engaged in buprenorphine therapy for OUD.<sup>185</sup> Standardized psychometric measures of recovery capital have been developed and validated,<sup>186</sup> and are now integrated into program design for recovery-oriented OUD treatment.<sup>187</sup>



**CASE EXAMPLE:** [Peer Recovery Center of Excellence \(PRCE\)](#), guided by a recovery capital framework, offers training in and technical assistance with the integration of recovery-oriented peer support systems into SUD and OUD treatment programs. Already partnered with the National Council for Mental Wellbeing, PRCE and organizations like it could engage [SAMHSA's BRSS TACS peer support program](#) to prioritize the integration of peer support into low-threshold OUD treatment, such as Federally Qualified Health Centers (FQHC)-based models, to round out care systems and build recovery capital into OUD treatment.

### **3. Integrating non-punitive recovery services within transitional and supportive recovery housing environments can increase engagement in care and prevent loss of housing or return to homelessness**

The integration of recovery support services into shelter, transitional, and supportive housing models is a critical component of building a recovery-oriented continuum of care for people with OUD experiencing homelessness.<sup>188</sup> Recovery housing models vary widely, from abstinence-based houses with punitive governance structures to self-governing, peer-based models to supported models with integrated medical and mental health services,<sup>189</sup> although some recovery housing models do not support the use of MOUD by residents.<sup>190</sup> Research has indicated geographic, racial, and economic disparities in the availability of recovery housing in the US, with higher density in urban areas with higher proportions of non-white residents, but lower density in economically disadvantaged areas.<sup>191</sup> Among patients for whom housing recovery support services are appropriate, peer-led practical life skills, social and behavioral coping skills, and emotional support services are key to successful integration and engagement.<sup>192</sup>

**CASE EXAMPLE:** In 2021, Massachusetts Department of Public Health [allocated 8.2 million](#) for recovery-based housing supports and integration. This funding is awarded to programs that support MOUD for residents and serves as a model funding scheme for state and local jurisdictions.

### **4. Removal of employment, social entitlement, and housing policies that discriminate against formerly incarcerated individuals can support post-release recovery**

Research has identified that criminal records are a substantial barrier to employment for formerly incarcerated individuals,<sup>45</sup> that disproportionately burden Black individuals.<sup>193</sup> A criminal record also presents major barriers to housing—as individuals after release from incarceration face barriers in access to HUD programs, student and campus housing, and rental housing subject to criminal background checks.<sup>194</sup> Formerly incarcerated persons also may face discrimination in the health care system due to stigma from health care workers.<sup>195,196</sup> Some research has shown that while “ban the box,” the primary policy strategy to reduce employment discrimination against formerly incarcerated persons, increases the overall likelihood of post-incarceration employment, it may also exacerbate existing racial disparities in employment.<sup>197,198</sup> Extending ban the box to all forms of employment—not just public-sector employment—is one strategy to mitigate racial and economic inequities identified by prior research.

**CASE EXAMPLE:** [New York State marijuana legalization](#) expunged certain marijuana-related criminal records. Expungement is preferable to other legal or executive avenues like President Biden’s recent federal marijuana conviction pardon,<sup>199</sup> as expungement ensures that criminal records are not discoverable through background checks. These cannabis legalization law provisions could serve as examples of broader drug policy reform legislation at the state or federal levels.

# References:

1. Rossen L, Warner M, Ahmad F, Sutton P. Data from: Early model-based provisional estimates of drug overdose, suicide, and transportation-related deaths. 2022. Deposited March 30, 2022.
2. Friedman J, Beletsky L, Jordan A. Surging Racial Disparities in the U.S. Overdose Crisis. *The American journal of psychiatry*. Feb 2022;179(2):166-169. doi:10.1176/appi.ajp.2021.21040381
3. Centers for Disease Control and Prevention. Data from: Wide-ranging Online Data for Epidemiologic Research (WONDER). 2022.
4. Ghose R, Forati AM, Mantsch JR. Impact of the COVID-19 Pandemic on Opioid Overdose Deaths: a Spatiotemporal Analysis. *Journal of urban health : bulletin of the New York Academy of Medicine*. Apr 2022;99(2):316-327. doi:10.1007/s11524-022-00610-0
5. Barboza G, Angulski K, Hines L, Brown P. Variability in Opioid-Related Drug Overdoses, Social Distancing, and Area-Level Deprivation during the COVID-19 Pandemic: a Bayesian Spatiotemporal Analysis. *Journal of urban health : bulletin of the New York Academy of Medicine*. Oct 2022;99(5):873-886. doi:10.1007/s11524-022-00675-x
6. Office of Disease Prevention and Health Promotion, US Department of Health and Human Services. Healthy People 2030: Social Determinants of Health. <https://health.gov/healthypeople/priority-areas/social-determinants-health>
7. Park JN, Rouhani S, Beletsky L, Vincent L, Saloner B, Sherman SG. Situating the Continuum of Overdose Risk in the Social Determinants of Health: A New Conceptual Framework. *The Milbank quarterly*. Sep 2020;98(3):700-746. doi:10.1111/1468-0009.12470
8. US Department of Health and Human Services. Overdose Prevention Strategy. <https://www.hhs.gov/overdose-prevention/>
9. Case A, Deaton A, Stone AA. Decoding the mystery of American pain reveals a warning for the future. *Proceedings of the National Academy of Sciences of the United States of America*. Oct 6 2020;117(40):24785-24789. doi:10.1073/pnas.2012350117
10. Blanchflower DG, Bryson A. Further decoding the mystery of American pain: The importance of work. *PLoS one*. 2022;17(1):e0261891. doi:10.1371/journal.pone.0261891
11. Cutler DM, Meara E, Stewart S. Socioeconomic Status and the Experience of Pain: An Example from Knees. NBER Working Paper. Cambridge, MA: National Bureau of Economic Research; 2020.
12. Tsai AC, Kiang MV, Barnett ML, et al. Stigma as a fundamental hindrance to the United States opioid overdose crisis response. *PLoS medicine*. Nov 2019;16(11):e1002969. doi:10.1371/journal.pmed.1002969
13. Skehan J, Greenhalgh S, Hazell T, Pirkis J. Reach, Awareness and Uptake of Media Guidelines for Reporting Suicide and Mental Illness: An Australian Perspective. *International Journal of Mental Health Promotion*. 2006/11/01 2006;8(4):29-35. doi:10.1080/14623730.2006.9721749
14. Grummitt L, Barrett E, Kelly E, Newton N. An Umbrella Review of the Links Between Adverse Childhood Experiences and Substance Misuse: What, Why, and Where Do We Go from Here? *Substance abuse and rehabilitation*. 2022;13:83-100. doi:10.2147/sar.S341818

15. Han K, Oh S. The effectiveness of home visiting programs for the prevention of child maltreatment recurrence at home: a systematic review and meta-analysis. *Child health nursing research*. Jan 2022;28(1):41-50. doi:10.4094/chnr.2022.28.1.41
16. Goodman WB, Dodge KA, Bai Y, Murphy RA, O'Donnell K. Effect of a Universal Postpartum Nurse Home Visiting Program on Child Maltreatment and Emergency Medical Care at 5 Years of Age: A Randomized Clinical Trial. *JAMA network open*. Jul 1 2021;4(7):e2116024. doi:10.1001/jamanetworkopen.2021.16024
17. Kitzman H, Olds DL, Knudtson MD, et al. Prenatal and Infancy Nurse Home Visiting and 18-Year Outcomes of a Randomized Trial. *Pediatrics*. Dec 2019;144(6)doi:10.1542/peds.2018-3876
18. Reynolds AJ, Temple JA, Ou SR, et al. Effects of a school-based, early childhood intervention on adult health and well-being: a 19-year follow-up of low-income families. *Arch Pediatr Adolesc Med*. Aug 2007;161(8):730-9. doi:10.1001/archpedi.161.8.730
19. Reynolds AJ, Temple JA, Robertson DL, Mann EA. Long-term effects of an early childhood intervention on educational achievement and juvenile arrest: A 15-year follow-up of low-income children in public schools. *Jama*. May 9 2001;285(18):2339-46. doi:10.1001/jama.285.18.2339
20. Gordon RA, Usdansky ML, Wang X, Gluzman A. Child Care and Mothers' Mental Health: Is High-Quality Care Associated With Fewer Depressive Symptoms? <https://doi.org/10.1111/j.1741-3729.2011.00657.x>. *Family Relations*. 2011/10/01 2011;60(4):446-460. doi:<https://doi.org/10.1111/j.1741-3729.2011.00657.x>
21. Eckenrode J, Campa M, Luckey DW, et al. Long-term effects of prenatal and infancy nurse home visitation on the life course of youths: 19-year follow-up of a randomized trial. *Arch Pediatr Adolesc Med*. Jan 2010;164(1):9-15. doi:10.1001/archpediatrics.2009.240
22. Olds D, Henderson CR, Jr., Cole R, et al. Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized controlled trial. *Jama*. Oct 14 1998;280(14):1238-44. doi:10.1001/jama.280.14.1238
23. Skeen S, Laurenzi CA, Gordon SL, et al. Adolescent Mental Health Program Components and Behavior Risk Reduction: A Meta-analysis. *Pediatrics*. Aug 2019;144(2)doi:10.1542/peds.2018-3488
24. Tremblay M, Baydala L, Khan M, et al. Primary Substance Use Prevention Programs for Children and Youth: A Systematic Review. *Pediatrics*. Sep 2020;146(3)doi:10.1542/peds.2019-2747
25. Payton JW, Wardlaw DM, Graczyk PA, Bloodworth MR, Tompsett CJ, Weissberg RP. Social and emotional learning: a framework for promoting mental health and reducing risk behavior in children and youth. *The Journal of school health*. May 2000;70(5):179-85. doi:10.1111/j.1746-1561.2000.tb06468.x
26. Tancred T, Papparini S, Melendez-Torres GJ, et al. A systematic review and synthesis of theories of change of school-based interventions integrating health and academic education as a novel means of preventing violence and substance use among students. *Systematic reviews*. Nov 13 2018;7(1):190. doi:10.1186/s13643-018-0862-y
27. Richardson L, Laing A, Choi J, et al. Effect of alternative income assistance schedules on drug use and drug-related harm: a randomised controlled trial. *The Lancet Public health*. May 2021;6(5):e324-e334. doi:10.1016/s2468-2667(21)00023-2
28. Morgan ER, Hill HD, Mooney SJ, Rivara FP, Rowhani-Rahbar A. State earned income tax credits and depression and alcohol misuse among women with children. *Prev Med Rep*. Apr 2022;26:101695. doi:10.1016/j.pmedr.2022.101695

29. Forget EL. New questions, new data, old interventions: the health effects of a guaranteed annual income. *Preventive medicine*. Dec 2013;57(6):925-8. doi:10.1016/j.ypmed.2013.05.029
30. Forget EL. The Town with No Poverty: The Health Effects of a Canadian Guaranteed Annual Income Field Experiment. *Canadian Public Policy*. 2011;37(3):283-305.
31. O'Brien R, Bair EF, Venkataramani AS. Death by Robots? Automation and Working-Age Mortality in the United States. *Demography*. 2022;59(2):607-628. doi:10.1215/00703370-9774819
32. Haffajee RL, Lin LA, Bohnert ASB, Goldstick JE. Characteristics of US Counties With High Opioid Overdose Mortality and Low Capacity to Deliver Medications for Opioid Use Disorder. *JAMA network open*. Jun 5 2019;2(6):e196373. doi:10.1001/jamanetworkopen.2019.6373
33. Wu P, Evangelist M. Unemployment Insurance and Opioid Overdose Mortality in the United States. *Demography*. Apr 1 2022;59(2):485-509. doi:10.1215/00703370-9772414
34. Venkataramani AS, Bair EF, O'Brien RL, Tsai AC. Association Between Automotive Assembly Plant Closures and Opioid Overdose Mortality in the United States: A Difference-in-Differences Analysis. *JAMA internal medicine*. Feb 1 2020;180(2):254-262. doi:10.1001/jamainternmed.2019.5686
35. Miller S, Johnson N, Wherry LR. Medicaid and Mortality: New Evidence From Linked Survey and Administrative Data\*. *The Quarterly Journal of Economics*. 2021;136(3):1783-1829. doi:10.1093/qje/qjab004
36. Venkataramani AS, Chatterjee P. Early Medicaid Expansions and Drug Overdose Mortality in the USA: a Quasi-experimental Analysis. *J Gen Intern Med*. Jan 2019;34(1):23-25. doi:10.1007/s11606-018-4664-7
37. Bradford AC, Bradford WD. The effect of evictions on accidental drug and alcohol mortality. *Health services research*. Feb 2020;55(1):9-17. doi:10.1111/1475-6773.13256
38. Chiang JC, Bluthenthal RN, Wenger LD, Auerswald CL, Henwood BF, Kral AH. Health risk associated with residential relocation among people who inject drugs in Los Angeles and San Francisco, CA: a cross sectional study. *BMC public health*. Apr 25 2022;22(1):823. doi:10.1186/s12889-022-13227-4
39. Ali AK, Wehby GL. State Eviction Moratoriums During The COVID-19 Pandemic Were Associated With Improved Mental Health Among People Who Rent. *Health affairs (Project Hope)*. Nov 2022;41(11):1583-1589. doi:10.1377/hlthaff.2022.00750
40. Kelleher KJ, Famelia R, Yilmazer T, et al. "Prevention of opioid use disorder: the HOME (housing, opportunities, motivation and engagement) feasibility study". *Harm reduction journal*. Nov 8 2021;18(1):112. doi:10.1186/s12954-021-00560-x
41. Miler JA, Carver H, Masterton W, et al. What treatment and services are effective for people who are homeless and use drugs? A systematic 'review of reviews'. *PloS one*. 2021;16(7):e0254729. doi:10.1371/journal.pone.0254729
42. Woodhall-Melnik JR, Dunn JR. A systematic review of outcomes associated with participation in Housing First programs. *Housing Studies*. 2016/04/02 2016;31(3):287-304. doi:10.1080/02673037.2015.1080816
43. Tyndall M, Dodd Z. How Structural Violence, Prohibition, and Stigma Have Paralyzed North American Responses to Opioid Overdose. *AMA journal of ethics*. Aug 1 2020;22(1):E723-728. doi:10.1001/amajethics.2020.723
44. Wogen J, Restrepo MT. Human Rights, Stigma, and Substance Use. *Health and human rights*. Jun 2020;22(1):51-60.

45. Pager D. The Mark of a Criminal Record. *American Journal of Sociology*. 2003;108(5):937-975. doi:10.1086/374403
46. Feelemyer J, Dyer TV, Turpin RE, et al. Longitudinal associations between the disruption of incarceration and community re-entry on substance use risk escalation among Black men who have sex with men; A causal analysis. *Drug and alcohol dependence*. Jun 12 2020;213:108123. doi:10.1016/j.drugalcdep.2020.108123
47. Green TC, Clarke J, Brinkley-Rubinstein L, et al. Postincarceration Fatal Overdoses After Implementing Medications for Addiction Treatment in a Statewide Correctional System. *JAMA psychiatry*. Apr 1 2018;75(4):405-407. doi:10.1001/jamapsychiatry.2017.4614
48. Ranapurwala SI, Shanahan ME, Alexandridis AA, et al. Opioid Overdose Mortality Among Former North Carolina Inmates: 2000-2015. *American journal of public health*. Sep 2018;108(9):1207-1213. doi:10.2105/ajph.2018.304514
49. Fleming CM, Nurius PS. Incarceration and adversity histories: Modeling life course pathways affecting behavioral health. *The American journal of orthopsychiatry*. 2020;90(3):312-323. doi:10.1037/ort0000436
50. American College of Obstetricians and Gynecologists. *Opposition to Criminalization of Individuals During Pregnancy and the Postpartum Period*. ACOG; 2020.
51. Laqueur H. Uses and Abuses of Drug Decriminalization in Portugal. 2015;40(3):746-781. doi:<https://doi.org/10.1111/lsi.12104>
52. Felix S, Portugal P, Tavares AS. Going after the Addiction, Not the Addicted: The Impact of Drug Decriminalization in Portugal. IZA Discussion Paper: IZA Institute of Labor Economics; 2017.
53. World Drug Report 2010 (2010).
54. Shlafer RJ, Hardeman RR, Carlson EA. Reproductive justice for incarcerated mothers and advocacy for their infants and young children. *Infant mental health journal*. Sep 2019;40(5):725-741. doi:10.1002/imhj.21810
55. Del Toro J, Fine A, Wang MT. The intergenerational effects of paternal incarceration on children's social and psychological well-being from early childhood to adolescence. *Development and psychopathology*. Mar 14 2022:1-12. doi:10.1017/s0954579421001693
56. Redmond N, Aminawung JA, Morse DS, Zaller N, Shavit S, Wang EA. Perceived Discrimination Based on Criminal Record in Healthcare Settings and Self-Reported Health Status among Formerly Incarcerated Individuals. *Journal of urban health : bulletin of the New York Academy of Medicine*. Feb 2020;97(1):105-111. doi:10.1007/s11524-019-00382-0
57. Clark AK, Wilder CM, Winstanley EL. A systematic review of community opioid overdose prevention and naloxone distribution programs. *Journal of addiction medicine*. May-Jun 2014;8(3):153-63. doi:10.1097/adm.0000000000000034
58. McDonald R, Strang J. Are take-home naloxone programmes effective? Systematic review utilizing application of the Bradford Hill criteria. *Addiction (Abingdon, England)*. Jul 2016;111(7):1177-87. doi:10.1111/add.13326
59. Mueller SR, Walley AY, Calcaterra SL, Glanz JM, Binswanger IA. A Review of Opioid Overdose Prevention and Naloxone Prescribing: Implications for Translating Community Programming Into Clinical Practice. *Substance abuse*. 2015;36(2):240-53. doi:10.1080/08897077.2015.1010032

60. Giglio RE, Li G, DiMaggio CJ. Effectiveness of bystander naloxone administration and overdose education programs: a meta-analysis. *Inj Epidemiol*. Dec 2015;2(1):10. doi:10.1186/s40621-015-0041-8
61. Marshall E. *Fentanyl Test Strip Pilot: San Francisco 2017-2018*. DOPE Project, National Harm Reduction Coalition; 2018.
62. Measham FC. Drug safety testing, disposals and dealing in an English field: Exploring the operational and behavioural outcomes of the UK's first onsite 'drug checking' service. *The International journal on drug policy*. May 2019;67:102-107. doi:10.1016/j.drugpo.2018.11.001
63. Reed MK, Guth A, Salcedo VJ, Hom JK, Rising KL. "You can't go wrong being safe": Motivations, patterns, and context surrounding use of fentanyl test strips for heroin and other drugs. *The International journal on drug policy*. May 2022;103:103643. doi:10.1016/j.drugpo.2022.103643
64. Krieger MS, Goedel WC, Buxton JA, et al. Use of rapid fentanyl test strips among young adults who use drugs. *The International journal on drug policy*. Nov 2018;61:52-58. doi:10.1016/j.drugpo.2018.09.009
65. Goldman JE, Wayne KM, Periera KA, Krieger MS, Yedinak JL, Marshall BDL. Perspectives on rapid fentanyl test strips as a harm reduction practice among young adults who use drugs: a qualitative study. *Harm reduction journal*. Jan 8 2019;16(1):3. doi:10.1186/s12954-018-0276-0
66. Park JN, Frankel S, Morris M, et al. Evaluation of fentanyl test strip distribution in two Mid-Atlantic syringe services programs. *The International journal on drug policy*. Aug 2021;94:103196. doi:10.1016/j.drugpo.2021.103196
67. Reed MK, Roth AM, Tabb LP, Groves AK, Lankenau SE. "I probably got a minute": Perceptions of fentanyl test strip use among people who use stimulants. *The International journal on drug policy*. Jun 2021;92:103147. doi:10.1016/j.drugpo.2021.103147
68. Peiper NC, Clarke SD, Vincent LB, Ciccarone D, Kral AH, Zibbell JE. Fentanyl test strips as an opioid overdose prevention strategy: Findings from a syringe services program in the Southeastern United States. *The International journal on drug policy*. Jan 2019;63:122-128. doi:10.1016/j.drugpo.2018.08.007
69. Nassau T, Al-Tayyib A, Robinson WT, Shinefeld J, Brady KA. The Impact of Syringe Services Program Policy on Risk Behaviors Among Persons Who Inject Drugs in 3 US Cities, 2005-2015. *Public health reports (Washington, DC : 1974)*. Jul/Aug 2020;135(1\_suppl):138s-148s. doi:10.1177/0033354920930137
70. Puzhko S, Eisenberg MJ, Filion KB, et al. Effectiveness of Interventions for Prevention of Common Infections Among Opioid Users: A Systematic Review of Systematic Reviews. *Frontiers in public health*. 2022;10:749033. doi:10.3389/fpubh.2022.749033
71. Harocopos A, Gibson BE, Saha N, et al. First 2 Months of Operation at First Publicly Recognized Overdose Prevention Centers in US. *JAMA network open*. Jul 1 2022;5(7):e2222149. doi:10.1001/jamanetworkopen.2022.22149
72. Burris S, Anderson ED, Davis CS, Beletsky L. Toward Healthy Drug Policy in the United States - The Case of Safehouse. *The New England journal of medicine*. Jan 2 2020;382(1):4-5. doi:10.1056/NEJMp1913448
73. Potier C, Lapr evote V, Dubois-Arber F, Cottencin O, Rolland B. Supervised injection services: what has been demonstrated? A systematic literature review. *Drug and alcohol dependence*. Dec 1 2014;145:48-68. doi:10.1016/j.drugalcdep.2014.10.012



74. Gehring ND, Speed KA, Launier K, O'Brien D, Campbell S, Hyshka E. The state of science on including inhalation within supervised consumption services: A scoping review of academic and grey literature. *The International journal on drug policy*. Apr 2022;102:103589. doi:10.1016/j.drugpo.2022.103589
75. Fernández-Viña MH, Prood NE, Herpolsheimer A, Waimberg J, Burris S. State Laws Governing Syringe Services Programs and Participant Syringe Possession, 2014-2019. *Public health reports (Washington, DC : 1974)*. Jul/Aug 2020;135(1\_suppl):128s-137s. doi:10.1177/0033354920921817
76. LeBlanc M, Masoor M, Roy B. *Supporting and Sustaining Access to Harm Reduction Services for People Who Use Drugs*. 2022. [https://www.nga.org/wp-content/uploads/2022/08/Supporting-and-Sustaining-Access-to-Harm-Reduction-Services\\_Aug2022.pdf](https://www.nga.org/wp-content/uploads/2022/08/Supporting-and-Sustaining-Access-to-Harm-Reduction-Services_Aug2022.pdf)
77. Yang YT, Beletsky L. United States vs Safehouse: The implications of the Philadelphia supervised consumption facility ruling for law and social stigma. *Preventive medicine*. Jun 2020;135:106070. doi:10.1016/j.ypmed.2020.106070
78. Vanjani R, Soske J, Pitts A, Bailer D. Reflections From Rhode Island's Safe Consumption Sites Regulations Committee: A Lesson in Racial Equity. *Journal of addiction medicine*. Nov-Dec 01 2022;16(6):624-626. doi:10.1097/adm.0000000000000996
79. Andersen D, Järvinen M. Harm Reduction: Ideals and Paradoxes. *Nordic Studies on Alcohol and Drugs*. 2007;24(3):235-252. doi:10.1177/145507250702400301
80. Souleymanov R, Allman D. Articulating Connections between the Harm-Reduction Paradigm and the Marginalisation of People Who Use Illicit Drugs. *British journal of social work*. Jul 2016;46(5):1429-1445. doi:10.1093/bjsw/bcv067
81. Krawczyk N, Allen ST, Schneider KE, et al. Intersecting substance use treatment and harm reduction services: exploring the characteristics and service needs of a community-based sample of people who use drugs. *Harm reduction journal*. Aug 24 2022;19(1):95. doi:10.1186/s12954-022-00676-8
82. Edwards F, Esposito MH, Lee H. Risk of Police-Involved Death by Race/Ethnicity and Place, United States, 2012-2018. *American journal of public health*. Sep 2018;108(9):1241-1248. doi:10.2105/ajph.2018.304559
83. Livingston JD. Contact Between Police and People With Mental Disorders: A Review of Rates. *Psychiatric services (Washington, DC)*. Aug 1 2016;67(8):850-7. doi:10.1176/appi.ps.201500312
84. Saleh AZ, Appelbaum PS, Liu X, Scott Stroup T, Wall M. Deaths of people with mental illness during interactions with law enforcement. *International journal of law and psychiatry*. May-Jun 2018;58:110-116. doi:10.1016/j.ijlp.2018.03.003
85. Rafla-Yuan E, Chhabra DK, Mensah MO. Decoupling Crisis Response from Policing - A Step Toward Equitable Psychiatric Emergency Services. *The New England journal of medicine*. May 6 2021;384(18):1769-1773. doi:10.1056/NEJMms2035710
86. Wagner KD, Harding RW, Kelley R, et al. Post-overdose interventions triggered by calling 911: Centering the perspectives of people who use drugs (PWUDs). *PloS one*. 2019;14(10):e0223823. doi:10.1371/journal.pone.0223823
87. Mercer F, Miler JA, Pauly B, et al. Peer Support and Overdose Prevention Responses: A Systematic 'State-of-the-Art' Review. *International journal of environmental research and public health*. Nov 17 2021;18(22)doi:10.3390/ijerph182212073
88. Butler SM, Sheriff N. *How the American Rescue Plan Act will help cities replace police with trained crisis teams for mental health emergencies*. 2021. <https://www.brookings.edu/research/how-the-american-rescue-plan-act-will-help-cities-replace-police-with-trained-crisis-teams-for-mental-health-emergencies/>



89. Glauser W. Why some doctors want to defund the police. *CMAJ*. Nov 30 2020;192(48):E1644-E1645. doi:10.1503/cmaj.1095905
90. Magwood O, Salvalaggio G, Beder M, et al. The effectiveness of substance use interventions for homeless and vulnerably housed persons: A systematic review of systematic reviews on supervised consumption facilities, managed alcohol programs, and pharmacological agents for opioid use disorder. *PLoS one*. 2020;15(1):e0227298. doi:10.1371/journal.pone.0227298
91. Wallace B, Barber K, Pauly BB. Sheltering risks: Implementation of harm reduction in homeless shelters during an overdose emergency. *The International journal on drug policy*. Mar 2018;53:83-89. doi:10.1016/j.drugpo.2017.12.011
92. Bardwell G, Collins AB, McNeil R, Boyd J. Housing and overdose: an opportunity for the scale-up of overdose prevention interventions? *Harm reduction journal*. Dec 6 2017;14(1):77. doi:10.1186/s12954-017-0203-9
93. Administration SAaMHS. Homeless and Housing Resource Center. Substance Abuse and Mental Health Services Administration. Updated June 6, 2022. <https://www.samhsa.gov/homeless-housing-resource-center>
94. Bukten A, Stavseth MR, Skurtveit S, Tverdal A, Strang J, Clausen T. High risk of overdose death following release from prison: variations in mortality during a 15-year observation period. *Addiction (Abingdon, England)*. Aug 2017;112(8):1432-1439. doi:10.1111/add.13803
95. Parmar MK, Strang J, Choo L, Meade AM, Bird SM. Randomized controlled pilot trial of naloxone-on-release to prevent post-prison opioid overdose deaths. *Addiction (Abingdon, England)*. Mar 2017;112(3):502-515. doi:10.1111/add.13668
96. Showalter D, Wenger LD, Lambdin BH, Wheeler E, Binswanger I, Kral AH. Bridging institutional logics: Implementing naloxone distribution for people exiting jail in three California counties. *Social science & medicine (1982)*. Sep 2021;285:114293. doi:10.1016/j.socscimed.2021.114293
97. Wenger LD, Showalter D, Lambdin B, et al. Overdose Education and Naloxone Distribution in the San Francisco County Jail. *Journal of correctional health care : the official journal of the National Commission on Correctional Health Care*. Oct 2019;25(4):394-404. doi:10.1177/1078345819882771
98. Scott CK, Dennis ML, Grella CE, Mischel AF, Carnevale J. The impact of the opioid crisis on U.S. state prison systems. *Health & justice*. Jul 24 2021;9(1):17. doi:10.1186/s40352-021-00143-9
99. Reed M, Siegler A, Tabb LP, Momplaisir F, Krevitz D, Lankenau S. Changes in overdose knowledge and attitudes in an incarcerated sample of people living with HIV. *International journal of prisoner health*. Jun 15 2021;ahead-of-print(ahead-of-print)doi:10.1108/ijph-01-2021-0004
100. Huxley-Reicher Z, Maldjian L, Winkelstein E, et al. Witnessed overdoses and naloxone use among visitors to Rikers Island jails trained in overdose rescue. *Addictive behaviors*. Nov 2018;86:73-78. doi:10.1016/j.addbeh.2017.11.029
101. Lambdin BH, Bluthenthal RN, Wenger LD, et al. Overdose Education and Naloxone Distribution Within Syringe Service Programs - United States, 2019. *MMWR Morb Mortal Wkly Rep*. Aug 21 2020;69(33):1117-1121. doi:10.15585/mmwr.mm6933a2
102. Kinnard EN, Bluthenthal RN, Kral AH, Wenger LD, Lambdin BH. The naloxone delivery cascade: Identifying disparities in access to naloxone among people who inject drugs in Los Angeles and San Francisco, CA. *Drug and alcohol dependence*. Aug 1 2021;225:108759. doi:10.1016/j.drugalcdep.2021.108759

103. Khan MR, Hoff L, Elliott L, et al. Racial/ethnic disparities in opioid overdose prevention: comparison of the naloxone care cascade in White, Latinx, and Black people who use opioids in New York City. *Harm reduction journal*. Feb 25 2023;20(1):24. doi:10.1186/s12954-023-00736-7
104. Madden EF, Qeadan F. Racial inequities in U.S. naloxone prescriptions. *Substance abuse*. 2020;41(2):232-244. doi:10.1080/08897077.2019.1686721
105. Yang C, Favaro J, Meacham MC. NEXT Harm Reduction: An Online, Mail-Based Naloxone Distribution and Harm-Reduction Program. *American journal of public health*. Apr 2021;111(4):667-671. doi:10.2105/ajph.2020.306124
106. National Academies of Sciences E, Medicine. *Medications for Opioid Use Disorder Save Lives*. The National Academies Press; 2019:174.
107. Volkow ND, Jones EB, Einstein EB, Wargo EM. Prevention and Treatment of Opioid Misuse and Addiction: A Review. *JAMA psychiatry*. Feb 1 2019;76(2):208-216. doi:10.1001/jamapsychiatry.2018.3126
108. Sordo L, Barrio G, Bravo MJ, et al. Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. *BMJ (Clinical research ed)*. Apr 26 2017;357:j1550. doi:10.1136/bmj.j1550
109. Ma J, Bao YP, Wang RJ, et al. Effects of medication-assisted treatment on mortality among opioids users: a systematic review and meta-analysis. *Molecular psychiatry*. Dec 2019;24(12):1868-1883. doi:10.1038/s41380-018-0094-5
110. Bahji A, Cheng B, Gray S, Stuart H. Reduction in mortality risk with opioid agonist therapy: a systematic review and meta-analysis. *Acta Psychiatr Scand*. Oct 2019;140(4):313-339. doi:10.1111/acps.13088
111. Donny EC, Brassler SM, Bigelow GE, Stitzer ML, Walsh SL. Methadone doses of 100 mg or greater are more effective than lower doses at suppressing heroin self-administration in opioid-dependent volunteers. *Addiction (Abingdon, England)*. Oct 2005;100(10):1496-509. doi:10.1111/j.1360-0443.2005.01232.x
112. Fareed A, Vayalapalli S, Stout S, Casarella J, Drexler K, Bailey SP. Effect of methadone maintenance treatment on heroin craving, a literature review. *Journal of addictive diseases*. Jan 2011;30(1):27-38. doi:10.1080/10550887.2010.531672
113. Gowing L, Ali R, White JM, Mbewe D. Buprenorphine for managing opioid withdrawal. *Cochrane Database Syst Rev*. Feb 21 2017;2(2):Cd002025. doi:10.1002/14651858.CD002025.pub5
114. Fudala PJ, Bridge TP, Herbert S, et al. Office-based treatment of opiate addiction with a sublingual-tablet formulation of buprenorphine and naloxone. *The New England journal of medicine*. Sep 4 2003;349(10):949-58. doi:10.1056/NEJMoa022164
115. Bart G. Maintenance medication for opiate addiction: the foundation of recovery. *Journal of addictive diseases*. 2012;31(3):207-25. doi:10.1080/10550887.2012.694598
116. Krupitsky E, Nunes EV, Ling W, Illeperuma A, Gastfriend DR, Silverman BL. Injectable extended-release naltrexone for opioid dependence: a double-blind, placebo-controlled, multicentre randomised trial. *Lancet*. Apr 30 2011;377(9776):1506-13. doi:10.1016/s0140-6736(11)60358-9
117. Lee JD, Friedmann PD, Kinlock TW, et al. Extended-Release Naltrexone to Prevent Opioid Relapse in Criminal Justice Offenders. *The New England journal of medicine*. Mar 31 2016;374(13):1232-42. doi:10.1056/NEJMoa1505409

118. Kelty E, Hulse G. Fatal and non-fatal opioid overdose in opioid dependent patients treated with methadone, buprenorphine or implant naltrexone. *The International journal on drug policy*. Aug 2017;46:54-60. doi:10.1016/j.drugpo.2017.05.039
119. Wakeman SE, Larochelle MR, Ameli O, et al. Comparative Effectiveness of Different Treatment Pathways for Opioid Use Disorder. *JAMA network open*. Feb 5 2020;3(2):e1920622. doi:10.1001/jamanetworkopen.2019.20622
120. Madden EF, Prevedel S, Light T, Sulzer SH. Intervention Stigma toward Medications for Opioid Use Disorder: A Systematic Review. *Substance use & misuse*. 2021;56(14):2181-2201. doi:10.1080/10826084.2021.1975749
121. Nguyen T, Ziedan E, Simon K, et al. Racial and Ethnic Disparities in Buprenorphine and Extended-Release Naltrexone Filled Prescriptions During the COVID-19 Pandemic. *JAMA network open*. Jun 1 2022;5(6):e2214765. doi:10.1001/jamanetworkopen.2022.14765
122. Goedel WC, Shapiro A, Cerdá M, Tsai JW, Hadland SE, Marshall BDL. Association of Racial/Ethnic Segregation With Treatment Capacity for Opioid Use Disorder in Counties in the United States. *JAMA network open*. Apr 1 2020;3(4):e203711. doi:10.1001/jamanetworkopen.2020.3711
123. Hansen H, Siegel C, Wanderling J, DiRocco D. Buprenorphine and methadone treatment for opioid dependence by income, ethnicity and race of neighborhoods in New York City. *Drug and alcohol dependence*. Jul 1 2016;164:14-21. doi:10.1016/j.drugalcdep.2016.03.028
124. Alibrahim A, Marsh JC, Amaro H, Kong Y, Khachikian T, Guerrero E. Disparities in expected driving time to opioid treatment and treatment completion: findings from an exploratory study. *BMC health services research*. Apr 11 2022;22(1):478. doi:10.1186/s12913-022-07886-7
125. Lim J, Farhat I, Douros A, Panagiotoglou D. Relative effectiveness of medications for opioid-related disorders: A systematic review and network meta-analysis of randomized controlled trials. *PLoS one*. 2022;17(3):e0266142. doi:10.1371/journal.pone.0266142
126. Joseph H, Stancliff S, Langrod J. Methadone maintenance treatment (MMT): a review of historical and clinical issues. *The Mount Sinai journal of medicine, New York*. Oct-Nov 2000;67(5-6):347-64.
127. Frank D. A chance to do it better: Methadone maintenance treatment in the age of Covid-19. *Journal of substance abuse treatment*. Apr 2021;123:108246. doi:10.1016/j.jsat.2020.108246
128. Levander XA, Pytell JD, Stoller KB, Korthuis PT, Chander G. COVID-19-related policy changes for methadone take-home dosing: A multistate survey of opioid treatment program leadership. *Substance abuse*. 2022;43(1):633-639. doi:10.1080/08897077.2021.1986768
129. Chan B, Bougatsos C, Priest KC, McCarty D, Grusing S, Chou R. Opioid treatment programs, telemedicine and COVID-19: A scoping review. *Substance abuse*. 2022;43(1):539-546. doi:10.1080/08897077.2021.1967836
130. Harocopos A, Nolan ML, Goldstein GP, Mantha S, O'Neill M, Paone D. Implementing a Methadone Delivery System in New York City in Response to COVID-19. *American journal of public health*. Dec 2021;111(12):2115-2117. doi:10.2105/ajph.2021.306523
131. Amram O, Amiri S, Panwala V, Lutz R, Joudrey PJ, Socias E. The impact of relaxation of methadone take-home protocols on treatment outcomes in the COVID-19 era. *The American journal of drug and alcohol abuse*. Nov 2 2021;47(6):722-729. doi:10.1080/00952990.2021.1979991
132. Ventura CAI, Denton EE, David JA, et al. Emergency Medical Services Prehospital Response to the COVID-19 Pandemic in the US: A Brief Literature Review. *Open access emergency medicine : OAEM*. 2022;14:249-272. doi:10.2147/oaem.S366006

133. Jones CM, Compton WM, Han B, Baldwin G, Volkow ND. Methadone-Involved Overdose Deaths in the US Before and After Federal Policy Changes Expanding Take-Home Methadone Doses From Opioid Treatment Programs. *JAMA psychiatry*. Sep 1 2022;79(9):932-934. doi:10.1001/jamapsychiatry.2022.1776
134. Suen LW, Castellanos S, Joshi N, Satterwhite S, Knight KR. "The idea is to help people achieve greater success and liberty": A qualitative study of expanded methadone take-home access in opioid use disorder treatment. *Substance abuse*. 2022;43(1):1143-1150. doi:10.1080/08897077.2022.2060438
135. Walters SM, Perlman DC, Guarino H, Mateu-Gelabert P, Frank D. Lessons from the First Wave of COVID-19 for Improved Medications for Opioid Use Disorder (MOUD) Treatment: Benefits of Easier Access, Extended Take Homes, and New Delivery Modalities. *Substance use & misuse*. 2022;57(7):1144-1153. doi:10.1080/10826084.2022.2064509
136. Levander XA, Hoffman KA, McIlveen JW, McCarty D, Terashima JP, Korthuis PT. Rural opioid treatment program patient perspectives on take-home methadone policy changes during COVID-19: a qualitative thematic analysis. *Addiction science & clinical practice*. Dec 11 2021;16(1):72. doi:10.1186/s13722-021-00281-3
137. Wyatt JP, Suen LW, Coe WH, et al. Federal and State Regulatory Changes to Methadone Take-Home Doses: Impact of Sociostructural Factors. *American journal of public health*. Apr 2022;112(S2):S143-s146. doi:10.2105/ajph.2022.306806
138. DiNardi M, Swann WL, Kim SY. Racial/ethnic residential segregation and the availability of opioid and substance use treatment facilities in US counties, 2009-2019. *SSM - population health*. Dec 2022;20:101289. doi:10.1016/j.ssmph.2022.101289
139. Andraka-Christou B. Addressing Racial And Ethnic Disparities In The Use Of Medications For Opioid Use Disorder. *Health affairs (Project Hope)*. Jun 2021;40(6):920-927. doi:10.1377/hlthaff.2020.02261
140. Lagisetty PA, Ross R, Bohnert A, Clay M, Maust DT. Buprenorphine Treatment Divide by Race/Ethnicity and Payment. *JAMA psychiatry*. Sep 1 2019;76(9):979-981. doi:10.1001/jamapsychiatry.2019.0876
141. Dunphy CC, Zhang K, Xu L, Guy GP, Jr. Racial and Ethnic Disparities of Buprenorphine and Vivitrol Receipt in Medicaid. *American journal of preventive medicine*. Nov 2022;63(5):717-725. doi:10.1016/j.amepre.2022.05.006
142. O'Connor AM, Cousins G, Durand L, Barry J, Boland F. Retention of patients in opioid substitution treatment: A systematic review. *PloS one*. 2020;15(5):e0232086. doi:10.1371/journal.pone.0232086
143. Dong H, Stringfellow EJ, Russell WA, Jalali MS. Racial and Ethnic Disparities in Buprenorphine Treatment Duration in the US. *JAMA psychiatry*. Nov 9 2022;doi:10.1001/jamapsychiatry.2022.3673
144. Mainstreaming Addiction Treatment (MAT) Act of 2021, (2021).
145. Wakeman SE, Rich JD. Addiction Treatment Within U.S. Correctional Facilities: Bridging the Gap Between Current Practice and Evidence-Based Care. *Journal of addictive diseases*. 2015;34(2-3):220-5. doi:10.1080/10550887.2015.1059217
146. Albizu-García CE, Caraballo JN, Caraballo-Correa G, Hernández-Viver A, Román-Badenas L. Assessing need for medication-assisted treatment for opiate-dependent prison inmates. *Substance abuse*. 2012;33(1):60-9. doi:10.1080/08897077.2011.620462
147. Binswanger IA, Blatchford PJ, Mueller SR, Stern MF. Mortality after prison release: opioid overdose and other causes of death, risk factors, and time trends from 1999 to 2009. *Annals of internal medicine*. Nov 5 2013;159(9):592-600. doi:10.7326/0003-4819-159-9-201311050-00005

148. Merrall EL, Kariminia A, Binswanger IA, et al. Meta-analysis of drug-related deaths soon after release from prison. *Addiction (Abingdon, England)*. Sep 2010;105(9):1545-54. doi:10.1111/j.1360-0443.2010.02990.x
149. Moore KE, Roberts W, Reid HH, Smith KMZ, Oberleitner LMS, McKee SA. Effectiveness of medication assisted treatment for opioid use in prison and jail settings: A meta-analysis and systematic review. *Journal of substance abuse treatment*. Apr 2019;99:32-43. doi:10.1016/j.jsat.2018.12.003
150. Evans EA, Wilson D, Friedmann PD. Recidivism and mortality after in-jail buprenorphine treatment for opioid use disorder. *Drug and alcohol dependence*. Feb 1 2022;231:109254. doi:10.1016/j.drugalcdep.2021.109254
151. Ludwig AS, Peters RH. Medication-assisted treatment for opioid use disorders in correctional settings: an ethics review. *The International journal on drug policy*. Nov 2014;25(6):1041-6. doi:10.1016/j.drugpo.2014.08.015
152. Wakeman SE. Why It's Inappropriate Not to Treat Incarcerated Patients with Opioid Agonist Therapy. *AMA journal of ethics*. Sep 1 2017;19(9):922-930. doi:10.1001/journalofethics.2017.19.9.stas1-1709
153. Furst JA, Mynarski NJ, McCall KL, Piper BJ. Pronounced Regional Disparities in United States Methadone Distribution. *The Annals of pharmacotherapy*. Mar 2022;56(3):271-279. doi:10.1177/10600280211028262
154. Mitchell P, Samsel S, Curtin KM, et al. Geographic disparities in access to Medication for Opioid Use Disorder across US census tracts based on treatment utilization behavior. *Social science & medicine (1982)*. Jun 2022;302:114992. doi:10.1016/j.socscimed.2022.114992
155. Joudrey PJ, Chadi N, Roy P, et al. Pharmacy-based methadone dispensing and drive time to methadone treatment in five states within the United States: A cross-sectional study. *Drug and alcohol dependence*. Mar 27 2020;211:107968. doi:10.1016/j.drugalcdep.2020.107968
156. Kiang MV, Barnett ML, Wakeman SE, Humphreys K, Tsai AC. Robustness of estimated access to opioid use disorder treatment providers in rural vs. urban areas of the United States. *Drug and alcohol dependence*. Nov 1 2021;228:109081. doi:10.1016/j.drugalcdep.2021.109081
157. Weintraub E, Greenblatt AD, Chang J, Himelhoch S, Welsh C. Expanding access to buprenorphine treatment in rural areas with the use of telemedicine. *The American journal on addictions*. Dec 2018;27(8):612-617. doi:10.1111/ajad.12805
158. Weintraub E, Seneviratne C, Anane J, et al. Mobile Telemedicine for Buprenorphine Treatment in Rural Populations With Opioid Use Disorder. *JAMA network open*. Aug 2 2021;4(8):e2118487. doi:10.1001/jamanetworkopen.2021.18487
159. Guillen AG, Reddy M, Saadat S, Chakravarthy B. Utilization of Telehealth Solutions for Patients with Opioid Use Disorder Using Buprenorphine: A Scoping Review. *Telemedicine journal and e-health : the official journal of the American Telemedicine Association*. Jun 2022;28(6):761-767. doi:10.1089/tmj.2021.0308
160. Jones CM, Shoff C, Hodges K, et al. Receipt of Telehealth Services, Receipt and Retention of Medications for Opioid Use Disorder, and Medically Treated Overdose Among Medicare Beneficiaries Before and During the COVID-19 Pandemic. *JAMA psychiatry*. Oct 1 2022;79(10):981-992. doi:10.1001/jamapsychiatry.2022.2284
161. Gajarawala SN, Pelkowski JN. Telehealth Benefits and Barriers. *The journal for nurse practitioners : JNP*. Feb 2021;17(2):218-221. doi:10.1016/j.nurpra.2020.09.013

162. Chu RC, Peters C, De Lew N, Sommers BD. *State Medicaid Telehealth Policies Before and During the COVID-19 Public Health Emergency*. Assistant Secretary for Planning and Evaluation, US Department of Health and Human Services; 2021.
163. Centers for Medicare and Medicaid Services. Opioid treatment programs (OTPs). Updated December 1, 2020. <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/Opioid-Treatment-Program>
164. Krans EE, Kim JY, Chen Q, et al. Outcomes associated with the use of medications for opioid use disorder during pregnancy. *Addiction (Abingdon, England)*. Dec 2021;116(12):3504-3514. doi:10.1111/add.15582
165. Saia KA, Schiff D, Wachman EM, et al. Caring for Pregnant Women with Opioid Use Disorder in the USA: Expanding and Improving Treatment. *Current obstetrics and gynecology reports*. 2016;5(3):257-263. doi:10.1007/s13669-016-0168-9
166. Committee Opinion No. 711: Opioid Use and Opioid Use Disorder in Pregnancy. *Obstetrics and gynecology*. Aug 2017;130(2):e81-e94. doi:10.1097/aog.0000000000002235
167. Bedrick BS, O'Donnell C, Marx CM, et al. Barriers to accessing opioid agonist therapy in pregnancy. *Am J Obstet Gynecol MFM*. Nov 2020;2(4):100225. doi:10.1016/j.ajogmf.2020.100225
168. Kim M, Byrne AM, Jeon J. The Effect of Vocational Counseling Interventions for Adults with Substance Use Disorders: A Narrative Review. *International journal of environmental research and public health*. Apr 13 2022;19(8)doi:10.3390/ijerph19084674
169. Oh S, DiNitto DM, Powers DA. Spillover Effects of Job Skills Training on Substance Misuse Among Low-Income Youths With Employment Barriers: A Longitudinal Cohort Study. *American journal of public health*. Jun 2020;110(6):900-906. doi:10.2105/ajph.2020.305631
170. Petry NM, Andrade LF, Rash CJ, Cherniack MG. Engaging in job-related activities is associated with reductions in employment problems and improvements in quality of life in substance abusing patients. *Psychology of addictive behaviors : journal of the Society of Psychologists in Addictive Behaviors*. Mar 2014;28(1):268-75. doi:10.1037/a0032264
171. Avery B, Lu H. *Ban the Box: US Cities, Counties, and States Adopt Fair-Chance Policies to Advance Employment Opportunities for People with Past Convictions*. 2021.
172. Worley J. Recovery in Substance Use Disorders: What to Know to Inform Practice. *Issues Ment Health Nurs*. Jan 2017;38(1):80-91. doi:10.1080/01612840.2016.1245375
173. Borkman TJ, Stunz A, Kaskutas LA. Developing an Experiential Definition of Recovery: Participatory Research With Recovering Substance Abusers From Multiple Pathways. *Substance use & misuse*. Jul 28 2016;51(9):1116-29. doi:10.3109/10826084.2016.1160119
174. Vigdal MI, Moltu C, Bjornestad J, Selseng LB. Social recovery in substance use disorder: A metasynthesis of qualitative studies. *Drug Alcohol Rev*. May 2022;41(4):974-987. doi:10.1111/dar.13434
175. Henkel D. Unemployment and substance use: a review of the literature (1990-2010). *Current drug abuse reviews*. Mar 2011;4(1):4-27. doi:10.2174/1874473711104010004
176. Laudet AB. Rate and predictors of employment among formerly polysubstance dependent urban individuals in recovery. *Journal of addictive diseases*. 2012;31(3):288-302. doi:10.1080/10550887.2012.694604



177. Kulesza M, Matsuda M, Ramirez JJ, Werntz AJ, Teachman BA, Lindgren KP. Towards greater understanding of addiction stigma: Intersectionality with race/ethnicity and gender. *Drug and alcohol dependence*. Dec 1 2016;169:85-91. doi:10.1016/j.drugalcdep.2016.10.020
178. Imboden R, Frey JJ, Bazell AT, et al. Workplace Support for Employees in Recovery From Opioid Use: Stakeholder Perspectives. *New solutions : a journal of environmental and occupational health policy : NS*. Nov 2021;31(3):340-349. doi:10.1177/10482911211043522
179. Le AB, Rosen JD. It Is Time to Implement Primary Prevention in the Workplace to Ameliorate the Ongoing U.S. Opioid Epidemic. *New solutions : a journal of environmental and occupational health policy : NS*. Nov 2021;31(3):210-218. doi:10.1177/10482911211039880
180. Akanbi MO, Iroz CB, O'Dwyer LC, Rivera AS, McHugh MC. A systematic review of the effectiveness of employer-led interventions for drug misuse. *Journal of occupational health*. Jan 2020;62(1):e12133. doi:10.1002/1348-9585.12133
181. Harnett P, Hindman J, Duenas M, Coogan M, Misicko H. Answering a Call to Action on American Workplace and Community Opioid Concerns. *New solutions : a journal of environmental and occupational health policy : NS*. Nov 2021;31(3):229-238. doi:10.1177/10482911211037573
182. Brady LA, Wozniak ML, Brimmer MJ, et al. Coping Strategies and Workplace Supports for Peers with Substance Use Disorders. *Substance use & misuse*. 2022;57(12):1772-1778. doi:10.1080/10826084.2022.2112228
183. Cloud W, Granfield R. Conceptualizing recovery capital: expansion of a theoretical construct. *Substance use & misuse*. 2008;43(12-13):1971-86. doi:10.1080/10826080802289762
184. Laudet AB, White WL. Recovery capital as prospective predictor of sustained recovery, life satisfaction, and stress among former poly-substance users. *Substance use & misuse*. 2008;43(1):27-54. doi:10.1080/10826080701681473
185. Parlier-Ahmad AB, Terplan M, Svikis DS, Ellis L, Martin CE. Recovery capital among people receiving treatment for opioid use disorder with buprenorphine. *Harm reduction journal*. Oct 13 2021;18(1):103. doi:10.1186/s12954-021-00553-w
186. Vilsaint CL, Kelly JF, Bergman BG, Groshkova T, Best D, White W. Development and validation of a Brief Assessment of Recovery Capital (BARC-10) for alcohol and drug use disorder. *Drug and alcohol dependence*. Aug 1 2017;177:71-76. doi:10.1016/j.drugalcdep.2017.03.022
187. Yedinak JL, Goedel WC, Paull K, et al. Defining a recovery-oriented cascade of care for opioid use disorder: A community-driven, statewide cross-sectional assessment. *PLoS medicine*. Nov 2019;16(11):e1002963. doi:10.1371/journal.pmed.1002963
188. Mericle AA, Grella CE. Integrating Housing and Recovery Support Services: Introduction to the Special Section. *Journal of dual diagnosis*. Apr-Jun 2016;12(2):150-2. doi:10.1080/15504263.2016.1176408
189. Paquette K, Pannella Winn LA. The Role of Recovery Housing: Prioritizing Choice in Homeless Services. *Journal of dual diagnosis*. Apr-Jun 2016;12(2):153-62. doi:10.1080/15504263.2016.1175262
190. Wood CA, Duello A, Miles J, et al. Acceptance of medications for opioid use disorder in recovery housing programs in Missouri. *Journal of substance abuse treatment*. Jul 2022;138:108747. doi:10.1016/j.jsat.2022.108747
191. Mericle AA, Patterson D, Howell J, Subbaraman MS, Faxio A, Karriker-Jaffe KJ. Identifying the availability of recovery housing in the U.S.: The NSTARR project. *Drug and alcohol dependence*. Jan 1 2022;230:109188. doi:10.1016/j.drugalcdep.2021.109188

192. Mericle AA, Slaymaker V, Gliske K, Ngo Q, Subbaraman MS. The role of recovery housing during outpatient substance use treatment. *Journal of substance abuse treatment*. Feb 2022;133:108638. doi:10.1016/j.jsat.2021.108638
193. Pager D, Western B, Sugie N. Sequencing Disadvantage: Barriers to Employment Facing Young Black and White Men with Criminal Records. *The Annals of the American Academy of Political and Social Science*. May 2009;623(1):195-213. doi:10.1177/0002716208330793
194. Pager D, Shepherd H. The Sociology of Discrimination: Racial Discrimination in Employment, Housing, Credit, and Consumer Markets. *Annual review of sociology*. Jan 1 2008;34:181-209. doi:10.1146/annurev.soc.33.040406.131740
195. Schnittker J, John A. Enduring stigma: the long-term effects of incarceration on health. *Journal of health and social behavior*. Jun 2007;48(2):115-30. doi:10.1177/002214650704800202
196. Frank JW, Wang EA, Nunez-Smith M, Lee H, Comfort M. Discrimination based on criminal record and healthcare utilization among men recently released from prison: a descriptive study. *Health & justice*. Mar 25 2014;2:6. doi:10.1186/2194-7899-2-6
197. Agan A, Starr S. Ban the Box, Criminal Records, and Racial Discrimination: A Field Experiment\*. *Quarterly Journal of Economics*. 2017;133(1):191-235. doi:10.1093/qje/qjx028 %J The Quarterly Journal of Economics
198. Doleac JL, Hansen B. The Unintended Consequences of “Ban the Box”: Statistical Discrimination and Employment Outcomes When Criminal Histories Are Hidden. *Journal of Labor Economics*. 2020/04/01 2019;38(2):321-374. doi:10.1086/705880
199. Biden JR. *A Proclamation on Granting Pardon for the Offense of Simple Possession of Marijuana*. 2022. October 6, 2022.



