

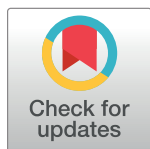
POLICY FORUM

Stigma as a fundamental hindrance to the United States opioid overdose crisis response

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Summary points

- The current United States opioid overdose crisis is a complex, multifaceted, public health emergency that urgently requires the implementation of evidence-based primary, secondary, and tertiary preventive interventions. We develop a typology of the stigma related to opioid use, showing how multiple dimensions of stigma continue to fundamentally hinder the response to the crisis.
- Public stigma is driven by stereotypes about people with opioid use disorders, such as their perceived dangerousness or perceived moral failings, which translate into negative attitudes toward people with opioid use disorders.
- Enacted stigma describes the behavioral manifestations of public stigma, including discrimination and social distancing. Public and enacted stigma, in turn, lead to delivery of suboptimal care and undermine access to treatment and harm reduction services.
- Public stigma and enacted stigma can become structural stigma when they become encoded in cultural norms, laws, and institutional policies. Collectively, these forms of stigma run at cross purposes to—and reduce public support for—public health-oriented policies to address the opioid overdose crisis.
- When people with opioid use disorders internalize or anticipate the public stigma attached to their illness, maladaptive behaviors (e.g., disengagement from care) leading to poorer health outcomes may occur.

Abbreviations: DEA, US Drug Enforcement Agency; OUD, opioid use disorder.

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- Each of these dimensions of stigma (structural, public, enacted, internalized, and anticipated) serve to reinforce each other, resulting in poorer health outcomes even as the epidemiology of opioid overdose mortality continues to change.
- These dimensions of stigma must be overcome to facilitate the requisite policy and programmatic changes needed to effectively address the opioid overdose crisis.

Introduction

The current US opioid overdose crisis is a public health emergency. The age-adjusted mortality rate due to drug overdose more than tripled from 1999 to 2017 [1]. In recent years, the largest increases in drug overdose mortality were observed for drug overdose deaths involving non-pharmaceutical fentanyl, which increased by an average of 71% per year in 2013–2017 [1–4], whereas overdose deaths involving prescription opioids and heroin have remained steady [5]. Concomitant with the rapid expansion in the magnitude of the opioid overdose crisis is an expansion in its scope, with increasingly syndemic [6] involvement of cocaine and psychostimulants [7–10].

There are multiple, interrelated, and deeply rooted social and economic determinants of the US opioid overdose crisis, none of which are likely to provide a sufficient explanation for the crisis when considered in isolation [11–17]. Although the epidemiology of opioid use and opioid use disorders (OUDs) has changed over time, the stigma attached to opioid use has endured [18]. Stigma is defined as a process wherein people with a particular social identity are labeled, stereotyped, and devalued, unfolding within the context of unequal and often pre-existing power relations, leading to discriminatory behavior against people with the stigmatized identity [19–21] (Box 1). Its persistence and its persistent effects on health are consistent with its conceptualization as a “fundamental cause” of population health inequities across multiple social and physical health outcomes [22,23]. In the following discussion, we describe how these multiple dimensions of stigma are a fundamental hindrance to the response to the US opioid crisis.

The US opioid overdose crisis response: Multiple levels of prevention needed

Given the complexity of the US opioid overdose crisis, an effective response will require a multicomponent portfolio of public health, social, and economic policy interventions to address its social and structural determinants [11–17]. Health system interventions will also be necessary to implement primary, secondary, and tertiary prevention of opioid overdoses [37]. First, exposure to opioid use among opioid-naïve patients should be minimized (primary prevention). Second, among those exposed to opioids, nonmedical use of prescription opioids and the incidence of OUDs must be reduced (secondary prevention). Third, expanded evidence-based treatment for OUDs is needed so that people with existing OUDs can achieve sustained remission, while the harms of ongoing opioid use (e.g., overdose) must be reduced for people who cannot, or do not choose to, achieve sustained remission (tertiary prevention). In combination, these preventive interventions will address what Humphreys and Pollack [38] have referred to as the “stock” and “flow” of the crisis: treatment and harm reduction for people

Box 1. Typology of the stigma related to opioid use.

- Public stigma [24] is driven by stereotypes about people with OUDs [18], such as their perceived dangerousness [25,26] or perceived moral failings [27], which translate into negative attitudes.
- Anticipated stigma occurs when people with a stigmatized identity are subjectively aware of such negative attitudes and develop expectations of being rejected were their stigmatized (and potentially hidden) identities to become known [28]. Among people who do not have the stigmatized identity, perceived stigma refers to subjective awareness of negative attitudes and expectations of rejection were a hypothetical stigmatized identity to become known.
- Internalized stigma results when people with a stigmatized identity come to accept their devalued status as valid, thereby adopting for themselves the prevailing negative attitudes embedded in public stigma [29,30].
- Enacted stigma describes the behavioral manifestations of public stigma, including discrimination and social distancing [31,32].
- Family members and friends may experience all of these forms of stigma as a result of their affiliation with people with OUDs, a phenomenon described as courtesy stigma [21].
- Structural stigma refers to the totality of ways in which societies constrain those with stigmatized identities through mutually reinforcing institutions, norms, policies, and resources [33–36].

already diagnosed with OUDs while simultaneously reducing the number of people with new diagnoses.

One component of primary and secondary prevention is promoting cautious and thoughtful opioid prescribing. People who are exposed to opioids—including prescribed opioids—are at increased risk of long-term use and of developing OUDs [39–41]. Surveys of people with OUDs often identify prescription opioids as the initiating opioid [42]. Thus, the importance of the admonition to “keep opioid-naïve patients opioid naïve” (p. 1454) [43] cannot be overstated. Other strategies to support primary and secondary prevention have been discussed extensively: reducing incautious and long-term opioid prescribing; preventing diversion; and identifying patients who may be at risk for, or who have already developed, OUDs [44–46].

Given current trends, however, prescribing-focused interventions alone will be insufficient to address the crisis. Opioid prescribing has already been in a nearly decade-long decline [47–49]. There is also evidence that the incidence of initial opioid prescriptions for opioid-naïve patients has declined [50]. Despite these favorable trends, drug overdose mortality has continued to increase [1], with nonpharmaceutical fentanyl and its analogues increasingly associated with drug overdose deaths [1–5]. Thus, a singular focus on physician prescribing of opioids, to the exclusion of other prevention efforts, is unlikely to improve outcomes for those engaging in nonmedical use of opioids (e.g., nonpharmaceutical fentanyl) [51,52].

Tertiary prevention should focus on expanding evidence-based treatment of OUDs and reducing the harms of ongoing opioid use. Gold-standard, first-line treatment of OUDs consists of opioid agonist medication (methadone) or partial agonist medication (buprenorphine)

[53]. Psychosocial interventions can also be effective when offered in conjunction with medication [54]. Yet only a minority of people with OUDs receive treatment of any kind, even after nonfatal overdose [55,56]. This underuse represents a missed public health opportunity, given the well-established effectiveness of opioid agonist treatment in reducing mortality [55,57]. Evidence-based harm reduction strategies for people with refractory OUDs include access to sterile injection equipment to reduce secondary transmission of HIV and hepatitis C [58–60], supervised consumption facilities [61] and supervised treatment with diacetylmorphine (heroin) [62] to reduce overdose risk, and expansion of overdose education and naloxone distribution to reduce the case-fatality rate of opioid overdoses when they do occur [63–65].

Stigma as a fundamental hindrance to the US opioid overdose crisis response

Public and enacted stigma

Negative attitudes toward people with OUDs undermine secondary prevention responses. People whose chronic noncancer pain syndromes have led to their physiological dependence on prescription opioid medications may be marked with the same labels as people with OUDs (e.g., morally weak, “addicts”) and experience difficulties obtaining care [66,67]. Healthcare professionals’ stigmatizing beliefs [68] can lead to provision of suboptimal care, a form of enacted stigma that reduces patients’ engagement with drug treatment [69–71]. In some instances, these suboptimal care patterns may extend to maintaining overly rigid and nonbeneficent care policies, lacking respect for patient autonomy, and deploying punitive care terminations in response to policy violations (e.g., smoking) or positive urine toxicology screening [66,70]. In the 3 years since the US Centers for Disease Control and Prevention published its new opioid-prescribing guideline [72], stigma enactments have included the imposition of rigid dosage or duration caps or initiation of noncollaborative tapers with established patients, escalating potential harms and transition to nonprescription opioids [73–78]. Enacted stigma has also been directly associated with nonfatal overdose [79].

Tertiary prevention is compromised when the stigma attached to OUDs affects access to treatment and harm reduction services. Among physicians who have obtained the US Drug Enforcement Agency (DEA) waiver to prescribe buprenorphine [80], most are not prescribing at capacity [81–83]; of these, many express little interest in taking on patients to reach capacity [84]. This gap in treatment access may reflect provider distancing from patients stereotyped as “difficult,” dangerous, or being involved in criminalized behaviors [85,86]. Other providers may wish to avoid the legal scrutiny associated with being a considered a “pill mill” (e.g., DEA audits) [87] or to avoid the courtesy stigma attached to caring for patients with OUDs [86,88]. Stigma has also undermined the wider distribution of overdose education and naloxone in the community. Specific challenges include anticipated stigma [89], concerns about moral hazard [90–92], or ignorance about state legislation related to naloxone prescribing or dispensing [93,94]. Most states have passed “Good Samaritan laws” to limit criminal liability for bystanders who provide or summon aid when witnessing an overdose incident [95], but the street-level effectiveness of such legislation may be limited by anemic implementation and punitive signaling by criminal law and law enforcement, including high-profile “drug-induced homicide” prosecutions, loss of housing, and other legal repercussions [96,97].

Structural stigma

Public and enacted stigma can become structural stigma when they become encoded in cultural norms, laws, and institutional policies. The effects of structural stigma on undermining

treatment of OUDs can be observed in how care is financed and delivered. Treatment is generally covered by state Medicaid programs [98], but prior authorization requirements and arbitrary lifetime treatment limits impose significant barriers to care [99–102], and many physicians who have obtained the waiver to prescribe buprenorphine do not accept third-party payments [103–105]. The 2010 Patient Protection and Affordable Care Act, among its many functions, sought to transform substance use treatment financing and delivery by mandating that effective treatments for substance use disorders be covered by third-party payers and integrated into mainstream healthcare systems [106,107]. However, the Affordable Care Act remains under threat, with attendant implications for the US opioid overdose crisis response [108]. Even where treatment is covered, treatment availability is commonly undermined by exclusionary zoning practices (that are themselves the product of public stigma [109,110]), further eroding engagement in care [111]. Concerns about treatment access are exacerbated in rural settings [112].

Other stigmatizing policies affect the health of people with OUDs in ways that are unrelated to treatment. Laws criminalizing the possession and distribution of certain substances codify stigma through both normative and instrumental pathways [97]. Many transplant centers consider OUDs, chronic opioid use, or opioid agonist treatment to be a relative contraindication to proceeding with transplantation [113–115]. Similarly, people with a history of injection drug use, or people on opioid agonist treatment (irrespective of injection drug use history), are routinely excluded from receiving post-acute care in skilled nursing facilities [116] or parenteral antimicrobial therapy in outpatient settings [117,118]. Physicians identified as having OUDs who are required to enroll in physician health programs are often required to adhere to abstinence-only approaches and discontinue opioid agonist treatment as a condition of maintaining professional licensure [119]. Taken together, these types of policies and related decision-making not only reinforce the ways in which people with OUDs are treated separately from others but also implicitly classify people with OUDs as being unworthy of investment and undeserving of treatment—thereby potentially having direct effects on health outcomes.

More generally, the language used to frame the crisis can influence norms about OUDs and about people with OUDs among policymakers and their constituents, directly affecting the policy levers that are brought to bear on the US opioid overdose crisis response. Everyday use of stigmatizing language negatively influences attributions of responsibility and increases support for punitive judgments (e.g., “substance abuser” [120]) or devalues evidence-based treatment of OUDs (e.g., “medication-assisted treatment” [121]). News coverage of the US opioid overdose crisis has inadequately emphasized treatment [122,123] and has instead largely framed the crisis as a criminal justice issue [124], particularly in ways that are racially disparate [125]. The very use of the moniker “epidemic” to describe the overdose crisis invokes isolation, quarantine, vector control, and other measures befitting infectious disease control but that are poorly calibrated for responding to the multifactorial opioid overdose crisis [97]. Language matters, because the judicious use of frames can shift public stigma [122,123], which can then become encoded structurally in the lack of public support for public health-oriented policies to address the opioid overdose crisis [126–131].

Internalized and anticipated stigma

When people with OUDs internalize or anticipate the public stigma attached to their illness, maladaptive behaviors leading to poorer health outcomes may occur [132,133]. Among people with OUDs, internalized stigma has been associated with psychological distress and poorer quality of life [134–136], continued substance use [137], and reduced engagement with substance use treatment [138]. Anticipated stigma has also been associated with psychological

distress [135,139] and reduced engagement in care [71,140–142]. In one nationally representative study of patients attending Health Resources and Services Administration health centers, stigma was one of the most commonly reported reasons for not engaging in substance use treatment [143]. The effects of internalized and anticipated stigma on treatment engagement can be especially pronounced in rural areas and small communities where treatment providers and their staff have multiple or overlapping relationships, thereby heightening concerns about boundary violations or breaches of confidentiality [144].

For people with OUDs who do initiate treatment, continued adherence and retention in care are needed to optimize outcomes. Longitudinal studies have consistently found that long-term retention in buprenorphine treatment is poor, with only one-third retained in care at 2 years [145–147]. No studies have directly linked stigma to retention in care for opioid agonist treatment, but among persons with other stigmatized conditions like HIV, stigma has been found to be a consistently strong correlate of treatment adherence, retention in care, and treatment outcomes [148,149].

Finally, the organization of treatment delivery itself can be stigmatizing to patients. Opioid treatment programs providing methadone—and the supervision, monitoring, and restrictive dispensing policies involved—are often experienced as degrading and humiliating [150–154]. Patient preferences for buprenorphine over methadone are routinely couched in terms of avoiding the stigma of methadone use [151,155]. These aspects of treatment delivery are themselves a product of stigma (i.e., are informed by negative stereotypes applied to people with OUDs) and are not necessary features of treatment itself [152].

Considerations for health disparity populations

People with OUDs who are incarcerated or who have recently been released from incarceration have a particularly urgent need for evidence-based treatment. Detoxification during incarceration without linkage to treatment after release increases the risk of overdose substantially [156–158]. However, few receive treatment during incarceration or are linked to treatment after release [159–161]. This undertreatment of people with OUDs who also have a history of involvement with the criminal justice system, often motivated by stigma [162], represents a missed public health opportunity given the well-established effectiveness of opioid agonist treatment in reducing recidivism [163] and mortality [164–166].

One of the most pernicious examples of the interactions between structural stigma, public stigma, and enacted stigma can be observed in the racialized drivers of the US opioid overdose crisis and of the policy and programmatic response to the crisis. Because of racial disparities in receipt of opioid analgesia to treat acute pain [167] and treatment discontinuation following aberrant urine drug-test results [168], blacks (compared with whites) were comparatively less affected by the “second wave” of opioid-involved drug overdose deaths driven largely by the natural/semisynthetic prescription opioids being readily prescribed by physicians influenced by national clinical guidelines for assessment and treatment of pain [15]. However, with increasing nonmedical use of prescription opioids and use of nonprescription opioids among whites, news coverage about the opioid overdose crisis in suburban or rural white communities often features sympathetic, etiological narratives—whereas such accounts are typically missing in coverage of the opioid overdose crisis among blacks and Latinos [125]. This selective stigmatization evokes the racialization of crack cocaine, racially disparate federal prosecutions for crack (versus powder) cocaine, and disproportionately harsh federal sentencing of blacks that continue to have reverberating impacts in the present day [169,170]. The racialization of OUDs has resulted in a treatment and prevention approach among blacks that is characterized by overcriminalization and reliance on heavily regulated delivery of opioid agonist

treatment segregated from traditional healthcare systems (i.e., daily dosing at community methadone clinics), whereas treatment and prevention among whites has become increasingly medicalized and addressed through office-based care [171,172]. In recent years, the burden of the opioid overdose crisis has disproportionately increased among blacks compared with whites [2]. Yet blacks receiving chronic prescription opioid treatment are more likely than whites to experience dose tapers [173], buprenorphine treatment remains largely concentrated among whites and in areas with higher proportions of white residents [174,175], and blacks who are able to access treatment are less likely to be successfully retained in care [146].

Addressing stigma to support the US opioid overdose crisis response

The response to the US opioid overdose crisis urgently requires the implementation of evidence-based primary, secondary, and tertiary prevention. The policy changes that are needed to support these interventions are well understood and have been discussed extensively [80,176–178]. Yet the stigma attached to OUDs remains a fundamental hindrance to the crisis response. Multiple dimensions of stigma (structural, public, enacted, internalized, and anticipated) that are rooted in intersecting social categories serve to reinforce each other, resulting in poorer health outcomes even as the epidemiology of opioid overdose mortality continues to change. Stigma influences everyday attitudes, agenda setting, and policy-making. Stigma compromises the financing of care for OUDs, shapes the distribution of access to care, and impinges upon care delivery. Stigma even undermines the health of people with OUDs in ways that have nothing to do with the treatment of OUDs.

What is less well understood is how the stigma-related barriers to these requisite policy and programmatic changes can be overcome, either directly or indirectly. Direct interventions to reduce public and enacted stigma may take the form of persuasive communication or educational interventions—such as those deployed through mass media campaigns, law enforcement training [179], or schools—designed to improve understanding about the causes of and evidence-based treatments for OUDs. However, the sustained, long-term impacts of such interventions on stigma are unknown [180]. To improve care within healthcare delivery settings specifically, direct educational interventions may involve curricular changes at the level of undergraduate [181], graduate [182], or continuing [183] medical education. The specific educational content packaged within such interventions should be selected carefully. Education about the biomedical foundation of OUDs, for example, may not necessarily have the desired effects on stigma [184,185]. Contact interventions also hold promise for stigma reduction [186], but, as with educational interventions, their long-term effects remain unknown [187]. Finally, for people with OUDs, direct interventions to reduce internalized and anticipated stigma might draw on approaches from cognitive behavioral therapy [188] or acceptance and commitment therapy [189].

Indirect interventions might target institutions instead of individuals. For example, the mass media plays a central role in shaping our culture and therefore may represent a critical lever for influencing how multiple levels of stigma translate into specific behaviors and policies. Some print media organizations have issued professional guidance about reducing the use of stigmatizing frames in reporting about the opioid overdose crisis [190]. As another example, the “Changing the Narrative” project at Northeastern University (<https://www.changingthenarrative.news>) aims to reduce stigma and improve the accuracy of media portrayals, using various strategies such as promotion of style guides, “detailing” to journalists and editors, and social media monitoring and outreach. If disseminated nationally, similar to the Australian government’s support of the *Mind-frame Media and Mental Health Project* [191], the impacts on public stigma could be substantial [123,126,129,192,193]. Some academic journals [194,195] and academic societies [196] have

adopted similar guidelines. Broadcast media, rather than conditioning people to be fearful of persons with OUDs [197], can potentially reduce public stigma by portraying people with OUDs in ways that provide viewers with insight into the structural factors surrounding their use of opioids. However, as with print media, guidance on film and television portrayals fall under the purview of multiple trade groups and companies, and the levers for intervention are likely to be similarly diffuse.

The extent to which these direct or indirect interventions will successfully translate into changes in structural stigma, including agenda setting and policy change, remains unknown. Elected officials' voting behavior and successful policy enactment are contingent upon numerous factors [198–200], of which public stigma is only one. Moreover, the systematic disenfranchisement of people with past criminal convictions is one of the most spiteful barriers to policy reform, because it strips voting rights from people whose behaviors were criminalized by the very laws that they are now powerless to change [97]. Thus, there will remain a need for civil society organizations and activist initiatives to have a central role in influencing governmental responses to the overdose crisis. More research is needed to understand the causal pathways through which stigma acts so that interventions targeting these mechanisms can be deployed to enhance the opioid overdose crisis response. Until the stigma of OUDs is addressed, it will continue to hinder implementation of these interventions, exacerbating existing population health inequalities.

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References

1. Hedegaard H, Miniño AM, Warner M. Drug overdose deaths in the United States, 1999–2017. NCHS Data Brief No. 329. Hyattsville: US National Center for Health Statistics; 2018. PMID: [30500323](#)
2. Alexander MJ, Kiang MV, Barbieri M. Trends in black and white opioid mortality in the United States, 1979–2015. *Epidemiology*. 2018; 29(5):707–15. <https://doi.org/10.1097/EDE.0000000000000858> PMID: [29847496](#)
3. Spencer MR, Warner M, Bastian BA, Trinidad JP, Hedegaard H. Drug overdose deaths involving fentanyl, 2011–2016. *Natl Vital Stat Rep*. 2019; 68(3):1–19. PMID: [31112123](#)
4. Kiang MV, Basu S, Chen J, Alexander MJ. Assessment of changes in the geographical distribution of opioid-related mortality across the United States by opioid type, 1999–2016. *JAMA Netw Open*. 2019; 2(2):e190040. <https://doi.org/10.1001/jamanetworkopen.2019.0040> PMID: [30794299](#)
5. Scholl L, Seth P, Kariisa M, Wilson N, Baldwin G. Drug and opioid-involved overdose deaths—United States, 2013–17. *MMWR Morb Mortal Wkly Rep*. 2019; 67(51–52):1419–27. <https://doi.org/10.15585/mmwr.mm675152e1> PMID: [30605448](#)
6. Tsai AC, Mendenhall E, Trostle JA, Kawachi I. Co-occurring epidemics, syndemics, and population health. *Lancet*. 2017; 389(10072):978–28. [https://doi.org/10.1016/S0140-6736\(17\)30403-8](https://doi.org/10.1016/S0140-6736(17)30403-8) PMID: [28271848](#)
7. Kariisa M, Scholl L, Wilson N, Seth P, Hoots B. Drug overdose deaths involving cocaine and psychostimulants with abuse potential—United States, 2003–2017. *MMWR Morb Mortal Wkly Rep*. 2019; 68(17):388–95. <https://doi.org/10.15585/mmwr.mm6817a3> PMID: [31048676](#)
8. Winkelman TNA, Chang VW, Binswanger IA. Health, polysubstance use, and criminal justice involvement among adults with varying levels of opioid use. *JAMA Netw Open*. 2018; 1(3):e180558. <https://doi.org/10.1001/jamanetworkopen.2018.0558> PMID: [30646016](#)
9. Ellis MS, Kasper ZA, Cicero TJ. Twin epidemics: The surging rise of methamphetamine use in chronic opioid users. *Drug Alcohol Depend*. 2018; 193:14–20. <https://doi.org/10.1016/j.drugalcdep.2018.08.029> PMID: [30326396](#)
10. Gladden RM, O'Donnell J, Mattson CL, Seth P. Changes in opioid-involved overdose deaths by opioid type and presence of benzodiazepines, cocaine, and methamphetamine—25 states, July–December

- 2017 to January–June 2018. *MMWR Morb Mortal Wkly Rep*. 2019; 68(34):737–44. <https://doi.org/10.15585/mmwr.mm6834a2> PMID: 31465320
11. Dasgupta N, Beletsky L, Ciccarone D. Opioid crisis: no easy fix to its social and economic determinants. *Am J Public Health*. 2018; 108(2):182–6. <https://doi.org/10.2105/AJPH.2017.304187> PMID: 29267060
12. Ruhm CJ. Drivers of the fatal drug epidemic. *J Health Econ*. 2019; 64:25–42. <https://doi.org/10.1016/j.jhealeco.2019.01.001> PMID: 30784811
13. King NB, Fraser V, Boikos C, Richardson R, Harper S. Determinants of increased opioid-related mortality in the United States and Canada, 1990–2013: a systematic review. *Am J Public Health*. 2014; 104:e32–e42. <https://doi.org/10.2105/AJPH.2014.301966> PMID: 24922138
14. Venkataramani AS, Bair EF, O'Brien RL, Tsai AC. A difference-in-differences analysis of the association between automotive assembly plant closures and opioid overdose mortality in the United States. *JAMA Intern Med* 2020; 180(2):1–9. <https://doi.org/10.1001/jamainternmed.2019.5686>
15. Baker DW. History of The Joint Commission's pain standards: lessons for today's prescription opioid epidemic. *JAMA*. 2017; 317(11):1117–8. <https://doi.org/10.1001/jama.2017.0935> PMID: 28241189
16. Ciccarone D. The triple wave epidemic: Supply and demand drivers of the US opioid overdose crisis. *Int J Drug Policy*. 2019 Sep; 71:183–188. <https://doi.org/10.1016/j.drugpo.2019.01.010> PMID: 30718120
17. Ballantyne JC, Sullivan MD. Intensity of chronic pain—the wrong metric? *N Engl J Med*. 2015; 373(22):2098–9. <https://doi.org/10.1056/NEJMp1507136> PMID: 26605926
18. Acker CJ. Stigma or legitimization? A historical examination of the social potentials of addiction disease models. *J Psychoactive Drugs*. 1993; 25(3):193–205. <https://doi.org/10.1080/02791072.1993.10472271> PMID: 8258758
19. Gilmore N, Somerville MA. Stigmatization, scapegoating and discrimination in sexually transmitted diseases: overcoming 'them' and 'us'. *Soc Sci Med*. 1994; 39(9):1339–58. [https://doi.org/10.1016/0277-9536\(94\)90365-4](https://doi.org/10.1016/0277-9536(94)90365-4) PMID: 7801170
20. Link BG, Phelan JC. Conceptualizing stigma. *Annu Rev Sociol*. 2001; 27(1):363–85. <https://doi.org/10.1146/annurev.soc.27.1.363>
21. Goffman E. *Stigma: notes on the management of spoiled identity*. Englewood Cliffs: Prentice-Hall; 1963.
22. Hatzenbuehler ML, Phelan JC, Link BG. Stigma as a fundamental cause of population health inequalities. *Am J Public Health*. 2013; 103(5):813–21. <https://doi.org/10.2105/AJPH.2012.301069> PMID: 23488505
23. Link BG, Phelan J. Social conditions as fundamental causes of disease. *J Health Soc Behav*. 1995; 35 (Extra Issue):80–94. PMID: 7560851
24. Corrigan PW, Watson AC. The paradox of self-stigma and mental illness. *Clin Psychol Sci Pract*. 2002; 9(1):35–53.
25. Crisp AH, Gelder MG, Rix S, Meltzer HI, Rowlands OJ. Stigmatisation of people with mental illnesses. *Br J Psychiatry*. 2000; 177:4–7. <https://doi.org/10.1192/bjp.177.1.4> PMID: 10945080
26. Janulis P, Ferrari JR, Fowler P. Understanding public stigma toward substance dependence. *J Appl Soc Psychol*. 2013; 43:1065–72. <https://doi.org/10.1111/jasp.12070>
27. Morone JA. Enemies of the people: the moral dimension to public health. *J Health Politics Policy Law*. 1997; 22(993–1020). <https://doi.org/10.1215/03616878-22-4-993> PMID: 9334916
28. Link BG. Understanding labeling effects in the area of mental disorders: an assessment of the effects of expectations of rejection. *Am Sociol Rev*. 1987; 52(1):96–112. <https://doi.org/10.2307/2095395>
29. Link BG, Cullen FT, Struening E, Shrout PE. A modified labeling theory approach to mental disorders: an empirical assessment. *Am Sociol Rev*. 1989; 54(3):400–23. <https://doi.org/10.2307/2095613>
30. Evans-Lacko S, Brohan E, Mojtabai R, Thornicroft G. Association between public views of mental illness and self-stigma among individuals with mental illness in 14 European countries. *Psychol Med*. 2012; 42(8):1741–52. <https://doi.org/10.1017/S0033291711002558> PMID: 22085422
31. Scambler G, Hopkins A. Being epileptic: coming to terms with stigma. *Sociol Health Illn*. 1986; 8(1):26–43. <https://doi.org/10.1111/1467-9566.ep11346455>
32. Link BG, Cullen FT, Frank J, Wozniak JF. The social rejection of former mental patients: understanding why labels matter. *Am J Sociol*. 1987; 92(6):1461–500. <https://doi.org/10.1086/228672>
33. Reskin B. The race discrimination system. *Annu Rev Sociol*. 2012; 38(1):17–35. <https://doi.org/10.1146/annurev-soc-071811-145508>

34. Corrigan PW, Markowitz FE, Watson AC. Structural levels of mental illness stigma and discrimination. *Schizophr Bull.* 2004; 30(3):481–91. <https://doi.org/10.1093/oxfordjournals.schbul.a007096> PMID: 15631241
35. Jones CP. Levels of racism: a theoretic framework and a gardener's tale. *Am J Public Health.* 2000; 90(8):1212–5. <https://doi.org/10.2105/ajph.90.8.1212> PMID: 10936998
36. Pescosolido BA, Martin JK, Lang A, Olafsdottir S. Rethinking theoretical approaches to stigma: a Framework Integrating Normative Influences on Stigma (FINIS). *Soc Sci Med.* 2008; 67(3):431–40. <https://doi.org/10.1016/j.socscimed.2008.03.018> PMID: 18436358
37. Pitt AL, Humphreys K, Brandeau ML. Modeling health benefits and harms of public policy responses to the US opioid epidemic. *Am J Public Health.* 2018; 108(10):1394–400. <https://doi.org/10.2105/AJPH.2018.304590> PMID: 30138057
38. Humphreys K, Pollack HA. How should the United States respond to the opioid addiction and overdose epidemic? In: Goldman HH, Frank RG, Morrissey JP, editors. *The Palgrave handbook of American mental health policy.* Cham: Palgrave Macmillan; 2020. p. 259–96. https://doi.org/10.1007/978-3-030-11908-9_10
39. Barnett ML, Olenski AR, Jena AB. Opioid-prescribing patterns of emergency physicians and risk of long-term use. *N Engl J Med.* 2017; 376(7):663–73. <https://doi.org/10.1056/NEJMsa1610524> PMID: 28199807
40. Brat GA, Agniel D, Beam A, Yorkgitis B, Bicket M, Homer M, et al. Postsurgical prescriptions for opioid naive patients and association with overdose and misuse: retrospective cohort study. *BMJ.* 2018; 360:j5790. <https://doi.org/10.1136/bmj.j5790> PMID: 29343479
41. Schroeder AR, Dehghan M, Newman TB, Bentley JP, Park KT. Association of opioid prescriptions from dental clinicians for US adolescents and young adults with subsequent opioid use and abuse. *JAMA Int Med.* 2019; 179(2):145–52. <https://doi.org/10.1001/jamainternmed.2018.5419> PMID: 30508022
42. Cicero TJ, Ellis MS, Surratt HL, Kurtz SP. The changing face of heroin use in the United States: a retrospective analysis of the past 50 years. *JAMA Psychiatry.* 2014; 71(7):821–6. <https://doi.org/10.1001/jamapsychiatry.2014.366> PMID: 24871348
43. Nelson LS, Juurlink DN, Perrone J. Addressing the opioid epidemic. *JAMA.* 2015; 314(14):1453–4. <https://doi.org/10.1001/jama.2015.12397> PMID: 26461995
44. Davis CS, Carr D. Physician continuing education to reduce opioid misuse, abuse, and overdose: Many opportunities, few requirements. *Drug Alcohol Depend.* 2016; 163:100–7. <https://doi.org/10.1016/j.drugalcdep.2016.04.002> PMID: 27137406
45. Babu KM, Brent J, Juurlink DN. Prevention of opioid overdose. *N Engl J Med.* 2019; 380(23):2246–55. <https://doi.org/10.1056/NEJMra1807054> PMID: 31167053
46. Carey CM, Jena AB, Barnett ML. Patterns of potential opioid misuse and subsequent adverse outcomes in Medicare, 2008 to 2012. *Ann Intern Med.* 2018; 168(12):837–45. <https://doi.org/10.7326/M17-3065> PMID: 29800019
47. Guy GP Jr., Zhang K, Bohm MK, Losby J, Lewis B, Young R, et al. Vital Signs: changes in opioid prescribing in the United States, 2006–2015. *MMWR Morb Mortal Wkly Rep.* 2017; 66(26):697–704. <https://doi.org/10.15585/mmwr.mm6626a4> PMID: 28683056
48. Jones CM, Lurie PG, Throckmorton DC. Effect of US Drug Enforcement Administration's rescheduling of hydrocodone combination analgesic products on opioid analgesic prescribing. *JAMA Int Med.* 2016; 176(3):399–402. <https://doi.org/10.1001/jamainternmed.2015.7799> PMID: 26809459
49. Bohnert ASB, Guy GP Jr., Losby JL. Opioid prescribing in the United States before and after the Centers for Disease Control and Prevention's 2016 opioid guideline. *Ann Intern Med.* 2018; 169(6):367–75. <https://doi.org/10.7326/M18-1243> PMID: 30167651
50. Zhu W, Chernew ME, Sherry TB, Maestas N. Initial opioid prescriptions among U.S. commercially insured patients, 2012–2017. *N Engl J Med.* 2019; 380(11):1043–52. <https://doi.org/10.1056/NEJMsa1807069> PMID: 30865798
51. Kertesz SG, Gordon AJ. A crisis of opioids and the limits of prescription control: United States. *Addiction.* 2019; 114(1):169–80. <https://doi.org/10.1111/add.14394> PMID: 30039595
52. Chen Q, Larochelle MR, Weaver DT, Lietz AP, Mueller PP, Mercaldo S, et al. Prevention of prescription opioid misuse and projected overdose deaths in the United States. *JAMA Netw Open.* 2019; 2(2):e187621. <https://doi.org/10.1001/jamanetworkopen.2018.7621> PMID: 30707224
53. Kampman K, Jarvis M. American Society of Addiction Medicine (ASAM) national practice guideline for the use of medications in the treatment of addiction involving opioid use. *J Addict Med.* 2015; 9(5):358–67. <https://doi.org/10.1097/ADM.0000000000000166> PMID: 26406300

54. Dugosh K, Abraham A, Seymour B, McLoyd K, Chalk M, Festinger D. A systematic review on the use of psychosocial interventions in conjunction with medications for the treatment of opioid addiction. *J Addict Med*. 2016; 10(2):93–103. <https://doi.org/10.1097/ADM.0000000000000193> PMID: 26808307
55. Laroche MR, Bernson D, Land T, Stopka TJ, Wang N, Xuan Z, et al. Medication for opioid use disorder after nonfatal opioid overdose and association with mortality: a cohort study. *Ann Intern Med*. 2018; 169(3):137–45. <https://doi.org/10.7326/M17-3107> PMID: 29913516
56. Frazier W, Cochran G, Lo-Ciganic WH, Gellad WF, Gordon AJ, Chang CH, et al. Medication-assisted treatment and opioid use before and after overdose in Pennsylvania Medicaid. *JAMA*. 2017; 318(8):750–2. <https://doi.org/10.1001/jama.2017.7818> PMID: 28829862
57. Sordo L, Barrio G, Bravo MJ, Indave BI, Degenhardt L, Wiessing L, et al. Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. *BMJ*. 2017; 357:j1550. <https://doi.org/10.1136/bmj.j1550> PMID: 28446428
58. Lurie P, Reingold AL, Bowser B, Chen D, Foley J, Guydish J, et al. The public health impact of needle exchange programs in the United States and abroad, vol. 1. San Francisco: Regents of the University of California, 1993. <https://stacks.cdc.gov/view/cdc/11203>
59. Des Jarlais DC, Friedman SR, Hopkins W. Risk reduction for the acquired immunodeficiency syndrome among intravenous drug users. *Ann Intern Med*. 1985; 103(5):755–9. <https://doi.org/10.7326/0003-4819-103-5-755> PMID: 4051350
60. Vlahov D, Des Jarlais DC, Goosby E, Hollinger PC, Lurie PG, Shriver MD, et al. Needle exchange programs for the prevention of human immunodeficiency virus infection: epidemiology and policy. *Am J Epidemiol*. 2001; 154(12 Suppl):S70–7. <https://doi.org/10.1093/aje/154.12.s70> PMID: 11744532
61. Marshall BD, Milloy MJ, Wood E, Montaner JS, Kerr T. Reduction in overdose mortality after the opening of North America's first medically supervised safer injecting facility: a retrospective population-based study. *Lancet*. 2011; 377(9775):1429–37. [https://doi.org/10.1016/S0140-6736\(10\)62353-7](https://doi.org/10.1016/S0140-6736(10)62353-7) PMID: 21497898
62. Oviedo-Joekes E, Brissette S, Marsh DC, Lauzon P, Guh D, Anis A, et al. Diacetylmorphine versus methadone for the treatment of opioid addiction. *N Engl J Med*. 2009; 361(8):777–86. <https://doi.org/10.1056/NEJMoa0810635> PMID: 19692689
63. Abouk R, Pacula RL, Powell D. Association between state laws facilitating pharmacy distribution of naloxone and risk of fatal overdose. *JAMA Int Med*. 2019; 179(6):805–11. <https://doi.org/10.1001/jamainternmed.2019.0272> PMID: 31058922
64. Walley AY, Xuan Z, Hackman HH, Quinn E, Doe-Simkins M, Sorensen-Alawad A, et al. Opioid overdose rates and implementation of overdose education and nasal naloxone distribution in Massachusetts: interrupted time series analysis. *BMJ*. 2013; 346:f174. <https://doi.org/10.1136/bmj.f174> PMID: 23372174
65. Irvine MA, Buxton JA, Otterstatter M, Balshaw R, Gustafson R, Tyndall M, et al. Distribution of take-home opioid antagonist kits during a synthetic opioid epidemic in British Columbia, Canada: a modelling study. *Lancet Public Health*. 2018; 3(5):e218–e25. [https://doi.org/10.1016/S2468-2667\(18\)30044-6](https://doi.org/10.1016/S2468-2667(18)30044-6) PMID: 29678561
66. Szalavitz M. No one should have to prove their worth to get medical care, regardless of addiction or pain. *Narrat Inq Bioeth*. 2018; 8(3):233–7. <https://doi.org/10.1353/nib.2018.0072> PMID: 30595590
67. Lagisetty PA, Healy N, Garpestad C, Jannausch M, Tipirneni R, Bohnert ASB. Access to primary care clinics for patients with chronic pain receiving opioids. *JAMA Netw Open*. 2019; 2(7):e196928. <https://doi.org/10.1001/jamanetworkopen.2019.6928> PMID: 31298712
68. Kennedy-Hendricks A, Busch SH, McGinty EE, Bachhuber MA, Niederdeppe J, Gollust SE, et al. Primary care physicians' perspectives on the prescription opioid epidemic. *Drug Alcohol Depend*. 2016; 165:61–70. <https://doi.org/10.1016/j.drugalcdep.2016.05.010> PMID: 27261154
69. van Boekel LC, Brouwers EP, van Weeghel J, Garretsen HF. Stigma among health professionals towards patients with substance use disorders and its consequences for healthcare delivery: systematic review. *Drug Alcohol Depend*. 2013; 131(1–2):23–35. <https://doi.org/10.1016/j.drugalcdep.2013.02.018> PMID: 23490450
70. Allen B, Harocopos A, Chernick R. Substance use stigma, primary care, and the New York State Prescription Drug Monitoring Program. *Behav Med*. Epub 2019 Feb 6. <https://doi.org/10.1080/08964289.2018.1555129> PMID: 30726167
71. Biancarelli DL, Biello KB, Childs E, Drainoni M, Salhaney P, Edeza A, et al. Strategies used by people who inject drugs to avoid stigma in healthcare settings. *Drug Alcohol Depend*. 2019; 198:80–6. <https://doi.org/10.1016/j.drugalcdep.2019.01.037> PMID: 30884432
72. Dowell D, Haegerich T, Chou R. No shortcuts to safer opioid prescribing. *N Engl J Med*. 2019. <https://doi.org/10.1056/NEJMp1904190>

73. Kroenke K, Alford DP, Argoff C, Canlas B, Covington E, Frank JW, et al. Challenges with implementing the Centers for Disease Control and Prevention opioid Guideline: a consensus panel report. *Pain Med.* 2019; 20(4):724–35. <https://doi.org/10.1093/pm/pny307> PMID: 30690556
74. Darnall BD, Juurlink D, Kerns RD, Mackey S, Van Dorsten B, Humphreys K, et al. International stakeholder community of pain experts and leaders call for an urgent action on forced opioid tapering. *Pain Med.* 2019; 20(3):429–33. <https://doi.org/10.1093/pm/pny228> PMID: 30496540
75. Kertesz SG. Turning the tide or riptide? The changing opioid epidemic. *Subst Abus.* 2017; 38(1):3–8. <https://doi.org/10.1080/08897077.2016.1261070> PMID: 27858590
76. Mark TL, Parish W. Opioid medication discontinuation and risk of adverse opioid-related health care events. *J Subst Abuse Treat.* 2019; 103(1):58–63. <https://doi.org/10.1016/j.jsat.2019.05.001> PMID: 31079950
77. Manhapra A, Arias AJ, Ballantyne JC. The conundrum of opioid tapering in long-term opioid therapy for chronic pain: a commentary. *Subst Abus.* 2018; 39(2):152–61. <https://doi.org/10.1080/08897077.2017.1381663> PMID: 28929914
78. Lawrence M. How the CDC guidelines killed my husband. *Narrat Inq Bioeth.* 2018; 8(3):219–22. <https://doi.org/10.1353/nib.2018.0069> PMID: 30595587
79. Latkin CA, Gicquelais RE, Clyde C, Dayton L, Davey-Rothwell M, German D, et al. Stigma and drug use settings as correlates of self-reported, non-fatal overdose among people who use drugs in Baltimore, Maryland. *Int J Drug Policy.* 2019; 68:86–92. <https://doi.org/10.1016/j.drugpo.2019.03.012> PMID: 31026734
80. Fiscella K, Wakeman SE, Beletsky L. Buprenorphine deregulation and mainstreaming treatment for opioid use disorder: X the X waiver. *JAMA Psychiatry.* 2019; 76(3):229–30. <https://doi.org/10.1001/jamapsychiatry.2018.3685> PMID: 30586140
81. Stein BD, Sorbero M, Dick AW, Pacula RL, Burns RM, Gordon AJ. Physician capacity to treat opioid use disorder with buprenorphine-assisted treatment. *JAMA.* 2016; 316(11):1211–2. <https://doi.org/10.1001/jama.2016.10542> PMID: 27654608
82. Sigmon SC. The untapped potential of office-based buprenorphine treatment. *JAMA Psychiatry.* 2015; 72(4):395–6. <https://doi.org/10.1001/jamapsychiatry.2014.2421> PMID: 25671806
83. Thomas CP, Doyle E, Kreiner PW, Jones CM, Dubenitz J, Horan A, et al. Prescribing patterns of buprenorphine waived physicians. *Drug Alcohol Depend.* 2017; 181:213–8. <https://doi.org/10.1016/j.drugalcdep.2017.10.002> PMID: 29096292
84. Huhn AS, Dunn KE. Why aren't physicians prescribing more buprenorphine? *J Subst Abuse Treat.* 2017; 78:1–7. <https://doi.org/10.1016/j.jsat.2017.04.005> PMID: 28554597
85. Haffajee RL, Bohnert ASB, Lagisetty PA. Policy pathways to address provider workforce barriers to buprenorphine treatment. *Am J Prev Med.* 2018; 54(6 Suppl 3):S230–S42. <https://doi.org/10.1016/j.amepre.2017.12.022> PMID: 29779547
86. McMurphy S, Shea J, Switzer J, Turner BJ. Clinic-based treatment for opioid dependence: a qualitative inquiry. *Am J Health Behav.* 2006; 30(5):544–54. <https://doi.org/10.5555/ajhb.2006.30.5.544> PMID: 16893317
87. Dineen KK, DuBois JM. Between a rock and a hard place: can physicians prescribe opioids to treat pain adequately while avoiding legal sanction? *Am J Law Med.* 2016; 42(1):7–52. <https://doi.org/10.1177/0098858816644712> PMID: 27263262
88. Madden EF. Intervention stigma: How medication-assisted treatment marginalizes patients and providers. *Soc Sci Med.* 2019; 232:324–31. <https://doi.org/10.1016/j.socscimed.2019.05.027> PMID: 31125801
89. Green TC, Case P, Fiske H, Baird J, Cabral S, Burstein D, et al. Perpetuating stigma or reducing risk? Perspectives from naloxone consumers and pharmacists on pharmacy-based naloxone in 2 states. *J Am Pharm Assoc (2003).* 2017; 57(2S):S19–S27.e4. <https://doi.org/10.1016/j.japh.2017.01.013> PMID: 28214219
90. Binswanger IA, Koester S, Mueller SR, Gardner EM, Goddard K, Glanz JM. Overdose education and naloxone for patients prescribed opioids in primary care: a qualitative study of primary care staff. *J Gen Intern Med.* 2015; 30(12):1837–44. <https://doi.org/10.1007/s11606-015-3394-3> PMID: 26055224
91. Green TC, Bowman SE, Zaller ND, Ray M, Case P, Heimer R. Barriers to medical provider support for prescription naloxone as overdose antidote for lay responders. *Subst Use Misuse.* 2013; 48(7):558–67. <https://doi.org/10.3109/10826084.2013.787099> PMID: 23647168
92. Bazazi AR, Zaller ND, Fu JJ, Rich JD. Preventing opiate overdose deaths: examining objections to take-home naloxone. *J Health Care Poor Underserved.* 2010; 21(4):1108–13. <https://doi.org/10.1353/hpu.2010.0935> PMID: 21099064

93. Okoro ON, Bastianelli KM, Wen YF, Bilden EF, Konowalchuk BK, Schneiderhan ME. Awareness of state legislation on naloxone accessibility associated with willingness to prescribe naloxone. *Subst Abus.* 2018; 39(1):14–20. <https://doi.org/10.1080/08897077.2017.1356787> PMID: 28727957
94. Davis C, Carr D. State legal innovations to encourage naloxone dispensing. *J Am Pharm Assoc* (2003). 2017; 57(2S):S180–S4. <https://doi.org/10.1016/j.japh.2016.11.007> PMID: 28073688
95. Davis CS, Carr D. Legal changes to increase access to naloxone for opioid overdose reversal in the United States. *Drug Alcohol Depend.* 2015; 157:112–20. <https://doi.org/10.1016/j.drugalcdep.2015.10.013> PMID: 26507172
96. Koester S, Mueller SR, Raville L, Langegger S, Binswanger IA. Why are some people who have received overdose education and naloxone reticent to call Emergency Medical Services in the event of overdose? *Int J Drug Policy.* 2017; 48:115–24. <https://doi.org/10.1016/j.drugpo.2017.06.008> PMID: 28734745
97. Beletsky L. America's favorite antidote: drug-induced homicide in the age of the overdose crisis. *Utah Law Rev.* 2019; 2019(4):833–90. <https://dc.law.utah.edu/ulr/vol2019/iss4/4/>
98. Mark TL, Lubran R, McCance-Katz EF, Chalk M, Richardson J. Medicaid coverage of medications to treat alcohol and opioid dependence. *J Subst Abuse Treat.* 2015; 55:1–5. <https://doi.org/10.1016/j.jsat.2015.04.009> PMID: 25921475
99. Andrews CM, Abraham AJ, Grogan CM, Westlake MA, Pollack HA, Friedmann PD. Impact of Medicaid restrictions on availability of buprenorphine in addiction treatment programs. *Am J Public Health.* 2019; 109(3):434–6. <https://doi.org/10.2105/AJPH.2018.304856> PMID: 30676789
100. Clark RE, Baxter JD. Responses of state Medicaid programs to buprenorphine diversion: doing more harm than good? *JAMA Int Med.* 2013; 173(17):1571–2. <https://doi.org/10.1001/jamainternmed.2013.9059> PMID: 23877740
101. Kermack A, Flannery M, Tofighi B, McNeely J, Lee JD. Buprenorphine prescribing practice trends and attitudes among New York providers. *J Subst Abuse Treat.* 2017; 74:1–6. <https://doi.org/10.1016/j.jsat.2016.10.005> PMID: 28132694
102. Burns RM, Pacula RL, Bauhoff S, Gordon AJ, Hendrikson H, Leslie DL, et al. Policies related to opioid agonist therapy for opioid use disorders: The evolution of state policies from 2004 to 2013. *Subst Abus.* 2016; 37(1):63–9. <https://doi.org/10.1080/08897077.2015.1080208> PMID: 26566761
103. Beetham T, Saloner B, Wakeman SE, Gaye M, Barnett ML. Access to office-based buprenorphine treatment in areas with high rates of opioid-related mortality: an audit study. *Ann Intern Med.* 2019; 171(1):1–9. <https://doi.org/10.7326/M18-3457> PMID: 31158849
104. Parran TV, Muller JZ, Chernyak E, Adelman C, Delos Reyes CM, Rowland D, et al. Access to and payment for office-based buprenorphine treatment in Ohio. *Subst Abuse.* 2017; 11:1178221817699247. <https://doi.org/10.1177/1178221817699247> PMID: 28642642
105. Rees J, Garcia G. Clinic payment options as a barrier to accessing medication-assisted treatment for opioid use in Albuquerque, New Mexico. *Addict Disord Their Treat.* 2019; 18(4):246–248 <https://doi.org/10.1097/ADT.0000000000000175>
106. Meinhofer A, Witman AE. The role of health insurance on treatment for opioid use disorders: Evidence from the Affordable Care Act Medicaid expansion. *J Health Econ.* 2018; 60:177–97. <https://doi.org/10.1016/j.jhealeco.2018.06.004> PMID: 29990675
107. Abraham AJ, Andrews CM, Grogan CM, D'Aunno T, Humphreys KN, Pollack HA, et al. The Affordable Care Act transformation of substance use disorder treatment. *Am J Public Health.* 2017; 107(1):31–2. <https://doi.org/10.2105/AJPH.2016.303558> PMID: 27925819
108. Wen LS, Behrle EB, Tsai AC. Evaluating the impact of Affordable Care Act repeal on America's opioid epidemic. *PLoS Med.* 2017; 14(8):e1002380. <https://doi.org/10.1371/journal.pmed.1002380> PMID: 28850576
109. Bernstein SE, Bennett D. Zoned Out: "NIMBYism", addiction services and municipal governance in British Columbia. *Int J Drug Policy.* 2013; 24(6):e61–5. <https://doi.org/10.1016/j.drugpo.2013.04.001> PMID: 23680227
110. Strike C, Miskovic M. Zoning out methadone and rising opioid-related deaths in Ontario: Reforms and municipal government actions. *Can J Public Health.* 2017; 108(2):e205–e7. <https://doi.org/10.17269/cjph.108.5858> PMID: 28621658
111. Amiri S, Lutz R, Socias ME, McDonnell MG, Roll JM, Amram O. Increased distance was associated with lower daily attendance to an opioid treatment program in Spokane County Washington. *J Subst Abuse Treat.* 2018; 93:26–30. <https://doi.org/10.1016/j.jsat.2018.07.006> PMID: 30126538
112. Joudrey PJ, Edelman EJ, Wang EA. Drive times to opioid treatment programs in urban and rural counties in 5 US states. *JAMA.* 2019; 322(13):1310–2. <https://doi.org/10.1001/jama.2019.12562> PMID: 31573628

113. Wakeman SE, Ladin K, Brennan T, Chung RT. Opioid use disorder, stigma, and transplantation: a call to action. *Ann Intern Med.* 2018; 169(3):188–9. <https://doi.org/10.7326/M18-1099> PMID: 29987319
114. Koch M, Banys P. Liver transplantation and opioid dependence. *JAMA.* 2001; 285(8):1056–8. <https://doi.org/10.1001/jama.285.8.1056> PMID: 11209177
115. Fleming JN, Lai JC, Te HS, Said A, Spengler EK, Rogal SS. Opioid and opioid substitution therapy in liver transplant candidates: A survey of center policies and practices. *Clin Transplant.* 2017; 31(12). <https://doi.org/10.1111/ctr.13119> PMID: 28941292
116. Wakeman SE, Rich JD. Barriers to post-acute care for patients on opioid agonist therapy; an example of systematic stigmatization of addiction. *J Gen Intern Med.* 2017; 32(1):17–9. <https://doi.org/10.1007/s11606-016-3799-7> PMID: 27393486
117. Suzuki J, Johnson J, Montgomery M, Hayden M, Price C. Outpatient parenteral antimicrobial therapy among people who inject drugs: a review of the literature. *Open Forum Infect Dis.* 2018; 5(9):ofy194. <https://doi.org/10.1093/ofid/ofy194> PMID: 30211247
118. Rapoport AB, Fischer LS, Santibanez S, Beekmann SE, Polgreen PM, Rowley CF. Infectious diseases physicians' perspectives regarding injection drug use and related infections, United States, 2017. *Open Forum Infect Dis.* 2018; 5(7):ofy132. <https://doi.org/10.1093/ofid/ofy132> PMID: 30018999
119. Beletsky L, Wakeman SE, Fiscella K. Practicing what we preach—ending physician health program bans on opioid-agonist therapy. *N Engl J Med.* 2019; 381(9):796–8. <https://doi.org/10.1056/NEJMp1907875> PMID: 31461593
120. Kelly JF, Westerhoff CM. Does it matter how we refer to individuals with substance-related conditions? A randomized study of two commonly used terms. *Int J Drug Policy.* 2010; 21(3):202–7. <https://doi.org/10.1016/j.drugpo.2009.10.010> PMID: 20005692
121. Friedmann PD, Schwartz RP. Just call it “treatment”. *Addict Sci Clin Pract.* 2012; 7(1):10. <https://doi.org/10.1186/1940-0640-7-10> PMID: 23186149
122. Kennedy-Hendricks A, Levin J, Stone E, McGinty EE, Gollust SE, Barry CL. News media reporting on medication treatment for opioid use disorder amid the opioid epidemic. *Health Aff (Millwood).* 2019; 38(4):643–51. <https://doi.org/10.1377/hlthaff.2018.05075> PMID: 30933576
123. McGinty EE, Stone EM, Kennedy-Hendricks A, Barry CL. Stigmatizing language in news media coverage of the opioid epidemic: Implications for public health. *Prev Med.* 2019; 124:110–4. <https://doi.org/10.1016/j.ypmed.2019.03.018> PMID: 31122614
124. McGinty EE, Kennedy-Hendricks A, Baller J, Niederdeppe J, Gollust S, Barry CL. Criminal activity or treatable health condition? News media framing of opioid analgesic abuse in the United States, 1998–2012. *Psychiatr Serv.* 2016; 67(4):405–11. <https://doi.org/10.1176/appi.ps.201500065> PMID: 26620290
125. Netherland J, Hansen HB. The war on drugs that wasn't: wasted whiteness, “dirty doctors,” and race in media coverage of prescription opioid misuse. *Cult Med Psychiatry.* 2016; 40(4):664–86. <https://doi.org/10.1007/s11013-016-9496-5> PMID: 27272904
126. Kennedy-Hendricks A, Barry CL, Gollust SE, Ensminger ME, Chisolm MS, McGinty EE. Social stigma toward persons with prescription opioid use disorder: associations with public support for punitive and public health-oriented policies. *Psychiatr Serv.* 2017; 68(5):462–9. <https://doi.org/10.1176/appi.ps.201600056> PMID: 28045350
127. McGinty EE, Goldman HH, Pescosolido B, Barry CL. Portraying mental illness and drug addiction as treatable health conditions: effects of a randomized experiment on stigma and discrimination. *Soc Sci Med.* 2015; 126:73–85. <https://doi.org/10.1016/j.socscimed.2014.12.010> PMID: 25528557
128. Barry CL, Sherman SG, McGinty EE. Language matters in combatting the opioid epidemic: safe consumption sites versus overdose prevention sites. *Am J Public Health.* 2018; 108(9):1157–9. <https://doi.org/10.2105/AJPH.2018.304588> PMID: 30088990
129. Bachhuber MA, McGinty EE, Kennedy-Hendricks A, Niederdeppe J, Barry CL. Messaging to increase public support for naloxone distribution policies in the United States: results from a randomized survey experiment. *PLoS ONE.* 2015; 10(7):e0130050. <https://doi.org/10.1371/journal.pone.0130050> PMID: 26132859
130. McGinty EE, Barry CL, Stone EM, Niederdeppe J, Kennedy-Hendricks A, Linden S, et al. Public support for safe consumption sites and syringe services programs to combat the opioid epidemic. *Prev Med.* 2018; 111:73–7. <https://doi.org/10.1016/j.ypmed.2018.02.026> PMID: 29481827
131. Kilmer B, Smart R, Taylor J, Caulkins JP. Prescribing diamorphine in the United States: Insights from a nationally representative survey. *Drug Alcohol Depend.* 2019; 196:62–5. <https://doi.org/10.1016/j.drugalcdep.2018.12.007> PMID: 30708289

132. Crapanzano KA, Hammarlund R, Ahmad B, Hunsinger N, Kullar R. The association between perceived stigma and substance use disorder treatment outcomes: a review. *Subst Abuse Rehabil.* 2019; 10:1–12. <https://doi.org/10.2147/SAR.S183252> PMID: 30643480
133. Clement S, Schauman O, Graham T, Maggioni F, Evans-Lacko S, Bezborodovs N, et al. What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. *Psychol Med.* 2015; 45(1):11–27. <https://doi.org/10.1017/S0033291714000129> PMID: 24569086
134. Earnshaw VA, Smith LR, Cunningham CO, Copenhaver MM. Intersectionality of internalized HIV stigma and internalized substance use stigma: Implications for depressive symptoms. *J Health Psychol.* 2015; 20(8):1083–9. <https://doi.org/10.1177/1359105313507964> PMID: 24170015
135. Ahern J, Stuber J, Galea S. Stigma, discrimination and the health of illicit drug users. *Drug Alcohol Depend.* 2007; 88(2–3):188–96. <https://doi.org/10.1016/j.drugalcdep.2006.10.014> PMID: 17118578
136. Latkin C, Davey-Rothwell M, Yang JY, Crawford N. The relationship between drug user stigma and depression among inner-city drug users in Baltimore, MD. *J Urban Health.* 2013; 90(1):147–56. <https://doi.org/10.1007/s11524-012-9753-z> PMID: 22918839
137. Kulesza M, Watkins KE, Ober AJ, Osilla KC, Ewing B. Internalized stigma as an independent risk factor for substance use problems among primary care patients: Rationale and preliminary support. *Drug Alcohol Depend.* 2017; 180:52–5. <https://doi.org/10.1016/j.drugalcdep.2017.08.002> PMID: 28869858
138. Cunningham JA, Sobell LC, Sobell MB, Agrawal S, Toneatto T. Barriers to treatment: why alcohol and drug abusers delay or never seek treatment. *Addict Behav.* 1993; 18(3):347–53. [https://doi.org/10.1016/0306-4603\(93\)90036-9](https://doi.org/10.1016/0306-4603(93)90036-9) PMID: 8393611
139. Earnshaw V, Smith L, Copenhaver M. Drug addiction stigma in the context of methadone maintenance therapy: an investigation into understudied sources of stigma. *Int J Ment Health Addict.* 2013; 11(1):110–22. <https://doi.org/10.1007/s11469-012-9402-5> PMID: 23956702
140. Keyes KM, Hatzenbuehler ML, McLaughlin KA, Link B, Olfson M, Grant BF, et al. Stigma and treatment for alcohol disorders in the United States. *Am J Epidemiol.* 2010; 172(12):1364–72. <https://doi.org/10.1093/aje/kwq304> PMID: 21044992
141. Brener L, von Hippel W, von Hippel C, Resnick I, Treloar C. Perceptions of discriminatory treatment by staff as predictors of drug treatment completion: utility of a mixed methods approach. *Drug Alcohol Rev.* 2010; 29(5):491–7. <https://doi.org/10.1111/j.1465-3362.2010.00173.x> PMID: 20887572
142. Paquette CE, Syvertsen JL, Pollini RA. Stigma at every turn: Health services experiences among people who inject drugs. *Int J Drug Policy.* 2018; 57:104–10. <https://doi.org/10.1016/j.drugpo.2018.04.004> PMID: 29715589
143. Bearnot B, Fine DR, Rigotti NA, Baggett TP. Access to treatment for drug use disorders at US health centers: a national study. *J Gen Intern Med.* 2019Dec; 34(12):2723–2725 <https://doi.org/10.1007/s11606-019-05043-1> PMID: 31090029
144. Faulkner KK, Faulkner TA. Managing multiple relationships in rural communities: neutrality and boundary violations. *Clin Psychol Sci Pract.* 1997; 4(3):225–34. <https://doi.org/10.1111/j.1468-2850.1997.tb00111.x>
145. Montalvo C, Stankiewicz B, Brochier A, Henderson DC, Borba CPC. Long-term retention in an outpatient behavioral health clinic with buprenorphine. *Am J Addict.* 2019; 28(5):339–46. <https://doi.org/10.1111/ajad.12896> PMID: 31066985
146. Weinstein ZM, Kim HW, Cheng DM, Quinn E, Hui D, Labelle CT, et al. Long-term retention in office based opioid treatment with buprenorphine. *J Subst Abuse Treat.* 2017; 74:65–70. <https://doi.org/10.1016/j.jsat.2016.12.010> PMID: 28132702
147. Manhapra A, Agbese E, Leslie DL, Rosenheck RA. Three-year retention in buprenorphine treatment for opioid use disorder among privately insured adults. *Psychiatr Serv.* 2018; 69(7):768–76. <https://doi.org/10.1176/appi.ps.201700363> PMID: 29656707
148. Katz IT, Ryu AE, Onuegbu AG, Psaros C, Weiser SD, Bangsberg DR, et al. Impact of HIV-related stigma on treatment adherence: systematic review and meta-synthesis. *J Int AIDS Soc.* 2013; 16(Suppl 2):18640. <https://doi.org/10.7448/IAS.16.3.18640> PMID: 24242258
149. Siedner MJ, Musinguzi N, Tsai AC, Muzoora C, Kembabazi A, Weiser SD, et al. Treatment as long-term prevention: sustained reduction in HIV sexual transmission risk with use of antiretroviral therapy in rural Uganda. *AIDS.* 2014; 28(2):267–71. <https://doi.org/10.1097/QAD.000000000000136> PMID: 24361683
150. Radcliffe P, Stevens A. Are drug treatment services only for 'thieving junkie scumbags'? Drug users and the management of stigmatised identities. *Soc Sci Med.* 2008; 67(7):1065–73. <https://doi.org/10.1016/j.socscimed.2008.06.004> PMID: 18640760

151. Gryczynski J, Jaffe JH, Schwartz RP, Dusek KA, Gugsu N, Monroe CL, et al. Patient perspectives on choosing buprenorphine over methadone in an urban, equal-access system. *Am J Addict*. 2013; 22(3):285–91. <https://doi.org/10.1111/j.1521-0391.2012.12004.x> PMID: 23617873
152. Dole VP, Nyswander ME. Methadone maintenance: a theoretical perspective. In: Lettieri DJ, Sayers M, Pearson HW, editors. *Theories on drug abuse: selected contemporary perspectives*. Washington, (DC): US Government Printing Office; 1980. NIDA Research Monograph 30. <https://archives.drugabuse.gov/sites/default/files/monograph30.pdf> PMID: 6779187
153. Harris J, McElrath K. Methadone as social control: institutionalized stigma and the prospect of recovery. *Qual Health Res*. 2012; 22(6):810–24. <https://doi.org/10.1177/1049732311432718> PMID: 22232295
154. McElrath K. Medication-assisted treatment for opioid addiction in the United States: critique and commentary. *Subst Use Misuse*. 2018; 53(2):334–43. <https://doi.org/10.1080/10826084.2017.1342662> PMID: 28862903
155. Yarborough BJ, Stumbo SP, McCarty D, Mertens J, Weisner C, Green CA. Methadone, buprenorphine and preferences for opioid agonist treatment: A qualitative analysis. *Drug Alcohol Depend*. 2016; 160:112–8. <https://doi.org/10.1016/j.drugalcdep.2015.12.031> PMID: 26796596
156. Binswanger IA, Stern MF, Deyo RA, Heagerty PJ, Cheadle A, Elmore JG, et al. Release from prison—a high risk of death for former inmates *New Engl J Med*. 2007; 356(2):157–65. <https://doi.org/10.1056/NEJMs064115> PMID: 17215533
157. Merrill EL, Kariminia A, Binswanger IA, Hobbs MS, Farrell M, Marsden J, et al. Meta-analysis of drug-related deaths soon after release from prison. *Addiction*. 2010; 105(9):1545–54. <https://doi.org/10.1111/j.1360-0443.2010.02990.x> PMID: 20579009
158. 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. *Ann Intern Med*. 2013; 159:592–600. <https://doi.org/10.7326/0003-4819-159-9-201311050-00005> PMID: 24189594
159. Nunn A, Zaller N, Dickman S, Trimbur C, Nijhawan A, Rich JD. Methadone and buprenorphine prescribing and referral practices in US prison systems: results from a nationwide survey. *Drug Alcohol Depend*. 2009; 105(1–2):83–8. <https://doi.org/10.1016/j.drugalcdep.2009.06.015> PMID: 19625142
160. Aronowitz SV, Laurent J. Screaming behind a door: the experiences of individuals incarcerated without medication-assisted treatment. *J Correct Health Care*. 2016; 22(2):98–108. <https://doi.org/10.1177/1078345816634079> PMID: 26984133
161. Friedmann PD, Hoskinson R, Gordon M, Schwartz R, Kinlock T, Knight K, et al. Medication-assisted treatment in criminal justice agencies affiliated with the criminal justice-drug abuse treatment studies (CJ-DATS): availability, barriers, and intentions. *Subst Abus*. 2012; 33(1):9–18. <https://doi.org/10.1080/08897077.2011.611460> PMID: 22263709
162. McMillan GP, Lapham SC. Staff perspectives on methadone maintenance therapy (MMT) in a large southwestern jail. *Addict Res Theory*. 2005; 13(1):53–63. <https://doi.org/10.1080/16066350512331328159>
163. Gordon MS, Kinlock TW, Schwartz RP, O'Grady KE. A randomized clinical trial of methadone maintenance for prisoners: findings at 6 months post-release. *Addiction*. 2008; 103(8):1333–42. <https://doi.org/10.1111/j.1360-0443.2008.002238.x> PMID: 18855822
164. Green TC, Clarke J, Brinkley-Rubinstein L, Marshall BDL, Alexander-Scott N, Boss R, et al. Postincarceration fatal overdoses after implementing medications for addiction treatment in a statewide correctional system. *JAMA Psychiatry*. 2018; 75(4):405–7. <https://doi.org/10.1001/jamapsychiatry.2017.4614> PMID: 29450443
165. Marsden J, Stillwell G, Jones H, Cooper A, Eastwood B, Farrell M, et al. Does exposure to opioid substitution treatment in prison reduce the risk of death after release? A national prospective observational study in England. *Addiction*. 2017; 112(8):1408–18. <https://doi.org/10.1111/add.13779> PMID: 28160345
166. Degenhardt L, Larney S, Kimber J, Gisev N, Farrell M, Dobbins T, et al. The impact of opioid substitution therapy on mortality post-release from prison: retrospective data linkage study. *Addiction*. 2014; 109(8):1306–17. <https://doi.org/10.1111/add.12536> PMID: 24612249
167. Todd KH, Deaton C, D'Adamo AP, Goe L. Ethnicity and analgesic practice. *Ann Emerg Med*. 2000; 35(1):11–6. [https://doi.org/10.1016/s0196-0644\(00\)70099-0](https://doi.org/10.1016/s0196-0644(00)70099-0) PMID: 10613935
168. Gaither JR, Gordon K, Crystal S, Edelman EJ, Kerns RD, Justice AC, et al. Racial disparities in discontinuation of long-term opioid therapy following illicit drug use among black and white patients. *Drug Alcohol Depend*. 2018; 192:371–6. <https://doi.org/10.1016/j.drugalcdep.2018.05.033> PMID: 30122319
169. Sklansky DA. Cocaine, race, and equal protection. *Stanford Law Rev*. 1995; 47(6):1283–322. <https://scholarship.law.berkeley.edu/facpubs/1061/>

170. McDonald DC, Carlson KE. Sentencing in the federal courts: does race matter? The transition to sentencing guidelines, 1986–90. Washington, (DC): US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics; 1993. doi: <https://www.bjs.gov/content/pub/pdf/sfc-drmstsg8690.pdf>
171. Hansen H, Netherland J. Is the prescription opioid epidemic a white problem? *Am J Public Health*. 2016; 106(12):2127–9. <https://doi.org/10.2105/AJPH.2016.303483> PMID: 27831792
172. Netherland J, Hansen H. White opioids: Pharmaceutical race and the war on drugs that wasn't. *Biosocieties*. 2017; 12(2):217–38. <https://doi.org/10.1057/biosoc.2015.46> PMID: 28690668
173. Buonora M, Perez HR, Heo M, Cunningham CO, Starrels JL. Race and gender are associated with opioid dose reduction among patients on chronic opioid therapy. *Pain Med*. Epub 2018 Jul 18. <https://doi.org/10.1093/pm/pny137> PMID: 30032197
174. Lagisetty PA, Ross R, Bohnert A, Clay M, Maust DT. Buprenorphine treatment divide by race/ethnicity and payment. *JAMA Psychiatry*. 2019; 76(9):979–81. <https://doi.org/10.1001/jamapsychiatry.2019.0876> PMID: 31066881
175. Hansen HB, Siegel CE, Case BG, Bertollo DN, DiRocco D, Galanter M. Variation in use of buprenorphine and methadone treatment by racial, ethnic, and income characteristics of residential social areas in New York City. *J Behav Health Serv Res*. 2013; 40(3):367–77. <https://doi.org/10.1007/s11414-013-9341-3> PMID: 23702611
176. Davis CS, Carr DH. Legal and policy changes urgently needed to increase access to opioid agonist therapy in the United States. *Int J Drug Policy*. 2019; 73:42–8. <https://doi.org/10.1016/j.drugpo.2019.07.006> PMID: 31336293
177. Beletsky L, Rich JD, Walley AY. Prevention of fatal opioid overdose. *JAMA*. 2012; 308(18):1863–4. <https://doi.org/10.1001/jama.2012.14205> PMID: 23150005
178. Fiscella K, Beletsky L, Wakeman SE. The inmate exception and reform of correctional health care. *Am J Public Health*. 2017; 107(3):384–5. <https://doi.org/10.2105/AJPH.2016.303626> PMID: 28177816
179. Arredondo J, Beletsky L, Baker P, Abramovitz D, Artamonova I, Clairgue E, et al. Interactive versus video-based training of police to communicate syringe legality to people who inject drugs: the SHIELD Study, Mexico, 2015–2016. *Am J Public Health*. 2019 Jun; 109(6):921–926. <https://doi.org/10.2105/AJPH.2019.305030> PMID: 30998406
180. Thornicroft G, Mehta N, Clement S, Evans-Lacko S, Doherty M, Rose D, et al. Evidence for effective interventions to reduce mental-health-related stigma and discrimination. *Lancet*. 2016; 387(10023):1123–32. [https://doi.org/10.1016/S0140-6736\(15\)00298-6](https://doi.org/10.1016/S0140-6736(15)00298-6) PMID: 26410341
181. Association of American Medical Colleges. How academic medicine is addressing the opioid epidemic. Washington (DC): Association of American Medical Colleges; 2019. https://www.aamc.org/system/files/d/1/63-opioids_-_how_academic_medicine_is_addressing_the_opioid_epidemic_-_20190222.pdf
182. Sharfstein JM, Olsen Y. Making amends for the opioid epidemic. *JAMA*. 2019; 321(15):1446–7. <https://doi.org/10.1001/jama.2019.3505> PMID: 30990541
183. Wakeman SE, Barnett ML. Primary care and the opioid-overdose crisis—buprenorphine myths and realities. *N Engl J Med*. 2018; 379(1):1–4. <https://doi.org/10.1056/NEJMp1802741> PMID: 29972748
184. Pescosolido BA, Martin JK, Long JS, Medina TR, Phelan JC, Link BG. "A disease like any other"? A decade of change in public reactions to schizophrenia, depression, and alcohol dependence. *Am J Psychiatry*. 2010; 167(11):1321–30. <https://doi.org/10.1176/appi.ajp.2010.09121743> PMID: 20843872
185. Schnittker J. An uncertain revolution: why the rise of a genetic model of mental illness has not increased tolerance. *Soc Sci Med*. 2008; 67(9):1370–81. <https://doi.org/10.1016/j.socscimed.2008.07.007> PMID: 18703264
186. Broockman D, Kalla J. Durably reducing transphobia: A field experiment on door-to-door canvassing. *Science*. 2016; 352(6282):220–4. <https://doi.org/10.1126/science.aad9713> PMID: 27124458
187. Paluck EL, Green SA, Green DP. The contact hypothesis re-evaluated. *Behav Public Policy*. 2019; 3(2):129–158. <https://doi.org/10.1017/bpp.2018.25>
188. Fung KM, Tsang HW, Cheung WM. Randomized controlled trial of the self-stigma reduction program among individuals with schizophrenia. *Psychiatry Res*. 2011; 189(2):208–14. <https://doi.org/10.1016/j.psychres.2011.02.013> PMID: 21377738
189. Luoma JB, Kohlenberg BS, Hayes SC, Fletcher L. Slow and steady wins the race: a randomized clinical trial of acceptance and commitment therapy targeting shame in substance use disorders. *J Consult Clin Psychol*. 2012; 80(1):43–53. <https://doi.org/10.1037/a0026070> PMID: 22040285
190. Associated Press Editors, editor. The Associated Press stylebook and briefing on media law 2017. New York: Basic Books; 2017.

191. Skehan J, Greenhalgh S, Hazell T, Pirkis J. Reach, awareness and uptake of media guidelines for reporting suicide and mental illness: an Australian perspective. *Int J Ment Health Promot*. 2006; 8(4):29–35. <https://doi.org/10.1080/14623730.2006.9721749>
192. Barry CL, McGinty EE, Pescosolido BA, Goldman HH. Stigma, discrimination, treatment effectiveness, and policy: public views about drug addiction and mental illness. *Psychiatr Serv*. 2014; 65(10):1269–72. <https://doi.org/10.1176/appi.ps.201400140> PMID: 25270497
193. McGinty E, Pescosolido B, Kennedy-Hendricks A, Barry CL. Communication strategies to counter stigma and improve mental illness and substance use disorder policy. *Psychiatr Serv*. 2018; 69(2):136–46. <https://doi.org/10.1176/appi.ps.201700076> PMID: 28967320
194. Saitz R. Things that work, things that don't work, and things that matter—including words. *J Addict Med*. 2015; 9(6):429–30. <https://doi.org/10.1097/ADM.0000000000000160> PMID: 26517322
195. Broyles LM, Binswanger IA, Jenkins JA, Finnell DS, Faseru B, Cavaia A, et al. Confronting inadvertent stigma and pejorative language in addiction scholarship: a recognition and response. *Subst Abus*. 2014; 35(3):217–21. <https://doi.org/10.1080/08897077.2014.930372> PMID: 24911031
196. Saitz R. International statement recommending against the use of terminology that can stigmatize people. *J Addict Med*. 2016; 10(1):1–2. <https://doi.org/10.1097/ADM.0000000000000178> PMID: 26588846
197. Wahl OF. Media madness: public images of mental illness. New Brunswick: Rutgers University Press; 1995.
198. Washington EL. Female socialization: how daughters affect their legislator fathers. *Am Econ Rev*. 2008; 98(1):311–32. <https://doi.org/10.1257/aer.98.1.311>
199. Chattopadhyay R, Duflo E. Women as policy makers: evidence from a randomized policy experiment in India. *Econometrica*. 2004; 72(5):1409–43. <https://doi.org/10.1111/j.1468-0262.2004.00539.x>
200. Moore S, Wolfe SM, Lindes D, Douglas CE. Epidemiology of failed tobacco control legislation. *JAMA*. 1994; 272(15):1171–5. [10.1001/jama.1994.03520150039034](https://doi.org/10.1001/jama.1994.03520150039034) PMID: 7933346