# We Can't Go Cold Turkey: Why Suppressing Drug Markets Endangers Society

*Nick Werle and Ernesto Zedillo*

## I. Introduction

By now, much of the public and many of its policymakers understand the U.S. opioid epidemic through a single narrative: The problem started as one of prescription painkiller abuse, but users switched to heroin after pills become somewhat harder to get, and this black-market supply was quickly tainted by fentanyl and other highly potent, synthetic opioids. This narrative is powerful, because it also describes both a typical drug user's progression from pills to heroin to deadly fentanyl-laced injections. But it omits a key accelerant that transformed this wave of addiction into an inferno of death, disease, and personal destruction: criminalized suppression of drug use. At each stage of the crisis, policymakers have sought to extinguish the problem of opioid abuse by directing law enforcement, regulatory agencies, and private parties to try cutting off the supplies of drugs and deterring individuals from using them. These suppressive strategies have produced unintended consequences that made the crisis substantially more harmful by pushing dependent users to engage in riskier behavior that is more likely to transmit diseases and lead to overdoses.

This essay argues that policies aimed at suppressing drug use exacerbate the nation's opioid problem. It neither endorses drug use nor advocates legalizing the consumption and sale of all substances in all circumstances. Instead, it contends that trying to suppress drug markets is the wrong goal, and in the midst of an addiction crisis it can be deadly. There is no single, correct drug policy; the right approach depends crucially on the substance at issue, the patterns of use and supply, and the jurisdiction's culture, institutions, and material resources. Decriminalization is no panacea for a nation's drug problems. Nevertheless, either *de jure* or *de facto* decriminalization of personal drug possession is a necessary condition for mitigating this crisis. The United States must shift its policies away from addressing drug use as a criminal justice issue and employ a public-health approach to managing substance abuse. While some U.S. jurisdictions have adopted harm reduction strategies to deal with people

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who use drugs, these demand-side interventions will be insufficient on their own to stop this crisis. As the Global Commission on Drug Policy has emphasized,[1] policymakers must also address the harder, supply-side problems — by expanding lawful access to opioids, with the twin objectives of undermining the black market and reducing the harm that existing opioid use poses to dependent users and their communities.

Suppressive policies intended to address opioid abuse will likely exacerbate the crisis of overdose deaths. State governments are rushing to restrict the supply of opioid painkillers by implementing prescription drug monitoring programs (PDMPs) and tightening regulations on medical practice. Over-prescription helped trigger the addiction epidemic, so these crackdowns may appear overdue. But the timing is wrong. Decades of opioid abuse have changed the background conditions against which these policies will operate. Action in the 1990s and early 2000s to prevent the pharmaceutical industry, unscrupulous healthcare providers, and misinformed doctors from flooding communities with painkillers might have made today's crisis less acute. But today, there are many chronic opioid users unlikely to stop consuming when painkillers become scarce. With black-market heroin increasingly tainted with fentanyl, and without widespread access to medication-assisted treatment, policies that restrict the supply of genuine pharmaceuticals will push people toward the more dangerous behavior of injecting black-market powders. Thus, well-intended policies may increase fatal overdoses and blood-borne disease transmission, just as the introduction of abuse-deterrent pills increased HIV and hepatitis C infections by pushing users to inject painkillers. The point is not that painkiller diversion and prescription-drug abuse are desirable, but rather that policies ought not push existing users to start injecting fentanyl-laced heroin by making safer alternatives unavailable. Absent an accessible and safe supply of opioids for addiction maintenance and treatment, these suppressive policies will likely divert dependent demand to street drugs and worsen the crisis.

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This essay pragmatically critiques suppressive drug laws, arguing that criminalization is a counterproductive response to opioid abuse. We start from the premise that opioid use disorder is a chronic, relapsing medical condition, not a moral failing.[2] Thus, people suffering from drug addiction deserve treatment and social support, not punishment. Some criminalization advocates recognize that opioid use disorder is a disease, but support criminalization of drug markets in the misguided belief that this will reduce the number of people who have this illness. In this essay we show that in fact criminalized suppression does little to reduce the incidence of opioid use disorder, and surely increases the harm — including the risk of fatality — for people who use drugs. Other advocates of criminalization view drug use primarily through a moral lens, and believe that conviction is appropriate to punish degeneracy. Combatting this idea and its consequent stigma is important, not least because they contribute to the social exclusion of people who use drugs that amplifies substance abuse's negative effects. But refuting this punitive view is beyond our scope.

Racism is another powerful motivation, conscious or not, to criminalize people who use drugs. Many people have powerfully explained how American drug laws reflect and feed racial anxieties. Criminal drug-control laws have contributed to immense racial disparities in the U.S. prison population, and so racial justice is an important reason to abandon these policies. The current crisis has been understood in starkly racialized terms, creating a popular understanding that the opioid epidemic primarily afflicts rural, white people, even though the overdose death toll is more multiracial and more urban than generally understood.[3] The narrative that today's heroin users are largely white and that heroin suppliers are largely black and Latino has contributed to the public's greater willingness to address opioid use less punitively, even as politicians have advocated for more suppressive supply-side policies.[4] Nevertheless, drug prohibition's racist origins and the suppressive framework's disparate racial effects are beyond the essay's scope.

Finally, this essay does not address many of the ways in which criminalization and incarceration harms


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individuals, their families, and communities. Conviction and incarceration in any circumstance directly infringes an individual's liberty, presents numerous collateral consequences for that person, and harms others in ways that radiate through families and communities. These impediments to human flourishing are crucially important to criminal justice reform, both in general and specifically with respect to reforming suppressive drug laws. But since this essay focuses on why suppressive policies have exacerbated the opioid epidemic, we neglect many issues pertinent to a broader critique of the U.S. criminal justice system.

This essay proceeds in three parts. Section II describes how the U.S. law has responded to the problem of drug abuse by suppressing non-medical use and illicit supply chains. We also discuss criminalized suppression's historical roots and contrast it to harm reduction. Section III analyzes criminalized suppression's economic logic and consequences. We discuss how the rise of fentanyl is a predictable consequence of suppressive supply-side policies and how deterrence has exacerbated the human costs of opioid addiction. We also explain why state governments are wrong to restrict the supply of prescription opioids by creating mandatory PDMPs and other suppressive measures without first radically expanding regulated access to opioids for maintenance treatment. Finally, section IV proposes reforms that reject criminalized suppression and discusses other countries' pragmatic responses to drug abuse. We argue that decriminalizing drug possession is a necessary condition for mitigating this epidemic and that the United States must expand access to medication-assisted treatment so as to provide an accessible, regulated supply of opioids to dependent users.

## II. Criminalized Suppression: The Legal Structure of Prohibition

American drug laws reflect a policy framework oriented toward suppressing unauthorized drug production and consumption, largely through the enforcement of criminal laws. We describe this framework as "criminalized suppression" of drug markets, an approach that takes rates of non-medical drug consumption and interdiction of illicit drugs as primary indicators. This section describes criminalized suppression's historical origins in the period of alcohol Prohibition and how it shapes opioid regulation and addiction treatment today.

### *A. Government Suppression of "Non-Medical" Opioid Consumption*

The United States regulates opioids so as to simultaneously suppress and promote their use. On the one hand, the law employs harsh criminal and regulatory sanctions to suppress unauthorized consumption. But on the other hand, legally supplying opioids is an immensely profitable, legal business: Pharmaceutical companies may aggressively promote opioid use for the medically supervised treatment of pain, and DEA-licensed healthcare providers can prescribe opioid painkillers to treat self-reported neuromuscular and autoimmune pain, even absent clinical trials proving that opioids are safe and effective for those indications. True, the law bans nearly all access to some substances, such as heroin. But licensed health care providers may prescribe numerous chemically similar opioids for pain management. Even if they prefer specific substances, dependent users are generally willing to substitute other opioids based on availability, potency, and price. The black market's size and accessibility depends not only on law enforcement action but also on the extent of legal access, because consumer demand shapes drug-trafficking networks, just as consumer demand in other sectors induces suppliers to bring products to market.

Likewise, during the Prohibition era, alcohol remained legal for specific purposes and in certain preparations. Thus, the law suppressed the alcohol trade rather than prohibiting it outright. The Volstead Act, which regulated alcohol under Prohibition, permitted people to consume "sacramental" wine and to store pre-Prohibition alcohol in their homes.[5] People could also obtain liquor under a doctor's prescription.[6] These rules stratified Prohibition's effects by class. The wealthy could still purchase legal, high-quality liquor through compliant doctors and pharmacies. But those unable to pay the extortionate prices to access genuine, "medical" liquor were relegated to buying trafficked liquor and often-adulterated spirits produced in black-market distilleries.[7] The Volstead Act permitted sale of so-called industrial alcohols, which were required to incorporate poisons and distasteful additives so as to deter drinkers. But the criminal organizations and independent distillers that emerged to satisfy the pent-up demand fortified their brews with industrial alcohol to boost profitability. As a result, the poor ended up consuming these poisons to devastating effect.

Federal law has long distinguished between opioid prescriptions intended to treat addiction through maintenance therapy and those intended to numb pain. This distinction stretches at least to the 1914 Harrison Narcotics Act, which was the first federal law to prohibit non-medical opioid use, and its subsequent amendments. The Treasury Department, charged with enforcement, promulgated regulations excluding maintenance as a form of legitimate medi-


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cal practice.[8] Doctors could only administer opioids to treat addiction if they rapidly weaned patients to sobriety, a process known as detoxification. The Supreme Court subsequently adopted this view: *Webb v. U.S.* presented the question of whether the Harrison Act's exception for medical opioid administration applied where a physician prescribes "morphine to an habitual user thereof, the order not being issued by him in the course of professional treatment in the attempted cure of the habit, but being issued for the purpose of providing the user with morphine sufficient to keep him comfortable by maintaining his customary use."[9] The Court held 5–4 that maintenance prescriptions were non-medical and thus prohibited: "[T]o call such an order for the use of morphine a physician's prescription would be so plain a perversion of meaning that no discussion of the subject is required."[10]

Today, opioid agonist treatment (OAT) for addiction maintenance is the gold standard for treating opioid use disorder. As a chronic, relapsing mental health condition, opioid use disorder is not susceptible to a cure, *per se*. But evidence-based treatments employing OAT can help patients stabilize their lives, manage their addictions, reintegrate into society, and reduce the harmful consequences of drug use.[11] Maintenance therapy has been shown to be more clinically effective and more cost effective than detoxification.[12] Abstinence-based treatments are common in the United States, where they often follow the model for alcohol abuse treatment, with the goal of lifetime abstinence, but there is little evidence of clinical efficacy.[13] Abstinence-based treatment can increase mortality risk: While heroin withdrawal itself is rarely life-threatening, putting people with opioid use disorder into withdrawal poses a high risk of overdose, because a period of abstinence leads to reduced tolerance.[14] This risk of overdose explains why abstinence-based treatment approaches for alcoholism are dangerous when applied to people with opioid use disorder: Relapse to alcohol use is rarely fatal, but relapse to fentanyl-laced heroin often kills.

The government has long sought to suppress consumption with a medication that would "cure" opioid addiction outright. But evidence shows that this goal can be deadly, because using medication to keep someone abstinent further raises overdose risk. Many drug courts and treatment programs now rely on naltrexone, which is sold under the brand name Vivitrol as a wonder drug for stopping opioid use. Naltrexone is an opiate antagonist that triggers immediate withdrawal and blocks opioids' pharmacological effects. But this abstinence is costly: Overdoses are more common following cessation of naltrexone treatment than among either untreated heroin users or maintenance patients.[15] Nevertheless, Vivitrol is now the "go-to option" in many of Ohio's drug courts: The state paid more than $38 million to provide 30,594 doses to Medicaid-eligible people in 2016, up from 100 doses in 2012.[16]

Methadone's legal status illustrates the focus on suppression rather than user safety or public health. The FDA first approved methadone as an analgesic in 1947, but since the 1970s it has been used primarily for OAT. Methadone is a synthetic opioid that produces longer-lasting, less intense intoxication than heroin, permitting people with opioid dependence to achieve a stable, high-functioning state without withdrawal symptoms or cravings. It has been proven to reduce illicit opioid use[17] and its harmful consequences, including mortality, crime, overdose, and HIV.[18] It is also cost-effective, despite heavy regulation.[19]

Still, federal law permits doctors to prescribe methadone for pain more easily than for maintenance. When used for pain relief, DEA-licensed doctors may prescribe methadone without any more restrictions than would apply to another Schedule II drug, such as OxyContin.[20] In contrast, there are extensive federal regulations governing methadone maintenance. Under federal law, all methadone maintenance treatments must occur in a federally regulated opioid treatment program. Specially licensed practitioners must provide the treatments, and the law prohibits prohibits doctors from writing a methadone prescription to be filled at a pharmacy, like they would for an opioid painkiller.[21] Methadone for maintenance generally must be dispensed and immediately consumed, requiring patients to visit clinics daily.[22] Opioid treatment programs must randomly screen patients for illicit drugs.[23] And clinics must provide a host of additional services to patients, adding to the cost and inconvenience of methadone maintenance.[24] State laws may impose other requirements,[25] and local zoning laws or community opposition complicates opening new clinics. Methadone patients must organize their lives around clinic visits, sometimes traveling several hours daily. These obstacles interfere with employment prospects and hinder social reintegration.

Other forms of opioid maintenance are also restricted by law. Doctors seeking to prescribe buprenorphine must receive special training and certifications, and federal law limits the number of patients they may treat at any time.[26] Yet no such prescribing limits exist for opioid painkillers, and pharmaceutical companies can even monitor prescribing rates and offer perks to the doctors selling the most pills.[27] Federal law requires a "legitimate medical purpose" for opioid prescriptions, and it expressly prohibits doctors from prescribing opioid painkillers for the


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purpose of addiction maintenance, except under the regulations specifically applicable to buprenorphine and methadone.[28] This creates an artificial shortage of buprenorphine, particularly in rural areas far from a methadone clinic where there are few doctors able to prescribe buprenorphine but high demand for treatment. Even in large cities, the regulations create an artificial scarcity for buprenorphine treatment spots, encouraging physicians to charge premium prices for access, sometimes refusing to accept insurance.[29] As a result, access to buprenorphine — much less disruptive to personal lives and less stigmatized than methadone — is highly stratified by class and race.[30] State Medicaid rules may also require buprenorphine patients to attend time-consuming group counseling sessions, conditions that may be unduly burdensome for people with poor access to transportation or who are trying to maintain employment on often-inflexible terms. Interviews with patients and providers suggest that these requirements can function as barriers to treatment, encouraging patients to self-medicate with buprenorphine purchased from the black market.

Demand for opioid maintenance dramatically outstrips the artificially constrained supply. In rural areas, methadone clinics can be distant and doctors capable of taking on more buprenorphine patients rare.[31] In urban areas, zoning regulations and inadequate funding also constricts supply. Thus, patients seeking maintenance treatment can face waiting lists lasting a year or longer, during which time they face a ten-fold higher risk of mortality than people immediately taken on.[32] Skeptics have cited black markets and diversion as reasons to maintain these restrictions, but with waiting lists that long, diversion should be seen as a symptom of supply shortages, not evidence that tight regulations are necessary to prevent abuse.

### *B. The role of criminalization in suppressing opioid use*

We describe this framework as *criminalized* suppression, because criminal law and policing are the central means of enforcing the legal prohibition on illicit drug consumption and supply. Typically, production, transport, sale, and possession of illicit drugs are criminal offenses under both state and federal law. While the Supreme Court has declared it unconstitutional to enact a "status crime" of being addicted to drugs,[33] states can achieve the same result in practice, by criminalizing the incidences of drug addiction, such as consumption, the possession of drug paraphernalia, or the knowing keeping of premises for drug-related purposes.

Even where policymakers have introduced drug courts and other diversion programs, primary authority remains vested in the police and judicial system, rather than public health authorities. Drug courts generally retain the threat of incarceration for non-compliance. This structure is a poor match for managing a chronic, relapsing condition, and so incarceration remains common. Judges often make treatment decisions, and without enforceable drug court standards, training in addiction medicine is scarce. Finally, many drug courts provide only abstinence-based treatments to participants. In one 2013 study, only 47% of U.S. drug courts provided OAT, and only 26% permitted methadone maintenance.[34]

### *C. Harm reduction: An alternative framework*

Many European countries have responded to heroin crises of their own by shifting from criminalized suppression to harm reduction. Harm reduction is policy framework less concerned with the *quantity* of drugs consumed than with the *social and individual harms* wrought by drug production, sale, consumption, and government policies. Rather than trying to deter people from using drugs with criminal sanctions, harm reduction aims to shift users into patterns of use that are less dangerous and less disruptive to society. A suppressive framework, focused solely on reducing consumption, threatens to withdraw social services from people with addiction to make drug use more costly and withhold resources from people deemed undeserving. In contrast, harm reduction policies steer people with problematic drug use toward tailored services, such as safe injection facilities, low-threshold methadone treatment, or supportive housing. The goal is to help stabilize their lives, improve their health, and reintegrate them into society, but not necessarily to get them to stop using immediately. Crucially, harm reduction services do not require continuous abstinence from illicit drug use as a condition of eligibility.

Adopting a harm reduction approach does not mean condoning drug use. Drug possession is still illegal in jurisdictions with comprehensive harm reduction policies, such as Switzerland and Portugal, as local officials explain early and often to observers. However illicit drug possession for personal use rarely leads to criminal charges. Instead, these societies have created a set of institutions that treat substance use as a medical and social issue. Police build trust more effectively, because drug users need not fear incarceration. These countries assign primary responsibility for opioid abuse to public health authorities, who evaluate interventions on the basis of overdose deaths and disease transmission rates. They also administer low-threshold OAT, which provides safe, low-cost access to opioids for maintenance purposes. These governments


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reason that the state can control the black market only by undercutting it with a safer, cheaper, and more reliable supply than traffickers provide. Addiction treatment providers can help people achieve abstinence if they desire, but they define treatment success in terms of health and social inclusion, rather than urinalysis.

## III. The Economic Consequences of Criminalized Suppression

A century spent trying to eradicate illicit drug use has confirmed that consumer demand is the most powerful force shaping drug markets. Where there is an existing stock of habitual users, no degree of suppression consistent with a democratic society can eradicate supply. Suppressive policies change, rather than eliminate, drug markets, altering the prices paid, the suppliers who profit, and the content of substances ingested. Prohibition increases profitability, by inserting a large risk premium into drug prices. Prohibition also directs drug-market revenues to transnational criminal organizations, financing violence and corruption in consumer, transit, and producer countries. Criminalization magnifies the risks users face, by empowering criminal suppliers who predictably cut drugs with toxic substances, and by stripping users' access to medical care, social support, and economic resources.

This section analyzes the economic implications of criminalized suppression. First, we show how criminalized suppression predictably causes the illicit drug supply to become more dangerous, because black-market producers and smugglers have an economic incentive to use highly potent additives. This "iron law of prohibition" contributed both to today's fatal opioid overdose crisis and to the epidemic of poisonings during alcohol Prohibition. Second, we analyze criminalized suppression's economic logic, which seeks to reduce demand by using the threat of punishment or personal harm to deter people from using drugs. This framework has been used to justify government policies that make drug use more dangerous to individuals and to society, even though it relies crucially on the false assumption that the decision to use drugs is rational, and thus amenable to deterrence. Finally, we suggest an alternative mode of analyzing drug markets during an addiction epidemic that considers suppressive policies' implications for already-dependent users and people initiating drug use.

### *A. Supply-side suppression makes the black market more dangerous*

Opioid overdoses are now the leading cause of death in much of the United States. Many of the deaths are due to fentanyl, which has adulterated the black-market drug supply. This development reflects the economic incentives that criminalized suppression creates for drug suppliers. The "iron law of prohibition" describes the tendency for aggressive supply-side policing to lead drug supplies to become dominated by increasingly potent and toxic additives. Alcohol Prohibition triggered the iron law, poisoning scores who drank spirits adulterated with additives that were both toxic and intoxicating. Today, similar economic forces help explain why fentanyl has become so dominant in U.S. drug markets, even though its dangers are widely known.

Alcohol Prohibition did far more to change *what* Americans drank than *how much*. During the three years after the Volstead Act took effect, consumption dropped to almost 30% of its pre-Prohibition level.[35] But instead of making alcoholic beverages unavailable, the Volstead Act pushed production, transport, sale, and consumption of alcohol underground. Organized criminal groups, infamously including the Mafia, took over illicit alcohol markets, which proved to be enormously profitable. By the late 1920s, after the black-market industry had developed, per capita alcohol consumption rebounded to 60–70% of its pre-Prohibition value.[36]

Even though per-capita alcohol consumption decreased modestly under the Volstead Act, people drank far more potent brews. The Act's consequences validate the Iron Law of Prohibition: "The more intense the law enforcement, the more potent the drugs will become."[37] This follows from clear economic incentives for black market producers, smugglers, and dealers to increase their products' potency:

> [C]oncentrated, potent drugs are more efficiently smuggled, transported, and sold and are easier for the consumer to conceal, transport, and consume without detection. Another advantage of potent drugs for the seller, but a disadvantage for the buyer, is that potent drugs can more easily be "cut" with other chemicals that resemble the real thing. Often these dilutants are poisons.[38]

Market data bear out that Prohibition's greatest effect on consumption was to cause hard liquor and wine to replace beer as Americans' drinks of choice. Per capita consumption of beer decreased about 70% under Prohibition, but people drank 65% more wine and 10% more liquor, compared to the period from 1911–1914.[39] Some estimate that the potency of alcohol products increased by more than 150% during Prohibition, compared to the periods before and after.[40] This dynamic follows from the cost structure of illicit drug trafficking: Actual production and refining costs are


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often insignificant compared to the expenses involved in transport, smuggling, and distribution, so cutting a product's bulk by boosting its potency is a boon to profitability. Historical alcohol prices reflect this cost structure: While beer prices increased more than 700% from pre-Prohibition prices, liquor prices only increased about 270%.[41] Expenditures on distilled spirits increased from 40% of total pre-Prohibition alcohol spending to almost 90% during Prohibition.[42]

For those who kept drinking, Prohibition made alcohol more dangerous. Almost immediately after Prohibition began, methyl alcohol, which cost about one-eighth of drinkable ethyl alcohol,[43] appeared in black-market alcohol. Bootleggers would stretch their grain alcohol by adding homemade "wood alcohol" or an industrial alcohol after attempting to distill out the poisonous components.[44] This added a long-lasting, powerful intoxication, but distillation was only occasionally successful.[45] Wood alcohol blindness quickly reached epidemic proportions.[46] Poisonings were common and came in waves, when tainted batches hit the streets, just as fatal fentanyl overdoses do today. The scale was comparable to today's crisis: In 1926, industrial alcohol sickened or blinded 1,200 people in New York City alone; another 400 died.[47] In the South, a potent concoction known as "Jake ginger" was legally sold by prescription for stomach ills but also adulterated and strengthened by bootleggers.[48] Even small quantities of Jake caused nerve damage and permanent paralysis. It produced an "epidemic of poisonings," and ultimately, "public health officials estimated the number of Jake victims at fifty to sixty thousand."[49]

The iron law also drives today's overdose epidemic. Much the death is due to fentanyl, which has pervaded the black market since 2013. Fentanyl-related overdoses killed more than 20,000 people in 2016, up more than 540% in three years.[50] Some users buy fentanyl intentionally, because fentanyl is ultra-fast acting and produces a more intense intoxication than other opioids,[51] either from street dealers or via the "dark web."[52] But fentanyl is also laced into both heroin and counterfeit painkillers. In recent years, the DEA has identified the rising trend of fentanyl-laced, counterfeit pharmaceuticals as particularly dangerous, because it expands the population of at-risk users.[53]

Fentanyl's rise was not an unfortunate coincidence; it was a predictable consequence of the supply-side incentives created by suppressive government policies. Fentanyl is cheaper to produce than heroin, because it does not require labor-intensive cultivation and harvesting of opium poppies. But more importantly, fentanyl is cheaper to traffic: Its lethal dose is just 2 milligrams.[54] Suppliers can thus boost profitability by lacing heroin with fentanyl, since they smuggling less bulk produces the same number of doses. The government has sought to fortify the southern border, responding to Mexican cartels trafficking heroin.[55] But fentanyl has traditionally taken different smuggling routes than heroin. For a while, much of the illicit fentanyl supply entered the United States in illegal shipments from China.[56] But consistent with the iron law, heightened interdiction rates increased the incentive for cartels to substitute fentanyl for heroin. Today, Mexican cartels reportedly synthesize fentanyl themselves from Chinese precursors.[57]

Just as alcohol Prohibition barely reduced drinking and produced a violent black market, attacking today's drug traffickers is fruitless so long as the U.S. opioid market is so lucrative. Production volumes of illicit drugs are so high, and drug trafficking is so profitable, that interdiction cannot raise prices enough to induce lower consumption. Instead, supply-side suppression has encouraged traffickers to smuggle cheaper and more potent opioids.

Prohibition in the face of persistent demand generates a black market with artificially high prices and grants criminal organizations monopoly power over that lucrative commerce. The economies of scale achievable in drug production, smuggling, corruption, violence, and money laundering mean that organized crime will tend to fight for and ultimately establish dominant positions in their markets. In regions home to illicit agriculture, cartels can act as monopsonies, keeping opium prices low and forcing subsistence farmers to absorb the costs of crop eradication.[58] The bulk of drugs' black-market value comes from trafficking them across international borders, so Mexico's worst violence has been in the north, with cartels fighting for control of land crossings to the United States. At the distribution level, a single cartel is dominant in


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many U.S. markets, possibly explaining why dealing-related violence has remained low.[59]

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*B. Deterrence and the economic logic of criminalized suppression*

An oversupply of pharmaceutical opioids may have triggered this addiction epidemic, but mitigating it requires managing Americans' demand for illicit opioids. Traditionally, demand reduction takes several forms. First, *prevention* reduces the number of people who begin using opioids, a crucial intervention in the midst of an addiction epidemic. Second, *treatment* cuts demand from current users, both by reducing their consumption and by legally obtaining opioids for maintenance. And finally, *deterrence* convinces people not to use drugs, by increasing the risks of drug use and threats of legal sanctions. American drug policy has long relied heavily on deterring drug use and underinvested in addiction treatment. But that faith in deterrence is misplaced, because it relies on a flawed model of human behavior. The economic theory justifying deterrence assumes that drug consumption is a rational decision, in which potential users weigh the costs and benefits of getting high. Despite criticism, this theory continues to motivate government policies that exacerbate the health risks and social isolation faced by people who use drugs, entrenching addiction's etiology.

Deterring future consumption is the central rationale for punishing drug users. The modern theoretical justification for deterrence is rooted in the microeconomic analysis of addiction, which models drug use as a rational choice.[61] Microeconomics describes someone as acting rationally when she takes only those actions for which her expected marginal benefit exceeds her expected marginal costs; that is, if she expects the choice to produce more pleasure than pain in the future. This model's conclusion is that someone could rationally use addictive drugs because the pleasure of today's euphoria outweighs the present value of addiction's future pain and the risk of punishment for acting illegally. Consequently, policymakers should be able to deter people from using drugs by increasing the expected future costs of addiction. These expected costs may come from the drug's purchase price, the drug's degradation of health and social capital, or the possibility of prosecution and punishment for illicit consumption. The theory also concludes that strong addictions must end "cold turkey," arguing that anything but immediate, full withdrawal is irrational, and thus inappropriate, for treating heroin addiction.[62] Subsequent economic theories have complicated this picture, explaining the decision to use drugs through a model of temptation and self-control,[63] mistake,[64] or time-inconsistent preferences[65]. But these approaches still assume rationality and counsel the same policies: deterring future use by raising the user's expected costs, suppressing drug supplies, and educating people about drugs' harmful effects.

The rationalist view of addiction has been subject to extensive critique, but its intuitive theory of deterrence still animates policy decisions. Deterrence strategy usually takes the form of trying to make prosecution more likely and punishments more severe. This strategy reached its apogee during the Reagan era, when Congress imposed draconian mandatory minimum sentences for trafficking and production offenses, criminalized simple possession under federal law, and introduced several enhancements that lengthened incarceration for repeat drug offenders and for use of a firearm in connection with a drug crime.

The United States is unique among developed democracies in the extent to which it incarcerates people with substance use disorders, often following conviction for minor drug distribution or property offenses, even though incarceration is known to dramatically increase rates of overdose death. While incarceration generally exacerbates the social, psychological, and economic reasons why someone ends up in prison, incarceration poses extreme risks to people with histories of injection drug use. Few U.S. detention facilities offer OAT, so incarceration usually produces withdrawal and a dramatic fall in opioid tolerance. Thus, formerly-incarcerated people with histories of opioid addiction face an elevated risk of fatal overdose in the weeks following release.[66]

Trying to deter drug use by raising its risks is a common and deadly government strategy. During Prohibition, the federal government tried suppressing illicit drinking by making it riskier, a strategy that predictably led to severe consequences. In 1926, "dry" congressmen demanded that the federal government more aggressively deter bootleggers from transforming industrial alcohols into salable spirits. In response, Secretary of the Treasury Andrew Mellon approved federal chemists' "Formula No. 5," which doubled the methyl alcohol concentration in denaturing agents.[67] The strategy worked, in the sense that it made safe alcohol much harder to obtain. But in so doing, it


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caused needless death and injury, since people continued drinking anyway.[68]

Opponents of harm-reduction policies often invoke similar logic, arguing that access to syringe exchanges, safe injection facilities, housing programs, and low-threshold OAT will encourage drug use, because it mitigates the risks of disease, homelessness, and poor health that supposedly dissuade people from using opioids. For instance, politicians have argued that syringe exchange programs encourage illicit drug use, even though public health research has shown that syringe exchanges do not encourage injection.[69] In fact, syringe exchanges are effective conduits to substance abuse treatment.[70]

Indiana exemplifies how misguided deterrence logic has increased this epidemic's toll. Scott County in southern Indiana has seen a severe HIV outbreak since 2015. According to CDC analysis, the outbreak emerged from abuse of the painkiller Opana, which gained popularity after access to OxyContin became more difficult.[71] In 2012, Opana's manufacturers had released an abuse-deterrent formulation designed to prevent users from crushing and snorting pills. But once this reformulation arrived in Scott County, addicts began injecting.[72] Indiana law is hostile to harm reduction efforts, and possession of syringes with intent to use them for nonmedical purposes is a felony.[73] It is illegal to purchase syringes without a prescription, and a burdensome exception for syringe exchanges was only added in 2015.[74] But the resulting syringe shortage didn't deter injection. It just led people to share needles, predictably triggering an HIV epidemic. In 2015, then-Governor Mike Pence permitted one syringe exchange to open in Scott County, and a few other counties eventually followed suit. But local politicians have resisted these harm reduction measures on moral and deterrence grounds. Two counties closed their syringe exchanges in late 2017 in the face of ongoing an HIV epidemic. The Indiana Attorney General recently praised these closures, falsely asserting that syringe exchanges encourage drug use: "Lawrence County is wise to back off the practice of distributing free needles to heroin addicts and other opioid abusers. Handing out clean needles encourages substance abusers to shoot up and, in many cases, shoot up more often."[75]

Misplaced deterrence theories also power resistance to harm reduction services proven to reduce overdose deaths. Other countries, including Canada, have used safe injection facilities (SIFs) to reduce overdoses, disease transmission, and public nuisances stemming from opioid use.[76] But the Department of Justice recently invoked the threat of federal criminal prosecution to prevent state and local officials from setting up the nation's first legally sanctioned SIF, arguing that it would encourage drug use.[77] Similar rhetoric slowed naloxone distribution. Opponents claimed that reducing overdose risk through naloxone access would encourage injection drug use and would discourage entry to abstinence-based treatments. However, numerous studies have disproven these assertions applying deterrence theory to naloxone access.[78]

These examples demonstrate how the suppressive logic of deterrence has exacerbated the health consequences of the opioid epidemic by obstructing access to harm reduction services. When people who use drugs associate state services with only repression and punishment, a deficit of trust develops, the neediest people will be unlikely to seek out public services. So long as criminalized suppression remains the framework within which drug-dependent people interact with the state, it will unduly hamper treatment access and social service provision.

*C. Suppressing prescription drugs without expanding access to opioid maintenance treatment will exacerbate the overdose crisis*

State governments are responding to the overdose epidemic suppressing the painkiller supply and making it



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"abuse-resistant." But these are the wrong policies at the wrong time. With so many people already addicted and access to opioid maintenance treatment an inaccessible patchwork, making it harder for dependent users to access pharmaceutical opioids will push them to inject fentanyl-laced, black-market powders and ingest counterfeit pills. Prescription painkiller abuse is serious, but pushing users into the black market magnifies the epidemic's harmful consequences, including overdoses. Policymakers should respond to the opioid problem by expanding access to OAT, rather than by pushing people toward riskier behavior.

The misguided effort to suppress painkiller abuse by introducing abuse-deterrent formulations (ADFs) is a cautionary tale. Starting around 2012, pharmaceutical companies reformulated several blockbuster opioid pills, including OxyContin and Opana, to make them harder to crush and sniff. Manufacturers had two motivations. Public health research showed that most heroin users initiated opioid use by taking legally dispensed pills, crushing and sniffing the pills before starting to inject.[79] ADFs were intended to make painkiller abuse more difficult and thus prevent painkiller users from developing destructive addictions. But financial incentives may have dominated: Manufacturers faced impending patent expirations, which would have opened their blockbuster painkillers to generic competition. They responded by introducing newly patented ADFs and then lobbying the FDA to take pills without these "safety" features off the market, preventing non-ADF generics from competing with brand-name painkillers.[80] At the time, no generics on the market had ADFs. Several years later, economists and public health officials have confirmed that the ADFs backfired and blame them for accelerating users' transitions from pills to powders.[81] Unable to snort the pills, many users turned to injecting them, increasing risks of overdose and disease transmission. Others turned to black-market drugs, buying fentanyl-laced heroin or counterfeit pills.[82] Despite the evidence, ADFs' intuitive appeal has attracted federal officials eager to be seen responding to the addiction crisis. Expanding the transition to ADFs is now a centerpiece of the FDA's national response.[83]

State governments have taken the lead in responding to the crisis, but many states' strategies have emphasized restricting prescription opioid access with Prescription Drug Monitoring Programs (PDMPs) and physician discipline, instead of expanding OAT access. Forty-nine states now operate PDMPs, statewide databases that record patients' prescription histories for controlled substances.[84] PDMPs permit providers to identify patients who are "doctor shopping" to try to obtain multiple, simultaneous prescriptions for their own use or to sell to others. State health departments, and law enforcement personnel, can also use some states' PDMPs to identify anomalous behavior and then target providers or patients for enforcement actions.[85] PDMPs have been shown to reduce the volume of opioids prescribed by more than 30%,[86] particularly in the 32 states that mandate provider access prior to prescribing opioid analgesics.[87]

The states have taken other measures to suppress nonmedical use of pharmaceutical opioids and restrict the diversion of pills to dealers. Some legislatures and medical boards have limited the number of pills and refills doctors may prescribe at a time. Attorneys general, medical licensing boards, criminal prosecutors, and health departments have sought to deter physicians and pharmacists from prescribing opioids to people with addictions. The federal government, state attorneys general, and private litigants have also sued pharmaceutical manufacturers and distributors for misbranding and negligent distribution practices.

Are these policies helping? PDMPs and these other measures have been touted for reducing the number of opioid prescriptions.[88] But this begs the question of whether reducing prescriptions is an unalloyed public health benefit. Restricting the volume of opioids that doctors can prescribe to new pain patients may reduce the rate at which people become addicted. But prescription opioids' reduced accessibility also compels habitual painkiller abusers to switch from genuine pharmaceuticals to using counterfeit pills or black-market heroin. As with the similar shift following ADFs' introduction, harmful consequences should increase. Indeed, empirical work from the past year has validated these concerns. A recent econometric analysis found that adopting PDMPs *increased* by 47%–84% the rate of heroin-involved criminal incidents that police encounter in the counties with highest per capita rates of pre-PDMP prescription opioid consumption.[89] But in lower-consumption counties, PDMP adoption did not significantly change the rate of heroin-involved incidents.[90] Studies of overdose mortality found that PDMP adoption had widely varying effects across states, but one found that implementation of PDMPs was associated with an 11% *increase* in drug overdose mortality.[91] Another study found a slight decrease in mortality overall.[92] These data are consistent with the proposition that reducing access to genuine pharmaceuticals is harmful where unmanaged opioid addiction is prevalent and OAT access is difficult.

In the same vein, states with restrictive cannabis laws have fared worse than those with legal access. Cannabis is a less addictive analgesic than hydrocodone and habitual use is less harmful than habitual


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heroin use, so cannabis could have been a better option for many chronic pain patients and a less harmful substitute for some non-medical opioid use. A nationwide analysis from 1999 to 2010 found that states permitting chronic pain patients to obtain medical cannabis legally had an opioid analgesic overdose mortality rate 25% lower than states without medical cannabis laws.[93] Colorado's experience from 2000–2015 also suggests that legalization of recreational cannabis produced a 6.5% reduction in opioid-related deaths in the following two years.[94] This evidence supports our contention that providing safe, regulated access to "illicit" drugs mitigates the consequences that drugs pose to society.

Counterintuitively, the best response to the opioid epidemic at this juncture may be to *increase,* rather than to suppress, regulated opioids access. We are not arguing that prescription opioid abuse is good. Rather, we contend that with such a large stock of dependent users and without access to low-threshold maintenance treatment, suppressing the supply of genuine pharmaceuticals pushes addicted people to consumer riskier black-market drugs. Therefore, until OAT is widely accessible, further suppression of pharmaceuticals is unwise.

## IV. Toward Public-Health Oriented Regulation of Opioids

In 2016, more than 2.1 million Americans had an opioid use disorder.[95] Those unable to remain abstinent need a regulated and safe means of maintaining their addictions and obtaining treatment. Introducing a safe, reliable, and sufficiently accessible supply of opioids for existing users can erode the demand that supports black markets. Just as important, a regulated supply system can improve individual and public health, because people are less likely to overdose or contract diseases consuming pharmaceutical-grade opioids than injecting substances bought on the street or in an anonymous, online bazaar. This system of supply should be run through a revamped, low-threshold, insurance-funded OAT system. This section discusses why decriminalization of drug possession for personal use is a necessary response to the crisis and describes reforms to the U.S. OAT system that could transform it into an effective way of supplying opioid-dependent people with an accessible and regulated source for addiction maintenance.

### *A. Decriminalization is a necessary but insufficient response to the crisis*

Some U.S. jurisdictions have abandoned the most draconian tactics for suppressing drug consumption. But even where the government relies less on threatened punishment to deter people from using drugs, policies remain tethered to suppression, because most dependent users still lack access to a regulated supply of drugs. States should rapidly reform both their laws and practices so as to shift from a punitive framework to one based on medical treatment, social support, and harm reduction.

Decriminalization policies must be tailored to specific communities. In some areas, *de facto* decriminalization, achieved through law enforcement policies and cooperative relationships with drug treatment providers and community groups, may be sufficient. However, *de jure* decriminalization is better, because it eliminates police officers' power to selectively arrest drug users, thereby fostering greater trust. For instance, Good Samaritan laws that protect people witnessing an opioid overdose from arrest amplify the public-health benefits from equipping police officers with naloxone, because witnesses are more likely to call for help. Even better is the model of cooperation between police and social workers in the Law Enforcement Assisted Diversion (LEAD) model: Social workers, defense attorneys, prosecutors, and police officers work together in case-management teams to stabilize the lives of marginalized drug users. In practice, LEAD operates as *de facto* decriminalization of drug possession, with cooperative rehabilitation replacing outright suppression. By substituting social support for arrest, LEAD has been able to reduce participants' odds of arrest by 58%.[96]

Non-U.S. jurisdictions that have effectively stopped opioid epidemics have shifted primary responsibility to public-health agencies, which tend to respond to relapse with service provision rather than punishment. The difference between American drug courts and the Portugal's commissions for the dissuasion of drug addiction (CDTs) highlight why public health authorities must take the leading role. American drug courts operate on a post-arrest diversion model, with criminal prosecution held in abeyance pending completion of the drug court program. People can avoid a judgment only if they avoid relapsing. The entire process of arrest, booking, detention, and ongoing proceedings is costly and stigmatizing, complicating social and economic reintegration even if someone is "successful." But if the defendant fails the drug court's program, she remains liable to incarceration. Such failure is common, because many drug courts ascribe to an abstinence-based philosophy and either prohibit OAT or permit it only under restrictive conditions.[97] Because substance use disorder is a chronically relapsing condition characterized by compulsive drug use, a model that punishes people for "failure" is itself poorly equipped for success.


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In contrast, the Portuguese public health authorities run the CDT system. If the police encounter someone on the street in possession of drugs for personal use, they give him an administrative summons for attendance at the local CDT. There is no arrest and no criminal record. CDT panels comprise psychiatrists, social workers, and lawyers, working together with a staff to understand the client's needs in a holistic manner. If the CDT determines that his drug use is unproblematic, they may impose a small fine, order community service, or merely dismiss him. But if it finds that he has an addiction or another social problem, it will refer him to appropriate services, chiefly low-threshold OAT. Access to these drugs is much easier than in the United States: Vans circulate throughout Lisbon, dispensing methadone to clients without burdensome rules or drug testing requirements. The CDT operates as a case manager, connecting people with necessary services. People with more severe problems receive more substantial services, and there is no threat of juridical coercion.

Portugal's is a religious and socially conservative society. Portuguese officials stress that drug use remains illegal, but that decriminalization is the necessary condition for their real reform — low-threshold OAT — to work. American commentators advocating drug policy reform often point to Portugal as an example of how "decriminalization" can eliminate drug problems. But that's not how the Portuguese see it. Only by decriminalizing the lives of drug users can the state build the trust necessary to bring them into state care for addiction treatment, social services, and OAT. Portugal's current situation is by no means utopian, and there is still problematic drug use. But the country enacted a self-consciously pragmatic policy response to a severe opioid epidemic at the end of the 1990s, and these measures successfully restrained the crisis and reduced overdose deaths and disease transmission.

The United States should adopt a similar harm reduction strategy. Given the prevalence of high-risk injection drug use, safe injection facilities ought to be opened as soon as possible. SIFs are professionally supervised healthcare facilities that seek to reduce mortality and morbidity by providing high risk drug users with a safe, hygienic place to consume drugs obtained off-premises. While politically contentious, SIFs' public health benefits are well settled. More than 90 SIFs operate legally in other countries, including Switzerland, Germany, Spain, France, Denmark, Norway, Canada, and Australia.[98] Unsanctioned SIFs operate in New York City and elsewhere in the United States, and several cities' public health departments are working toward opening a municipal SIF in 2018, despite the federal government's steadfast opposition.[99] Numerous studies have found that SIFs do not increase injection drug use, drug trafficking, or crime.[100] SIFs do, however, decrease the morbidity and mortality associated with injection drug use, increase uptake of addiction treatment, and reduce the public nuisances associated with drug use, such as discarded syringes and injection in public spaces.[101] SIFs have been remarkable successful in reducing fatal opioid overdoses: In Vancouver, Canada opening a SIF caused fatal opioid overdoses to fall 35% in the surrounding area.[102] In Sydney, Australia, the number of ambulance calls responding to overdoses near a SIF decreased 68% during its operating hours.[103] None of the legally operating SIFs has ever reported a fatal opioid overdose by a someone using its service.[104] In 2011, when the Canadian Supreme Court ordered the Minister of Health to continue licensing Vancouver's experimental SIF, the Court declared its social value to be settled: "[the Vancouver SIF] saves lives. Its benefits have been proven. There has been no discernable negative impact on the public safety and health objectives of Canada during its eight years of operation."[105]

Abstinence-based limits on access to wraparound social services and public benefits should also be removed, because requiring people to be abstinent

Law enforcement agencies cannot address the root causes of substance use disorder, because they lack authority to establish regulated systems of supply and low-threshold OAT. But for those systems to work, law enforcement agencies must be fully engaged partners, policing in ways that reinforce, rather than undermine, the medical care and social reintegration of people who use drugs.


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in order to get access to services does not help people manage addiction. The best-studied context is housing, and the evidence is clear: "[The] traditional abstinence approach was not more effective at reducing rates of substance use."[106] In randomized controlled trials, people provided with housing first, and subject to no abstinence requirements, were "significantly less likely to use or abuse substances when compared to Treatment First clients."[107] Deterrence-based approaches are counterproductive, because relapse does not follow from rational cost-benefit calculations. Stable housing permits people who use drugs to reintegrate into society and better manage chemical dependencies. Stress is a crucial driver of relapse to problematic drug use, and eviction needlessly introduces stress, trauma, and disruption into an already disorganized life. So even if abstinence is the goal, law should not make it a necessary condition receiving social support.

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*B. Public health-oriented regulation of opioids*

How can we design a system that provides an accessible, regulated supply of opioids to people already dependent on the drugs without encouraging others to start using? Other countries, including Switzerland, Portugal, Germany, and the Netherlands have faced epidemics of heroin abuse in the past and reformed their systems for healthcare, policing, and social services to abate the crisis and manage future abuse. Each successful national addiction treatment system has at its core a comprehensive, low-threshold OAT system that provides existing users with an accessible and low-cost source for pharmaceutical grade opioids. Access to maintenance drugs is considered essential, mainstream medical care, and so regulations permit people who have stabilized their conditions to quickly escape the disruptive pattern of daily clinic visits for methadone maintenance by shifting oversight to general practitioners and permitting prescriptions for take-home doses to be filled at local pharmacies. Several jurisdictions have also recognized the value of adding medical-grade heroin as an OAT maintenance option because some patients' conditions are more stable with heroin-assisted treatment (HAT) than with methadone or buprenorphine. Finally, these jurisdictions use far fewer opioids in pain treatment than the United States and prohibit the kinds of financial incentives and marketing practices that led to overreliance on painkillers in the first place.

Low-threshold methadone maintenance is the cornerstone of comprehensive drug treatment. Where methadone and buprenorphine maintenance is available in the United States, the numerous regulatory and practical barriers to access make it a "high-threshold" service. Features of high-threshold treatment include requirements that patients visit specialized and often inaccessible clinics daily for supervised drug administration, inflexible admission criteria, waiting lists, limited-duration treatment, zero-tolerance of illicit drug use, and high prices. In contrast, low-threshold services impose few requirements to access treatment. Patients need not abstain from illicit drugs as a condition of service use, and these programs aim to reduce all documented barriers to service access and minimize requirements for retention.[108] They also aim to destigmatize treatment, so people who use drugs feel welcome, trust the service, and know they will not be discriminated against. Low-threshold services consider relapses to be expected features of the underlying condition, and they respond with additional services rather than discipline. Wraparound services and counseling are usually offered but are not compulsory. Service providers seek to be minimally disruptive to patients' lives, so they do not require patients to travel long distances, using pharmacy distribution, "methadone buses," and take-home doses to eliminate daily clinic visits.

Other countries' pragmatic responses to opioid crises of their own can serve as a model for U.S. policymakers.

In France, methadone maintenance must be initiated in clinics, but a patient may transfer her prescription to a general practitioner after her condition is stabilized. Methadone is free in clinics and pharmacy-dispensed doses are reimbursed through standard prescription coverage. Pharmacies may provide up to a week's doses at a time. Users are not required to register, undergo no testing for illicit drug use, and need not undergo counseling as a condition of treatment.[109] These policies, introduced in 1995, are credited with substantially reducing opioid overdoses, HIV and hepatitis C incidence, and drug-related crime.[110]

In Hong Kong, the Department of Health actively promotes methadone maintenance and makes on-demand methadone treatment very accessible. Opiate-dependent people can generally access methadone maintenance on the same day they present for treatment, following a urine test to verify that they are opioid users. People under 18 are admitted, and parental consent is preferred but not mandatory.[111] The fee for each visit is fixed at HK$1 ($0.13).[112] The clinics oper-


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ate daily and are open before and after work hours, as more than half of maintenance patients are employed.

Methadone's accessibility is key, and mobile service provision has been successful in several cities. In Amsterdam, the government has distributed methadone by bus since the 1970s. These mobile clinics dispense free methadone throughout the city, so patients may attend more easily.[113] Lisbon adopted this model in 2001, and now has several buses that dispense free methadone throughout the greater metropolitan area.[114] One can only imagine how providing such mobile methadone services would increase maintenance treatment access both in the rural areas of the United States, where addiction is rampant and methadone access extremely limited, and in sprawling metropolitan areas.

The U.S. government should also add pharmaceutical-grade heroin to the list of approved drugs for maintenance therapy. Switzerland, Germany, the Netherlands, the United Kingdom, France, Australia, and Canada have all offered heroin-assisted treatment (HAT) in specialized clinics, either as an established or experimental treatment.[115] Studies have shown that incorporating heroin maintenance was more effective than methadone maintenance alone for certain groups of long-term and treatment-resistant drug users and produced no greater incidence of serious adverse effects.[116] Randomized controlled trials in the Netherlands have shown that HAT patients experienced significantly fewer heroin cravings and engaged in less illicit heroin use than methadone maintenance patients.[117] A randomized, controlled trial in Vancouver found that for some patients, using injectable heroin for maintenance was more effective than oral methadone at retaining people in addiction treatment and at reducing illicit drug use and other illegal activity, such as sex work.[118] Interviews in Vancouver showed that HAT permitted people with long-term addictions to stabilize their lives, improve their health, regain employment, and reintegrate into social and political life. But realizing these benefits requires open-ended maintenance treatment, since forced cessation of HAT causes the gains to evaporate.[119] Introducing pharmaceutical-grade heroin as a maintenance therapy option could therefore improve the health of America's existing injection drug users and help extinguish the demand powering illicit markets.

Switzerland shows how government-administered OAT can stabilize an epidemic of drug use and undercut an incumbent black market. Methadone and buprenorphine are available on a low-threshold basis through general practitioners and regular pharmacies. Patients addicted for more than two years who have twice failed other treatment regimens qualify for high-threshold, clinic-based HAT. Swiss health insurance plans must cover all OAT options, providing extremely low-cost and reliable access to a safe, high quality, supply. And since providing these services is not unusually profitable, providers lack structural incentives to expand the market. The absolute number of opioid consumers, including OAT recipients, has stayed consistent since the height of the Swiss opioid epidemic in the early 1990s, indicating that prevention efforts and the regulatory structure governing OAT have kept people from initiating opioid use, despite collapsing heroin prices.[120] The addiction treatment system has largely replaced the black market as a source for accessing opioids. The black market has been structurally stable and largely non-violent during this period, with well entrenched, Albanian criminal organizations dominating the scene.[121] Intelligence suggests that the heroin trade is now minimally profitable. So long as the potency and volume of the heroin market remain stable and residual trafficking activity produces neither violence nor public nuisances, suppressing the illicit heroin market remains a low police priority.

Skeptics may object that expanding the OAT system and lowering access thresholds would risk providing an accessible and socially acceptable means for people to initiate drug use. But the experiences of Switzerland and other countries belay that fear. Low-threshold OAT access does not mean no-threshold access: Providers still test patients' urine to ensure that they are opioid users, because giving methadone to someone without any tolerance is dangerous. A well-regulated OAT system actually reduces the risk of initiation, because it undermines black-market suppliers, who have incentives to promote opioid dependence and so seek out new customers. In the United States, the black market's ubiquity likely explains the troubling increase from in the proportion of people initiating opioid use directly with black-market heroin. A recent study estimated that the proportion of Americans who initiated opioid use with heroin increased from 9% in 2005 to 33% in 2015.[122] This dramatic increase in people starting directly with heroin further suggests that policymakers focused on restricting painkiller access are actually fighting the last war.

Opioids are highly addictive substances, but political economy is as important as chemistry in triggering an addiction epidemic. In better regulated supplies, the goal should providing dependent users with a safe, accessible, and reliable supply of opioids for addiction maintenance without encouraging oversupply and initiation of abuse. Unlike today's alcohol market, no entities should have economic incentives to promote problematic consumption. Given the intrin-


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sic risks of dispensing opioids and the documented success of existing OAT regimens, it makes sense to organize access through the treatment system and to fund the care through medical insurance. Relying on market-based incentives to enlist private-sector providers entails making maintenance treatment sufficiently profitable. But making opioid prescription profitable entails its own substantial risks, made plain in the well-known stories of pharmaceutical industry manipulations and physician profiteering that ignited the epidemic of painkiller addiction.

The pharmaceutical industry's dismal track record in fomenting this epidemic is a cautionary tale. Even some libertarian-minded advocates of drug "legalization" have questioned their stances, in light of the role legal opioids played in triggering addictions.[123] But concluding that prohibition is best follows only from an ideological premise that criminalized prohibition and unregulated legalization are the only available policy alternatives. Prescription painkillers caused such damage because they were aggressively and deceptively marketed in a regulatory environment excessively deferential to industry and focused more on profitability than on health. Many of prescription opioids' dangers stem from the fee-for-service financing models that generally bedevil American healthcare, though the iatrogenic risks of over-testing pale in comparison to those of over-medicating post-surgical and pain management patients. Even more dangerous are laws permitting pharmaceutical manufacturers to supplement physicians' incomes with perks and consulting fees, as Perdue Pharma famously did for doctors that prescribed the most OxyContin. To regulate opioids consistently with public health needs, providers must be compensated on the basis of population health, not services rendered. And prescribers should follow the direction of impartially generated medical evidence, not industry marketing materials.

Neither are addiction treatment providers guaranteed to be public-health regarding. Indeed, this addiction epidemic has spurred a concomitant boom in the treatment market, and private capital is rushing in to exploit profit opportunities. This has financed dramatic consolidation of addiction treatment providers, fueled by billions of dollars in cash from the private equity industry.[124] Since American addiction treatment lacks clear standards of care, profitability, rather than evidence, often determines treatment regimens. This frequently means abstinence and group therapy, rather than OAT. Sometimes, it can also mean compulsory work programs, with sober home residents or drug court participants sent to work without pay in local businesses that have made financial arrangements with "treatment" providers.[125] People seeking addiction treatment for themselves or their loved ones often lack the information necessary to make informed choices, and maintenance therapy's stigma drives people away from evidence-based treatment. As a result, many patients are in expensive facilities but lack access to OAT. The trend has even resulted in privatization of purportedly public institutions, such as facilities for civil commitment of opioid users, which are increasingly run by the private prison industry and too rarely provide high-quality OAT.

Government has an important role, not just as a regulator but as a direct service provider or a link in the supply chain. Models exist for using exclusive government provision of critical supply chain services to prevent profit-maximizing, private entities from oversupplying a habit-forming substance and damaging public health. For instance, the Uruguayan law legalizing recreational cannabis created a state monopoly at the wholesale level. This entity mediates between highly regulated growers and highly regulated retailers, setting prices that both ensure sufficient returns on investment to attract private capital and prevent the industry from expanding and commercializing to a degree that would undermine public health. In an earlier era, the British government successfully addressed the problem of drunkenness in wartime factory towns by nationalizing pubs, which then provided alcohol under conditions dictated by public health concerns rather than profitability.[126] And following Prohibition, some U.S. states retained government monopolies on retail liquor sales. Of course, public control does not eliminate risk of bad regulatory design: One need only consider state-run lotteries to see how public entities can also run amuck.

Widespread public provision of low-threshold maintenance treatment would be an excellent investment. Numerous studies have found that maintenance therapies are cost effective, even as currently provided, because people with OAT-stabilized addictions impose fewer costs on other social programs, law enforcement, and healthcare services.[127] But the current system is unnecessarily expensive and thus crowds out more and better services for people who use drugs. Methadone is an unpatented medicine that is cheap to produce. Many of the costs associated with maintenance treatment are the result of the suppressive regulations that also impede access. Shifting maintenance treatment to a low-threshold model would not just ease access to care, but that it would also make proper addiction medicine more affordable and thus more widely available.

Ultimately, drug policies that govern policing and prescribing cannot solve this crisis on their own. Issues as disparate as employment conditions, pharmaceuti-


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cal misbranding regulations, healthcare finance, housing policy, and sustainable development programs all affect patterns of drug use and supply. Cannabis legalization and implementation of harm reduction responses to the opioid epidemic reflect a growing awareness that eradication of non-medical drug use is a futile objective. Our contribution is to show that suppression is not just fruitless but is actually harmful. Although beset by crisis, the United States has an historic opportunity to break from the policies of criminalized suppression. No two drug crises are the same, just as no two societies are interchangeable. Nevertheless, other countries' experiences demonstrate that a public health approach to drug problems is both more humane and more effective than criminalized suppression.

## Note

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