Foreign Policy at BROOKINGS

HOW SHOULD DRUG POLICY RESPOND TO SURGING SUPPLIES OF DANGEROUS DRUGS?

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Executive summary

The crisis of illegal fentanyl and other synthetic opioids is best understood as a massive expansion in supply, not an epidemic of new drug use. The big expansion in opioid use disorder (OUD) was driven by abuse of prescription opioids (PO) that were produced, distributed, and dispensed by the health care system. This occurred largely legally, beginning in the late 1990s. If the 1980s crack epidemic produced an unusually large number of drug-related homicides, disorder, and flagrant place-based markets per person who became dependent, the PO epidemic was the opposite. However, over time, a subset of those individuals "traded down" to illegal opioid markets, where prices per morphine equivalent dose are lower.

The subsequent conversion of illegal opioid markets from heroin to fentanyl was driven by market forces. High-level suppliers recognized that fentanyl is cheaper per pure kilogram and produces 20 times as many retail doses per unit weight. This radically reduced traffickers' production costs, driving prices down throughout the distribution chain. In some markets, retail opioid purchases today can yield 10 times as many morphine equivalent doses per dollar as in 2013.

This has led to a modest increase in the number of people with OUD, but very big increases in both intensity of use ("habit size") and overdose death rate per person with OUD, because as the drug is cheaper, users can afford to buy it in larger quantities.

Society could respond in many ways. Weak data and the absence of good natural experiments prevent definitive scientific conclusions as to which approach is best, but this paper offers three aids to help readers think systematically about the question:

1. A historical review of opioid epidemics and the evolution of supply.
2. An assessment of drug law enforcement (DLE) that recognizes its greatest successes accrue when it prevents things from happening.
3. A conceptual graph depicting the relationship between drug supply and total harm.

Building on that foundation, seven visions for drug policy are articulated. Three minimize the role of drug law enforcement, passing the baton to treatment, harm reduction, or prescribed safer supply, respectively.

Indeed, drug treatment and some harm reduction programs—notably syringe exchange and naloxone distribution—should be pursued aggressively. But a distressing share of today's high-frequency consumers of illegal opioids will die prematurely even in places like British Columbia, Canada, that lead the world in progressive drug policy.[1] That underscores the need to prevent new potential users from escalating into opioid use disorder and to not let compassionate interventions for the current pool of people with OUD inadvertently squander chances to keep that escalation low.

A fourth vision views DLE and treatment in partnership, not opposition, with the criminal justice system helping to induce people with OUD to seek out and remain in treatment.

Two more visions stress DLE's role in controlling supply, hoping to turn back the clock either by tipping illegal opioid markets back from fentanyl to heroin or by keeping prices (nearly) as high as in the past, despite the continued availability of fentanyl.

The last stresses DLE's potential to reduce the collateral harms created by drug markets and drug suppliers, rather than assigning it a potentially Sisyphean task of suppressing the supply of synthetic drugs that are so cheap for criminals to produce. If the same quantity of drugs gets supplied, but with diminished violence, corruption, disorder, and threats to democratic institutions, that would still be a valuable contribution.

These seven alternatives are not mutually exclusive. A mixture could be pursued. To the extent that this paper takes a position, it is to encourage the inclusion of the last in the mix. DLE's valuable contributions in mitigating the harms of drug markets are often underappreciated.

1. Introduction

The spread of synthetic drugs is the defining challenge for drug policy in the 2020s.[2]

At least in North America, this spread can be thought of as supply-driven, with fentanyl radically reducing raw material costs for suppliers of illegal opioids and cheap methamphetamine slowly overtaking cocaine as the most widely misused stimulant. This paper asks how supply control policies ought to respond. The focus is on illegally manufactured opioids; a previous paper addressed diversion from legal (medical) supply.[3]

This paper's scope is strategic, not tactical, because its intended audience is policy thinkers generally, not just leaders of drug law enforcement (DLE). Rather than proposing specific tactics, we consider how a dramatic expansion in the supply of illegally manufactured drugs might alter the goals and role of DLE relative to the other pillars of drug policy: prevention, treatment, and harm reduction.

One natural response might be to crank up efforts to arrest suppliers and/or extend prison sentences to offset that expansion. That may indeed be an appropriate response in some cases, but such a position should be derived, not leaped to reflexively.

One could also reason that drug consumption can be limited by either demand or supply. If illegal supply has now overwhelmed law enforcement's best efforts, it may be time to focus on limiting demand through prevention and treatment that encourages recovery.

A third response would give up on attempting to limit use, and instead expand efforts to make that use less harmful.

A fourth would undercut burgeoning illegal supply with legal supply, either through outright legalization or through prescribed safer supply (PSS).

Data on illegal suppliers are limited and there are few natural experiments that permit rigorous empirical evaluation of these alternate responses, so the analytical approach taken here is more theory-driven deduction than induction.

This paper aims to provide a framework for thinking about the potential merits and limits of these competing responses by revisiting the roles and goals of drug law enforcement and supply control. It will focus on illegally manufactured fentanyl, but there may be parallels with other synthetic drugs, including nitazines in Europe and methamphetamine in many parts of the world.

The next section describes the history and evolution of illegal opioid markets. Section 3 "scores" DLE's successes to date at supply control. Section 4 introduces a conceptual graph that helps clarify how different beliefs about the relationship between drug supply and total drug-related harm might translate into different beliefs about what policy would be best. Section 5 then describes seven ideas about DLE's role and identifies what beliefs about the nature of expanded supply, and its effects on harms, support those various possible policy paths.

2. A brief history of illegal opioid markets

HEROIN MARKETS BEFORE PRESCRIPTION OPIOIDS AND FENTANYL

Until the end of the 20th century, heroin dominated illegal opioid markets in North America. Production shifted amongst source regions (Southwest Asia, Southeast Asia, Colombia, and Mexico) and form (brown powder, white powder, and "tar"), but the basic structure of distribution remained constant. Plant-based production happened abroad, with varying methods and specific forms coming from Afghanistan, Myanmar, Mexico, and other places. Within the United States, large import shipments were successively divided into smaller bundles at each step in a vertically disaggregated domestic distribution network. At each stage, transaction quantities shrank, perhaps by a factor of 10, and the price per pure gram rose, perhaps by 50%-100%. That meant that most of the money that drug users spent buying heroin stayed with lower-level dealers, although only the (much smaller number of) higher-level dealers earned large sums.

There was little processing within the final market countries. For the most part, a domestic dealer just bought a bag of drugs from a supplier, broke it down into smaller quantities, and sold it to individuals at a lower market level, or sometimes transported the drugs, e.g., from a regional hub to a smaller city. Sometimes the heroin was diluted (by adding inert filler, such as lactose) or adulterated (by adding psychoactive material, such as caffeine), but the diluents and adulterants were far cheaper than the heroin, and the mixing process was unsophisticated (stereotypically done with a bullet blender).

The most sophisticated domestic processors might have been New York City heroin "mills" that could package one or a few kilograms into retail sales units (e.g., "bundles" of 10 "dime bags") in a day or two of concerted activity.[4] Even those "mills" were more of a rolodex than a permanent physical factory or large, stable employer. Mill staff were gig workers, not salaried staff, and might even do jobs for multiple mill managers. The location could be just an apartment, and the equipment was limited to blenders, tables, and subway cards for manipulating the powder. Activity was batched: workers were locked in until a load was fully processed and then the apartment sat empty until another load arrived.

The physics of heroin helped keep dealing organizations' footprints light. A network supplying 5,000 users with four 100-milligram dime bags per day was delivering the same weight as one two-liter bottle of Diet Coke per day, even though the retail value of that heroin might approach $200,000 per day.

The networks' decentralized structure and absence of dedicated "factories" or "machinery" made them resilient to enforcement. DLE could eliminate individuals and organizations, but lost throughput capacity could rapidly be made up by those who remained, and the vulnerable retail sellers were simply too numerous to incapacitate.[5]

CONTRIBUTIONS OF DLE BEFORE THE PRESCRIPTION OPIOID CRISIS

DLE kept heroin physically scarce in most of the country outside of New York City until the late 1960s. As late as 1967, the President's Commission on Law Enforcement and Administration of Justice reported that heroin "available on the street is generally so far diluted that … [frequent users do] not develop profound physical dependence"[6]; U.S. consumption was about 1.5 metric tons (vs. Midgette et al.'s 2019 estimate of 47 pure metric tons in 2016[7]); and more than half of known heroin-dependent individuals were in New York, with most others were confined to seven states and Washington, D.C.

Sentences were harsh. Immediately after World War II, an upsurge in addiction led to tough federal sentencing laws passing in 1951 and 1956. However, the market was so small that even harsh sentencing did not swamp prisons. At the close of 1965, there were only 3,998 drug-law violators in federal institutions (all drugs), as against 64,355 at the time of this writing—which is nine times as many per capita.[8]

Then in a few short years, heroin spread to other major cities, with incidence peaking around 1969.[9] That epidemic was cut short by various interventions including the Turkish poppy ban, breaking the "French Connection" that smuggled heroin from Turkey through Marseille, and the expansion of methadone,[10] leading to a more than 90% decline in initiation by 1972.[11]

The shortages of the 1970s eventually eased. Inflation-adjusted retail prices fell by about 80% during the 1980s and 1990s, but DLE still succeeded in keeping heroin availability limited.[12] For example, the proportion of high school seniors describing heroin as "easy" or "fairly easy" to get has always been less than the corresponding proportion for cocaine.[13] There was no internet back then, and place-based physical markets were mainly limited to disadvantaged neighborhoods in larger cities within certain regions. (Heroin was less prominent in the South.)

Most of the U.S. population was insulated from the temptation to use powerful opioids, and most people who used heroin regularly had been troubled and/or traumatized youth with "shattered childhoods"[14] who escalated up to heroin through a series of illegal substances consistent with the so-called "gateway hypothesis."[15] At least through 2000, those entering treatment with heroin as their primary substance of abuse were an aging legacy of that earlier epidemic.[16]

The heroin market at that time was more hemispheric than global. U.S. heroin supply came primarily from Mexico and Colombia. The much greater amounts produced in Afghanistan mostly stayed in the Eastern Hemisphere.

Markets were in some sense balanced. There was little evidence of heroin suppliers proactively trying to open up new U.S. markets, but there were also no sustained shortages akin to the 2001 Australian heroin drought.[17]

This relative stability of illegal opioid markets and use did not come cheap. Law enforcement devoted considerable effort to attacking heroin distribution. Criminal justice statistics are not fully broken down by drug, but in 2000 there were 529,200 arrests for heroin and cocaine (combined) in the United States, and about 455,000 people were incarcerated for drug-law violations (all drugs).[18]

PRESCRIPTION OPIOIDS AND THE SPREAD OF OPIOID USE DISORDER

The 1972-2000 market stability was broken not by conventional criminals, but by pharmaceutical companies, doctors' liberal prescribing, and the medical system more generally. That story has been well-told many times,[19] but a brief recap through the lens of illegal opioid markets is useful because this drug epidemic differed fundamentally from the earlier heroin and cocaine epidemics. Certainly, illegal suppliers were willing to meet the expanded demand, but the root cause of that expanded demand was the actions of well-meaning people with graduate degrees and white-collar jobs, not criminals of the conventional sort.

Starting in the late 1990s, large numbers of people developed opioid use disorder (OUD) by taking legally manufactured and dispensed prescription opioids (PO), often obtained to treat their chronic pain or by purchasing from "doctor shoppers" or "pill mills." The growth was rapid. A 2011 report by Leonard Paulozzi and colleagues found a quadrupling in overdose deaths from opioid pain relievers (OPR) between 1999 and 2008, a quadrupling in OPR sales between 1999 and 2010, and a six-fold increase in OPR-related treatment admissions between 1999 and 2009.[20]

The resulting flow into opioid use disorder created enormous problems, and was much greater than during the earlier heroin era.[21] Whereas Beau Kilmer and others estimated in 2014 that the number of people using heroin daily or near-daily did not reach 1 million until 2009,[22] Katherine Keyes and colleagues estimate the total number of people with opioid use disorder—including the greater number who were abusing PO—could have been close to 4 million by 2010.[23]

That large-scale supply was delivered without large-scale criminal suppliers.[24] It was produced, distributed, and dispensed by the health care system, largely in accordance with laws and regulations. Some was then redistributed peer-to-peer by people with little or no other criminal involvement, no history of violence, and little organization. Heroin distributors played next to no role. For the first time, it was the people who use opioids who were actually producing supply—e.g., with prescriptions from multiple doctors—not just working retail jobs distributing drugs produced overseas. Doctor shoppers not only cut out the mid-level wholesale dealers, but they also bypassed the international producers.

Because it was people with OUD who created new supply for diversion to others who then developed OUD, there was a contagious ("viral") spread. Escalation to dependence happened to people of all ages and walks of life, not just youth, and so via peer-to-peer redistribution, supply became available to people of all ages and walks of life. Likewise, escalation to PO dependence happened in all states, cities, and even small towns, so supply of diverted PO became available to people in all of these locations—including many that heroin distribution networks had never reached.

Three factors contributed to the PO epidemic not being seen as a criminal justice problem. One was the absence of any prominent role for organized drug traffickers; in caricature, the drug suppliers carried stethoscopes, not submachine guns. Second, the dependent users were older—and so less crime-prone. Third, the PO crisis hit everyone, so it was harder to blame on some "other" group.

If the 1980s crack epidemic produced an unusually large number of drug-related homicides, disorder, and flagrant place-based markets per person who became dependent, the PO epidemic was the opposite. Prescription opioids quietly addicted and killed large numbers of Americans without spectacular or visible sequelae that made for compelling videos on the nightly news. In a media world whose mantra is "If it bleeds, it leads," those who simply stopped breathing were simply ignored.

SWELLING DEMAND FOR ILLEGAL OPIOIDS—INITIALLY HEROIN

Nationwide OUD from prescription opioids evolved into nationwide demand for illegal opioids, which before 2015 effectively meant demand for heroin. There are at least three non-exclusive narratives for why this happened.

The first lays the blame on organized criminal groups. According to this story, heroin traffickers recognized that PO abuse had created a market opportunity, and they pushed their supply on vulnerable individuals. Sam Quinones' 2015 book "Dreamland" captures elements of that view.[25]

The second blames restrictions on access to PO. According to that view, it was efforts to reduce new escalation into OUD that drove

people who already had OUD to "trade down" to less desirable illegal opioids.[26] A 2019 paper by William Evans, Ethan Lieber, and Patrick Power is typical of this view. They "attribute the recent quadrupling of heroin death rates to the August 2010 reformulation of … OxyContin. The new abuse-deterrent formulation led many consumers to substitute an inexpensive alternative, heroin."[27] A variant of this theory blames not the restrictions per se, but the absence of adequate treatment capacity at the time those restrictions were imposed.

The third narrative views "trading down" as a common outcome of prolonged prescription opioid abuse even in the absence of any new restrictions on PO. Diverted PO typically sell for about three times as much per morphine milligram equivalent (MME) as illegally manufactured opioids. As habit sizes grew beyond what could be supported by conning doctors, and/or as addiction interfered with legitimate jobs and income, the 67% price discount available from illegal opioids came to offset their greater risk of overdose.[28]

Under all three theories, the proportion trading down might be greater for younger than older cohorts. It might be harder for young, otherwise healthy patients to convince doctors to continually expand prescribed quantities.

Trading down was visible in prevalence numbers by the late aughts, and in increasing heroin overdose deaths after 2010.[29] Trends in Drug Enforcement Administration arrests tell a similar story, drifting lower from 2000-2007, before nearly tripling after 2007 to a peak in 2015.[30]

Illegal opioid distributors enjoyed a big influx of new demand. People who reach heroin after developing OUD on PO were terrific customers because they were already heavy opioid users. Also, whereas previously heroin demand was concentrated in disadvantaged urban neighborhoods, the people with iatrogenic OUD came from all states, income strata, ages, and ethnicities, and were as likely to be from small cities and rural areas as from major metropolitan areas. Illegal supply expanded to serve this demand created by the health care system, bringing illegal opioids to places where heretofore they had been scarce.

This heroin-dominated "second wave" of the overdose epidemic was relatively brief because it was soon replaced by something worse.[31]

EFFECTS OF FENTANYL

Illegally manufactured fentanyl spread over the decade from 2014-2024, both geographically and in forms of product.

Geographically, it appeared first in western Canada and the eastern United States and spread from there, as can be seen in maps of fatal overdose rates.[32] The increase in deaths does not necessarily reflect any big increase in the number of people using illegal opioids. Rather, it is primarily due to fentanyl greatly increasing the annual risk of overdose death for people using illegal opioids.[33] The "fentanyl epidemic" is not so much an epidemic of new drug use as an epidemic of drug death.

The evolution of different forms of fentanyl products involved at least three distinct steps. At first, fentanyl primarily replaced heroin as the dominant illegal opioid "powder" (powder in quotes because Mexican tar is not literally a powder) sold to people with opioid dependence.

The reason was simple economics: illegally manufactured fentanyl radically reduces opioid suppliers' raw materials costs.[34] At higher market levels, fentanyl is both cheaper per pure kilogram than heroin and produces 20 times as many retail doses per pure kilogram. Fentanyl's appeal—at least initially—was to high-level suppliers, not necessarily to users.

Radically lower raw material costs put downward pressure on prices throughout the supply chain. This did not change retail unit prices; a "dime

bag" in New York still costs $10, and a "point" in Vancouver still costs $20 (albeit with bulk discounts). Rather, as is usual in drug markets, declines in price took the form of increases in the number of morphine milligram equivalents per retail bag, meaning that the doses were more powerful.

The switch from heroin to fentanyl dramatically increased deaths per person with OUD via some combination of higher deaths per use session (e.g., due to greater variability in dose per bag) and more use sessions (because fentanyl was shorter-acting, and so used more times per day).

Fentanyl then started to be sold pre-mixed with other drugs. Adding fentanyl to cocaine and meth was particularly deadly because people who had only been using stimulants had not built up a tolerance to opioids. Adding benzodiazepines to the heroin/fentanyl bags increased deaths because of the synergistic effect of those drugs on the suppression of breathing.

Finally, fentanyl was also sold in tablets that were mostly manufactured ("pressed") in Mexico. That expanded the market to people who would "pop a pill" but who would not inject illegal opioid powders. Indeed, there was concern about rainbow-colored pills possibly being designed to appeal to children.

The transition to pills may alter the role of U.S.-based dealers in the domestic drug distribution network vis-à-vis the Mexican drug trafficking organizations (DTO). Traditionally, the domestic distributors packaged the DTO's product for retail sale, and that gave them the chance to tamper with the DTO's products. Although it is physically possible to grind down pre-pressed pills, add diluents or adulterants, and re-press them, that is not the normal practice. It is moderately difficult to press pills that maintain their integrity and look like "real" pharmaceutical pills. By producing pre-pressed pills, the Mexican DTOs may have "demoted" the role of domestic distributors into mere distributors. This could have had two possible effects that merit further study.

First, it might reduce variability in dose from retail unit to retail unit. Second, it could remove a potential source of disputes within the United States if buyers are less likely to blame their domestic suppliers for having ripped them off by cutting the goods. Anything that reduces disputes might also reduce violence among parties with no recourse to the dispute-resolution services of civil courts.[35] Thus, an action Mexican DTOs may have taken to protect their financial interests might inadvertently be partially protective against overdoses and/or systemic violence by drug dealers.

The irony of such effects is tempting to academics, so it is important to stress that at present this is only plausible conjecture; it currently lacks empirical support.

3. Evaluating DLE's successes vis-à-vis opioid markets to date

Having sketched the evolution of illegal opioid supply, this paper turns to assessing the benefits drug law enforcement provided over this time.

For some, DLE is an end unto itself; those who violate the law should be punished. But if one thinks about DLE as a means toward achieving practical ends, then drug law enforcement is about prevention, and grading DLE's success requires thinking like Alice in Wonderland. She wished for a world where "Nothing would be what it is because everything would be what it isn't." For drug control, "What DLE does is for nothing, and what isn't there because of DLE is everything."

Conventional DLE performance metrics, like seizures, arrests, and drug-related incarceration, are actually costs. They are costly to taxpayers, harmful to the person convicted, and can be

corrosive to society when they fall disproportionately on the poor, minorities, or other disadvantaged groups. The goal of DLE should not be to maximize those costly actions, but rather to prevent other things—drug supply, violence, corruption, and neighborhood disorder—while using the smallest possible number of arrests, convictions, and incarceration.

It is easy to see and count DLE costs. We have to think harder to recognize its benefits, because they are things that don't happen. They are dogs that don't bark.

For example, a spectacular success of DLE in the United States is the very low levels of drug-related corruption within U.S. borders. Year in and year out, U.S. drug markets provide more than $100 billion per year in revenues for criminals,[36] but only a vanishingly small share of that is used to bribe politicians or law enforcement officials. Not all countries are so lucky. Nor, indeed, is the United States just "lucky." The near absence of large-scale corruption is a credit to the diligence and integrity of U.S. institutions, including DLE.

The near absence of assassinations of journalists, politicians, and law enforcement officers is a second example. Those things happen with distressing frequency in other countries, but not often inside the United States. The occasional exceptions make the point. U.S. law enforcement reacted with fury at the torture and murder of DEA agent Kiki Camarena in 1985. Mexican trafficking organizations took note; arguably, there has not been an event like it since. In 2023, four Americans were abducted and two were killed in Mexico. The Gulf Cartel apologized and delivered suspects with a letter that read, in part, "The [Gulf Cartel] asks society to remain calm because we are committed to ensure that these errors caused by indiscipline aren't repeated. The guilty parties will pay, regardless of who they are."[37]

The difference is not limited to targeted assassinations, as the contrast between Ciudad Juarez and El Paso illustrates. The two cities are effectively one metro area with an international border running through the middle, but rates of violence are utterly different on each side. The contrast was extreme in 2010 when there were 3,622 homicides in Ciudad Juarez vs. five that year in El Paso, even though Ciudad Juarez is only a bit more than twice as populous.[38]

That said, DLE's scorecard vis-à-vis preventing systemic drug-related violence in the United States is mixed. The FBI typically lists only about 500 homicides per year as being narcotics-related, but that is likely a substantial undercount. Larry Eichel and Octavia Howell report that Philadelphia alone averaged 67 per year from 2012-2016.[39]

Likewise, DLE's scorecard vis-à-vis preventing market disorder is mixed. Most Americans go about their daily lives without encountering public drug selling or drug-related violence, but residents of places like Philadelphia's Kensington neighborhood are not so fortunate. Drug markets in 2024 may not be as flagrant or as violent as were the crack markets of the 1980s, but the markets in 2024 may be more disruptive to surrounding communities than they were in 2014, before fentanyl. Even liberal bastions on the West Coast are losing patience, as seen with Oregon's repeal of drug decriminalization via Measure 110, San Francisco's recall of District Attorney Chesa Boudin, and "Defund the Police" going from progressive rallying cry to Republican talking point.[40]

Regarding the volume of illegal supply, the rapid spread of illegal fentanyl and the associated overdose crisis can be seen as a DLE failure, or we can credit drug control for having prevented that disaster from happening sooner. Illegally manufactured fentanyl did not break out until 2014, perhaps because that was when simpler recipes to synthesize the drug became available. Yet fentanyl was first synthesized in 1959, its substantial cost advantages relative to heroin were already recognized 50 years ago,[41] and there were four prior episodes of fentanyl starting to appear in U.S. drug markets that were cut short, beginning in 1979.[42] Its near absence from

U.S. opioid markets over the 35 years between 1979 and 2014 could have averted half a million premature deaths. That's a win for DLE.

We can be similarly appreciative that for 25 years from 1972 to 1997, illegal opioid markets were largely constrained to major cities and the diversion of pharmaceutical opioids was relatively modest.

What changed? Determining that is a bit like debating which was the greatest sports team of all time. Individuals' conclusions may be more reflective of prior loyalties than the quality of the points made by their debating partner. Very informally, people seem to resonate with one or more of five views.

View No. 1: DLE is less competent or dedicated than in the past. I am skeptical and so do not elaborate.

View No. 2: The world has changed. Globalization of commerce, expansion in international travel, new technologies (e.g., the internet, cryptocurrencies, encryption, and burner cell phones), and the diffusion of other technologies (developing countries gaining chemical and pharmaceutical industries, drug synthesis recipes circulating on the internet, etc.) have conspired to make drug control more difficult than in the past.

View No. 3: Illegal markets can stably exist at low- or high-volume equilibria for various reasons.[43] Although it is possible to keep markets at low-volume equilibria indefinitely, now that they have "tipped" to a high-volume equilibrium it is difficult to put that horse back into the barn.

View No. 4: It was always only a matter of time. Prohibiting easy-to-make consumer goods is never sustainable in a free society. All DLE could do was delay the inevitable, and time is up.

View No. 5: DLE works; we just aren't trying hard enough. The 12-year Reagan-Bush "drug war" can claim some successes. Between 1981 and 1992, the proportion of high school seniors reporting past-year cocaine use fell by three-quarters and the number of days of cannabis use reported by the general population fell by two-thirds.[44] The cocaine market had seemed impervious for decades, but then U.S. consumption abruptly fell by more than 50% between 2006 and 2010.[45] According to this view, all we need to pull off another victory is more resources, persistence, and perhaps some tactical adjustments.

Views No. 4 and No. 5 are diametrically opposed, representing broad pessimism and broad optimism concerning DLE. The false choice between those two can dominate debates, and within academic circles, optimism about DLE is scarce.

My view leans more toward a mixture of No. 2 and No. 3. Illegally manufactured fentanyl—and other synthetic opioids—are technological innovations that radically reduced raw materials costs for drug supply chains. They also permit production to occur anywhere, not just places with such low state control that drug crops can be cultivated, and permit seizures to be replaced in days, not just at the end of the next growing season. Illegality slowed the diffusion of those technologies, but they are now generally available and there is no easy way to reverse that. That makes it even harder than before for DLE to keep retail prices high, but keeping retail prices high wasn't the only or even the most important role of DLE.

4. Beliefs about the benefits of reducing supply

PLOTTING THE RELATIONSHIP BETWEEN TOTAL SUPPLY AND HARM

Section 2 argued that illegally manufactured fentanyl can be construed as a major outward shift in the supply curve for illegal opioids. The

previous section gave perspectives on DLE's past achievements and how hard it may be for DLE to reduce supply today. We now turn to the benefit side of the equation.

Whatever degree of disagreement exists over what DLE has accomplished in the past, there may be even less consensus about the potential merits of restricting supply in the future. Instead of reviewing divided literatures and picking sides, we suggest below in Figure 1 a stylized relationship or graph whose consideration may help readers clarify their own thinking.

The graph's vertical axis measures total societal, drug-related harm stemming from addiction, overdose, the impoverishment of dependent users, and the violence, corruption, and other corrosive effects of drug suppliers receiving high criminal income.

The horizontal axis represents supply, the net effects of drug supply control. In reality, this axis wouldn't be univariate; it is not as simple as the quantity of drugs shipped minus the quantity seized. It should be construed more abstractly to also encompass price and availability. The left side of the axis would correspond to small quantities being sold at high prices and only in certain places, or in inconvenient forms. The right side would correspond to large quantities readily available at low prices to anyone who wishes to purchase them.

The question is: What does this functional relationship or graph look like? How does total harm to society depend on net supply?

I will attempt to establish three points on this curve, and then discuss the multiple shapes (in terms of concavity and convexity) that could pass through those points, and what those different curves imply for the beliefs about the effectiveness of additional supply control.

ESTIMATING THREE POINTS ON THE CURVE

Presumably on the far left, total societal harm is low. High prices and low availability lead to lower levels of use, dependence, and overdose. A very small market also translates into relatively few criminal suppliers, little market-related violence, and modest criminal income. Despite high unit prices, criminal revenues would be constrained by the low volume of sales. That was the situation before the late 1960s.

Near the middle of the horizontal axis, total societal harm can be quite large. Consider the early 2010s, after iatrogenic dependence had swelled the market but before fentanyl became common. Already many millions of people—and their families—had lives dominated by OUD, and there were well more than 10,000 overdose deaths a year. The $40 billion or so spent on heroin each year[46] enriched criminal networks, impoverished users, and generated considerable criminal activity.[47]

Now consider the far-right side of the graph. How much worse did the expansion in supply make things between 2014 and 2024? That is a key but difficult question.

A reflexive answer is "much worse" because opioid overdose deaths nearly tripled.[48] However, overdose deaths are just one part of the problem. Other aspects may not have tripled.

Crime trends vary across crime types, but none tripled. There are no really good data on drug-related homicides, let alone those specific to opioid markets. The overall homicide rate per capita fell sharply in the 1990s, was flat from 2000 to 2008, dropped another 20% to a nadir in 2014, and then rebounded to levels not seen since the late 1990s, with a 43% increase between 2014 and 2022. By contrast, violent crime overall barely changed between 2014 and 2022 (up 5%), and property crime fell by 24% overall and by 50% for burglary.[49]

Nor did the prevalence of illegal opioid use triple. Indeed, some relevant measures declined. Between 2014 and 2022, the lifetime prevalence of heroin use reported by 8th, 10th, and 12th graders fell from 0.9%-1.0% to 0.4%-0.5%. "Narcotic use other than heroin" was only reported for 12th graders, and its prevalence fell from 9.5% to 3.2%. The corresponding trends in availability were favorable, meaning declining proportions of youth reported it was "easy" or "fairly easy" to get those drugs.[50]

The household survey is extremely limited for monitoring highly stigmatized behaviors like heroin use, but it shows only a 23% increase in past-year heroin prevalence between 2014-2015 (average of the two years) and 2021-2022.[51] Also, Keyes et al. note that the prevalence of opioid use disorder (not just heroin use disorder) as measured by the household survey was trending downward from 2015 to 2019.[52]

There is considerable consternation about growing, visible drug use and dealing among "street" populations, particularly in West Coast cities such as Portland and San Francisco. There are no good data on how many people who are experiencing homelessness have OUD, let alone for how many it was their OUD that caused their homelessness. Perhaps the most consistently measured data come from the Department of Housing and Urban Development's Point-In-Time (PIT) estimates.[53] They show homelessness declining until 2015 or 2016 and rising thereafter. Overall numbers in 2023 were up 13% over 2014 (653,104 vs. 576,450), with a pronounced 46% increase among the unsheltered (256,610 vs. 175,399) vs. a slight decline among people experiencing sheltered homelessness (396,494 vs. 401,051 in 2014).

All of these indicators are partial and flawed. None individually matter as much as overdose deaths. But collectively, they support the idea that opioid overdose deaths increased more than did other aspects of the opioid problem.

Thus, while someone who views the drug problem as essentially synonymous with overdose deaths might think the current drug problem is three times as bad as it was back in 2014, others could defend a substantially smaller increase.

Another question is how much of the change should be blamed on the expansion in supply, as opposed to the shift to fentanyl. For example, imagine a hypothetical world in which the retail price per morphine milligram equivalent dose fell as much as it actually has, but the markets still sold only heroin and not fentanyl. And imagine another hypothetical world in which fentanyl replaced heroin, but the price per MME stayed constant. Presumably, both of those hypothetical worlds would entail more deaths than in 2014, but fewer than we actually have in 2024. But by how much? Did fentanyl replacing heroin double deaths, with an additional 50% bump up from lower prices, for a combined effect of a threefold increase?[54] Or was the switch to fentanyl the junior partner, and declining prices the bigger driver? There do not seem to be any good data for teasing this apart because the changes happened simultaneously, and the measurement of prices is poor.

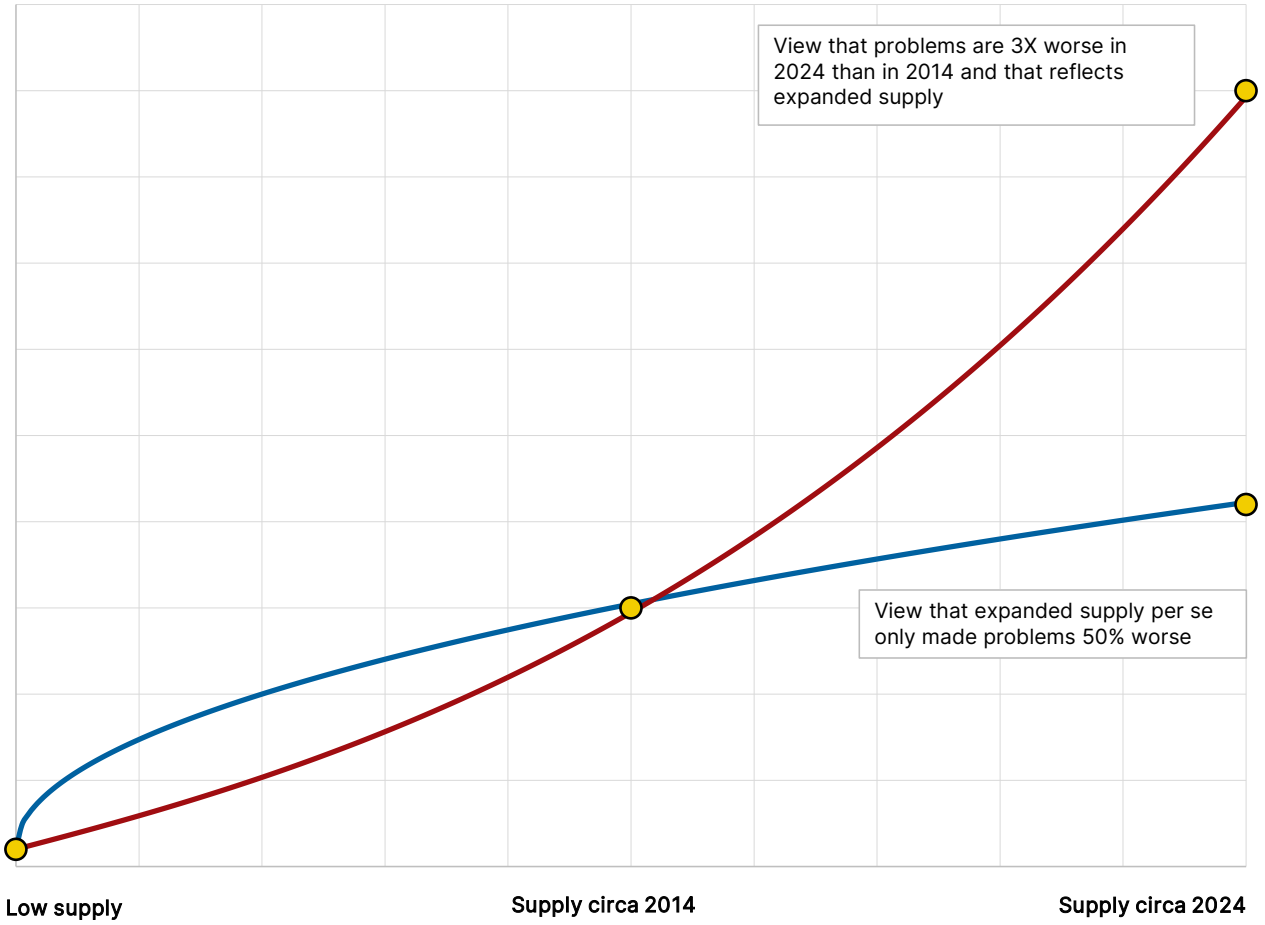
The distinction matters, though, because certain types of supply control might shift the supply curve back but not tip the market from fentanyl back to heroin, whereas others are explicitly intended to get rid of fentanyl.

SOME ILLUSTRATIVE CURVES

We now sketch two (of many) possible curves through the points just discussed, with different curvatures.

FIGURE 1

Stylized depiction of different beliefs about effect of expanded supply



The red curve is the most urgent in terms of motivating efforts to reduce supply. It perceives that over the last decade, the overall opioid problem has grown as sharply as overdose deaths. It attributes that increase to expanded supply, and it sees the overall relationship between supply and harm as convex.

The blue curve is the least concerned with fluctuations in supply around current levels. It perceives that the recent expansion has only increased harm modestly because of one or both of two stories. One is that addiction, violence, disorder, etc. are collectively more important than overdose deaths, and those other harms did not increase terribly much even as overdose deaths soared. The second is that it wasn't expansion in supply per se that killed so many people but rather the shift from heroin to fentanyl. The blue line is also concave, thinking of the incremental effects of expanded supply as diminishing.

There are other ways of positioning the dots on this graph, and of connecting them. The goal here is not to argue that science has a settled, empirical answer as to the shape and location of these curves. Rather, the points are: (1) to recognize that different observers can have different mental models of this relationship; (2) differences between those understandings can translate into different beliefs about the potential benefits of restricting supply; and therefore, (3) readers are encouraged to reflect on what they think this relationship looks like.

5. Synthesis

With this groundwork laid, consider seven possible responses to the expansion of supply brought by the fentanyl era. The goal is not to anoint a winner but rather to clarify what one must believe for each of the various responses to be preferred. Indeed, one might expect the political process to hedge its bets and try a bit of everything, rather than putting all its eggs in one basket. However, discussing these seven as distinct alternatives helps clarify their potential contributions and limitations.

REDOUBLING SUPPLY CONTROL EFFORTS TO PURGE OPIOID MARKETS OF FENTANYL

The most basic understanding of events over the last decade is that markets switching to illegally manufactured fentanyl has been a disaster, so let's use two strategies to get rid of fentanyl and return to the "good old days" when markets sold "just" heroin.

One is pressuring China. That may serve a variety of geopolitical interests, including embarrassing China, aligning the United States with other Southeast Asian countries (who have parallel resentments about Chinese-produced methamphetamine), and drawing attention to Chinese organized crime groups (who are also active in money laundering, wildlife trafficking, etc.). However, even if China cooperated, it might not reduce opioid deaths in the United States if alternative sources of fentanyl and its precursors emerged. Synthesizing fentanyl and its "near" precursors is not difficult; many individuals and organizations in many countries have the technical wherewithal.

One reason for hope, though, is that no one is making enormous sums producing those chemicals. The essential chemicals needed to produce one kilogram (kg) of fentanyl sell for $1,000-$10,000. The total U.S. fentanyl market is in the single-digit metric tons (MT) pure, so revenues from selling those chemicals cannot exceed 10 MT multiplied by $10,000 per kg, or $100 million, and it could be closer to $10 million.[55] That is tiny relative to the roughly $50 billion in retail sales of illegal opioids.[56] The chemists are not the ones getting super rich.

Also, as Peter Reuter, Bryce Pardo, and Jirka Taylor (Figure 1) observe, whereas distribution chains for plant-based drugs have a double-funnel shape, with few kingpins but many farmers and retailers, synthetic drugs' distribution networks are just a single funnel or triangle, with many retailers but few producers.[57] Far fewer chemists are needed to produce fentanyl than farmers are needed to grow the poppies to make heroin.

That the producers of the key chemicals are neither highly numerous nor very rich makes them an easier target. Perhaps a concerted effort to take down many at once could create a temporary shortage. On the other hand, the very fact that chemists get such a tiny sliver of retail sales revenue means that the supply chain could pay their replacements much more without driving up retail prices.[58]

Every drug and situation is different, but it is worth reviewing past claims regarding the control of precursor chemicals. Rebecca McKetin et al. reviewed evaluations of 13 rounds of methamphetamine precursor regulations, and two interdiction events, and found that seven had significant (between 12%-77%) effects on price, purity, hospital admissions, treatment admissions, seizures, and/or self-reported use.[59] More recent literature finds additional successes.[60] One study by James K. Cunningham et al. concluded that U.S. regulation of acetic anhydride in November 1989 had substantial effects on heroin price, purity, and seizures that lasted two to five years.[61] Another addressed cocaine precursor and essential chemical controls, finding modest effects for two interventions (sulfuric and hydrochloric acid controls in 1992 and methyl isobutyl ketone controls in 1995) and larger and longer-lasting effects from controls in 1989 on

potassium permanganate and in 2006 on sodium permanganate.[62] Still another study concluded that precursor controls temporarily but noticeably disrupted North American meth markets, although other authors have a less optimistic view.[63]

In sum, there are reasons for hope and reasons for pessimism regarding the potential to create lasting disruptions in fentanyl production.

The second strategy is to make the probability or consequence of arrests so much higher for selling fentanyl that a rational drug distributor will only handle heroin, even when fentanyl is available. This is an application of targeted enforcement and focused deterrence ideas advocated by influential criminal justice professor Mark Kleiman, among others.[64] Logically, differential enforcement "taxes" should be able to mold the market in desired directions, and there have been some successful applications of this principle, notably in reducing violence in some local markets.[65]

I personally am skeptical that either of these approaches can work, at least in the long run, because there are so many different ways of producing synthetic opioids from so many readily available precursors. Some Reuters journalists recently reported buying online and having everything delivered needed to make $3 million worth of fentanyl for just $3,600.[66] Also, the wisdom of targeting fentanyl relative to heroin depends on a belief that much of the increased harm over the last decade is due to the unique properties of fentanyl in particular, as opposed to a general expansion of opioid supply. However, the benefit of success could be large, so it is hard to begrudge people for trying this approach.

REFOCUSING SUPPLY CONTROL TO KEEP THE TAX ON DOMESTIC DISTRIBUTION HIGH

A bag of drugs sold at retail bundles together the cost of the original production plus the "service" of moving those drugs from the point of production to the consumer. Production costs accounted for a small share of retail prices even in the heroin era; most of the value-added comes from distribution. In that sense, heroin was a bit like a plastic measuring cup bought at the high-end kitchen store Williams-Sonoma; retail prices were dominated by markups along the distribution chain, not by production costs.

So perhaps even if fentanyl costs almost nothing to produce, as long as distribution within the United States remained just as difficult for drug dealers, and they demanded just as much compensation for that service, then retail prices may not fall dramatically.

That belief has been termed an "additive model" of price transmission, in contrast with a "multiplicative model" in which prices are marked up across market levels by a constant percentage. (This distinction and its policy implications have been thoroughly discussed elsewhere and so will not be repeated here.[67])

If the additive model of price transmission held, then continued commitment to strong domestic drug supply control efforts ought to be able to limit the extent to which retail prices per MME fall, even if there is no way to flip the market from fentanyl back to heroin.

However, there may still need to be adjustments to law enforcement priorities. There is little point in working hard to seize drugs that can be replaced at a very low cost. DLE can seize product at the border all day long, and DTOs can just produce more that evening with barely a shrug (if the people arrested along with the seizure are easily replaced transporters). Seizing fentanyl at the border is not bad and may induce smugglers to take costly steps to reduce their risk of seizures, but seizing product per se is now a very inefficient way of imposing costs on the drug distribution system.

By contrast, the seizure of financial assets or other tangible assets such as property or boats continues to impose the same cost on fentanyl dealers as it would on heroin dealers. A seized million dollars costs a million dollars to replace, no matter whether the dealers made that money selling fentanyl or heroin.

This means that keeping a high enforcement tax on domestic distribution requires not only maintaining intensity but also altering tactics to focus on assets that remain difficult to replace, even now that the drug being sold is fentanyl.

RELYING ON TREATMENT, INSTEAD OF DLE

Expanded supply moves the market equilibrium along the downward-sloping demand curve toward lower prices and greater consumption. (There is extensive empirical evidence that consumption increases when prices decline.[68])

Skeptics of Econ 101 might instead think that the quantity consumed will essentially be the minimum of how much the market offers and how much people want to buy. Under that view, if there is no shortage, it makes little difference whether supply is merely ample or truly over-flowing because people won't buy what they don't want. Doubling down on expensive DLE might only reduce supply from over-flowing to ample, and so not reduce use by much. That line of thinking is consistent with the blue line in Figure 1 (pg. 12) and could encourage directing scarce taxpayer dollars toward treatment and other forms of demand reduction, instead of towards DLE.

The treatment options for opioids are much more favorable than they are for stimulants like cocaine or methamphetamine. Methadone and other medications for OUD treatment (MOUD) are among the best-studied medical interventions, and the literature consistently finds that they are highly cost-effective.[69]

MOUD doses and other practice parameters may need to adjust to changing patterns of use. Historically, a typical methadone dose was 40-80 mg per day. That is 190-380 MME per day, which is comparable to, or only modestly below, the MME per day that clients were obtaining from heroin before entering treatment.[70] However, in the fentanyl era, some are consuming many more MME per day. For example, people who use opioids in Vancouver may still be consuming two or more 100-milligram "point" bags per day. Those bags contain fentanyl with an average potency of around 16%. If fentanyl is 50-100 times more potent than morphine, that corresponds to 1,600-3,200 MME per day, or about 10 times what is commonly delivered in methadone maintenance.

Dosing is a tactical question. Strategically, almost all observers support expanding MOUD regardless of what is or is not done on the supply control side. The only real question is whether treatment alone is "enough" to be an adequate response to the overdose crisis.

AGGRESSIVELY PURSUING BOTH TREATMENT AND DLE, INCLUDING IN PARTNERSHIP

In the 1980s, drug policy focused on supply reduction. In the 21st century, drug policy researchers almost unanimously endorse MOUD but are skeptical of, or even actively hostile to, drug law enforcement. In the late 20th century—and still today in some quarters—there

was a vision that embraced both active drug law enforcement and generous support for the recovery of people with substance use disorders (SUD).

That approach supports expanding treatment but concedes that just offering treatment is not enough because many people with SUD are ambivalent about receiving treatment. Among respondents to the 2022 National Survey on Drug Use and Health who were recorded as meeting the criteria for SUD and were not already in treatment, fewer than 1% reported seeking treatment.[71]

Drug law enforcement can help address that in two ways. One is by restricting supply enough to make drugs expensive and/or time-consuming to buy. For example, Louisa Degenhardt et al. conclude that with the Australian heroin drought "a reduction in heroin supply appeared to produce modest improvements in intermediate [treatment] outcomes. Supply and demand reduction measures, when both are implemented successfully, may be complementary."[72]

The second is using the criminal justice system to push people into treatment. Drug courts may be the best-known and studied version of this idea.[73] They are specialty courts whose judges often reduce or eliminate sentences for offenders who submit to treatment backed by frequent drug testing. There are a wide variety of other diversion programs, both pre- and post-arrest.[74] It has long been recognized that retention in treatment is highly correlated with treatment success,[75] so there have been hopes that a criminal justice "stick" could be used to induce people to enter and remain in treatment long enough to achieve better outcomes.

Others argue that compulsory treatment may not be as effective and/or that it is not ethical to compel people to receive medical care that they do not want.[76]

ACCEPTING GREATER RATES OF DRUG USE, BUT STRIVING TO REDUCE ITS HARMFULNESS

Harm reduction is the fourth pillar of drug policy. It comprises a diverse collection of specific tactics united by the common goal of reducing the harmfulness of drug use, rather than trying to reduce the amount of drug use.[77] There is broad support for key harm reduction tactics, notably the provision of clean syringes and expanded access to the overdose-reversing drug naloxone. There is less consensus concerning the effectiveness, ethics, and/or power of certain other harm-reduction interventions. Keith Humphreys' paper in this series discusses this at length, but the following arithmetic exercise complements that discussion by highlighting one way that fentanyl challenges a harm-reduction approach.

Amidst the present overdose crisis, a particular harm reduction focus is averting a fatal overdose today, rather than concentrating energies on achieving long-term recovery and thus reducing the number of years spent in active use. But if a person's period of drug use is long enough, and the annual death rate despite harm-reduction efforts remains high enough, then their overdose might be merely delayed rather than averted, unless the duration of their drug-using career is also reduced. It is worth trying to quantify the key parameters governing this, even if only roughly.

Once people develop OUD, they often use illegal opioids at least intermittently for many years, if not decades. Yih-Ing Hser, M. Douglas Anglin, and Keiko Powers pioneered long-term longitudinal studies of people in treatment for OUD, an approach that has now been replicated in many countries.[78] A typical finding is that even many years later (24 years, in the case of Hser et al.'s study) considerable shares of study subjects have either died (often from drug-related reasons) or are still using that drug.

Based on this, modeling studies sometimes suppose that chronic, high-frequency heroin users have about a 5% annual rate of permanent desistance.[79] That 5% includes overdose death (before fentanyl that was perhaps 0.5% per year),[80] death from other causes (perhaps 1.1% per year), and recovery—meaning exit from use other-than-by-death (3.4%). That meant that before the fentanyl era, about two-thirds of people with OUD might achieve complete recovery before dying (since 3.4% / 5% is about two-thirds).

Consider how those odds deteriorate when fentanyl amplifies the overdose death rate. British Columbia is a world leader in harm reduction, so I will use its statistics for this exercise as a best-case scenario. British Columbia suffers about 2,300 overdose deaths per year, the vast majority of which pertain to fentanyl.[81] That works out to 45 per 100,000 residents per year, or about 1.5 times the U.S. rate. The population at highest risk for overdose in British Columbia numbers about 50,000,[82] implying an overdose death rate of approximately 2,000 / 50,000 = 4% per year. If rates of deaths from other causes and recovery remain at 1.1% and 3.4% per year, respectively, that would suggest that only about 40% of people would exit OUD via recovery,[83] and the other 60% exit via death. If the harm-reduction approach reduced the rate at which people achieved complete recovery, because abstinence is not the goal, the odds of exiting via recovery would be even less favorable.[84]

Those numbers are exceedingly rough, but they make a conceptual point. If fentanyl increases the annual death rate among people using illegal opioids even in the presence of harm-reduction programs, then policies predicated on extended periods of use become inherently risky.

PRESCRIBED SAFER SUPPLY (PSS)

Prescribed safer supply, or PSS, adopts the maxim, "If you can't beat them, join them." If DLE can't keep fentanyl or other "toxic" drugs out of illegal markets, then perhaps the government should give legal, pharmaceutical-grade fentanyl, hydromorphone, or other opioids to people using illegal opioids in order to undercut the illegal market. If it is adulterants and variable dosing that create use-related harms, then free, clean, dose-regulated legal opioids would solve the problem for program clients.

Dispensing PSS for on-premise consumption need not be riskier than conventional medication-assisted opioid treatment, but a key concern is whether free, low-barrier, take-home supply could be diverted to others in ways that increase escalation into substance use disorder. That concern has been raised with respect to both the old "British system" of doctors supplying heroin[85] and the mid-1960s Swedish experiment with medical supply of amphetamines and opioids.[86]

Canada generally, and British Columbia in particular, leads the world in PSS. In March 2020, British Columbia introduced province-wide PSS as part of its response to the COVID-19 epidemic. The most common form of PSS in British Columbia is hydromorphone tablets.

The extent of diversion to date is unknown and hotly contested. There are news reports of police seizing thousands of PSS pills at once, suggesting that PSS clients may well be selling them to dealers,[87] but the academic literature tends to view diversion as unproblematic or to think of it as "secondary safe supply."[88] The National Safer Supply Community of Practice describes diversion as "a harm reduction practice rooted in mutual aid that saves lives and improves quality of life."[89]

However, some simple arithmetic suggests that PSS participants may have both the incentive and the means to sell their prescribed drugs, and if PSS tried to replace the entire illegal market, the scale of potential diversion could be large.

Consider a PSS participant who receives 14 8-mg hydromorphone tablets per day, "sells" them for $1 each,[90] and continues to use 100-mg "point" bags of "down" (the local slang term for illegal

opioids) that sell for $15-$20 each. In total, the 14 tablets (known informally as "Dillys") contain 560 morphine milligram equivalents, whereas a point contains 1,200 MME, so selling the Dillys to buy illegal opioids allows the PSS participant to increase their opioid consumption.[91]

Diverting PSS could also tempt those who do not wish to increase their opioid consumption. $14 per day works out to about $5,100 per year, which could be a substantial income for many impoverished people who use illegal opioids. Indeed, people with OUD who are not currently using illegal opioids might wish to enroll just to obtain pills to resell.

Could program participants find customers? When PSS enrollment is low, PSS participants might just sell locally to other people with OUD.[92] But even if all people with OUD in one region are enrolled in PSS, the existing fentanyl distribution network could connect PSS participants to customers who do not yet have OUD or who live in other regions. For example, the PSS participant's retail fentanyl supplier might accept pills in a barter trade, selling the two "point" bags of fentanyl for 14 pills plus $26 in cash, instead of for $40 in cash. The fentanyl retailer might likewise pay the wholesale fentanyl supplier in pills and cash, instead of just in cash, perhaps for the equivalent of $1.25 per pill. A wholesale illegally manufactured fentanyl dealer supplying 10 retailers each, who supply seven PSS participants who wish to sell their pills, would receive about 1,000 pills a day. In a month, that would accumulate to a number of pills whose cost, total MME, and weight are similar to a kilogram of heroin in pre-fentanyl days—a quantity that wholesale markets were willing and able to move across jurisdictional boundaries. Hence, even if PSS collapsed Dilly prices locally, there is a plausible mechanism for connecting PSS participants to customers for those pills in other markets.

Could such diversion lead additional people to develop OUD? That important question deserves elaboration elsewhere, but it is clear that the scale of opioid flow in a full-scale PSS program would be quite large.

IQVIA's MIDAS database records about 1 MME per inhabitant per day in sales of opioid analgesics in Canada in 2019.[93] If British Columbia has 50,000 people consuming two 100-mg "point" bags per day that are 16% fentanyl, that is 80-160 million MME per day. Given a population of 5.071 million, that is 16-32 MME per inhabitant per day. Hence, if PSS tried to match the current consumption of illegal opioids, and its rate of diversion were even one-tenth the rate of diversion of prescription opioids used to treat pain, PSS diversion would exceed the diversion of opioid analgesics. That is noteworthy because the non-medical use of opioid analgesics was the pathway to OUD for many of the people who are at the greatest risk of overdose today.

To be clear, this arithmetic in no way proves that diversion from large-scale low-barrier PSS would be a problem. Perhaps there are technological fixes, such as smart pill dispensers or remote monitoring of PSS consumption. It is only a plausibility argument, but it shows that a comprehensive analysis of PSS needs to consider more than just the benefits of PSS for program participants.

ASK DLE TO CONTROL DRUG SUPPLIERS, NOT DRUG SUPPLY

The first two options discussed in this section conceived of DLE's role as being primarily supply control. Most of the other options said little about DLE's role, beyond perhaps inducing people with opioid use disorder to seek and remain in treatment. They thought it was time for DLE to pass the baton to some other approach—be it treatment, harm reduction, and/or prescribed safer supply.

There is, though, another option, and that is to enthusiastically embrace DLE, but with a different objective. Traditional thinking asked DLE to control the supply of drugs, meaning to shift back the supply curve, reduce availability, and drive up prices.[94]

An alternative is to instead ask DLE to control the suppliers of drugs, meaning to minimize the violence, corruption, disorder, and other harmful externalities they impose on society.[95]

Caulkins and Humphreys described this approach in more detail in a 2023 paper, but the spirit of the idea is as follows.[96] If the quantity of opioids supplied and consumed in the United States remained the same, but the number of homicides committed by opioid suppliers declined by 50%, or the number of government officials they corrupted declined by 50%, that would be a win. Or if the number of people supplied remained the same, but all sales were hidden behind closed doors instead of sometimes occurring in flagrant, place-based retail markets that destroy the quality of life for neighborhood families, that would be a win too.

This acquiescence to the existing high level of supply fits most comfortably with a view of the world represented by the blue curve in Figure 1, in which the benefits realized from any achievable reduction in supply are modest. In that case, it would be better to devote scarce DLE resources to reducing violence, corruption, and other market-related problems.

If the United States chooses to focus on controlling such collateral harms, it would de-emphasize distant international efforts whose raison d'être was reducing drug supply. It could, though, continue to pursue international law enforcement cooperation for other reasons. For example, if Chinese organized crime groups were seen as particularly instrumental in money laundering or corruption, they might be enforcement priorities for those reasons. Likewise, U.S. law enforcement might continue to pressure Mexican DTOs into having their U.S.-based affiliates operate primarily via stealth, not intimidation.

This approach might tolerate further reductions in retail prices. Although lower prices bring greater use, that increase may be proportionately smaller than the decline in price, leading to lower revenues for drug traffickers, less impoverishment of people who use opioids, and potentially less property crime.[97] (In one of the oldest high-quality economic studies of opioid markets, Lester Silverman and Nancy Spruill estimated that for every 50% increase in the price of heroin, there would be a 14% increase in total property crime.[98])

Furthermore, change in consumption includes not only changes in the number of people using but also changes in the intensity of use, and recent trends with opioids and cannabis suggest the latter can be larger. A 50% increase in use would not mean a 50% increase in the number of lives dominated by OUD. It might mean only 10% more people with OUD, but people with OUD using 40% more per person.

The drug policy literature appears relatively unconcerned about the quantities of opioids consumed. There are, however, potential harms from the greater daily consumption of opioids. For example, chronic exposure can increase sensitivity to pain, a condition known as hyperalgesia.[99] More generally, Srinivasa Raghavan et al. report that "studies have shown that a range of subtle yet significant complications have emerged which have the potential to increase the morbidity of patients who are on long-term opioid therapy. They include hypogonadism, osteoporosis, immune suppression, cognitive impairment and hyperalgesia."[100]

If the relative lack of concern in the literature is justified, and if supply-induced increases in consumption mostly take the form of greater intensity of use, then easing up on supply control may not exacerbate use-related harms by much. If either of those assumptions does not hold, then reductions in supply control may create greater use-related harm.

6. Conclusion

This paper's principal objective is to help readers clarify their own thinking as to how to conceptualize the role of DLE in this new, changed world of dramatically expanded opioid supply. The analytical aids offered here to that end include:

- A history of illegal opioid markets, stressing first principles not contextual details (Section 2).
- A "scorecard" of DLE's performance that recognizes DLE's main successes lie in things that did not happen (Section 3).
- A discussion of the relationship between total harms and supply, including the scale of harms now vs. before illegally manufactured fentanyl became common (Section 4).

Building on that foundation, Section 5 discussed seven visions of DLE's role: two that recommit DLE to suppressing supply, several that minimize DLE's potential, and one that asks DLE to control drug suppliers, and the corrosive effects of drug markets, not to reduce drug supply per se.

The goal is not to prove that any one vision is superior. The alternatives are not mutually exclusive. Furthermore, the nature of the available data, as well as the inherently value-filled nature of such an evaluation, preclude definitive scientific statements. However, having studied drug markets and drug policy for more than 35 years, I will acknowledge that I am sympathetic toward the final view, and would suggest that it be included in some fashion in the policy mix.

I suggest that it may be time to free DLE from unrealistic expectations that it suppress drug use by eradicating supply or sealing the borders and let it instead focus on managing the violence, corruption, and other harms created by illegal drug production and distribution. Operationally, that might mean changing how DLE reports its successes, and how it incentivizes and rewards personnel. Sheer numbers of arrests and quantities seized would be somewhat de-emphasized relative to identifying and dismantling specific drug-trafficking organizations whose operations are particularly noxious. That would emphasize enforcement targets' quality over quantity while continuing broad-based pressure to force all criminal organizations to "keep their heads down" (more formally, incur the "structural consequences of product illegality"). In addition, to the extent that DLE still wishes to prioritize driving up prices by imposing costs on suppliers, there may be a need to shift away from seizing product and redouble efforts to seize financial assets.

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