

# Bocconi

## INELASTIC DEMAND, RATIONAL CONSUMERS, AND DRUG POLICY

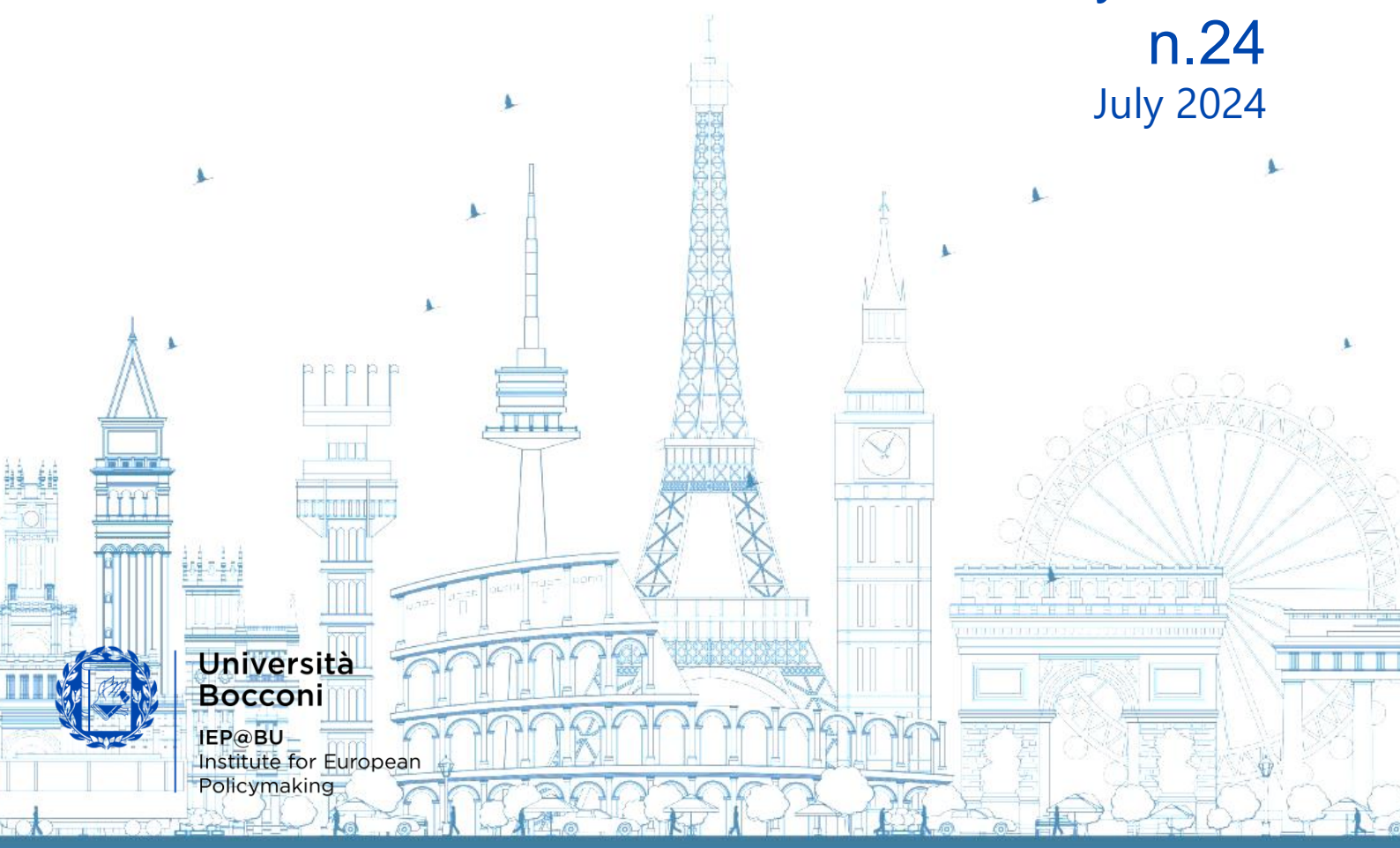
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IEP@BU Policy Brief  
n.24  
July 2024



Università  
Bocconi

IEP@BU  
Institute for European  
Policymaking



## Executive Summary

Fentanyl and its analogues are beginning to appear across Europe. This places the estimated population of 1 million high-risk European narcotics users in jeopardy. American responses to fentanyl's proliferation there, nearly a decade ago, and earlier waves of the opiate epidemic provide important lessons for informing the European response. Policy that ignores the incentives of drug users as rational consumers with an inelastic demand have consistently caused unwanted negative spillover effects. Efficiently targeted law enforcement efforts in Australia and recently in America have been able to prevent these adverse spillovers. Proactive strategies, such as Italy's recently adopted plan for preventing the spread of fentanyl into the country, exemplify an approach that, when integrated with the overall EU strategy, can be successful in preventing Europe from experiencing the same fentanyl crisis that America has faced.

## Introduction

As the opiate epidemic continues to ravage the United States, killing around 100,000 people each year, we are now starting to see the same extremely lethal fentanyl and its analogues that drove the massive spikes in American overdose mortality appearing across Europe.<sup>1 2</sup> Between 2012 and 2020, 37 different new fentanyl analogues were identified as circulating in Europe's illicit drug supply by the EU Early Warning System, a joint partnership of 29 nations sharing forensic toxicology results within a single system (Council of the European Union 2024). A significant risk already exists, as by 2021 74% of overdoses in the EU were attributed to opioids and another estimated 1 million high risk opioid users live across the union (European Monitoring Centre for Drugs and Drug Addiction and Europol 2024). If the EU does not take sufficient preventative measures, that population would be severely at risk if fentanyl and its analogues were to be successful in supplanting heroin.

Fortunately, it appears that Europe is lagging behind the US in the breadth and extent of its burgeoning opiate crisis. Heroin is still the dominant opiate abused in Europe (Europol 2022). In the US, much deadlier fentanyl (and its analogues) surpassed heroin nearly a decade ago in 2015,

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<sup>1</sup> <https://www.economist.com/graphic-detail/2024/06/12/the-drug-overdose-capitals-of-europe>

<sup>2</sup> <https://foreignpolicy.com/2024/04/26/europe-could-soon-be-hooked-on-fentanyl/>



kicking off the so-called “third wave” of the country’s opiate epidemic (Hedegaard et al. 2021).<sup>3</sup> This lag provides Europe with an opportunity to avoid the missteps and policy failures that have driven the worst of America’s epidemic. There is much to be learned from examining the repeated failures of US drug policy. Hopefully those failures can inform the European response- perhaps allowing the EU to stave off the worst impacts of fentanyl’s rising tide.

## **A Recurring Theme Among Drug Policy Failures**

Consistently we have seen policies aimed at mitigating the harms wrought by drug epidemics fail due to the same, seemingly obvious, oversight of policymakers: drug users are rational consumers like those found in any other market and their demand for illicit narcotics is largely inelastic. Drug users shift the quantities that they demand in response to changes in price signals just like consumers elsewhere, albeit with less responsive adjustments due to the inelasticity of their demand. Researchers have consistently documented the inelastic demand for heroin and illicit opioids (see Saffer & Chaloupka (1999); Gallet (2014); Olmstead et al. (2015); and Diaz-Campo & Mancino (2023) among others). Users are not responding to increases in the costs of illegal drugs in the same way that the average buyer of apples responds to changes in produce prices. Addiction inherently means that users will demand some constant minimum quantity, regardless of changes in effective prices. This seemingly simple principle manifests itself as the mechanism of policy failure across domains.

On the so-called “harm reduction” side, researchers have observed that the increased availability of a potentially life-saving overdose reversing drug was associated with no change in overdose mortality, but an increase in opiate-related hospital admissions (Doleac & Mukherjee 2022). Similarly, another researcher found that despite syringe exchange programs being effective in reducing rates of HIV transmission, they also led to increased overdose mortality (Packham 2022). Both of these well-intentioned efforts unfortunately also served to lower the effective cost of drug use. Drug users, responding to this effectively lower price, manifested a (unfortunately named) textbook moral hazard problem: reduced costs allowed these users to engage in increased drug usage. This was reflected across numerous metrics and wrought ill effects. While these harm reduction approaches have succeeded in reducing some adverse outcomes, it is not a straightforward welfare calculation to compare those positive benefits to the negative impacts

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<sup>3</sup> The US has since entered a “fourth wave” of the opiate crisis, as fentanyl analogues are increasingly seen to have been used in conjunction with stimulant drugs in lethal overdoses (Ciccarone 2021).



brought on by increased drug consumption.

Now, regarding inelastic demand, we can look to supply-side enforcement efforts. The intention of most supply-side enforcement efforts follow the same script. Acknowledging that it is more or less impossible to remove all of the illicit drugs from a market, enforcement efforts are aimed at reducing the available quantity of the drug or increasing the economic costs to sellers. The logic follows that this would in turn lead to increased prices for consumers, which if the demand for narcotics is analogous to the demand for other common commodities would lead to an inward shift of the demand curve. Less narcotics would be demanded (and consumed) and a reduction in a myriad of adverse downstream outcomes would be observed.

Unfortunately, the demand for narcotics is not analogous to that of other commodities. Demand for illicit drugs is largely inelastic. Enforcement efforts drive substitution effects and a costly, due to the inherent risks of experimentation with narcotics, consumer search. Perhaps the best example of this all playing out is the US's attempt to stifle the blooming market for diverted pharmaceutical opioids in the early 2000's. In response to a wave of bad publicity and lawmaker pressure, the company behind the most commonly abused prescription pain killer replaced the drug with a new "abuse deterrent" reformulation. Predictably, reductions in the misuse of the drug were evident. However, users already hooked on the drug and saddled with an inelastic demand for opiates were not able to simply exit the market. Instead, widespread substitution to much more dangerous heroin was observed. This, detailed at length in Alpert et al. (2018), was the major causal contributor to America's massive increase in heroin overdoses.

This same sort of effect is evident across law enforcement efforts at stifling illicit drug use as well. Through what is essentially the same causal mechanism, crack downs aimed at individual rogue over-prescribing doctors lead to local increases in heroin usage and mortality (Soliman 2023). Efforts aimed at arresting street level narcotics dealers were observed to lead to immediate local increases in overdose mortality (Ray et al. 2023). The removal of known drug dealers precipitated a risky search among users to find new substitute sources for their supply. Sadly, trying these new unfamiliar sources often proved fatal for users. Removing sources of the narcotics does not eviscerate the inelastic demand for opiates among users. Instead, they substitute and search for alternative sources- often creating more dangerous situations than before.

## **Policies That Work**

Perhaps the past example of what does work, comes from somewhere else entirely. Moore & Schnepel (2024) examine a massive reduction in the heroin supply of Australia. Enforcement efforts at ports of entry were remarkably successful at preventing the entry of heroin into the country. Obviously, Australia is an island. There are no land routes that suppliers can substitute to. Further, during the early 2000's in which the supply shock occurred, there was no true substitute for heroin.



Fentanyl was yet to come to prominence and prescription opioids were much more expensive.<sup>4</sup> In this setting, there was no true direction for existing users to substitute to when the heroin supply was reduced. The authors track known drug users with administrative data, and find that in the very short run these users did try to find a substitute. There were increases in cocaine and methamphetamine use. Yet, these stimulants did not serve as a real substitute for the opiates removed from the market. After about a year use of those drugs returned to their baseline levels and, on account of the reductions in heroin use, overall mortality for these drug users was reduced.

In a setting in which there was nowhere for users to substitute towards enforcement effort worked exactly as intended. However, Europe is not an island. Land borders are porous and, given the minute volumes of fentanyl utilized by users relative to heroin, the prospect of preventing the flow of fentanyl from entering Europe seems improbable. Despite this, a recent law enforcement initiative in a United States city seems to elucidate a principle by which broad positive impacts can be realized after the drugs have entered a regional market. Detailed in Porreca (2024), the Kensington Initiative in America's largest open-air drug market sought to employ law enforcement intelligence efforts to solely target the most prolific operators of that market. Despite only physically targeting a 3 square kilometer area, the initiative spurred reductions in traffic to other regional illegal drug markets as far as 50 kilometers away. This initiative changed the trajectory of overdose mortality across the metropolitan area, leading to large reductions in overdose deaths relative to the rest of the country's cities.

That initiative worked because it cut off a regional supply chain. Efficiently targeted law enforcement efforts cut at the epicenter of a far reaching regional market. Like in the Australian example, the tendency towards search and substitution still remained among the area's users. However, like in that example, the initiative left users with a significantly reduced set of options to substitute towards. The supply shock precipitated in one small neighborhood reverberated regionally and effectively priced a large set of users out of the market. In addition to the observed reductions in overdose mortality, there is also an observed increase in the dispensing of a drug prescribed as treatment for opioid use disorder- evidence that users are truly seeking to exit the market for narcotics following the law enforcement induced supply shock.

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<sup>4</sup>The authors do observe an increase in opioid prescribing, evidence of some substitution from heroin to prescription alternatives- albeit not of a large enough magnitude to offset the positive impacts they observe.



## European Drug Policy

EU strategy for addressing illicit drugs is governed by the EU Drugs Strategy and Action Plan 2021-2025, adopted in 2020 by the Council of the European Union (General Secretariat of the Council 2020).<sup>5</sup> This policy delegates responsibility for addressing illicit narcotics among various EU agencies and member states. Interdiction of illicit drugs within the EU and at ports of entry is the responsibility of Europol, local member state law enforcement agencies, and the Maritime Analysis and Operations Centre Narcotics Division with the support of the European Commission's Internal Security Fund. Data collection efforts are managed by European Monitoring Centre for Drugs and Drug Addictions, which aggregates data collected by member states and has the authority to issue alerts and threat assessments. Member states engage in local law enforcement efforts, public health initiatives, and specific harm reduction initiatives. As such, the responses and attitudes of member states can vary widely as a function of their individual political atmosphere. However, all member states are tasked with carrying out the broad objectives, both supply and demand side, of the adopted EU Drugs Strategy.

This year, Italy took a massive step in becoming one of the first member states of the EU to adopt a national plan directly regarding fentanyl. The plan, drafted by the Department for Drug Policies, is largely two pronged; encompassing prevention and management objectives (Dipartimento Politiche Antidroga 2024). Its prevention efforts focus on both intercepting illicit fentanyl in an attempt to prevent the drugs from entering the market, as well as efforts to prevent legal pharmaceutical fentanyl from being diverted. Plans for increased levels of cooperation among law enforcement agencies and the judicial system and plans for increased international cooperation are included. Efforts to prevent pharmaceutical diversion include increased monitoring and security of pharmaceutical fentanyl and educational efforts aimed at healthcare workers. The plan further establishes a contingency public health plan for if synthetic opiates are able to proliferate throughout the country despite interdiction efforts. This plan includes training for health care workers to improve recognition and treatment of overdoses, increasing access to the overdose-reversing drug naloxone, education efforts aimed at the youth and high risk populations, and the implementation of operational procedures to respond to an emergency if it were to arise (Presidenza Consiglio dei Ministri 2024).

In her speech introducing the plan, Prime Minister Meloni directly referenced the American epidemic and referred to the hyper-lethality of the drug, calling it a "zombie drug" (Meloni 2024). It is commendable that Italy has made combating fentanyl a priority, before the drug and other synthetic opioids entrench themselves in the country. It seems as if the plan contains the primary elements needed to be successful. Particularly, despite details of the law enforcement components of the plan

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<sup>5</sup> [https://home-affairs.ec.europa.eu/news/how-eu-fights-illicit-drug-trafficking-2023-06-26\\_en](https://home-affairs.ec.europa.eu/news/how-eu-fights-illicit-drug-trafficking-2023-06-26_en)



being scarce, the fact that the plan explicitly references coordination of efforts with the anti-mafia commission suggests that law enforcement efforts will be focused on a high level of the supply chain (Presidenza Consiglio dei Ministri 2024). As detailed in Porreca (2024), high level enforcement efforts can induce downstream effects that create widespread supply shortages and prevent offsetting substitution effects. Coupling this sort of law enforcement approach with public health and harm reduction initiatives provides a very real chance of success in preventing the worst of fentanyl's impacts.

## Conclusions

As Europe begins to face the start of its own relationship with fentanyl, it is paramount that policymakers learn from the lessons of American and Australia in crafting their own response. Policymakers need to bear in mind that drug users are consumers who will respond to the changing economic environment wrought by their efforts. They will search for substitutes despite the best intentions of policy. However, initiatives that are conscious of this tendency can reap positive impacts. Rather than blind sweeps of street level dealers, a measured approach that is built on careful intelligence efforts aimed at identifying and disrupting regional epicenters should be employed. As is the case of the new Italian national plan, harm reduction efforts need to be rolled out alongside the disruptions of local markets, not as a replacement for law enforcement effort. Strategic policy that accounts for the behavior of drug users as consumers is the only chance Europe has to prevent the ravages of fentanyl, if the drug is to continue to take root here. We can only hope that our policymakers here take heed of the lessons learned by others.



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