

FENTANYL MARKETS, DISTRIBUTION, AND CONSUMPTION IN SOUTH AMERICA

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Executive summary

North America's opioid epidemic, driven primarily by fentanyl consumption, has raised alarm bells around the world. Fentanyl, like other synthetic drugs, has revolutionized the traditional illicit drug market. Unlike plant-based drugs such as cocaine or heroin—which depend on geographical, environmental, and temporal conditions for harvesting and synthesis—synthetic drugs can be produced year-round in clandestine urban or rural laboratories using chemicals that are often easily and legally accessible. Additionally, synthetic drugs, especially fentanyl, pose significant health risks to users, making them a pressing issue for governments globally.

This paper addresses the current dynamics of fentanyl's illicit production, distribution, and consumption in Colombia, Brazil, Chile, and Argentina and the actions that their governments are taking to prepare for and address this phenomenon.

As of mid-2024, illicit fentanyl distribution in South America has been very low, including in the four countries studied in this paper. However, aside from Argentina, the other three countries have experienced a significant increase in seizures of licit fentanyl—diverted from medical facilities—in the last few years of recorded data, albeit from a very low baseline. Even so, there is no evidence of fentanyl being illegally produced or extensively trafficked in the region. In very few cases, the seized illicit fentanyl had been trafficked from places like North America.

Similarly, law enforcement has identified only a few cases of fentanyl overdoses in the region, the vast majority of which involved fentanyl mixed into other illegal substances. However, many of the region's countries, such as Argentina, lack adequate monitoring and the forensic capacities to test for the presence of fentanyl and mostly do not do so. Thus, the prevalence of its use could be significantly undercounted. There is

no evidence so far that large, organized criminal groups are involved in the trafficking and distribution of fentanyl in Chile, Colombia, Argentina, or Brazil.

At this point, the biggest risk of an expanded illicit fentanyl supply in South America comes from local drug retail networks lacing other drugs with fentanyl to create demand without users' knowledge. This practice, seen in the early stages of the North American fentanyl epidemic, where small distributors mixed fentanyl with drugs like heroin to increase their potency and profits, led to a surge in addiction and overdose deaths. Although only a few cases of this strategy have been detected in South America, authorities have seized fentanyl-adulterated drugs in cities like Bogotá and Medellín in Colombia and São Paulo in Brazil. These incidents have heightened fears about the potential spread of fentanyl-laced drugs in the region and the possibility of a similar crisis to that seen in North America.

To prevent a fentanyl epidemic in South America, different strategies must be factored in, drawing on the approaches of public health professionals, public-private partnerships, and law enforcement. Early warning systems should be established to detect the possibility of increased use, overdoses, or production of synthetic opioids. Health care systems must expand addiction treatment programs, train professionals in responsible opioid prescribing, and make naloxone, a medicine that reverses opioid overdose, widely accessible. Law enforcement should enhance border controls, use advanced technologies, and implement focused deterrence strategies targeting key traffickers. Regulatory authorities need to enforce strict controls on fentanyl precursors, including rigorous tracking, inspections, and collaboration across sectors to prevent diversion into illicit markets. Partnerships with the private sector can be instrumental in preventing the diversion of substances from legal to illegal uses.

I. Introduction

North America's devastating fentanyl crisis has sparked concerns in other regions of the world about the possibility of contagion and about how prepared countries' health care and law enforcement systems are to respond to such a crisis. This paper explores the current incidence of fentanyl consumption, retail, trafficking, and production in Colombia, Brazil, Chile, and Argentina, the countries where most fentanyl seizures in South America have been detected. The paper also assesses the likelihood that regional fentanyl consumption or production will increase and, if so, how it may do so. It concludes by providing policy recommendations for preventing a future fentanyl crisis in the region.

This is no small task. After all, unlike in the case of South America's other traditionally produced and consumed illicit drugs—namely, marijuana and cocaine—there is only scant information on the production, distribution, and consumption of fentanyl in the region. There are several reasons behind this. One reason is that fentanyl is a legal drug used as an anesthetic and for pain relief. In addition, its consumption, like that of other opioids, is not widespread in South America, so authorities do not systematically monitor fentanyl, including the incidence and patterns of production, retail, and consumption as well as overdose deaths. Information about fentanyl seizures is also limited, incomplete, and contradictory (even across government agencies of the same country), particularly because it lacks information about the source of the seized fentanyl. Thus, in addition to using open-source information, the research conducted for this paper includes interviews with experts and government authorities in the region and information provided by governments upon requests from the authors.

As of July 2024, there have been few detected instances of fentanyl smuggling or consumption in South America. There is no concrete evidence of illegal production of fentanyl in the countries analyzed, and the links of organized crime

in these dynamics have been mostly through local, low-scale distribution groups without the main criminal groups' greater involvement. Most fentanyl seized by law enforcement agencies in the region has involved fentanyl diverted from countries' health care systems. Although this fentanyl is purer than illicitly produced fentanyl, it poses fewer risks because it has been manufactured according to pharmaceutical standards and with the required measures for medical treatment. However, the handling of pharmaceutical fentanyl by individuals or traffickers without medical and chemical knowledge poses a serious risk to the health of the end users of these substances. In a few cases, the seized fentanyl did not come from diversion from medical use, but instead from illegal supply chains outside of the region, mainly in North America. Only a very low number of fentanyl seizures have taken place in the region. Several fentanyl overdose deaths have occurred in some cities, with high-profile media coverage, but these cases have only been sporadic. However, most of the countries studied in this paper have seen an increase in seizures of fentanyl for medical use in the last few years of recorded data, which raises concerns for government authorities in these countries.

The current limited incidence of fentanyl use and production in South America and the aforementioned dynamics, however, should not lead to policy complacency. South American countries should proactively address the emerging threat of synthetic opioids like fentanyl by enhancing monitoring systems, improving law enforcement strategies to dismantle illegal networks, and enforcing stringent regulatory controls over the chemical precursors used in the production of fentanyl and other synthetic opioids. Collaboration between the public and private sectors is crucial for preventing the diversion of substances into illegal markets, while demand reduction strategies and expanded health care services should be prioritized to mitigate the impact of potential opioid misuse. Additionally, maintaining balanced access to medical opioids is essential for avoiding the pitfalls seen in other regions.

This paper is divided into five sections, beginning with this introduction. The second section examines the preconditions that preceded the opioid crisis in North America. While these preconditions are not the only factors that are applicable to different contexts, they help identify significant risks for South America. The third section analyzes the current dynamics of the illicit production, distribution, and consumption of fentanyl in Colombia, Brazil, Chile, and Argentina—the four South American countries where most fentanyl seizures have been reported over the last five years. Drawing on the main preconditions that preceded the opioid crisis in North America and the dynamics identified in the four countries studied, the fourth section assesses the conditions and key risk factors for the potential emergence of a fentanyl crisis in South America. Finally, the fifth section presents concluding remarks and the main policy recommendations.

II. Key factors driving the fentanyl crisis in North America

The U.S. Center for Disease Control and Prevention (CDC) has demarcated three key moments in the opioid crisis in the United States.¹ First, in the 1990s, the overprescribing of medical opioids led to the development of opioid addictions and associated overdose deaths. Some of these individuals began to seek stronger opioids on the streets, primarily heroin, leading to the second phase of the crisis between 2010 and 2013, when deaths associated with heroin use increased. Then, from 2013 until now, the third wave of the opioid crisis has been characterized by the use of more potent opioids, such as fentanyl.

It is important to note that no single factor explains the fentanyl epidemic that North America has faced.² Rather, a confluence of several supply, demand, and technological factors lies behind the crisis. Some of these elements are common around the world, including South America, while others are specific to particular countries.

The primary factor is the existing demand for both legal and illegal opioids. In the United States, an inadequate regulatory framework, combined with irresponsible and even criminal practices in the prescription of opioids like oxycodone, led to a substantial population of individuals dependent on these substances. The lack of proper regulation and oversight, combined with the aggressive promotion of oxycodone and other prescribed opioids by some pharmaceutical companies, led to widespread overprescription. Many patients who were initially prescribed with oxycodone for legitimate pain management became dependent on the drug due to its highly addictive nature. Over time, this created a large population of opioid-dependent users, many of whom turned to more potent opioids, including heroin and eventually fentanyl, as their tolerance increased and as access to prescription opioids became more restricted.³ This baseline demand for opioids was a necessary and important condition for the emergence of the fentanyl crisis in 2013.⁴

Supply development is the second key element. In the United States, fentanyl has not been a starting drug. Instead, it only managed to penetrate the market once retailers integrated it in their quest to lower prices or circumvent existing laws.⁵ Until around 2019, it was uncommon for opioid users in the United States to specifically seek out fentanyl. Instead, the demand was primarily for prescription opioids like oxycodone and illicit heroin. Numerous reports and studies documented instances where users, who had been unknowingly provided with fentanyl instead of the heroin or prescription opioids they expected, expressed dissatisfaction due to its potency and unpredictability.⁶ This involuntary exposure to fentanyl was largely driven by small-scale traffickers who mixed fentanyl into heroin,

methamphetamine, and cocaine to increase the drugs' potency and their profits.⁷ It was not until fentanyl became more entrenched in the U.S. drug market around 2019 or 2020 that some users began to specifically seek it out for its powerful effects.

Other factors contributed to the unleashing of the fentanyl crisis in North America: chemical innovations, regulatory deficiencies, and technological changes.⁸ The chemical factors include the spread of simpler and more efficient methods of fentanyl production. Recipes to produce fentanyl are now available on the web. Precursors, or chemicals used to produce fentanyl, are marketed through e-commerce platforms, and some of these substances can even be obtained legally, given the relaxed regulations on some of them due to their broad licit uses.

Initially, most of the fentanyl arriving in the United States came from countries with major chemical and pharmaceutical industries such as China and India.⁹ These substances were marketed over the internet and even sent by mail to the United States. Deficient regulatory schemes and the enormous size of China's chemical and pharmaceutical industries enabled China to become the top supplier of illegal fentanyl and fentanyl chemical precursors to countries like Mexico, which experienced a surge in fentanyl production.¹⁰ Once China, under U.S. pressure, scheduled the entire class of fentanyl-type drugs in May 2019, Mexico became the main source of fentanyl seized in the United States. Following bans in China, Chinese smuggling networks shifted to supplying fentanyl precursors to buyers in Mexico where illegal fentanyl producers—known as cooks—began pressing fentanyl into blue pills that are designed to look like medicated opioids such as oxycodone.¹¹ In some cases, the lack of specialized knowledge among these cooks resulted in some pills containing more than two milligrams of fentanyl, which is a lethal dose for most people.¹² These innovations and technological factors are not confined to a specific country; the technological knowledge required is readily available to anyone with internet access.

Mexico's experience is crucial for understanding how the illegal production of fentanyl can emerge in various countries. This is primarily because the fentanyl supply chain, like that of other synthetic drugs, operates within some of the world's most significant industries and through global trade and transportation networks. In other words, the line between legality and illegality is even more tenuous in the supply chains of synthetic drugs compared to those of plant-based drugs. In Mexico, illicit fentanyl producers access precursors, pre-precursors, and essential chemicals from various chemical companies worldwide. China and India have been the primary suppliers, but they are not the only ones. Even companies in countries such as Germany and the United States have sold chemical precursors to networks of brokers and illicit fentanyl producers.¹³ This poses a challenge for the countries analyzed, considering that Brazil, Colombia, Chile, and Argentina host large chemical industries.¹⁴ Understanding this interconnectivity between illegal and legal markets is crucial for preventing the diversion of legal precursor chemicals for the production of illicit drugs.

Similarly, Mexico's experience has shown that the barriers to entry in the fentanyl market are lower compared to those of other drugs.¹⁵ A variety of actors are involved in the fentanyl supply chain, including producers and traders of chemical precursors, brokers and importers, cooks, and criminal groups involved in trafficking the drug to the United States.¹⁶ This presents a significant challenge for regulators and law enforcement agencies, as it indicates that while targeting major criminal networks is important, it is not the only approach to addressing the issue of synthetic drugs like fentanyl. This level of global interconnectivity and the fuzzy distinctions between legality and illegality in the synthetic drug supply chain is perhaps the main challenge facing governments in this regard, a dynamic that extends beyond fentanyl.

The next section will discuss the cases of Colombia, Brazil, Chile, and Argentina. More precisely, it will address the prevalence rates of

medical and illegal opioid use; the main cases of fentanyl seizures and the source of these drug supplies; documented cases of overdoses and overdose deaths; the level of knowledge and monitoring by health care, law enforcement, and regulatory authorities; and the involvement (or lack of involvement) of organized crime groups in these countries in the production, trafficking, or distribution of fentanyl.

III. Fentanyl in Colombia, Brazil, Chile, and Argentina

COLOMBIA

Illicit fentanyl has not traditionally been common in Colombia. However, the recent increase in seizures of medical fentanyl over the past two years may indicate a growing presence of this drug in the country's illicit drug markets.

Historically, Colombia has not had a large, established illegal market for opioids, whether plant-based or synthetic. Instead, Colombia's illicit market has revolved around cocaine, with the country being the world's leading producer of this drug.¹⁷ There is also minimal consumption of illicit opioids in Colombia. According to the latest Colombian National Study of Psychoactive Substances, published in 2019, the lifetime prevalence of nonprescription opioid use in the country— including morphine, oxycodone, hydrocodone, tramadol, hydromorphone, and fentanyl—was 0.86% among individuals aged 12 to 65.¹⁸ The prevalence rate for the previous 12 months was 0.28%. The specific figure for heroin use was even lower, at 0.09% of Colombians aged 12 to 65 who reported having used the drug at some point in their lives, with a prevalence rate of 0.02% over the last 12 months. This contrasts with the figures for other substances among individuals aged 12 to 65, such as marijuana (8.3%) and cocaine (2.1%).¹⁹

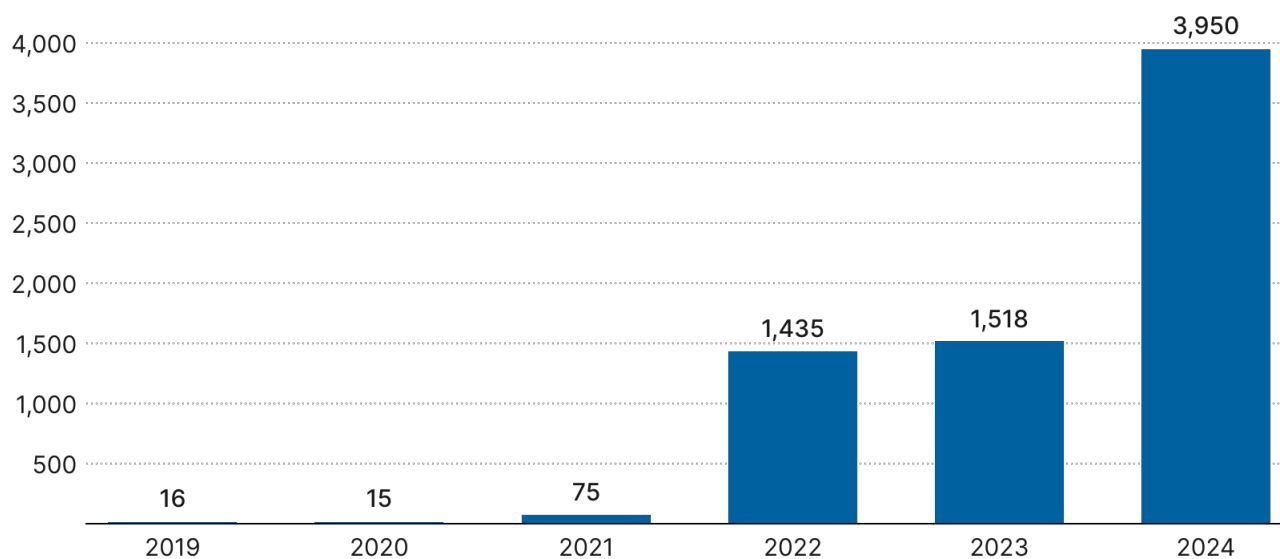
“Heroin is not a frequently used substance, and opioid-type drugs such as oxycodone, methadone, and fentanyl are even less common,” according to an exchange of electronic communications with the Early Warning System of the Colombian Drug Observatory, a unit of the Ministry of Justice and Law. “These cases do occur and are susceptible to abuse, but they are not among the substances primarily used, traded, and trafficked in the country.”²⁰

The Colombian Drug Observatory first warned about the presence of illegal fentanyl in the country in 2019, following the seizure of oxycodone and fentanyl vials in the cities of Pereira and Cali, respectively.²¹ However, the report cautioned that no illegal market for fentanyl had been identified in the country. In contrast, NGOs such as Acción Técnica Social (ATS) claimed that recreational use of fentanyl had been present in Colombia since 2014, though it was mainly concentrated within the medical profession.²²

Since 2019, Colombia has been experiencing a steady increase in cases of fentanyl being diverted from medical facilities. In 2021, 75 illegally diverted vials were seized; this number rose to 1,435 in 2022 (an increase of 1,813% in just one year), 1,518 in 2023, and 3,950 in the first three months of 2024, marking a massive escalation (see Figure 1).²³

FIGURE 1

Fentanyl seizures in Colombia, 2019–2024



Note: Data available until March 2024.

Source: Colombian National Police.

Colombian authorities have yet to identify where the country's health care system or supply chain is leaking fentanyl into the illegal market. However, some of the most recent seizures of fentanyl vials have involved individuals connected to the health care sector. In August 2023, a young student working at a clinic in the city of Cúcuta was caught in possession of 98 vials of fentanyl intended for hospital use.²⁴

Colombia's National Narcotics Fund (Fondo Nacional de Estupefacientes, FNE) tightly regulates and monitors the distribution of fentanyl. The regulatory regime for medical fentanyl mandates detailed reporting, including information about the prescribing physician, the patient recipient, the amount of fentanyl prescribed and dispensed, and the time of administration. Other actors in the supply chain include the pharmaceutical industry, drug distributors, hospital networks, and drugstores. Despite the controls, the authorities continue to analyze where these diversions are taking place.

Beyond the diversion of medical fentanyl, two other cases involving illegal fentanyl were identified in Colombia in 2021 and 2022.²⁵ In 2021, a small group of young people in the city of Cartagena became intoxicated with a combination of fentanyl and β -hydroxythiofentanyl, but it is unknown where they obtained the fentanyl. In 2022, a shipment of heroin adulterated with p-fluorofentanyl was seized at El Dorado International Airport in Bogotá, en route from the United States to the Colombian city of Itagüí, in the department of Antioquia. The authorities did not disclose further details about the case.

A combination of ketamine and fentanyl appears to be present in Colombia within the context of the production and commercialization of *tusi*, a synthetic drug typically composed of ketamine, ecstasy, and other substances. Subsequently, in 2023, 163 vials of fentanyl were seized in Bogotá from an individual who was also found with ketamine and amphetamines—drugs that have been detected in the analysis of *tusi* samples in the country.²⁶ Analyses of *tusi* by civil society

organizations, such as ATS, and even by some government institutions, have not found licit or illicit fentanyl in the samples of *tusi*. However, recently, the Anti-Narcotics Division of the Colombian National Police discovered small traces of fentanyl in *tusi* samples in the city of Medellín.²⁷

According to an analysis by the Colombian Drug Observatory, between 2013 and 2023, 30 fentanyl overdose deaths were reported in the country.²⁸ In 34.8% of these cases, fentanyl was mixed with other drugs, primarily ketamine.

An official from the Anti-Narcotics Division of the Colombian National Police mentioned that police have not identified the involvement of any organized crime groups in the diversion of pharmaceutical fentanyl or the trafficking of illicit fentanyl. The police have not found evidence of foreign criminal groups involved in the trafficking of illicit fentanyl, although law enforcement considers it a potential risk, given that major Colombian criminal groups have alliances with organizations such as the Sinaloa Cartel and the Jalisco New Generation Cartel (Cartel de Jalisco Nueva Generación, CJNG).²⁹ Nor does the Anti-Narcotics Division have information indicating that illicit fentanyl is being produced in Colombia or entering the country's market illegally, though it identifies this as a risk.³⁰

While there may be no involvement by the country's large criminal groups—such as the Gulf Clan, also known as the Gaitanist Self-Defense Forces of Colombia (Autodefensas Gaitanistas de Colombia, AGC), the dissidents from the Revolutionary Armed Forces of Colombia (Fuerzas Armadas Revolucionarias de Colombia, FARC), or the National Liberation Army (Ejército de Liberación Nacional, ELN)—the increase in fentanyl vial seizures and related arrests reported by the press does point to the involvement of small, local criminal groups.

The small, localized networks involved in the production and commercialization of *tusi* in cities like Medellín are sourcing medical opioids to mix

into the drug.³¹ While they may have permission from larger criminal groups to distribute drugs in certain territories, they often operate with some degree of independence. The main criminal groups in Medellín, for their part, have denied any involvement in the fentanyl market in the city or approval of its distribution in their controlled territories.³² Given the presence of fentanyl in *tusi* samples, there are several possibilities: the large criminal groups that control the city ignore this issue, are unaware of it, or fail to control the smaller drug distribution networks.

According to information authorities have revealed to some media outlets, other criminal groups, such as La Cordillera, which has a significant presence in the country's coffee-growing region, also access medical fentanyl to sell at parties, either on its own or mixed with *tusi*.³³

Regarding the risk of fentanyl production in the country, Colombia's extensive history of cocaine production has led to robust regulation of companies handling precursor chemicals. The Ministry of Justice and Law oversees the administrative control of chemical precursors for natural drugs, while the National Narcotics Fund manages the precursors associated with pharmaceuticals and synthetic drugs such as fentanyl. The Colombian National Police handles operational controls.

Companies seeking permits to handle chemical precursors must submit an import plan detailing their suppliers abroad, the quantities of substances to be imported, entry points, and transit routes to the chemicals' final destination.³⁴ They must also provide a production plan specifying at which point in the process the chemical precursors will be used and in what quantities, along with a distribution and purchasing plan that accounts for both suppliers and final customers. The Colombian chemical industry is important. It accounts for around 1.5% of the country's GDP, and by 2022, more than 10,000 chemical companies in the country were generating 246,000 jobs.³⁵

While Colombia controls the main precursors and pre-precursors of fentanyl—including 4-anilino-N-phenethylpiperidine (ANPP), piperidine, and N-phenethyl-4-piperidone (NPP)—it lacks regulations on other key chemicals used in the production of this opioid, such as 4-anilinopiperidine (4-AP), 1-boc-4-anilinopiperidine (1-boc-4-AP),

4-piperidone, 1-boc-4-piperidone, norfentanyl, and benzylfentanyl (see Table 1). This represents a significant loophole that could be exploited for the diversion of these substances into illicit opioid production. Despite this, the Anti-Narcotics Division has no record of fentanyl precursor seizures in the country.³⁶

TABLE 1

Fentanyl precursors that are regulated in Colombia

Substance	Type of substance	Substance regulated
Norfentanyl	Precursor	
Benzylfentanyl	Pre-precursor	
1-benzyl-4-piperidone	Pre-precursor	
1-benzyl-4-phenyliminopiperidine	Pre-precursor	
1-benzyl-4-anilinopiperidine	Pre-precursor	
Piperidine	Pre-precursor	X
Propionic anhydride	Pre-precursor	
4-anilino-N-phenethylpiperidine (ANPP)	Precursor	X
N-phenethyl-4-piperidone (NPP)	Pre-precursor	X
4-piperidone	Pre-precursor	
1-boc-4-piperidone	Pre-precursor	
1-phenethyl-4-phenyliminopiperidine	Pre-precursor	
4-anilinopiperidine (4-AP)	Pre-precursor	
1-boc-4-anilinopiperidine (1-Boc-4-AP)	Pre-precursor	

Source: [Colombia's Ministry of Health](#).

The Colombian government's 2023 national drug policy includes an action plan to address the synthetic drug supply chain, including fentanyl. This strategy focuses on several key elements: controlling chemical precursors; enhancing technologies to identify substances and generate early warnings; sanctioning the diversion of drugs to illicit markets; and strengthening the country's control, technological, and regulatory

capacities.³⁷ The country's strategy has four main components: international cooperation for the exchange of information and training; prevention; interagency collaboration with other entities; and research and intelligence to identify patterns behind the diversion of this opioid. For their part, institutions such as the Colombian National Police have established a unit specializing in fentanyl.

BRAZIL

Like in Colombia, opioid use in Brazil appears to be relatively low, with fentanyl use being particularly minimal.

Francisco Bastos, coordinator of the research network on substance use and abuse at Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro and senior researcher at Fundação Oswaldo Cruz (FIOCRUZ)—a research center based in Rio de Janeiro that specializes in biological sciences research and development—mentioned that there is currently no significant market for opioids in the country.³⁸ Instead, Brazil is one of the largest cocaine consumption markets in South America.³⁹

According to the Third National Study on Drug Use in the Brazilian Population, the most recent nationwide drug use survey conducted and coordinated by Bastos, 3.1% of Brazilians aged 12 to 65 consumed powdered cocaine, while only 0.3% used heroin.⁴⁰ The drugs with the highest lifetime prevalence were marijuana, hashish, and skank, with 7.7% of the population aged 12 to 65 having consumed them.⁴¹ The survey also found that the lifetime prevalence rate for benzodiazepines without a prescription was 3.9%, while the lifetime prevalence for opioids was 2.9%. The opioid prevalence rate in the 12 months prior to the survey was 1.4%, and the figure was 0.6% for the last 30 days.⁴²

The low cost and widespread availability of cocaine in Brazil, compared to heroin, largely drives cocaine use in the country.⁴³ Brazil's neighbors are major global cocaine producers—Colombia, Peru, and Bolivia—and Brazil serves as a significant transshipment hub for cocaine destined for Europe. Over the years, as trafficked drugs have leaked into the domestic market, Brazil has developed a substantial appetite for this stimulant.

Yet, despite the dominance of cocaine, the presence of fentanyl in Brazil is not new. In fact, fentanyl seizures date back to 2009, when the Brazilian Federal Police seized eight boxes of

Fentanest, the commercial name for fentanyl citrate, in the eastern zone of São Paulo.⁴⁴ The seizure also involved 108 kilograms of cocaine. Following this, the police launched an operation and uncovered a network that was legally purchasing the drug and diverting it to the illegal market. Between 2009 and 2022, a total of 1,215 vials of fentanyl, 3,735 seals (papers containing chemicals intended for oral consumption), and 70,173 milligrams of fentanyl were seized in Brazil, primarily in São Paulo, according to data provided by the Brazilian Federal Police in response to a request for information made by the authors of this paper.⁴⁵

Since then, other seizures have occurred. In February 2023, the Brazilian government seized 31 vials of medical fentanyl in Vitória, the capital of the southeastern state of Espírito Santo.⁴⁶ In August, another 41 vials were seized.⁴⁷ The site of the arrest, an abandoned house used as a drug mixing and distribution facility, also contained cocaine, coca base, paste, and other chemicals such as anesthetics, acetone, ether, and norepinephrine. During the same month, 14 vials of fentanyl were seized in Rio Novo do Sul, also in Espírito Santo, along with three kilograms of cocaine and one kilogram of crack.⁴⁸ The drugs were being transported by a man traveling in a vehicle on a state highway; the substances were discovered during a police search. In November 2023, 50 vials of fentanyl and a kilogram of cocaine were seized as a man was transporting the drugs through the northwest of Rio de Janeiro.⁴⁹ According to the authorities, the man transporting the drugs was a member of the Red Command (Comando Vermelho), Brazil's oldest criminal group.⁵⁰

No illegal production of fentanyl has been identified in Brazil. Instead, the reported seizures have involved the diversion of fentanyl from medical facilities. However, the specific point in the medical supply chain where these diversions are occurring has not yet been identified. "Opioids have never thrived in Brazil. Never," said Bastos. "What we have is an increase in sales of legal opioids and some diversion."⁵¹

Brazil's Health Regulatory Agency (Agência Nacional de Vigilância Sanitária—Anvisa) regulates the commercial distribution of medical fentanyl. Any company supplying medical fentanyl must be registered with and licensed by Anvisa and is subject to its evaluations and regulatory requirements. However, weaknesses in the system remain.

Given the large size of Brazil's chemical industry, control over chemical substances and the companies that handle them is crucial. Brazil and Mexico are the largest chemical markets in Latin America.⁵² In 2022, Brazil was the tenth-largest

chemical market worldwide based on earnings.⁵³ In 2023, it experienced growth of 8.2% and is supported by commercial alliances with different continents.⁵⁴ Among the countries analyzed, Brazil controls the second-largest number of fentanyl precursors and pre-precursors, including norfentanyl, piperidine, propionic anhydride, ANPP, NPP, 4-AP, and 1-boc-4-AP (see Table 2).⁵⁵ Additionally, Brazil has established control mechanisms for companies engaged in commercial operations with chemical precursors to ensure the traceability of these substances throughout all stages of the production and distribution supply chain.⁵⁶

TABLE 2

Fentanyl precursors that are regulated in Brazil

Substance	Type of substance	Substance regulated
Norfentanyl	Precursor	X
Benzylfentanyl	Pre-precursor	
1-benzyl-4-piperidone	Pre-precursor	
1-benzyl-4-phenyliminopiperidine	Pre-precursor	
1-benzyl-4-anilinopiperidine	Pre-precursor	
Piperidine	Pre-precursor	X
Propionic anhydride	Pre-precursor	X
4-anilino-N-phenethylpiperidine (ANPP)	Precursor	X
N-phenethyl-4-piperidone (NPP)	Pre-precursor	X
4-piperidone	Pre-precursor	
1-boc-4-piperidone	Pre-precursor	
1-phenethyl-4-phenyliminopiperidine	Pre-precursor	
4-anilinopiperidine (4-AP)	Pre-precursor	X
1-boc-4-anilinopiperidine (1-Boc-4-AP)	Pre-precursor	X

Source: [Brazil's Federal Police](#); [Health Regulatory Agency](#), [Ministry of Health](#).

The involvement of organized crime in Brazil's fentanyl dynamics appears to be limited to local drug distribution and commercialization. A security analyst in São Paulo, who requested anonymity, noted that Brazil's major criminal groups, such as the First Capital Command (Primeiro Comando da Capital, PCC), remain focused on international cocaine trafficking—a market that continues to generate significant profits.⁵⁷ “They are much more concerned about the cocaine routes because these are what really make them a lot of money in the tri-border area. What we have is a very strong connection with cocaine,” said the analyst.⁵⁸ Meanwhile, it is the smaller local drug distribution networks, which buy cocaine from the PCC, that reduce the purity of the drug by adding other chemicals, possibly including fentanyl and ketamine, according to the analyst.⁵⁹

The quantities of fentanyl seized in Brazil have been low. However, the quantities of cocaine found during these fentanyl seizures are so significant that it is evident that distributors may be mixing fentanyl and cocaine. Other types of mixtures involving fentanyl are occurring on the streets, with users often unaware that they are consuming drugs adulterated with fentanyl. In 2023, the Campinas Toxicological Information and Assistance Center (CIATox) issued an alert about the presence of fentanyl in synthetic cannabinoids, LSD, and cocaine in the city of Campinas, in the state of São Paulo.⁶⁰

Brazil is only now starting to develop preparedness plans for confronting a more intense influx of illicit fentanyl into the country. Enhancing training, detection, toxicology, and analysis of seized fentanyl are all important steps.

In electronic correspondence with the authors, Rony Costa, director of the Brazilian Society of Toxicology, emphasized that increasing the capacity of laboratories to identify and quantify fentanyl in clinical cases of intoxication and in seized drugs is crucial for developing a more comprehensive understanding of illicit fentanyl use and trafficking in Brazil.⁶¹ Ensuring tighter

control over supply chains and reducing the diversion of fentanyl from Brazil's medical sector, while maintaining its availability for surgeries and pain management, are increasingly necessary objectives, according to Brazilian government officials.⁶² Expanding the availability of naloxone is also essential.

Similarly, written correspondence with Brazil's National Secretariat for Drug Policy and Asset Management at the Ministry of Justice and Public Security emphasized the need for a comprehensive and multifaceted approach to address the challenge of fentanyl in Brazil.⁶³ This includes strengthening early warning systems to ensure the dissemination of fentanyl alerts to public health authorities, law enforcement officials, and the public, as well as improving interagency cooperation.

CHILE

Although fentanyl consumption in Chile is not significant, seizures of medical fentanyl diverted to illicit markets have increased in recent years, raising concerns among authorities. Chile does not have significant opioid use among its population. According to the country's Fifteenth National Study on Drugs in the General Population for 2024, the use of analgesic drugs in the 12 months prior to the survey—including codeine, tramadol, morphine, methadone, fentanyl, oxycodone, and others—was reported by 1.5% of the population interviewed between 2022 and 2023.⁶⁴ This figure represents an increase compared to the same measurement in 2020 and 2018, when 1.2% of respondents reported having consumed nonprescription analgesics in the past year. The lifetime prevalence of nonprescription analgesic use among individuals aged 12 to 64 was 3.5% in 2022, according to estimations the Chilean National Service for the Prevention and Rehabilitation of Drug and Alcohol Abuse provided to the authors.

According to an analyst of drug consumption in Chile, who spoke under the condition of anonymity, there are no indications of a significant market for fentanyl consumption in the country, based on surveys and analyses conducted by the government.⁶⁵ The Chilean Forensic Medical Service reported 31 deaths between 2018 and 2023 in which fentanyl was identified, regardless of whether fentanyl was the cause of death. The cities with the most cases were Santiago (13), Iquique (12), Concepción (4), and Temuco (2).⁶⁶

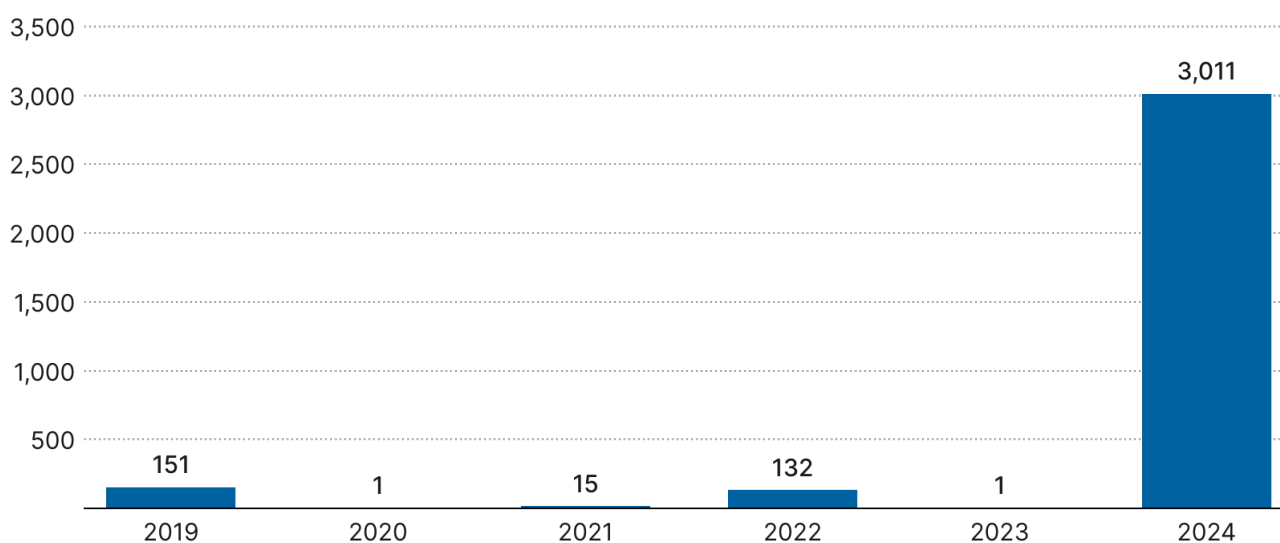
However, there has been an increase in the consumption of other synthetic drugs in Chile, such as ketamine—used in the production of *tusi*—as well as ecstasy and amphetamine-type stimulants. “One of the things we have seen recently is a noticeable increase in the consumption of synthetic drugs, especially among the younger population,” said an official from Chile’s National Prosecutor’s Office in an interview with the authors.⁶⁷

Though the trend is not fully consistent, seizures of fentanyl in Chile have significantly increased recently (see Figure 2). According to the Chilean Investigations Police, between 2019 and the first four months of 2024, a total of 1,131 vials of fentanyl were seized. Notably, there was a large spike in the first four months of 2024, during which 831 vials were seized, primarily in the Santiago metropolitan region.⁶⁸

In addition, June 2024 saw the largest fentanyl seizures in the country, when 1,195 vials were found during police raids in the Antofagasta region.⁶⁹ According to an official from the Carabineros de Chile’s Anti-Drug Department, the vials had been stolen from a truck transporting the fentanyl, but they did not reveal any further information about the case.⁷⁰ There have also been seizures of medical fentanyl from other countries. The most recent seizure occurred in August 2024, when 985 vials of fentanyl were seized in a shipment coming to Chile from Paraguay (see Figure 2 for a total tally).⁷¹

FIGURE 2

Fentanyl seizures in Chile, 2019–2024



Note: Data is current through early August 2024.

Source: Chilean Investigative Police and National Prosecutor’s Office.

In the majority of these seizures, the fentanyl had been diverted from medical supply chains. “We have seen recent growth in the theft of fentanyl vials, many of which then enter the illicit drug trafficking market,” an official from Chile’s National Prosecutor’s Office told the authors. “There are individuals within the health network who divert some quantities, but there is also a shift towards a more organized phenomenon, with individuals able to move larger quantities of fentanyl in vials.”⁷²

This leakage of medical fentanyl into the Chilean illicit market is occurring despite strict regulations. The Public Health Institute of Chile, the agency responsible for controlling and monitoring fentanyl, sets requirements for the importation, transportation, distribution, sale, and disposal of psychotropic and narcotic drugs, including fentanyl.⁷³ However, the escalating theft of fentanyl highlights weaknesses in the controls placed on the supply chain, such as in Chilean laboratories.⁷⁴ Communication between the Public Health Institute and distributing companies and laboratories may be one such weakness.

Chilean authorities have also seized fentanyl during raids targeting other illicit drugs, including cocaine, ecstasy, ketamine, and marijuana.⁷⁵ For example, in 2023, Chile’s Drug Early Warning System issued an alert about a green substance containing fentanyl, caffeine, morphine, etizolam, phenylpropanolamine, xylazine, acetylcodeine, and 6-monoacetylmorphine.⁷⁶ Similarly, between 2019 and 2020, the Public Health Institute of Chile analyzed over 820 samples in which ecstasy was found to be mixed with tramadol, another medical opioid, indicating an increase in such adulterations compared to previous years.⁷⁷

While Chilean authorities have not identified direct mixtures of fentanyl with other drugs, they have acknowledged that it could be happening. “I would not rule out the possibility that they are indeed mixing it with other chemical substances, especially considering the growth and increased number of seizures we have observed,” said one official.⁷⁸

Nonetheless, the co-location of fentanyl with other illicit drugs may indicate the emergence of criminal fentanyl markets in Chile, a trend that indicates that local criminal drug networks are experimenting with introducing fentanyl into local drug markets. Given the growing consumption of synthetic drugs in the country—especially ketamine, seizures of which rose from seven kilograms in 2017 to 381 kilograms as of August 2023⁷⁹—there is a risk that fentanyl could begin to be mixed with this drug or replace it in the production of *tusi*.

El Tren de Aragua, the Venezuelan mega-gang with a presence in Chile, appears to be the main group behind the flow of ketamine into the country, according to police investigations.⁸⁰ While the group has not been linked to fentanyl diversions, this does not mean there is no risk. In addition to El Tren de Aragua, other international actors have been identified in investigations by Chile’s Attorney General’s Office, including Mexican criminal groups such as the Sinaloa Cartel and CJNG, as well as the Trinitarios, a criminal group from the Dominican Republic.

While no direct links between these foreign criminal groups and fentanyl dynamics in Chile have been found, authorities are closely monitoring this potential threat, according to Roberto Contreras, a professor at the University of Chile and a researcher who studies organized crime.⁸¹ “Mainly, the concern comes from El Tren de Aragua and the external organizations that work with them,” said Contreras. “The increase in homicides is a current worry and is clearly linked to the illicit drug trafficking activities of foreign organizations that have settled in our country. These organizations have brought with them execution methods that were not previously common in our national territory.”⁸²

The Chilean government has been implementing various strategies in response to these risks. An information exchange system between various institutions has been established, which has been key to controlling, investigating, and prosecuting diversion cases, according to Contreras.⁸³

Additionally, the work of institutional drug observatories has made it possible to identify patterns associated with the use and impact of substances such as fentanyl in Chile.

Likewise, the authorities have closely monitored the dynamics of chemical precursors to prevent possible diversions and target suspicious chemical operations. Significant controls are exercised over individuals and companies handling chemical precursors in the country. In May 2024, some of the main precursors and

pre-precursors of fentanyl were added to the list of controlled substances.⁸⁴ Currently, the country controls norfentanyl, piperidine, ANPP, NPP, 4-AP, and 1-boc-4-AP, which represents an important advance in preventing the diversion of substances for the illegal production of synthetic opioids (see Table 3). It is important to note that Chile has a significant chemical sector. In 2022, chemical exports accounted for 14% of the country's total exports.⁸⁵ Additionally, the Chilean chemical industry represents around 2% of the country's GDP.⁸⁶

TABLE 3

Fentanyl precursors that are regulated in Chile

Substance	Type of substance	Substance regulated
Norfentanyl	Precursor	X
Benzylfentanyl	Pre-precursor	
1-benzyl-4-piperidone	Pre-precursor	
1-benzyl-4-phenyliminopiperidine	Pre-precursor	
1-benzyl-4-anilinopiperidine	Pre-precursor	
Piperidine	Pre-precursor	X
Propionic anhydride	Pre-precursor	
4-anilino-N-phenethylpiperidine (ANPP)	Precursor	X
N-phenethyl-4-piperidone (NPP)	Pre-precursor	X
4-piperidone	Pre-precursor	
1-boc-4-piperidone	Pre-precursor	
1-phenethyl-4-phenyliminopiperidine	Pre-precursor	
4-anilinopiperidine (4-AP)	Pre-precursor	X
1-boc-4-anilinopiperidine (1-Boc-4-AP)	Pre-precursor	X

Source: Chile's Ministry of Home Affairs and Public Security

Similarly, the Chilean government has made legal adjustments to enhance its capacity to prosecute foreign criminal organizations in Chile that are behind the flow of synthetic drugs, such as ketamine, into the country. In addition, given the risk of a possible influx of illicitly produced fentanyl into the country, government officials have strengthened protocols and policies to contain this potential issue if it were to arise.⁸⁷

Chile's National Drug Strategy 2024-2030 aims to strengthen the registration and control systems for substances that can be used in the production of synthetic drugs.⁸⁸ It also seeks to enhance the early warning system to help authorities obtain timely information on changes in consumer markets. Additionally, the strategy focuses on designing and implementing measures to prevent the diversion of medical drugs, such as fentanyl, to the illegal market.

ARGENTINA

The consumption of opioids in Argentina is higher than in the other South American countries analyzed in this paper. However, rather than trending upward, this dynamic has remained stable over time. According to the 2023 National Survey on Consumption and Care Practices conducted by the Argentine Drug Observatory, 3.1% of respondents aged 16 to 75 reported having used opioid drugs—such as morphine, tramadol, oxycodone, codeine, and fentanyl—at some point in their lives without a medical prescription.⁸⁹ This figure is only marginally smaller than the prevalence of cocaine use, which stands at 3.9%. In comparison, heroin, morphine, and opium use was reported at 0.1% in the 2017 national drug survey, the most recent year for which data is available.⁹⁰

“The consumption of legal opioids in Argentina is high. However, it does not follow the same trend as the United States, which has seen a very rapid and steep increase over time,” said Alberto Föhrig, director of international cooperation at Argentina's Ministry of Security. “The country experiences high but relatively stable consump-

tion, which means there hasn't been a dramatic shift toward fentanyl. Although consumption is high, it is not growing significantly. As a result, some of us have identified this as a potential risk.”⁹¹

A 2021 report by the Organization of American States (OAS) found that illicit fentanyl use was common among health care sector workers in Argentina, while its use among the general population was almost nonexistent.⁹² The first reported alert about fentanyl in the country dates back to November 2018, when authorities discovered remifentanyl, a potent fentanyl analog, during home raids.⁹³ The alert is not public, so no further details are available. According to figures from Argentina's Ministry of Security, 72 vials of fentanyl for medical use were seized in Buenos Aires in 2022, 500 vials were seized in Misiones in 2023, and 15 vials were seized in the first three months of 2024.⁹⁴ In January 2024, Argentine law enforcement agencies reported the seizure of seven vials of fentanyl—along with ephedrine, marijuana, and cocaine—during raids conducted in Buenos Aires.⁹⁵

A month later, the Argentine Drug Observatory issued an early warning stating that fentanyl had not been mixed with other drugs such as cocaine.⁹⁶ However, the warning highlighted the dangers of mixing fentanyl with other substances and the potential for dependency on medical fentanyl.

It is not known if there have been other deaths due to fentanyl consumption in the country, as data from the Ministry of Health do not distinguish when fentanyl is present in persons who have probably died from overdoses.⁹⁷ Therefore, it is possible that fentanyl use and related overdose deaths are underreported in Argentina.

Although there is no widespread fentanyl consumer market in Argentina, authorities consider it a potential risk. “We are not currently facing a serious fentanyl problem,” said Martin Verrier, Secretary of State for the Fight Against Drugs and Organized Crime at the Argentine

Ministry of Security. “However, given the evolving market in the United States and other countries, we are concerned that fentanyl could start to appear, particularly mixed with cocaine. Cocaine is a substance with significant movement in Argentina, both for domestic consumption and export.”⁹⁸ Likewise, he mentioned that if fentanyl consumption were to become established in Argentina, it would likely be driven more by the supply side than by domestic demand.⁹⁹

Cases where fentanyl and cocaine have been mixed have already materialized in Argentina. In 2022, 24 people overdosed and died in Buenos Aires after consuming cocaine adulterated with carfentanil, a highly potent fentanyl analog used as a sedative for large animals.¹⁰⁰ At that time, over 100 people were admitted to emergency services after consuming the adulterated cocaine.¹⁰¹ Based on the medical signs the affected individuals presented, health care professionals decided to administer naloxone. The Argentine government was unable to trace the origins of the drug. However, Mariana Sousa Zabaleta, a professor at the National University of San Martín, argues that the circumstances of the incident—including the characteristics of the market where the drug was distributed (a low-income area), the profile of those arrested (mainly retail drug distributors), the type of users who consumed the cocaine, and the absence of a significant fentanyl market—all indicate that a local processing market is unlikely. In fact, one hypothesis, though not proven, is that the drug was contaminated before entering Argentina.¹⁰²

Despite the risk, this is the only case of cocaine contamination with fentanyl identified in Argentina so far. Verrier believes that the fentanyl being diverted from medical use today is intended for direct consumption rather than for mixing with other drugs, given that it contains less of the drug’s active ingredient compared to illicitly produced fentanyl.¹⁰³

As for the involvement of organized crime, the seizures and the case of cocaine contamination indicate the participation of retail drug distri-

bution networks in the illicit market for medical fentanyl. “What we have seen are very minor actors who generally target a small, specific market of medical personnel with addiction problems, as they are the ones in contact with these substances,” Verrier said. “However, there are no large suppliers or major organizations behind these findings, at least not so far.”¹⁰⁴ Similarly, Föhrig mentioned that Argentine criminal groups are relatively unsophisticated, with limited production capacities for these types of substances. Therefore, he does not believe that these groups are currently involved in the illicit production of fentanyl.¹⁰⁵

Similarly, while Argentine authorities have not detected signs that international criminal groups are involved in fentanyl trafficking in the country, law enforcement personnel have not ruled out the potential risk. Groups such as the PCC (a major cocaine trafficker in the Southern Cone) and some Colombian and Mexican criminal organizations—which have previously established connections with local groups in Argentina—may try to introduce cocaine mixed with fentanyl into the country.¹⁰⁶

Between 2003 and 2008, Argentina experienced a surge in ephedrine imports that exceeded the country’s legal requirements. Much of this ephedrine ended up in the hands of Mexican criminal groups involved in methamphetamine production.¹⁰⁷ In response, Argentine authorities have implemented much stricter control strategies, focusing on monitoring and regulating substances and the companies that handle them. These controls, similar to those in other countries studied, emphasize the registration of companies handling these substances, tracking quantities, monitoring suppliers and end clients, and conducting verification visits.

To date, there has been no evidence of illicit fentanyl production in the country, nor have any fentanyl precursors been reported as seized. Additionally, it is important to note that Argentina has the most comprehensive substance regulation among the countries analyzed. The country

controls norfentanyl, benzylfentanyl, piperidine, ANPP, NPP, 4-AP, 1-boc-4-AP, and 1-phenethyl-4-phenyliminopiperidine (see Table 4). This is significant given the size of Argentina's substan-

tial chemical industry. By 2020, Argentina's chemical and petrochemical industry was the second-largest in South America and the third-largest in Latin America.

TABLE 4

Fentanyl precursors that are regulated in Argentina

Substance	Type of substance	Substance regulated
Norfentanyl	Precursor	X
Benzylfentanyl	Pre-precursor	X
1-benzyl-4-piperidone	Pre-precursor	
1-benzyl-4-phenyliminopiperidine	Pre-precursor	
1-benzyl-4-anilinopiperidine	Pre-precursor	
Piperidine	Pre-precursor	X
Propionic anhydride	Pre-precursor	
4-anilino-N-phenethylpiperidine (ANPP)	Precursor	X
N-phenethyl-4-piperidone (NPP)	Pre-precursor	X
4-piperidone	Pre-precursor	
1-boc-4-piperidone	Pre-precursor	
1-phenethyl-4-phenyliminopiperidine	Pre-precursor	X
4-anilinopiperidine (4-AP)	Pre-precursor	X
1-boc-4-anilinopiperidine (1-Boc-4-AP)	Pre-precursor	X

Source: Argentina's National Register of Precursor Chemicals.

Working together with the private sector is crucial. Companies whose agricultural shipments have been contaminated with cocaine have implemented a video surveillance system along the entire route over the Paraguay-Paraná waterway to prevent their products from falling victim to traffickers.¹⁰⁸ This type of initiative presents an opportunity for the Argentine government to strengthen cooperation with the economic sectors impacted by such criminal activities. For example, the government could enhance collaboration with companies in the chemical sector that are vulnerable to the diversion of precursor substances.

The Argentine government's strategies to address fentanyl risks have focused on prevention. In May 2024, Argentine customs officials tightened controls so that fentanyl imports can only enter through Ministro Pistarini International Airport in Buenos Aires and are subject to the strictest scrutiny.¹⁰⁹ In June 2024, a roundtable for the prevention of illicit fentanyl trafficking and abuse was established, an effort that included various institutions such as the Ministry of Health and Ministry of Security, regulatory agencies, and customs, among others.¹¹⁰ This roundtable aimed to "design and implement strategies and policies to control and restrict the illegal traf-

ficking of this drug and its analogs, as well as the chemical precursors used in its production,” according to a press release.¹¹¹ The roundtable has also played a key role in strengthening laws on controlled narcotic substances, adding over 160 new substances to the list (including 65 fentanyl analogs) and providing relevant training to various entities.¹¹²

IV. The conditions and main risk factors for the emergence of fentanyl in South America

While opioid use in South America is generally lower than it is in North America, the region is not immune to the risks that have driven the fentanyl crisis in the United States. In North America, both high rates of medical opioid prescriptions and the illegal use of heroin have fueled the opioid epidemic. However, South America’s generally lower prevalence rates should not lead to complacency. There is a potential risk that local distribution networks could mimic, at a much larger scale, the strategies observed in the United States by introducing synthetic opioids into commonly consumed drugs, such as cocaine or methamphetamine. According to Marya Hynes, the head of the Inter-American Observatory on Drugs that is affiliated with the OAS, one of the main risks associated with fentanyl in Latin America is that the mixing of fentanyl with other commonly consumed substances could create demand for this opioid by inducing a dependence on similar synthetic opioids among drug users

who consume fentanyl.¹¹³ This adulteration could inadvertently create a new demand for synthetic opioids among users who are initially unaware of their exposure. If not closely monitored, such a scenario could lay the groundwork for a broader public health crisis.

At present, there is limited evidence that major drug trafficking organizations (DTOs) in South America are actively involved in the production, trafficking, or distribution of synthetic opioids like fentanyl. The dominant focus of these organizations remains on cocaine production and trafficking, which continues to be the primary illegal drug trade in the region.¹¹⁴ The explosion of fentanyl use in North America and its domination of the drug market there has not impacted cocaine production in South America. Although cocaine use has declined significantly in the United States over the past decade and a half,¹¹⁵ and a significant amount of cocaine circulating through the U.S. market now contains fentanyl, the cocaine market is still robust and perhaps still expanding in Western Europe, while it is certainly increasing in Eastern Europe. It is also starting to grow, albeit from very low baselines, in the Asia-Pacific region, as Mexican criminal organizations are working to expand demand there. Cocaine use is also increasing in Brazil and Argentina. According to the data presented by the United Nations Office on Drugs and Crime in the 2022 World Drug Report, the total number of past-year cocaine users worldwide has steadily increased in the last decade.¹¹⁶

Coca-leaf production and potential cocaine production in the Andean region have also been unaffected by the fentanyl epidemic in North America. In fact, as Figures 3A and 3B show, coca leaf production and cocaine production significantly increased between 2013 and 2021.

FIGURE 3A

Coca bush cultivation in South America

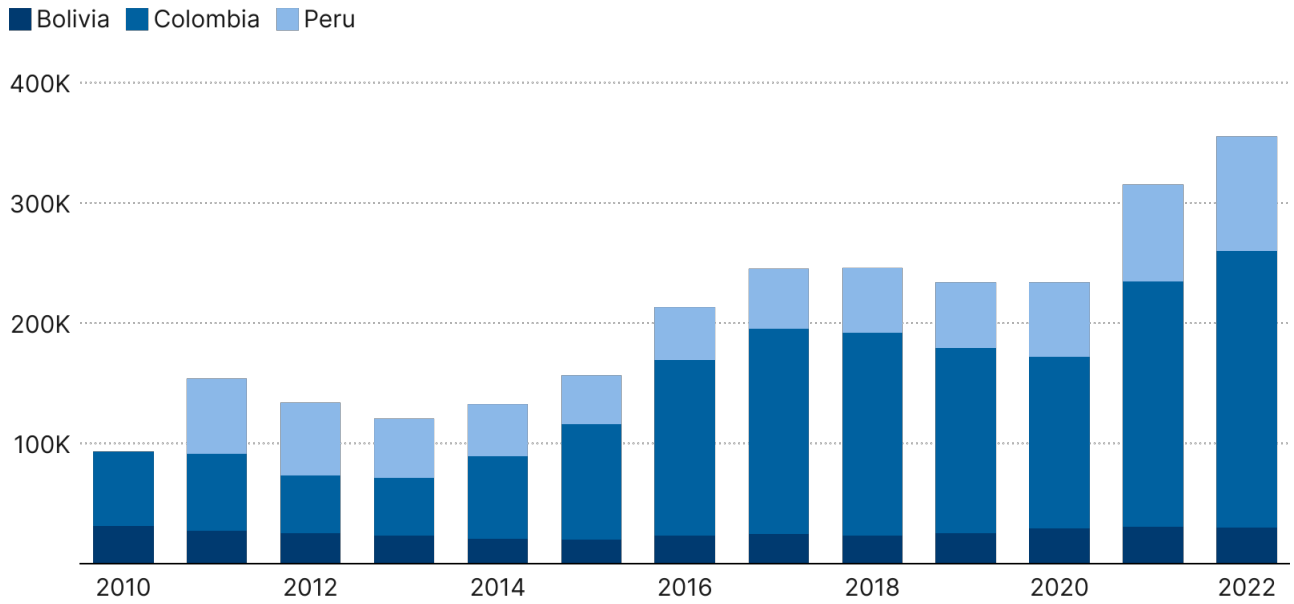
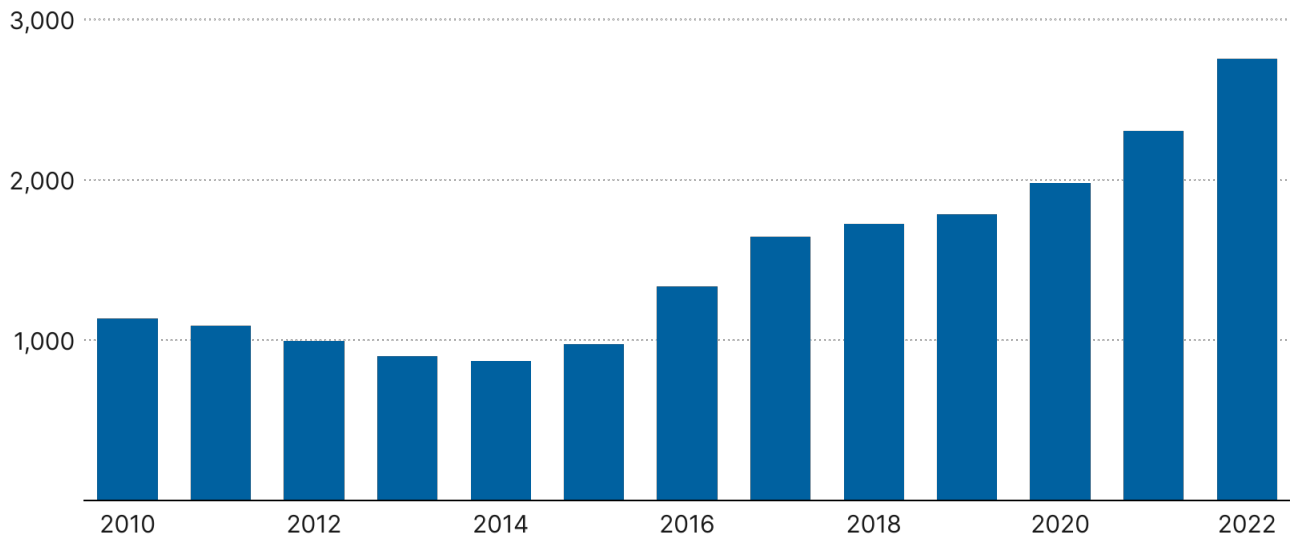


FIGURE 3B

Potential cocaine production in South America (metric tons)



Source: Authors' calculations based on the UNODC's World Drug Report 2022.

Overall, the global cocaine market remains vigorous, and at least so far it has not been undermined by the spread of illicit synthetic opioids. That may be one reason why some cocaine-smuggling groups—most importantly the PCC, the AGC in Colombia, and other criminal networks—have not yet been identified as engaging in fentanyl trafficking.

But the possibility of DTOs expanding into the synthetic opioid market cannot be entirely ruled out. Should market conditions change—such as an increase in local demand or the emergence of more profitable trafficking routes—these organizations might be incentivized to enter the synthetic opioid trade. While this is currently a low-probability scenario, it requires vigilant monitoring. Indeed, given the high level of interconnectivity between organized criminal groups in the region, the risk of transnational criminal groups, such as Mexican criminal organizations, becoming linked to fentanyl trafficking is something the authorities do not rule out, particularly in Argentina and Chile. This scenario is less likely in countries such as Colombia and Brazil, where domestic criminal groups have an established stranglehold on domestic criminal markets, giving less room for foreign actors to enter.

A recent cause for alarm about the potential emergence of fentanyl in some South American countries, such as Chile and Colombia, is the substantial increase in fentanyl seizures, often diverted from medical facilities. These seizures indicate that illegal networks are actively seeking to exploit the availability of medical fentanyl, raising concerns about the potential for these substances to enter the illicit market.

These risks are compounded by the widespread know-how required to produce synthetic opioids. The technological advancements and chemical innovations that facilitated the North American fentanyl crisis are not confined to that region. The knowledge of how to synthesize fentanyl and its analogs is readily accessible, and if demand or economic incentives shift, there is a plausible risk that this knowledge could be applied in

South America. This potential underscores the importance of robust regulatory oversight and proactive international cooperation to prevent the spread of synthetic opioid production within the region.

In summary, although South America currently exhibits lower opioid use rates compared to North America, the region faces potential risks that could lead to a synthetic opioid crisis. The introduction of fentanyl or its analogs into the drug supply by local distributors could create new demand, and while large DTOs in the region are not currently involved, shifts in market dynamics could change this. Moreover, the recent increase in fentanyl seizures diverted from medical facilities in countries like Chile and Colombia is an alarming trend that warrants close monitoring. The technological capability to produce synthetic opioids is readily available, making it crucial for government authorities in South America to remain vigilant and prepared to address these emerging threats.

V. Concluding remarks and policy recommendations

Although South America currently exhibits lower opioid use rates compared to North America, the region faces potential risks that could lead to a synthetic opioid crisis. The diversion of fentanyl is a warning about the possible establishment of an opioid market in the region based on an increase in supply. The most likely path to establishing a large illicit market in the region is the mixing of fentanyl into other drugs, an intensifying effort by local criminal networks to build up demand for fentanyl.

Law enforcement authorities should develop a focused deterrence strategy by cracking down on criminal networks that divert fentanyl from medical facilities and those involved in mixing fentanyl with other drugs, like cocaine

or methamphetamine. Continuous monitoring of fentanyl's presence in the drug market, particularly through drug observatories, early warning systems, and lab analyses is essential for detecting and responding quickly to any signs of fentanyl's spread. Authorities need to communicate the focused deterrence strategy widely to ensure that those involved in illegal activities understand the risks and consequences of participating in the fentanyl market. This approach is intended to preemptively address and mitigate the risk of a fentanyl crisis in South America by disrupting the potential for small distribution networks to mimic the U.S. experience.

Although large transnational DTOs have not yet sought to establish illicit fentanyl production and use in South America, law enforcement authorities need to remain vigilant to that possibility. Law enforcement needs to permanently establish and improve the monitoring of fentanyl diversion from the medical sector and prioritize the dismantling of the criminal networks that are facilitating the diversion and selling of stolen fentanyl in local markets. At this point, research into how the networks behind the diversion of medical fentanyl are operating is key to identifying the loopholes in the law that are enabling these leaks. Likewise, it is important to deepen research on how fentanyl commercialization networks are operating in the illegal market and how this substance is competing in the illicit drug market.

Similarly, given the risk that illicit fentanyl may start being produced in South America, it is important to strengthen regulatory systems regarding precursors, pre-precursors, and essential chemicals that, while used in various legal industries, may be diverted to the illegal production of synthetic drugs. Argentina is the country analyzed with the best regulations on fentanyl precursor chemicals, followed by Brazil, Chile, and finally Colombia. At this point, it is also key to strengthen cooperation with the private sector to identify possible cases of diversion.

The authorities responsible for regulating the chemical and pharmaceutical industries should implement stringent controls, monitoring systems, and enhanced tracking and reporting requirements for the production, distribution, and sale of fentanyl precursors and medical fentanyl. Manufacturers and distributors should be required to implement track-and-trace technologies to monitor the movement of these substances. Licensing and inspection processes need to be tightened and combined with regular and unannounced inspections to ensure compliance with regulatory standards. Authorities should also conduct background checks and rigorous vetting of the personnel involved in the handling of these substances. Collaboration between chemical industry regulators, pharmaceutical regulators, and law enforcement needs to be facilitated to share intelligence on suspicious activities or anomalies in the supply chain. Strict penalties should be set and enforced for noncompliance with regulations, including hefty fines, revoked licenses, and criminal charges for individuals and companies found diverting precursors or medical fentanyl for illicit purposes. This evidence-based approach would help prevent the diversion of critical substances into illegal channels, thus reducing the availability of illicit fentanyl on the market.

In this regard, public-private cooperation must be strengthened to mitigate the risks of substance diversion to illegal markets and to strengthen Know Your Customer programs within relevant industries.¹¹⁷ The type of strategies that companies in Argentina are implementing to protect themselves from cocaine contamination on ships can be an entry point to work with other companies. These types of connections can be strengthened in other countries too.

North America's experience has shown that the supply reduction approach cannot be the only strategy for dealing with the synthetic drug market. More importantly, it is essential to consider demand reduction strategies. Given the possibility that the illicit use of fentanyl and/or other opioids will in time grow in South America,

it is also crucial to expand the availability of treatments, including opioid treatment medications and harm reduction approaches such as overdose medications like naloxone. Likewise, training of medical and law enforcement personnel on the presence of fentanyl in the illicit consumer market and on how to respond to possible cases of intoxication or overdose should be strengthened. Health care systems should establish and reinforce prescription drug monitoring programs to prevent the diversion and misuse of prescription opioids and to train health care professionals in responsible opioid prescribing practices. Addiction treatment programs should be expanded as well.

Similarly, it is important to strengthen the analysis of consumption patterns behind fentanyl, mainly by supporting the drug observatories, early warning systems, and civil society organizations in charge of testing substances and

analyzing consumption trends.¹¹⁸ It is also important to ensure the independence and impartiality of regulatory regimes controlling prescription opioids in South American countries to prevent a disastrous wave of overprescription like the one that the United States experienced. Yet appropriate and potentially expanded access to palliative care and analgesic medications needs to be maintained.

By adopting these proactive measures, South American countries can address potential vulnerabilities in both the supply and demand for synthetic opioids, thereby reducing the likelihood of a fentanyl epidemic similar to the one observed in North America. A comprehensive approach that combines strong regulatory oversight, public-private cooperation, and preventive health strategies will be crucial in keeping the risk of a synthetic opioid crisis at bay.

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