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A City on the Front Lines of an Epidemic: The Opioid Crisis in Las Vegas

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Abstract

While addiction to opioids kills more Americans every year, the purpose of this report is to assess the extent of the problem in the Las Vegas metropolitan area, and to propound ways in which local policy can help. A geospatial analysis of opioid demand nationally, regionally, and locally explains how the epidemic is diffusing, where divides exist in terms of access to treatment, and the differential effects of opioids driving this crisis. By tracking opioid-related prescriptions, hospital admissions, and deaths, the results show that opioid demand in the Las Vegas metro has decreased but remains well above the national average.

Executive Summary

- The Las Vegas metro is a hotspot for opioid-involved health consequences.
- Not all opioids are created equal; doctors are prescribing less but overdoses are still high, and most overdose deaths are due to illegal opioids.
- Efforts to combat the opioid epidemic have public support locally and at the state-level; however, the disposition of a multijurisdictional legal battle against the pharmaceutical industry remains to be seen.
- Policy efforts should take lessons from opioid-induced deaths and focus on treating those who are currently addicted.
- Traditional policy approaches have focused on restricting the legal supply of opioids without accounting for the fact that the illegal market supplants the demand.

Introduction

Opioid abuse disorder has swept the nation as the world's worst drug epidemic—Las Vegas and the rest of Nevada are by no means immune to this issue. In fact, the cities of Las Vegas, Henderson, and North Las Vegas have recently joined Clark County, the State of Nevada, and 47 states in filing lawsuits against the pharmaceutical industry for their role in causing the opioid epidemic (Sadler, 2019).

Understanding why and how opioid abuse became an epidemic, however, requires a retrospective look at more macro-level causal factors—factors other than Big Pharma's involvement. The U.S. opioid epidemic has origins in legal pharmaceuticals, yes; the *global market of painkillers*, however, has origins in other parts of the world and is fueled by a historically persistent American demand, according to Brookings scholar and drug policy expert, Dr. Vanda Felbab-Brown. There are differences between *opioids* and *opiates*. Natural opiates are "natural" because the seeds of opium poppy plants produce morphine, which is used in the production of illegal drugs like heroin. Synthetic opioids are for the most part legal pharmaceuticals such as hydrocodone, which is used for post-operative recovery and other pain management needs. An important relationship to note, explains Dr. Felbab-Brown, is that when the legal supply of opioids decreases, the black market is quick to supplant the demand. (Felbab-Brown, 2019).

Another influence has been the nationwide change in the importance of pain management. The American healthcare system incentivizes pain pill prescriptions, sometimes for palliative reasons and other times because pharmaceutical companies have been known to capture food and drug regulators (Felbab-Brown, 2019). It is important to remember, however, that factors beyond industry and government corruption proliferated the epidemic. Some have to do with a lack of education, framing, and even social issues. (Deweerdt, 2019).

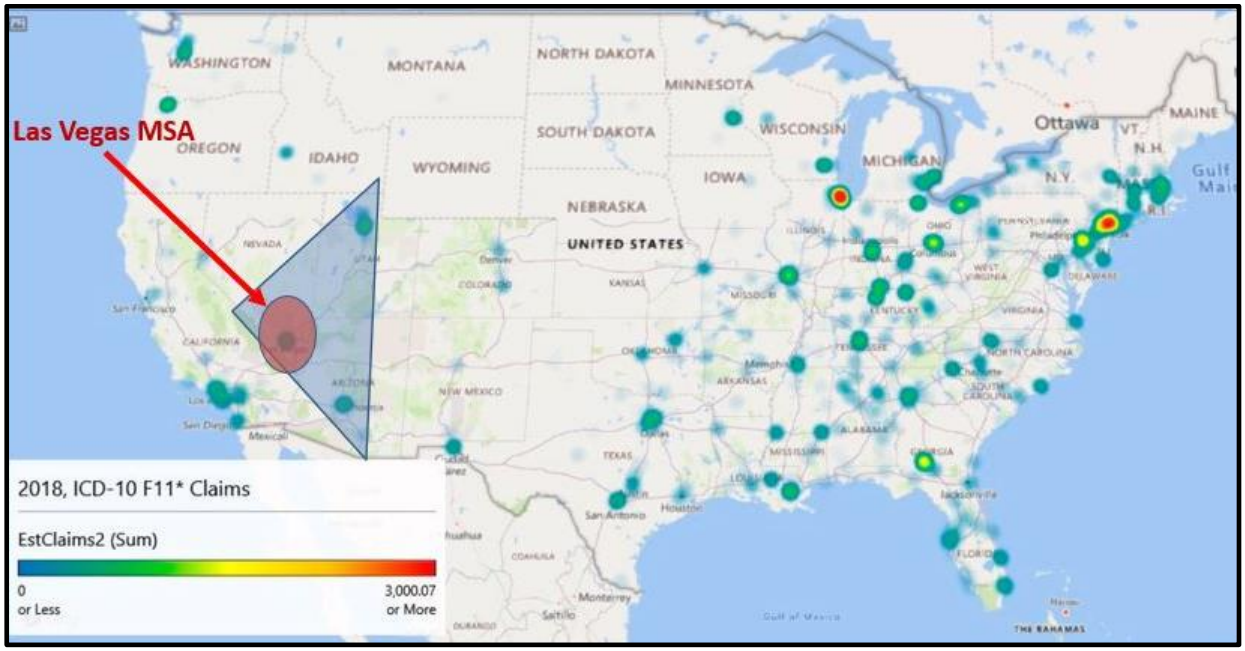
One of the nation's foremost experts on addiction science and opioid abuse, Dr. Keith Humphreys is a psychiatrist at Stanford University and, formerly, a drug policy advisor to the White House under Presidents George W. Bush and Barack Obama. The opioid epidemic, explains Humphreys, came in three overlapping waves: "the first was dominated by prescription opioids, the second by heroin, and the third by cheaper — but more potent — synthetic opioids such as fentanyl" (Deweerdt, 2019).

The Opioid Crisis

National Level

Researchers from Texas State University have recently made the case that knowing *where* the opioid crisis concentrates can help allocate resources and inform policy decisions. Their finding, that opioid demand diffuses from east to west across the U.S., speaks to the extent and urgency of the problem. Opioid-involved hospitalizations are increasing, and as shown in Figure 1, the Las Vegas Metro is a new area of interest (Fulton, et al., 2019).

Figure 1: Geospatial-temporal analysis of opioid-related in-patient hospital admissions in the U.S. 2016-2018 (per 10,000 people)



Source: Journal of Clinical Medicine

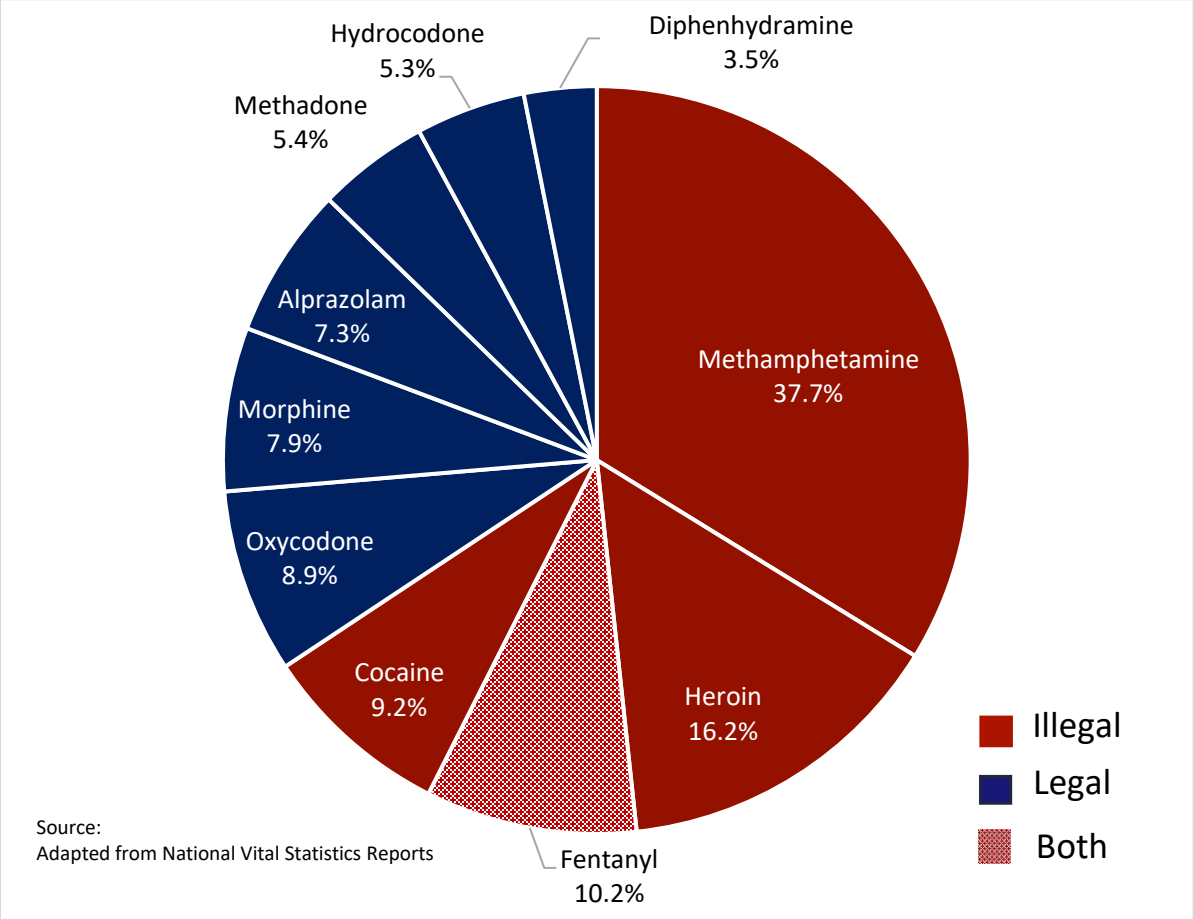
In 2017, over seventy thousand Americans died of a drug overdose and over two-thirds of those deaths involved an opioid (Barry & Frank, 2019). Researchers at the CDC who have recently re-evaluated the way we calculate opioid-involved overdose deaths say that "although prescription and illicit opioid overdoses are closely entwined, it is important to differentiate the deaths to craft appropriate prevention and response efforts. Unfortunately, disentangling these deaths is challenging because...death certificate data do not specify whether the drugs were prescribed by a health care provider, pharmaceutically manufactured but not prescribed to the person (i.e., diverted prescriptions), or illicitly manufactured" (Seth, et al., 2019).

The transition from one wave of the epidemic to another "has blurred the lines between prescription [deaths] and [illegal] opioid deaths" (Seth, et al., 2019). The U.S. has experienced rapid increases in the supply of illicitly manufactured synthetic opioids that, traditionally, were meant to be prescribed by a physician. The ever-potent fentanyl, for example, used to be the kind of opioid doctors prescribed for more severe or chronic pain such as the kind experienced by cancer patients. Today, however, "illicit Chinese fentanyl surged into U.S. drug markets through Mexico, and fentanyl [overdose deaths] soared in 2014" (Edmund, 2018). According to the American Academy of Pain Medicine, increases in illicitly manufactured fentanyl (IMF) correlated with a rise in deaths caused by synthetic opioids but not with rates of legal fentanyl prescriptions (Edmund, 2018). This discrepancy suggests that black market opioids—and not medically necessary pain medications—are the primary drivers of the current epidemic.

Regional Level

A 2017 CDC study of "drugs most frequently involved in drug overdose deaths" in the U.S. found varying rankings across regions (Hedegaard, et al., 2019). Within the aggregate of Nevada and a few proximate states (namely Arizona, California, and Hawaii), about 30% of all drug overdose deaths involved synthetic opioids. Still, over 60% had to do with illegal drugs. One of the most potent drugs, fentanyl, is slightly more prevalent nationally than it is in this region, where it ranked 3rd out of 10 in drug overdose deaths. The opioids most frequently involved in drug overdose deaths were heroin and fentanyl, but as shown in Figure 2 below, the region continues to have a meth problem. Patterns between the present study and other macro-level ones suggest that the more granular the geospatial analysis of opioid demand, the easier it is to identify which drugs to target in order to prepare for related problems in an area.

Figure 2: Drugs most frequently involved in drug overdose deaths in 2017 (AZ, CA, HI, and NV)



State Level

In 2014, Nevada was one of 7 states selected to participate in a national policy coalition to reduce prescription drug abuse. Before leaving office, former Nevada governor Brian Sandoval, in conjunction with the Division of Public and Behavioral Health, conducted a comprehensive analysis of the state's "opioid use disorder" crisis," from which we can extract three main findings. First, the counties with the highest prescription rates were rural counties. Second, the populations most afflicted by opioid use disorder were white middle aged and elderly Nevadans. Third, deaths from synthetic opioids such as fentanyl have increased but there were nearly 4x as many from semi-synthetic drugs like hydrocodone and oxycodone while deaths related to methadone, a pain medication primarily used for medically assisted addiction treatment, decreased over time (Nevada Department of Health and Human Services, Division of Public and Behavioral Health, 2018). The state's technical report provides a more in-depth review of the differential effect that specific kinds of opioids have on death rates. Its recency and the developments reported, particularly in the areas

where resources are lacking, can serve to identify ways in which policymakers at the metro level can influence those at the state-level so that best practices may be enforced by state law.

Looking at opioid demand from a state-level perspective shows that a rural-urban divide is present in the way that the epidemic is diffusing. Earlier this year, NIDA, a national organization whose mission is "advancing addiction science," reported that Nevada providers prescribe at a higher rate than do providers nationwide (National Institute on Drug Abuse, 2019). Moreover, despite having the largest share of Nevada's population and the largest presence of medical providers in the state, Clark County ranked below the state average for opioid prescriptions dispensed; telling us that those in more rural areas of the state receive more prescriptions than do core urban residents. Another important element of the opioid crisis in Nevada is that urban-rural divides also exist in terms of access to treatment. The counties with the highest prescription rates were rural counties; however, addiction treatment programs are only available in urban areas like Clark County, Washoe County, and Carson City.

The report that NIDA produced specifically for the state of Nevada measures trends over time for indicators of opioid-related health consequences, including overdose deaths. The findings suggest that not all opioids are created equal. Some are causing more deaths than others, which is important because a common goal of many states' responses to the epidemic has been to reduce and restrict opioid prescriptions *generally*. NIDA also reports that total opioid overdose deaths in Nevada have started trending downward and even dropped below the national average while overdoses caused by synthetic opioids (mostly fentanyl) have increased; and "heroin-involved deaths more than doubled" (National Institute on Drug Abuse, 2019).

Metro Level

Las Vegas and two nearby metros—Phoenix and Salt Lake City—have recently emerged as new areas of high opioid-related hospital admissions (Fulton, et al., 2019). In order to ascertain the extent of the damage in the Las Vegas Metro, the present study extracts and adapts data from the Nevada Opioid Overdose Surveillance Dashboard, which is a database created by the Nevada Department of Health and Human Services (DHHS) and the Southern Nevada Health District (SNHD). It includes county-level data from 2011 to 2018. By synthesizing state-level data from the Dashboard and focusing on the Las Vegas Metropolitan Statistical Area (MSA), the data track opioid prescription rates as they correlate to opioid-involved overdose incidents—that is *opioid-involved deaths, emergency room visits, and hospitalizations*. Seeing as there are decreasing trends for both opioid

prescriptions and all three health indicators, it is fair to say that, in most regards, Las Vegas fairs better than the state.

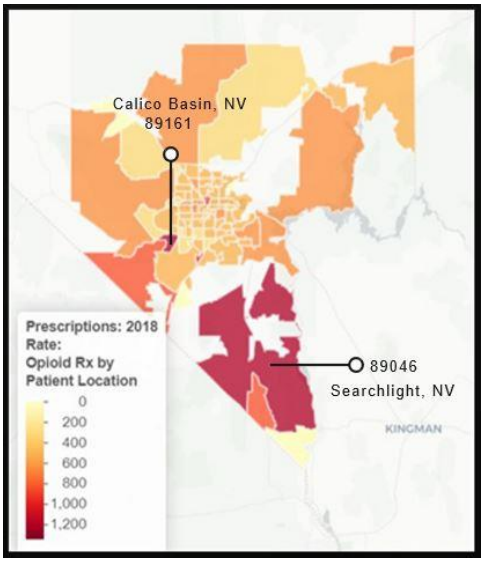


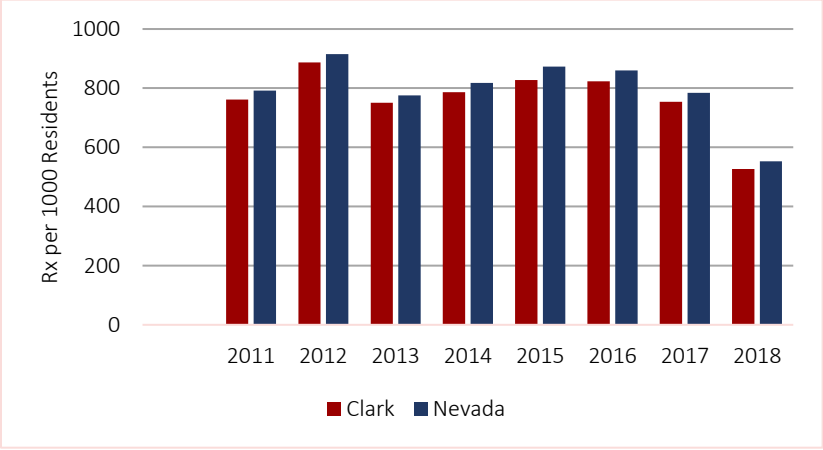
Figure 3: Opioid prescriptions per 100k residents by patient location in Clark County, NV, 2018

Source: Nevada Opioid Surveillance Dashboard

Clark County ranked below the state average for opioid prescriptions for every year data is available. Nevertheless, the areas highlighted in red (zip codes 89161 and 89046) show a high concentration of opioids prescribed to patients in an area much less populated than the rest of the metro. The area which corresponds to the largest zip code, 89046, is known as Searchlight, Nevada.

Figure 4 below shows a bar chart of opioid prescriptions dispensed per 1,000 residents in Clark County and the entire state of Nevada from 2011 to 2018. For all years, prescription rates in Nevada's largest county have kept in par with rates in the rest of the state, gradually decreasing after 2016.

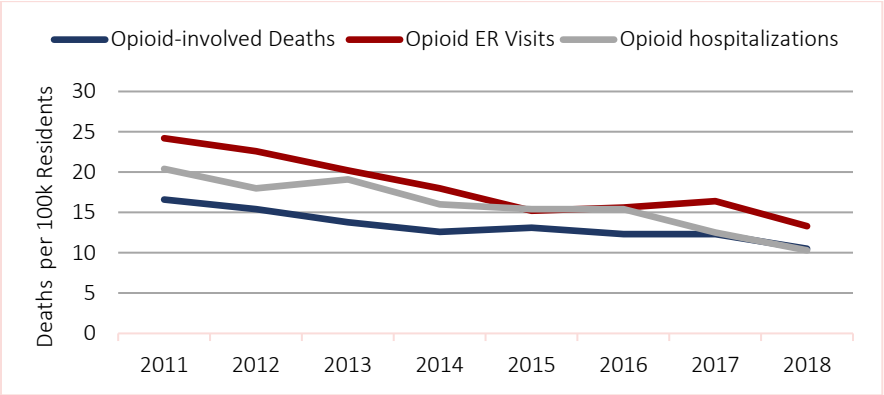
Figure 4: Opioid prescriptions per 1,000 residents, Clark County and Nevada (2011-2018)



Source: Adapted from the Nevada Opioid Overdose Surveillance Dashboard

Figure 5 is a line graph measuring trends over time for rates of opioid-involved deaths, ER visits, and hospitalizations in Clark County, Nevada from 2011 to 2018. For each year except 2015, rates of opioid-involved ER visits were higher than rates of overdose deaths and rates of in-patient hospital admissions. Since 2011, all three indicators are on a downward trend.

Figure 5: Opioid-involved Deaths and Hospital Visits in Clark County, NV (2011-2018)



Source: Adapted from the Nevada Opioid Overdose Surveillance Dashboard

From the dashboard, we can extract three main findings about opioids in the Las Vegas Metro: opioid prescriptions rates are on a downward trend; opioid-involved deaths are in Clark County are on a downward trend and have stayed under the Nevada state average; and emergency room visits and hospitalizations are higher in Clark County than the rest of Nevada but continue to trend downward. (Nevada opioid overdose surveillance dashboard, n.d.)

The State of Play in Metropolitan Las Vegas

Thousands of cities, counties, and states have filed lawsuits against corporate pharmaceutical manufacturers, distribution companies, and the individuals who own them. Some have been consolidated into multijurisdictional class-action suits while others continue to move up the courts independently. A common theme in the various legal complaints blame Big Pharma for knowingly advertising and distributing addictive drugs. While some cases have settled before a measure of damages can be established, most of the litigation includes causes of action for damages related to the financial burden of hospitalizing and incarcerating individuals with opioid abuse disorder. Although the disposition of the cases remains to be seen, some activists call for more than just a financial settlement with the pharmaceutical industry. They argue that costs beyond dollar amounts

have depleted communities and that whatever measure of accountability the courts choose will set an important precedent and have meaningful policy implications.

Earlier this year, Nevada Attorney General Aaron Ford filed a lawsuit against Big Pharma. In the complaint he named more than 40 defendants who in one way or another contributed to the manufacturing, sale, or distribution of opioids in the state. Some of those defendant parties included names we see in the Las Vegas metro every day; names like CVS, Walmart, and Walgreens. Another important element of the state's lawsuit is that, unlike claims made in the national arena, an estimate for monetary damages can be calculated using a combination of approximate hospital costs and data provided by the Nevada Opioid Overdose Surveillance Dashboard. One such estimate conducted by the Las Vegas Sun ranges in the hundreds of millions of dollars (Sadler, 2019).

The three largest cities in Clark County have also filed suit against Big Pharma. Las Vegas, Henderson, and North Las Vegas are represented by a prominent local law firm, Eglet Adams (formerly Eglet Prince). The cities' complaints are similar to each other and similar to the Clark County and Nevada versions. They make claims for damages regarding the strain on public services created by the opioid epidemic which helped profit defendant pharmaceutical companies. So far, only the City of Henderson has engaged in settlement negotiations, as recent court records show that Henderson's city attorney voluntarily dismissed a company which subsequently filed for bankruptcy.

Recommendations for Policy

A summary of recent best practices literature, combined with a look at past attempts to implement policy solutions across the country, shows that a lot of "what works" either has unintended negative policy implications or needs further research. Alas, the most promising policy solutions involve looking not just at those who have died as a result of opioid abuse disorder but also at those who are currently addicted. Recent research finds that medication-assisted treatment aimed at phasing patients out of opioid dependency works and is safe. Moreover, increasing the number of drug treatment facilities—and access to them—has more positive long-term outcomes not just for addicts but for society. The key to substance abuse treatment lies in increasing the number—and the accessibility—of drug treatment facilities such as methadone clinics. According to a Brookings report, a 10 percent increase in facilities per capita reduces a county's drug-induced mortality rate by 2 percent (Doleac, et al., 2019). Not only would meeting this goal alleviate the deadly and costly effects of the opioid epidemic, it would give metro leaders a way to evaluate progress.

Cities across the U.S. are coming up with innovative ways to tackle the opioid epidemic from the ground up. The city of Annapolis, Maryland, for example, recently launched a mobile phone application designed to live-feed the locations of available drug treatment facilities. Another mobile phone application out of the Washington, D.C. metro area is helping law enforcement and first responders track patterns of inflows and areas primed for drug overdose incidents (Poon, 2018). Whether identifying issues like information management, healthcare shortages, or even disconnects in the built environment, city leaders have mobilized in areas where federal and state government programs have not quite reached them yet.

Discussion and Policy Implications

Using geographic information systems to monitor the opioid crisis in the Las Vegas Metro reveals that geographic differences exist, and they can be used to make comparisons across metros as well as to allocate resources in the areas most afflicted.

This report speaks to health consequences specifically; which is important because the opioid epidemic harms society in different ways (economic costs, social costs, etc.). Equally alarming, Las Vegans should worry that our city is experiencing a shortage in medical providers and medical infrastructure. Our population has grown and will continue to grow while at the same time Nevadans from other parts of the state—who also live in communities with limited access to medical care—often flock to the city for more serious or specialized problems. So, if we don't have the doctors, nurses, or clinics necessary to sustain our existing community, and much less the one that's coming, then we are most certainly not prepared to combat the strain that a raging opioid epidemic has on our local healthcare system.

Popular narratives surrounding drug policy and dependency have focused on restricting providers from over-prescribing opioids as much as possible. Regulation generally is sound but what is missing, however, is discussion over the discrepancy between lowering rates of legal prescriptions and simultaneous increases in overdose death rates. The results show that most deaths are caused by illicit fentanyl and heroin. This means that one unintended consequence of previous policy solutions is extremely deleterious implications for patients who legitimately benefit from medically necessitated pain relief. This study supports the notion that opioids have differential effects on health outcomes—whether natural or synthetic, whether long term or acute, and whether legal or illegal.

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Author Biography

Carmen Solano is a local Las Vegan and first-generation college student at UNLV. She is starting her junior year as an Urban Studies major; also pursuing minors in criminal justice and public policy. Outside of UNLV, Carmen's background is in the legal field where she was an experienced litigation paralegal and ran a local, multifaceted law practice. Carmen's goal is to earn a Ph.D. in Criminology & Criminal Justice and become a policymaker in the public sector, at a university, or for a non-profit.