

# NEVADA KIDS COUNT

## *Opioid Epidemic*

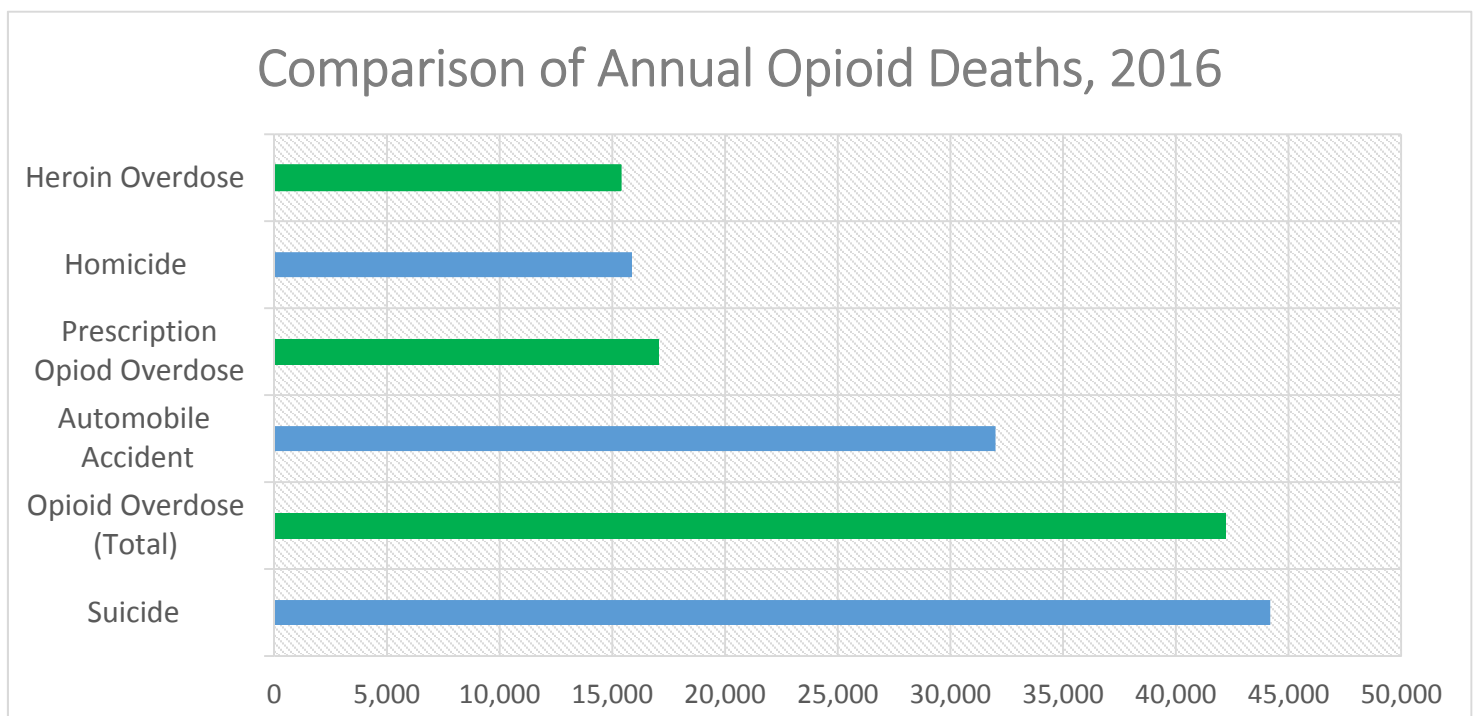
### Overview

Five times more people died from opioid overdoses in 2016 than in 1999, killing an average of five Americans every hour in 2016 (CDC, 2017). That same year, 2.1 million Americans suffered from an opioid overdose. As a result, former Department of Health and Human Services (HHS) Director Tom Price declared the opioid epidemic a public health emergency in April 2017 (HHS, 2017). His former department estimates that the epidemic costs the United States over \$500 million per year (HHS, 2017).

Much of the epidemic stems from prescription opioids. In the late 1990s, pharmaceutical corporations argued that opioid pain relievers lacked addictive qualities (HHS, 2017). Due to this claim, the quantity of opioids received by pharmacies, hospitals, and doctors quadrupled from 1999 to 2010 (HHS, 2017). Deaths from prescription opioids more than quadrupled in that same time interval. Doctors now understand the addictive nature of these drugs. In 2016, 11.5 million individuals misused prescription opioids, with 2.1 million misusing them for the first time, and over 17,000 deaths (Figure 1) occurred due to overdoses on commonly prescribed opioids such as methadone, oxycodone, and hydrocodone (HHS, 2017). Risk factors for prescription opioid abuse include receiving a low income, residing in a rural area, and suffering from a mental illness (CDC, 2017). The CDC believes that published figures underestimate prescription opioid deaths, given that some death certificates do not indicate what drug caused the death.

Prescription drugs do not constitute the entire opioid epidemic. Over 900,000 Americans used heroin in 2016, 170,000 of whom did so for the first time (HHS, 2017). Heroin overdoses killed over 15,000 people that year, while 19,000 died from other synthetic opioids. Heroin deaths have spiked in the past few years, rising from 1 death per 100,000 people in 2010 to almost 5 in 2016 (CDC, 2017). The demographics surrounding heroin use have also shifted. Fifty years ago, heroin usage was most common among non-white, urban, and low-income individuals. Today, the drug is more widespread among white, suburban, and middle-class individuals (Cicero et al., 2017).

Figure 1



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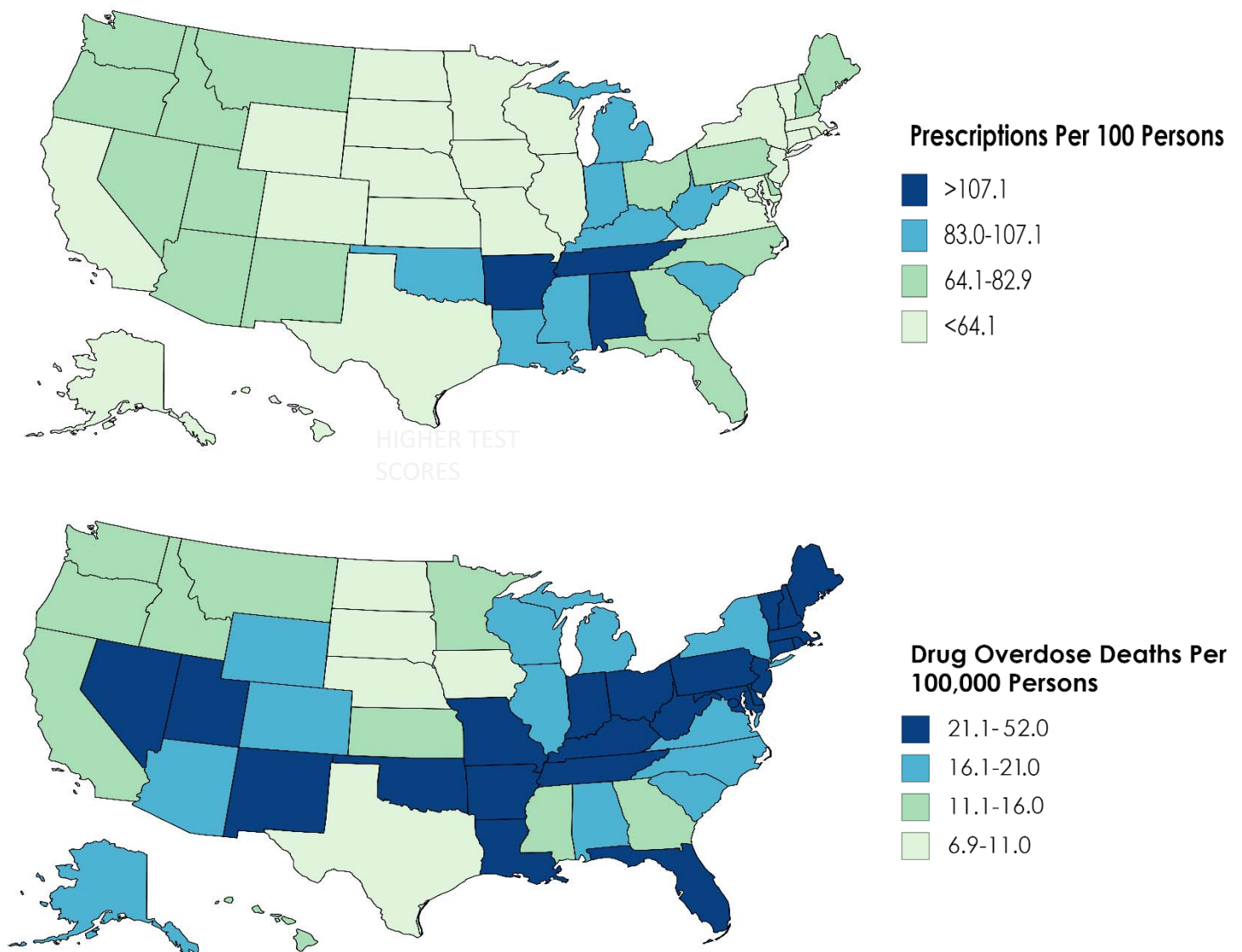
### Around the Nation

Opioid prescriptions rates peaked in 2012 at 81.3 prescriptions per 100 persons, but that rate has declined every year since. Many counties, however, contain more opioid prescriptions than people. The prescription rates are especially high in much of the South and Mountain regions (CDC, 2017).

In 2016, drug overdose deaths rose in 26 states, with most of the increases occurring in the Northeast, Midwest, and South. The states with the highest death rates from drug overdoses were West Virginia at 52.0 per 100,000 persons, Ohio at 39.1 per 100,000 persons, and New Hampshire at 39.0 per 100,000 persons (CDC, 2017).

The maps below visualize the variation in opioid prescription rates and drug overdose deaths in the United States.

Figure 2: National Stats in 2016



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### Harms to Children and Teenagers

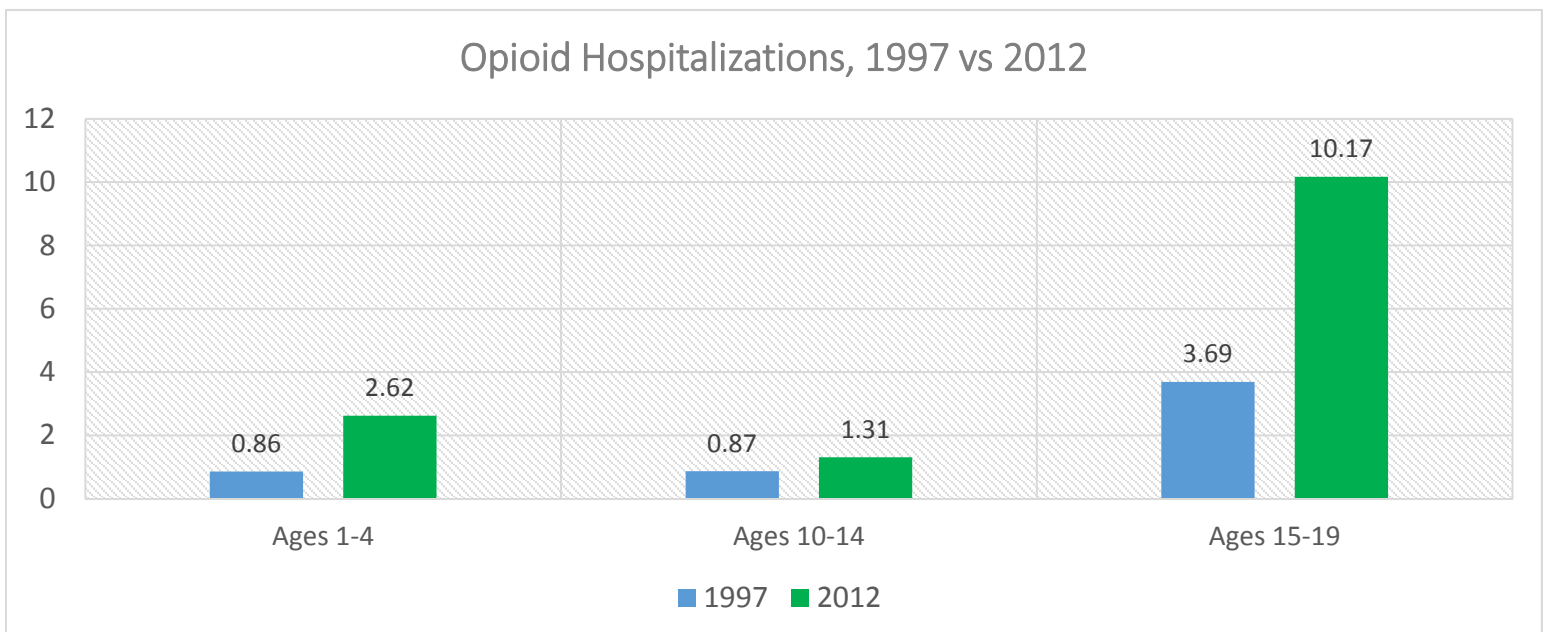
Bailey et al. (2009) studied 9,179 cases from 2003 to 2006 in which children were exposed to prescription opioids. Almost all exposure occurred at home and via ingestion. Of these children, 8 died, 34 suffered major effects, and 214 suffered moderate effects. The researchers also noted that youth exposure to opioids correlated with the number of adult prescriptions in the area.

Allen et al. (2017) explored poison control center reports from 2000 to 2015. Over that span, poison control centers received 188,458 opioid exposure reports for people under the age of 20. These exposures rose from 2000 to 2009, but fell every remaining year. Teenagers were more likely than children to both suffer from opioid exposure and to require serious medical attention. In addition, opioid-related teenaged suicides rose by 52.7 percent over the studied time period.

Opioid usage also threatens children's cognitive development. Nygaard et al. (2015) compared 72 children with prenatal opioid exposure to a 58-child control group. Boys with prenatal opioid exposure experienced consistently lower levels of cognitive functioning throughout their childhood, whereas, for girls, the cognitive gap between the treatment and control group grew over time.

Gaither et al. (2016) studied the role of opioids on hospitalization of children and teenagers. They found that, for children aged 1 to 19, hospitalizations for opioid poisonings rose 165 percent from 1997 to 2012. For children ages 1 to 4 and teens aged 15 to 19, the increase was 205 and 176 percent, respectively. Teens in this age group also experienced a 161 percent increase in heroin poisonings over that same time (Figure 3).

Figure 3



\*Estimates for the group aged 5 to 9 years did not meet the criteria for statistical reliability, so they are not shown.

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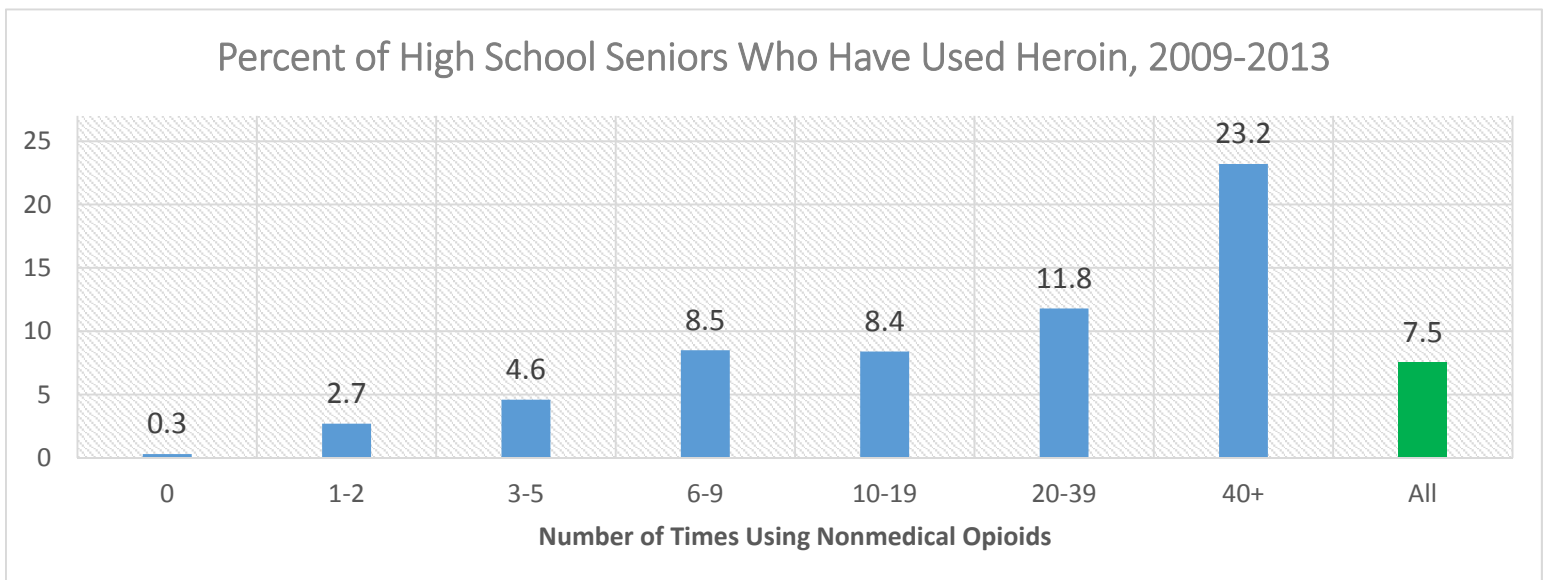
## *Opioid Epidemic*

### Causes of Opioid Abuse

Voepel-Lewis et al. (2017) note that, in the first decade of the 21<sup>st</sup> century, opioid prescriptions to adults doubled while prescription to teenagers and children quadrupled. They argue that pain scales caused much of this increase. Pain scales recommended opioids to treat severe pain, regardless of the pain's source. Thus, doctors prescribed opioids to treat severe headaches and inflammatory pain, which doctors from previous decades would have addressed with non-opioids. In one emergency setting, the authors found that doctors who used pain scales prescribed more opioids to children than those who did not. Doctors have admitted to excessively prescribing opioids to avoid the financial penalties associated with poor reviews from patients. As a result, the American Medical Association now discourages the use of pain scales.

Palamar et al. (2016) conducted a national survey of high school seniors regarding opioid usage. They found that 12 percent of seniors reported using nonmedical opioids at least once, and about 1.2 percent reported using heroin at some point in their lives. Students were more likely to use heroin if they were male, white, religious, had two parents, or earned more than \$50 per week. The researchers note a strong relationship between the number of times using nonmedical opioids and the prevalence of heroin use (Figure 4). Hence, they conclude that nonmedical opioids lead to heroin usage. Compton et al. (2016) echo the concern of nonmedical opioids causing heroin usage, listing numerous studies that link nonmedical opioid usage to heroin usage. Given the observational nature of these studies, however, they remain unsure of a causal link between nonmedical opioids and heroin.

Figure 4



Groenewald et al. (2016) find that 2.91 percent of children received an opioid prescription in 2012, compared to 2.68 percent in 1996. This amounts to an 8.6 percent rise in prescriptions. On other hand, opioid prescriptions to adults spiked by 20.8 percent over this same time. White children, children with health insurance, and children with fair to poor general health were the most likely to receive opioid prescriptions. Many doctors, however, prescribed excessive amounts to children under 3 years old. Basco et al. (2015) studied 11 years of Medicaid prescription data. They find that 2.7 percent of prescriptions for children aged 0-36 months contained excessive doses. This figure was 8.9 percent for infants 2 months old or younger, 5.7 percent for 3 to 5 months, 3.6 percent for 6 to 11 months, and 2.3 percent for children older more than one year old.

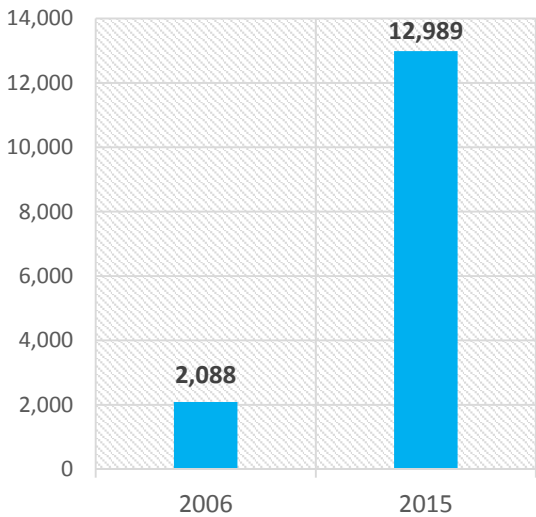
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### Opioid Abuse

Figure 5: United States

Heroin Deaths



Heroin Deaths Per 100,000 Persons, by Age

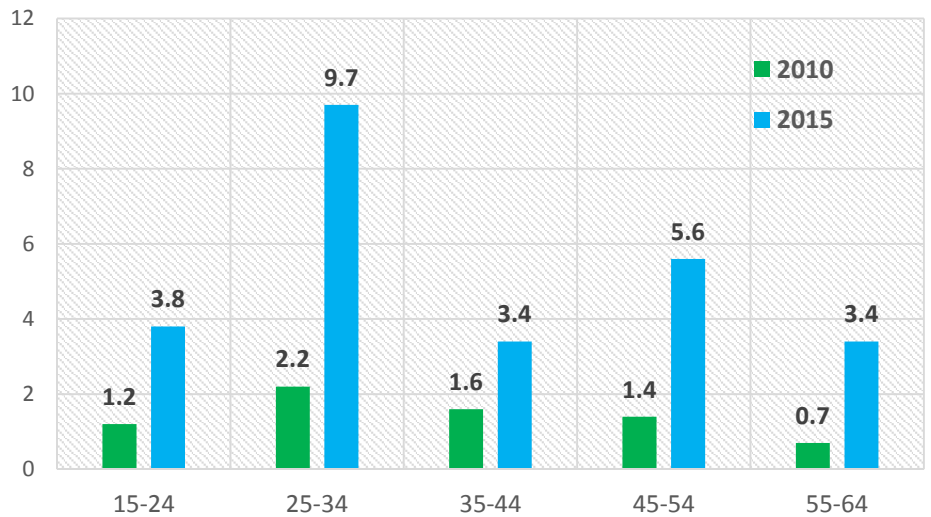
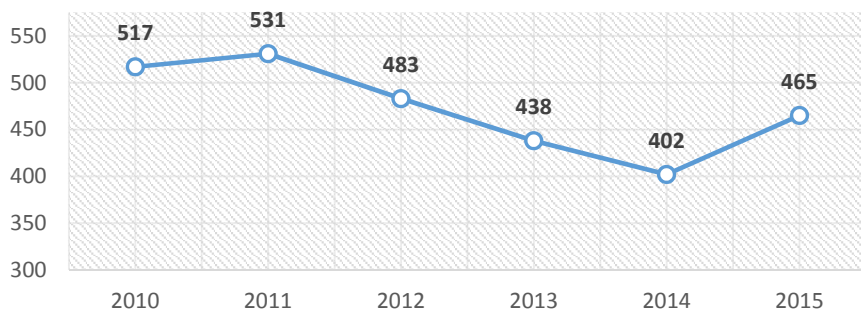


Figure 6: Nevada

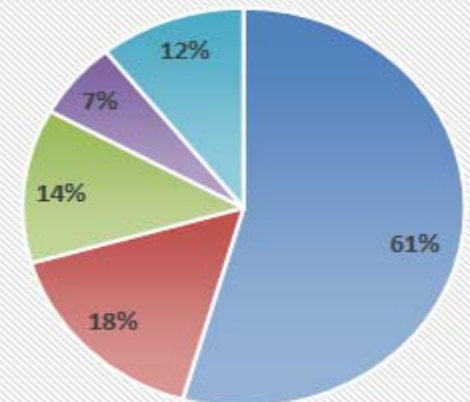
Inpatient Admissions for Heroin



Opioid Overdose Deaths in Nevada



Type of Opioid Responsible for Overdose, 2015



- Natural and semi-synthetic
- Heroin
- Methodone
- Synthetic
- Unspecified

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## Opioid Epidemic

### Solutions



The Department of Health and Human Services has five priorities:

- Funding state-level treatment and recovery programs with \$485 million in grants,
- Promoting the use of drugs like naloxone that impede the effects of overdoses,
- Improving data collection and offering technical assistance to local authorities,
- Researching new treatments for addiction or creating safer painkillers, and
- Rethinking medical practices that lead to a rise in opioid prescriptions (Price, 2017)



Nevada has taken its own steps towards addressing the epidemic:

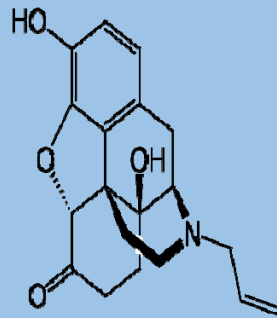
- Requiring healthcare providers to report overdoses or suspected overdoses,
- Distributing naloxone, an anti-overdose drug, to rural counties and allowing individuals suffering from overdoses to use another individual's naloxone prescription,
- Creating treatment centers for opioid users that will offer psychiatry and medical screenings,
- Mandating doctors to enroll in a monitoring program that flags over-prescribers,
- Gathering and disposing used needles and unused pills,
- Collaborating with federal enforcers to prevent drug trafficking, and
- Subpoenaing opioid manufacturers and distributors (Rindels, 2017)



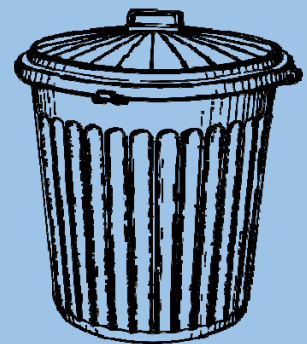
Research new drugs and treatments



Collect data and spot excessive prescriptions



Provide Naloxone



Dispose of unused pills

### Other Ideas

**Alternative Pain Killers:** Legalized marijuana may offer another policy tool, acting as a non-opioid painkiller. Livingston et al. (2017) found that Colorado's legalization decreased opioid-related deaths by 0.7 deaths per month. The researchers argued that marijuana legalization reversed the upward trend of opioid-related death in the state.

**Safe Storage:** Improved storage of prescriptions opioids could prevent youth poisonings. McDonald et al. (2017) conducted a nationally representative survey of adults that take prescription opioids and live with a child under the age of 18. The researches counted adults as employing "safe storage" for children under the age 7, if the adults kept the medicine in locked or latched place. For children older than 7, medication must be locked to qualify as safe storage. They find that 32.6 percent of adults with only children under age 7 exercised safe storage, compared to 11.7 percent for those with only children older than 7, and 29.0 percent for those with children in both age groups. In short, the majority of parents leave their children with easy access to prescription opioids. Thus, better storage practices may assuage some of the damages.

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- Figure 4:** Data from Groenewald et al. (2016)
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