

# Opioid Use and Other Trends

## National Overview

Across the nation communities are struggling with a devastating increase in the number of people misusing opioid drugs, leading many to identify the current situation as a public health epidemic. Prescription drugs and illicit street drugs from the opioid class of drugs are highly addictive, subject to abuse, and in many cases, lead to tragic outcomes including drug overdose deaths, infants born with addictions, criminal behavior, and countless hours of lost time that could otherwise be devoted to productive work, family relationships, or skill-building. This public health crisis impacts people across all age groups and all communities, and comes with high social and public costs; the US Department of Health and Social Services reports over \$75 billion in costs related to opioid dependency and misuse in a single year (DHHS, 2016). According to data from the NSDUH, the use of prescription painkillers without a prescription was the second most abused category of drugs in the United States, after marijuana, with an estimated 3.8 million people in the United States using these drugs within the past month (Center for Behavioral Statistics and Quality, 2016).

Deaths due to drug overdoses are increasing across the United States; between 2014-2015 overdoses increased by 11%. In 2014, six out of every ten overdoses were associated with the use of opioids (Rudd et al. 2016). The CDC reports that 91 Americans die as a result of an opioid overdose, every day (CDC, n.d.). Increasingly, heroin makes up a large proportion of all drug overdose deaths that occur nationally; 8% of drug overdoses were attributable to heroin in 2010 and by 2015 one in four people that died as a result of drug overdose, overdosed on heroin. Heroin overdoses tripled between 2010 and 2015 (Hedegaard, Warner, & Minio, 2017), though misidentification of fentanyl and heroin fentanyl mixes account for some of this increase.

In 2015, about 62 deaths per day were attributed to prescription opioids. The risk of overdose increases when opioids are used at the same time with benzodiazepine medications, such as Valium or Xanax. Methadone, Oxycodone, and Hydrocodone are the drugs most often attributed to overdose in this category. In addition, the CDC reports that over 1,000 people visit an emergency room each day as a result of misusing prescription opioids, (CDC n.d.). According to the National Safety Council, 1.9 million

people in the United States are addicted to prescription opioids, 4.3 million use these drugs for nonmedical purposes, and four out of five current heroin users report that they transitioned to heroin after using prescription opioids (National Safety Council/NSC, 2016). Significantly rethinking prescribing practice and policy should have an effect on the number of people who overdose on these drugs or move on to harder and potentially more dangerous illegitimately made and distributed drugs.

The CDC estimates that about a third of the deaths attributed to prescription opioids are a result of fentanyl. Fentanyl, a powerful synthetic opioid often prescribed to patients during end of life care or with advanced cancer, is increasingly accessible to users. Much of the fentanyl on the street has been illegally imported from China or illegally manufactured in China, the U.S. and Mexico, and is not derived from pharmaceutical supplies. The CDC reports that fentanyl is 50 times more potent than heroin, and is often found mixed with heroin or cocaine, with often deadly results. In just one year, 2014-2015, the death rate associated with people who overdosed on synthetic opioids, which includes fentanyl, increased over 70% (CDC, n.d.). A recently troubling trend identified by the Drug Enforcement Agency are reports of illegally manufactured pills inscribed with prescription brand names that are instead primarily made with fentanyl. In 2016, communities in Florida and California had high numbers of overdose deaths associated with counterfeit pills that contained fentanyl (DEA, 2016).

Additional health complications can arise from the misuse of opioids. Drug users that inject heroin or other drugs risk spreading infectious disease. Intravenous drug use has been linked to HIV/AIDS and Hepatitis C. Many communities and states have enacted needle-exchange programs that allow drug users to drop off used needles and receive either free or reduced cost needles. In addition, many of these programs provide resources about substance abuse treatment, infectious disease control, and other health information.

Neonatal abstinence syndrome (NAS) is another public health concern linked to the use of opioids. A study of 28 states between 1999 and 2013 found over a 300% increase in the number of babies born with NAS (Ko et al., 2016). Babies born with this condition experience symptoms of withdrawal, which complicates regular healthy development, and often leads to additional time spent in the hospital after delivery. Infants born to mothers who use opioids are also at higher risk of smaller birth weight, birth defects, trouble feeding, developmental delays, future behavioral problems, and Sudden Infant Death Syndrome (DHHS, 2016). In Delaware, 314 infants were born with NAS in 2015 (Albright & Rini, 2016).

## Delaware Context

Delaware has been hit hard by the opioid epidemic. In 2014, Delaware had the 8<sup>th</sup> highest heroin fatality rate in the US (NSC, 2016). Delaware's drug overdose rate, across all categories of drugs, has increased in the past few years. In 2014, over 70% of all drug overdose deaths were related to opioids; 42% involved prescribed opioids, and 29% involved illicit drugs, including heroin (Prescription Behavior Surveillance System, 2016). Fentanyl-related overdoses are a major public health concern; such overdoses tripled in 2016, with 120 confirmed fentanyl related deaths (Horn, 2017a). Emergency responders in Delaware have responded to the increase in opioid-related overdoses by carrying the opioid antagonist, Naloxone, which can reverse the symptoms of opioids on the nervous system, and potentially save the life of a person suffering an overdose. Emergency responders used Naloxone on 2,334 occasions in 2016 (Horn, 2017a). Yet, even with increased access to potentially life-saving medication, tragic overdoses still occur frequently in Delaware. In March 2017, the Delaware Online News Journal reported that four people died in a five-hour span, in separate locations across New Castle County, due to heroin overdoses (Horn, 2017b).

### Data in Action

Treatment admissions in Delaware increased more than 600% between 2013 and 2015. More people are seeking treatment services for heroin dependence than in the past. In 2015, nearly 35% of all treatment admissions in Delaware were related to heroin. An additional 5% were related to other opioids (TEDS, 2015). A recent SWOT analysis by the Opiate and Heroin Dependency Committee, prepared for newly-elected New Castle County Executive Matt Meyer, showed a significant gap between treatment need and access to services, partly due to lack of public knowledge about already existing resources, but also due to limitations in available services (Anderson et al., 2016). Increased public education about the services that do exist, and expanding treatment options, may help reduce some of the grave consequences associated with opioid abuse. National research has shown that women with children often resist accessing treatment services out of fear that their children may be taken into state custody. Treatment programs that accommodate mothers with children have higher success rates with women with children, than those that do not. Nationally, up to 70% of women who enter treatment do have children (DHHS, 2016). Expanding treatment options that are responsive to the needs of caregivers may help improve treatment outcomes across the state.

Prescription drug overdoses account for a larger portion of drug overdose deaths in Delaware than heroin (Prescription Behavior Surveillance System, 2016). Prescription Monitoring Programs have been established in many states, including Delaware, to provide data on prescribing patterns, as well as patient use. These data can help to identify “pill mills” (doctors that prescribe disproportionate amounts of opioids to patients) as well as “doctor shoppers” (individuals who change doctors frequently in order to obtain prescribed opioids). These data can also help doctors identify whether patients are already taking prescriptions that may interfere with opioids, such as benzodiazepines. A recent analysis from the University of Delaware of the Prescription Drug Monitoring Program demonstrated that only 1% of doctors wrote a quarter of opioid prescriptions in the state (Anderson, Martin, Fang, & Li, 2016). Additional analyses of the data by UD researchers were used to create hotspot maps that identified locations in the state that have increased numbers of people with opioid prescriptions (CDHS, 2017). Identifying potential points of access should help reduce some of the flow of pills to recreational users. Delaware has already made some progress in targeting pill mills; early in 2017, three doctors in Delaware were sanctioned as a result of over-prescribing (Goss, 2017).

Changes in prescribing policy and public education strategies that were put in place over the past several years may also be having an effect. Delaware data from the Prescription Behavior Surveillance System (PBSS) at Brandeis University’s Center of Excellence, which reports to the CDC, shows a 26% decline between 2012-2105 in opioid prescriptions with high dosages (over 100 morphine milligram equivalents, or MMEs) that have been associated with greater risk of overdose and death. During the same period, there was a decline of over 50% in the rate of multiple provider episodes, which corresponds with “doctor shopping.” Despite these significant improvements, Delaware still has the highest rate of patients with prescriptions of over 100 MMEs, compared to other states also analyzed by the PBSS, which suggests that there is still much room for improvement in this area, and that successful intervention should include prescribers (Prescription Behavior Surveillance System, 2016).

Data from the DSS show that less than 1% of 8<sup>th</sup> and 11<sup>th</sup> grade students in school report using heroin in the past year, and only 3% of students reported using prescription painkillers. Data from the NSDUH show that for adults in Delaware, age 18 to 25, past year nonmedical use of pain relievers was slightly higher than the national average. In Delaware 9.5% of adults reported misusing these drugs in the past year, higher than the national average response rate of 8.3%.

**2016 DELAWARE SCHOOL SURVEY**  
**Prescription pain killer use among Delaware 8th graders**  
(in percentages)

|                   | Lifetime | Past Year | Past Month | Perceived Great Risk of Using Prescription Drugs without a Prescription |
|-------------------|----------|-----------|------------|---|
| <b>STATEWIDE</b>  | 3        | 2         | 1          | 50  |
| <b>Males</b>      | 3        | 2         | 1          | 48  |
| <b>Females</b>    | 4        | 3         | 1          | 52  |
| <b>Wilmington</b> | 4        | 3         | 1          | 47  |
| <b>Males</b>      | 3        | 2         | 1          | 37  |
| <b>Females</b>    | 5        | 3         | 1          | 55  |
| <b>New Castle</b> | 3        | 2         | 1          | 53  |
| <b>Males</b>      | 3        | 2         | 1          | 53  |
| <b>Females</b>    | 3        | 2         | 1          | 53  |
| <b>Kent</b>       | 4        | 3         | 2          | 44  |
| <b>Males</b>      | 4        | 3         | 2          | 40  |
| <b>Females</b>    | 4        | 3         | 1          | 48  |
| <b>Sussex</b>     | 4        | 2         | 1          | 46  |
| <b>Males</b>      | 2        | 1         | 1          | 44  |
| <b>Females</b>    | 5        | 3         | 2          | 49  |

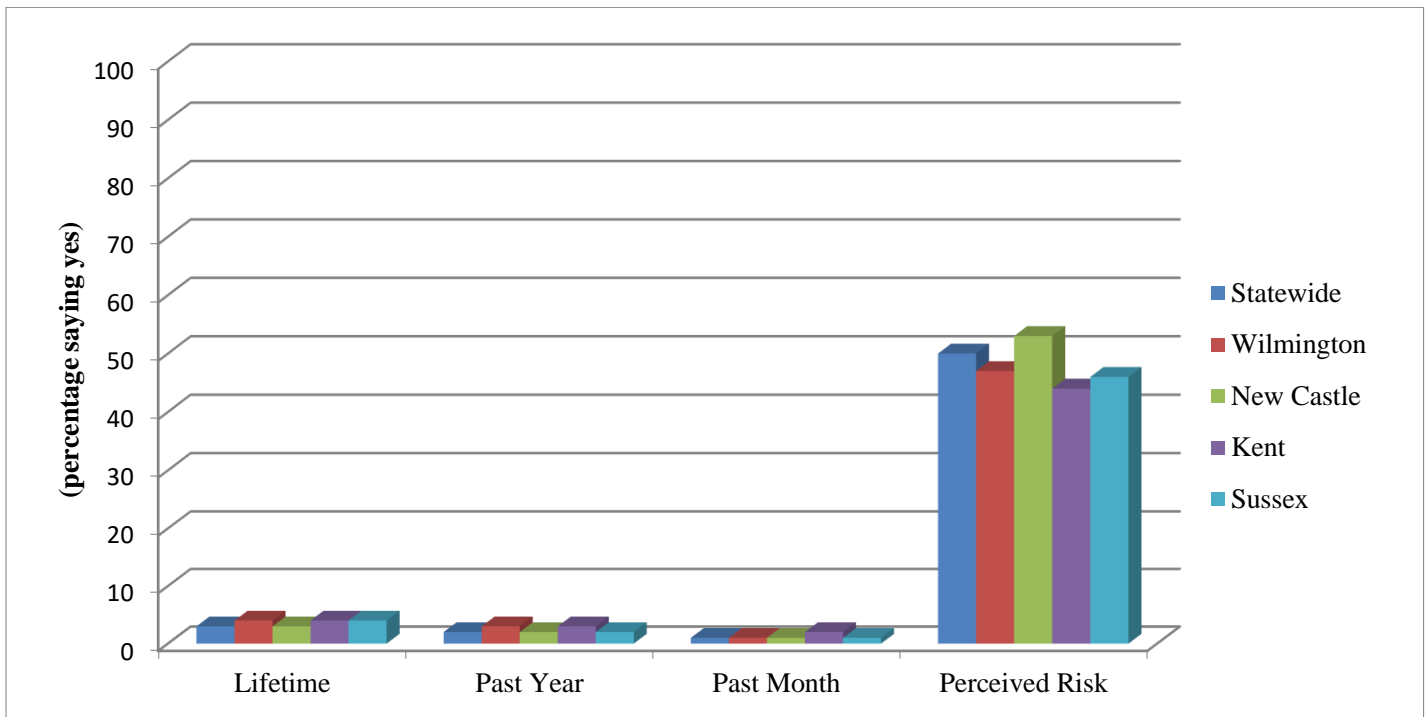


Figure 71 Prescription pain killer use among Delaware 8th graders

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Source: [“2016 Delaware School Survey.” Center for Drug and Health Studies, University of Delaware.](#)

# 2016 DELAWARE SCHOOL SURVEY

## Prescription pain killer use among Delaware 11th graders (in percentages)

|                   | Lifetime | Past Year | Past Month | Perceived Great Risk of Using Prescription Drugs without a Prescription |
|-------------------|----------|-----------|------------|---|
| <b>STATEWIDE</b>  | 6        | 3         | 1          | 64  |
| <b>Males</b>      | 7        | 2         | 2          | 61  |
| <b>Females</b>    | 6        | 3         | 1          | 67  |
| <b>Wilmington</b> | 6        | 3         | 1          | 66  |
| <b>Males</b>      | 8        | 3         | 1          | 65  |
| <b>Females</b>    | 5        | 3         | 1          | 68  |
| <b>New Castle</b> | 6        | 3         | 1          | 60  |
| <b>Males</b>      | 6        | 2         | 1          | 57  |
| <b>Females</b>    | 6        | 3         | 1          | 63  |
| <b>Kent</b>       | 7        | 2         | 2          | 64  |
| <b>Males</b>      | 7        | 1         | 2          | 60  |
| <b>Females</b>    | 6        | 2         | 1          | 67  |
| <b>Sussex</b>     | 6        | 3         | 1          | 62  |
| <b>Males</b>      | 6        | 2         | 1          | 56  |
| <b>Females</b>    | 5        | 3         | 1          | 65  |

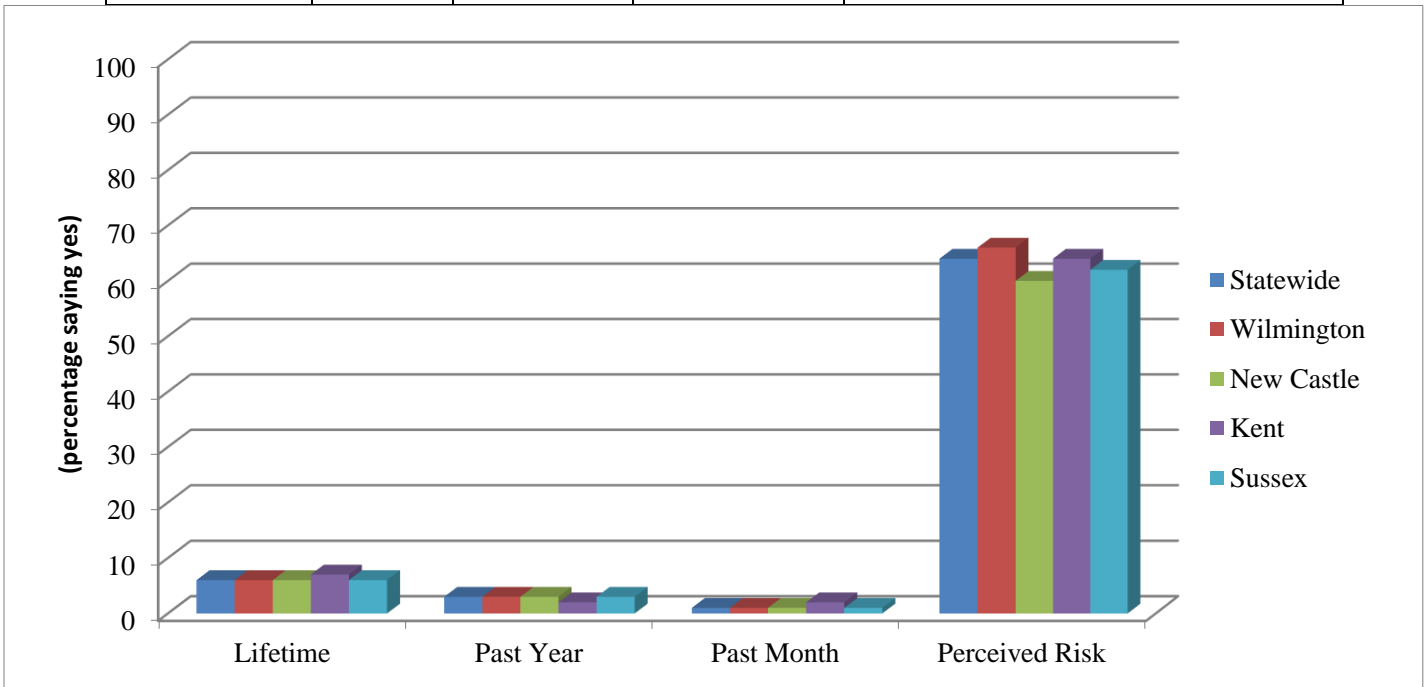


Figure 72 Prescription pain killer use among Delaware 11th graders

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Source:

["2016 Delaware School Survey." Center for Drug and Health Studies, University of Delaware.](#)

# 2016 DELAWARE SCHOOL SURVEY

Trends in monthly use of prescription pain killers among Delaware eleventh graders, 2002- present  
(in percentages)

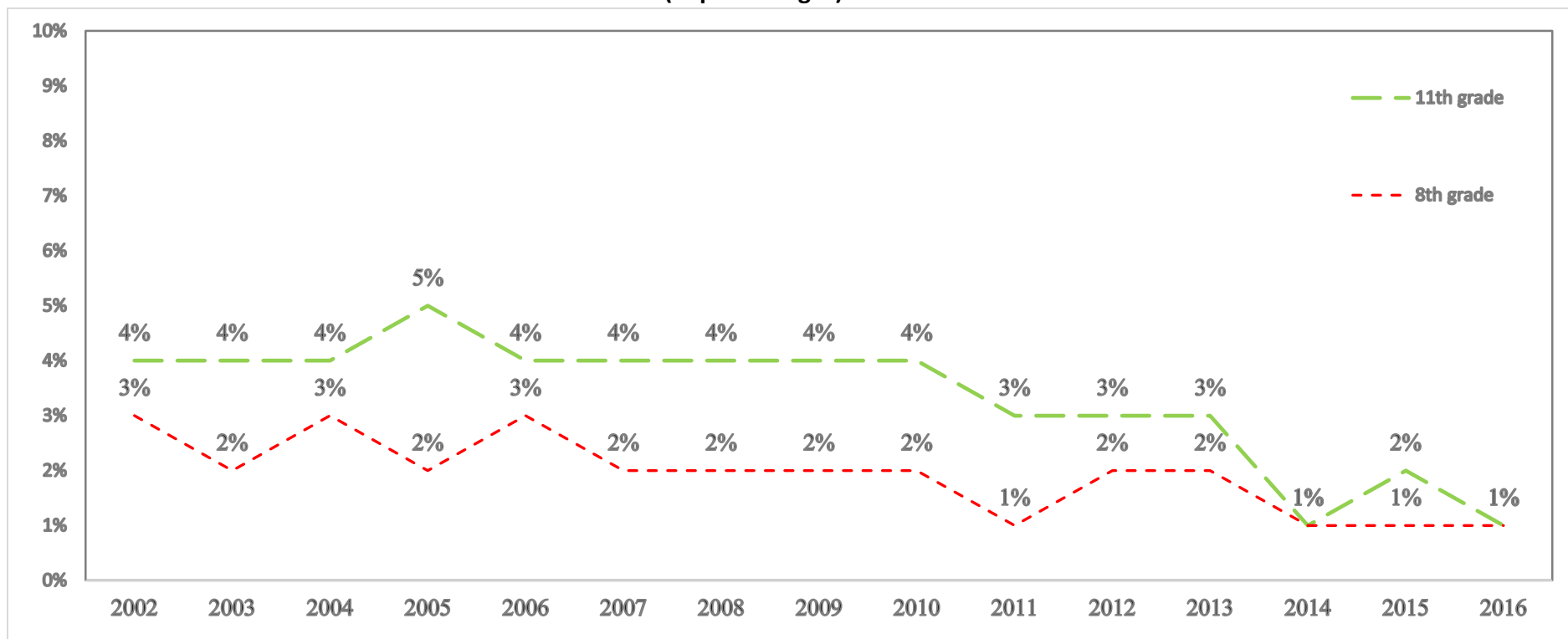


Figure 73 Trends in monthly use of prescription pain killers among Delaware eleventh graders, 2002- present

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Source:  
[“2016 Delaware School Survey.” Center for Drug and Health Studies, University of Delaware.](#)

## NATIONAL SURVEY OF DRUG USE AND HEALTH (NSDUH)

### Nonmedical use of pain relievers in past year, by age group and state: 2012-2013 and 2013-2014 NSDUHs (in percentages) <sup>a</sup>

| State        | AGE GROUP (Years) |           |                             |           |           |                             |           |           |                             |             |           |                             |
|--------------|-------------------|-----------|-----------------------------|-----------|-----------|-----------------------------|-----------|-----------|-----------------------------|-------------|-----------|-----------------------------|
|              | 12 or Older       |           |                             | 12-17     |           |                             | 18-25     |           |                             | 26 or Older |           |                             |
|              | 2012-2013         | 2013-2014 | <i>p</i> value <sup>b</sup> | 2012-2013 | 2013-2014 | <i>p</i> value <sup>b</sup> | 2012-2013 | 2013-2014 | <i>p</i> value <sup>b</sup> | 2012-2013   | 2013-2014 | <i>p</i> value <sup>b</sup> |
| Total U.S.   | 4.51              | 4.06      | .000 <sup>c</sup>           | 5.00      | 4.67      | .020 <sup>c</sup>           | 9.47      | 8.32      | .000 <sup>c</sup>           | 3.60        | 3.26      | .001 <sup>c</sup>           |
| Northeast    | 3.90              | 3.65      | .046 <sup>c</sup>           | 4.05      | 4.03      | .928                        | 8.64      | 7.84      | .005 <sup>c</sup>           | 3.09        | 2.91      | .217                        |
| Delaware     | 4.87              | 4.34      | .158                        | 5.60      | 4.66      | .080 <sup>d</sup>           | 10.65     | 9.52      | .163                        | 3.81        | 3.44      | .373                        |
| Maryland     | 4.18              | 4.50      | .373                        | 4.46      | 4.57      | .808                        | 8.49      | 9.13      | .352                        | 3.44        | 3.74      | .460                        |
| New Jersey   | 3.96              | 3.51      | .131                        | 4.08      | 3.80      | .508                        | 9.4       | 7.83      | .014 <sup>c</sup>           | 3.12        | 2.82      | .372                        |
| Pennsylvania | 3.94              | 3.93      | .955                        | 4.56      | 4.48      | .815                        | 9.11      | 8.73      | .460                        | 3.01        | 3.08      | .777                        |

Figure 74 Nonmedical use of pain relievers in past year by age group and state, 2012-2014

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Notes:

<sup>a</sup> Estimates are based on a survey-weighted hierarchical Bayes estimation approach.

<sup>b</sup> *p* value: Bayes posterior probability of no change.

<sup>c</sup> Difference between the 2013-2014 estimate and the 2014-2015 estimate is statistically significant at the 0.05 level.

<sup>d</sup> Difference between the 2013-2014 estimate and the 2014-2015 estimate is statistically significant at the 0.10 level.

Source:

[“2013-2014 National Survey on Drug Use and Health.” Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration](#)



## Rate of Opioid Prescriptions by Geographic Region in Delaware

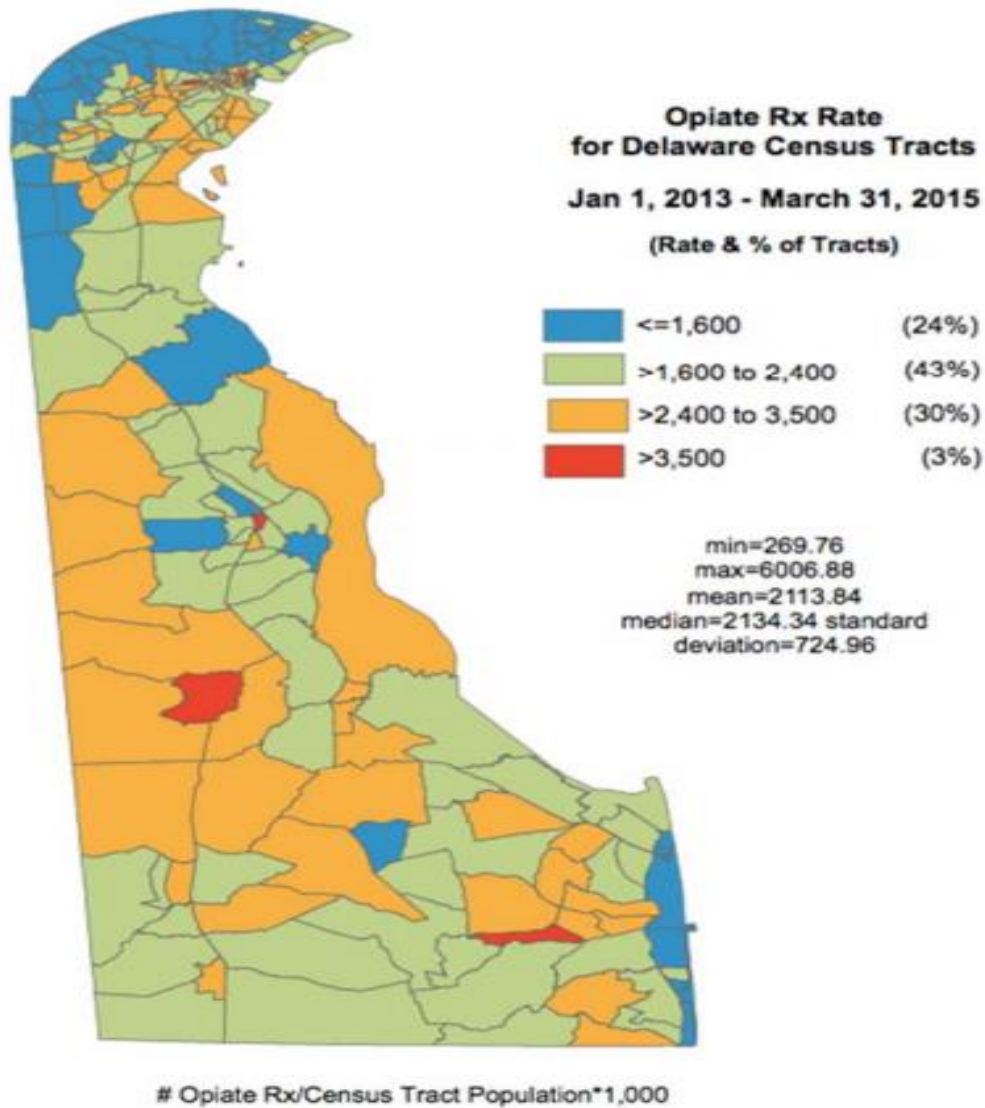


Figure 75 Rate of Opioid Prescriptions by Geographic Region in Delaware

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### Notes:

Map was designed and created by the Delaware Prescription Monitoring Program (PMP). Delaware's PMP is a system that collects daily information on all controlled substance (schedules II-V) prescriptions within the State. All practitioners who hold an active Delaware Controlled Substance Registration (with the exception of veterinarians) are required, by Delaware law, to register with the PMP.

The map highlights the differences in opioid prescription rates by census tract.

Between 2013 and the 1st quarter of 2015, Delaware neighborhoods averaged 2,113.8 opiate prescriptions per 1,000 residents. The map shows 3% of the neighborhoods – shaded red- where opiate prescription rates were 50% to 300+% larger than the state average

### Source:

Office of Controlled Substances, Division of Professional Regulation DE. Funding for this project has been provided by the Department for Health and Social Services, Division of Substance Abuse and Mental Health - State Delaware through a grant from the Substance Abuse and Mental Health Services Administration (SAMHSA, SP020704).

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