New York State

Opioid Annual Data Report

2018

New York State Department of Health

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Introduction

Public Health Law Section 3309(5)[1] requires the New York State (NYS) Commissioner of Health to publish findings on statewide opioid overdose data annually. In this report, the New York State Department of Health (NYSDOH) provides an overview of opioid-related mortality and morbidity across New York State, including:

- Opioid overdose deaths
- Naloxone administration encounters
- Opioid overdose emergency department (ED) visits and hospitalizations
- Treatment admissions for opioid dependency
- Prevalence of opioid use behaviors and opioid dependency
- Opioid prescribing

Opioids include both prescription opioid pain relievers such as hydrocodone, oxycodone, fentanyl and morphine, as well as illegal opioids such as heroin, illicitly manufactured fentanyl and fentanyl analogues, and opium.

Most of the data in this report are presented at the state level. County-level data are available in the New York State County Opioid Quarterly Report published October 2018 on the NYSDOH Opioid-related Data website.[2]

This report provides information to assist agencies and programs across the state in planning and tailoring interventions to address the ongoing opioid crisis.

Please direct questions or requests for additional information to opioidprevention@health.ny.gov.

This report is supported in part by Cooperative Agreement number 55NU17CE002742, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

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[1] https://www.nysenate.gov/legislation/laws/PBH/3309

[2] Opioid-related Data in New York State. New York State Department of Health website. https://health.ny.gov/statistics/opioid/

Glossary

Acronym/Abbreviation	Definition
BNE	Bureau of Narcotic Enforcement
CDS	Client Data System
COOP program	Community Opioid Overdose Prevention program
ED	Emergency Department
EMS	Emergency Medical Services
e-PCR	Electronic Pre-hospital Care Reports
MME	Morphine milligram equivalents
NSDUH	National Survey on Drug Use and Health
NYC	New York City
NYS	New York State
NYSDOH	New York State Department of Health
NYS excl. NYC	New York State excluding New York City
NYS OASAS	New York State Office of Alcoholism and Substance Abuse Services
PMP	Prescription Monitoring Program
SPARCS	Statewide Planning and Research Cooperative System
SUD	Substance Use Disorder
Asian/PI-NH	Asian/Pacific Islander - non-Hispanic
Black-NH	Black - non-Hispanic
Other-NH	Other - non-Hispanic
White-NH	White - non-Hispanic
YRBSS	Youth Risk Behavior Surveillance System

Executive Summary

This report aims to provide a comprehensive overview of opioid-related data for New York State residents. It presents the most recent and complete information available on opioid-related overdose deaths and death rates by age, gender, ethnicity – for the whole state and by geographic location. Overall data on emergency department and hospital utilization for the treatment of opioid overdoses, abuse, and dependency are provided, as well as data on the volume of naloxone (opioid antagonist) administrations by pre-hospital services (emergency medical services, law enforcement, and community programs). Statewide information is also presented for unique clients admitted to the Office of Alcoholism and Substance Abuse Services certified chemical dependence treatment programs with heroin or any other synthetic or semi-synthetic opioid reported as the primary, secondary, or tertiary substance of abuse at admission. Prescription monitoring program data on dispensed opioid analgesic and benzodiazepine prescriptions are provided, as are data on prescription opioids for outpatient treatment, for the state total and by age, gender, and region. Finally, population-based survey data on illicit drug use, heroin use, and pain reliever misuse are presented.

Depending on the data source, several types of estimates are presented in this report. Rates per 100,000 population are used for mortality and morbidity, while rates per 1,000 population are used for opioid prescriptions. Percentages are used for survey-related data, and for several other opioid prescription-related indicators.

County maps are provided throughout the report. The county colors are based on the ranks of county rates, from the lowest to the highest, as follows:

- The YELLOW category includes 50 percent of counties with the lowest estimates; those in quartile 1 and quartile 2;
- The BLUE category includes 25 percent of counties with the highest estimates; those in quartile 4; and
- The GREEN category includes counties between the lowest 50 percent and the highest 25 percent (i.e., 25 percent of counties or those in quartile 3).

For detailed methodology, data sources, indicator descriptions, suppression criteria, and limitations please see the Methods section at the end of this report.

Opioid Overdose Mortality

Opioid overdose deaths among New York State residents increased sharply in 2015 and 2016. The rate of overdose deaths involving any opioid in New York State was almost three times higher in 2016 (15.1 deaths per 100,000 population) than it was in 2010 (5.4 per 100,000). The 2016 statewide rate of overdose deaths involving heroin was 6.5 per 100,000 population, while the rate of deaths involving "opioid pain relievers" was 11.7 per 100,000.

Among overdose deaths involving "opioid pain relievers", a subcategory of synthetic opioids excluding methadone (8.3 deaths per 100,000), which includes illicit fentanyl and its analogues, contributed to the majority of deaths. Thus, this does not mean that the majority of deaths in the "opioid pain reliever" category are attributable to prescription opioid overdoses. Instead, they are largely due to a subcategory of illicit synthetic opioids which are not medically-prescribed and are commonly found mixed with heroin and other illicit drugs or pressed into counterfeit pill

form to resemble prescriptions opioids (see Figure 1.13).[3,4] Because this subcategory of illicit synthetic opioids is coded together with prescription opioids, there is not a distinct category of prescription opioids from which to determine a rate of prescription opioid overdose deaths. An alternative data source is necessary to accurately determine rates of prescription opioid overdose death.

There was a sharp increase in the statewide age-adjusted rate of overdose deaths involving synthetic opioids other than methadone, from 1.4 deaths per 100,000 in 2014 to 8.3 per 100,000 in 2016. Furthermore, a large increase was observed in 2016 (compared to 2010) for overdose deaths involving synthetic opioids other than methadone with other substances present, such as heroin (3.3 per 100,000) and cocaine (2.3 per 100,000).

Since 2010, the rate of overdose deaths involving any opioid has been higher among residents of New York State excluding (outside) New York City than among residents of New York City, with both rates trending upward through 2016. Similarly, the rate of overdose deaths involving heroin has been higher in New York State excluding New York City than in New York City since 2010, again increasing through 2016. Statewide, 2016 rates of overdose deaths involving any opioid were higher among males (22.3 per 100,000) than among females (8.1 per 100,000), higher among White non-Hispanics (19.8 per 100,000) than among Black non-Hispanics (10.5 per 100,000) or Hispanics (12.6 per 100,000), and highest among those aged 25-44 years (27.7 per 100,000). During 2016, most opioid overdose deaths in New York State occurred in the decedent's home (60.3 percent). There was no apparent seasonal pattern in the number of opioid overdose deaths by month in New York State during 2016.

Naloxone Administration

Naloxone, also known by the brand name Narcan, is a medication that can reverse an opioid overdose if administered in time. A total of 15,616 unique naloxone administrations were reported electronically by Emergency Medical Service (EMS) agencies throughout New York State in 2017, having increased by about 50 percent from 10,319 reports received in 2015. While most of the increase was due to a rise in opioid overdose, some of the increase is attributable to improved reporting by EMS agencies. According to 2017 data, naloxone administrations were most common among males and those aged 25-44 years (68.4 percent and 43.8 percent, respectively). Over half of all naloxone administrations by EMS in 2017 took place in residential settings (54.9 percent).

Law enforcement reports of naloxone administration totaled 1,742 in 2017, while Community Opioid Overdose Prevention (COOP) programs reported 2,062 for the same year. Naloxone administrations were most common among males (1,247 by law enforcement; 1,283 by COOP programs), and those aged 25-44 (1,045 by law enforcement; 1,271 by COOP programs).

Overall, the numbers of naloxone administrations from all sources reported have trended upward, increasing in response to the rise in opioid overdoses. This is also driven by greater availability of naloxone among first responders and the general public, and easier access to the medication

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[3] United States Drug Enforcement Administration. 2018 National Drug Threat Assessment. October 2018. https://www.dea.gov/documents/2018/10/02/2018-national-drug-threat-assessment-ndta

[4] Paone D, Nolan ML, Tuazon E, Blachman-Forshay J. Unintentional Drug Poisoning (Overdose) Deaths in New York City, 2000–2016. New York City Department of Health and Mental Hygiene: Epi Data Brief (89); June 2017. http://www1.nyc.gov/assets/doh/downloads/pdf/epi/databrief89.pdf

through programs such as the New York State Naloxone Copayment Assistance Program (N-CAP).

Emergency Department Visits and Hospitalizations

In 2016, there were more than 11,000 emergency department (ED) visits for any opioid overdose among New York State residents, with a statewide crude rate of 56.9 per 100,000 population. The rate was highest among young adults aged 18-24 (104.5 per 100,000), followed by those aged 25-44 (103.4 per 100,000). The ED visit rate for opioid overdose was more than two times higher among males (77.5 per 100,000) than that among females (37.5 per 100,000). Disparities existed among certain racial and ethnic groups. The rate was highest among the White non-Hispanic population (68.8 per 100,000), followed by the Black non-Hispanic population (36.2 per 100,000) and Hispanics (30.8 per 100,000). Geographic differences continue to be seen. ED visit rate for opioid overdose was more than two times higher for New York State excluding New York City (74.9 per 100,000) as compared to New York City (33.3 per 100,000).

Of those visits for opioid overdose, more than 6,000 visits were due to a heroin overdose. Similar patterns were observed for ED visits due to heroin, where high risk populations appeared to be among ages 18 to 44, male, and white non-Hispanic residents. However, state residents outside of New York City had three times the rate of New York City residents with rates of 49.0 and 16.7 per 100,000, respectively.

During 2016, there were more than 25,000 hospital discharges due to opioid use (including overdose, abuse, dependence and unspecified use). The crude rate for New York State was 130.2 per 100,000. The geographic disparity between New York City (137.7 per 100,000) and New York State excluding New York City (124.4 per 100,000) was smaller compared to the rates for ED visits due to opioid overdose. Hospital discharge rates due to opioid use were higher in New York City while ED visit rates due to opioid and heroin overdose were higher in New York State excluding New York City. In contrast with the distribution by age group for ED visits for opioid overdose, the highest risk for hospital discharge for opioid use was among those aged 25-44 years (261.3 per 100,000). The rate among males (188.9 per 100,000) was over two and a half times that of females (74.7 per 100,000). Smaller disparities were observed for the rates of hospital discharge involving opioid use among racial and ethnic groups, with the rate for White non-Hispanics (130.0 per 100,000) only slightly higher than the rates for Black non-Hispanics (117.0 per 100,000) and Hispanics (124.0 per 100,000).

Opioid burden includes opioid overdose deaths, ED visits and hospital discharges involving non-fatal opioid overdose and opioid use (including abuse, dependence, and unspecified use). For New York State in 2016, the crude rate for overall opioid burden was 295.9 per 100,000 – over 58,000 unique events. Following the pattern of hospital discharges for opioid use, the groups at the highest risk for opioid burden include males (425.9 per 100,000) and those between the ages of 25-44 years (590.0 per 100,000). Disparities between racial and ethnic groups were also smaller compared to ED visits for opioid overdose. The rates for New York City (290.0 per 100,000) and New York State excluding New York City (300.3 per 100,000) were similar, indicating that the opioid burden is distributed across the state – not concentrated in one region.

Office of Alcoholism and Substance Abuse Services Client Data

The New York State Office of Alcoholism and Substance Abuse Services (OASAS) provided data on unique clients admitted for any opioid (including heroin) between 2010-2017. The source

of this information is the Client Data System. This system collects data on every person admitted to an OASAS-certified treatment program in New York State. It does not have data for individuals who get treated by the United States (U.S.) Department of Veterans Affairs, go outside New York State for treatment, are admitted to hospitals but not to an OASAS-certified treatment program, or receive medication addiction treatment from a physician outside the OASAS system of care.

Because a significant amount of time often elapses from an individual's initial use of an opioid and their admission to treatment, OASAS considers the number of unique clients admitted to treatment for opioids to be a trailing indicator of the prevalence of opioid abuse.

Statewide, the number of unique clients admitted for any opioid increased 21.1 percent between 2010 and 2016 before declining slightly in 2017. Areas of the state outside of New York City showed a 43.4 percent increase in the number of unique clients admitted for any opioids between 2010 and 2016 while there was a 4.7 percent decline among New York City residents admitted during this period. During 2017, the counties with the highest crude rates of unique clients admitted to treatment for opioids were mostly rural counties. It is important to recognize that admissions rates are affected by the availability of treatment at the local level.

Throughout this period, more than twice as many males as females were admitted for any opioid, but between 2010 and 2016, there was a 30.7 percent increase in the number of females admitted for any opioid while males increased by 17.1 percent. The 25-34 age group consistently had the highest crude rate of clients admitted for opioids between 2010 and 2017.

Prescription Monitoring Program

In 2017, more than eight million opioid analgesics and over five million benzodiazepine prescriptions were dispensed to New York State residents. During 2012-2017, the crude rate of opioid analgesics declined from 474.5 prescriptions per 1,000 population in 2012 to 408.7 per 1,000 in 2017, while the crude rate of benzodiazepine prescriptions increased slightly between 2012 (266.0 per 1,000 population) and 2017 (271.2 per 1,000). The rate for opioid analgesics was higher in New York State excluding New York City (522.9 per 1,000) than in New York City (259.8 per 1,000) for 2017. The rate of opioid analgesic prescriptions was higher among females than males, and among the 55-64 year age group compared to other age groups. Similar sociodemographic patterns were observed for the benzodiazepine prescribing rate in 2017.

In New York State, a significant reduction occurred in the number of patients who received opioid prescriptions from five or more prescribers, at five or more pharmacies in a six-month period ("doctor shoppers") between 2012 (27.0 per 100,000 population) and 2017 (1.4 per 100,000 population).

Opioid analgesics prescribed in higher dosages (> 90 morphine milligram equivalents (MME)) are associated with higher risks of overdose and death.[5] In New York State, the percentage of patients (receiving one or more opioid analgesic prescriptions) with a total daily dose of 90 or greater morphine milligram equivalents for at least one day, declined between 2012 (14.9 percent) and 2017 (12.8 percent). In 2017, New York State excluding New York City (13.2

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[5] Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016. MMWR Recomm Rep 2016;65(No. RR-1):1–49. https://www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm

percent) had a higher percentage of patients receiving 90 or greater morphine milligram equivalents for at least one day compared to New York City (12.0 percent); patients aged 55-64 years had the highest percentage for both males (18.4 percent) and females (15.9 percent).

Among patients with at least one prescription for opioid analgesics or benzodiazepines[6], the percentage who received two or more days of overlapping opioid analgesic and benzodiazepine prescriptions declined between 2016 (5.6 percent) and 2017 (5.0 percent) for New York State. During 2012-2017, New York State excluding New York City had consistently higher percentages of overlapping prescriptions compared to New York City. The percentage was higher among those aged 55 or older (6.7 percent for 55-64 age group, and 6.8 percent for 65 or older group) and among female patients (5.4 percent) in 2017.

In New York State, almost 700,000 buprenorphine prescriptions were dispensed for outpatient treatment of substance use disorder in 2017. The crude rate of buprenorphine prescribing for substance use disorder increased by 54.6 percent from 22.7 per 1,000 population in 2012 to 35.1 per 1,000 in 2017. The rate was more than two times higher in New York State excluding New York City than that for New York City during 2012-2017. In New York State, males consistently had higher rates than females from 2012 through 2017, and 25-34 age group had the highest rates for buprenorphine prescribing for the treatment of substance use disorder in both 2012 (63.1 per 1,000) and 2017 (88.9 per 1,000).

Survey Data

Two national surveys provide contextual information about the prevalence of drug use among youth and adults in New York State and in the United States. The Youth Risk Behavior Surveillance System provides data on self-reported lifetime use of heroin among high school students, from 2003 to 2017. This trend increased in New York State from 1.8 percent in 2003 to a peak of 4.8 percent in 2015, before decreasing to 3.9 percent in 2017. Conversely, a slightly downward trend was observed for the U.S. during the same time period. For New York State in 2017, the percentage was highest among male students (4.8 percent, compared to 2.1 percent among females), Hispanic students (5.2 percent, compared to the low of 1.8 percent among white students), and twelfth-graders (4.5 percent, compared to the low of 2.3 percent among tenth graders).

Data from the National Survey on Drug Use and Health provide comparisons between New York State and the U.S. on the estimated prevalence of opioid and illicit drug use in 2015 and 2016 combined. In both New York State and the U.S., 3.4 percent of people aged 12 and older reported use of illicit drugs other than marijuana in the past month; this percentage was highest among those aged 18-25 years (6.9 percent in New York State, and 7.3 percent in the U.S.). Reported use of heroin in the past year had lower percentages, with only 0.33 percent for the U.S. and 0.42 percent for New York State; in New York State the percentage was highest among those aged 18-25 years (0.63 percent). Misuse of prescription pain relievers in the past year was higher for the U.S. (4.5 percent) than for New York State (3.9 percent), with the highest percentage being in the 18-25 age group (6.9 percent in New York and 7.8 percent in the U.S.).

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[6] Benzodiazepines include medications such as Xanax and Valium.

Opioid Overdose Mortality Data

Figure 1.1 Overdose deaths, age-adjusted rate per 100,000 population, by substance, New York State, 2010 and 2016
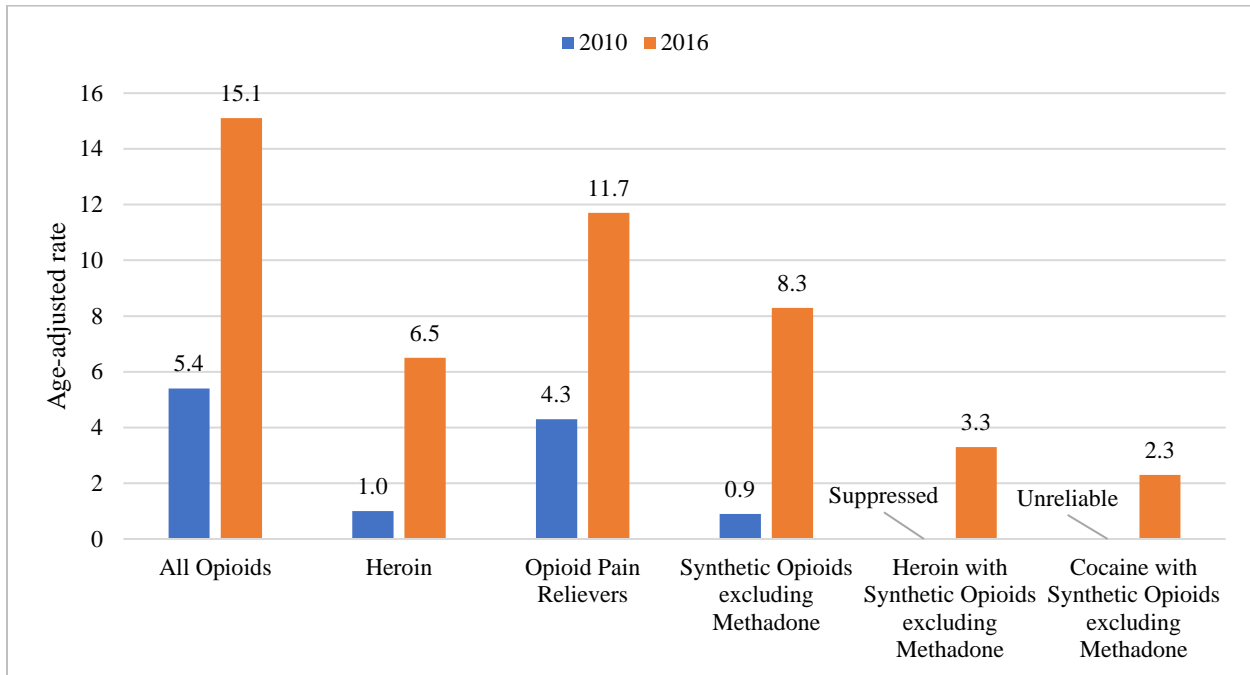
Data source: CDC WONDER; Data accessed August 2018

Note: Death count and rate are suppressed for categories with fewer than 10 deaths. Rate is marked as 'unreliable' when the count is fewer than 20 deaths. The categories are not mutually exclusive. For complete data, see Appendix: Data Table 1.1.

Among New York State (NYS) residents, the number of overdose deaths involving any opioid increased from 1,074 in 2010 to 3,009 in 2016. The age-adjusted rate of deaths involving all opioids in NYS approximately tripled between 2010 and 2016, from 5.4 to 15.1 deaths per 100,000 population. This included a large increase in the age-adjusted rate of deaths involving synthetic opioids excluding methadone, a subcategory of opioid pain relievers (also called analgesics), such as fentanyl.[7]

Fentanyl is a very potent opioid with legitimate medical uses; as such, it is classified in this pain reliever category. However, illicitly manufactured fentanyl has become a major part of the illicit opioid market. Since approximately 2014, illicitly manufactured fentanyl has played a significant part in the rising opioid-related death toll in the U.S., often being mixed into powder heroin and even cocaine, or pressed into counterfeit pills (such as ones illicitly manufactured to resemble Vicodin, OxyContin, or Xanax) with a variety of other substances.[8] Because it is not possible to distinguish illicit fentanyl from medically administered fentanyl in postmortem toxicology

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[7] Rudd RA, Seth P, David F, Scholl L. Increases in Drug and Opioid-Involved Overdose Deaths — United States, 2010–2015. MMWR Morb Mortal Wkly Rep 2016;65:1445–1452. https://www.cdc.gov/mmwr/volumes/65/wr/mm655051e1.htm

[8] https://www.dea.gov/factsheets/fentanyl

testing, all fentanyl-related deaths are classified in the same way – labeled as "synthetic opioids, excluding methadone."

In NYS, increases in deaths involving synthetic opioids, excluding methadone, drove most of the increase in the age-adjusted rate of deaths involving any opioid pain reliever, an overwhelming majority of which involved fentanyl.[9, 10] It is also important to note that overdose deaths increasingly involved both heroin and synthetic opioids, excluding methadone, together. A similar pattern was also observed for deaths involving both cocaine and synthetic opioids, excluding methadone, together. These combinations typically include fentanyl.

Although there have been increases in the number of deaths involving opioid overdose, some of the observed increase has likely been due to raised awareness of opioid overdoses, improvements in technology and resources for toxicology testing, and improved cause-of-death reporting.

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[9] Rudd RA, Seth P, David F, Scholl L. Increases in Drug and Opioid-Involved Overdose Deaths — United States, 2010–2015. MMWR Morb Mortal Wkly Rep 2016;65:1445–1452. https://www.cdc.gov/mmwr/volumes/65/wr/mm655051e1.htm

[10] Paone D, Nolan ML, Tuazon E, Blachman-Forshay J. Unintentional Drug Poisoning (Overdose) Deaths in New York City, 2000–2016. New York City Department of Health and Mental Hygiene: Epi Data Brief (89); June 2017. http://www1.nyc.gov/assets/doh/downloads/pdf/epi/databrief89.pdf

Figure 1.2 Overdose deaths involving any opioid, age-adjusted rate per 100,000 population, by county, New York State, 2016
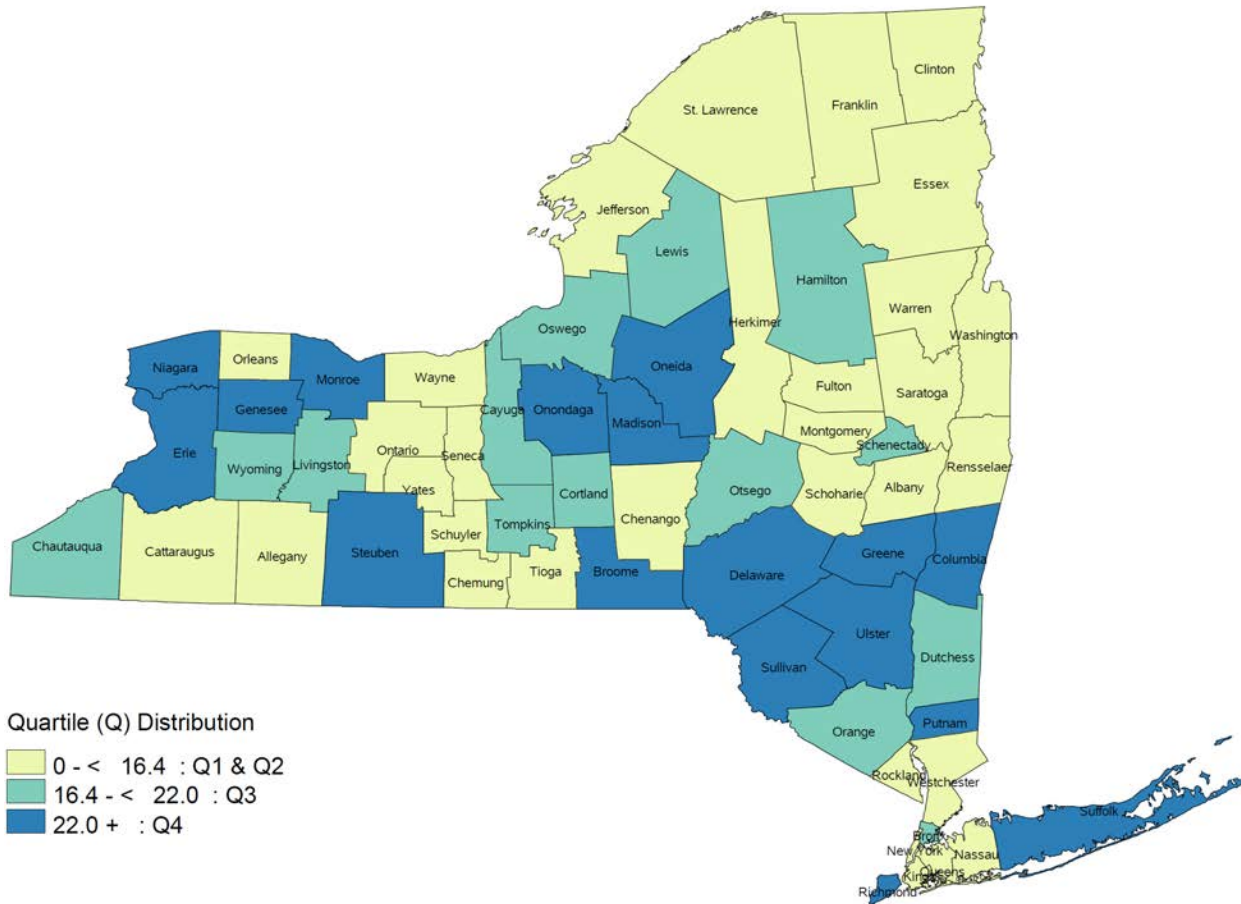
Data source: New York State Department of Health, Bureau of Vital Statistics; Data as of May 2018
For county data on overdose deaths involving any opioid, see Appendix: Data Table 1.2.

In NYS during 2016, the age-adjusted rate per 100,000 population for overdose deaths involving any opioid was highest in Ulster County (33.6 per 100,000), and lowest in Schuyler County (0.0 per 100,000). Counties with rates in the top 25 percent also included Broome, Erie, Greene, Onondaga, Delaware, Columbia, Suffolk, Putnam, Sullivan, Genesee, Niagara, Oneida, Steuben, Richmond, and Madison.

Figure 1.3 Overdose deaths involving heroin, age-adjusted rate per 100,000 population, by county, New York State, 2016
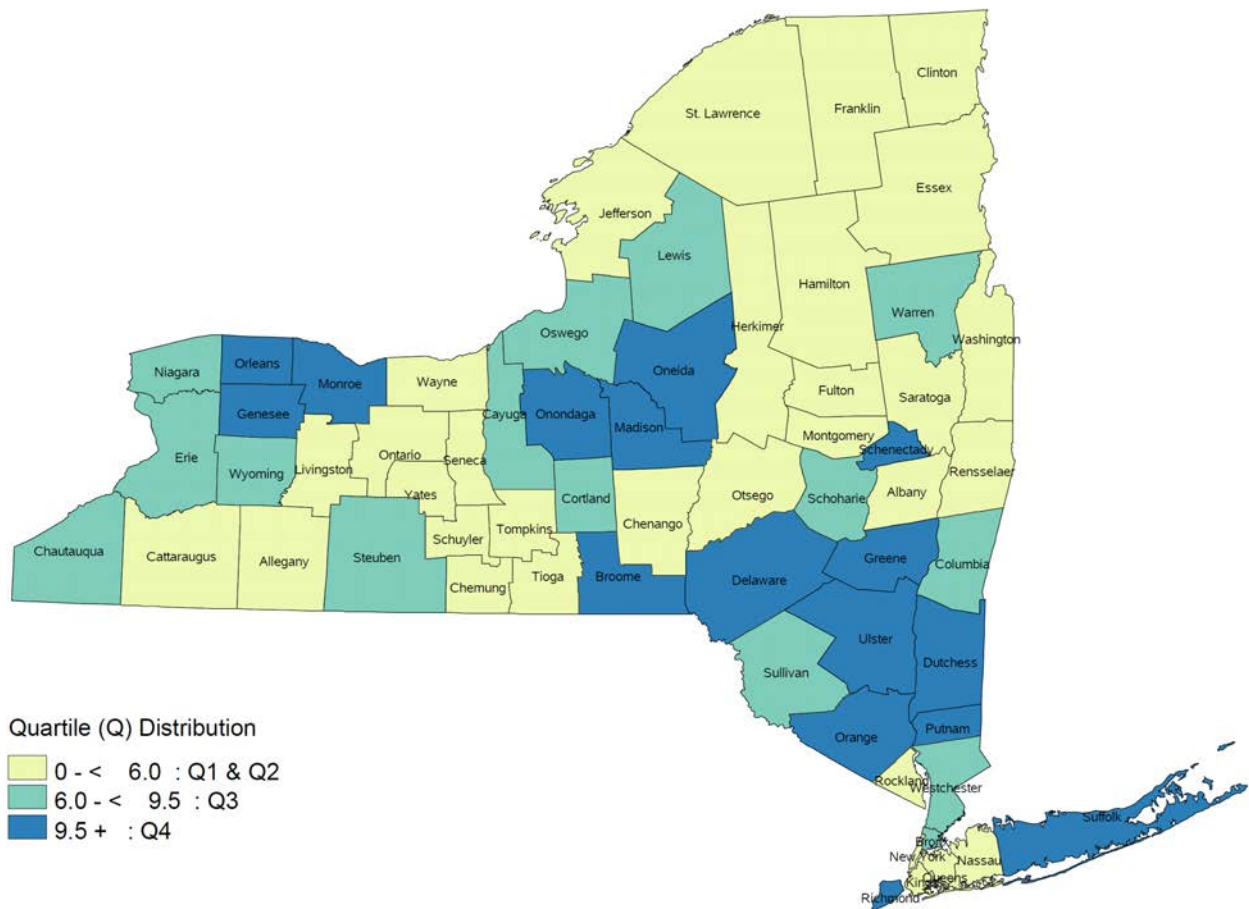
Data source: New York State Department of Health, Bureau of Vital Statistics; Data as of May 2018
For county data on overdose deaths involving heroin, see Appendix: Data Table 1.3.

In NYS during 2016, the age-adjusted rate per 100,000 population for overdose deaths involving heroin was highest in Greene County (17.4 per 100,000), and lowest in Montgomery, Essex, Franklin, Hamilton, Chemung, Schuyler, Seneca, Wayne, Yates, and Allegany counties (0.0 per 100,000). Counties with rates in the top 25 percent also included Oneida, Broome, Ulster, Madison, Onondaga, Orange, Putnam, Richmond, Delaware, Schenectady, Dutchess, Orleans, Genesee, Suffolk, and Monroe.

Figure 1.4 Overdose deaths involving synthetic opioids other than methadone, age-adjusted rate per 100,000 population, by county, New York State, 2016
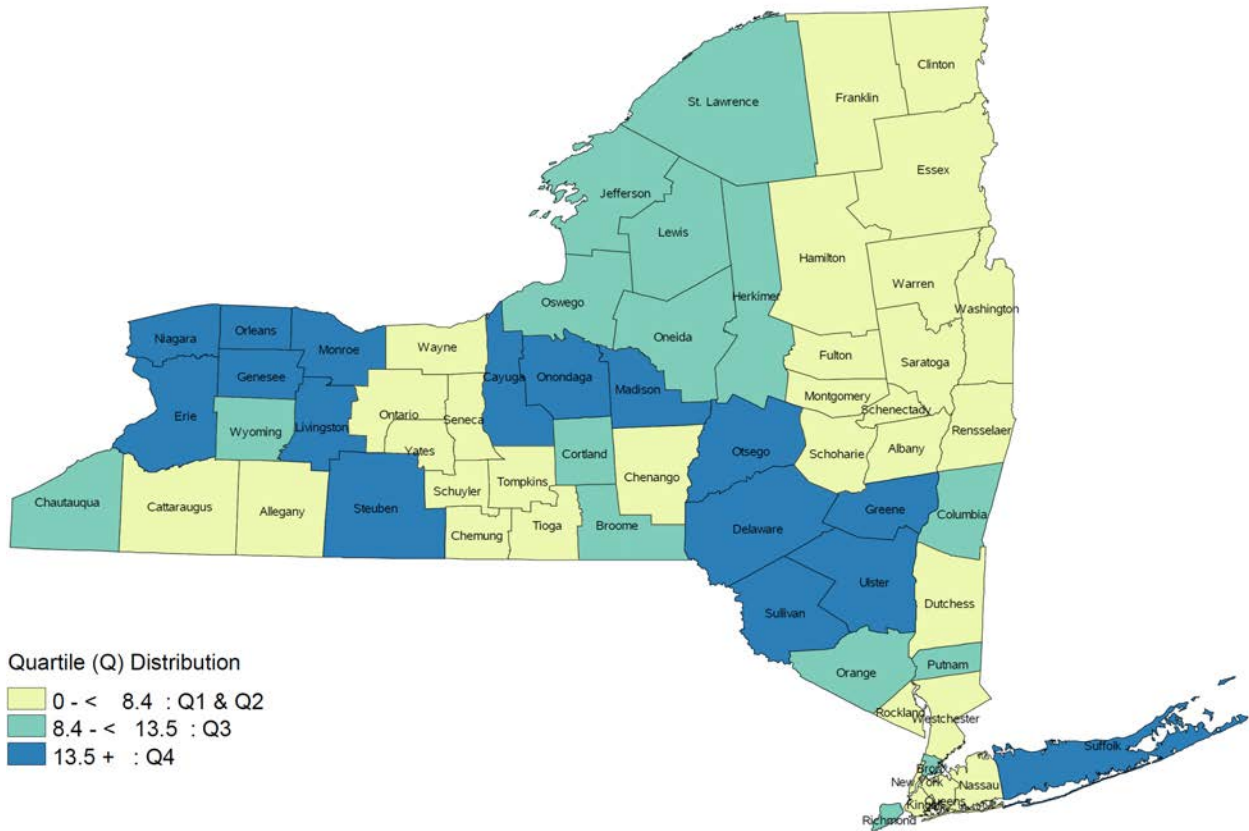
Data source: New York State Department of Health, Bureau of Vital Statistics; Data as of May 2018
For county data on overdose deaths involving synthetic opioids other than methadone, see Appendix: Data Table 1.4.

In NYS during 2016, the age-adjusted rate per 100,000 population for overdose deaths involving synthetic opioids other than methadone was highest in Erie County (24.1 per 100,000), and lowest in Montgomery, Hamilton, Washington, and Schuyler counties (0.0 per 100,000). Counties with rates in the top 25 percent also included Greene, Onondaga, Genesse, Cayuga, Steuben, Livingston, Monroe, Niagara, Delaware, Otsego, Ulster, Madison, Suffolk, Sullivan, and Orleans.

Figure 1.5 Overdose deaths involving any opioid, age-adjusted rate per 100,000 population, by region, New York State, 2010-2016
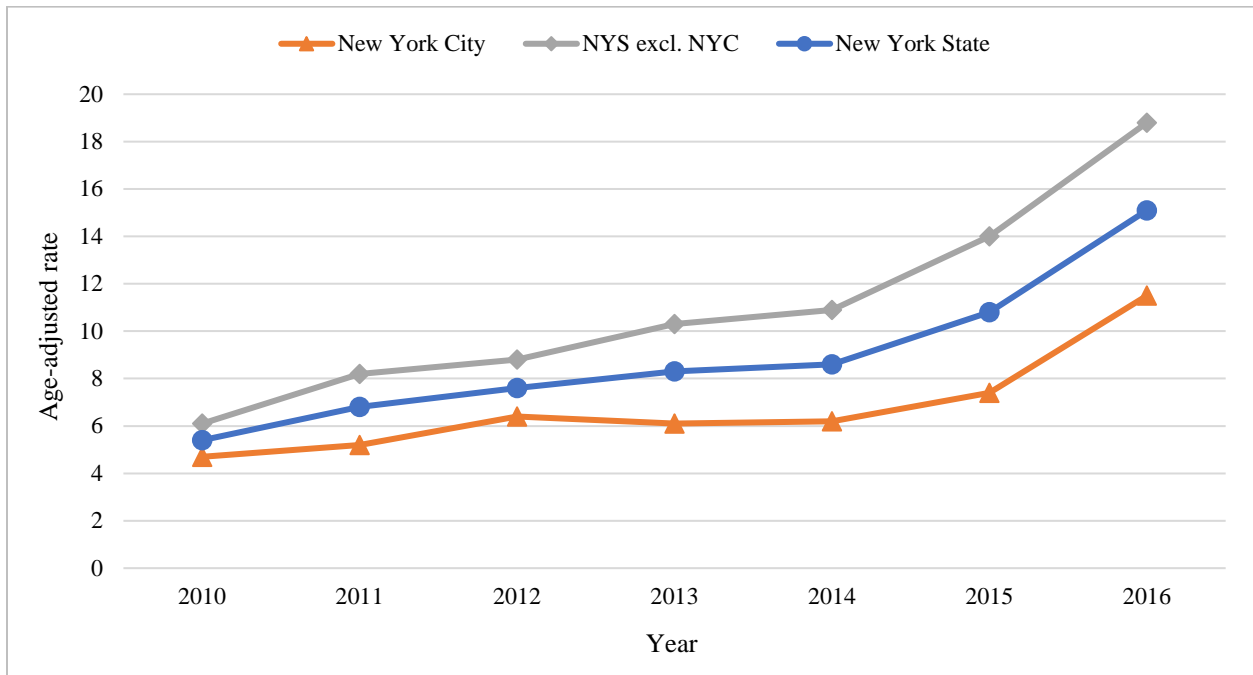
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.5.

The age-adjusted rate of overdose deaths involving any opioid increased in both New York City (NYC) and NYS excl. NYC between 2010 and 2016. The rate for NYC was lower in 2016 (11.5 per 100,000) than the rate for NYS excl. NYC (18.8 per 100,000).

Figure 1.6 Overdose deaths involving any opioid, age-adjusted rate per 100,000 population, by gender, New York State, 2010-2016
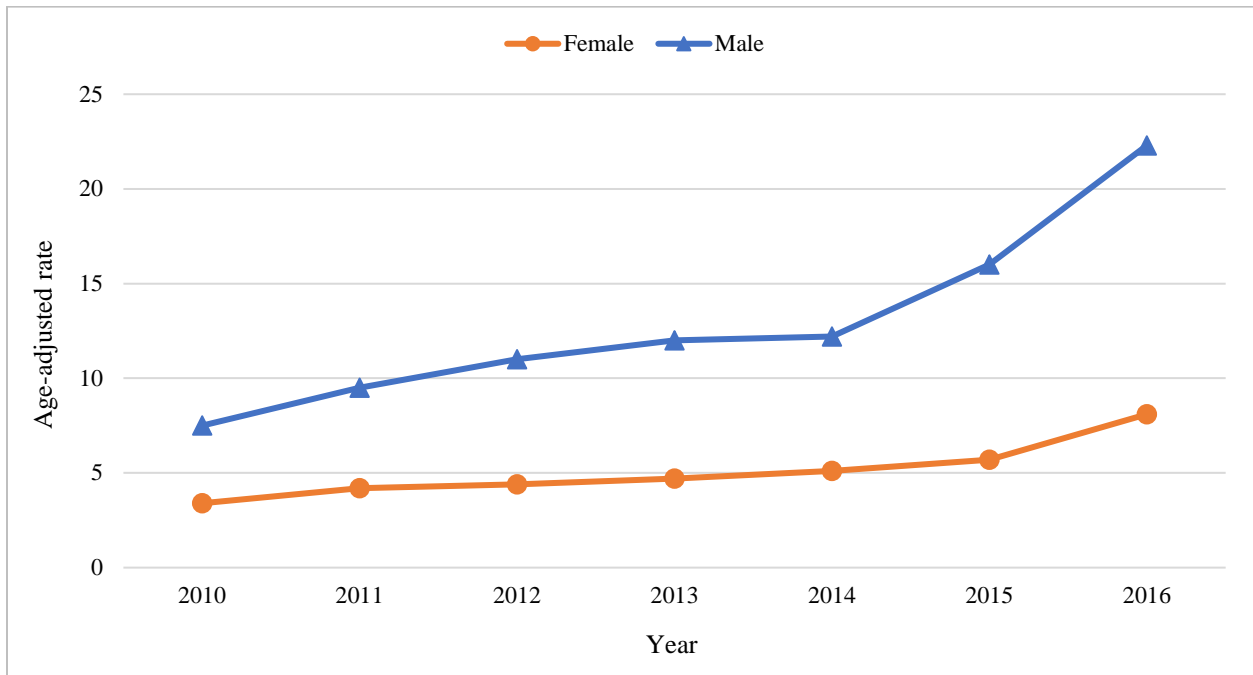
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.6.

In NYS, the rate per 100,000 population of overdose deaths involving any opioid was higher among males than among females. There was a larger increase in the rate among males (from 7.5 per 100,000 in 2010 to 22.3 per 100,000 in 2016) than there was in the rate among females (from 3.4 per 100,000 in 2010 to 8.1 per 100,000 in 2016).

Figure 1.7 Overdose deaths involving any opioids, age-adjusted rate per 100,000 population, by race/ethnicity, New York State, 2010-2016
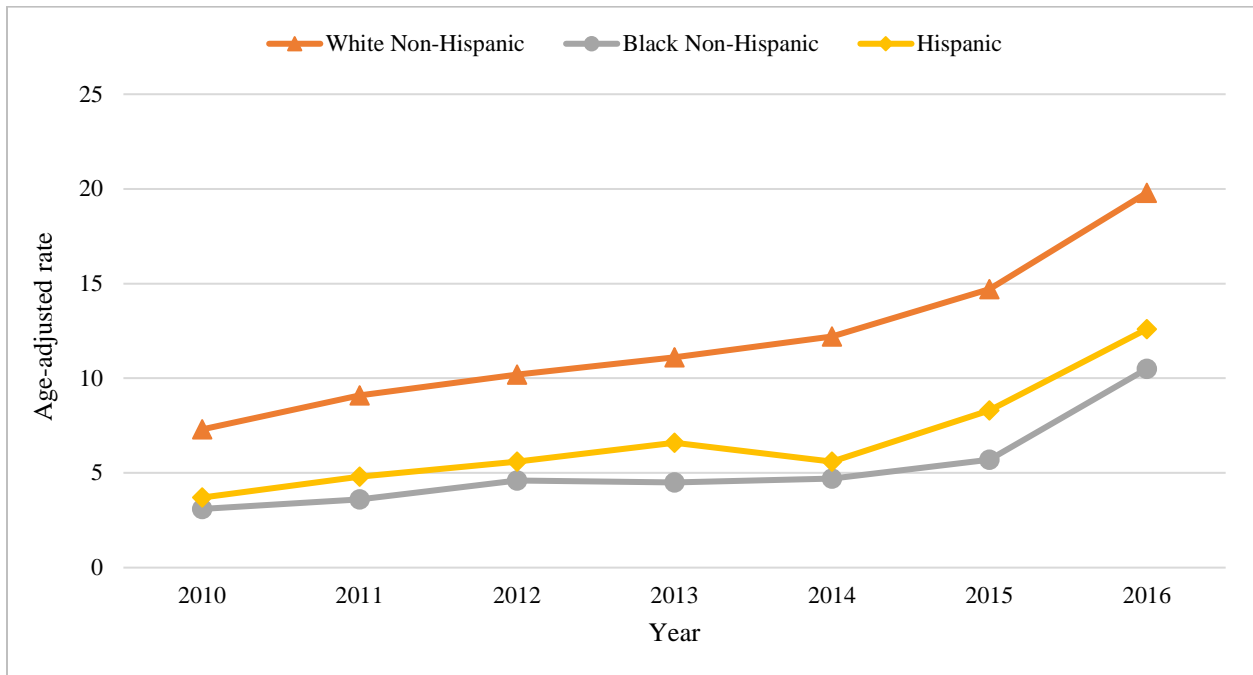
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.7.

The age-adjusted rates of overdose deaths involving any opioids in NYS among White non-Hispanic, Black non-Hispanic, and Hispanic populations increased between 2010 and 2016. The White non-Hispanic population had the highest age-adjusted rates each year during this time period.

Figure 1.8 Overdose deaths involving any opioid, crude rate per 100,000 population, by age group, New York State, 2016
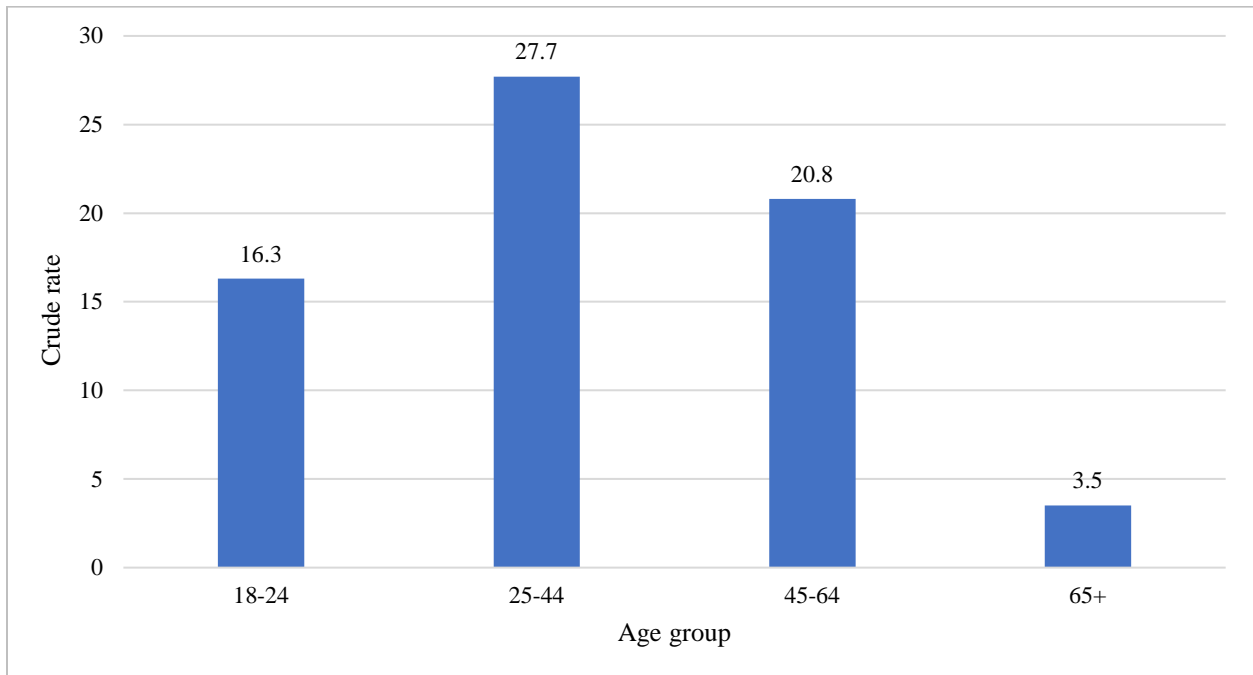
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.8.

In NYS during 2016, the crude rate of overdose deaths involving all opioids was highest among the 25-44 year old age group (27.7 per 100,000 population), followed by the 45-64 (20.8 per 100,000), and 18-24 (16.3 per 100,000) age groups.

Figure 1.9 Overdose deaths involving heroin and opioid pain relievers, age-adjusted rate per 100,000 population, by region, New York State, 2010 and 2016
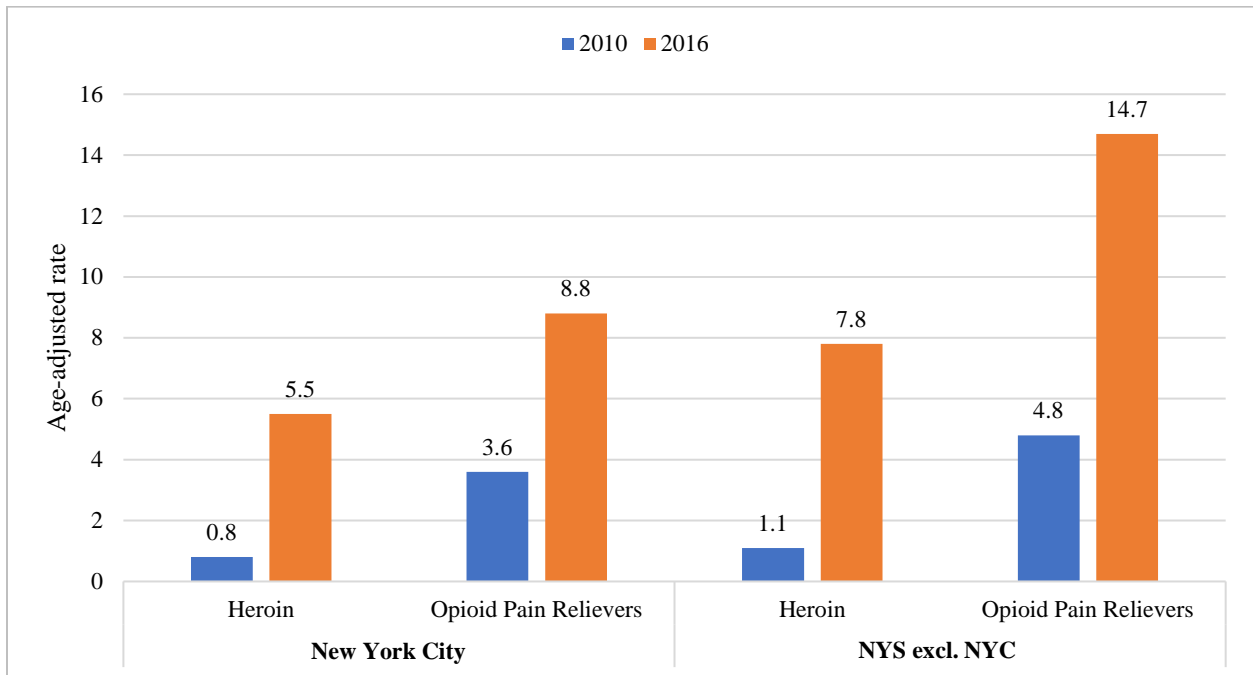
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.9.

In New York, from 2010 to 2016, the age-adjusted rates of overdose deaths involving heroin and opioid pain relievers, respectively, increased both in NYC and NYS excl. NYC. In 2010 and 2016, the rates were higher in NYS excl. NYC than they were in NYC.

Figure 1.10 Overdose deaths involving heroin, age-adjusted rate per 100,000 population, by region, New York State, 2010-2016
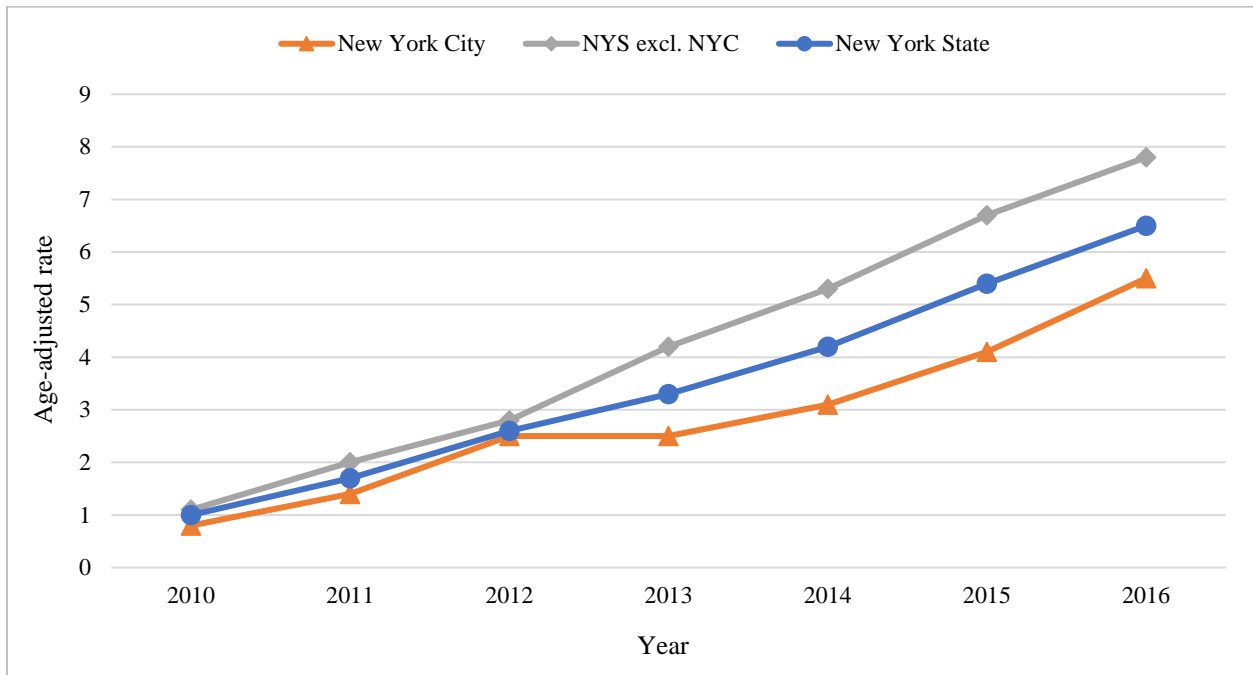
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.10.

The age-adjusted rate of overdose deaths involving heroin in NYS was 6.5 times higher in 2016 (6.5 per 100,000 population) than it was in 2010 (1.0 per 100,000). The rate in NYS excl. NYC was higher than the rate within NYC.

Figure 1.11 Overdose deaths involving heroin, age-adjusted rate per 100,000 population, by sub-population, New York State, 2016
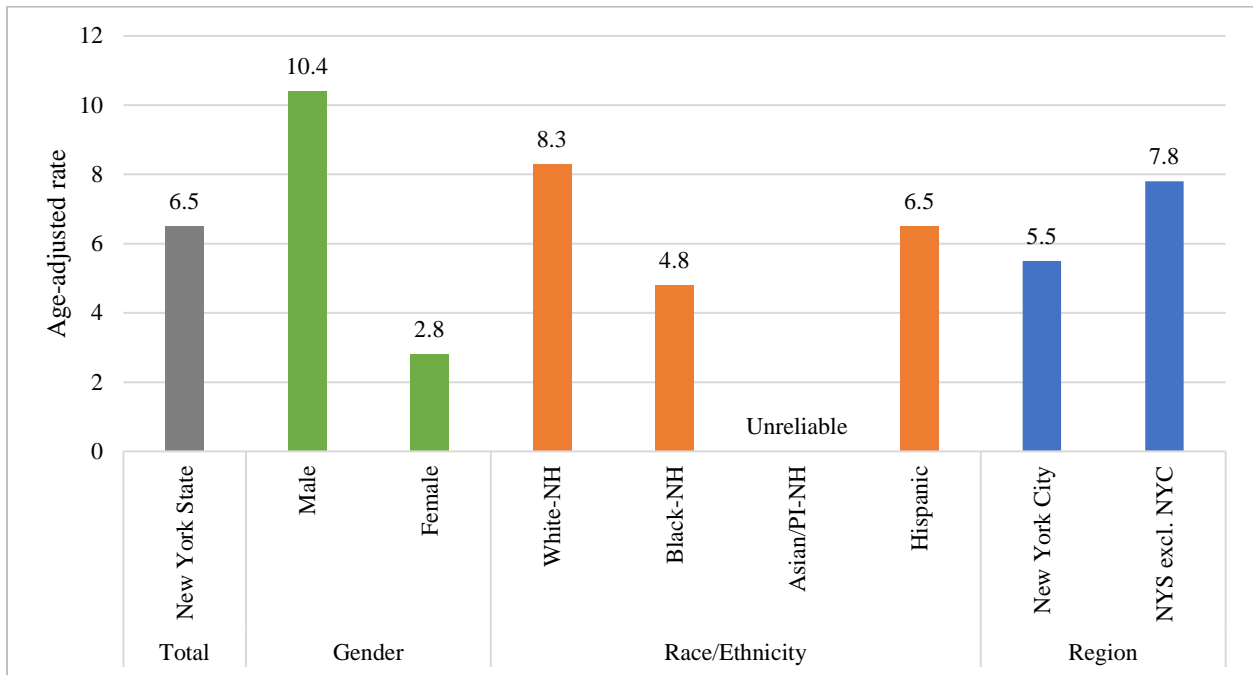
Note: Rates are marked as 'unreliable' when counts are fewer than 20 deaths.
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.11.

In NYS during 2016, the age-adjusted rates of overdose deaths involving heroin among males (10.4 per 100,000 population), White non-Hispanics (8.3 per 100,000), and NYS residents outside of NYC (7.8 per 100,000) were higher than the statewide rate (6.5 per 100,000).

Figure 1.12 Overdose deaths involving heroin, crude rate per 100,000 population, by age group, New York State, 2016
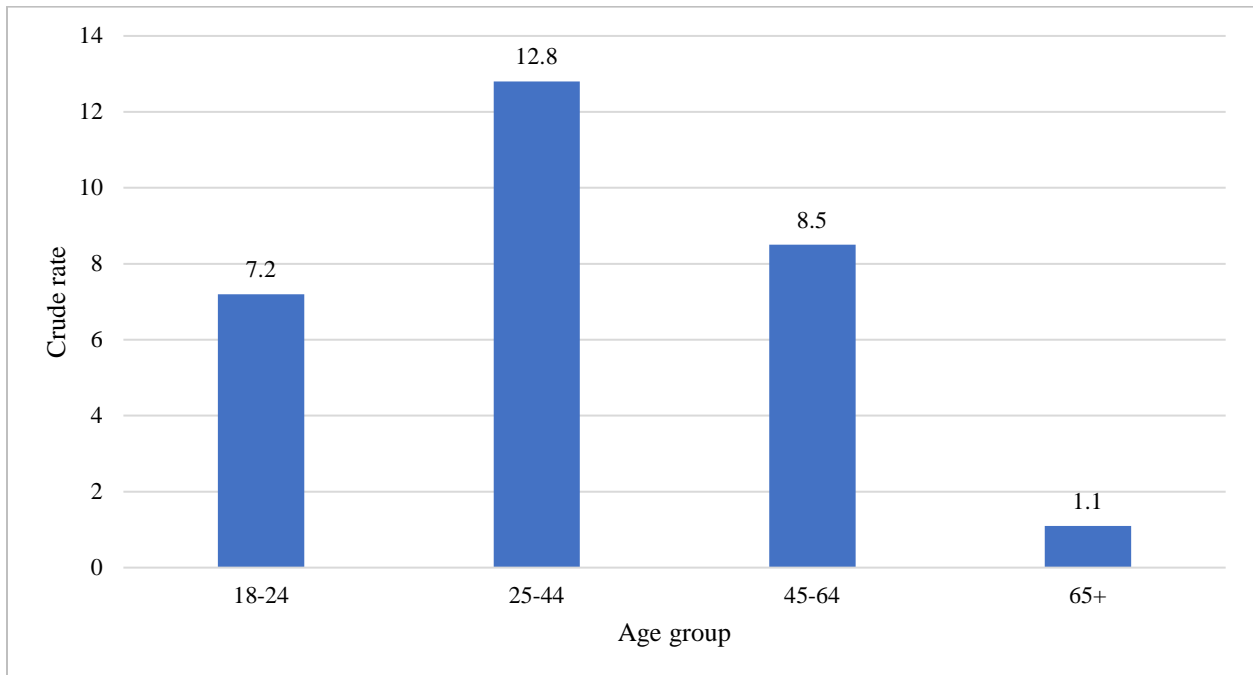
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.12.

In NYS during 2016, the crude rate of overdose deaths involving heroin was highest among the 25-44 year old age group (12.8 per 100,000), followed by the 45-64 (8.5 per 100,000) and 18-24 (7.2 per 100,000) age groups.

Figure 1.13 Overdose deaths involving synthetic opioids other than methadone, age-adjusted rate per 100,000 population, New York State, 2010-2016
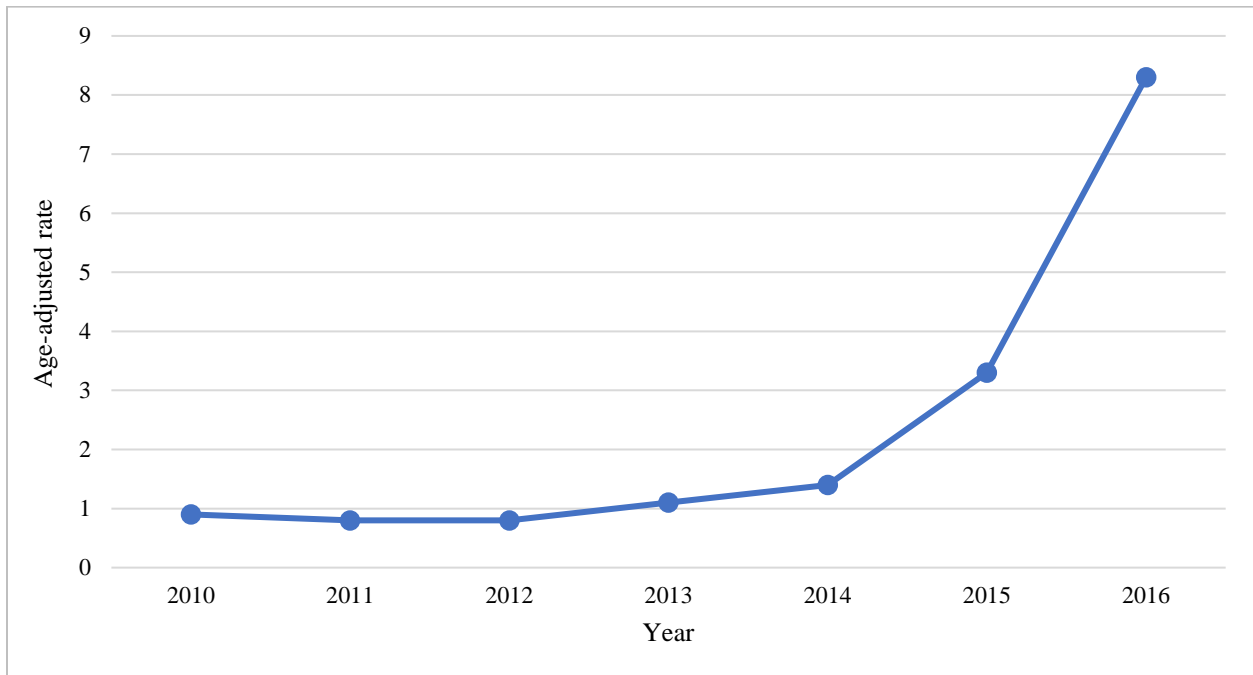
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.13.

In NYS, the age-adjusted rate of overdose deaths involving synthetic opioids other than methadone was relatively stable between 2010 (0.9 per 100,000 population) and 2014 (1.4 per 100,000), but increased sharply in 2015 (to 3.3 per 100,000) and 2016 (to 8.3 per 100,000). This category includes, but is not exclusive to, fentanyl.

Figure 1.14 Overdose deaths involving synthetic opioids other than methadone, age-adjusted rate per 100,000 population, by sub-population, New York State, 2016
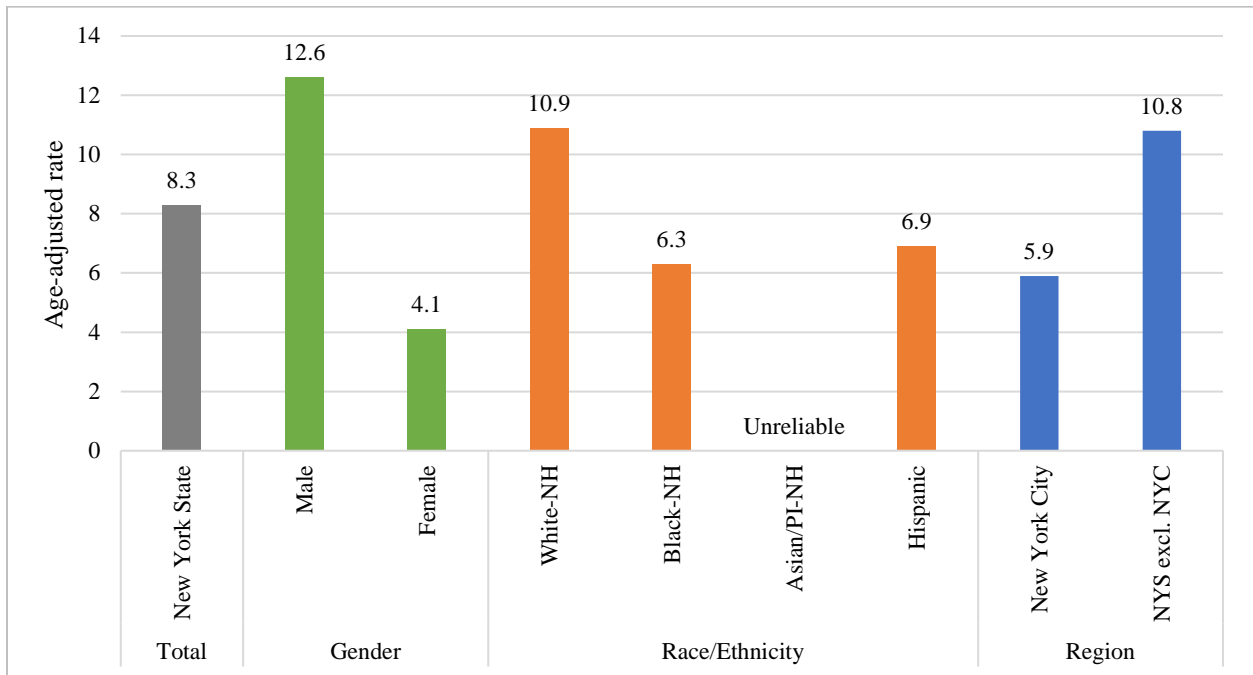
Note: Rates are marked as 'unreliable' when counts are fewer than 20 deaths.
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.14.

In NYS during 2016, the age-adjusted rates of overdose deaths involving synthetic opioids other than methadone among males (12.6 per 100,000 population), White non-Hispanics (10.9 per 100,000), and residents of NYS excl. NYC (10.8 per 100,000) were higher than the statewide rate (8.3 per 100,000).

Figure 1.15 Overdose deaths involving synthetic opioids other than methadone, crude rate per 100,000 population, by age group, New York State, 2016
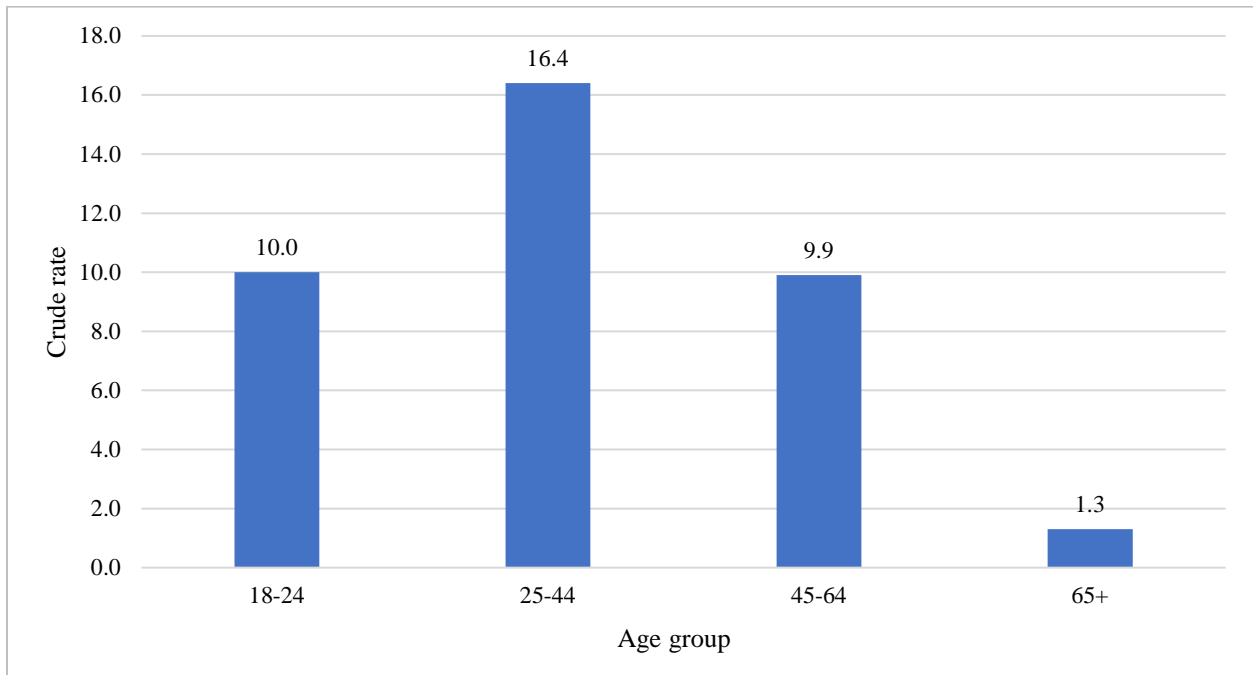
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.15.

In NYS during 2016, the crude rate of overdose deaths involving synthetic opioids other than methadone was highest among the 25-44 year old age group (16.4 per 100,000), followed by the 18-24 (10.0 per 100,000), and 45-64 (9.9 per 100,000) age groups.

Figure 1.16 Overdose deaths involving any opioid, by month, New York State, 2016
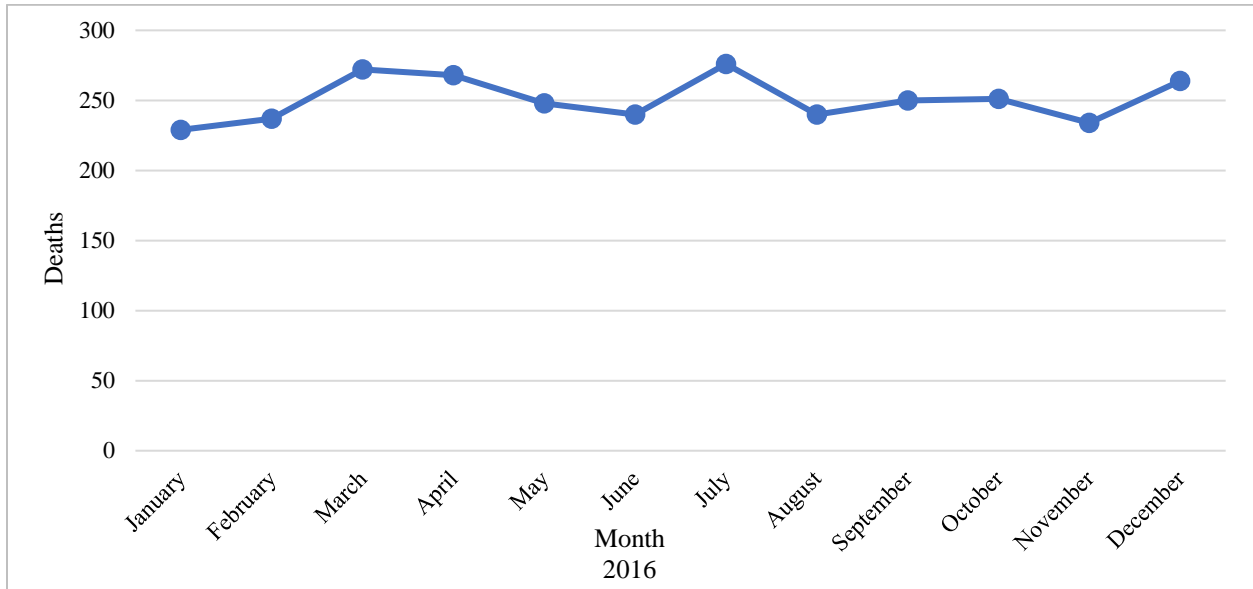
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.16.

In NYS during 2016, there did not appear to be a seasonal pattern to the monthly numbers of overdose deaths involving all opioids.

Figure 1.17 Overdose deaths involving any opioid, by day of week, New York State, 2016
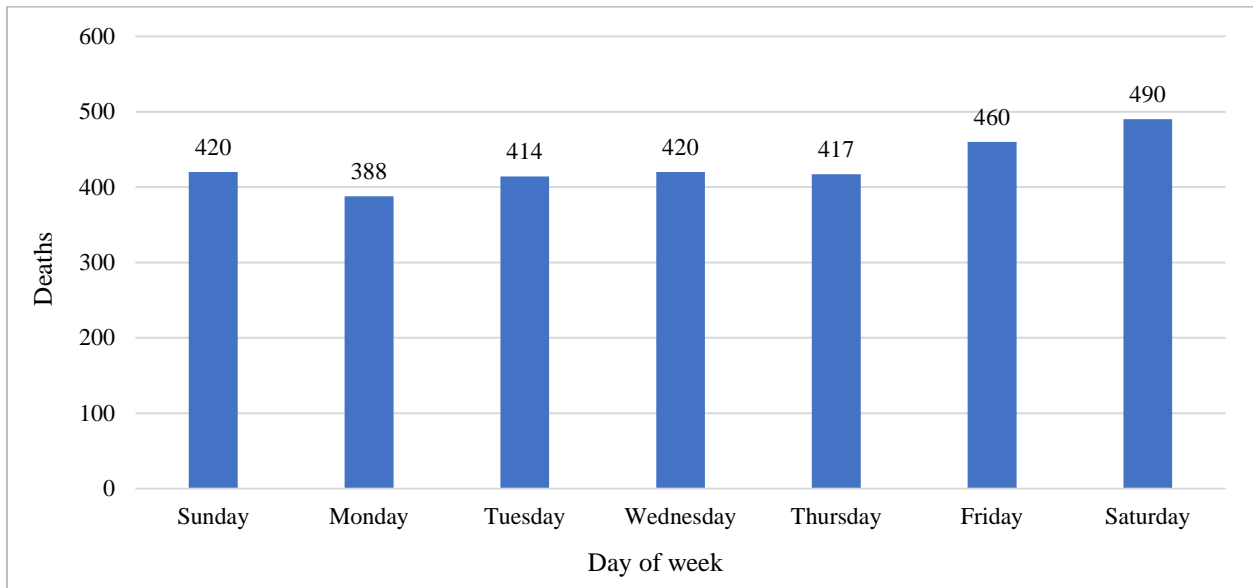
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.17.

Saturday was the day of the week during 2016 with the highest number of overdose deaths involving all opioids. The day of the week with the fewest overdose deaths involving all opioids was Monday.

Figure 1.18 Overdose deaths involving any opioid, by place of death, New York State, 2016

Other, n = 303

Inpatient
(medical facility), n = 259

Outpatient or ER
(medical facility), n = 516

Dead on arrival
(medical facility), n = 108

Decedent's home, n = 1,814

The number of deaths occurring in "Hospice facility," "Nursing home/long term care," and "Place of death unknown," are suppressed due to each location type, respectively, having counts of fewer than 10.
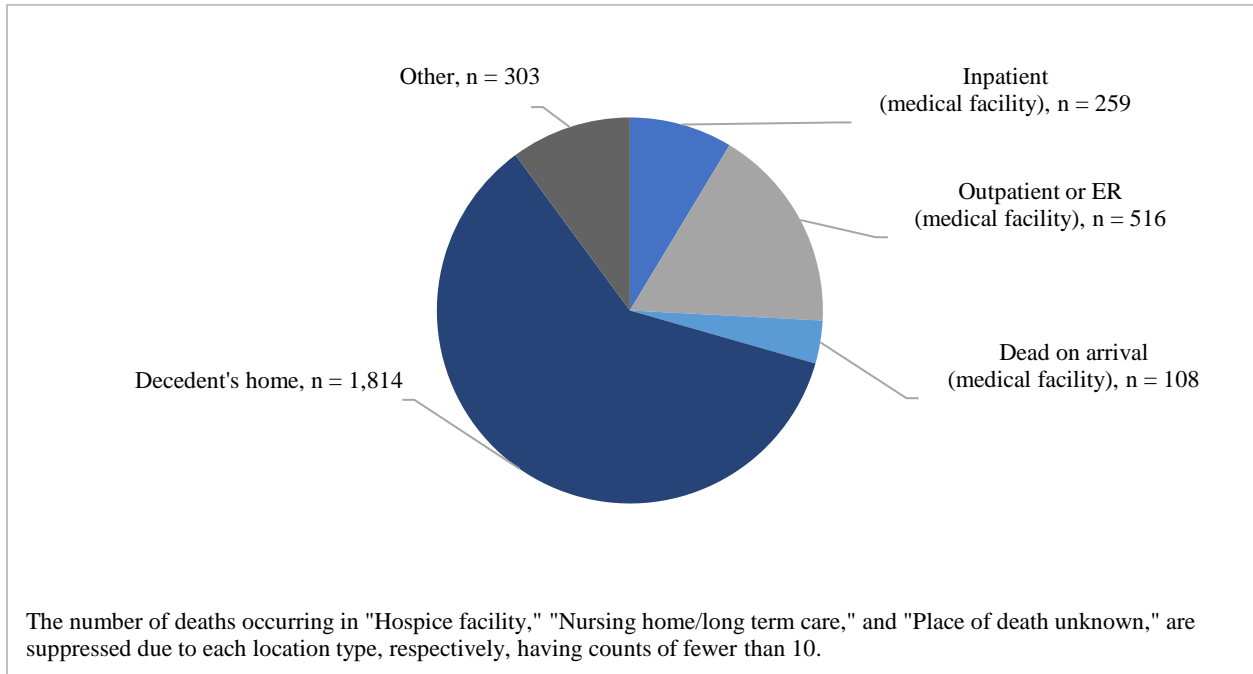
Data source: CDC WONDER; Data accessed August 2018
For complete data, see Appendix: Data Table 1.18.

In NYS during 2016, most overdose deaths involving all opioids occurred at the decedent's home (60.3 percent).

Naloxone Administration Data

Figure 2.1 Unique naloxone administrations by EMS agencies, by region, New York State 2015-2017
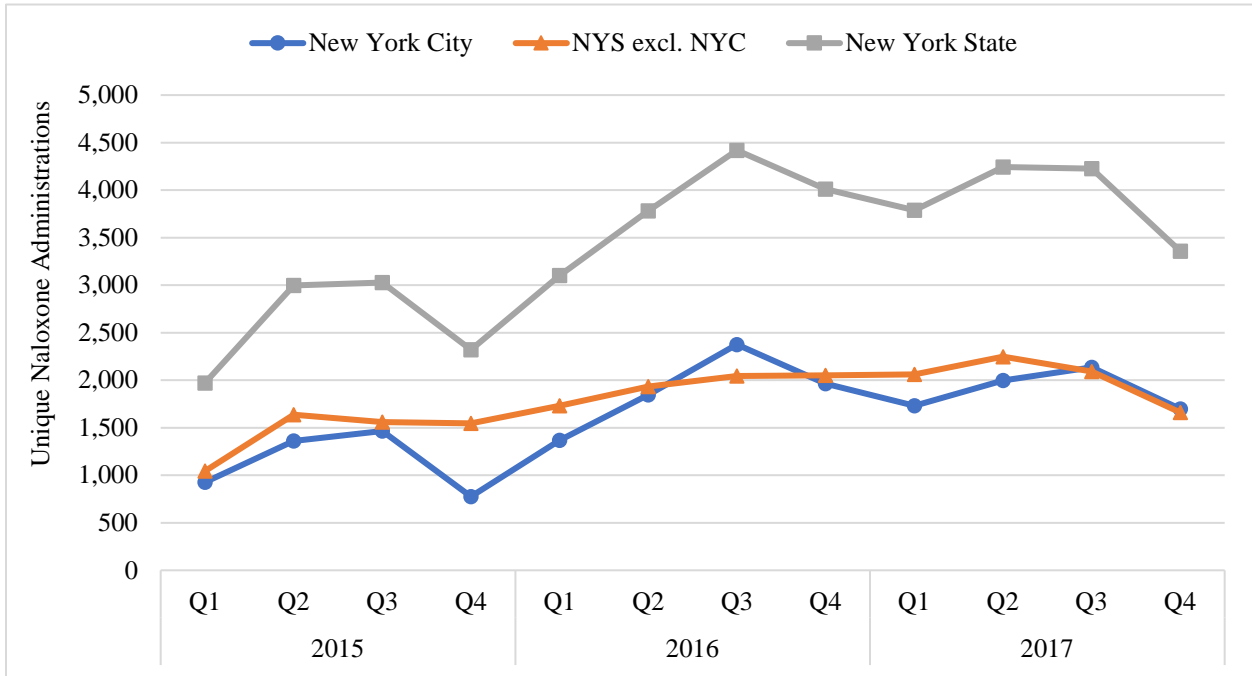
Data source: New York State Department of Health, Bureau of Emergency Medical Services
Data as of August 2018
For complete data on naloxone administrations for 2015-2017, see Appendix: Data Table 2.1.

The number of electronically reported naloxone administrations by EMS per quarter in NYS increased from 1,972 in Quarter 1 of 2015 to 3,356 in Quarter 4 of 2017. During that time, Quarter 3 of 2016 had the highest number of reported administrations (4,419). There was a total of 15,616 administrations reported during 2017, about a 50 percent increase from 10,319 administrations in 2015.

It should be noted that approximately 90 percent of EMS care provided throughout NYS is reported through electronic Pre-hospital Care Reports (e-PCRs); however, that should not be interpreted as 90 percent of care provided and documented evenly across the state. As more EMS agencies have begun reporting electronically since 2015, additional naloxone administrations are captured. This could partially contribute to the increase in naloxone administrations from 2015 to 2017. However, the observed increase was largely due to the rise in opioid overdose.

Figure 2.2 Unique naloxone administrations by EMS agencies, by age group, gender, and incident location type, New York State (excluding Suffolk County), 2017
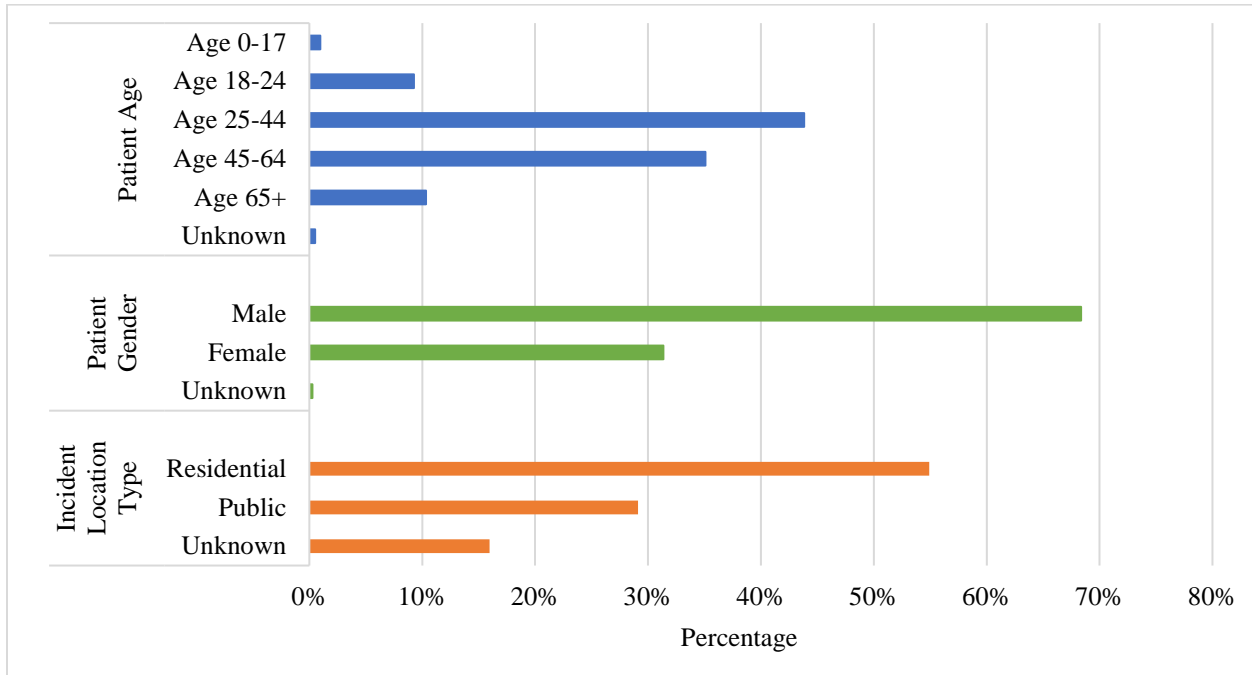
Data source: New York State Department of Health, Bureau of Emergency Medical Services
Data as of August 2018; data for Suffolk County not available
For complete data, see Appendix: Data Table 2.2.

In 2017, most of the EMS naloxone administrations occurred in residential settings (8,257 administrations, or 54.9 percent), similar to overdose deaths. The majority also involved male patients (10,280 administrations, or 68.4 percent) and patients aged 25-44 years (6,591 administrations, or 43.8 percent).

Figure 2.3 Unique naloxone administrations by EMS agencies, by month of incident, New York State (excluding Suffolk County), 2017
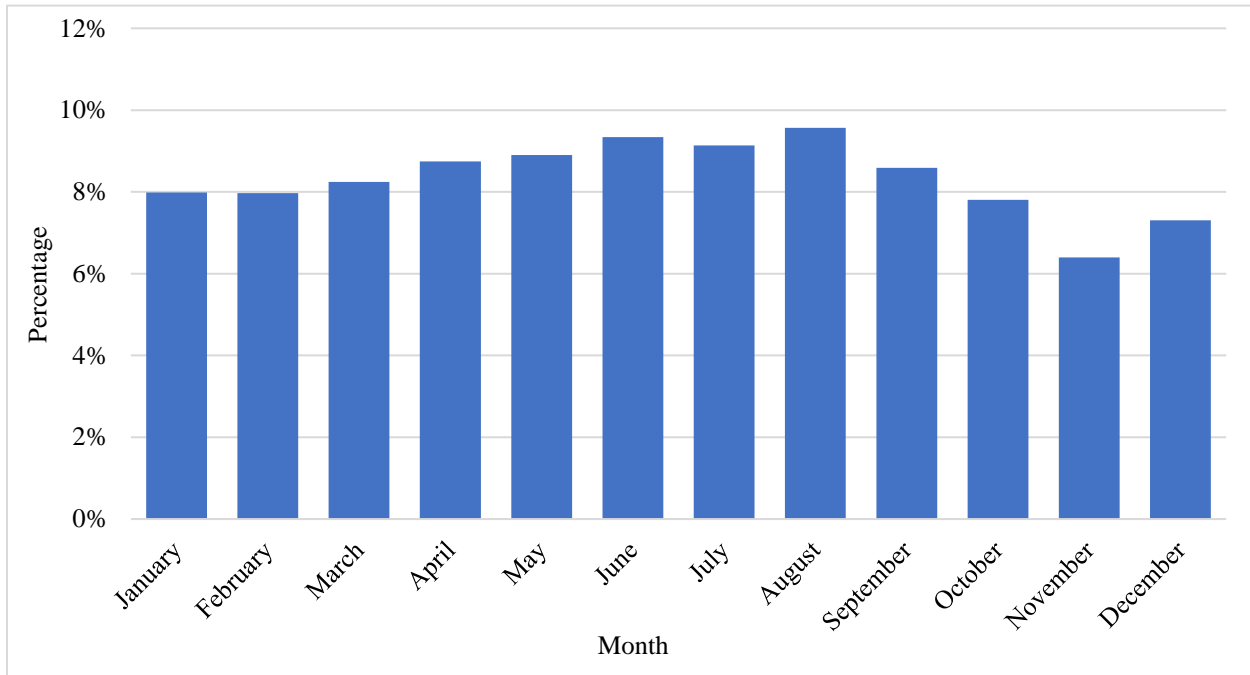
Data source: New York State Department of Health, Bureau of Emergency Medical Services
Data as of August 2018; data for Suffolk County not available
For complete data, see Appendix: Data Table 2.3.

The number of naloxone administration administrations by EMS during 2017 were not evenly distributed across the months, with more administrations occurring during spring and summer, and fewer occurring during fall and winter. The month with the highest number of naloxone administrations was August (1,438 administrations or 9.6 percent) while the month with the lowest number was November (962 administrations or 6.4 percent).

Figure 2.4 Unique naloxone administrations by EMS agencies, by incident day of week, New York State (excluding Suffolk County), 2017
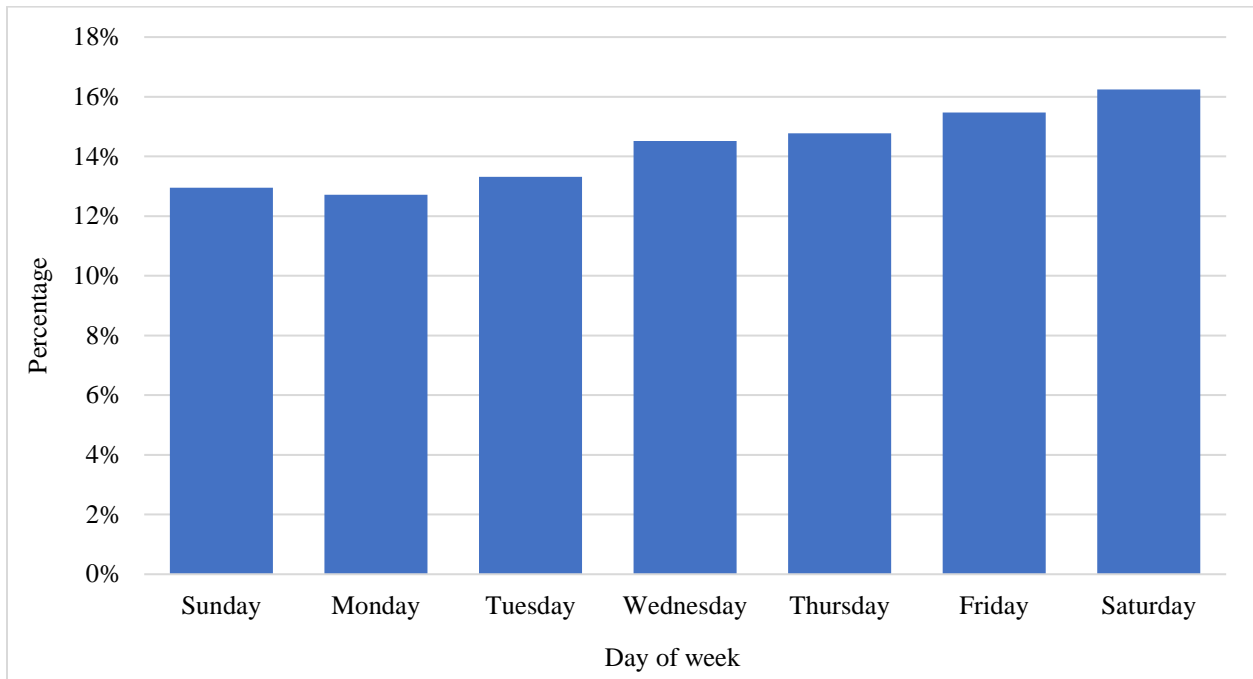
Data source: New York State Department of Health, Bureau of Emergency Medical Services
Data as of August 2018; data for Suffolk County not available
For complete data, see Appendix: Data Table 2.4.

On average, Saturday was the day of the week during which the highest number of naloxone administration administrations by EMS occurred (2,443 administrations or 16.2 percent) in 2017. The day of the week with the fewest administrations was Monday (1,913 administrations or 12.7 percent).

Figure 2.5 Unique naloxone administrations by EMS agencies, crude rate per 1,000 unique 911 EMS dispatches by county, New York State (excluding Suffolk County), 2017
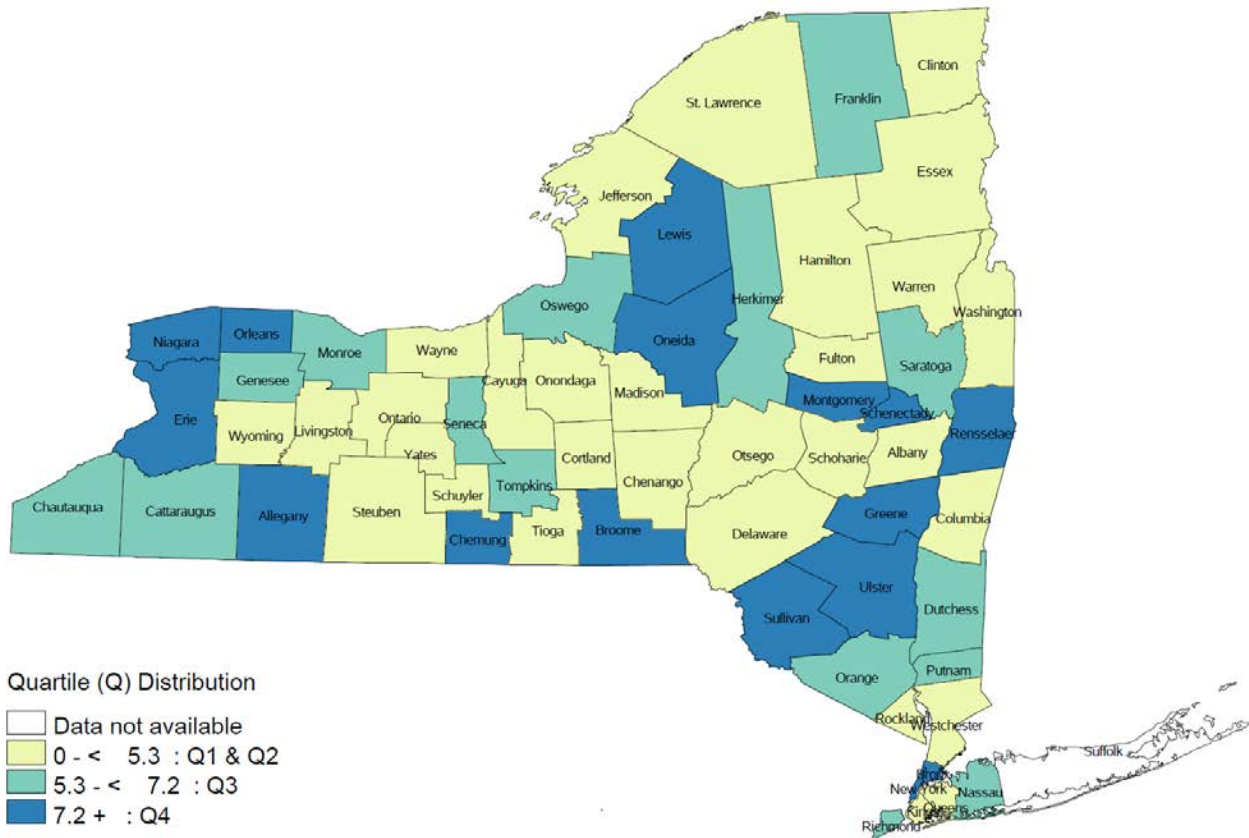
Data source: New York State Department of Health, Bureau of Emergency Medical Services
Data as of August 2018; data for Suffolk County not available
Note: Rates may be unstable for counties with less than 10 naloxone administrations.
For county-level data on EMS naloxone administrations, see Appendix: Data Table 2.5.

This map shows variation in the county rate of unique naloxone administrations per 1,000 unique 911 EMS dispatches in 2017. The counties shown in blue had the highest rates of naloxone administration, ranging from 7.2 per 1,000 to 11.4 per 1,000. The ten counties with the highest stable rates of unique naloxone administrations in 2017 were Chemung (11.4), Broome (9.7), Sullivan (9.4), Orleans (9.0), Lewis (8.8), Niagara (8.7), Erie (8.3), Rensselaer (8.3), Montgomery (8.1), and Allegany (7.9). Counties shown in yellow had the lowest rates of naloxone administration per 1,000 unique dispatches. Please note that a rate could not be calculated for Suffolk County, as complete data were unavailable.

Figure 2.6 Naloxone administration reports by law enforcement and community programs, by quarter, New York State 2017
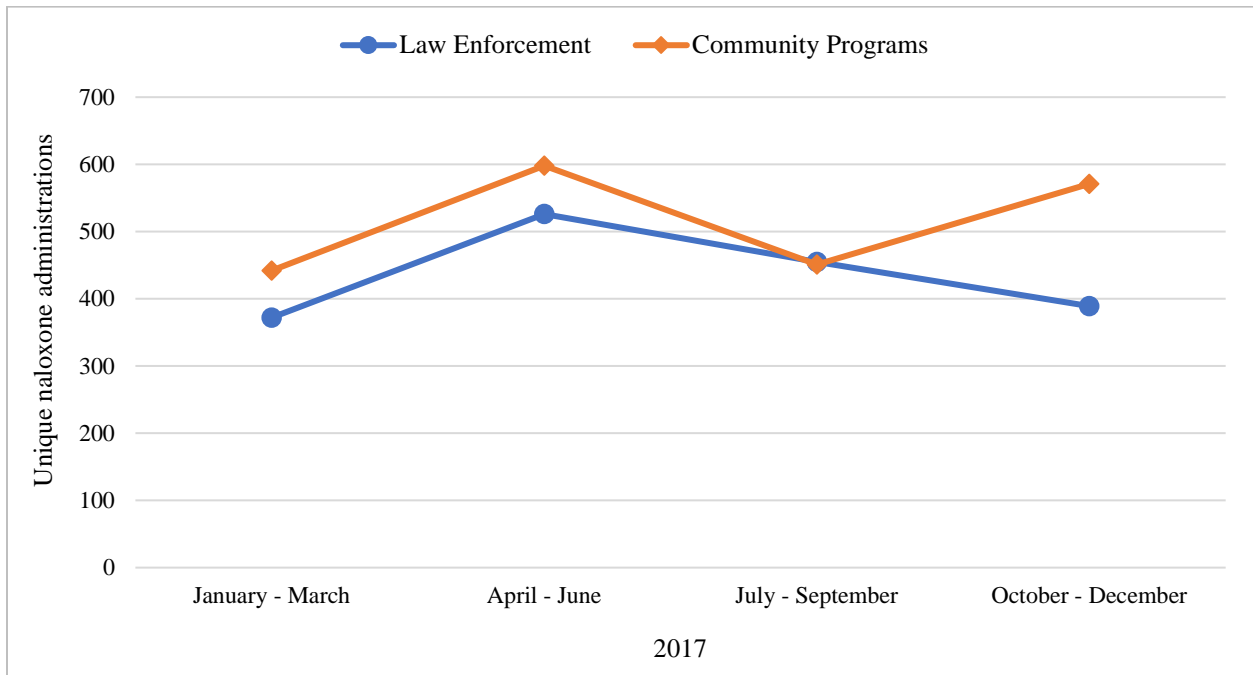
Data source: New York State Department of Health AIDS Institute; Data as of August 2018
For complete data, see Appendix: Data Table 2.6.

In NYS during 2017, April through June (Quarter 2) was the quarter for which both law enforcement agencies and community opioid overdose prevention programs, respectively, reported the highest number of naloxone administrations.

Figure 2.7 Naloxone administration reports by law enforcement and community programs, by patient age group, New York State 2017
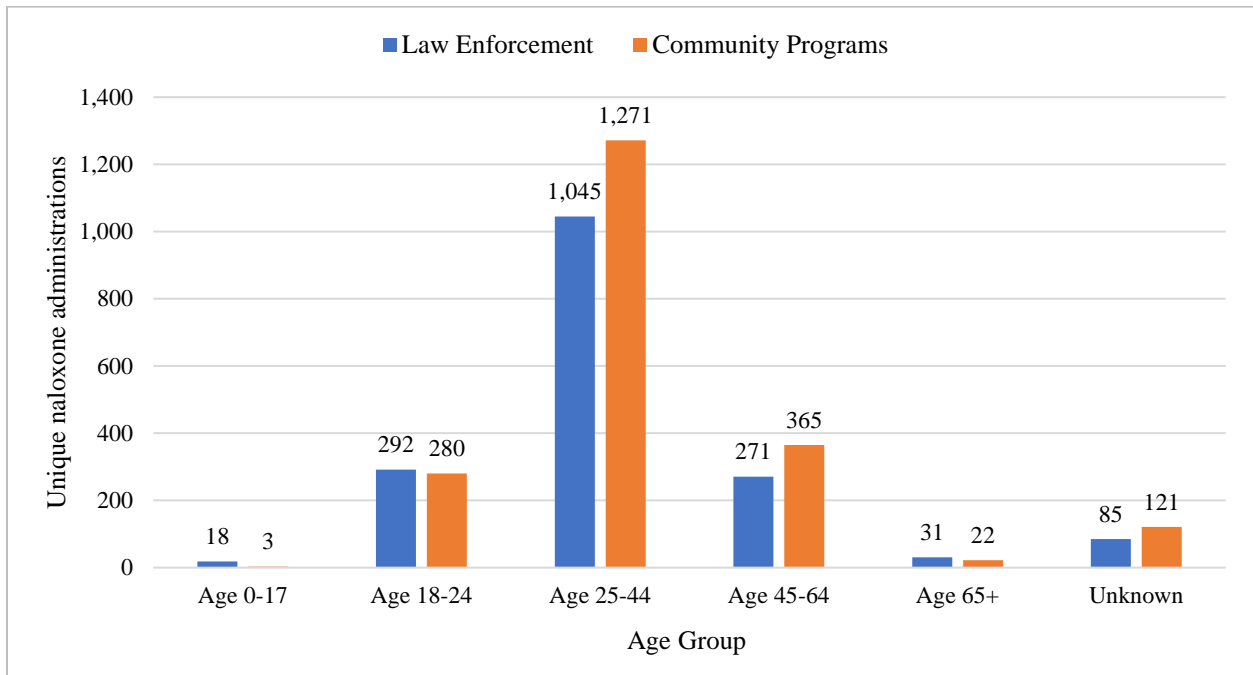
Data source: New York State Department of Health AIDS Institute; Data as of August 2018
For complete data, see Appendix: Data Table 2.7.

In NYS during 2017, most naloxone administration reports from law enforcement agencies and community opioid overdose prevention programs were for patients aged 25-44.

Figure 2.8 Naloxone administration reports by law enforcement and community programs, by patient gender, New York State 2017

Other* includes "Transgender", "Intersex", and "Other, not specified"
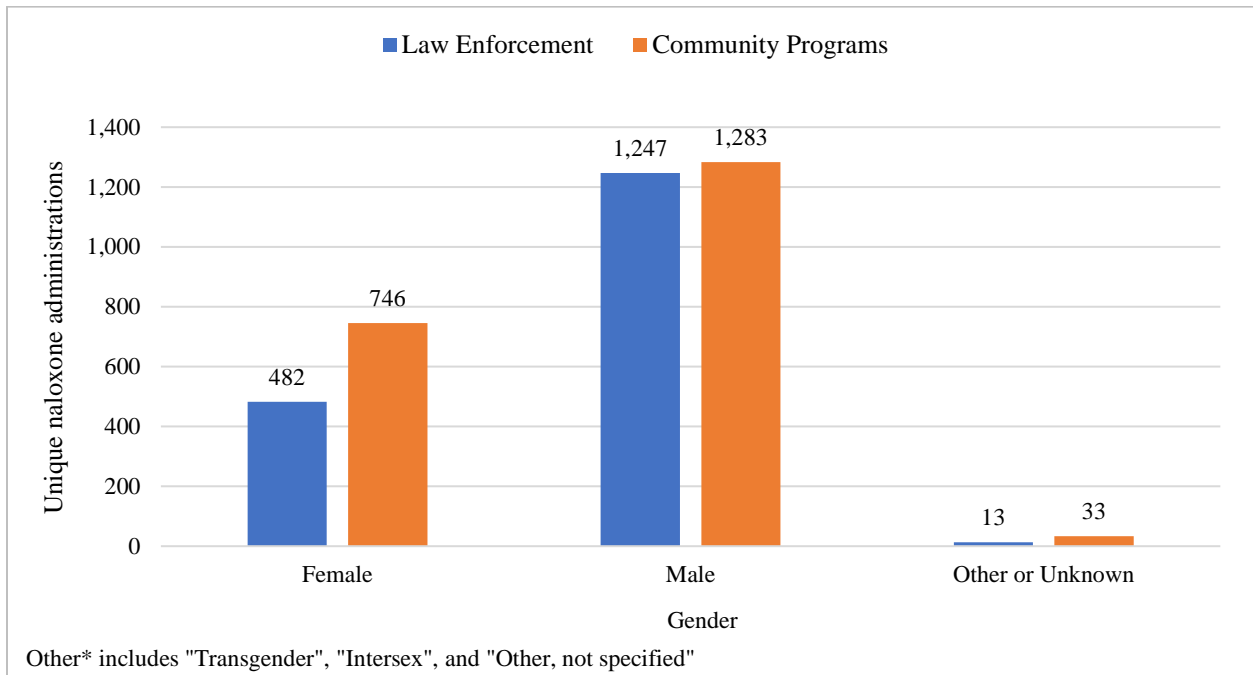
Data source: New York State Department of Health AIDS Institute; Data as of August 2018
For complete data, see Appendix: Data Table 2.8.

In NYS during 2017, as with naloxone administrations by EMS, most naloxone administration reports from law enforcement agencies and community opioid overdose prevention programs were for male patients.

Emergency Department Visits and Hospitalization Data

Figure 3.1 All emergency department visits (including outpatients and admitted patients) involving any opioid overdose, crude rate per 100,000 population, by sub-population, New York State, 2016
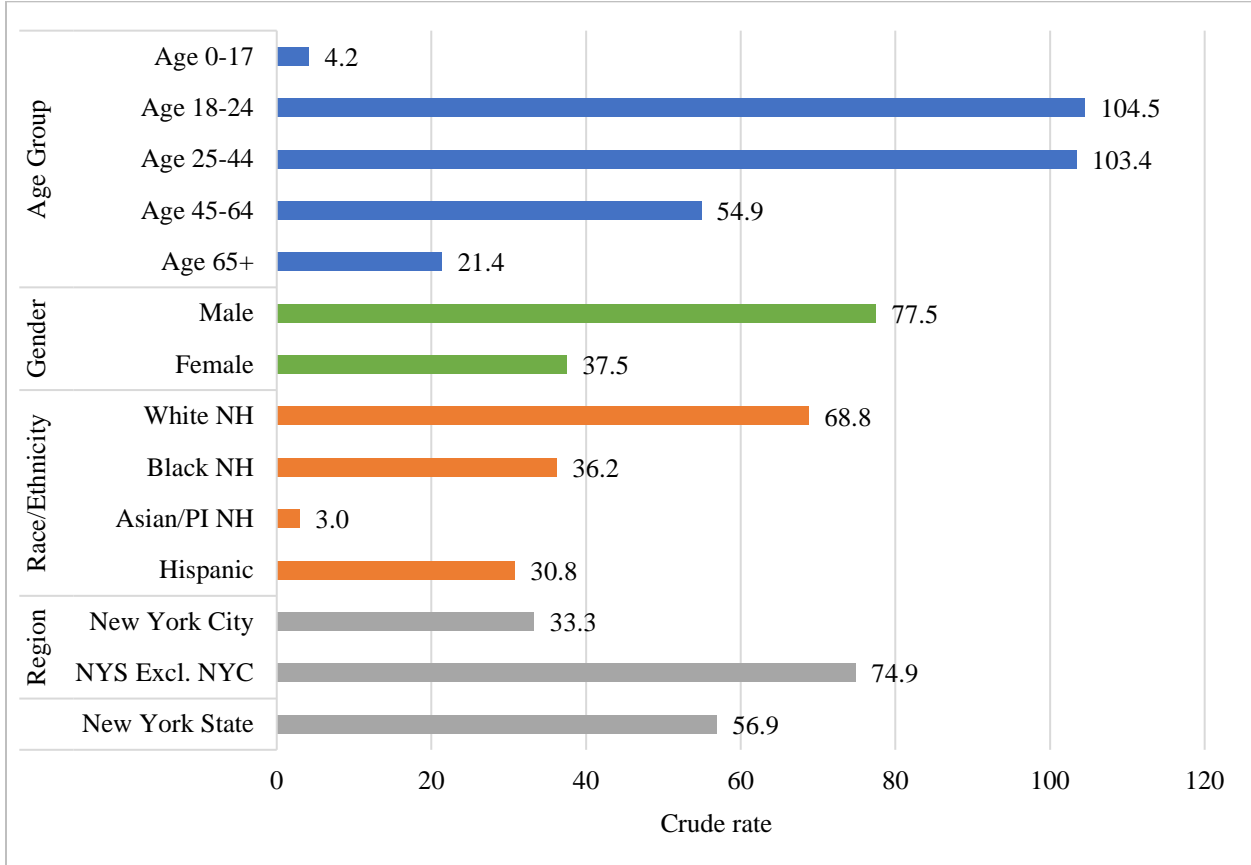
Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017
For complete data, see Appendix: Data Table 3.1.

In 2016, there was a total of 11,243 ED visits for any opioid overdose among NYS residents with a crude rate of 56.9 per 100,000 population. The rate was highest among those aged 18-24 (104.5 per 100,000) followed by ages 25-44 (103.4 per 100,000). The rate for ED visit due to any opioid overdose was more than two times higher for males (77.5 per 100,000) than that among females (37.5 per 100,000), and for NYS excluding NYC (74.9 per 100,000) than NYC (33.3 per 100,000). The rate was highest among White NH individuals (68.8 per 100,000), followed by the rates among Black NH individuals (36.2 per 100,000) and Hispanic individuals (30.8 per 100,000).

Figure 3.2 All emergency department visits (including outpatients and admitted patients) involving any opioid overdose, crude rate per 100,000 population, by county, New York State, 2016
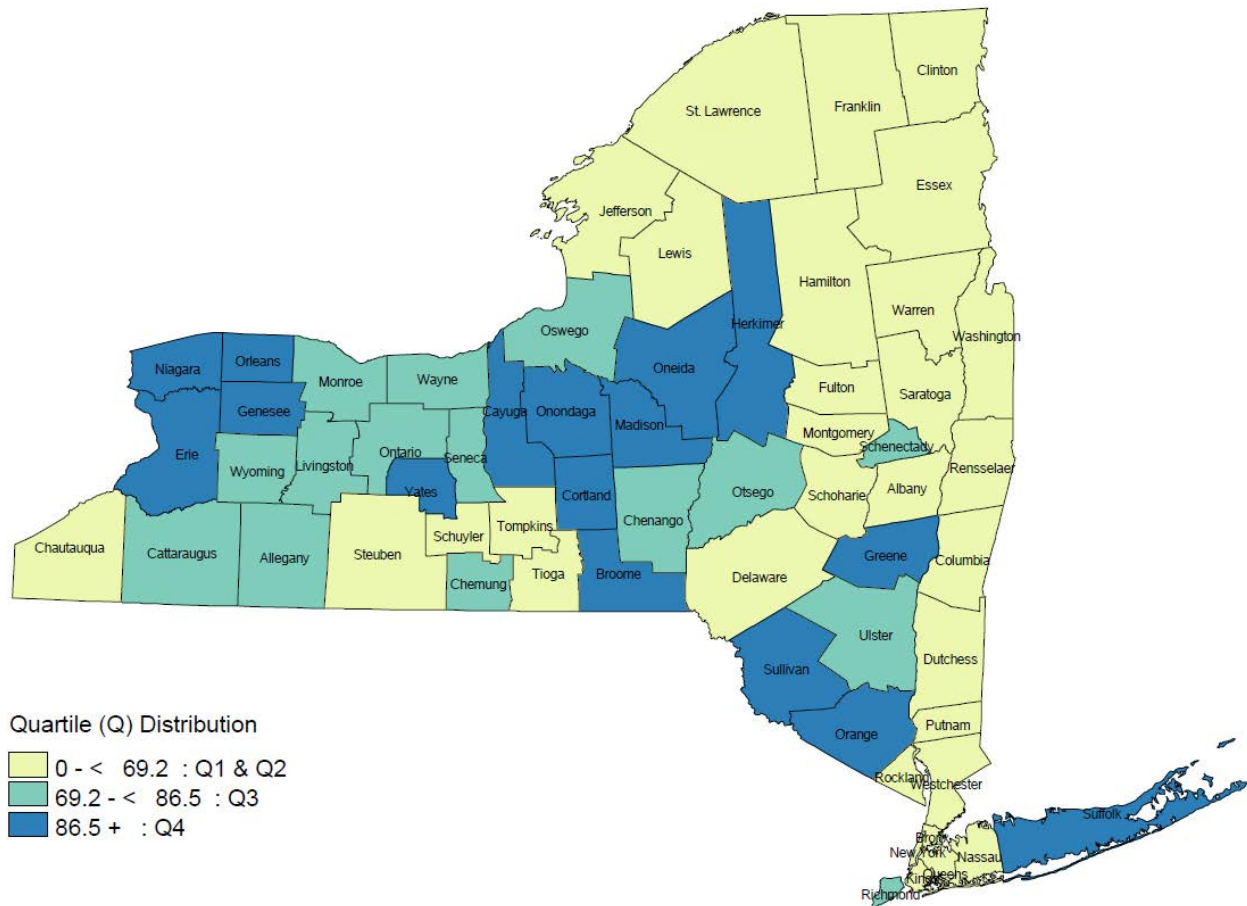
Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017
For complete data, see Appendix: Data Table 3.2.

The 16 counties in the highest quartile (crude rates greater than or equal to 86.5 per 100,000 population) for ED visits due to any opioid overdose included Erie, Niagara, Sullivan, Onondaga, Broome, Greene, Cayuga, Oneida, Cortland, Genesee, Yates, Suffolk, Orleans, Herkimer, Madison, and Orange.

Figure 3.3 All emergency department visits (including outpatients and admitted patients) involving heroin overdose, crude rate per 100,000 population, by sub-population, New York State, 2016
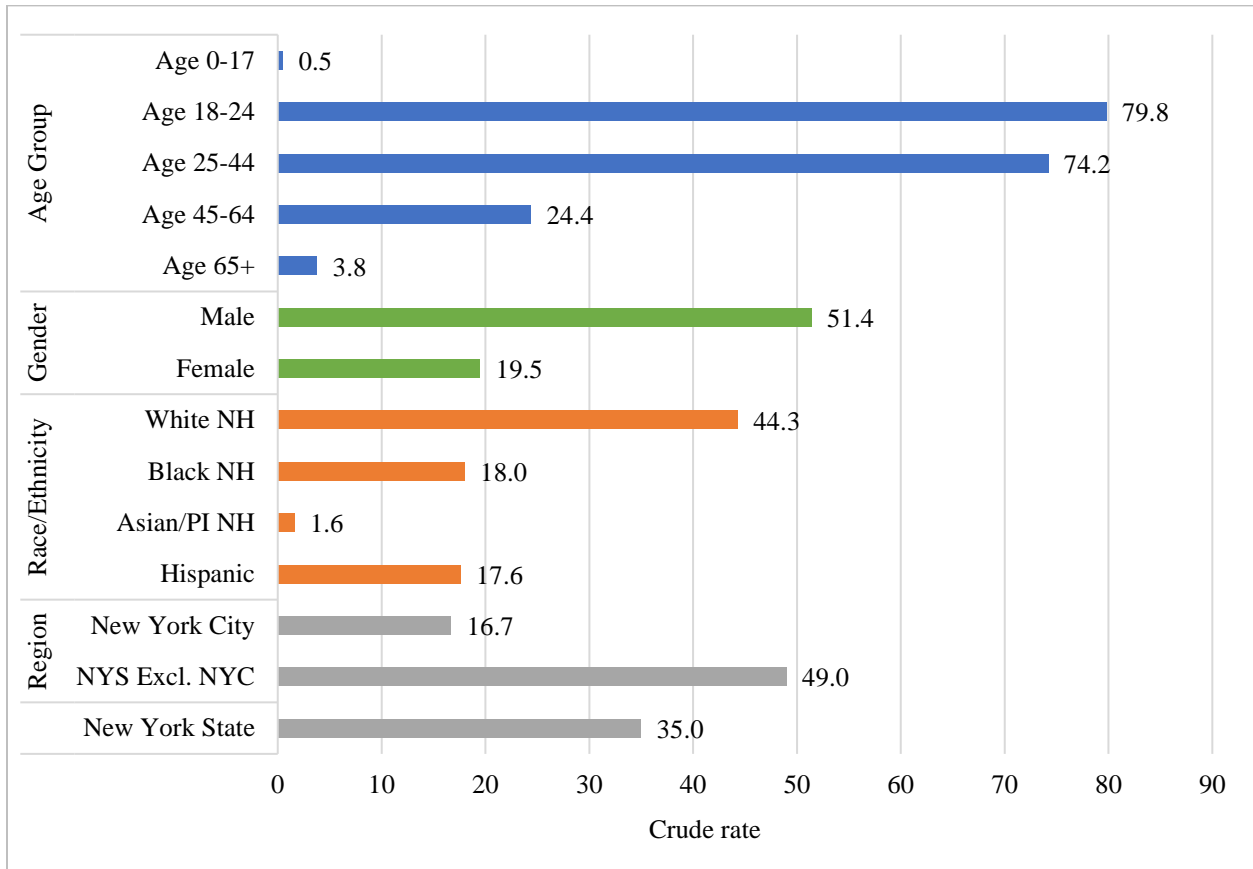
Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017
For complete data, see Appendix: Data Table 3.3.

In 2016, there was a total of 6,915 ED visits for heroin overdose among NYS residents, with a crude rate of 35.0 per 100,000 population. The rate was highest among age group 18-24 (79.8 per 100,000) followed by age group 25-44 (74.2 per 100,000). The rate for ED visit due to heroin overdose was three times higher for NYS excluding NYC (49.0 per 100,000) than NYC (16.7 per 100,000). The rate was more than two and a half times higher for males (51.4 per 100,000) than females (19.5 per 100,000), and among White NH individuals (44.3 per 100,000) than Hispanic individuals (17.6 per 100,000) and Black NH individuals (18.0 per 100,000).

Figure 3.4 All emergency department visits (including outpatients and admitted patients) involving heroin overdose, crude rate per 100,000 population, by county, New York State, 2016
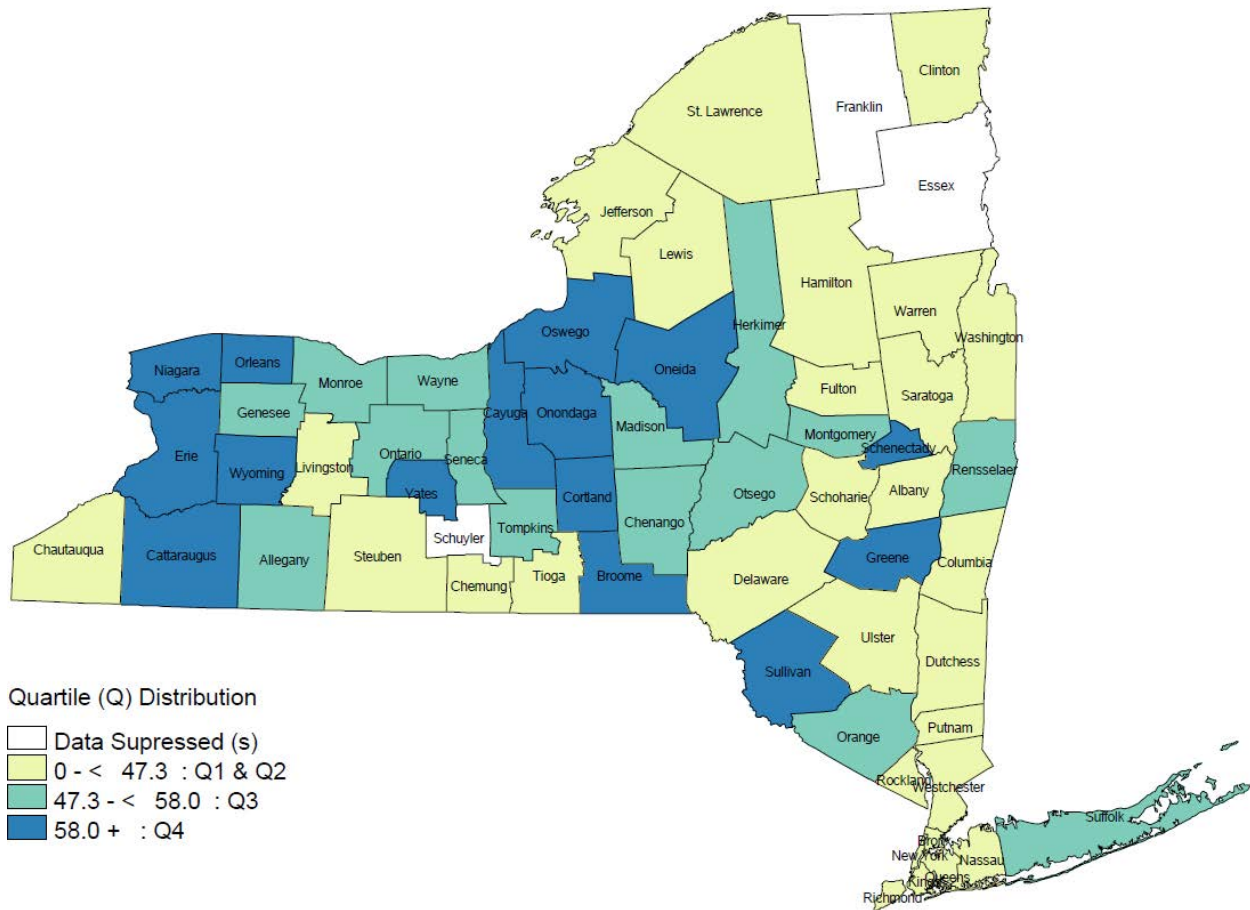
Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017
For complete data, see Appendix: Data Table 3.4.

The 15 counties in the highest quartile (crude rates greater than or equal to 58.0 per 100,000 population) for ED visits due to heroin overdose included Erie, Broome, Onondaga, Sullivan, Oneida, Greene, Niagara, Cayuga, Cortland, Orleans, Yates, Cattaraugus, Schenectady, Wyoming and Oswego.

Figure 3.5 Hospital discharges involving opioid use (including overdose, abuse, dependence and unspecified use), crude rate per 100,000 population, by sub-population, New York State, 2016
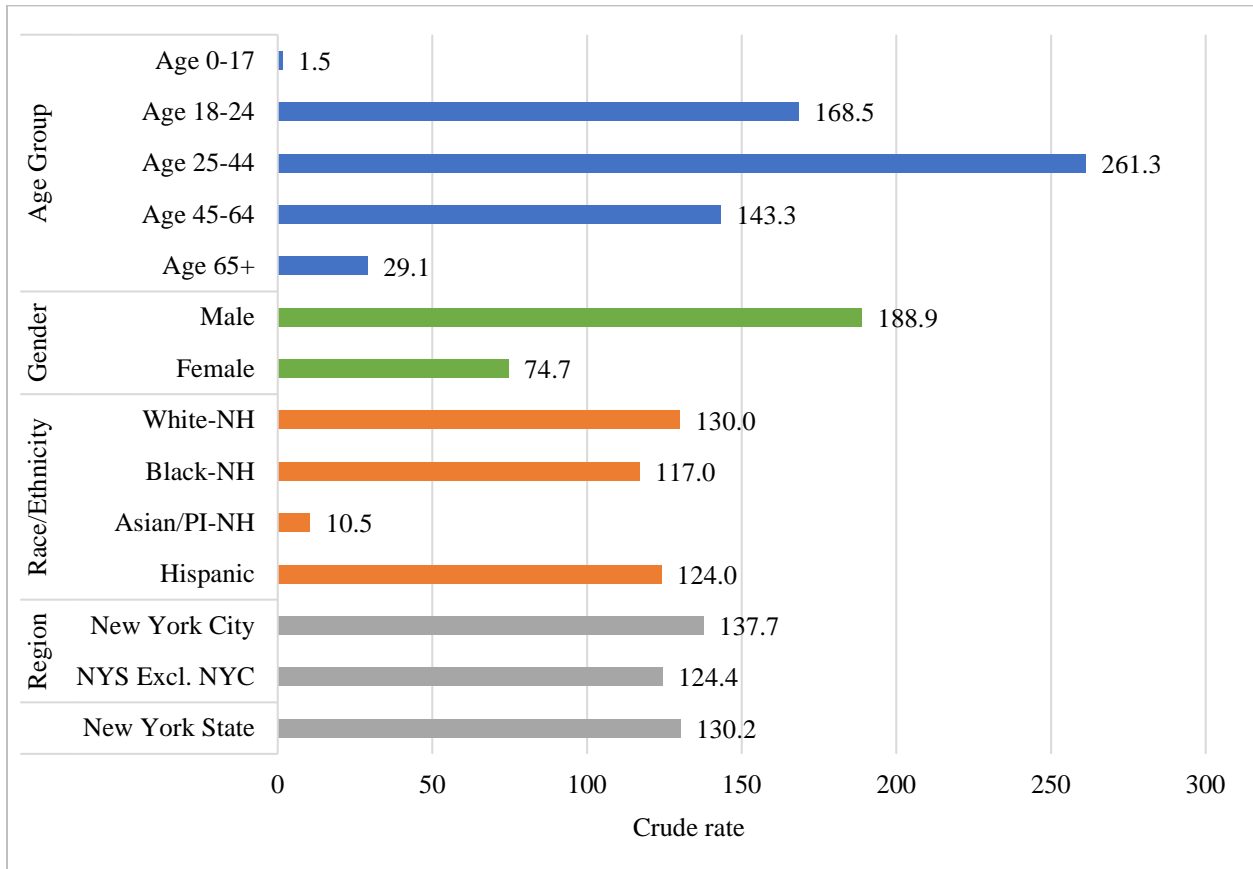
Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017
For complete data, see Appendix: Data Table 3.5.

In 2016, there was a total of 25,704 hospital discharges for opioid use (including overdose, abuse, dependence and unspecified use) among NYS residents with a crude rate of 130.2 per 100,000 population. The rate was highest among age group 25-44 (261.3 per 100,000), followed by age group 18-24 (168.5 per 100,000). The rate for hospital discharge due to opioid use was more than two and a half times higher for males (188.9 per 100,000) than females (74.7 per 100,000). The rate was highest among White NH individuals (130.0 per 100,000) followed by the rates among Hispanic individuals (124.0 per 100,000) and Black NH individuals (117.0 per 100,000). NYC (137.7 per 100,000) had a higher rate than NYS excluding NYC (124.4 per 100,000).

Figure 3.6 Hospital discharges involving opioid use (including overdose, abuse, dependence and unspecified use), crude rate per 100,000 population, by county, New York State, 2016
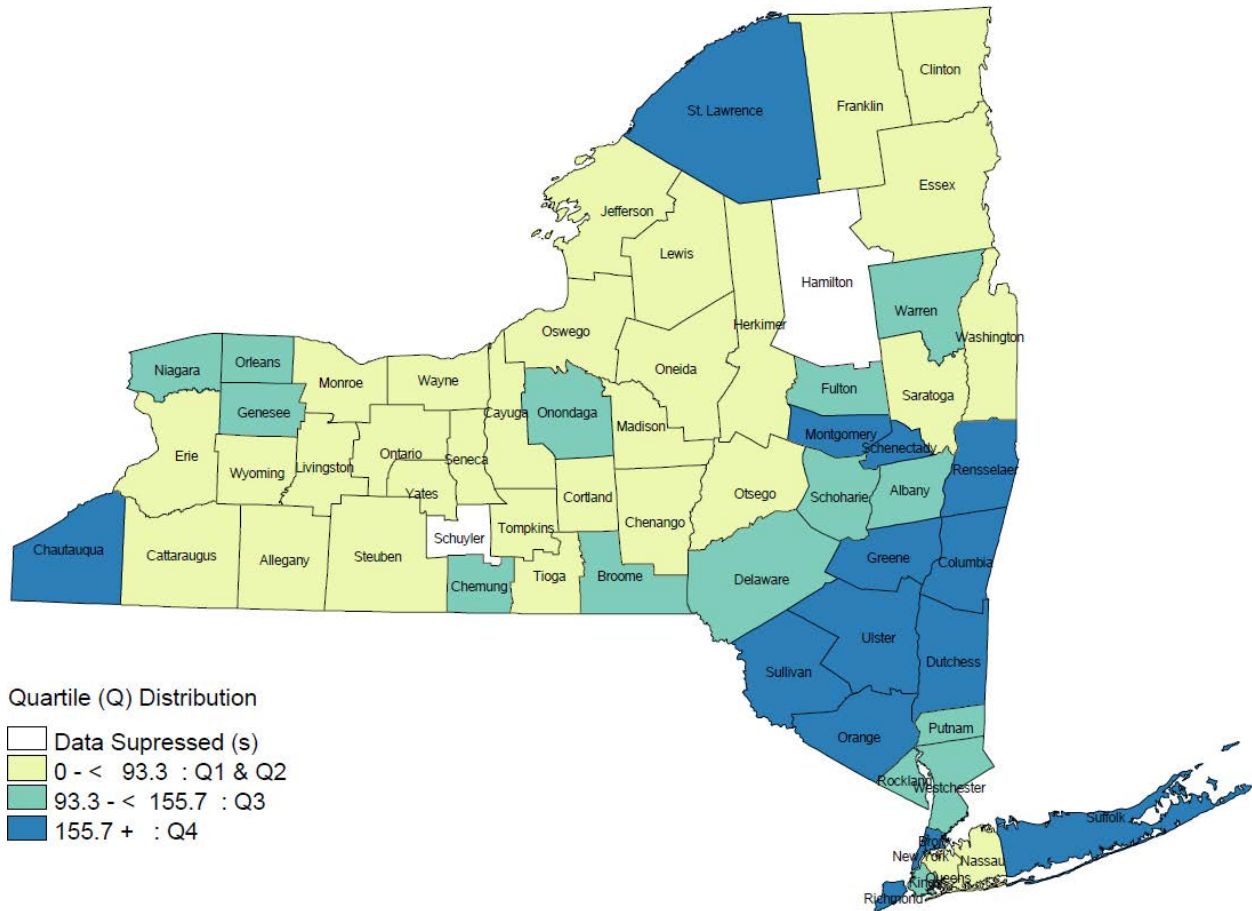
Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017
For complete data, see Appendix: Data Table 3.6.

The 15 counties in the highest quartile (crude rates greater than or equal to 155.7 per 100,000 population) for hospital discharges due to opioid use (including overdose, abuse, dependence and unspecified use) included St. Lawrence, Ulster, Chautauqua, Bronx, Richmond, Sullivan, Dutchess, Greene, Orange, Columbia, Montgomery, Suffolk, Rensselaer, New York and Schenectady.

Figure 3.7 Opioid burden (including opioid overdose deaths, non-fatal outpatient ED visits and hospital discharges involving opioid overdose, abuse, dependence and unspecified use), crude rate per 100,000 population, by sub-population, New York State, 2016
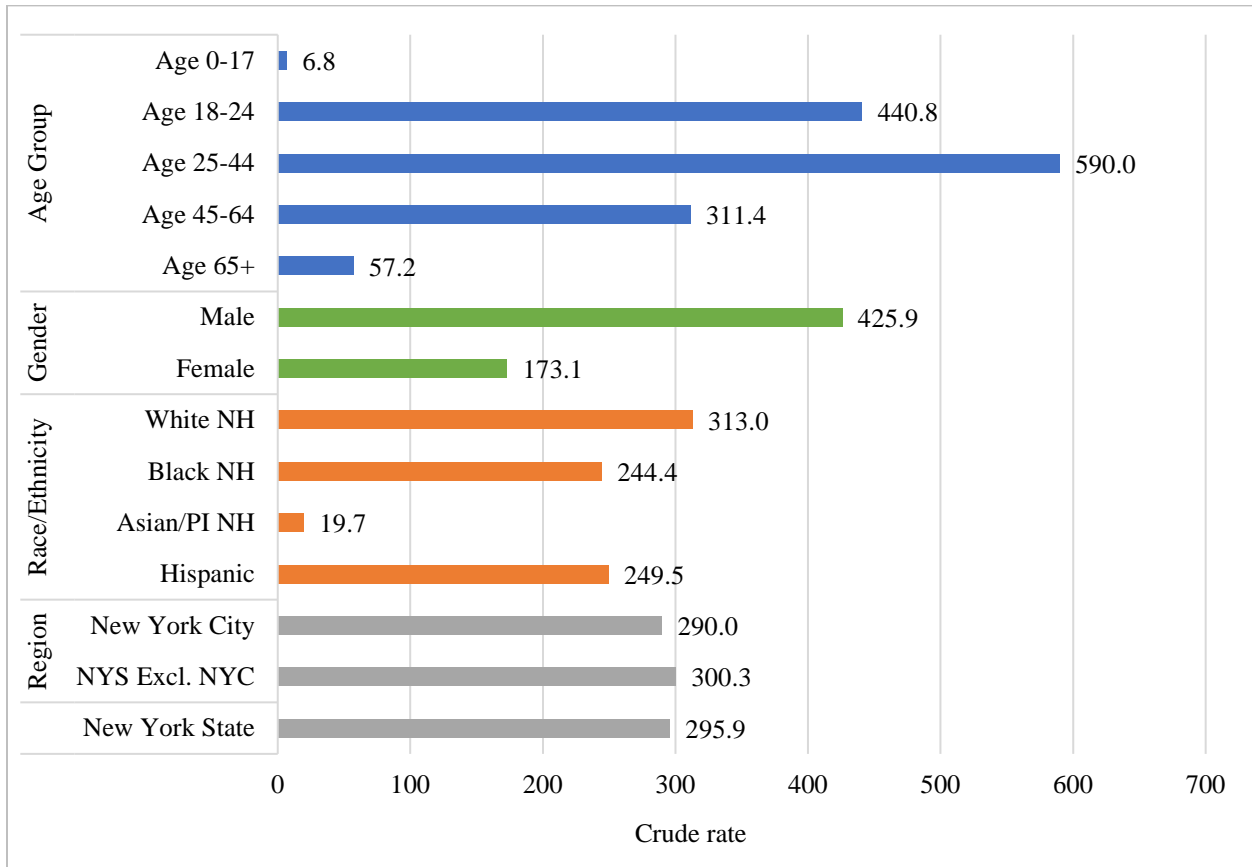
Data source: New York State Department of Health, Bureau of Vital Statistics; Data as of May 2018
New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017
For complete data, see Appendix: Data Table 3.7.

In 2016, the total number of opioid overdose deaths, non-fatal outpatient ED visits and hospital discharges involving opioid overdose, abuse, dependence and unspecified use was 58,422 among NYS residents with a crude rate of 295.9 per 100,000 population. The rate was highest among age group 25-44 (590.0 per 100,000), followed by the age group 18-24 (440.8 per 100,000). The rate for opioid burden was nearly two and a half times higher for males (425.9 per 100,000) than females (173.1 per 100,000). The rate was highest among White NH individuals (313.0 per 100,000), followed by the rates among Hispanic individuals (249.5 per 100,000) and Black NH individuals (244.4 per 100,000). NYS excluding NYC (300.3 per 100,000) had a slightly higher rate than NYC (290.0 per 100,000).

Figure 3.8 Opioid burden (including opioid overdose deaths, non-fatal outpatient ED visits and hospital discharges involving opioid overdose, abuse, dependence and unspecified use), crude rate per 100,000 population, by county, New York State, 2016
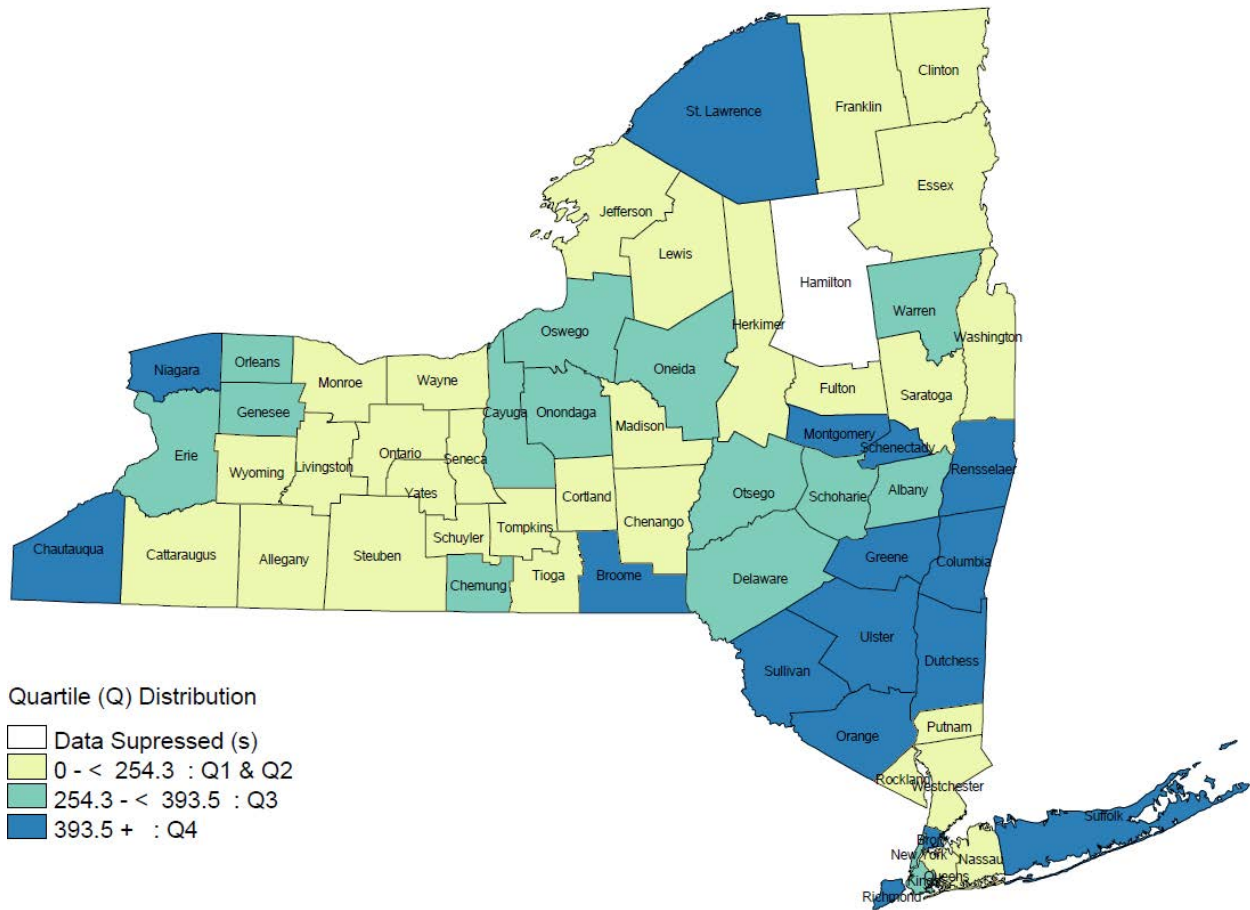
Data source: New York State Department of Health, Bureau of Vital Statistics; Data as of May 2018
New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017
For complete data, see Appendix: Data Table 3.8.

The 16 counties in the highest quartile (crude rates greater than or equal to 393.5 per 100,000 population) for opioid burden (including opioid overdose deaths, non-fatal outpatient ED visits and hospital discharges involving opioid overdose, abuse, dependence and unspecified use) included Ulster, Sullivan, St. Lawrence, Chautauqua, Greene, Bronx, Dutchess, Broome, Richmond, Niagara, Suffolk, Orange, Rensselaer, Schenectady, Montgomery and Columbia.

OASAS Client Data

Figure 4.1 Unique clients admitted to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by region, New York State, 2010-2017
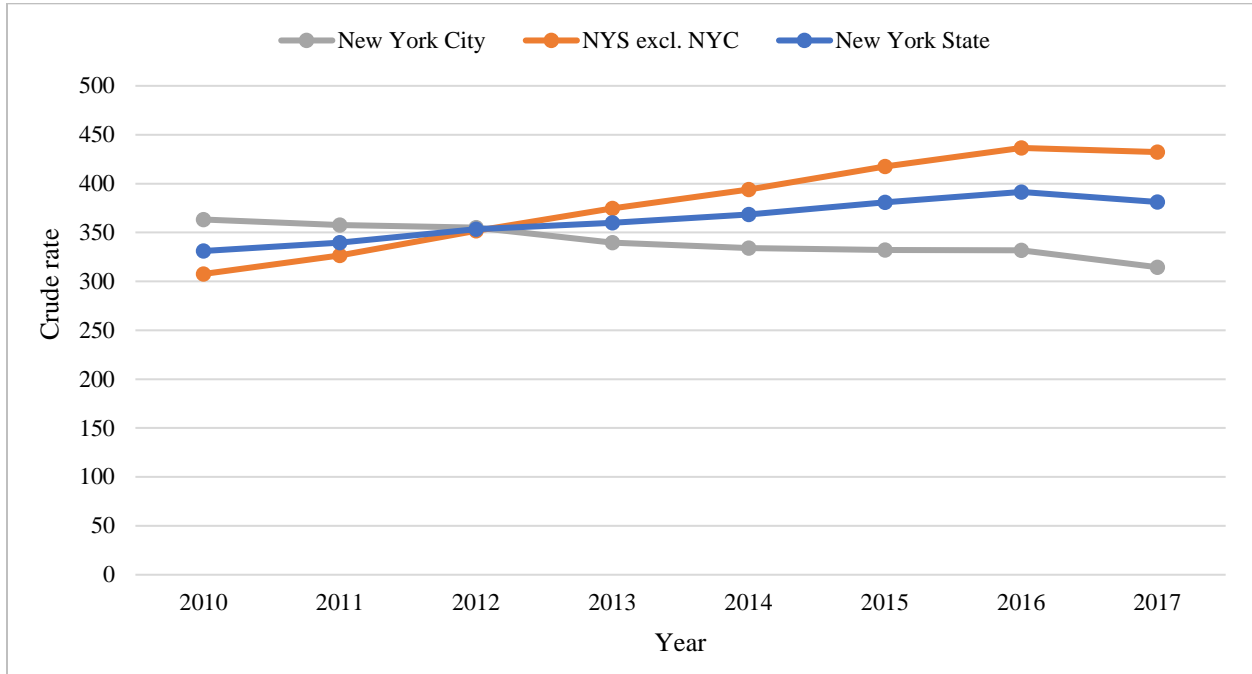
Data source: New York State Office of Alcoholism and Substance Abuse Services (OASAS)
Data as of April 2018
For complete data on OASAS unique client admissions, see Appendix: Data Table 4.1.

In 2017, among NYS residents, there were 65,202 unique clients admitted to OASAS-certified chemical dependence treatment programs for any opioid. This represented a crude rate of 381.3 per 100,000 population. From 2010 to 2017, the rates for NYS increased significantly from 331.1 to 381.3 per 100,000 population, while NYC rates decreased each year. 2017 rates were lower than 2016 rates in all of these regions.

Figure 4.2 Unique clients admitted to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by age group, New York State, 2010-2017
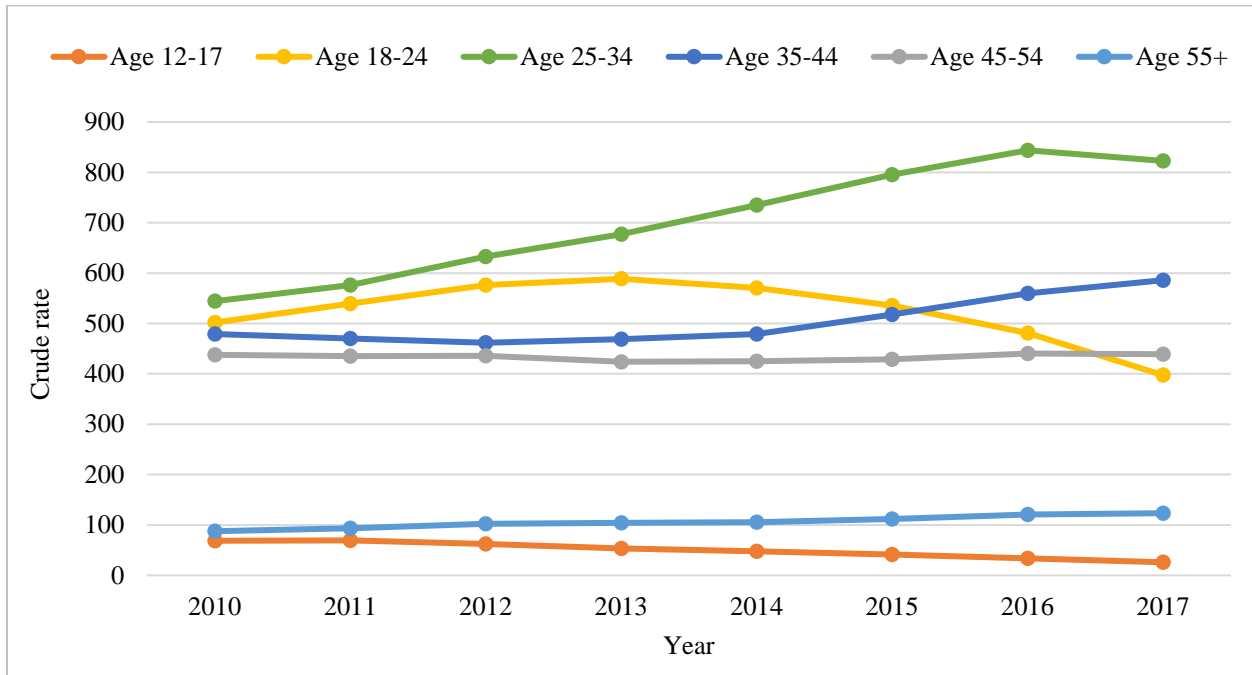
Data source: New York State Office of Alcoholism and Substance Abuse Services (OASAS)
Data as of April 2018
For complete data on OASAS unique client admissions by age group, see Appendix: Data Table 4.2.

Since 2010, those aged 25-34 years had the highest rate (822.8 per 100,000 in 2017) among all age groups. Since 2013, the rates steadily increased for all age groups except those aged 12-17, 18-24, and 25-34.

Figure 4.3 Unique clients admitted to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by gender, New York State, 2010-2017
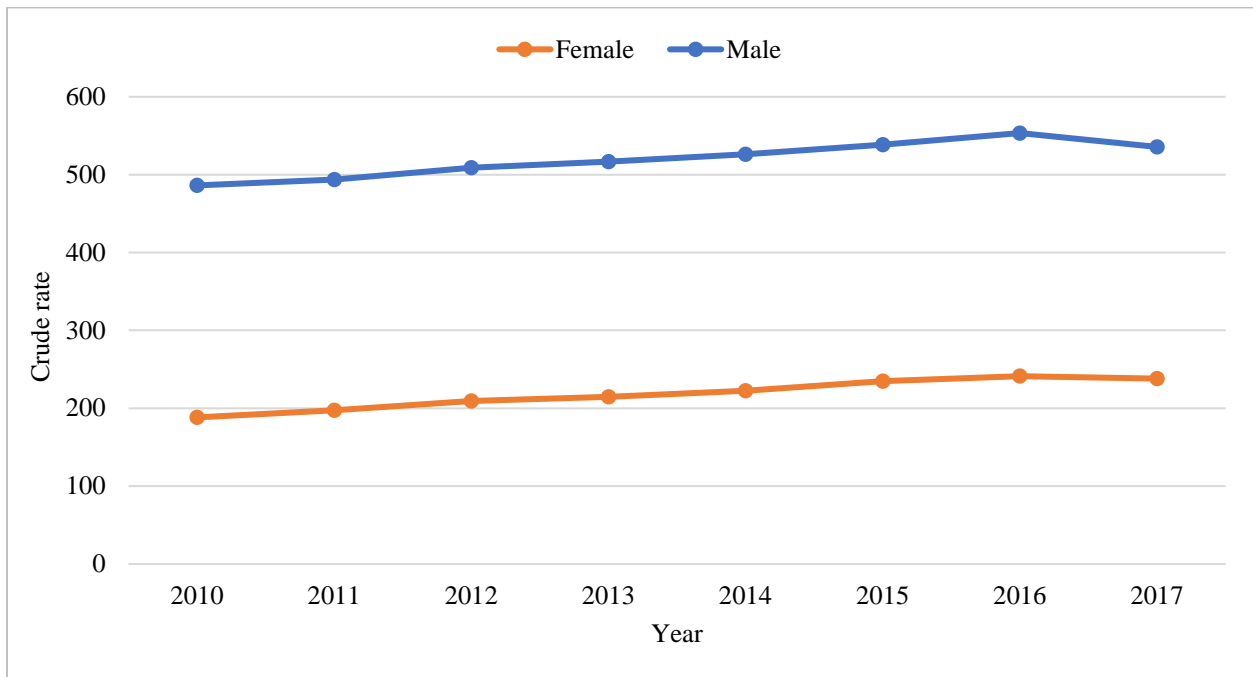
Data source: New York State Office of Alcoholism and Substance Abuse Services (OASAS)
Data as of April 2018
For complete data on OASAS unique client admissions by age group, see Appendix: Data Table 4.3.

From 2010 to 2016, the rates were consistently higher for males than females, although the rate has steadily increased for each gender. There was a decrease for both genders between 2016 and 2017. In 2017, the rate for males (535.6 per 100,000) was over two times higher than the rate for females (238.2 per 100,000).

Figure 4.4 Unique clients admitted to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by race/ethnicity, New York State, 2010-2017
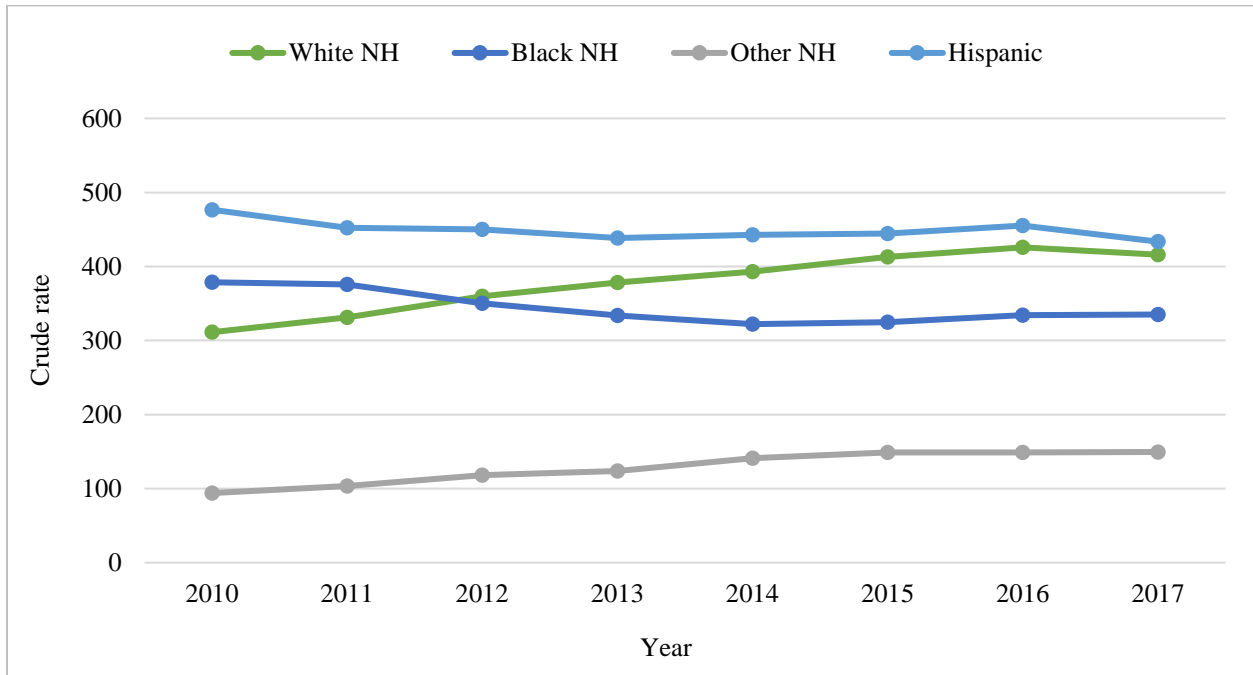
Data source: New York State Office of Alcoholism and Substance Abuse Services (OASAS)
Data as of April 2018
For complete data on OASAS unique client admissions by age group, see Appendix: Data Table 4.4.

Hispanics had a consistently higher rate than other groups during 2010-2017. In 2017, Hispanics had the highest rate (433.6 per 100,000) as compared to non-Hispanic Whites (335.2 per 100,000) and non-Hispanic Blacks (415.9 per 100,000).

Figure 4.5 Unique clients admitted to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by county, New York State, 2017
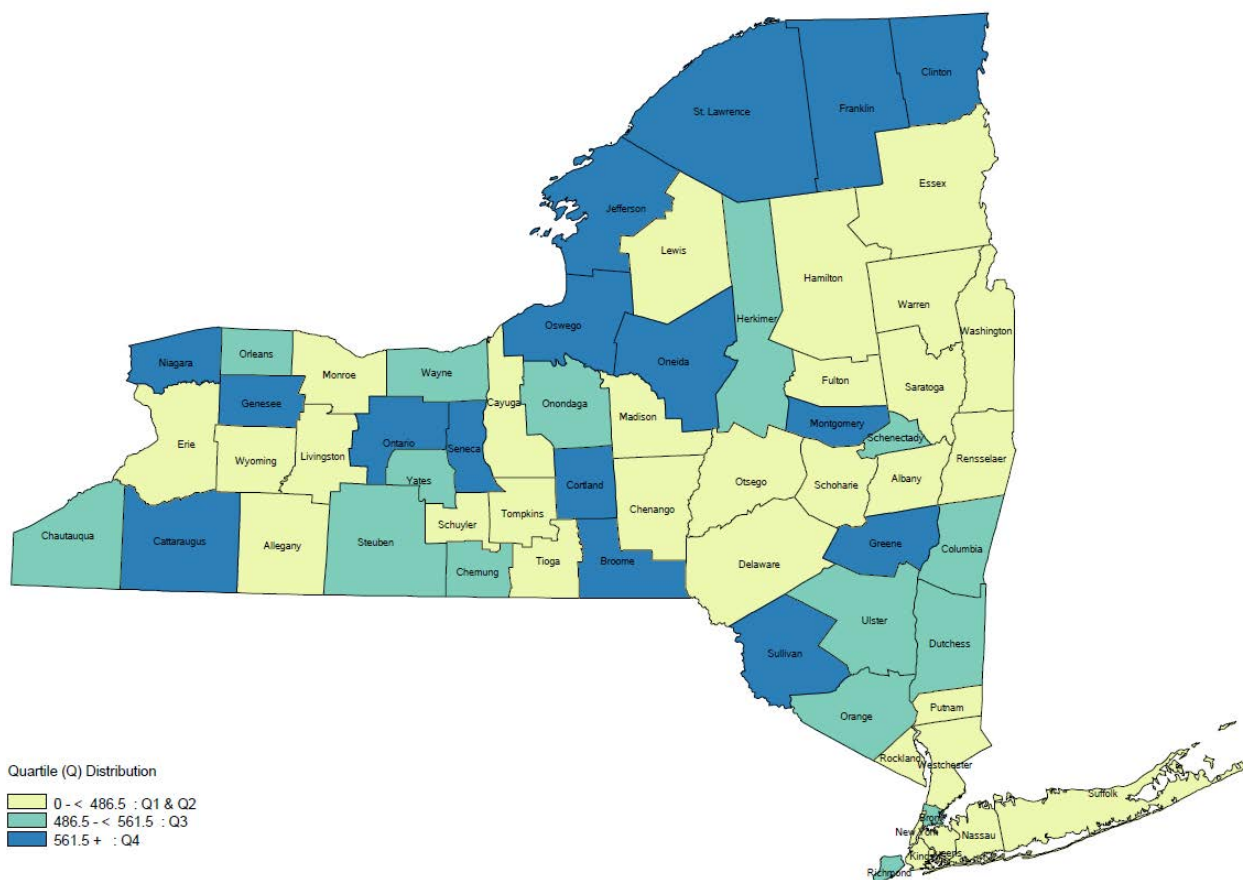
Data source: New York State Office of Alcoholism and Substance Abuse Services (OASAS)
Data as of April 2018
For complete data on OASAS unique client admissions by age group, see Appendix: Data Table 4.5.

Counties that had the highest crude rates in 2017 are shaded in blue. In 2017, the top 16 counties in the highest quartile (crude rates greater than or equal to 561.5 per 100,000 population) included Cortland, Genesee, Sullivan, Niagara, Oswego, Oneida, Cattaraugus, Montgomery, Greene, Ontario, Broome, Clinton, St. Lawrence, Seneca, Jefferson and Franklin.

Prescription Monitoring Program Data

Figure 5.1 Opioid analgesic prescriptions, crude rate per 1,000 population, by region, New York State, 2012-2017
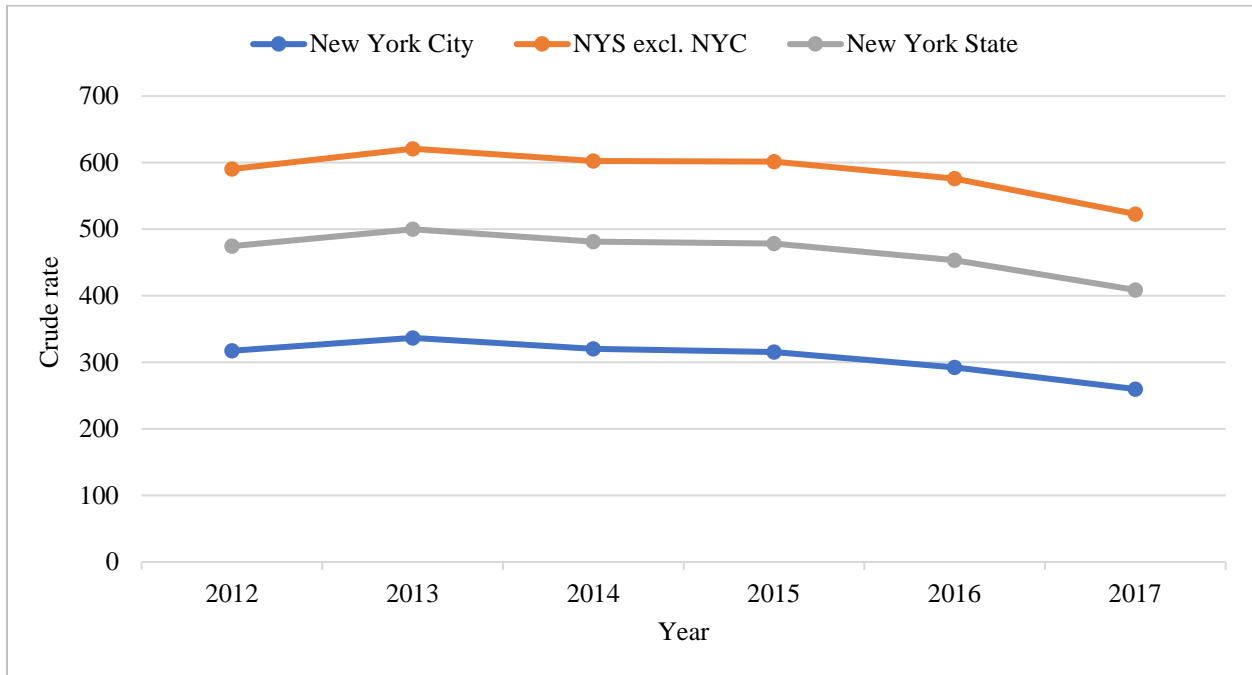
The data exclude buprenorphine prescriptions for the treatment of substance use disorder.
New York State total contains number with county unknown.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.1.

In NYS, the crude rate of opioid analgesic prescriptions declined consistently between 2013 (499.9 per 1,000 population) and 2017 (408.7 per 1,000), representing more than an 18 percent reduction. During 2012-2017, NYS excluding NYC consistently had the highest rate of opioid analgesic prescriptions, compared to NYC. In 2017, more than eight million opioid prescriptions were filled by state residents; the rate was two times higher for NYS excluding NYC (522.9 per 1,000) than NYC (259.8 per 1,000).

Figure 5.2 Opioid analgesic prescriptions, crude rate per 1,000 population, by age, New York State, 2012 and 2017
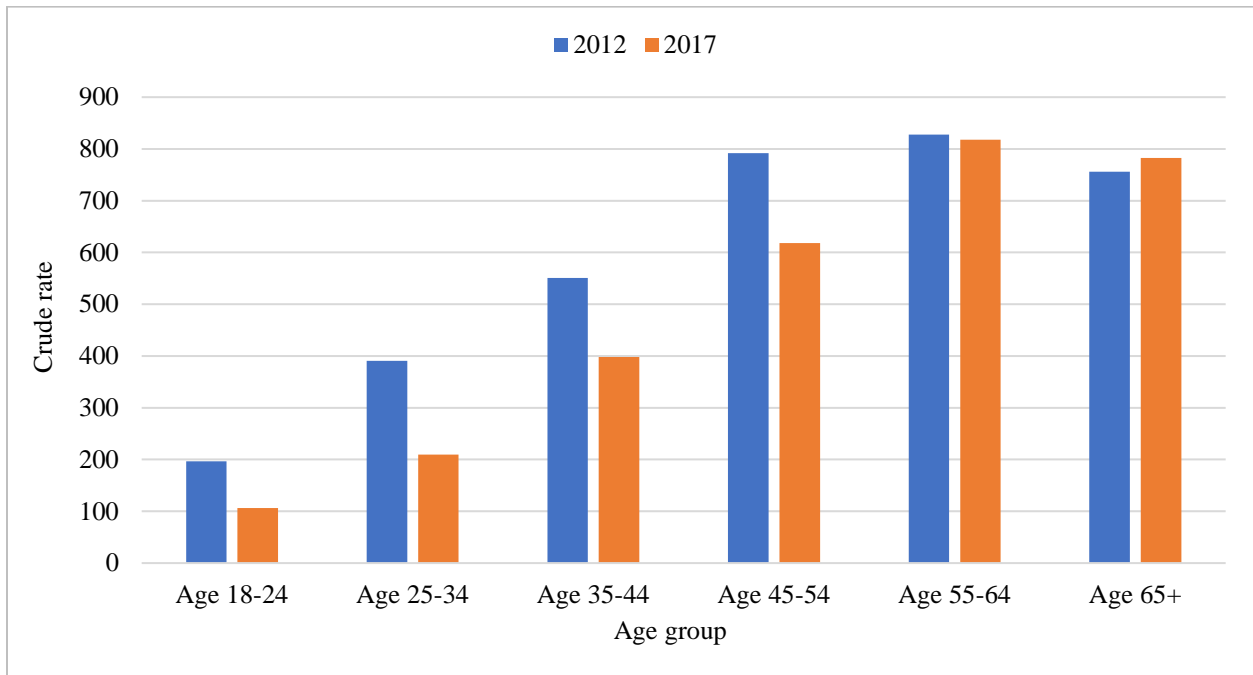
The data exclude buprenorphine prescriptions for the treatment of substance use disorder.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.2.

The crude rate of opioid analgesic prescriptions per 1,000 population declined across all age groups between 2012 and 2017, except for the 65 year and older age group, where the rate increased slightly from 2012 (756.0 per 1,000) to 2017 (782.5 per 1,000). Larger reductions were observed for individuals between 18 and 54 years old. The 55-64 year old age group had the highest rate of opioid analgesic prescriptions in both 2012 and 2017.

Figure 5.3 Opioid analgesic prescriptions, crude rate per 1,000 population, by gender, New York State, 2012-2017
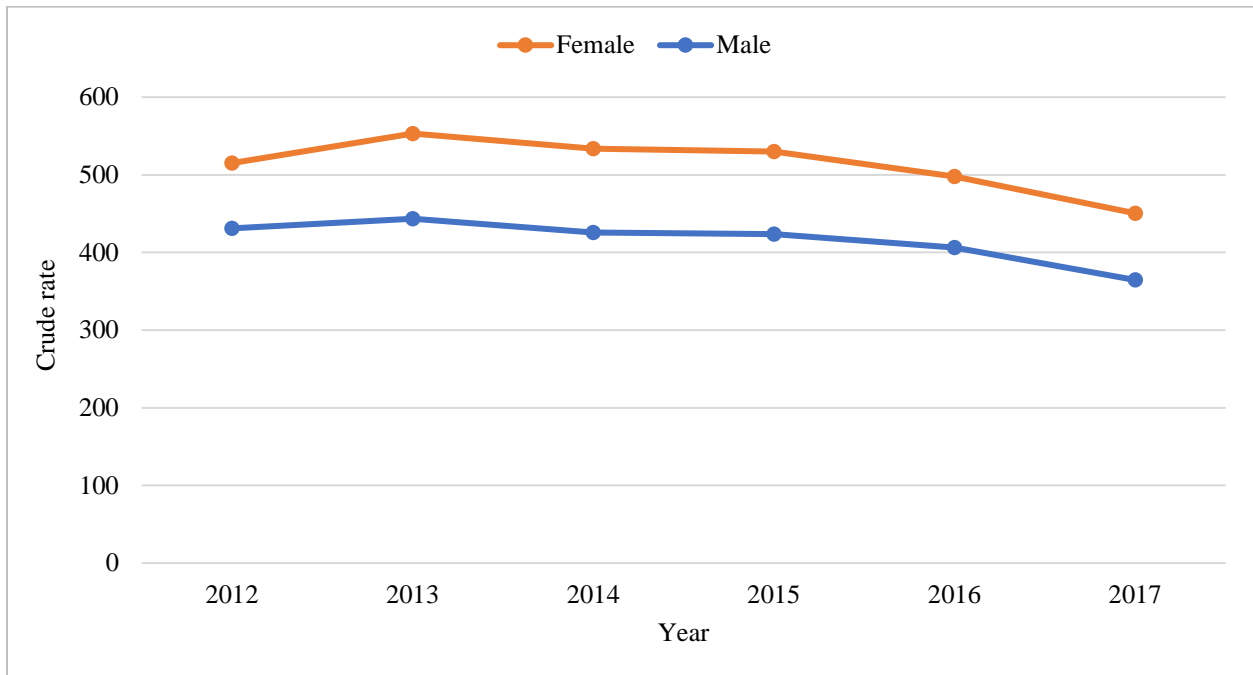
The data exclude buprenorphine prescriptions for the treatment of substance use disorder.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.3.

The crude rate of opioid analgesic prescriptions per 1,000 population was consistently higher among females than males between 2012 and 2017. In 2017, the rate was 23 percent higher among females (450.4 per 1,000) than males (364.5 per 1,000).

Figure 5.4 Opioid analgesic prescriptions, crude rate per 1,000 population, by age and gender, New York State, 2017
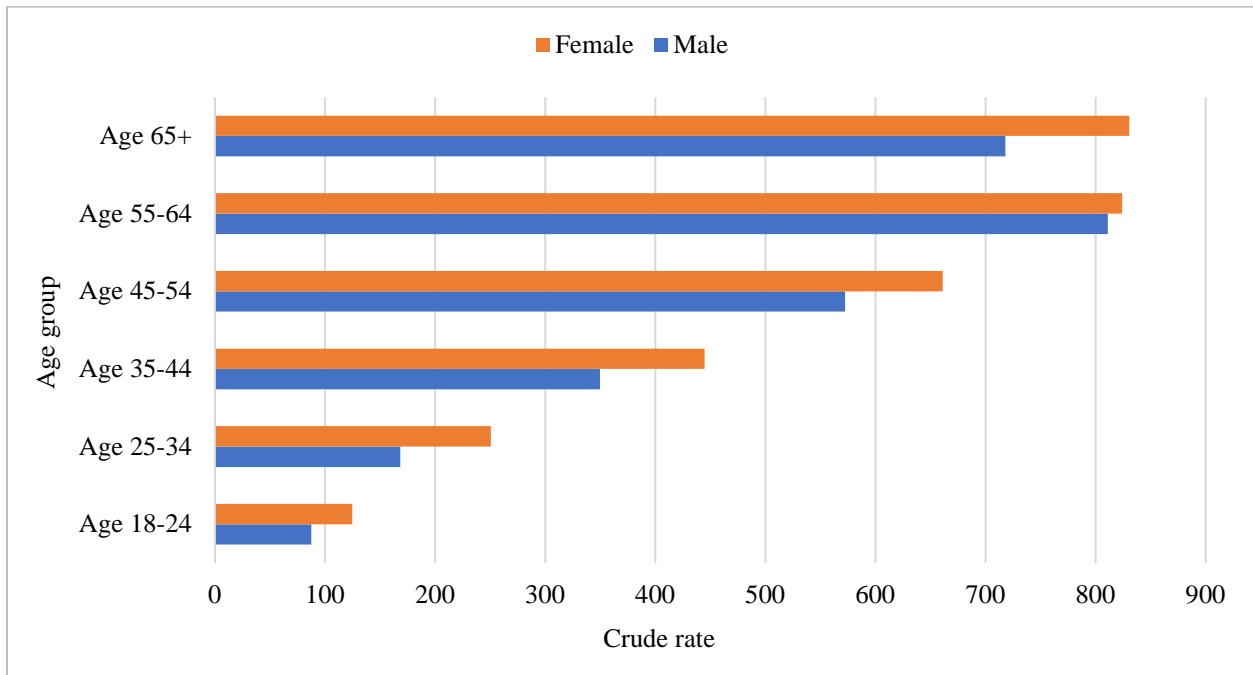
The data exclude buprenorphine prescriptions for the treatment of substance use disorder.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.4.

In 2017, the crude rate of opioid analgesic prescriptions per 1,000 population was higher for females than it was for males, across all age groups. The gap between genders was highest among the 65 year and older age group.

Figure 5.5 Patients with prescribed opioid analgesics from five or more prescribers and dispensed at five or more pharmacies in a six-month period, crude rate per 100,000 population, by region, New York State, 2012-2017
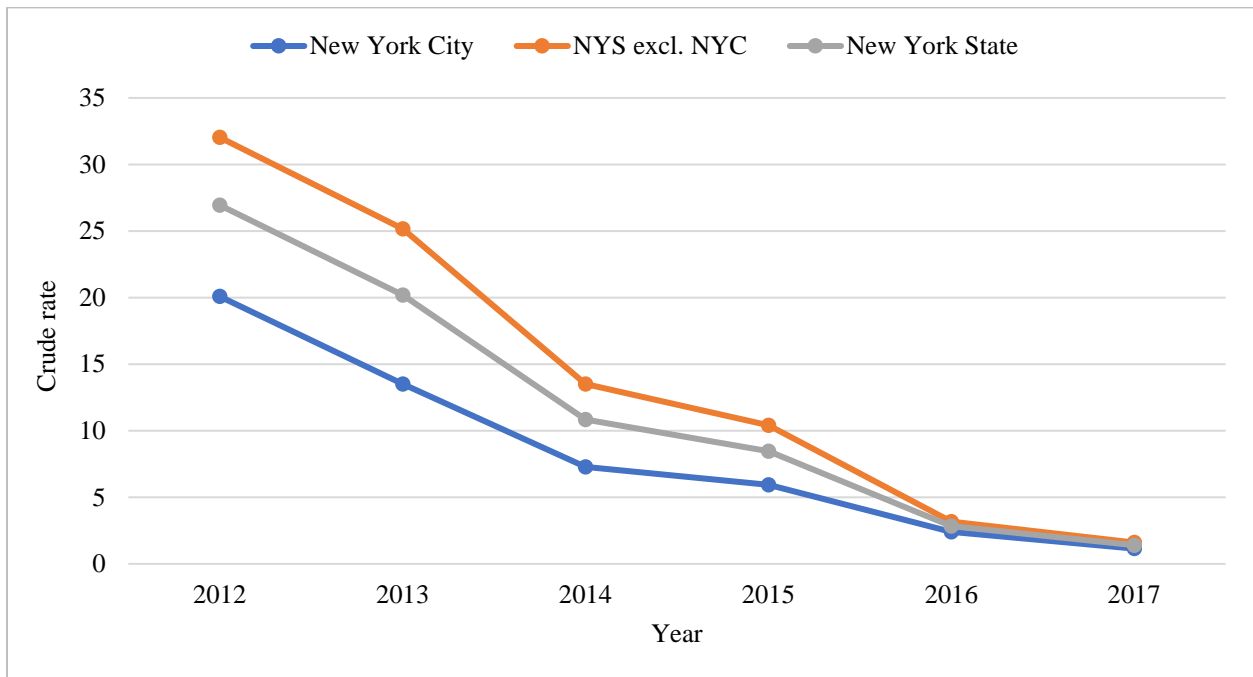
The data exclude buprenorphine prescriptions for the treatment of substance use disorder.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.5.

The number of patients who received opioid prescriptions from five or more prescribers, at five or more pharmacies in a six-month period ("doctor shoppers") dropped significantly across NYS between 2012 to 2017. In NYS, the crude rate per 100,000 population declined from 27.0 in 2012 to 1.4 in 2017.

Figure 5.6 Benzodiazepine prescriptions, crude rate per 1,000 population, by region, New York State, 2012-2017
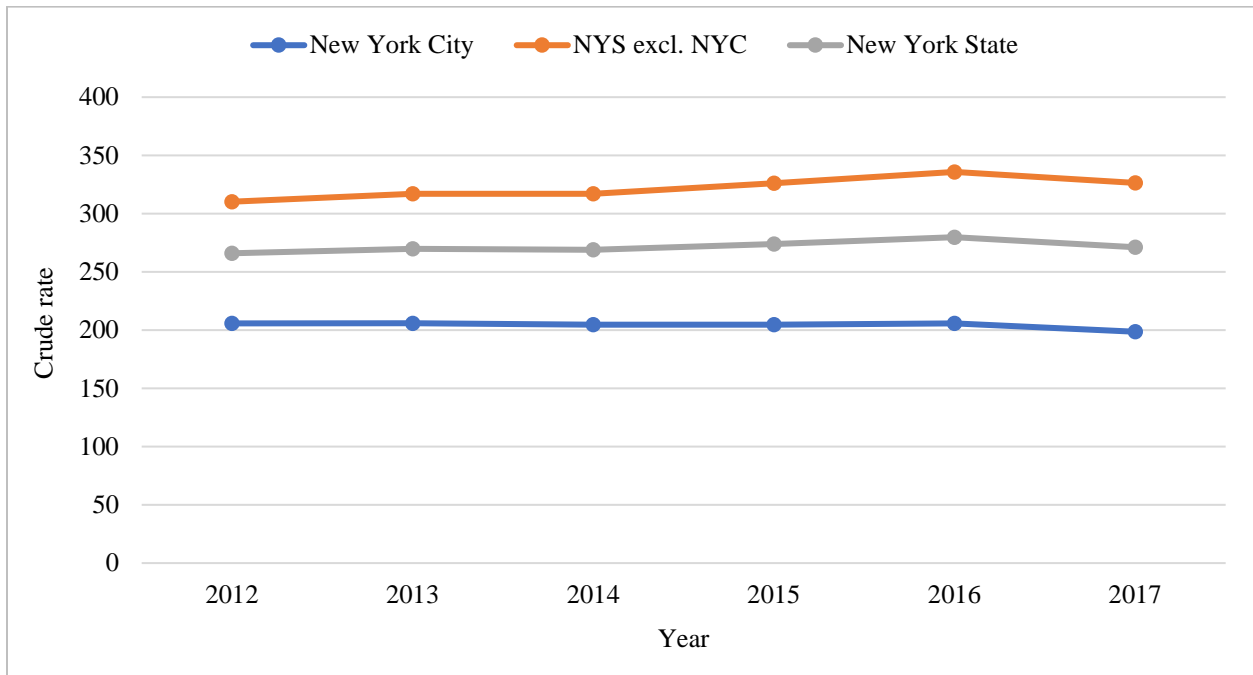
New York State total contains number with county unknown.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.6.

In NYS, the crude rate of benzodiazepine prescriptions increased slightly between 2012 (266.0 per 1,000 population) to 2017 (271.2 per 1,000). During 2012-2017, NYS excluding NYC had consistently higher rates of benzodiazepine prescriptions than NYC. In 2017, the rate was 64 percent higher for NYS excluding NYC (326.5 per 1,000) than for NYC (198.6 per 1,000).

Figure 5.7 Benzodiazepine prescriptions, crude rate per 1,000 population, by age, New York State, 2012 and 2017
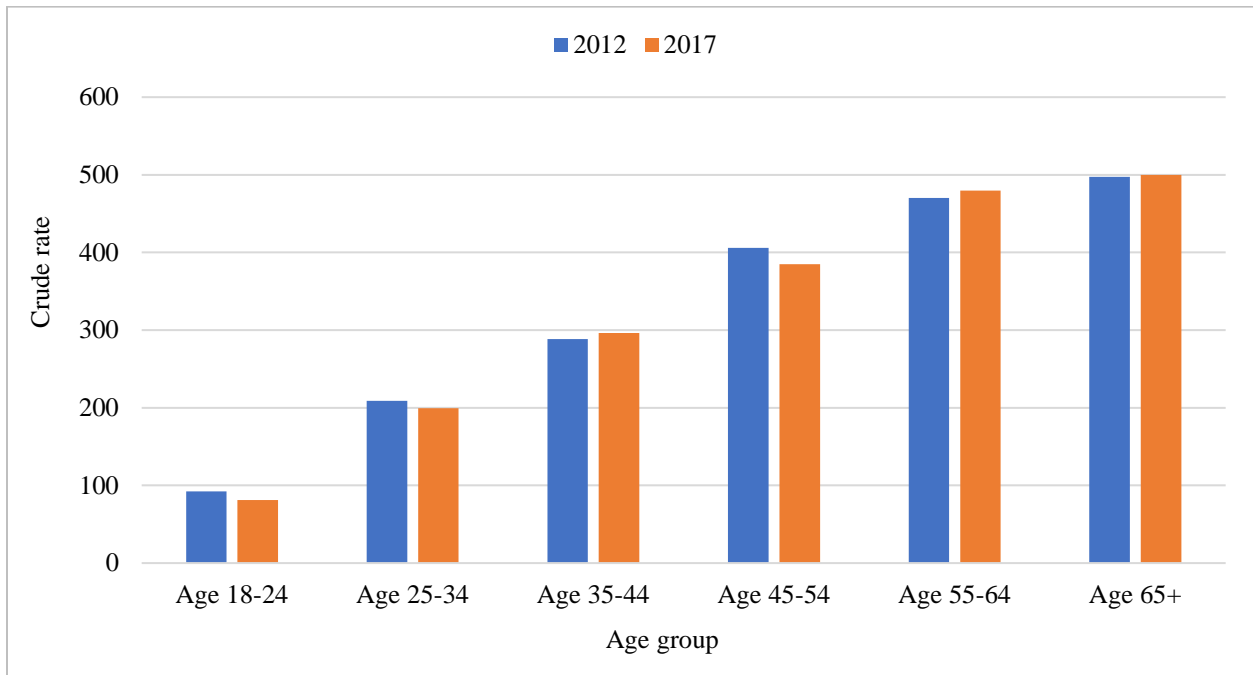
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.7.

In NYS, the crude rate of benzodiazepine prescriptions was highest among the 65 year and older age group in both 2012 (497.5 per 1,000) and 2017 (500.1 per 1,000). The rate declined for the 18-24, 25-34, and 45-54 year old age groups between 2012 and 2017.

Figure 5.8 Benzodiazepine prescriptions, crude rate per 1,000 population, by gender, New York State, 2012-2017
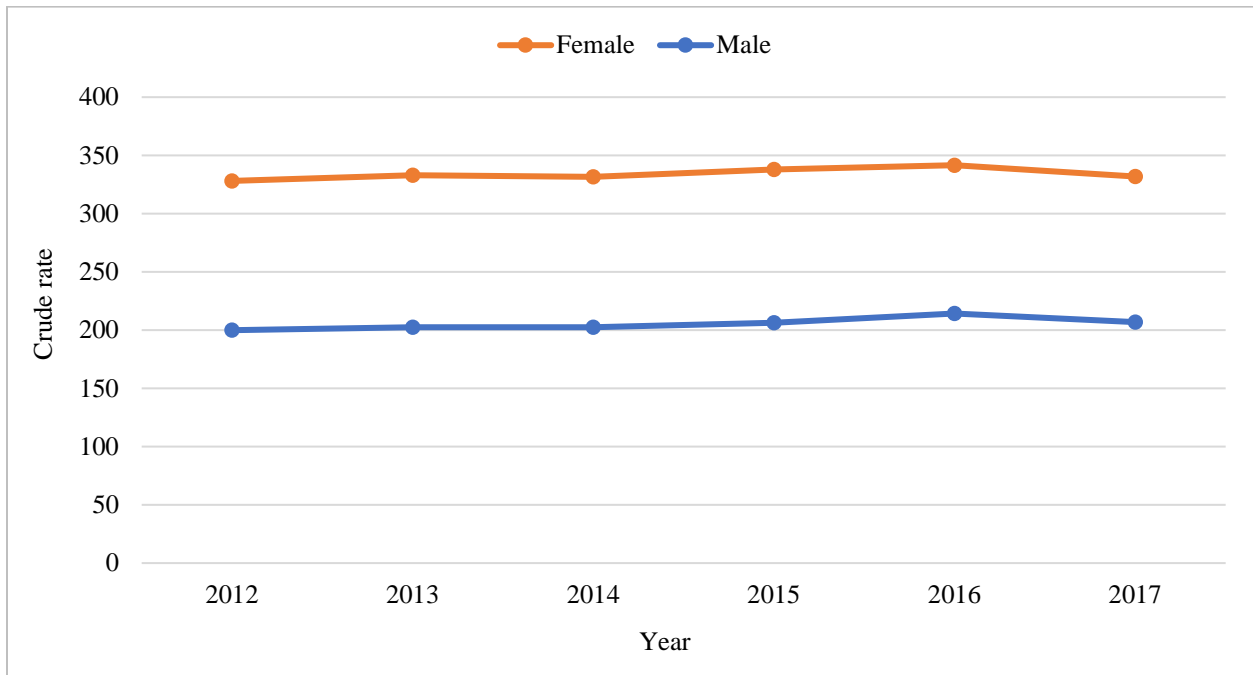
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.8.

The crude rate of benzodiazepine prescriptions per 1,000 population was consistently higher among females than males between 2012 to 2017. In 2017, the rate was 60 percent higher among females (331.8 per 1,000) than males (206.9 per 1,000).

Figure 5.9 Benzodiazepine prescriptions, crude rate per 1,000 population, by age and gender, New York State, 2017
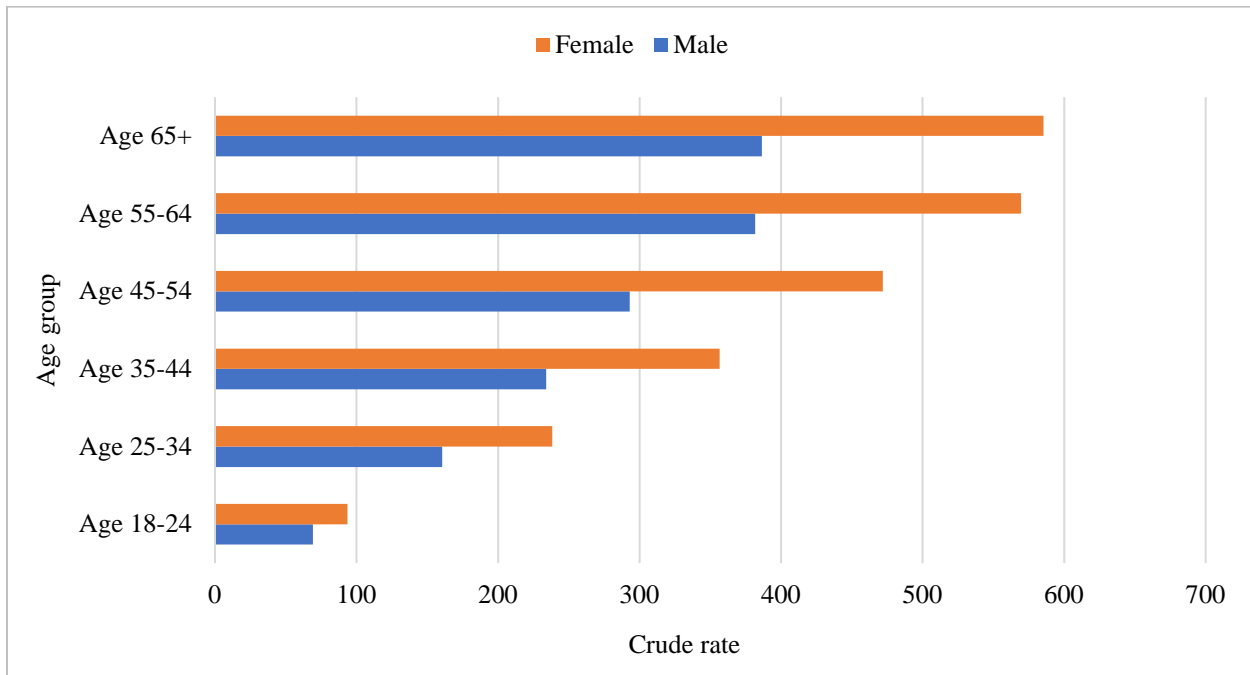
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.9.

In 2017, the 65 year and older age group had the highest crude rate of benzodiazepine prescriptions for both males (386.4 per 1,000 population) and females (585.3 per 1,000), followed by the 55-64 year old age group with rates of 381.7 per 1,000 males and 569.6 per 1,000 females.

Figure 5.10 Percentage of patients prescribed one or more opioid analgesics with a total daily dose of ≥ 90 MME on at least one day, by region, New York State, 2012-2017
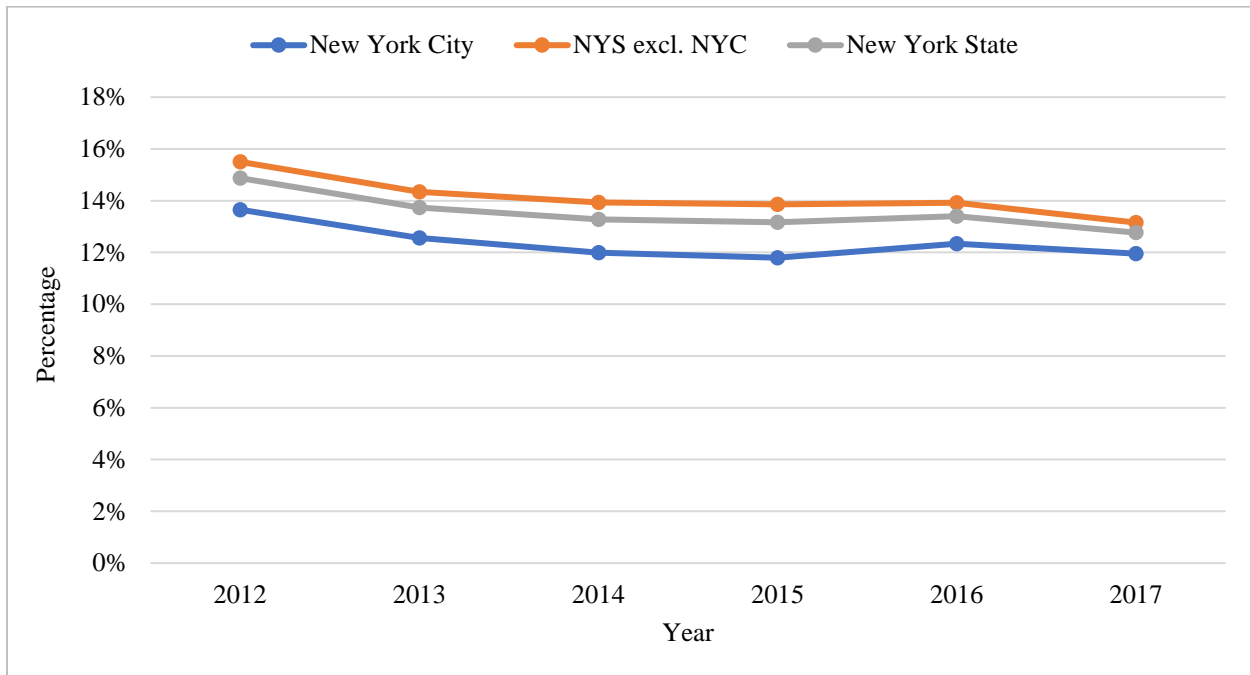
The data excludes buprenorphine prescriptions for pain and treatment of substance use disorder.
New York State total contains number with county unknown.
MME: morphine milligram equivalents
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.10.

Opioid analgesics prescribed in higher dosages (≥ 90 MME) are associated with higher risk of overdose and death.[11] The percentage of patients (receiving one or more opioid analgesic prescriptions) with a total daily dose of ≥ 90 MME for at least one day declined between 2012 (14.9 percent) and 2017 (12.8 percent) in NYS. During 2012-2017, the percentage was consistently higher in NYS excluding NYC than in NYC.

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[11] Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016. MMWR Recomm Rep 2016;65(No. RR-1):1–49. https://www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm

Figure 5.11 Percentage of patients prescribed one or more opioid analgesics with a total daily dose of ≥ 90 MME on at least one day, by age, New York State, 2012 and 2017
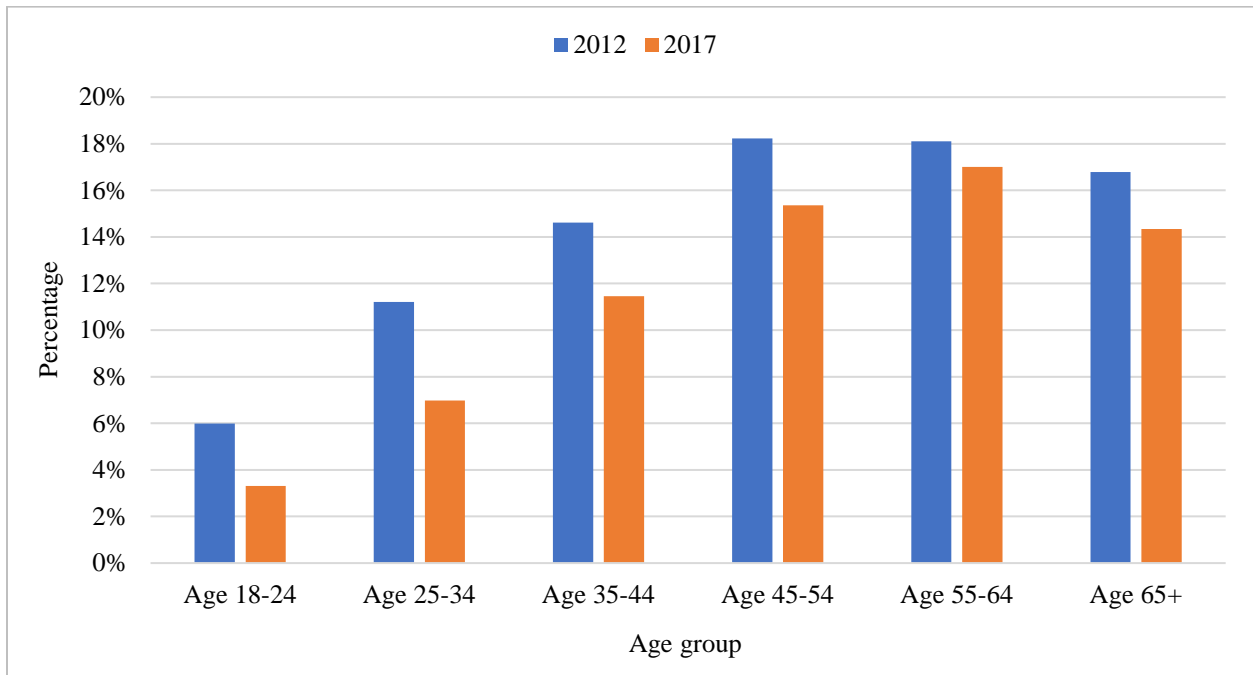
The data excludes buprenorphine prescriptions for pain and treatment of substance use disorder.
MME: morphine milligram equivalents
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.11.

In NYS, the percentage of patients (receiving one or more opioid analgesic prescriptions) with a total daily dose of ≥ 90 MME for at least one day declined across all age groups between 2012 and 2017. The highest percentage was seen among the 45-54 year old age group in 2012 (18.2 percent) and 55-64 year old age group in 2017 (17.1 percent).

Figure 5.12 Percentage of patients prescribed one or more opioid analgesics with a total daily dose of ≥ 90 MME on at least one day, by gender, New York State, 2012-2017
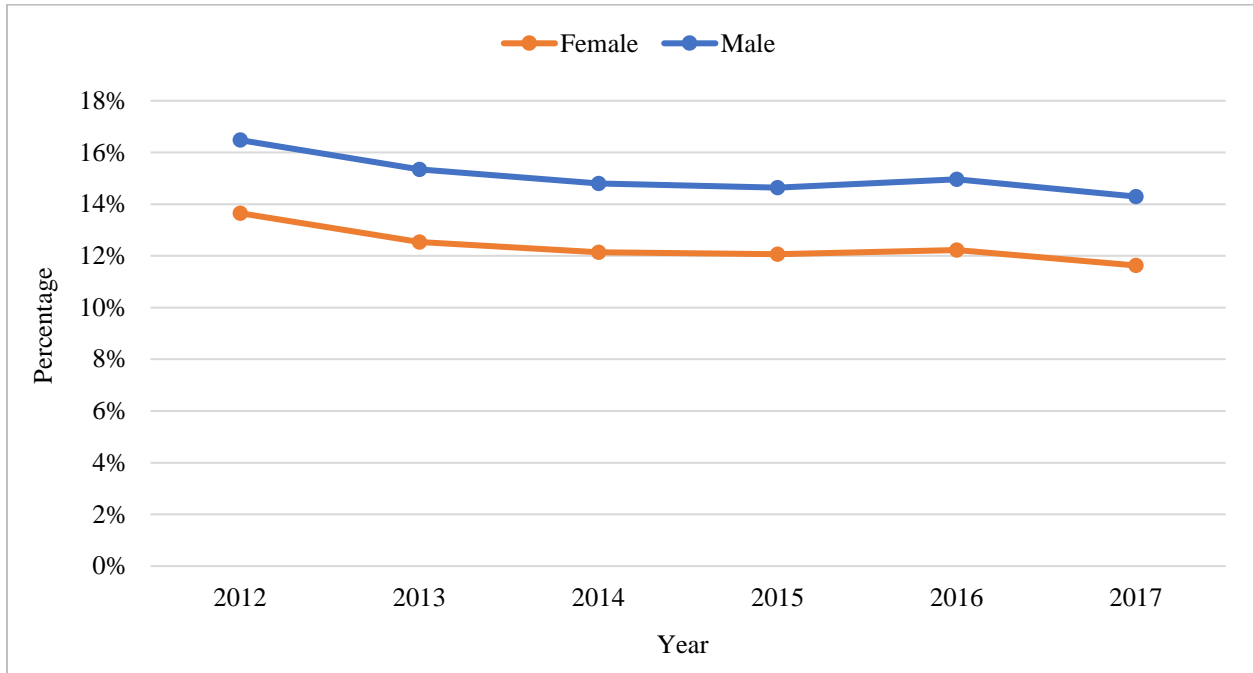
The data excludes buprenorphine prescriptions for pain and treatment of substance use disorder.
MME: morphine milligram equivalents
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.12.

The percentage of patients (receiving one or more opioid analgesic prescriptions) with a total daily dose of ≥ 90 MME for at least one day was consistently higher among males than females between 2012 to 2017. In 2017, the percentage was higher among male patients (14.4 percent) than female patients (11.7 percent).

Figure 5.13 Percentage of patients prescribed one or more opioid analgesics with a total daily dose of ≥ 90 MME on at least one day, by age and gender, New York State, 2017
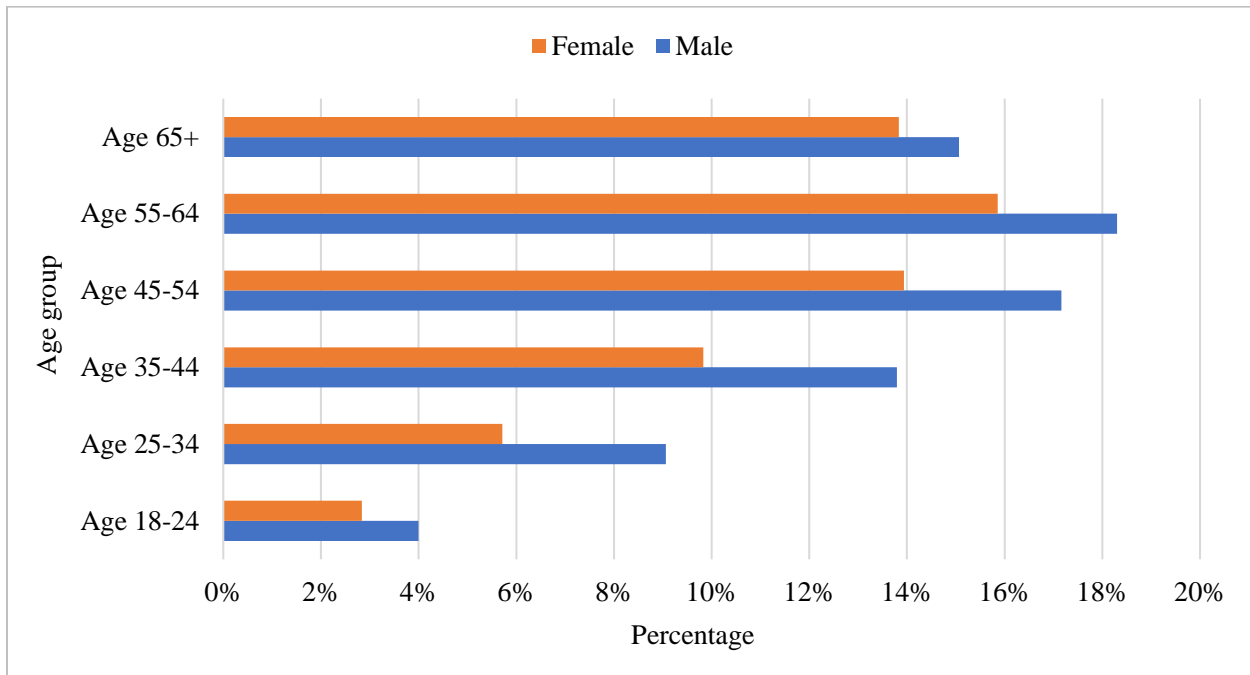
The data excludes buprenorphine prescriptions for pain and treatment of substance use disorder.
MME: morphine milligram equivalents
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.13.

In 2017, the percentage of patients (receiving one or more opioid analgesic prescriptions) with a total daily dose of ≥ 90 MME for at least one day was highest among the 55-64 year old age group, for both males (18.4 percent) and females (15.9 percent), followed by the 45-54 year old age group with 17.3 percent among males and 14.0 percent among females.

Figure 5.14 Percentage of patients* with two or more days of overlapping opioid analgesic and benzodiazepine prescriptions, by region, New York State, 2012-2017
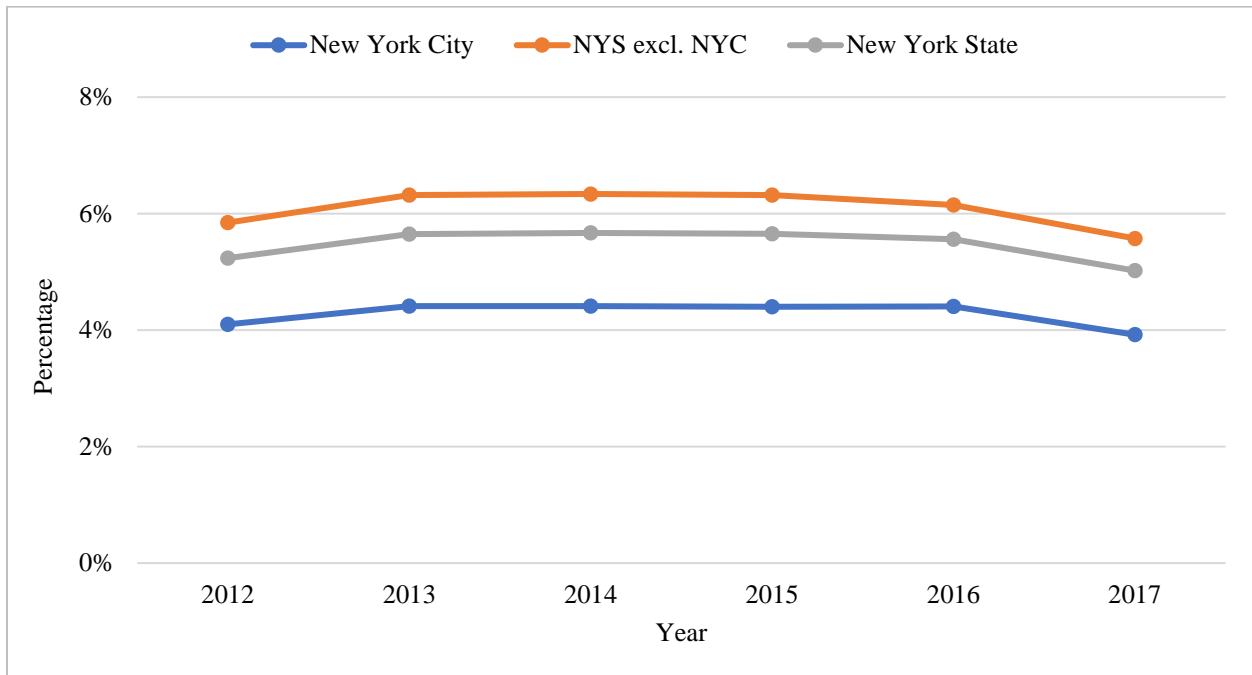
*: Patients with at least one prescription for opioid analgesics or benzodiazepines during a given year
Opioid analgesic prescriptions exclude buprenorphine prescriptions for the treatment of SUD.
New York State total contains number with county unknown.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.14.

Among patients with at least one prescription for opioid analgesics or benzodiazepines, the percentage who received two or more days of overlapping opioid analgesic and benzodiazepine prescriptions declined between 2016 (5.6 percent) and 2017 (5.0 percent) in NYS. During 2012-2017, NYS excluding NYC had consistently higher percentages compared to NYC. In 2017, the percentage was higher for NYS excluding NYC (5.6 percent) than for NYC (3.9 percent).

Figure 5.15 Percentage of patients* with two or more days of overlapping opioid analgesic and benzodiazepine prescriptions, by age, New York State, 2012 and 2017
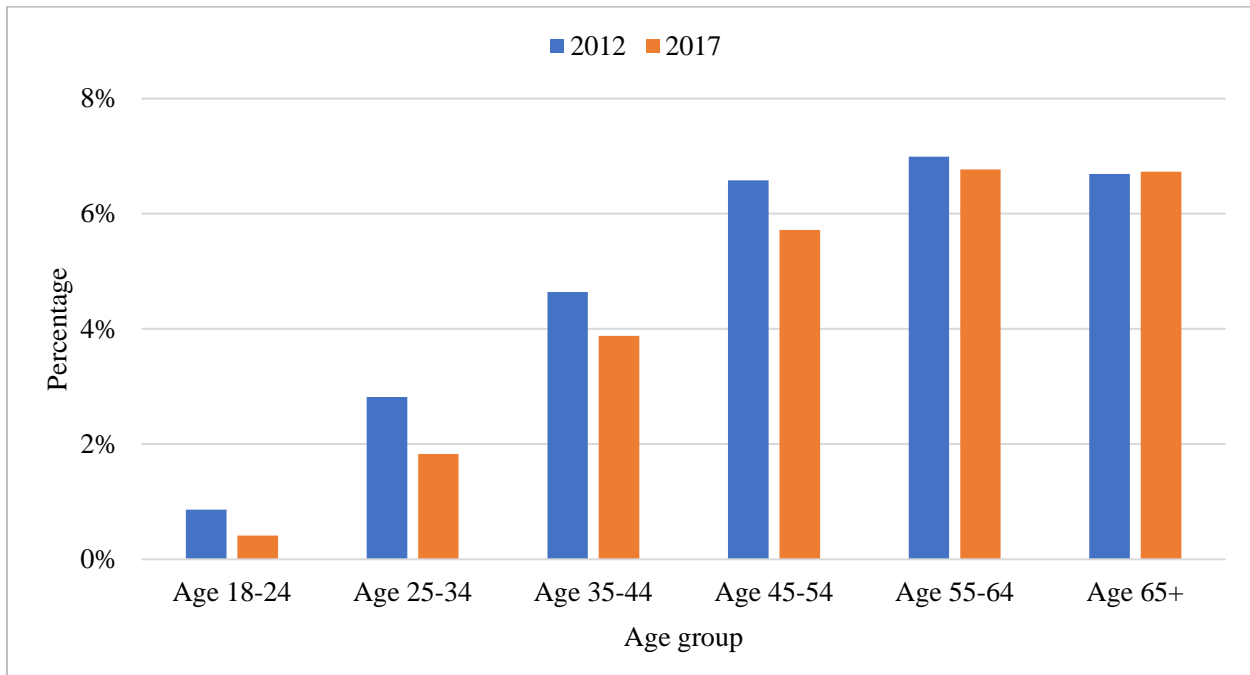
*: Patients with at least one prescription for opioid analgesics or benzodiazepines during a given year
Opioid analgesic prescriptions exclude buprenorphine prescriptions for the treatment of SUD.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.15.

Among patients with at least one prescription for opioid analgesics or benzodiazepines, the percentage who received two or more days of overlapping opioid analgesic and benzodiazepine prescriptions declined between 2012 and 2017 for all age groups, except for 65 or older age group. The largest reduction was observed among the 25-34 year old age group. Patients aged 55-64 years had the highest percentage in both 2012 and 2017.

Figure 5.16 Percentage of patients* with two or more days of overlapping opioid analgesic and benzodiazepine prescriptions, by gender, New York State, 2012-2017
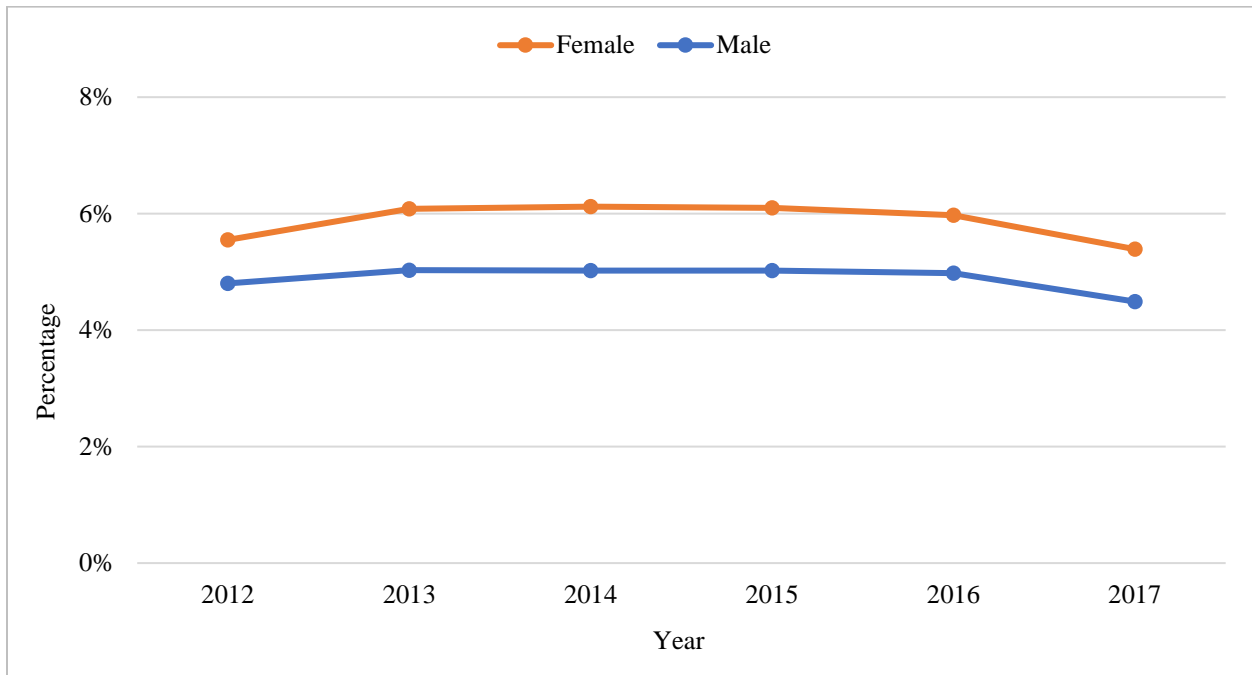
*: Patients with at least one prescription for opioid analgesics or benzodiazepines during a given year
Opioid analgesic prescriptions exclude buprenorphine prescriptions for the treatment of SUD.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.16.

Among patients with at least one prescription for opioid analgesics or benzodiazepines, the percentage who received two or more days of overlapping opioid analgesic and benzodiazepine prescriptions was consistently higher among females than males between 2012 and 2017. In 2017, 5.4 percent of females, and 4.5 percent of males had overlapping prescriptions.

Figure 5.17 Percentage of patients* with two or more days of overlapping opioid analgesic and benzodiazepine prescriptions, by age and gender, New York State, 2017
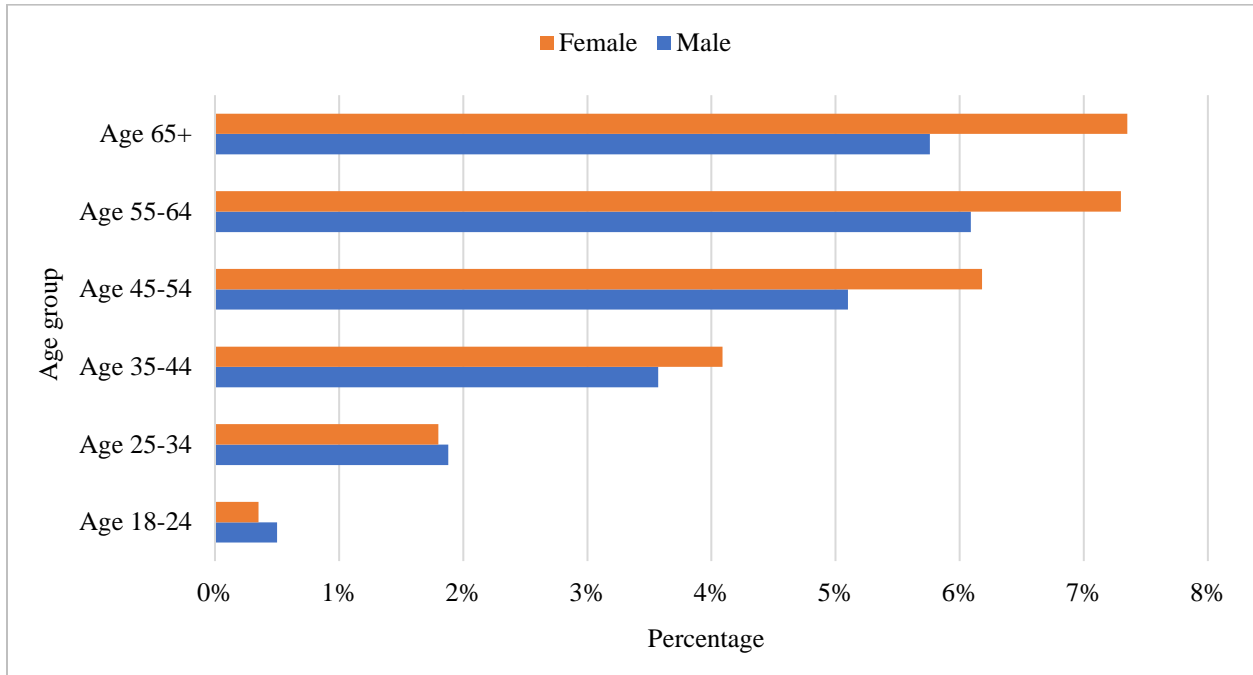
*: Patients with at least one prescription for opioid analgesics or benzodiazepines during a given year
Opioid analgesic prescriptions exclude buprenorphine prescriptions for the treatment of SUD.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.17.

In 2017, among patients with at least one prescription for opioid analgesics or benzodiazepines, the percentage who received two or more days of overlapping opioid analgesic and benzodiazepine prescriptions was higher among females than among males, except in the 18-24 and 25-34 year old age groups. The largest gap in the percentage between genders was seen among the 65 year or older age group.

Figure 5.18 Buprenorphine prescriptions for substance use disorder (SUD), crude rate per 1,000 population, by region, New York State, 2012-2017
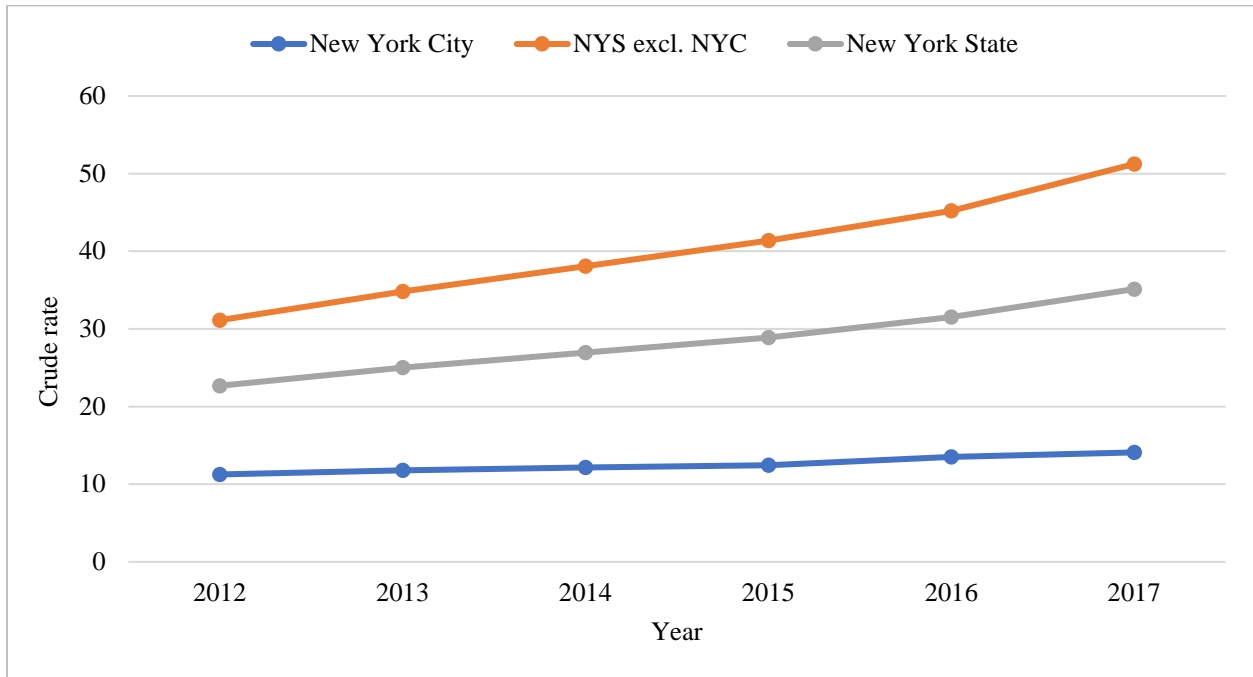
New York State total contains number with county unknown.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.18.

In NYS, the crude rate of buprenorphine prescriptions for SUD increased between 2012 (22.7 per 1,000 population) and 2017 (35.1 per 1,000), representing a 54.6 percent increase. The rate was more than two times higher in NYS excluding NYC than in NYC during 2012-2017.

Figure 5.19 Buprenorphine prescriptions for substance use disorder (SUD), crude rate per 1,000 population, by age, New York State, 2012 and 2017
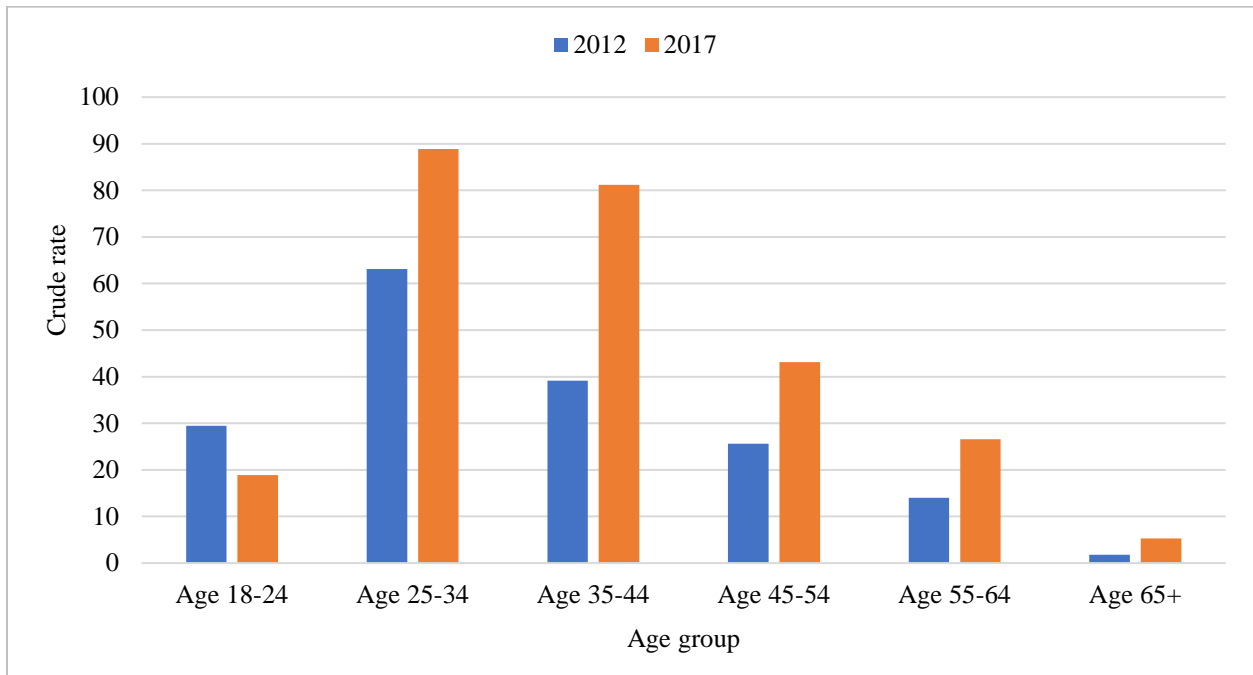
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.19.

The crude rate of buprenorphine prescriptions for SUD per 1,000 population increased between 2012 and 2017 across all age groups, except the 18-24 year old age group, for whom the rate decreased from 29.5 per 1,000 in 2012 to 18.9 per 1,000 in 2017. The largest increase in the rate was among the 35-44 year old age group, from 39.1 per 1,000 in 2012 to 81.2 per 1,000 in 2017. The rate was highest among the 25-34 year old age group in both 2012 and 2017.

Figure 5.20 Buprenorphine prescriptions for substance use disorder (SUD), crude rate per 1,000 population, by gender, New York State, 2012-2017
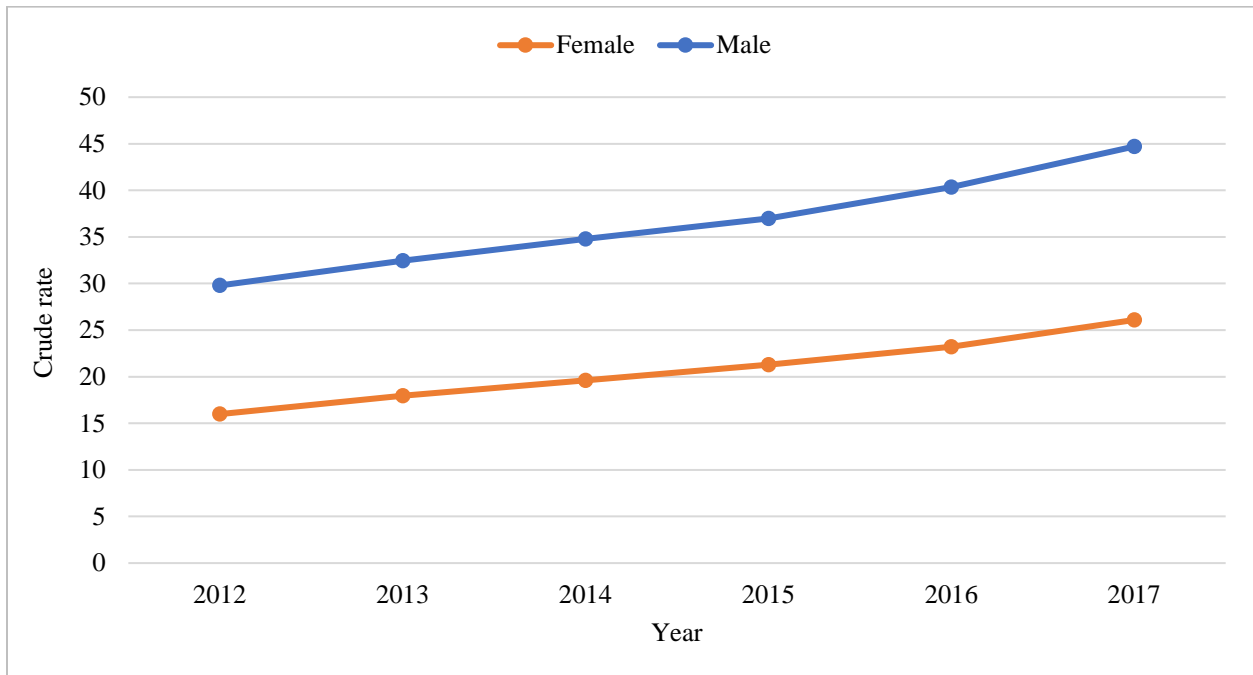
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.20.

The crude rate of buprenorphine prescriptions for SUD per 1,000 population was consistently higher among males than females. In 2017, the crude rate was 71 percent higher among males (44.7 per 1,000) than females (26.1 per 1,000).

Figure 5.21 Buprenorphine prescriptions for substance use disorder (SUD), crude rate per 1,000 population, by age and gender, New York State, 2017
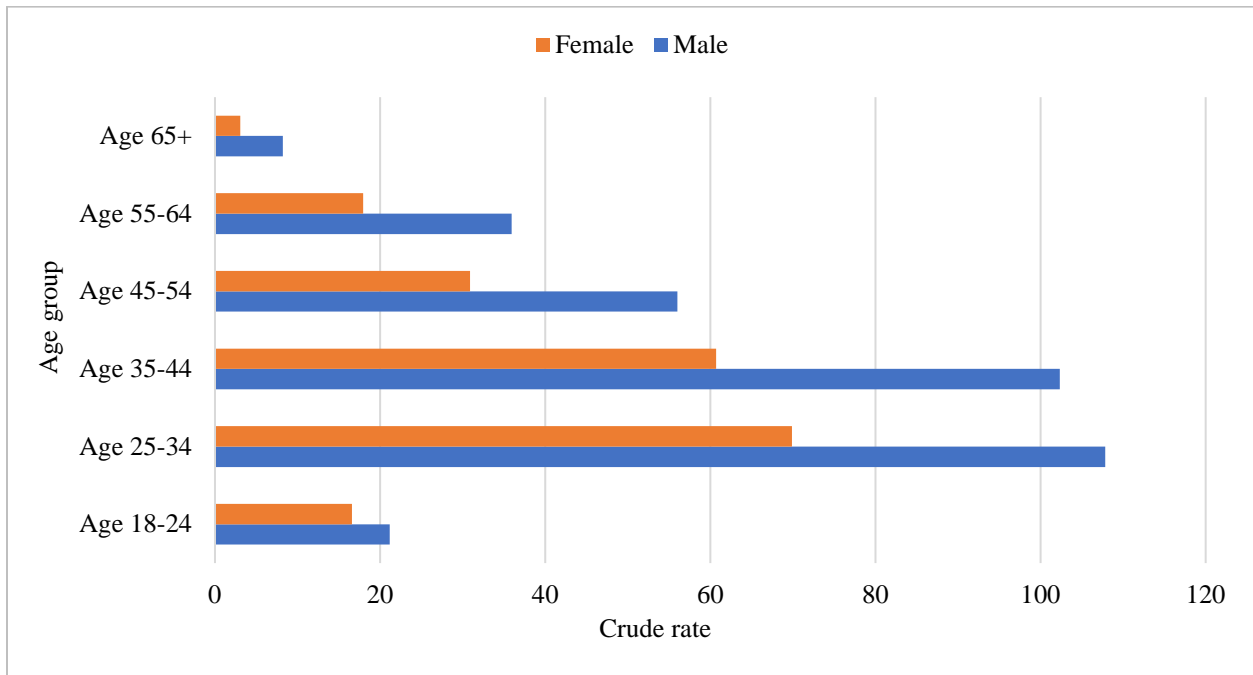
Data Source: NYS Prescription Monitoring Program; Data as of April 2018
For complete data, see Appendix: Data Table 5.21.

In 2017, the crude rate of buprenorphine prescriptions for SUD per 1,000 population was highest among the 25-34 year old age group for both males (107.8 per 1,000) and females (69.9 per 1,000), followed by the 35-44 year age group with a rate of 102.3 per 1,000 for males and 60.7 per 1,000 for females.

Survey Data

Figure 6.1 Percentage of high school students reporting ever using heroin, New York State and United States, 2003–2017
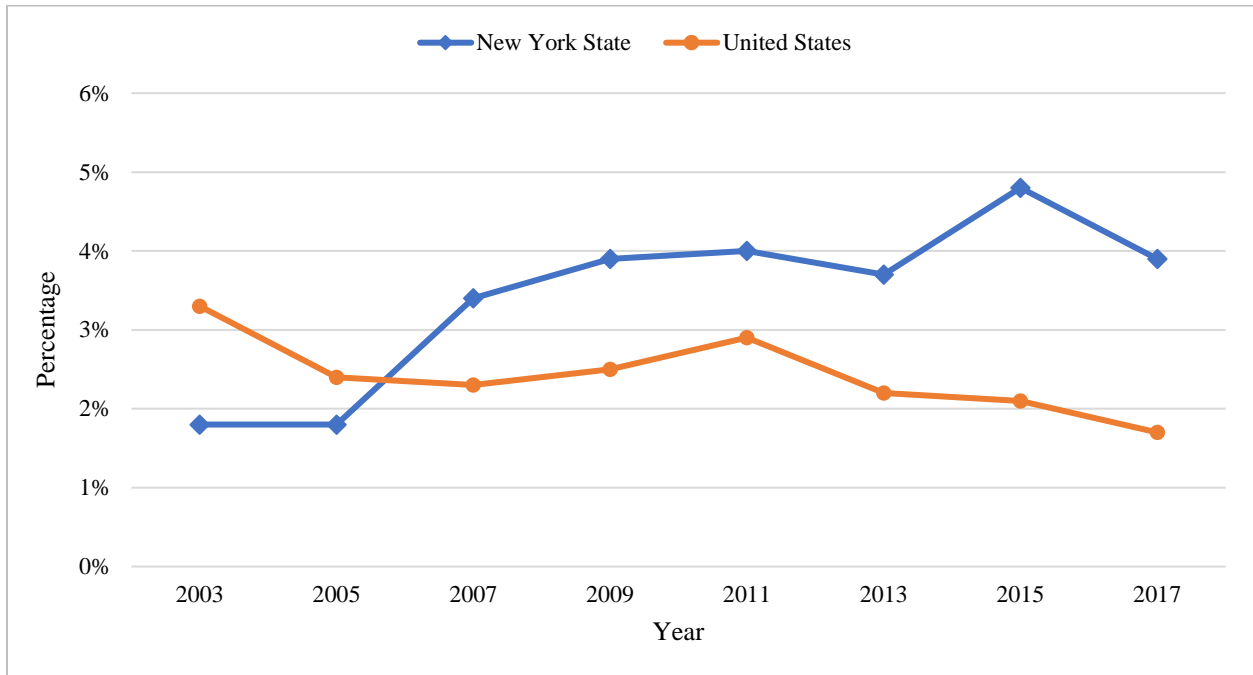
Data source: Youth Risk Behavior Surveillance System (YRBSS); Data accessed August 2018
Survey Question: During your life, how many times have you used heroin (also called smack, junk, or China White)?
For complete data, see Appendix: Data Table 6.1.

The percentage of high school students in NYS who reported ever using heroin increased from 1.8 percent in 2003 to 4.8 percent in 2015. In 2017, that percentage reduced to 3.9 percent. The percentage of students who reported ever using heroin has, since 2007, been consistently higher in NYS than nationally.

Figure 6.2 Percentage of high school students reporting ever using heroin, by subpopulation, New York State, 2017
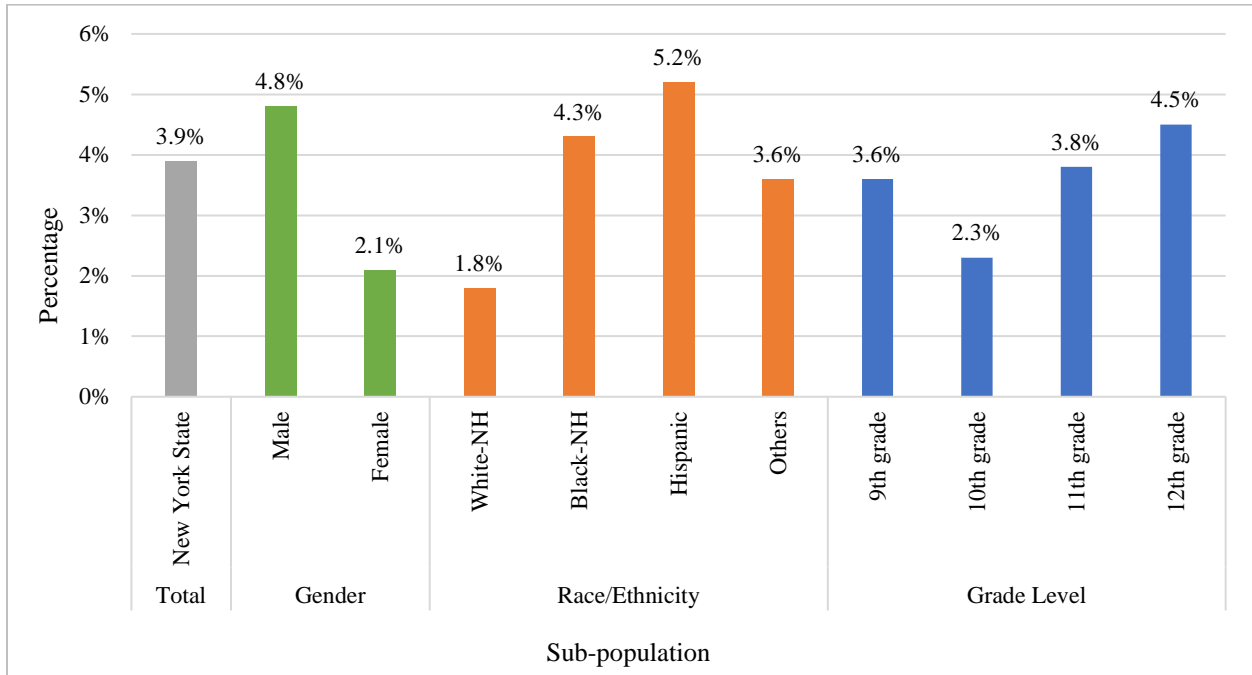
Data source: Youth Risk Behavior Surveillance System (YRBSS); Data accessed August 2018
Survey Question: During your life, how many times have you used heroin (also called smack, junk, or China White)?
For complete data, see Appendix: Data Table 6.2.

In NYS during 2017, 3.9 percent of all high school students reported ever using heroin statewide. This was higher among male (4.8 percent), Black non-Hispanic (4.3 percent), Hispanic (5.2 percent), and 12th grade (4.5 percent) students, respectively.

Figure 6.3 Prevalence of illicit drug use other than marijuana in the past month, by age group, 2015-2016
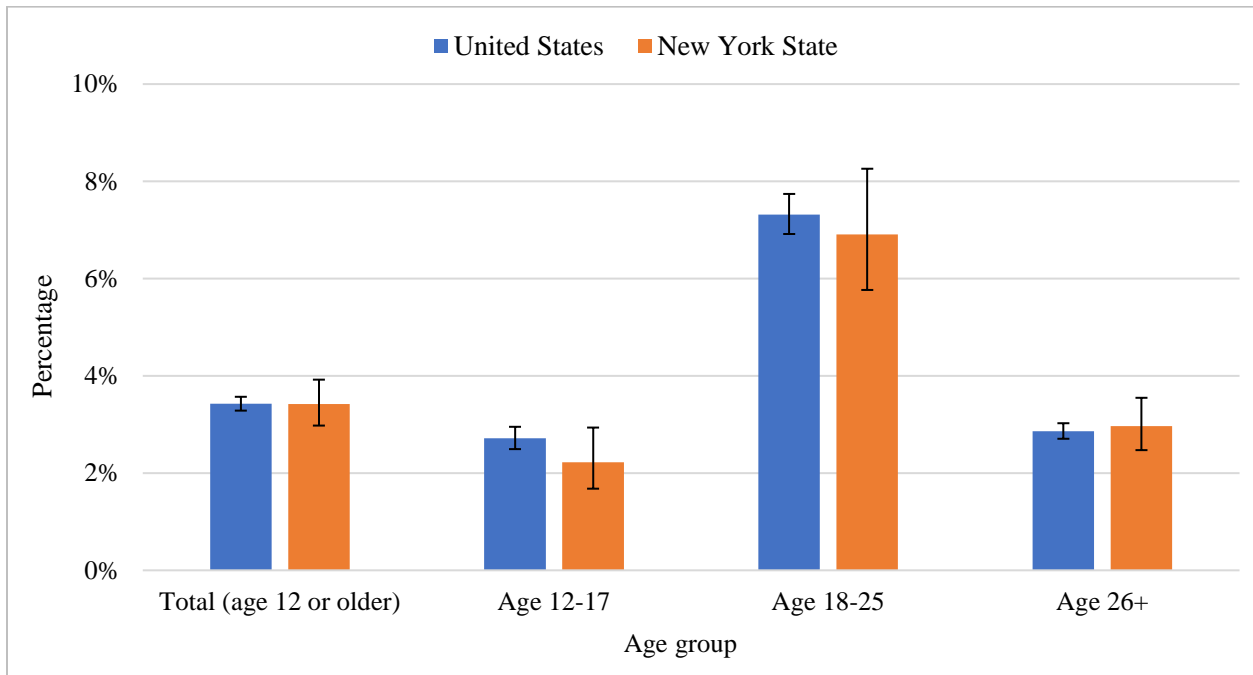
Data source: National Survey on Drug Use and Health (NSDUH); Data accessed August 2018
For complete data, see Appendix: Data Table 6.3.

During 2015-2016, both in NYS and the U.S., 3.4 percent of the population aged 12 and older used illicit drugs other than marijuana in the past month. The percentage was highest in the 18-25 age group (6.9 percent in NYS, and 7.3 percent in the U.S.), followed by ages 26 and older (3.0 percent in NYS, and 2.9 percent in the U.S.), and ages 12-17 (2.2 percent in NYS, and 2.7 percent in the U.S.).

Figure 6.4 Prevalence of heroin use in the past year, by age group, 2015-2016
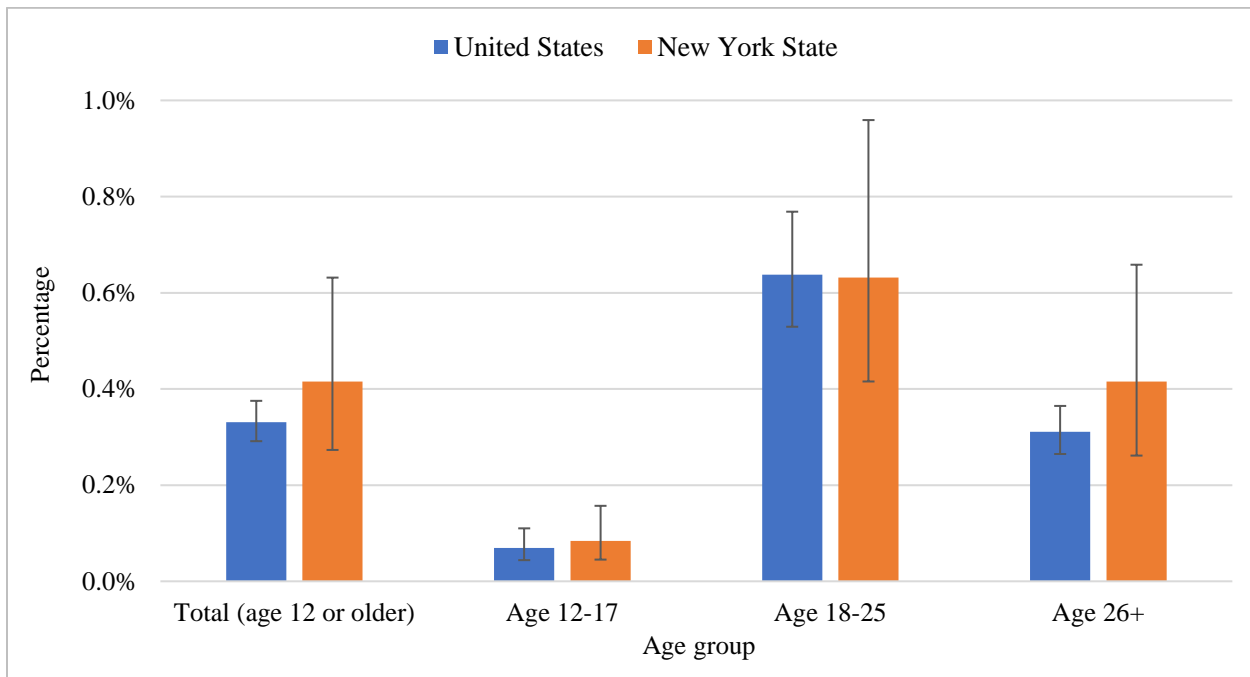
Data source: National Survey on Drug Use and Health (NSDUH); Data accessed August 2018
For complete data, see Appendix: Data Table 6.4.

During 2015-2016, 0.42 percent of the population aged 12 and older in NYS and 0.33 percent of the population aged 12 and older in the U.S. reported having used heroin in the past year. The percentage was highest among the 18-25 age group (0.63 percent in NYS, 0.64 percent in the U.S.), followed by ages 26 and older (0.42 percent in NYS, 0.31 percent in the U.S.), and ages 12-17 (0.08 percent in NYS, 0.07 percent in the U.S.).

Figure 6.5 Prevalence of pain reliever misuse in the past year, by age group, 2015-2016
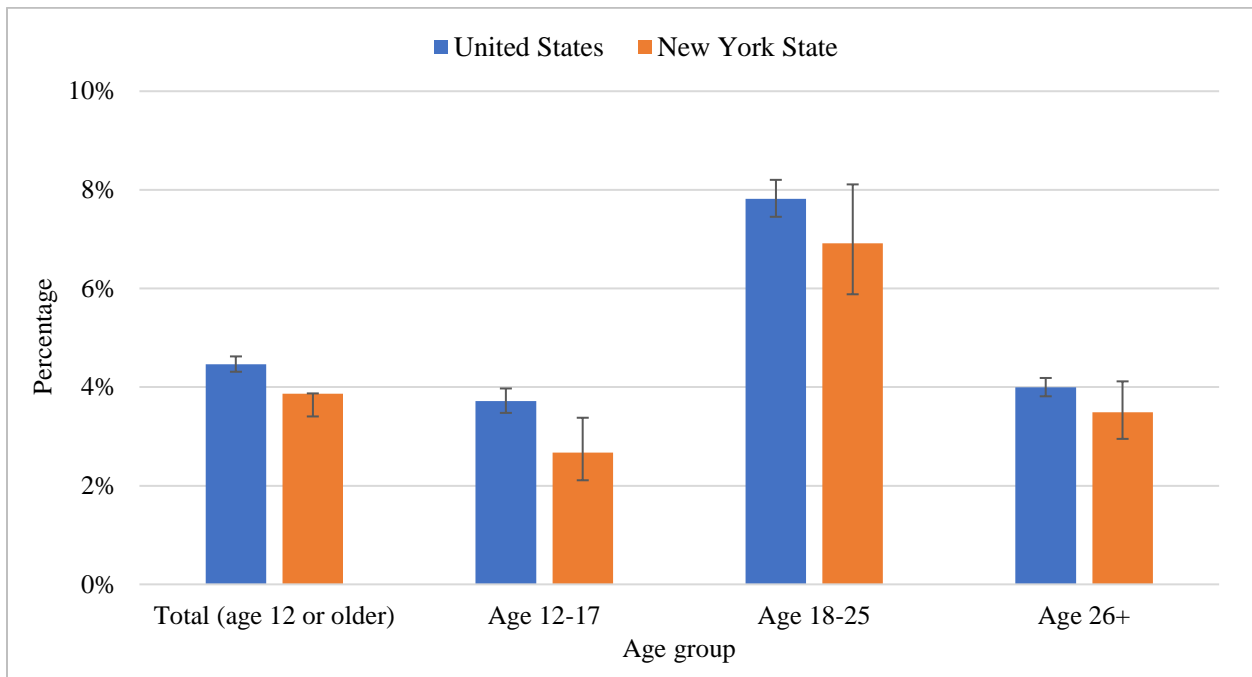
Data Source: National Survey on Drug Use and Health (NSDUH); Data accessed August 2018
For complete data, see Appendix: Data Table 6.5.

During 2015-2016, 3.9 percent of the population aged 12 and older in NYS and 4.5 percent of the population aged 12 and older in the U.S. reported having misused pain relievers in the past year. The percentage was highest among the 18-25 age group (6.9 percent in NYS, 7.8 percent in the U.S.), followed by ages 26 and older (3.5 percent in NYS, 4.0 percent in the U.S.), and ages 12-17 (2.7 percent in NYS, 3.7 percent in the U.S.).

Methods

Indicators

Indicator	Definition	ICD Codes/Detailed Explanation	Data Source
Overdose deaths involving any opioid	All poisoning deaths involving opioids, all manners, using all causes of death	Underlying cause of death, determined from the field designated as such, or, where missing or unknown, from the first-listed multiple cause of death field: X40-X44, X60-X64, X85, Y10-Y14 AND Any opioid in all other causes of death: T40.0, T40.1, T40.2, T40.3, T40.4, T40.6	Vital Statistics
Overdose deaths involving heroin	Poisoning deaths involving heroin, all manners, using all causes of death	Underlying cause of death, determined from the field designated as such, or, where missing or unknown, from the first-listed multiple cause of death field: X40-X44, X60-X64, X85, Y10-Y14 AND Heroin in all other causes of death: T40.1	Vital Statistics
Overdose deaths involving opioid pain relievers	Poisoning deaths involving opioid pain relievers, all manners, using all causes of death	Underlying cause of death, determined from the field designated as such, or, where missing or unknown, from the first-listed multiple cause of death field: X40-X44, X60-X64, X85, Y10-Y14 AND Any opioid pain relievers in all other causes of death: T40.2, T40.3, T40.4	Vital Statistics
Overdose deaths involving any synthetic opioid other than methadone	Poisoning deaths involving any synthetic opioid other than methadone, all manners, using all causes of death	Underlying cause of death, determined from the field designated as such, or, where missing or unknown, from the first-listed multiple cause of death field: X40-X44, X60-X64, X85, Y10-Y14 AND Any opioid pain relievers in all other causes of death: T40.4	Vital Statistics
All emergency department visits involving opioid overdose	All outpatient (not being admitted) emergency department visits involving opioid poisonings, all manners, principal diagnosis or first-listed cause of injury	ICD-10-CM: Principal Diagnosis: T40.0, T40.1, T40.2, T40.3, T40.4, T40.6 (Excludes 'adverse effect' or 'underdosing' as indicated by the values of 5 and 6 in the 6th character; and 'sequela' as indicated by the value of 'S' in the 7th character; e.g. T400X5S, T400X6S)	SPARCS
Emergency department visits involving heroin overdose	Outpatient (not being admitted) emergency department visits involving heroin poisoning, all manners, principal diagnosis or first-listed cause of injury	ICD-10-CM: Principal Diagnosis: T40.1 (Excludes 'adverse effect' or 'underdosing' as indicated by the values of 5 and 6 in the 6th character; and 'sequela' as indicated by the value of 'S' in the 7th character; e.g. T401X5S, T401X6S)	SPARCS
Emergency department visits involving opioid overdose excluding heroin	Outpatient (not being admitted) emergency department visits involving opioid poisonings except heroin, all manners, principal diagnosis or first-listed cause of injury	ICD-10-CM: Principal Diagnosis: T40.0, T40.2, T40.3, T40.4, T40.6 (Excludes 'adverse effect' or 'underdosing' as indicated by the values of 5 and 6 in the 6th character; and 'sequela' as indicated by the value of 'S' in the 7th character; e.g. T400X5S, T400X6S)	SPARCS
All hospitalizations involving opioid overdose	All hospitalizations involving opioid poisonings, all manners, principal diagnosis or first-listed cause of injury	ICD-10-CM: Principal Diagnosis: T40.0, T40.1, T40.2, T40.3, T40.4, T40.6 (Excludes 'adverse effect' or 'underdosing' as indicated by the values of 5 and 6 in the 6th character; and 'sequela' as indicated by the value of 'S' in the 7th character; e.g. T400X5S, T400X6S)	SPARCS
Hospitalizations involving heroin overdose	Hospitalizations involving heroin poisonings, all manners, principal diagnosis or first-listed cause of injury	ICD-10-CM: Principal Diagnosis: T40.1 (Excludes 'adverse effect' or 'underdosing' as indicated by the values of 5 and 6 in the 6th character; and 'sequela' as indicated by the value of 'S' in the 7th character; e.g. T401X5S, T401X6S)	SPARCS

Indicator	Definition	ICD Codes/Detailed Explanation	Data Source
Hospitalizations involving opioid overdose excluding heroin	Hospitalizations involving opioid poisonings except heroin, all manners, principal diagnosis or first-listed cause of injury	ICD-10-CM: Principal Diagnosis: T40.0, T40.2, T40.3, T40.4, T40.6 (Excludes 'adverse effect' or 'underdosing' as indicated by the values of 5 and 6 in the 6th character; and 'sequela' as indicated by the value of 'S' in the 7th character; e.g. T400X5S, T400X6S)	SPARCS
Unique clients admitted for any opioid (including heroin)	Unique clients admitted to OASAS-certified chemical dependence treatment programs with heroin or any other synthetic or semi-synthetic opioid reported as the primary, secondary, or tertiary substance of abuse at admission, aggregated by client ZIP code of residence.	Other opioid includes synthetic and semi-synthetic opioids. The OASAS Client Data System (CDS) collects specific data on methadone, buprenorphine, oxycodone, as well as "other synthetic opioids." Other synthetic opioids also include drugs such as hydrocodone, pharmaceutical and/or nonpharmaceutical fentanyl. Clients may also have heroin or any other substance as the primary, secondary or tertiary substance of abuse at admission. A unique client is identified by the client's date of birth, last four digits of Social Security number, gender, and the first two letters of last name, and year admitted, across the whole state.	OASAS Client Data System
Naloxone administration report by Emergency Medical Services (EMS)	Each naloxone administration report represents an EMS encounter when the administration of naloxone was given during the course of patient care. Multiple doses may be dispensed within a single administration report. Often, administrations of naloxone were given for patients presenting with similar signs and symptoms of a potential opioid overdose; final diagnosis of an opioid overdose is completed during definitive care or final evaluation.	Medication administered is equal to naloxone.	NYS e-PCR data, and other regional EMS Program data collection methods
Naloxone administration report by law enforcement	Each naloxone administration report represents a naloxone administration instance in which a trained law enforcement officer administered one or more doses of naloxone to a person suspected of an opioid overdose.	Not applicable	NYS Law Enforcement Naloxone Administration Database
Naloxone administration report by registered COOP program	Each naloxone administration report represents a naloxone administration instance in which a trained responder administered one or more doses of naloxone to a person suspected of an opioid overdose. Naloxone administration instances that are not reported to the AIDS Institute by the registered COOP programs are excluded from the county report.	Not applicable	NYS Community Opioid Overdose Prevention Naloxone Administration Database
Percentage of high school students reporting ever using heroin	Percentage of respondents indicating that they had used heroin.	Survey question: "During your life, how many times have you used heroin (also called smack, junk, or China White)?" Responses: "A. 0 times B. 1 or 2 times C. 3 to 9 times D. 10 to 19 times E. 20 to 39 times F. 40 or more times"	Youth Risk Behavior Surveillance System (YRBSS)

Indicator	Definition	ICD Codes/Detailed Explanation	Data Source
Prevalence of illicit drug use other than marijuana in the past month	Prevalence of respondents reporting use of illicit drugs other than marijuana in the past month.	Illicit Drug Use Other Than Marijuana Use includes the misuse of prescription psychotherapeutics or the use of cocaine (including crack), heroin, hallucinogens, inhalants, or methamphetamine. Misuse of prescription psychotherapeutics is defined as use in any way not directed by a doctor, including use without a prescription of one's own; use in greater amounts, more often, or longer than told; or use in any other way not directed by a doctor. Prescription psychotherapeutics do not include over-the-counter drugs. State estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques.	National Survey on Drug Use and Health (NSDUH)
Prevalence of heroin use in the past year	Prevalence of respondents reporting use of heroin in the past year.	State estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques.	NSDUH
Prevalence of pain reliever misuse in the past year	Prevalence of respondents reporting misuse of pain relievers in the past year.	Misuse of prescription psychotherapeutics is defined as use in any way not directed by a doctor, including use without a prescription of one's own; use in greater amounts, more often, or longer than told; or use in any other way not directed by a doctor. Prescription psychotherapeutics do not include over-the-counter drugs. State estimates, along with the 95 percent Bayesian confidence (credible) intervals, are based on a survey-weighted hierarchical Bayes estimation approach and generated by Markov Chain Monte Carlo techniques.	NSDUH

Indicator	Numerator	Denominator
Opioid analgesic prescription rate[a] per 1,000 population	Schedule II, III and IV opioid analgesic prescriptions[c] dispensed to state residents.	Midyear population for the calendar year under surveillance from US census
Patients prescribed opioid analgesics from five or more prescribers and dispensed at five or more pharmacies in a six-month period, rate[a] per 100,000 population	Number of patients receiving prescriptions[c] for opioid analgesics from five or more prescribers and that are dispensed at five or more pharmacies in a six-month period	Midyear population for the calendar year under surveillance from US census
Buprenorphine prescribing for substance use disorder (SUD), rate[a] per 1,000 population	Buprenorphine prescriptions dispensed to state residents for substance use disorder (SUD) within the state	Midyear population for the calendar year under surveillance from US census
Benzodiazepine prescription rate[a] per 1,000 population	Benzodiazepine prescriptions dispensed to residents within the state. Common benzodiazepine prescriptions include alprazolam, clonazepam, diazepam, and lorazepam.	Midyear population for the calendar year under surveillance from US census
Patients prescribed one or more opioid analgesics with a total daily dose of $\geq$ 90 MME[b] on at least one day	Patients prescribed one or more opioid analgesics prescription[d] with a total daily dose of $\geq$ 90 MME on at least one day	Patients who received one or more opioid analgesic prescriptions[d] during a given year
Opioid analgesics prescriptions with an average daily dose of $\geq$ 90 MME[b]	Number of schedule II, III and IV opioid analgesics prescriptions[d] with an average daily dose of $\geq$ 90 MME	Number of schedule II, III and IV opioid analgesic prescriptions[d] dispensed to state residents during a given year
Patients with two or more days of overlapping opioid analgesic and benzodiazepine prescriptions	Patients with two or more days of overlapping opioid analgesic and benzodiazepine prescriptions[c]	Patients with at least one prescription[c] for opioid analgesics or benzodiazepines during a given year

[a]: The rates presented are controlled substance prescription rates per population. These numbers are federally-standardized indicators used to measure types of progress toward combating the controlled substance epidemic in certain states. They are not rates of the number of different people who are receiving a controlled substance prescription in a certain population. Rather, they are rates of the number of specific controlled substance prescriptions written and dispensed within the period. For example, if a county has a rate of 25, that means there were 25 prescriptions per 1,000 people in the population. However, it does not necessarily mean that 25 out of 1,000 individuals received a prescription; all 25 controlled substance prescriptions could have been for one individual.

[b]: Morphine milligram equivalent

[c]: Buprenorphine prescriptions for the treatment of substance use disorder were excluded.

[d]: Buprenorphine prescriptions for the pain and the treatment of substance use disorder were excluded.

Data Sources

CDC WONDER:

State level opioid overdose mortality data were obtained from the Centers for Disease Control and Prevention Multiple Cause of Death Data query (CDC WONDER).[12]

Vital Records (Vital Statistics) Vital Event Registration:

New York State consists of two registration areas, New York City (NYC) and New York State Exclusive of New York City (also referred to as Rest of State). NYC includes the five counties of Bronx, Kings (Brooklyn), New York (Manhattan), Queens and Richmond (Staten Island); the remaining 57 counties comprise New York State Exclusive of NYC. The NYSDOH's Bureau of Vital Records processes data from live birth, death, fetal death and marriage certificates recorded in New York State Exclusive of NYC. Through a cooperative agreement, the NYSDOH receives data on live births, deaths, and fetal deaths recorded in NYC from the New York City Department of Health and Mental Hygiene (NYCDOHMH), and on live births and deaths recorded outside of New York State to residents of New York State from other states and Canada.

In general, vital event indicators for NYC geographical areas reported by the NYSDOH and the NYCDOHMH may be different because the former includes possibly all NYC residents' events,

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[12] https://wonder.cdc.gov/mcd.html

regardless of where they took place, and the latter reports events to NYC residents that took place in NYC.

Vital statistics mortality data include up to 20 causes of death. Frequencies are based on decedents' county of residence, not the county where death occurred. This report's mortality indicators reflect all manners and all causes of death. Data are frequently updated as additional confirmations on the causes of death and new records for all NYS resident deaths are received. Therefore, the frequencies published in subsequent reports may also differ due to timing and/or completeness of data.

Statewide Planning and Research Cooperative System (SPARCS):

SPARCS collects information about hospitalizations and ED visits through the patient discharge data system. Outpatient ED visits are events that did not result in admission to the hospital. Each hospitalization and outpatient ED visit receives an ICD-10-CM code at discharge that indicates the primary reason for the occurrence. There is also a first-listed cause, external cause of injury, and up to 24 other diagnosis codes recorded to further describe the hospitalization or ED visits.

Statistics in these tables are based on the primary diagnosis and first-listed cause of injury unless otherwise noted. An individual can have more than one hospitalization or ED visit. Numbers and rates are based on the number of discharges and not on the number of individuals seen. The frequencies are based on patients' county of residence, not the county where the incident occurred. County of residence was assigned based on ZIP code for cases in which patient county of residence was listed as unknown or missing, but a valid NY ZIP code was present. For indicators related to the ED data, the numbers represent ED visits for opioid overdose patients who were not subsequently admitted into the hospital.

New York State Emergency Medical Services (EMS) Data:

New York State maintains an EMS patient care data repository, in which all e-PCR data are captured from across the State, with some exceptions. Data for Suffolk County are obtained through the Suffolk County Regional EMS Medical Control, to which all medication administrations by EMS–including naloxone–are required to be reported. Data for Nassau County is primarily provided by the Nassau County Police Department, based on reports submitted by Nassau County first response agencies and most ambulance transport agencies. The EMS data from Nassau County Police Department are combined with e-PCR data submitted by other agencies not included in the Nassau County Police Department reporting. As of January 2018, EMS naloxone administrations for Nassau County have been updated with the Nassau County Police Department data for all quarters and years shown, and are likely to show increases compared to previously-issued data. Finally, part of the data for Richmond County is obtained directly from the EMS agency, due to a difference in reporting mechanisms. This reporting is expected to come in line with the NEMSIS 3.4.0 reporting standard in the near future.

New York State Law Enforcement Naloxone Administration Dataset:

The NYS Law Enforcement Naloxone Administration dataset provides information on naloxone administrations by law enforcement officers in the case of a suspected opioid overdose. The form collects the age and gender of the individual receiving naloxone, the county and ZIP code where the suspected opioid overdose occurred, aided status before and after naloxone administration, the suspected drug used, the number of naloxone vials administered by the officer and whether the person lived. Initial trainings of law enforcement began in 2014 and are ongoing. The data do not yet comprehensively include the New York City Police Department and the Nassau County Police Department, which use a distinct reporting mechanism.

New York State Community Opioid Overdose Prevention (COOP) Program Dataset:

The NYS COOP program dataset provides information on naloxone administrations by lay persons trained by registered NYS COOP programs in the case of a suspected opioid overdose. Naloxone

administration reports are submitted by registered COOP programs, not individual lay persons. The form collects information including age and gender of the individual receiving naloxone, the county and ZIP code where the suspected opioid overdose occurred, aided status before naloxone administration, the number of naloxone doses administered by the responder, and whether the person lived.

New York State Office of Alcoholism and Substance Abuse Services (OASAS) Client Data System (CDS):

The New York State Office of Alcoholism and Substance Abuse Services (OASAS) provides data on unique clients admitted for any opioid. This information comes from the OASAS Client Data System (CDS). The CDS collects data on every person admitted to an OASAS-certified chemical dependence treatment program. The reported cases are based on the county of residence at the time of admission. County residents admitted more than once per quarter or year are counted only once. The data are presented as people admitted for the use of any opioid, including heroin (i.e., heroin or another opioid was the primary, secondary or tertiary substance of abuse at admission). The CDS includes data for individuals served in the OASAS-certified treatment system. It does not have data for individuals who get treated by the U.S. Department of Veterans Affairs, go outside New York State for treatment, are admitted to hospitals but not to chemical dependence treatment, or receive an addictions medication from a physician outside the OASAS system of care.

Prescription Monitoring Program (PMP) Data:

The New York State Prescription Monitoring Program Registry (PMP) is an online registry that is maintained by New York State Department of Health's Bureau of Narcotic Enforcement. The registry collects dispensed prescription data for controlled substances in schedules II, III, IV and V that are reported by more than 5,000 separate dispensing pharmacies and practitioners registered with New York State. The data must be submitted to the Bureau of Narcotic Enforcement (BNE) within 24 hours after the prescription is dispensed. BNE closely monitors all submitted prescriptions and their associated information. The integrity of the data is achieved through a variety of system edits, and it is the responsibility of the pharmacies to provide timely and accurate data.

Effective August 27, 2013, NYS prescribers are required to consult the Prescription Monitoring Program Registry prior to writing a prescription for Schedule II, III, and IV controlled substances. The PMP provides practitioners with direct, secure access to view dispensed controlled substance prescription histories for their patients. The PMP is available 24 hours a day/7 days a week via an application on the Health Commerce System (HCS). Patient reports will include all controlled substances that were dispensed in New York State and reported by the pharmacy/dispenser for the past year. This information will allow practitioners to better evaluate their patients' treatment with controlled substances and determine whether there may be abuse or non-medical use. In addition, pharmacists can also access the registry before dispensing the prescriptions for controlled substances.

The Youth Risk Behavior Surveillance System (YRBSS):

What is the YRBSS?

The YRBSS is a national survey of youth and young adults in the U.S. It was developed to monitor priority health risk behaviors that are often established in childhood and adolescence. The YRBSS had been conducted every two years since 1991 and surveys high school students on substance use, physical activity, dietary behaviors, sexual behaviors, and behaviors related to injuries and violence. The national survey is conducted by CDC and the state, territorial, tribal government, and local surveys are administered by departments of health and education.

What is its use?

Health departments use the data for a variety of purposes. Among those are to provide information on prevalence and trends in health behaviors, identify demographic variations in health-related behaviors, provide comparable data, and measure progress toward achieving state and national health objectives.

Who is covered in the YRBSS?

The health characteristics estimated from the YRBSS pertain only to 9th through 12th grade students in public and private schools in the U.S. A three-stage cluster sample design is employed to identify a nationally representative sample of 9th through 12th grade students. Primary sample units are used, schools are samples from the primary sample units, and intact classes of required subjects are identified and samples. All students enrolled in the sample classes can participate in the survey.

The National Survey on Drug Use and Health (NSDUH):

What is the NSDUH?

The National Survey on Drug Use and Health (NSDUH) is sponsored by the Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration (SAMHSA). SAMHSA is a division within the U.S. Department of Health and Human Services (HHS). It is an on-going data collection plan designed to provide national and state-level statistical information on the use of alcohol, tobacco, and illicit drugs, including the non-medical use of prescription drugs, in the U.S. The survey tracks trends in substance use and identifies at-risk groups. It also collects data on mental health, co-occurring substance use and mental disorders, and treatment.

What is its use?

Organizations and agencies use the data for a variety of purposes. The data are used to provide information on prevalence of substance use and abuse, identify patterns and trends in substance use, identify demographic variations in health-related behaviors, identify risk factors, and assess potential need for services.

Who is covered in the NSDUH?

The health characteristics estimated from the NSDUH pertain only to the civilian, noninstitutionalized population age 12 years and older. Approximately 70,000 individuals are interviewed. US households are randomly selected and an interviewer visits each selected household. One or two residents from each selected household may be interviewed and the interview is administered on a laptop computer. The questions are answered in private directly on to the laptop computer; for some items, the interviewer reads the question. Each survey participant is compensated with $30.

Why are the data for New York estimates?

The NSDUH uses a small area estimation procedure to provide state-level data. Data for two consecutive years are combined with county and census block/tract-level data to produce state estimates. This is a model-based methodology used by the NSDUH that allows for more precise estimates that those based solely on the sample where sample sizes are small.

Data Suppression Rules for Confidentiality

In many instances, results are not shown (i.e., suppressed) to protect individuals' confidentiality. Suppression rules vary, depending on the data source. An 's' notation indicates that the data did not meet reporting criteria.

Data Source	Suppression Criteria
Vital Statistics - Death Records	Denominator population <50
Statewide Planning and Research Cooperative System (SPARCS) - ED and hospital records	Numerator 1-5 cases
OASAS Client Data System (CDS) - Admissions	Numerator 1-5 admissions
Prehospital Care Reports	None
NYS Law Enforcement Naloxone Administration Dataset	None
NYS Community Opioid Overdose Prevention Program (COOP) Dataset	None
NYS Prescription Monitoring Program	Numerator between 1 - 5 cases

Data Limitations

Data Source	Limitations
Vital Records	The accuracy of indicators based on codes found in vital statistics data is limited by the completeness and quality of reporting and coding. Death investigations may require weeks or months to complete; while investigations are being conducted, deaths may be assigned a pending status on the death certificate (ICD-10-CM underlying cause code of R99, "other ill-defined and unspecified causes of mortality"). Analysis of the percentage of death certificates with an underlying cause of death of R99 by age, over time, and by jurisdiction should be conducted to determine potential impact of incomplete underlying causes of death on drug overdose death indicators.
	The percentage of death certificates with information on the specific drug(s) involved in drug overdose deaths varies substantially by state and local jurisdiction and may vary over time. The substances tested for, the circumstances under which the tests are performed, and how information is reported on death certificates may also vary. Drug overdose deaths that lack information about the specific drugs may have involved opioids.
	Even after a death is ruled as caused by a drug overdose, information on the specific drug might not be subsequently added to the certificate. Therefore, estimates of fatal drug overdoses involving opioids may be underestimated from lack of drug specificity. Additionally, deaths involving heroin might be misclassified as involving morphine (a natural opioid), because morphine is a metabolite of heroin.
	The indicator "Overdose deaths involving opioid pain relievers" includes overdose deaths due to pharmaceutically and illicitly produced opioids such as fentanyl.
	Data for New York City on opioid overdose deaths are not included in this report.
SPARCS	The recent data may be incomplete and should be interpreted with caution. Health Care Facilities licensed in New York State, under Article 28 of the Public Health Law, are required to submit their inpatient and/or outpatient data to SPARCS. SPARCS is a comprehensive all-payer data reporting system established in 1979 as a result of cooperation between the healthcare industry and government. Created to collect information on discharges from hospitals, SPARCS now collects patient level detail on patient characteristics, diagnoses and treatments, services, and charges for hospitals, ambulatory surgical centers, and clinics, both hospital extension and diagnosis and treatment centers.
	Per NYS Rules and Regulations, Section 400.18 of Title 10, data are required to be submitted: (1) monthly, (2) 95% within 60 days following the end of the month of patient's discharge/visit, and (3) 100% are due 180 days following the end of the month of the patient discharge/visit. Failure to comply may result in the issuance of Statement of Deficiencies (SODs) and facilities may be subject to a reimbursement rate penalty.
	The accuracy of indicators, which are based on diagnosis codes (ICD-9-CM codes before Oct. 1, 2015 and ICD-10-CM on or after Oct. 1, 2015) reported by the facilities, is limited by the completeness and quality of reporting and coding by the facilities. The indicators are defined based on the principal diagnosis code or first-listed valid external cause code only. The sensitivity and specificity of these indicators may vary by year, hospital location, and drug type. Changes should be interpreted with caution due to the change in codes used for the definition.
	The SPARCS data do not include discharges by people who sought care from hospitals outside of New York State, which may lower numbers and rates for some counties, especially those which border other states.
OASAS Client Data System (CDS)	The recent data may be incomplete and should be interpreted with caution. The CDS includes data for individuals served in the OASAS-certified treatment system. It does not have data for individuals who get treated by the U.S. Department of Veterans Affairs, go outside New York State for treatment, are admitted to hospitals but not to substance use disorder (SUD) treatment, get diverted to other systems, or receive an addictions medication from a physician outside the OASAS system of care. OASAS-certified chemical dependence treatment programs are required to submit their admissions data to the CDS not later than the fifth of the month following the clinical admission transaction. Data are considered to be substantially complete three months after the due date, but are able to be updated indefinitely.
	The accuracy of measures, which are based on data reported by the programs, is limited by the completeness, consistency and quality of reporting and coding by the programs. The sensitivity and specificity of these indicators may vary by provider, program, and possible substances reported.
	Opioid admissions data are not direct measures of the prevalence of opioid use.
	The availability of chemical dependence treatment services within a county may affect the number of admissions of county residents to programs offering those services.

Data Source	Limitations
EMS Patient Care Reports	Documentation data entry errors can occur, and may result in 'naloxone administered' being recorded when a different medication had actually been administered.
	Patients who present as unresponsive or with an altered mental status with unknown etiology may be administered naloxone, as part of the treatment protocol, while attempts are being made to determine the cause of the patient's current unresponsive state or altered mental status.
	Electronic PCR data currently capture 85%-90% of all EMS data statewide, from 45%-50% of all certified EMS agencies. The remaining data are reported via paper PCR, from which extracting narcotic/heroin overdoses and naloxone administrations is impractical.
	The Suffolk County results in this report do not include patients recorded as 'unresponsive/unknown' who received a treatment protocol that includes naloxone; the Suffolk County results in this report only include patients who received naloxone alone for suspected opioid overdose.
	The National Emergency Medical Services Information System (NEMSIS) is a universal standard for how EMS patient care data are collected. In 2017, most EMS agencies in New York State adhere to the NEMSIS version 2 standard that was released in 2005. However, in 2018, many are beginning to transition to the recently released NEMSIS version 3 standard, which will improve the quality of EMS data. This report primarily captures data from NEMSIS version 2 agencies, and a small number of NEMSIS version 3 agencies.
NYS Law Enforcement Naloxone Administration Dataset	All data are self-reported by the responding officer at the scene. Not all data fields are completed by the responding officer. There is often a lag in data reporting. All data should be interpreted with caution.
	It is possible that not all naloxone administrations reported are for an opioid overdose. There are not toxicology reports to confirm suspected substances used.
	Increase may represent expansion of program and may or may not indicate an increase in overdose events.
	Data for New York City on naloxone administration reports by law enforcement are not included in this report. Data displayed for Nassau County on naloxone administration reports by law enforcement are not complete due to the use of an alternate reporting system.
NYS Community Opioid Overdose Prevention (COOP) Program Dataset	All data are self-reported by the responder on the scene. Not all data fields are completed by the responder. There is often a lag in data reporting. All data should be interpreted with caution.
	Increase may represent expansion of program and may or may not indicate an increase in overdose events.
	Reporting administrations of naloxone to the NYSDOH is one of the mandated responsibilities of registered COOP program directors. The actual number of incidents of naloxone administrations in the community may be higher than the number reported to the NYSDOH due to the delay in reporting.
	The actual number of naloxone administrations is likely to substantially exceed the number reported to the NYSDOH.
NYS Prescription Monitoring Program (PMP)	For all PMP indicators, several exclusions were applied. Prescriptions for out-of-state patients or without a valid patient's NY ZIP code were removed from the analysis. Data from veterinarians and prescription drugs administered to animals were not included in the analysis of PMP data. Prescriptions filled for opioids that have supply days greater than 90 were eliminated from the analysis. Also, opioids not typically used in outpatient settings and cold formulations including elixirs, antitussives, decongestants, antihistamines and expectorants were not included in the analysis.
Youth Behavior Risk Surveillance System (YBRSS)	YRBSS has multiple limitations. First, all data are self-reported, and the extent of underreporting or overreporting of behaviors cannot be determined. Second, the national, state, and local school-based survey data apply only to youth who attend school and, therefore, are not representative of all persons in this age group due to a small portion of youth not enrolled in a high school program o had not completed high school. Third, whereas YRBSS is designed to produce information to help assess the effect of broad national, state, and local policies and programs, it was not designed to evaluate the effectiveness of specific interventions (e.g., a professional development program, school curriculum, or media campaign). [13]

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[13] https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5312a1.htm

Data Source	Limitations
The National Survey on Drug Use and Health (NSDUH)	NSDUH estimates of substance use among adolescents have generally been lower than corresponding estimates from two school-based surveys: Monitoring the Future (MTF) and the Youth Risk Behavior Surveillance System (YRBSS) In December 2012, SAMHSA released a report, "Comparing and Evaluating Youth Substance Use Estimates from the National Survey on Drug Use and Health and Other Surveys," which explored some of the reasons for this. It is important to note that, although NSDUH has consistently shown lower prevalence rates than MTF and YRBSS, the trends have usually been parallel. Unlike, MTF and YRBSS, NSDUH conducts interviews in the adolescent's home. The SAMHSA report stated, "It is possible that conducting an interview in an adolescent's home environment has an inhibitory effect on adolescent substance users' willingness to report use, even if parents or other household members are not in the same room as the adolescent and are not able to see how adolescents are answering the substance use questions." The SAMHSA report noted that factors besides interview privacy also could contribute to lower estimates of adolescent substance use in NSDUH than in MTF or YRBSS. These other factors include the focus of the survey (e.g., primary focus on substance use or on broader health topics), how prominently substance use is mentioned when a survey is presented to parents and adolescents, procedures for obtaining parental permission for their children to be interviewed, assurances of anonymity or confidentiality, the placement and context of substance use questions in the interview, the survey mode (e.g., computer-assisted interviewing with skip patterns or paper-and-pencil questionnaires), and the question structure and wording. For example, NSDUH asks filter questions about lifetime use before asking about the most recent use of a substance or the frequency of use. Research has shown that filter questions can depress the reporting of certain behaviors. Some NSDUH respondents also may realize early during their interview that if they answer "no" to the initial filter questions about lifetime substance use, they can avoid having to answer subsequent questions and therefore will finish the interview in less time. The YRBSS questionnaire does not have these kinds of skip patterns, and the MTF questionnaire uses skip patterns minimally. In addition, students taking a survey in a classroom administration setting may not be motivated to finish sooner if they otherwise have to stay until the end of the class period.

Appendix

Data Table 1.1 Overdose deaths, age-adjusted rate per 100,000 population, by substance, New York State, 2010 and 2016

Substance	2010		2016	
	Deaths	**Age-Adjusted Rate per 100,000 Population**	**Deaths**	**Age-Adjusted Rate per 100,000 Population**
All Opioids	1,074	5.4	3,009	15.1
Heroin	193	1.0	1,307	6.5
Opioid Pain Relievers	851	4.3	2,337	11.7
Synthetic Opioids (excluding methadone)	173	0.9	1,641	8.3
Heroin with Other Synthetic Opioids (excluding methadone)	Suppressed	Suppressed	649	3.3
Cocaine with Other Synthetic Opioids (excluding methadone)	18	Unreliable	451	2.3

Note: Death count and rate are suppressed for categories with less than 10 deaths. Rate is marked as 'unreliable' when the count is less than 20 deaths. Categories of substances are not mutually exclusive.
Data source: CDC WONDER; Data accessed August 2018

Data Table 1.2 Overdose deaths involving any opioid, age-adjusted rate per 100,000 population, by county, New York State, 2016

Region / County	Deaths	Population	Age-Adjusted Rate per 100,000 Population
Region - 1 Long Island			
Nassau	191	1,361,500	14.9
Suffolk	344	1,492,583	24.6
Long Island	**535**	**2,854,083**	**20.0**
Region - 2 New York City			
Bronx	266	1,455,720	18.6
Kings	270	2,629,150	10.0
New York	200	1,643,734	11.1
Queens	191	2,333,054	7.7
Richmond	106	476,015	22.0
New York City	**1,033**	**8,537,673**	**11.5**
Region - 3 Mid-Hudson			
Dutchess	51	294,473	17.7
Orange	68	379,210	19.6
Putnam	21	98,900	24.3
Rockland	37	326,780	13.5
Sullivan	16	74,801	24.1
Ulster	54	179,225	33.6
Westchester	126	974,542	13.2
Mid-Hudson	**373**	**2,327,931**	**17.2**
Region - 4 Capital Region			
Albany	28	308,846	9.6
Columbia	13	60,989	25.9
Greene	12	47,508	30.4
Rensselaer	13	160,070	8.4
Saratoga	13	227,053	6.1
Schenectady	29	154,553	20.8
Capital Region	**108**	**959,019**	**12.3**
Region - 5 Mohawk Valley			
Fulton	4	53,828	7.7*
Herkimer	8	62,613	14.0*
Montgomery	3	49,276	6.3*
Otsego	11	60,097	21.7
Schoharie	4	31,317	14.4*
Mohawk Valley	**30**	**257,131**	**12.5**
Region - 6 North Country			
Clinton	8	81,073	11.6*
Essex	4	38,102	10.2*
Franklin	2	50,409	4.6*
Hamilton	1	4,542	20.5*
Warren	5	64,567	10.9*
Washington	4	61,800	6.7*
North Country	**24**	**300,493**	**9.0**

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Region / County	Deaths	Population	Age-Adjusted Rate per 100,000 Population
Region - 7 Tug Hill Seaway			
Jefferson	18	114,006	16.3
Lewis	4	26,865	16.5*
St. Lawrence	14	110,038	15.2
Tug Hill Seaway	**36**	**250,909**	**15.8**
Region - 8 Central NY			
Cayuga	16	77,861	20.4
Cortland	8	48,070	21.2*
Madison	14	71,329	22.0
Oneida	50	231,190	23.8
Onondaga	129	466,194	28.8
Oswego	23	118,987	19.3
Central NY	**240**	**1,013,631**	**25.1**
Region - 9 Southern Tier			
Broome	57	195,334	32.1
Chenango	5	48,579	11.0*
Delaware	10	45,523	26.7
Tioga	5	48,760	10.8*
Tompkins	17	104,871	18.5
Southern Tier	**94**	**443,067**	**23.2**
Region -10 Finger Lakes			
Chemung	5	86,322	6.4*
Livingston	11	64,257	19.9
Monroe	159	747,727	22.0
Ontario	11	109,828	11.6
Schuyler	0	18,099	0.0*
Seneca	3	34,777	10.3*
Steuben	17	96,940	22.7
Wayne	7	90,798	8.0*
Yates	3	24,923	9.5*
Finger Lakes	**216**	**1,273,671**	**18.1**
Region -11 Western NY			
Allegany	2	47,077	5.9*
Cattaraugus	7	77,677	10.5*
Chautauqua	24	129,504	20.4
Erie	274	921,046	31.3
Genesee	14	58,482	24.1
Niagara	46	211,758	23.9
Orleans	6	41,346	15.7*
Wyoming	7	40,791	19.4*
Western NY	**380**	**1,527,681**	**26.6**

Data source: New York State Department of Health, Bureau of Vital Statistics; Data as of May 2018
* Fewer than 10 events in the numerator, therefore the rate is unstable.

Data Table 1.3 Overdose deaths involving heroin, age-adjusted rate per 100,000 population, by county, New York State, 2016

Region / County	Deaths	Population	Age-Adjusted Rate per 100,000 Population
Region - 1 Long Island			
Nassau	58	1,361,500	4.8
Suffolk	129	1,492,583	9.6
Long Island	**187**	**2,854,083**	**7.3**
Region - 2 New York City			
Bronx	116	1,455,720	8.2
Kings	143	2,629,150	5.2
New York	95	1,643,734	5.2
Queens	87	2,333,054	3.4
Richmond	58	476,015	12.4
New York City	**499**	**8,537,673**	**5.5**
Region - 3 Mid-Hudson			
Dutchess	28	294,473	10.3
Orange	45	379,210	13.2
Putnam	11	98,900	12.6
Rockland	16	326,780	5.6
Sullivan	4	74,801	6.5*
Ulster	24	179,225	15.2
Westchester	66	974,542	7.2
Mid-Hudson	**194**	**2,327,931**	**9.1**
Region - 4 Capital Region			
Albany	17	308,846	5.9
Columbia	4	60,989	8.9*
Greene	7	47,508	17.4*
Rensselaer	8	160,070	5.2*
Saratoga	5	227,053	2.4*
Schenectady	17	154,553	11.8
Capital Region	**58**	**959,019**	**6.5**
Region - 5 Mohawk Valley			
Fulton	2	53,828	3.9*
Herkimer	2	62,613	3.7*
Montgomery	0	49,276	0.0*
Otsego	1	60,097	2.3*
Schoharie	2	31,317	7.2*
Mohawk Valley	**7**	**257,131**	**2.9***
Region - 6 North Country			
Clinton	2	81,073	3.1*
Essex	0	38,102	0.0*
Franklin	0	50,409	0.0*
Hamilton	0	4,542	0.0*
Warren	3	64,567	6.1*
Washington	3	61,800	5.8*
North Country	**8**	**300,493**	**3.3***

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Region / County	Deaths	Population	Age-Adjusted Rate per 100,000 Population
Region - 7 Tug Hill Seaway			
Jefferson	7	114,006	5.4*
Lewis	2	26,865	6.6*
St. Lawrence	4	110,038	4.8*
Tug Hill Seaway	**13**	**250,909**	**5.2**
Region - 8 Central NY			
Cayuga	6	77,861	7.4*
Cortland	3	48,070	8.6*
Madison	9	71,329	15.1*
Oneida	34	231,190	16.3
Onondaga	63	466,194	14.2
Oswego	10	118,987	8.5
Central NY	**125**	**1,013,631**	**13.3**
Region - 9 Southern Tier			
Broome	27	195,334	15.4
Chenango	2	48,579	4.8*
Delaware	5	45,523	11.9*
Tioga	1	48,760	2.6*
Tompkins	2	104,871	2.5*
Southern Tier	**37**	**443,067**	**9.2**
Region -10 Finger Lakes			
Chemung	0	86,322	0.0*
Livingston	2	64,257	4.0*
Monroe	69	747,727	9.5
Ontario	5	109,828	5.2*
Schuyler	0	18,099	0.0*
Seneca	0	34,777	0.0*
Steuben	5	96,940	6.7*
Wayne	0	90,798	0.0*
Yates	0	24,923	0.0*
Finger Lakes	**81**	**1,273,671**	**6.8**
Region -11 Western NY			
Allegany	0	47,077	0.0*
Cattaraugus	2	77,677	2.9*
Chautauqua	11	129,504	9.4
Erie	74	921,046	8.1
Genesee	5	58,482	9.6*
Niagara	12	211,758	6.6
Orleans	4	41,346	10.0*
Wyoming	2	40,791	6.4*
Western NY	**110**	**1,527,681**	**7.6**

Data source: New York State Department of Health, Bureau of Vital Statistics; Data as of May 2018
* Fewer than 10 events in the numerator, therefore the rate is unstable.

Data Table 1.4 Overdose deaths involving synthetic opioids other than methadone, age-adjusted rate per 100,000 population, by county, New York State, 2016

Region / County	Deaths	Population	Age-Adjusted Rate per 100,000 Population
Region - 1 Long Island			
Nassau	88	1,361,500	7.1
Suffolk	192	1,492,583	14.3
Long Island	**280**	**2,854,083**	**10.9**
Region - 2 New York City			
Bronx	147	1,455,720	10.5
Kings	119	2,629,150	4.2
New York	110	1,643,734	6.1
Queens	91	2,333,054	3.7
Richmond	59	476,015	12.5
New York City	**526**	**8,537,673**	**5.9**
Region - 3 Mid-Hudson			
Dutchess	23	294,473	8.3
Orange	34	379,210	9.7
Putnam	11	98,900	12.9
Rockland	20	326,780	7.2
Sullivan	9	74,801	13.9*
Ulster	24	179,225	14.6
Westchester	51	974,542	5.5
Mid-Hudson	**172**	**2,327,931**	**8.1**
Region - 4 Capital Region			
Albany	14	308,846	5.0
Columbia	6	60,989	12.1*
Greene	8	47,508	21.4*
Rensselaer	9	160,070	6.2*
Saratoga	9	227,053	4.3*
Schenectady	7	154,553	5.0*
Capital Region	**53**	**959,019**	**6.1**
Region - 5 Mohawk Valley			
Fulton	2	53,828	3.8*
Herkimer	5	62,613	8.5*
Montgomery	0	49,276	0.0*
Otsego	7	60,097	15.1*
Schoharie	2	31,317	7.2*
Mohawk Valley	**16**	**257,131**	**7.0**
Region - 6 North Country			
Clinton	5	81,073	7.4*
Essex	1	38,102	3.3*
Franklin	2	50,409	4.6*
Hamilton	0	4,542	0.0*
Warren	2	64,567	4.8*
Washington	0	61,800	0.0*
North Country	**10**	**300,493**	**4.1**

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Region / County	Deaths	Population	Age-Adjusted Rate per 100,000 Population
Region - 7 Tug Hill Seaway			
Jefferson	12	114,006	10.8
Lewis	2	26,865	9.9*
St. Lawrence	8	110,038	9.2*
Tug Hill Seaway	**22**	**250,909**	**10.1**
Region - 8 Central NY			
Cayuga	14	77,861	17.2
Cortland	4	48,070	9.9*
Madison	9	71,329	14.4*
Oneida	29	231,190	13.4
Onondaga	89	466,194	20.3
Oswego	13	118,987	11.2
Central NY	**158**	**1,013,631**	**16.5**
Region - 9 Southern Tier			
Broome	23	195,334	12.1
Chenango	1	48,579	3.1*
Delaware	5	45,523	15.2*
Tioga	2	48,760	5.2*
Tompkins	6	104,871	6.5*
Southern Tier	**37**	**443,067**	**9.2**
Region -10 Finger Lakes			
Chemung	1	86,322	1.3*
Livingston	9	64,257	15.9*
Monroe	113	747,727	15.7
Ontario	5	109,828	6.1*
Schuyler	0	18,099	0.0*
Seneca	1	34,777	4.3*
Steuben	13	96,940	17.0
Wayne	3	90,798	2.9*
Yates	2	24,923	5.9*
Finger Lakes	**147**	**1,273,671**	**12.4**
Region -11 Western NY			
Allegany	1	47,077	2.4*
Cattaraugus	4	77,677	6.1*
Chautauqua	12	129,504	10.3
Erie	211	921,046	24.1
Genesee	9	58,482	17.6*
Niagara	29	211,758	15.6
Orleans	5	41,346	13.5*
Wyoming	4	40,791	10.9*
Western NY	**275**	**1,527,681**	**19.4**

Data source: New York State Department of Health, Bureau of Vital Statistics; Data as of May 2018

* Fewer than 10 events in the numerator, therefore the rate is unstable.

Data Table 1.5 Overdose deaths involving any opioid, age-adjusted rate per 100,000 population, by region, New York State, 2010-2016

Year	New York City		NYS excl. NYC		New York State	
	Deaths	Age-Adjusted Rate per 100,000 Population	Deaths	Age-Adjusted Rate per 100,000 Population	Deaths	Age-Adjusted Rate per 100,000 Population
2016	1,030	11.5	1,979	18.8	3,009	15.1
2015	665	7.4	1,501	14.0	2,166	10.8
2014	555	6.2	1,184	10.9	1,739	8.6
2013	541	6.1	1,140	10.3	1,681	8.3
2012	560	6.4	970	8.8	1,530	7.6
2011	453	5.2	903	8.2	1,356	6.8
2010	394	4.7	680	6.1	1,074	5.4

Data source: CDC WONDER; Data accessed August 2018

Data Table 1.6 Overdose deaths involving any opioid, age-adjusted rate per 100,000 population, by gender, New York State, 2010 - 2016

Year	Female		Male	
	Deaths	Age-Adjusted Rate per 100,000 Population	Deaths	Age-Adjusted Rate per 100,000 Population
2016	818	8.1	2,191	22.3
2015	592	5.7	1,574	16.0
2014	539	5.1	1,200	12.2
2013	500	4.7	1,181	12.0
2012	453	4.4	1,077	11.0
2011	437	4.2	919	9.5
2010	346	3.4	728	7.5

Data source: CDC WONDER; Data accessed August 2018

Data Table 1.7 Overdose deaths involving any opioids, age-adjusted rate per 100,000 population, by race/ethnicity, New York State, 2010-2016

Year	White Non-Hispanic		Black Non-Hispanic		Hispanic	
	Deaths	Age-Adjusted Rate per 100,000 Population	Deaths	Age-Adjusted Rate per 100,000 Population	Deaths	Age-Adjusted Rate per 100,000 Population
2016	2,110	19.8	338	10.5	473	12.6
2015	1,600	14.7	182	5.7	307	8.3
2014	1,345	12.2	150	4.7	201	5.6
2013	1,254	11.1	146	4.5	238	6.6
2012	1,145	10.2	140	4.6	196	5.6
2011	1,027	9.1	115	3.6	168	4.8
2010	832	7.3	97	3.1	120	3.7

Data source: CDC WONDER; Data accessed August 2018

Data Table 1.8 Overdose deaths involving any opioid, crude rate per 100,000 population, by age group, New York State, 2016

Age Group	Deaths	Crude Rate per 100,000 Population
Age 18-24	311	16.3
Age 25-44	1,485	27.7
Age 45-64	1,096	20.8
Age 65+	107	3.5

Data source: CDC WONDER; Data accessed August 2018

Data Table 1.9 Overdose deaths involving heroin and opioid pain relievers, age-adjusted rate per 100,000 population, by region, New York State, 2010 and 2016

Substance and Year`	New York City		NYS excl. NYC	
	Deaths	Age-Adjusted Rate per 100,000 Population	Deaths	Age-Adjusted Rate per 100,000 Population
Heroin				
2010	72	0.8	121	1.1
2016	496	5.5	811	7.8
Opioid pain relievers				
2010	307	3.6	544	4.8
2016	785	8.8	1,552	14.7

Data source: CDC WONDER; Data accessed August 2018

Data Table 1.10 Overdose deaths involving heroin, age-adjusted rate per 100,000 population, by region, New York State, 2010-2016

Year	New York City		NYS excl. NYC		New York State	
	Deaths	Age-Adjusted Rate per 100,000 Population	Deaths	Age-Adjusted Rate per 100,000 Population	Deaths	Age-Adjusted Rate per 100,000 Population
2016	496	5.5	811	7.8	1,307	6.5
2015	363	4.1	695	6.7	1,058	5.4
2014	274	3.1	551	5.3	825	4.2
2013	223	2.5	443	4.2	666	3.3
2012	221	2.5	295	2.8	516	2.6
2011	122	1.4	212	2.0	334	1.7
2010	72	0.8	121	1.1	193	1.0

Data source: CDC WONDER; Data accessed August 2018

Data Table 1.11 Overdose deaths involving heroin, age-adjusted rate per 100,000 population, by sub-population, New York State, 2016

Population	Deaths	Age-Adjusted Rate per 100,000 Population
Total		
New York State	1,307	6.5
Gender		
Male	1,033	10.4
Female	274	2.8
Race/Ethnicity		
White-NH	861	8.3
Black-NH	160	4.8
Asian/PI-NH	13	Unreliable
Hispanic	244	6.5
Region		
New York City	496	5.5
NYS excl. NYC	811	7.8

Note: Rates are marked as 'unreliable' when counts are fewer than 20 deaths.
Data source: CDC WONDER; Data accessed August 2018

Data Table 1.12 Overdose deaths involving heroin, crude rate per 100,000 population, by age group, New York State, 2016

Age Group	Deaths	Crude Rate per 100,000 Population
Age 18-24	137	7.2
Age 25-44	685	12.8
Age 45-64	450	8.5
Age 65+	32	1.1

Data source: CDC WONDER; Data accessed August 2018

Data Table 1.13 Overdose deaths involving synthetic opioids other than methadone, age-adjusted rate per 100,000 population, New York State, 2010-2016

Year	Deaths	Age-Adjusted Rate per 100,000 Population
2016	1,641	8.3
2015	668	3.3
2014	294	1.4
2013	210	1.1
2012	164	0.8
2011	155	0.8
2010	173	0.9

Data source: CDC WONDER; Data accessed August 2018

Data Table 1.14 Overdose deaths involving synthetic opioids other than methadone, age-adjusted rate per 100,000 population, by sub-population, New York State, 2016

Population		Deaths	Age-Adjusted Rate per 100,000 Population
Total			
	New York State	1,641	8.3
Gender			
	Male	1,235	12.6
	Female	406	4.1
Race/Ethnicity			
	White NH	1,127	10.9
	Black NH	204	6.3
	Asian/PI NH	11	Unreliable
	Hispanic	262	6.9
Region			
	New York City	523	5.9
	NYS excl. NYC	1,118	10.8

Note: Rates are marked as 'unreliable' when counts are fewer than 20 deaths.
Data source: CDC WONDER; Data accessed August 2018

Data Table 1.15 Overdose deaths involving synthetic opioids other than methadone, crude rate per 100,000 population, by age group, New York State, 2016

Age Group	Deaths	Crude Rate per 100,000 Population
Age 18-24	191	10.0
Age 25-44	879	16.4
Age 45-64	524	9.9
Age 65+	40	1.3

Data source: CDC WONDER; Data accessed August 2018

Data Table 1.16 Overdose deaths involving any opioid, by month, New York State, 2016

Month	Deaths
December	264
November	234
October	251
September	250
August	240
July	276
June	240
May	248
April	268
March	272
February	237
January	229

Data source: CDC WONDER; Data accessed August 2018

Data Table 1.17 Overdose deaths involving any opioid, by day of week, New York State, 2016

Day of the week	Deaths
Sunday	420
Monday	388
Tuesday	414
Wednesday	420
Thursday	417
Friday	460
Saturday	490

Data source: CDC WONDER; Data accessed August 2018

Data Table 1.18 Overdose deaths involving any opioid, by place of death, New York State, 2016

Place of Death	Deaths (%)
Inpatient (medical facility)	259 (8.6%)
Outpatient or ER (medical facility)	516 (17.1%)
Dead on arrival (medical facility)	108 (3.6%)
Decedent's home	1,814 (60.3%)
Other	303 (10.1%)

Note: The numbers of deaths occurring in hospice facilities, nursing home/long term care, and 'unknown' locations, respectively, are suppressed.
Data source: CDC WONDER; Data accessed August 2018

Data Table 2.1 Unique naloxone administrations by EMS agencies, by region, New York State 2015-2017

	New York City	NYS excluding NYC	New York State
2017	**7,559**	**8,057**	**15,616**
Q1	1,730	2,060	3,790
Q2	1,996	2,248	4,244
Q3	2,136	2,090	4,226
Q4	1,697	1,659	3,356
2016	**7,553**	**7,761**	**15,314**
Q1	1,369	1,733	3,102
Q2	1,846	1,935	3,781
Q3	2,376	2,043	4,419
Q4	1,962	2,050	4,012
2015	**4,532**	**5,787**	**10,319**
Q1	928	1,044	1,972
Q2	1,361	1,637	2,998
Q3	1,467	1,561	3,028
Q4	776	1,545	2,321

Data source: New York State Department of Health, Bureau of Emergency Medical Services
Data as of August 2018

Data Table 2.2 Unique naloxone administrations by EMS agencies, by age group, gender, and incident location type, New York State (excluding Suffolk County), 2017

	Number	Percentage
Patient Age		
Age 0-17	146	1.0%
Age 18-24	1,393	9.3%
Age 25-44	6,591	43.8%
Age 45-64	5,276	35.0%
Age 65+	1,554	10.3%
Unknown	77	0.5%
Patient Gender		
Female	4,716	31.4%
Male	10,280	68.4%
Unknown	41	0.3%
Incident Location Type		
Public	4,380	29.1%
Residential	8,257	54.9%
Unknown	2,400	16.0%

Data source: New York State Department of Health, Bureau of Emergency Medical Services
Data as of August 2018; data for Suffolk County not available

Data Table 2.3 Unique naloxone administrations by EMS agencies, by month of incident, New York State (excluding Suffolk County), 2017

Month of Unique Naloxone Administration Incident	Number	Percentage
January	1,201	8.0%
February	1,199	8.0%
March	1,240	8.2%
April	1,315	8.7%
May	1,339	8.9%
June	1,405	9.3%
July	1,374	9.1%
August	1,438	9.6%
September	1,291	8.6%
October	1,174	7.8%
November	962	6.4%
December	1,099	7.3%

Data source: New York State Department of Health, Bureau of Emergency Medical Services
Data as of August 2018; data for Suffolk County not available

Data Table 2.4 Unique naloxone administrations by EMS agencies, by incident day of week, New York State (excluding Suffolk County), 2017

Day of Unique Naloxone Administration Incident	Number	Percentage
Sunday	1,947	12.9%
Monday	1,913	12.7%
Tuesday	2,002	13.3%
Wednesday	2,183	14.5%
Thursday	2,222	14.8%
Friday	2,327	15.5%
Saturday	2,443	16.2%

Data source: New York State Department of Health, Bureau of Emergency Medical Services
Data as of August 2018; data for Suffolk County not available

Data Table 2.5 Unique naloxone administrations by EMS agencies, number and crude rate per 1,000 unique 911 EMS dispatches, by county, New York State, 2017

County	Total 2017 (numerator)	Unique EMS Dispatch Volume (denominator)	Crude rate per 1,000
Albany	303	65,931	4.6
Allegany	45	5,718	7.9
Broome	338	35,017	9.7
Cattaraugus	64	11,964	5.3
Cayuga	41	10,402	3.9
Chautauqua	129	19,580	6.6
Chemung	159	13,984	11.4
Chenango	30	5,875	5.1
Clinton	18	4,454	4.0
Columbia	63	12,135	5.2
Cortland	39	7,631	5.1
Delaware	22	6,478	3.4
Dutchess	315	51,489	6.1
Erie	806	96,747	8.3
Essex	8	3,079	2.6
Franklin	23	3,668	6.3
Fulton	16	3,882	4.1
Genesee	54	9,376	5.8
Greene	58	8,044	7.2
Hamilton	1	372	2.7
Herkimer	53	8,882	6.0
Jefferson	76	16,388	4.6
Lewis	19	2,161	8.8
Livingston	39	10,526	3.7
Madison	39	9,089	4.3
Monroe	816	132,605	6.2
Montgomery	91	11,265	8.1
Nassau	742	114,336	6.5
Niagara	124	14,330	8.7

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County	Total 2017 (numerator)	Unique EMS Dispatch Volume (denominator)	Crude rate per 1,000
Oneida	305	39,845	7.7
Onondaga	439	85,769	5.1
Ontario	70	16,887	4.1
Orange	289	47,405	6.1
Orleans	48	5,318	9.0
Oswego	113	18,384	6.1
Otsego	25	7,989	3.1
Putnam	56	9,314	6.0
Rensselaer	176	21,156	8.3
Rockland	33	39,929	0.8
St. Lawrence	57	12,074	4.7
Saratoga	158	24,176	6.5
Schenectady	237	32,021	7.4
Schoharie	8	2,524	3.2
Schuyler	1	1,812	0.6
Seneca	29	4,107	7.1
Steuben	68	13,231	5.1
Suffolk	579	n/a	n/a
Sullivan	82	8,691	9.4
Tioga	17	4,049	4.2
Tompkins	98	14,610	6.7
Ulster	211	27,815	7.6
Warren	48	9,173	5.2
Washington	27	6,401	4.2
Wayne	61	12,237	5.0
Westchester	262	62,595	4.2
Wyoming	17	3,608	4.7
Yates	12	3,118	3.8
NYS excl. NYC	8,057	1,229,646	6.1
Bronx	1,947	267,617	7.3
Kings	1,825	377,520	4.8
New York	2,218	307,560	7.2
Queens	1,128	252,116	4.5
Richmond	441	79,690	5.5
New York City	7,559	1,284,503	5.9
New York State	15,616	2,514,149	6.0

n/a: Data not available

Data source: New York State Department of Health Bureau of Emergency Medical Services

Data as of August 2018

Note: Rates may be unstable for counties with less than 10 naloxone administrations

Data Table 2.6 Naloxone administration reports by law enforcement and community programs, by quarter, New York State, 2017

2017	Quarter 1 January - March	Quarter 2 April - June	Quarter 3 July - September	Quarter 4 October - December
Law Enforcement	372	526	455	389
Community Programs	442	598	451	571

Data source: New York State Department of Health AIDS Institute
Data as of August 6, 2018

Data Table 2.7 Naloxone administration reports by law enforcement and community programs, by patient age group, New York State, 2017

Age Group	Law Enforcement	Community Programs
Age 0-17	18	3
Age 18-24	292	280
Age 25-44	1,045	1,271
Age 45-64	271	365
Age 65+	31	22
Unknown	85	121

Data source: New York State Department of Health AIDS Institute
Data as of August 6, 2018

Data Table 2.8 Naloxone administration reports by law enforcement and community programs, by patient gender, New York State, 2017

Gender	Law Enforcement	Community Programs
Female	482	746
Male	1,247	1,283
Other* or Unknown	13	33

* Other includes "Transgender", "Intersex", and "Other, not specified"
Data source: New York State Department of Health AIDS Institute
Data as of August 6, 2018

Data Table 3.1 All emergency department visits (including outpatients and admitted patients) involving any opioid overdose, crude rate per 100,000 population, by sub-population, New York State, 2016

Group	Characteristics	ED Visits	Crude Rate per 100,000 Population
Age Group	Age 0-17	175	4.2
	Age 18-24	1,991	104.5
	Age 25-44	5,533	103.4
	Age 45-64	2,894	54.9
	Age 65+	650	21.4
Gender	Male	7,431	77.5
	Female	3,811	37.5
Race/Ethnicity	White NH	7,680	68.8
	Black NH	1,082	36.2
	Asian/PI NH	54	3.0
	Hispanic	1,153	30.8
Region	New York City	2,847	33.3
	NYS Excl. NYC	8,396	74.9
Total	New York State	11,243	56.9

Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017

Data Table 3.2 All emergency department visits (including outpatients and admitted patients) involving any opioid overdose, crude rate per 100,000 population, by county, New York State, 2016

Region / County	Emergency Department Visits	Population	Crude Rate per 100,000 Population
Region - 1 Long Island			
Nassau	523	1,361,500	38.4
Suffolk	1,409	1,492,583	94.4
Long Island	**1,932**	**2,854,083**	**67.7**
Region - 2 New York City			
Bronx	805	1,455,720	55.3
Kings	770	2,629,150	29.3
New York	440	1,643,734	26.8
Queens	494	2,333,054	21.2
Richmond	338	476,015	71.0
New York City	**2,847**	**8,537,673**	**33.3**
Region - 3 Mid-Hudson			
Dutchess	138	294,473	46.9
Orange	328	379,210	86.5
Putnam	53	98,900	53.6
Rockland	70	326,780	21.4
Sullivan	97	74,801	129.7
Ulster	143	179,225	79.8
Westchester	260	974,542	26.7
Mid-Hudson	**1,089**	**2,327,931**	**46.8**
Region - 4 Capital Region			
Albany	137	308,846	44.4
Columbia	37	60,989	60.7
Greene	55	47,508	115.8
Rensselaer	108	160,070	67.5
Saratoga	132	227,053	58.1
Schenectady	121	154,553	78.3
Capital Region	**590**	**959,019**	**61.5**
Region - 5 Mohawk Valley			
Fulton	27	53,828	50.2
Herkimer	57	62,613	91.0
Montgomery	30	49,276	60.9
Otsego	49	60,097	81.5
Schoharie	18	31,317	57.5
Mohawk Valley	**181**	**257,131**	**70.4**
Region - 6 North Country			
Clinton	27	81,073	33.3
Essex	11	38,102	28.9
Franklin	13	50,409	25.8
Hamilton	0	4,542	0.0*
Warren	43	64,567	66.6
Washington	27	61,800	43.7
North Country	**121**	**300,493**	**40.3**

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Region / County	Emergency Department Visits	Population	Crude Rate per 100,000 Population
Region - 7 Tug Hill Seaway			
Jefferson	59	114,006	51.8
Lewis	11	26,865	40.9
St. Lawrence	66	110,038	60.0
Tug Hill Seaway	**136**	**250,909**	**54.2**
Region - 8 Central NY			
Cayuga	85	77,861	109.2
Cortland	47	48,070	97.8
Madison	64	71,329	89.7
Oneida	248	231,190	107.3
Onondaga	579	466,194	124.2
Oswego	95	118,987	79.8
Central NY	**1,118**	**1,013,631**	**110.3**
Region - 9 Southern Tier			
Broome	240	195,334	122.9
Chenango	36	48,579	74.1
Delaware	29	45,523	63.7
Tioga	25	48,760	51.3
Tompkins	71	104,871	67.7
Southern Tier	**401**	**443,067**	**90.5**
Region -10 Finger Lakes			
Chemung	61	86,322	70.7
Livingston	48	64,257	74.7
Monroe	593	747,727	79.3
Ontario	80	109,828	72.8
Schuyler	7	18,099	38.7*
Seneca	28	34,777	80.5
Steuben	32	96,940	33.0
Wayne	75	90,798	82.6
Yates	24	24,923	96.3
Finger Lakes	**948**	**1,273,671**	**74.4**
Region -11 Western NY			
Allegany	37	47,077	78.6
Cattaraugus	66	77,677	85.0
Chautauqua	82	129,504	63.3
Erie	1,288	921,046	139.8
Genesee	57	58,482	97.5
Niagara	280	211,758	132.2
Orleans	38	41,346	91.9
Wyoming	32	40,791	78.4
Western NY	**1,880**	**1,527,681**	**123.1**

Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017

* Fewer than 10 events in the numerator, therefore the rate is unstable.

Data Table 3.3 All emergency department visits (including outpatients and admitted patients) involving heroin overdose, crude rate per 100,000 population, by sub-population, New York State, 2016

Group	Characteristics	ED Visits	Crude Rate per 100,000 Population
Age Group	Age 0-17	22	0.5
	Age 18-24	1,520	79.8
	Age 25-44	3,974	74.2
	Age 45-64	1,285	24.4
	Age 65+	114	3.8
Gender	Male	4,932	51.4
	Female	1,983	19.5
Race/Ethnicity	White NH	4,946	44.3
	Black NH	538	18.0
	Asian/PI NH	29	1.6
	Hispanic	659	17.6
Region	New York City	1,425	16.7
	NYS Excl. NYC	5,490	49.0
Total	New York State	6,915	35.0

Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017

Data Table 3.4 All emergency department visits (including outpatients and admitted patients) involving heroin overdose, crude rate per 100,000 population, by county, New York State, 2016

Region / County	Emergency Department Visits	Population	Crude Rate per 100,000 Population
Region - 1 Long Island			
Nassau	303	1,361,500	22.3
Suffolk	807	1,492,583	54.1
Long Island	**1,110**	**2,854,083**	**38.9**
Region - 2 New York City			
Bronx	396	1,455,720	27.2
Kings	399	2,629,150	15.2
New York	195	1,643,734	11.9
Queens	253	2,333,054	10.8
Richmond	182	476,015	38.2
New York City	**1,425**	**8,537,673**	**16.7**
Region - 3 Mid-Hudson			
Dutchess	83	294,473	28.2
Orange	216	379,210	57.0
Putnam	35	98,900	35.4
Rockland	33	326,780	10.1
Sullivan	61	74,801	81.5
Ulster	78	179,225	43.5
Westchester	145	974,542	14.9
Mid-Hudson	**651**	**2,327,931**	**28.0**
Region - 4 Capital Region			
Albany	107	308,846	34.6
Columbia	23	60,989	37.7
Greene	36	47,508	75.8
Rensselaer	85	160,070	53.1
Saratoga	91	227,053	40.1
Schenectady	91	154,553	58.9
Capital Region	**433**	**959,019**	**45.2**
Region - 5 Mohawk Valley			
Fulton	17	53,828	31.6
Herkimer	32	62,613	51.1
Montgomery	24	49,276	48.7
Otsego	30	60,097	49.9
Schoharie	10	31,317	31.9
Mohawk Valley	**113**	**257,131**	**43.9**
Region - 6 North Country			
Clinton	14	81,073	17.3
Essex	s	38,102	s
Franklin	s	50,409	s
Hamilton	0	4,542	0.0*
Warren	21	64,567	32.5
Washington	15	61,800	24.3
North Country	**55**	**300,493**	**18.3**

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Region / County	Emergency Department Visits	Population	Crude Rate per 100,000 Population
Region - 7 Tug Hill Seaway			
Jefferson	34	114,006	29.8
Lewis	7	26,865	26.1*
St. Lawrence	32	110,038	29.1
Tug Hill Seaway	**73**	**250,909**	**29.1**
Region - 8 Central NY			
Cayuga	55	77,861	70.6
Cortland	33	48,070	68.6
Madison	41	71,329	57.5
Oneida	176	231,190	76.1
Onondaga	441	466,194	94.6
Oswego	69	118,987	58.0
Central NY	**815**	**1,013,631**	**80.4**
Region - 9 Southern Tier			
Broome	186	195,334	95.2
Chenango	26	48,579	53.5
Delaware	17	45,523	37.3
Tioga	18	48,760	36.9
Tompkins	53	104,871	50.5
Southern Tier	**300**	**443,067**	**67.7**
Region -10 Finger Lakes			
Chemung	32	86,322	37.1
Livingston	27	64,257	42.0
Monroe	406	747,727	54.3
Ontario	52	109,828	47.3
Schuyler	s	18,099	s
Seneca	19	34,777	54.6
Steuben	10	96,940	10.3
Wayne	48	90,798	52.9
Yates	16	24,923	64.2
Finger Lakes	**613**	**1,273,671**	**48.1**
Region -11 Western NY			
Allegany	26	47,077	55.2
Cattaraugus	49	77,677	63.1
Chautauqua	56	129,504	43.2
Erie	954	921,046	103.6
Genesee	32	58,482	54.7
Niagara	158	211,758	74.6
Orleans	28	41,346	67.7
Wyoming	24	40,791	58.8
Western NY	**1,327**	**1,527,681**	**86.9**

Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017

* Fewer than 10 events in the numerator, therefore the rate is unstable.

s: Data do not meet reporting criteria.

Data Table 3.5 Hospital discharges involving opioid use (including overdose, abuse, dependence and unspecified use), crude rate per 100,000 population, by sub-population, New York State, 2016

Group	Characteristics	Hospital Discharges	Crude Rate per 100,000 Population
Age Group	Age 0-17	63	1.5
	Age 18-24	3,210	168.5
	Age 25-44	13,989	261.3
	Age 45-64	7,560	143.3
	Age 65+	882	29.1
Gender	Male	18,115	188.9
	Female	7,588	74.7
Race/Ethnicity	White NH	14,506	130.0
	Black NH	3,500	117.0
	Asian/PI NH	186	10.5
	Hispanic	4,645	124.0
Region	New York City	11,757	137.7
	NYS Excl. NYC	13,947	124.4
Total	New York State	25,704	130.2

Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017

Data Table 3.6 Hospital discharges involving opioid use (including overdose, abuse, dependence and unspecified use), crude rate per 100,000 population, by county, New York State, 2016

Region / County	Discharges	Population	Crude Rate per 100,000 Population
Region - 1 Long Island			
Nassau	1,177	1,361,500	86.4
Suffolk	2,555	1,492,583	171.2
Long Island	**3,732**	**2,854,083**	**130.8**
Region - 2 New York City			
Bronx	3,523	1,455,720	242.0
Kings	3,172	2,629,150	120.6
New York	2,576	1,643,734	156.7
Queens	1,334	2,333,054	57.2
Richmond	1,152	476,015	242.0
New York City	**11,757**	**8,537,673**	**137.7**
Region - 3 Mid-Hudson			
Dutchess	700	294,473	237.7
Orange	736	379,210	194.1
Putnam	115	98,900	116.3
Rockland	342	326,780	104.7
Sullivan	180	74,801	240.6
Ulster	589	179,225	328.6
Westchester	1,334	974,542	136.9
Mid-Hudson	**3,996**	**2,327,931**	**171.7**
Region - 4 Capital Region			
Albany	382	308,846	123.7
Columbia	117	60,989	191.8
Greene	107	47,508	225.2
Rensselaer	267	160,070	166.8
Saratoga	199	227,053	87.6
Schenectady	241	154,553	155.9
Capital Region	**1,313**	**959,019**	**136.9**
Region - 5 Mohawk Valley			
Fulton	57	53,828	105.9
Herkimer	34	62,613	54.3
Montgomery	88	49,276	178.6
Otsego	55	60,097	91.5
Schoharie	31	31,317	99.0
Mohawk Valley	**265**	**257,131**	**103.1**
Region - 6 North Country			
Clinton	34	81,073	41.9
Essex	9	38,102	23.6*
Franklin	12	50,409	23.8
Hamilton	s	4,542	s
Warren	71	64,567	110.0
Washington	38	61,800	61.5
North Country	**165**	**300,493**	**54.9**

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Region / County	Discharges	Population	Crude Rate per 100,000 Population
Region - 7 Tug Hill Seaway			
Jefferson	38	114,006	33.3
Lewis	17	26,865	63.3
St. Lawrence	460	110,038	418.0
Tug Hill Seaway	**515**	**250,909**	**205.3**
Region - 8 Central NY			
Cayuga	49	77,861	62.9
Cortland	33	48,070	68.6
Madison	30	71,329	42.1
Oneida	164	231,190	70.9
Onondaga	443	466,194	95.0
Oswego	93	118,987	78.2
Central NY	**812**	**1,013,631**	**80.1**
Region - 9 Southern Tier			
Broome	302	195,334	154.6
Chenango	27	48,579	55.6
Delaware	57	45,523	125.2
Tioga	43	48,760	88.2
Tompkins	75	104,871	71.5
Southern Tier	**504**	**443,067**	**113.8**
Region -10 Finger Lakes			
Chemung	87	86,322	100.8
Livingston	37	64,257	57.6
Monroe	637	747,727	85.2
Ontario	46	109,828	41.9
Schuyler	s	18,099	s
Seneca	13	34,777	37.4
Steuben	46	96,940	47.5
Wayne	59	90,798	65.0
Yates	8	24,923	32.1*
Finger Lakes	**937**	**1,273,671**	**73.6**
Region -11 Western NY			
Allegany	20	47,077	42.5
Cattaraugus	59	77,677	76.0
Chautauqua	323	129,504	249.4
Erie	831	921,046	90.2
Genesee	73	58,482	124.8
Niagara	329	211,758	155.4
Orleans	40	41,346	96.7
Wyoming	33	40,791	80.9
Western NY	**1,708**	**1,527,681**	**111.8**

Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017

* Fewer than 10 events in the numerator, therefore the rate is unstable.

s: Data do not meet reporting criteria.

Data Table 3.7 Opioid burden (including opioid overdose deaths, non-fatal outpatient ED visits and hospital discharges involving opioid overdose, abuse, dependence and unspecified use), crude rate per 100,000 population, by sub-population, New York State, 2016

Group	Characteristics	Numerator	Crude Rate per 100,000 population
Age Group	Age 0-17	286	6.8
	Age 18-24	8,398	440.8
	Age 25-44	31,583	590.0
	Age 45-64	16,421	311.4
	Age 65+	1,734	57.2
Gender	Male	40,836	425.9
	Female	17,584	173.1
Race/Ethnicity	White NH	34,923	313.0
	Black NH	7,312	244.4
	Asian/PI NH	351	19.7
	Hispanic	9,348	249.5
Region	New York City	24,761	290.0
	NYS Excl. NYC	33,661	300.3
Total	New York State	58,422	295.9

Data source: New York State Department of Health, Bureau of Vital Statistics; Data as of May 2018
New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017

Data Table 3.8 Opioid burden (including opioid overdose deaths, non-fatal outpatient ED visits and hospital discharges involving opioid overdose, abuse, dependence and unspecified use), crude rate per 100,000 population, by county, New York State, 2016

Region / County	Numerator	Population	Crude Rate per 100,000 Population
Region - 1 Long Island			
Nassau	2,506	1,361,500	184.1
Suffolk	6,165	1,492,583	413.0
Long Island	**8,671**	**2,854,083**	**303.8**
Region - 2 New York City			
Bronx	6,779	1,455,720	465.7
Kings	7,713	2,629,150	293.4
New York	5,274	1,643,734	320.9
Queens	2,974	2,333,054	127.5
Richmond	2,021	476,015	424.6
New York City	**24,761**	**8,537,673**	**290.0**
Region - 3 Mid-Hudson			
Dutchess	1,274	294,473	432.6
Orange	1,566	379,210	413.0
Putnam	247	98,900	249.7
Rockland	596	326,780	182.4
Sullivan	399	74,801	533.4
Ulster	1,003	179,225	559.6
Westchester	2,157	974,542	221.3
Mid-Hudson	**7,242**	**2,327,931**	**311.1**
Region - 4 Capital Region			
Albany	1,020	308,846	330.3
Columbia	240	60,989	393.5
Greene	235	47,508	494.7
Rensselaer	659	160,070	411.7
Saratoga	551	227,053	242.7
Schenectady	633	154,553	409.6
Capital Region	**3,338**	**959,019**	**348.1**
Region - 5 Mohawk Valley			
Fulton	135	53,828	250.8
Herkimer	136	62,613	217.2
Montgomery	199	49,276	403.8
Otsego	156	60,097	259.6
Schoharie	86	31,317	274.6
Mohawk Valley	**712**	**257,131**	**276.9**
Region - 6 North Country			
Clinton	102	81,073	125.8
Essex	47	38,102	123.4
Franklin	38	50,409	75.4
Hamilton	s	4,542	s
Warren	182	64,567	281.9
Washington	125	61,800	202.3
North Country	**497**	**300,493**	**165.4**

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Region / County	Numerator	Population	Crude Rate per 100,000 Population
Region - 7 Tug Hill Seaway			
Jefferson	201	114,006	176.3
Lewis	47	26,865	174.9
St. Lawrence	558	110,038	507.1
Tug Hill Seaway	**806**	**250,909**	**321.2**
Region - 8 Central NY			
Cayuga	198	77,861	254.3
Cortland	119	48,070	247.6
Madison	126	71,329	176.6
Oneida	619	231,190	267.7
Onondaga	1,382	466,194	296.4
Oswego	303	118,987	254.6
Central NY	**2,747**	**1,013,631**	**271.0**
Region - 9 Southern Tier			
Broome	832	195,334	425.9
Chenango	92	48,579	189.4
Delaware	137	45,523	300.9
Tioga	93	48,760	190.7
Tompkins	192	104,871	183.1
Southern Tier	**1,346**	**443,067**	**303.8**
Region -10 Finger Lakes			
Chemung	253	86,322	293.1
Livingston	115	64,257	179.0
Monroe	1,787	747,727	239.0
Ontario	189	109,828	172.1
Schuyler	21	18,099	116.0
Seneca	62	34,777	178.3
Steuben	183	96,940	188.8
Wayne	181	90,798	199.3
Yates	54	24,923	216.7
Finger Lakes	**2,845**	**1,273,671**	**223.4**
Region -11 Western NY			
Allegany	103	47,077	218.8
Cattaraugus	189	77,677	243.3
Chautauqua	643	129,504	496.5
Erie	3,244	921,046	352.2
Genesee	198	58,482	338.6
Niagara	882	211,758	416.5
Orleans	111	41,346	268.5
Wyoming	87	40,791	213.3
Western NY	**5,457**	**1,527,681**	**357.2**

Data source: New York State Department of Health, Bureau of Vital Statistics; Data as of May 2018
New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of December 2017
s: Data do not meet reporting criteria

Data Table 4.1 Unique clients admitted to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by region, New York State, 2010-2017

Year	New York City		NYS excl. NYC		New York State	
	OASAS Clients	Crude Rate per 100,000 Population	OASAS Clients	Crude Rate per 100,000 Population	OASAS Clients	Crude Rate per 100,000 Population
2017	23,236	314.5	41,966	432.3	65,202	381.3
2016	24,217	331.8	42,271	436.5	66,488	391.5
2015	24,255	332.0	40,551	417.7	64,806	380.9
2014	24,232	334.1	38,238	394.0	62,470	368.4
2013	24,402	339.8	36,298	374.8	60,700	359.9
2012	25,299	355.1	33,989	351.9	59,288	353.3
2011	25,209	357.7	31,411	326.4	56,620	339.6
2010	25,424	363.3	29,476	307.6	54,900	331.1

Data source: New York State Office of Alcoholism and Substance Abuse Services (OASAS)

Data as of April 2018

Data Table 4.2 Unique clients admitted to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by age group, New York State, 2010-2017

Year	Age Group	OASAS Clients	Crude rate per 100,000 population
2017	Age 12-17	365	26.0
	Age 18-24	7,443	397.5
	Age 25-34	24,164	822.8
	Age 35-44	14,450	586.0
	Age 45-54	11,672	439.3
	Age 55+	7,108	123.4
2016	Age 12-17	481	33.9
	Age 18-24	9,158	480.7
	Age 25-34	24,395	843.9
	Age 35-44	13,777	559.5
	Age 45-54	11,917	440.4
	Age 55+	6,760	120.7
2015	Age 12-17	590	41.3
	Age 18-24	10,400	535.4
	Age 25-34	22,906	795.5
	Age 35-44	12,921	517.7
	Age 45-54	11,842	429.2
	Age 55+	6,147	111.6
2014	Age 12-17	684	47.5
	Age 18-24	11,265	570.3
	Age 25-34	20,940	735.4
	Age 35-44	12,008	478.8
	Age 45-54	11,865	425.4
	Age 55+	5,708	105.7
2013	Age 12-17	778	53.5
	Age 18-24	11,671	588.7
	Age 25-34	18,985	677.1
	Age 35-44	11,817	468.9
	Age 45-54	11,937	424.1
	Age 55+	5,512	104.2
2012	Age 12-17	923	62.6
	Age 18-24	11,513	576.3
	Age 25-34	17,452	633.0
	Age 35-44	11,727	461.8
	Age 45-54	12,386	436.1
	Age 55+	5,287	102.2

Year	Age Group	OASAS Clients	Crude rate per 100,000 population
2011	Age 12-17	1,036	69.4
	Age 18-24	10,708	539.3
	Age 25-34	15,639	576.2
	Age 35-44	12,043	470.3
	Age 45-54	12,471	435.3
	Age 55+	4,723	93.5
2010	Age 12-17	1,046	68.5
	Age 18-24	9,953	501.8
	Age 25-34	14,476	544.3
	Age 35-44	12,509	479.3
	Age 45-54	12,606	437.9
	Age 55+	4,310	87.6

Data source: New York State Office of Alcoholism and Substance Abuse Services (OASAS)
Data as of April 2018

Data Table 4.3 Unique clients admitted to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by gender, New York State, 2010-2017

Year	Female		Male	
	OASAS Clients	Crude rate per 100,000 population	OASAS Clients	Crude rate per 100,000 population
2017	21,121	238.2	44,081	535.6
2016	21,240	241.2	45,248	553.4
2015	20,714	234.7	44,092	538.5
2014	19,569	222.3	42,901	526.0
2013	18,792	214.7	41,908	516.6
2012	18,251	209.3	41,037	508.9
2011	17,110	197.4	39,510	493.7
2010	16,257	188.3	38,643	486.2

Data source: New York State Office of Alcoholism and Substance Abuse Services (OASAS)
Data as of April 2018

Data Table 4.4 Unique clients admitted to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by race/ethnicity, New York State, 2010-2017

Year	Race/ethnicity	OASAS Clients	Crude rate per 100,000 population
2017	White NH	40,720	415.9
	Black NH	8,565	335.2
	Other NH	2,469	149.5
	Hispanic	13,448	433.6
2016	White NH	41,781	425.9
	Black NH	8,477	334.3
	Other NH	2,378	148.9
	Hispanic	13,852	455.5
2015	White NH	40,770	413.1
	Black NH	8,240	324.9
	Other NH	2,359	149.0
	Hispanic	13,437	444.4
2014	White NH	38,982	392.9
	Black NH	8,144	322.2
	Other NH	2,159	141.0
	Hispanic	13,185	442.7
2013	White NH	37,716	378.2
	Black NH	8,351	333.8
	Other NH	1,822	124.0
	Hispanic	12,811	438.4
2012	White NH	35,938	359.7
	Black NH	8,704	350.5
	Other NH	1,686	118.0
	Hispanic	12,960	450.1
2011	White NH	33,118	331.5
	Black NH	9,264	375.8
	Other NH	1,430	103.3
	Hispanic	12,808	452.5
2010	White NH	31,162	311.3
	Black NH	9,275	378.7
	Other NH	1,272	94.0
	Hispanic	13,191	476.7

Data source: New York State Office of Alcoholism and Substance Abuse Services (OASAS)
Data as of April 2018

Data Table 4.5 Unique clients admitted to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by county, New York State, 2017

Region / County	OASAS Clients	Population	Crude rate per 100,000 population
Region - 1 Long Island			
Nassau	2,680	1,181,320	226.9
Suffolk	5,929	1,292,955	458.6
Long Island	**8,609**	**2,474,275**	**347.9**
Region - 2 New York City			
Bronx	6,445	1,223,406	526.8
Kings	5,862	2,225,300	263.4
New York	5,876	1,495,030	393.0
Queens	2,987	2,033,987	146.9
Richmond	2,066	411,498	502.1
New York City	**23,236**	**7,389,221**	**314.5**
Region - 3 Mid-Hudson			
Dutchess	1,337	260,789	512.7
Orange	1,577	319,297	493.9
Putnam	293	87,496	334.9
Rockland	599	267,827	223.7
Sullivan	458	65,104	703.5
Ulster	784	159,098	492.8
Westchester	1,985	841,393	235.9
Mid-Hudson	**7,033**	**2,001,004**	**351.5**
Region - 4 Capital Region			
Albany	1,222	272,119	449.1
Columbia	292	53,999	540.8
Greene	265	42,441	624.4
Rensselaer	622	139,288	446.6
Saratoga	466	200,004	233.0
Schenectady	742	133,489	555.9
Capital Region	**3,609**	**841,340**	**429.0**
Region - 5 Mohawk Valley			
Fulton	207	46,910	441.3
Herkimer	273	53,904	506.5
Montgomery	262	41,892	625.4
Otsego	186	53,884	345.2
Schoharie	87	27,977	311.0
Mohawk Valley	**1,015**	**224,567**	**452.0**
Region - 6 North Country			
Clinton	430	71,397	602.3
Essex	160	34,063	469.7
Franklin	251	44,700	561.5
Hamilton	9	4,115	218.7*
Warren	249	57,099	436.1
Washington	219	54,056	405.1
North Country	**1,318**	**265,430**	**496.6**

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Region / County	OASAS Clients	Population	Crude rate per 100,000 population
Region - 7 Tug Hill Seaway			
Jefferson	532	94,702	561.8
Lewis	87	22,556	385.7
St. Lawrence	560	95,126	588.7
Tug Hill Seaway	**1,179**	**212,384**	**555.1**
Region - 8 Central NY			
Cayuga	308	67,802	454.3
Cortland	319	41,916	761.0
Madison	248	62,401	397.4
Oneida	1,269	198,803	638.3
Onondaga	2,076	400,552	518.3
Oswego	683	102,494	666.4
Central NY	**4,903**	**873,968**	**561.0**
Region - 9 Southern Tier			
Broome	1,027	169,169	607.1
Chenango	168	41,570	404.1
Delaware	173	40,165	430.7
Tioga	133	42,153	315.5
Tompkins	327	94,752	345.1
Southern Tier	**1,828**	**387,809**	**471.4**
Region -10 Finger Lakes			
Chemung	359	73,526	488.3
Livingston	265	56,678	467.6
Monroe	3,129	645,546	484.7
Ontario	584	95,732	610.0
Schuyler	57	15,774	361.4
Seneca	176	30,045	585.8
Steuben	430	82,859	519.0
Wayne	398	77,963	510.5
Yates	118	21,300	554.0
Finger Lakes	**5,516**	**1,099,423**	**501.7**
Region -11 Western NY			
Allegany	170	40,824	416.4
Cattaraugus	414	66,182	625.5
Chautauqua	582	112,091	519.2
Erie	3,815	803,447	474.8
Genesee	371	50,315	737.4
Niagara	1,281	184,036	696.1
Orleans	199	35,881	554.6
Wyoming	124	35,610	348.2
Western NY	**6,956**	**1,328,386**	**523.6**

Data source: New York State Office of Alcoholism and Substance Abuse Services (OASAS)

Data as of April 2018

* Fewer than 10 events in the numerator, therefore the rate is unstable

Data Table 5.1 Opioid analgesics prescriptions, crude rate per 1,000 population, by region, New York State, 2012-2017

Year	New York City		NYS excl. NYC		New York State	
	Number of opioid analgesics prescriptions	Crude rate per 1,000 population	Number of opioid analgesics prescriptions	Crude rate per 1,000 population	Number of opioid analgesics prescriptions	Crude rate per 1,000 population
2017	2,240,560	259.8	5,870,398	522.9	8,113,197	408.7
2016	2,494,535	292.2	6,456,650	576.1	8,953,679	453.5
2015	2,699,284	315.7	6,764,668	601.6	9,467,425	478.3
2014	2,718,403	320.1	6,782,409	602.6	9,504,509	481.3
2013	2,830,515	336.7	6,983,209	621.0	9,823,709	499.9
2012	2,645,315	317.3	6,635,337	590.7	9,285,310	474.5

The data excludes buprenorphine prescriptions for the treatment of SUD.
New York State total contains number with county unknown.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.2 Opioid analgesics prescriptions, crude rate per 1,000 population, by age group, New York State, 2012 and 2017

Age group	2012		2017	
	Number of opioid analgesics prescriptions	Crude rate per 1,000 population	Number of opioid analgesics prescriptions	Crude rate per 1,000 population
Age 18-24	392,086	196.3	198,541	106.0
Age 25-34	1,077,664	390.9	615,396	209.5
Age 35-44	1,398,494	550.7	981,513	398.0
Age 45-54	2,249,460	792.0	1,642,567	618.2
Age 55-64	1,998,338	827.5	2,126,767	817.9
Age 65+	2,084,788	756.0	2,474,286	782.5

The data excludes buprenorphine prescriptions for the treatment of SUD.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.3 Opioid analgesics prescriptions, crude rate per 1,000 population, by gender, New York State, 2012-2017

Year	Female		Male	
	Number of opioid analgesics prescriptions	**Crude rate per 1,000 population**	**Number of opioid analgesics prescriptions**	**Crude rate per 1,000 population**
2017	4,599,751	450.4	3,513,034	364.5
2016	5,058,597	498.0	3,894,725	406.2
2015	5,396,027	529.8	4,070,955	423.5
2014	5,425,223	533.7	4,079,117	425.7
2013	5,595,070	553.1	4,228,703	443.4
2012	5,193,964	515.2	4,091,929	431.2

The data excludes buprenorphine prescriptions for the treatment of SUD.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.4 Opioid analgesics prescriptions, crude rate per 1,000 population, by age and gender, New York State, 2017

Age group	Gender	Number of opioid analgesics prescriptions	Crude rate per 1,000 population
Age 18-24	Male	82,467	87.6
	Female	116,037	124.7
Age 25-34	Male	247,289	168.4
	Female	368,006	250.6
Age 35-44	Male	424,299	349.6
	Female	557,101	444.9
Age 45-54	Male	739,146	572.5
	Female	903,219	661.1
Age 55-64	Male	1,009,202	811.0
	Female	1,117,469	824.2
Age 65+	Male	973,272	718.1
	Female	1,500,904	830.7

The data excludes buprenorphine prescriptions for the treatment of SUD.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.5 Patients with prescribed opioid analgesics from five or more prescribers and dispensed at five or more pharmacies in a six-month period, crude rate per 100,000 population, by region, New York State, 2012-2017

Year	New York City		NYS excl. NYC		New York State	
	Number of patients	Crude rate per 100,000 population	Number of patients	Crude rate per 100,000 population	Number of patients	Crude rate per 100,000 population
2017	198	1.1	360	1.6	559	1.4
2016	410	2.4	709	3.2	1,121	2.8
2015	1,014	5.9	2,340	10.4	3,358	8.5
2014	1,236	7.3	3,042	13.5	4,288	10.9
2013	2,272	13.5	5,661	25.2	7,945	20.2
2012	3,349	20.1	7,197	32.0	10,570	27.0

The data excludes buprenorphine prescriptions for the treatment of SUD.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.6 Benzodiazepine prescriptions, crude rate per 1,000 population, by region, New York State, 2012-2017

Year	New York City		NYS excl. NYC		New York State	
	Number of prescriptions	Crude rate per 1,000 population	Number of prescriptions	Crude rate per 1,000 population	Number of prescriptions	Crude rate per 1,000 population
2017	1,712,598	198.6	3,665,676	326.5	5,382,793	271.2
2016	1,756,754	205.8	3,763,749	335.8	5,524,442	279.8
2015	1,750,436	204.7	3,668,499	326.2	5,422,772	273.9
2014	1,738,848	204.8	3,569,049	317.1	5,312,013	269.0
2013	1,730,837	205.9	3,565,049	317.0	5,300,343	269.7
2012	1,714,528	205.7	3,485,242	310.3	5,205,202	266.0

New York State total contains number with county unknown.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.7 Benzodiazepine prescriptions, crude rate per 1,000 population, by age, New York State, 2012 and 2017

Age group	2012		2017	
	Number of prescriptions	Crude rate per 1,000 population	Number of prescriptions	Crude rate per 1,000 population
Age 18-24	184,333	92.3	152,283	81.3
Age 25-34	576,295	209.0	585,584	199.4
Age 35-44	732,784	288.5	730,806	296.4
Age 45-54	1,152,800	405.9	1,023,161	385.1
Age 55-64	1,135,968	470.4	1,247,339	479.7
Age 65+	1,371,965	497.5	1,581,296	500.1

Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.8 Benzodiazepine prescriptions, crude rate per 1,000 population, by gender, New York State, 2012-2017

Year	Female		Male	
	Number of prescriptions	Crude rate per 1,000 population	Number of prescriptions	Crude rate per 1,000 population
2017	3,387,936	331.8	1,994,389	206.9
2016	3,469,784	341.6	2,054,140	214.3
2015	3,440,047	337.8	1,982,385	206.3
2014	3,370,622	331.6	1,941,174	202.6
2013	3,368,309	333.0	1,931,825	202.6
2012	3,307,665	328.1	1,897,310	199.9

Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.9 Benzodiazepine prescriptions, crude rate per 1,000 population, by age and gender, New York State, 2017

Age group	Gender	Number of prescriptions	Crude rate per 1,000 population
Age 18-24	Male	65,219	69.3
	Female	87,039	93.5
Age 25-34	Male	235,563	160.4
	Female	349,922	238.2
Age 35-44	Male	284,168	234.1
	Female	446,585	356.7
Age 45-54	Male	378,362	293.1
	Female	644,714	471.9
Age 55-64	Male	475,012	381.7
	Female	772,244	569.6
Age 65+	Male	523,643	386.4
	Female	1,057,577	585.3

Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.10 Percentage of patients prescribed one or more opioid analgesics with a total daily dose of ≥ 90 MME on at least one day, by region, New York State, 2012-2017

Year	Region	Number of patients received opioid analgesics ≥ 90 MME	Number of patients received opioid analgesic prescriptions	Percentage
2017	New York City	91,854	764,633	12.0
	NYS excl. NYC	210,227	1,589,553	13.2
	New York State	302,231	2,354,598	12.8
2016	New York City	106,659	860,791	12.4
	NYS excl. NYC	244,275	1,746,314	14.0
	New York State	351,096	2,607,552	13.5
2015	New York City	113,795	959,160	11.9
	NYS excl. NYC	258,671	1,857,883	13.9
	New York State	372,681	2,817,671	13.2
2014	New York City	117,480	970,365	12.1
	NYS excl. NYC	261,817	1,868,600	14.0
	New York State	379,578	2,839,733	13.4
2013	New York City	130,016	1,022,830	12.7
	NYS excl. NYC	280,959	1,941,943	14.5
	New York State	411,547	2,968,187	13.9
2012	New York City	132,444	970,155	13.7
	NYS excl. NYC	287,400	1,853,987	15.5
	New York State	420,133	2,824,836	14.9

The data excludes buprenorphine prescriptions for pain and treatment of SUD.
MME: morphine milligram equivalents
New York State total contains number with county unknown.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.11 Percentage of patients prescribed one or more opioid analgesics with a total daily dose of ≥ 90 MME on at least one day, by age, New York State, 2012 and 2017

Year	Age group	Number of patients received opioid analgesics ≥ 90 MME	Number of patients received opioid analgesic prescriptions	Percentage
2017	Age 18-24	4,879	146,392	3.3
	Age 25-34	20,460	290,364	7.1
	Age 35-44	36,215	313,627	11.6
	Age 45-54	63,350	410,233	15.4
	Age 55-64	82,454	482,729	17.1
	Age 65+	93,757	651,412	14.4
2012	Age 18-24	14,476	241,458	6.0
	Age 25-34	48,474	431,910	11.2
	Age 35-44	63,798	436,112	14.6
	Age 45-54	101,761	557,872	18.2
	Age 55-64	89,878	496,319	18.1
	Age 65+	99,591	592,951	16.8

The data excludes buprenorphine prescriptions for pain and treatment of SUD.
MME: morphine milligram equivalents
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.12 Percentage of patients prescribed one or more opioid analgesics with a total daily dose of ≥ 90 MME on at least one day, by gender, New York State, 2012-2017

Year	Gender	Number of patients received opioid analgesics ≥ 90 MME	Number of patients received opioid analgesic prescriptions	Percentage
2017	Male	144,542	1,005,368	14.4
	Female	157,645	1,348,881	11.7
2016	Male	168,215	1,118,687	15.0
	Female	182,852	1,488,504	12.3
2015	Male	177,406	1,206,515	14.7
	Female	195,224	1,610,693	12.1
2014	Male	180,703	1,212,560	14.9
	Female	198,830	1,626,776	12.2
2013	Male	195,808	1,263,374	15.5
	Female	215,677	1,704,461	12.7
2012	Male	200,898	1,219,206	16.5
	Female	219,161	1,605,448	13.7

The data excludes buprenorphine prescriptions for pain and treatment of SUD.
MME: morphine milligram equivalents
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.13 Percentage of patients prescribed one or more opioid analgesics with a total daily dose of ≥ 90 MME on at least one day, by age and gender, New York State, 2017

Age group	Gender	Number of patients received opioid analgesics ≥ 90 MME	Number of patients received opioid analgesic prescriptions	Percentage
Age 18-24	Male	2,422	60,008	4.0
	Female	2,456	86,358	2.8
Age 25-34	Male	10,056	110,067	9.1
	Female	10,399	180,220	5.8
Age 35-44	Male	17,902	128,881	13.9
	Female	18,307	184,691	9.9
Age 45-54	Male	31,332	181,488	17.3
	Female	32,005	228,691	14.0
Age 55-64	Male	41,588	226,082	18.4
	Female	40,860	256,605	15.9
Age 65+	Male	40,694	268,919	15.1
	Female	53,055	382,435	13.9

The data excludes buprenorphine prescriptions for pain and treatment of SUD.
MME: morphine milligram equivalents
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.14 Percentage of patients* with two or more days of overlapping opioid analgesic and benzodiazepine prescriptions, by region, New York State, 2012-2017

Year	Region	Number of patients with two or more overlapping days	Number of patients received opioid or benzo prescriptions	Percentage
2017	New York City	41,969	1,070,319	3.9
	NYS excl. NYC	118,742	2,130,299	5.6
	New York State	160,762	3,201,284	5.0
2016	New York City	51,326	1,165,384	4.4
	NYS excl. NYC	140,161	2,279,512	6.1
	New York State	191,542	3,445,582	5.6
2015	New York City	55,504	1,260,329	4.4
	NYS excl. NYC	150,122	2,375,465	6.3
	New York State	205,705	3,636,676	5.7
2014	New York City	55,966	1,268,408	4.4
	NYS excl. NYC	150,395	2,372,939	6.3
	New York State	206,467	3,642,386	5.7
2013	New York City	58,292	1,321,337	4.4
	NYS excl. NYC	155,011	2,452,527	6.3
	New York State	213,416	3,777,440	5.6
2012	New York City	52,005	1,268,613	4.1
	NYS excl. NYC	138,594	2,370,551	5.8
	New York State	190,694	3,640,140	5.2

*: Patients with at least one prescription for opioid analgesics or benzodiazepines during a given year
Opioid analgesics prescriptions exclude buprenorphine prescriptions for the treatment of SUD.
New York State total contains number with county unknown.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.15 Percentage of patients* with two or more days of overlapping opioid analgesic and benzodiazepine prescriptions, by age, New York State, 2012 and 2017

Year	Age group	Number of patients with two or more overlapping days	Number of patients received opioid or benzo prescriptions	Percentage
2017	Age 18-24	765	185,202	0.4
	Age 25-34	7,467	407,968	1.8
	Age 35-44	16,944	436,605	3.9
	Age 45-54	32,068	560,198	5.7
	Age 55-64	43,945	649,511	6.8
	Age 65+	59,346	881,838	6.7
2012	Age 18-24	2,429	283,262	0.9
	Age 25-34	15,153	538,215	2.8
	Age 35-44	25,812	555,810	4.6
	Age 45-54	47,149	716,034	6.6
	Age 55-64	45,763	654,449	7.0
	Age 65+	54,055	807,651	6.7

*: Patients with at least one prescription for opioid analgesics or benzodiazepines during a given year
Opioid analgesics prescriptions exclude buprenorphine prescriptions for the treatment of SUD.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.16 Percentage of patients* with two or more days of overlapping opioid analgesic and benzodiazepine prescriptions, by gender, New York State, 2012-2017

Year	Gender	Number of patients with two or more overlapping days	Number of patients received opioid or benzo prescriptions	Percentage
2017	Male	58,713	1,307,096	4.5
	Female	102,039	1,893,714	5.4
2016	Male	70,596	1,418,070	5.0
	Female	120,933	2,027,025	6.0
2015	Male	75,072	1,496,413	5.0
	Female	130,614	2,139,696	6.1
2014	Male	75,060	1,495,640	5.0
	Female	131,394	2,146,290	6.1
2013	Male	77,825	1,545,841	5.0
	Female	135,567	2,231,202	6.1
2012	Male	71,930	1,499,957	4.8
	Female	118,743	2,139,967	5.6

*: Patients with at least one prescription for opioid analgesics or benzodiazepines during a given year
Opioid analgesics prescriptions exclude buprenorphine prescriptions for the treatment of SUD.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.17 Percentage of patients* with two or more days of overlapping opioid analgesic and benzodiazepine prescriptions, by age and gender, New York State, 2017

Age group	Gender	Number of patients with two or more overlapping days	Number of patients received opioid or benzodiazepine prescriptions	Percentage
Age 18-24	Male	374	74,757	0.5
	Female	391	110,412	0.4
Age 25-34	Male	2,884	153,733	1.9
	Female	4,583	254,136	1.8
Age 35-44	Male	6,266	175,529	3.6
	Female	10,674	261,005	4.1
Age 45-54	Male	11,951	234,555	5.1
	Female	20,116	325,567	6.2
Age 55-64	Male	17,320	284,603	6.1
	Female	26,624	364,850	7.3
Age 65+	Male	19,800	343,689	5.8
	Female	39,542	538,078	7.4

*: Patients with at least one prescription for opioid analgesics or benzodiazepines during a given year
Opioid analgesics prescriptions exclude buprenorphine prescriptions for the treatment of SUD.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.18 Buprenorphine prescriptions for substance use disorder (SUD), crude rate per 1,000 population, by region, New York State, 2012-2017

Year	New York City		NYS excluding NYC		New York State	
	Number of prescriptions	Crude rate per 1,000 population	Number of prescriptions	Crude rate per 1,000 population	Number of prescriptions	Crude rate per 1,000 population
2017	121,543	14.1	575,238	51.2	697,285	35.1
2016	115,448	13.5	506,837	45.2	622,775	31.5
2015	106,477	12.5	465,168	41.4	572,176	28.9
2014	103,274	12.2	428,786	38.1	532,498	27.0
2013	98,980	11.8	391,597	34.8	491,237	25.0
2012	93,886	11.3	349,661	31.1	443,872	22.7

New York State total contains number with county unknown.
Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.19 Buprenorphine prescriptions for substance use disorder (SUD), crude rate per 1,000 population, by age, New York State, 2012 and 2017

Age group	2012		2017	
	Number of prescriptions	Crude rate per 1,000 population	Number of prescriptions	Crude rate per 1,000 population
Age 18-24	58,865	29.5	35,390	18.9
Age 25-34	173,973	63.1	260,996	88.9
Age 35-44	99,381	39.1	200,231	81.2
Age 45-54	72,695	25.6	114,561	43.1
Age 55-64	33,811	14.0	69,064	26.6
Age 65+	4,898	1.8	16,717	5.3

Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.20 Buprenorphine prescriptions for substance use disorder (SUD), crude rate per 1,000 population, by gender, New York State, 2012-2017

Year	Female		Male	
	Number of prescriptions	Crude rate per 1,000 population	Number of prescriptions	Crude rate per 1,000 population
2017	266,416	26.1	430,800	44.7
2016	235,741	23.2	387,020	40.4
2015	216,721	21.3	355,411	37.0
2014	199,321	19.6	333,151	34.8
2013	181,667	18.0	309,569	32.5
2012	161,161	16.0	282,710	29.8

Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 5.21 Buprenorphine prescriptions for substance use disorder (SUD), crude rate per 1,000 population, by age and gender, New York State, 2017

Age group	Gender	Number of prescriptions	Crude rate per 1,000 population
Age 18-24	Male	19,934	21.2
	Female	15,456	16.6
Age 25-34	Male	158,296	107.8
	Female	102,655	69.9
Age 35-44	Male	124,207	102.3
	Female	76,024	60.7
Age 45-54	Male	72,327	56.0
	Female	42,228	30.9
Age 55-64	Male	44,727	35.9
	Female	24,337	17.9
Age 65+	Male	11,141	8.2
	Female	5,558	3.1

Data Source: NYS Prescription Monitoring Program; Data as of April 2018

Data Table 6.1 Percentage of high school students reporting ever using heroin, New York State and United States, 2003-2017

Year	Percentage (95% Confidence Interval)	
	New York State	**United States**
2017	3.9 (2.7–5.7)	1.7 (1.3–2.2)
2015	4.8 (3.7 - 5.9)	2.1 (1.5–2.8)
2013	3.7 (2.7 - 4.6)	2.2 (1.7–2.8)
2011	4.0 (3.0 - 5.0)	2.9 (2.5–3.3)
2009	3.9 (2.7 - 5.1)	2.5 (2.2–2.9)
2007	3.4 (2.4 - 4.4)	2.3 (1.8–2.8)
2005	1.8 (1.3 - 2.3)	2.4 (2.0–2.8)
2003	1.8 (1.4 - 2.2)	3.3 (2.6–4.1)

Data source: Youth Risk Behavior Surveillance System (YRBSS); data accessed August 2018
Survey question: During your life, how many times have you used heroin (also called smack, junk, or China White)?

Data Table 6.2 Percentage of high school students reporting ever using heroin, by subpopulation, New York State, 2017

Sub-Population	Percentage (95% Confidence Interval)
New York State	3.9 (2.7-5.7)
Gender	
Male	4.8 (3.3-6.9)
Female	2.1 (1.2-3.6)
Race/Ethnicity	
White-NH	1.8 (1.2-2.7)
Black-NH	4.3 (2.5-7.4)
Hispanic	5.2 (3.4-7.9)
Others	3.6 (2.2-6.1)
Grade Level	
9th grade	3.6 (1.5-8.4)
10th grade	2.3 (1.7-3.1)
11th grade	3.8 (2.5-5.7)
12th grade	4.5 (3.1-6.4)

Data source: Youth Risk Behavior Surveillance System (YRBSS), accessed August 2018
Survey question: During your life, how many times have you used heroin (also called smack, junk, or China White)?

Data Table 6.3 Prevalence of illicit drug use other than marijuana in the past month, by age group, 2015-2016

	United States			New York State		
	Percentage	**95% C.I.**		**Percentage**	**95% C.I.**	
		Low	**High**		**Low**	**High**
Age 12-17	2.7%	2.5%	3.0%	2.2%	1.7%	2.9%
Age 18-25	7.3%	6.9%	7.7%	6.9%	5.8%	8.3%
Age 26+	2.9%	2.7%	3.0%	3.0%	2.5%	3.5%
Total (age 12 or older)	3.4%	3.3%	3.6%	3.4%	3.0%	3.9%

Data source: National Survey on Drug Use and Health (NSDUH); Data accessed August 2018

Data Table 6.4 Prevalence of heroin use in the past year, by age group, 2015-2016

	United States			New York State		
	Percentage	**95% C.I.**		**Percentage**	**95% C.I.**	
		Low	**High**		**Low**	**High**
Age 12-17	0.07%	0.04%	0.11%	0.08%	0.05%	0.16%
Age 18-25	0.64%	0.53%	0.77%	0.63%	0.42%	0.96%
Age 26+	0.31%	0.26%	0.36%	0.42%	0.26%	0.66%
Total (age 12 or older)	0.33%	0.29%	0.38%	0.42%	0.27%	0.63%

Data source: National Survey on Drug Use and Health (NSDUH); Data accessed August 2018

Data Table 6.5 Prevalence of pain reliever misuse in the past year, by age group, 2015-2016

	United States			New York State		
	Percentage	**95% C.I.**		**Percentage**	**95% C.I.**	
		Low	**High**		**Low**	**High**
Age 12-17	3.7%	3.5%	4.0%	2.7%	2.1%	3.4%
Age 18-25	7.8%	7.5%	8.2%	6.9%	5.9%	8.1%
Age 26+	4.0%	3.8%	4.2%	3.5%	3.0%	4.1%
Total (age 12 or older)	4.5%	4.3%	4.6%	3.9%	3.4%	3.9%

Data source: National Survey on Drug Use and Health (NSDUH); Data accessed August 2018

Acknowledgements

New York State Department of Health

Office of Public Health:

Office of Public Health Practice

AIDS Institute

Center for Environmental Health

Bureau of Emergency Medical Services and Trauma Systems

Bureau of Narcotic Enforcement

Bureau of Vital Records

Office of Governmental Affairs

New York State Office of Alcoholism and Substance Abuse Services