



**Department
of Health**

**New York State
Opioid Annual Report
2020**

New York State Department of Health

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New York State Opioid Annual Report 2020

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1 - EXECUTIVE SUMMARY

1.1 - Charge

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) shall provide information on:

- opioid overdoses and opioid overdose deaths, including age, sex, ethnicity, and geographic location;
- data on emergency room utilization for the treatment of opioid overdose;
- data on the dispensing and utilization of opioid antagonists;
- data on the utilization of pre-hospital services; and
- any other information necessary to ascertain the success of the program, areas of the state which are experiencing particularly high rates of overdoses, ways to determine if services, resources and responses in particular areas of the state are having a positive impact on reducing overdoses, and ways to further reduce overdoses.

1.2 - Introduction

Death from opioid poisoning is a national issue. In 2018, in the United States (US), there were 46,802 opioid overdose deaths, which included 31,335 overdose deaths involving synthetic (i.e., human-made) opioids other than methadone (SOOTM), 14,996 heroin overdose deaths, and 14,975 deaths from commonly prescribed opioids (including opioid pain relievers such as Vicodin and OxyContin).^{2,3} Similarly in NYS, there were 2,991 opioid overdose deaths among residents in 2018, of which 2,195 involved SOOTM (73 percent), followed by 1,243 overdose deaths involving heroin, and 998 involved commonly prescribed opioids. There was a 200 percent increase in the number of opioid overdose deaths in NYS between 2010 and 2017. In 2018, however, the number of deaths declined seven percent compared to the previous year, from 3,224 to 2,991, marking the first decrease since 2010. Overdose deaths involving SOOTM were largely associated with fentanyl and its analogs.⁴ The prevalence of fentanyl adulterated and substituted heroin (FASH) and counterfeit opioid and other pills (e.g., oxycodone, alprazolam, etc.) has increased in local drug supplies in many states, including NYS.^{5,6} Furthermore, the number of overdose deaths involving cocaine has also been increasing in NYS since 2010, largely driven by the co-presence of fentanyl, with a slight decrease from 2017 to 2018.

Besides the dramatic increase in the number of deaths identified in the past few years, the opioid epidemic has devastated the lives of persons with opioid use disorder (OUD), along with their families and friends. Those with OUD are at higher risk for human immunodeficiency virus (HIV), hepatitis C virus (HCV), and many chronic diseases. Finally, there is the economic impact on society with healthcare costs for their treatment, costs for law enforcement efforts and emergency medical responses, and when overdose deaths occur, the costs for county coroners and medical examiners.

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Between 2016 and 2019, the NYSDOH has been awarded more than \$7 million in funding from the Centers for Disease Control and Prevention (CDC) through the *Prescription Drug Overdose: Prevention for States* program, and an additional \$4 million awarded from the *Public Health Crisis Response* cooperative agreement. In 2019, the NYSDOH was awarded approximately \$6 million from the CDC through its *Overdose Data to Action* cooperative agreement. These resources have been utilized to advance interventions for prevention of opioid overdoses as outlined in the 2019 report. This report will focus on updating the data from the 2019 report.

Public health solutions must evolve in order to have long lasting benefit. Prior to 2016, the NYSDOH response to overdoses rested largely on supporting a network of harm reduction-oriented syringe exchange programs (SEP) for which overdose prevention has always been a focus, improving access to naloxone in the community, and implementing the Internet System for Tracking Over-Prescribing (I-STOP), Governor Cuomo's signature legislation that strengthened the Prescription Monitoring Program (PMP) and created a safe disposal program for controlled substance medications. The NYSDOH's role in fighting the opioid epidemic has grown substantially since this initial work. The NYSDOH is a key partner in a statewide multi-agency collaboration implementing NYS's comprehensive strategy to address this public health emergency, including ensuring that evidence-based treatment is affordable and accessible, enforcing the Public Health Law, educating prescribers, promoting harm reduction, and building local capacity to prevent deaths due to overdoses.

Data in this report may not always be exactly comparable to other similar data the NYSDOH has reported in earlier publications. This is particularly true for mortality, hospital and emergency department (ED), and Prescription Monitoring Program (PMP) data. Mortality data are considered preliminary until the official files are closed, typically 18 months after the end of the calendar year to allow for time for toxicology and other investigations to be completed. Mortality data may be reported by place of death, or by place of decedent's residence, and may or may not include out-of-state deaths. This report uses final mortality data files and includes all deaths recorded for New York State residents, by place of residence, including out-of-state deaths. Hospital and ED (SPARCS) data may be not comparable to the numbers in the other reports due to a change in the cut off date for the data provided. NYS requires 95% of a facility's SPARCS data to be submitted 60 days following the month of patient discharge, and 100% of a facility's SPARCS data are due 180 days following the end of the facility's fiscal year. It is also important to note that SPARCS data only uses the principle diagnosis listed on a claim in this annual report, whereas other sources may use all diagnoses. For opioid overdose data, the exclusive values of the 6th and 7th digits of the ICD-10-CM code may also be different than the definition in other reports. For PMP data, CDC's standards exclude from the analysis drugs that are not typically used in outpatient settings or are otherwise not critical for morphine milligram equivalents (MME) purposes.

1.3 - Data Highlights

Opioid Burden

The NYSDOH combines multiple data sources to measure opioid burden, including opioid overdose deaths, non-fatal outpatient ED visits and hospital discharges involving opioid overdose, abuse, dependence and unspecified use. Collectively, these are opioid events that

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represent the overall health burden of opioids within NYS. Among NYS residents, opioid burden decreased by about nine percent from 59,132 events in 2017 to 54,602 in 2018, and the crude rate per 100,000 population decreased from 301.8 in 2017 to 279.4 in 2018. The rate in 2018 was highest among those 25-44 years of age, and among Hispanic individuals (rates among Black non-Hispanic and White non-Hispanic individuals were nearly as high). The rate was two and a half times higher among males than among females. New York City (NYC) had a higher rate (310.2 per 100,000) than NYS excluding NYC (256.2 per 100,000). The counties with the highest rates for opioid burden, listed in descending order by 2018 rate, included Bronx, Chautauqua, Ulster, Sullivan, Dutchess, Richmond, Greene, Rensselaer, New York, Orleans, Chemung, Columbia, Hamilton, Albany, Suffolk, and Niagara, counties.

Among NYS residents, the number of newborns with Neonatal Abstinence Syndrome (NAS) and/or affected by maternal use of drugs of addiction decreased 18 percent from 2,103 in 2017 to 1,731 in 2018, and the crude rate per 1,000 newborn discharges decreased from 10.0 to 9.0.

Use of Opioids and Other Substances

The Substance Abuse and Mental Health Services Administration (SAMHSA) funds the National Survey on Drug Use and Health (NSDUH), an annual nationwide survey involving interviews with approximately 70,000 randomly selected individuals aged 12 years and older. These data are used to provide state and national estimates, track trends in the use of substances, assess the consequences of substance use and abuse, and identify those groups at high risk for OUD.⁷ During 2017-2018, 3.3 percent of the population aged 12 years and older in both NYS and in the US reported using illicit drugs other than marijuana in the past month. The percentage acknowledging use of illicit drugs other than marijuana remained relatively steady in NYS between the 2015-2016 and 2017-2018 time periods.

During 2017-2018, 2.8 percent of the population aged 12 years and older in NYS reported having misused pain relievers in the past year, compared to 3.9 percent in the US. In NYS, between the 2015-2016 and 2017-2018 time periods, the percentage decreased from 3.7 percent to 2.8 percent. In that same period, the percentage of reported heroin use in the past year decreased from 0.4 percent to 0.2 percent in NYS, whereas the US percentage remained steady at 0.3 percent. While reported misuse of pain relievers and heroin decreased, reported cocaine use in the past month increased from 0.9 percent to 1.1 percent in NYS. The percentage for the US overall remained steady at around 0.7 percent. In 2017-2018, 69.3 percent in NYS and 71.2 percent in the US reported perceiving great risk from using cocaine once a month.

Opioid Mortality

Among NYS residents, the number of overdose deaths involving any opioid increased each year between 2010 and 2017, with an overall increase of 200 percent from 1,074 in 2010 to 3,224 in 2017. In 2018, overdose deaths involving any opioid decreased from 2017 (3,224) by seven percent to 2,991 deaths. Despite the recent decline, the 2018 age-adjusted rate of 15.1 deaths involving any opioid per 100,000 population in NYS is still nearly triple that of 5.4 in 2010. The number of overdose deaths involving commonly prescribed opioids increased by 42 percent from 737 deaths in 2010 to 1,044 in 2017, followed by a four percent decrease in 2018 to 998 deaths. Most of these opioid-related mortality trends were driven by deaths involving SOOTM, with

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annual increases from 2010 to 2017. Despite a small decrease in SOOTM-related deaths in 2018, there was still an overall the increase of 1,169 percent from 2010 from 2018.

The number of overdose deaths involving cocaine has also been increasing in NYS since 2010, with a slight decrease from 2017 to 2018. Upon closer examination of these deaths, it becomes clear that the presence of opioids, specifically fentanyl, has been driving the increase. Overdose deaths involving cocaine increased by 237 percent, from 388 deaths in 2010 to 1,306 in 2017, then decreased by 2 percent between 2017 and 2018 to 1,276. Deaths involving both cocaine and SOOTM (predominantly illicitly manufactured fentanyl)⁸ increased from 18 in 2010 to 786 in 2018, a 4,267 percent increase. The number of deaths involving cocaine without SOOTM, however, increased by 32 percent for the same time period, from 370 deaths in 2010 to 490 in 2018, indicating that fentanyl likely drove most of the increase in deaths involving cocaine overall.

It is important to note that although there have been increases in the number of overdose deaths involving any opioid through 2017 and increases in overdose deaths involving cocaine and SOOTM through 2018, some of the observed increases have likely been due to raised awareness of opioid overdoses, improvements in technology and resources for toxicology testing, and improved cause-of-death reporting.

Opioid Morbidity

Among NYS residents, the number of hospital discharges for opioid use (including overdose, abuse, dependence and unspecified use) decreased by eight percent from 25,535 in 2017 to 23,514 in 2018, and the crude rate per 100,000 population decreased from 130.3 in 2017 to 120.3 in 2018. The rate in 2018 was highest among the 25-44 year-old age group and among Hispanic individuals. The rate was two and a half times higher among males (174.4 per 100,000) than among females (69.3 per 100,000). NYC had a higher rate (134.1 per 100,000) than NYS excluding NYC (109.9 per 100,000).

In 2018, there were 11,006 visits to EDs due to an opioid overdose among NYS residents, a ten percent decrease from 2017 (12,297 visits). The crude rate per 100,000 decreased from 62.8 in 2017 to 56.3 in 2018. The rate in 2018 was highest among the 25-44 year-old age group and among White non-Hispanic individuals. The rate was two times higher among males than among females. NYC had a lower rate (41.9 per 100,000) than NYS excluding NYC (67.2 per 100,000).

Opioid Treatment Data

The NYS Office of Addiction Services and Supports (OASAS) provided data on admissions for any opioid between 2010-2019. The source of this information is the Client Data System (CDS), which collects data on people treated in all OASAS-certified chemical dependence treatment programs. Data are collected at admission and discharge from a level of care within a provider in New York State. The CDS does not have data for individuals who get treated by the US Department of Veterans Affairs, go outside NYS for treatment, are admitted to hospitals but not to an OASAS-certified treatment program, or receive medication for addiction treatment from a physician outside the OASAS system of care.

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

Statewide, the number of admissions for any opioid increased 27.6 percent between 2010 and 2016 before declining slightly in 2017, 2018 and 2019. Areas of the state outside of NYC showed a 54.6 percent increase in the number of admissions for any opioid between 2010 and 2016, while there was a 1.7 percent decline among NYC residents admitted during this period. During 2019, the counties with the highest crude rates of admissions 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 treatment for any opioid. However, between 2010 and 2016, there was a 40.4 percent increase in the number of females admitted for any opioid, while males increased by 22.8 percent. The 25-34 age group consistently had the highest crude rate of clients admitted for opioids between 2010 and 2019.

Prescription Monitoring Program

In 2019, more than six and a half million opioid analgesic prescriptions were dispensed to NYS residents. The crude rate of opioid analgesics declined from 457.9 prescriptions per 1,000 population in 2016 to 347.5 per 1,000 in 2019. The rate for opioid analgesic prescriptions was higher in NYS excluding NYC (444.3 per 1,000) than in NYC (218.1 per 1,000) for 2019.

Initiating treatment for chronic pain with long-acting or extended-release opioids is associated with higher risk of overdose than the initiation of treatment with immediate-release opioids.⁹ The number of incidents in which patients were both opioid-naïve and received long-acting opioid prescriptions declined between 2017 (22,622) and 2019 (14,967) in NYS. During 2017-2019, the percentage was consistently higher in NYC than in NYS excluding NYC.

Opioid use for acute pain is associated with long-term opioid use, and physical dependence on opioids is an expected physiologic response in patients exposed to opioids for more than a few days.⁹ In July 2016, NYS limited the initial prescribing of opioids for acute pain to no more than a 7-day supply.¹⁰ In NYS, opioid prescriptions for more than a 7-day supply decreased steadily, from 28.7 percent in the first quarter of 2017 to 15.3 percent in the fourth quarter of 2019.

In NYS, a substantial reduction occurred in the crude rate of patients who received opioid prescriptions from five or more prescribers at five or more pharmacies in a six-month period ("doctor shoppers") between 2016 (2.9 per 100,000 population) and 2019 (1.2 per 100,000).

Opioid analgesics prescribed in higher dosages (≥ 90 morphine milligram equivalents (MME)) are associated with higher risks of overdose and death.⁹ In New York State, the percentage of patients receiving one or more opioid analgesic prescriptions with a total daily dose of 90 or greater MME for at least one day, declined between 2016 (13.5 percent) and 2019 (11.0 percent). In 2019, NYS excluding NYC (11.2 percent) had a higher percentage of patients receiving 90 or greater MME for at least one day, compared to NYC (10.3 percent); statewide, patients aged 55-64 years had the highest percentage for both males (15.9 percent) and females (13.7 percent).

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Among patients with at least one prescription for opioid analgesics or benzodiazepines (e.g., Xanax® [alprazolam], Valium® [diazepam]), the percentage who received two or more days of overlapping opioid analgesic and benzodiazepine prescriptions declined between 2016 (9.7 percent) and 2019 (8.4 percent) for NYS. During 2016-2019, NYS excluding NYC had consistently higher percentages of overlapping prescriptions compared to NYC. Statewide, the percentage was higher among those aged 65 or older for both male (10.0 percent) and female patients (11.9 percent) in 2019.

In NYS, more than 78,600 patients were prescribed at least one buprenorphine prescription for outpatient treatment of OUD in 2019. The crude rate of buprenorphine prescribing for OUD increased by 28.5 percent from 314.8 per 100,000 population in 2016 to 404.5 per 100,000 in 2019. The rate was more than two times higher in NYS excluding NYC than that for NYC during 2016-2019.

Naloxone Administration

NYS is a leader in the implementation of public health programming to prevent death from opioid overdoses. Its multi-pronged approach focuses on building overdose response capacity within communities throughout the State. The core of this program is for community laypersons to be trained by organizations registered with the NYSDOH to administer naloxone (an opioid antagonist also known by the brand name Narcan) in the event of a suspected opioid overdose. There are currently more than 800 registered Community Opioid Overdose Prevention (COOP) programs, with over half a million individuals trained by them since the initiative's inception in 2006. Of these, 78,000 were public safety personnel and the rest were community responders. In 2019, there were 1,558 naloxone administration reports by law enforcement (LE) to the NYSDOH and 2,749 reports by COOP programs. In total, including unique administrations by Emergency Medical Services (EMS) agencies, there were 16,710 reported naloxone administrations in NYS in 2019.

There were 12,403 unique naloxone administrations reported electronically by EMS agencies during 2019, about a 10 percent decrease statewide from 13,724 administrations in 2018, with a seven percent decrease in NYC and a 13 percent decrease in NYS excluding NYC.

Administrations were higher on Fridays and Saturdays, highlighting a need for individuals using substances such as opioids to obtain naloxone in their communities and have it available over weekends. Unique administrations occurred roughly evenly across months of the year, with counts slightly higher during the summer months (data not shown). For information about EMS naloxone administrations prior to 2017, please see the [Opioid Annual Report, 2019](#).

2 - INTRODUCTION

This report reflects the work of many programs within the New York State Department of Health (NYSDOH), in partnership with other agencies which have worked collaboratively to address the opioid epidemic. The principles of public health provide a useful framework for both investigating and understanding the causes and consequences of opioid use disorder (OUD). This public health approach consists of four steps:

1. Defining the problem through the systematic collection of information about the magnitude, scope, characteristics and consequences of OUD.
2. Establishing the factors that increase or decrease the risk for OUD, and the factors that could be modified through interventions.
3. Identifying what works to prevent OUD by designing, implementing and evaluating interventions.
4. Implementing effective and promising interventions in a wide range of settings.¹¹

This report provides an overview of opioid-related mortality and morbidity across NYS. Opioids include both prescription opioid pain relievers such as hydrocodone, oxycodone, fentanyl, and morphine, as well as illegal opioids such as heroin, and illicitly manufactured fentanyl and fentanyl analogs. As previously described in the Introduction, data in this report may not always be exactly comparable to other similar data the NYSDOH has reported in earlier publications.

Death from opioid poisoning is a national issue. In 2018, in the US, there were 46,802 opioid overdose deaths, which included 31,335 overdose deaths involving synthetic (i.e., human-made) opioids other than methadone (SOOTM), 14,996 heroin overdose deaths, and 14,975 deaths from commonly prescribed opioids (including opioid pain relievers such as Vicodin and OxyContin).² Similarly in NYS, there were 2,991 opioid overdose deaths among residents in 2018, of which 2,195 involved SOOTM (73 percent), followed by 1,243 overdose deaths involving heroin, and 998 involved commonly prescribed opioids. There was a 200 percent increase in the number of opioid overdose deaths in NYS between 2010 and 2017. In 2018, however, the number of deaths declined 7 percent compared to the previous year (from 3,224 to 2,991), marking the first decrease observed within this time period.

Besides the dramatic increase in the number of deaths identified in the past few years, the opioid epidemic has devastated the lives of those with OUD, along with their families and friends. Those with OUD are at higher risk for Human Immunodeficiency Virus (HIV), hepatitis C virus (HCV), and chronic diseases. Finally, there is the rising economic impact on society with healthcare costs for treatment, costs for law enforcement efforts and emergency medical responses, the lost economic productivity of some of those with OUD, and when overdose deaths occur, the costs for county coroners and medical examiners.

Due to the impact of this national epidemic, multiple sources of funding are being provided by federal agencies including the Substance Abuse and Mental Health Services Administration (SAMHSA) and the CDC. In addition, the Association of State and Territorial Health Officials (ASTHO) issued a 2017 and 2018 President's Challenge to address preventing substance misuse and addictions.¹²

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Opioid poisoning prevention requires a comprehensive approach that spans systems, organizations, and environments, combining treatment and intervention with prevention efforts. Between 2016 and 2019, the NYSDOH has been awarded more than \$7 million in funding from the Centers for Disease Control and Prevention (CDC) through the *Prescription Drug Overdose: Prevention for States* program, and an additional \$4 million awarded from the *Public Health Crisis Response* cooperative agreement. In 2019, the NYSDOH was awarded approximately \$6 million from the CDC through its *Overdose Data to Action* cooperative agreement. These resources have been utilized to advance interventions for prevention of opioid overdoses as outlined in the 2019 report. This report will focus on updating the data from the 2019 report.

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

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

2.1 - Glossary

Acronym/Abbreviation	Definition
ACCRSC	Albany County Correctional and Rehabilitative Services Center
ACOG	American College of Obstetricians and Gynecologists
ALS	Advanced Life Support
ASTHO	Association of State and Territorial Health Officials
BLS	Basic Life Support
BNE	Bureau of Narcotic Enforcement
CDC	Centers for Disease Control and Prevention
CDS	Client Data System (OASAS)
CFR	Certified First Responders
COOP	Community Opioid Overdose Prevention
DCJS	Division of Criminal Justice Services
DEA	Drug Enforcement Administration
DOCCS	Department of Corrections and Community Supervision
ED	Emergency Department
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
e-PCR	Electronic Pre-hospital Care Reports
FASH	Fentanyl Adulterated and Substituted Heroin
HCV	Hepatitis C Virus
HIDTA	High Intensity Drug Trafficking Areas
HIV	Human Immunodeficiency Virus
HRC	Harm Reduction Coalition
ICD-9	International Classification of Disease, Ninth Revision
ICD-10	International Classification of Disease, Tenth Revision
I-STOP	Internet System for Tracking Over Prescribing
LA	Long-acting
LE	Law Enforcement
LGU	Local Governmental Units
MAT	Medication-Assisted Treatment
MATTERS	Medication Assisted Treatment and Emergency Referrals
MME	Morphine Milligram Equivalents
NAS	Neonatal Abstinence Syndrome
NH	Non-Hispanic
NSDUH	National Survey on Drug Use and Health
NYC	New York City
NYS	New York State
NYSDOH	New York State Department of Health
NYS excluding NYC	New York State excluding New York City
OASAS	Office of Addiction Services and Supports
OFPC	Office of Fire Prevention and Control

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OOPPS	Opioid Overdose Prevention Program System
OUD	Opioid Use Disorder
PCR	Pre-hospital Care Report
PDSE	Peer Delivered Syringe Exchange
PEP	Post-exposure Prophylaxis
PMP	Prescription Monitoring Program
PrEP	Pre-exposure Prophylaxis
PWUD	People Who Use Drugs
SA	Short-acting
SAMHSA	Substance Abuse and Mental Health Services Administration
SEP	Syringe Exchange Program
SOOTM	Synthetic Opioids Other Than Methadone
SPARCS	Statewide Planning and Research Cooperative System
STSEP	Second Tier Syringe Exchange Program
TEAS	Technology Enhanced Access to Syringes
UCC	Urgent Care Center
US	United States

2.2 - Acknowledgements

This report was prepared with the invaluable assistance from the following programs:

- New York State Department of Health:
 - AIDS Institute
 - Bureau of Emergency Medical Services and Trauma Systems
 - Bureau of Narcotic Enforcement
 - Bureau of Vital Records
 - Center for Community Health
 - Division of Epidemiology
 - Division of Family Health
 - Office of Health Insurance Programs
 - Office of Public Health Practice
 - Office of Quality and Patient Safety
- New York State Office of Addiction Supports and Services
- New York/New Jersey High Intensity Drug Trafficking Area

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3 - BACKGROUND

The NYSDOH's role in fighting the opioid epidemic has been dramatically and rapidly increasing. The NYSDOH is a key partner in implementing the comprehensive New York State (NYS) strategy to address this public health and public safety emergency. Prior to 2016, the NYSDOH response to overdoses rested largely on supporting a network of harm reduction-oriented syringe exchange programs (SEP) for which overdose prevention has always been a focus, improving access to naloxone in the community, and implementing the Internet System for Tracking Over-Prescribing (I-STOP), Governor Cuomo's signature legislation that strengthened the Prescription Monitoring Program (PMP) and created a safe disposal program for controlled substance medications. The role for the NYSDOH has grown since this initial work, and continues to rapidly expand.

The NYSDOH is committed to protecting the health and safety of all New Yorkers. By using a public health approach of research, evaluation and implementation of evidence-based strategies, as well as enforcement of existing laws to protect patients and prevent diversion, the NYSDOH is focused on identifying solutions to stop this epidemic while protecting all New Yorkers from the consequences of opioid misuse. Through innovation and collaboration, the NYSDOH has brought together key stakeholders such as researchers, healthcare providers, insurers, treatment providers, mental health providers, law enforcement officials, other governmental agencies, and experts in information technology to expand and strengthen partnerships to secure and realign resources and create a collaborative infrastructure to implement a comprehensive approach.

The NYSDOH strategies are as follows:

- Implement and evaluate evidence-based and culturally appropriate prevention, policy and harm reduction strategies in a variety of settings.
- Expand and enhance the use and dissemination of relevant surveillance and monitoring data.
- Optimize use of the Prescription Monitoring Program to prevent individuals from becoming addicted to controlled substances.
- Expand education for consumers, families and healthcare providers that includes reducing stigma against people who use drugs.
- Assist in building capacity to address the opioid emergency in local communities and support community coalitions.
- Expand support for and access to harm reduction interventions, including access to sterile syringes and naloxone.
- Expand activities that provide linkages to care for people who use drugs.
- Increase access and utilization of evidence-based medication for opioid use disorder.
- Use data, evaluation and research to inform interventions.
- Use real-time data to identify emerging hazards and target interventions.

The NYSDOH is implementing evidence-based interventions that will strive to combat this epidemic. Through a statewide prescriber education program, healthcare providers are now receiving education on pain management, palliative care, and addiction, which includes appropriate safe prescribing methods, and how to identify and treat substance use disorder. We

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have improved access to the Prescription Monitoring Program (PMP) so prescribers can easily access vital information about patient prescriptions. We have worked with local, state, and federal law enforcement agencies in the investigation of drug diversions, fraudulent prescribing, and pill mills. We have analyzed and disseminated county-level data such as naloxone administrations, emergency room visits, hospitalizations and deaths related to overdose. These data are provided to each county on a quarterly basis to assist communities in understanding their local burden. We have expanded access for people with OUD to buprenorphine due to the well-documented role it has in preventing opioid overdoses, improvement in adherence to other medications, provision of stability, reduction of disease transmission, and increase in access points for supportive and healthcare services.^{12,13} And we have worked to provide near real-time information on ED visits to our local partners.

Developing solutions is a collaborative effort across multiple sectors at state and local levels. Ensuring that evidence-based treatment is affordable and accessible, educating prescribers and enforcing the law, and building local capacity to prevent deaths due to overdoses are all roles of the NYSDOH.

3.1 - State and Local Collaboration

There has been strong collaboration between the NYSDOH with the NYS Office of Addiction Services and Supports (OASAS) regarding opioid prevention activities. Collaborations also continue with the following NYS agencies: Office of Children and Family Services, Office of Mental Health, the Division of Criminal Justice Services, the State Education Department, the Department of Corrections and Community Supervision (DOCCS), and the State Police. In addition, the NYSDOH has worked with the NY/NJ High Intensity Drug Trafficking Area (HIDTA) to station a Public Health Analyst in the NYSDOH to assist with data review and collaboration with HIDTA Drug Information Officers in law enforcement.

In March 2016, the NYSDOH received funding from the CDC to help build a more robust public health response to the opioid poisoning epidemic. The initial work under this grant focused on enhancing the infrastructure within the NYSDOH to facilitate greater collaboration throughout the agency (Figure 1). Teams were developed linking programs in the following Centers and Bureaus located within the NYSDOH's Office of Public Health: the AIDS Institute (Office of Drug User Health and Office of Program Evaluation and Research), Center for Environmental Health (Bureau of Occupational Health and Injury Prevention), Center for Community Health (Division of Epidemiology and Division of Family Health), and the Office of Public Health Practice (Local Health Services Group and Public Health Information Group). Within the NYSDOH Office of Primary Care and Health Systems Management, the Bureau of Narcotic Enforcement and the Bureau of Emergency Medical Services and Trauma Services, and the NYSDOH Office of Health Insurance Programs are also involved. The NYSDOH Office of Quality and Patient Safety, the NYSDOH Bureau of Vital Records, and the NYS Information Technology Services offer invaluable assistance and collaboration.

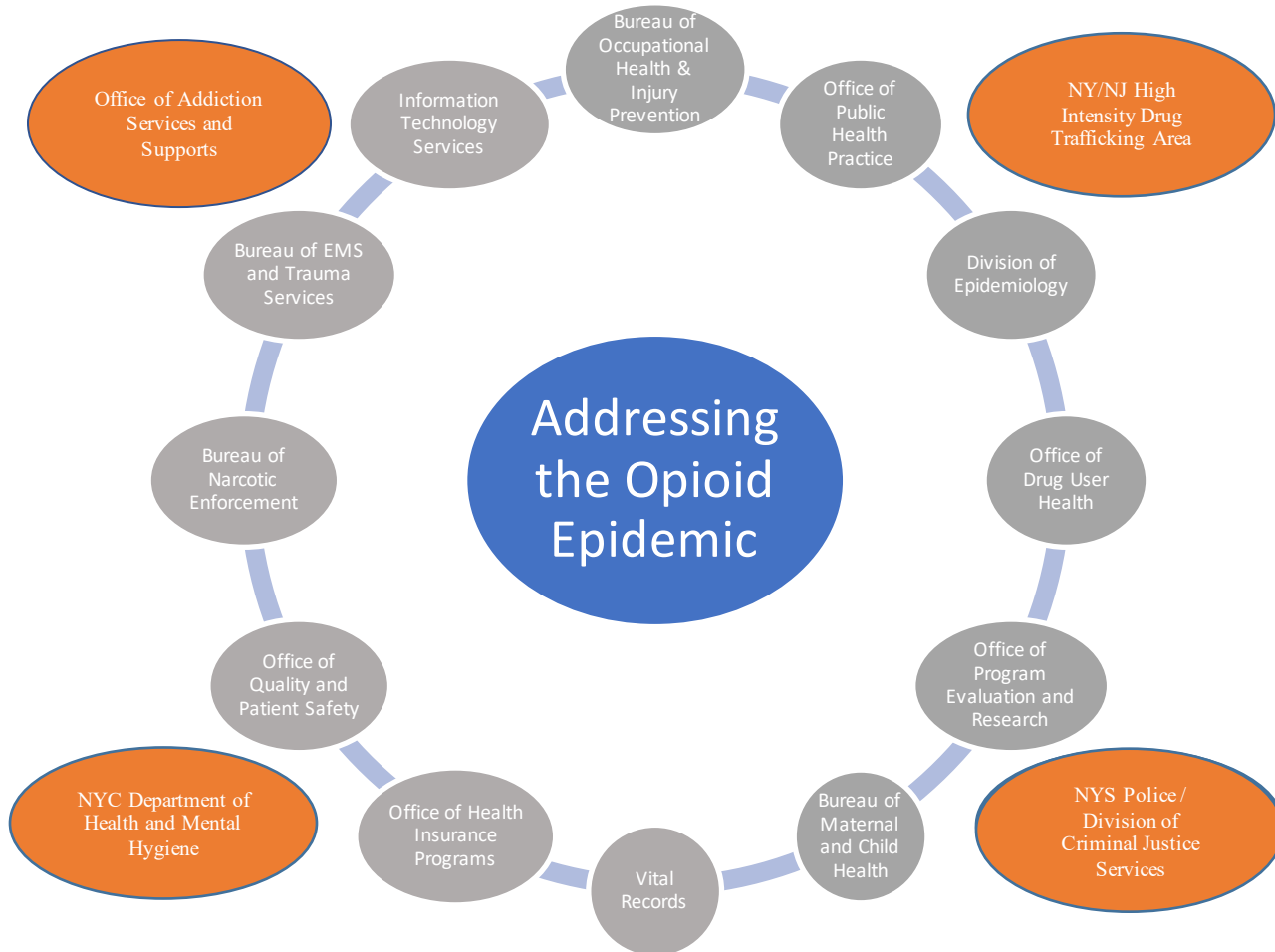
Every six years, every county health department is required to work with its local hospitals to complete a community health assessment and a community health improvement plan. Each county has an established coalition which analyzes local health data and develops plans to

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identify the local interventions to improve the health of their community. As part of the community health improvement process, each county must choose Prevention Agenda priorities to develop interventions to address. The Prevention Agenda¹⁴ is the blueprint for state and local action to improve the health of New Yorkers in five priority areas and to promote equity for racial, ethnic, disability, and low socioeconomic groups, as well as other populations who experience them using Health Across All Policies and Healthy Aging approaches. One of these priorities is to “Promote Well-Being and Prevent Mental and Substance Use Disorders.” Among the 48 counties that selected this priority in 2019-2024, 27 chose “prevent opioid and other substance misuse and deaths” as a focus.

OASAS has encouraged its Local Governmental Units (LGUs) to collaborate with county health departments on the Promote Well-Being and Prevent Mental and Substance Use Disorders priority area of the Prevention Agenda. Under Mental Hygiene Law, LGUs have responsibility for oversight of the local mental hygiene system. A significant amount of local collaboration has taken place between County Health Department and LGUs.

Figure 1. Opioid Poisoning Prevention Programs within NYS Department of Health



3.2 - Magnitude of the Opioid Burden

The opioid epidemic has grown nationally as well as in NYS. In 2018, drug overdose deaths involving any opioid accounted for 46,802 lives nationwide.² Among NYS residents, the number of overdose deaths involving any opioid increased from 1,074 in 2010 to 3,224 in 2017, then decreased by 7 percent between 2017 and 2018 to 2,991 deaths. The age-adjusted rate of deaths involving any opioid in NYS nearly tripled between 2010 and 2018, from 5.4 to 15.1 deaths per 100,000 population. The landscape of this epidemic has changed significantly in the last decade. While in 2002, it was still relatively rare to have an opioid overdose in most communities, it is now commonplace and has spread throughout NYS by impacting every county, city and town. The increase in deaths due to opioid overdose included a large increase in deaths due to fentanyl.⁴ Since approximately 2014, illicitly manufactured fentanyl has become a major part of the illicit opioid market.¹⁵ Often mixed into heroin and even cocaine, or pressed into counterfeit pills (such as ones illicitly manufactured to resemble Vicodin, OxyContin, or Xanax), illicit fentanyl has played a significant part in the rising opioid-related death toll in the US.

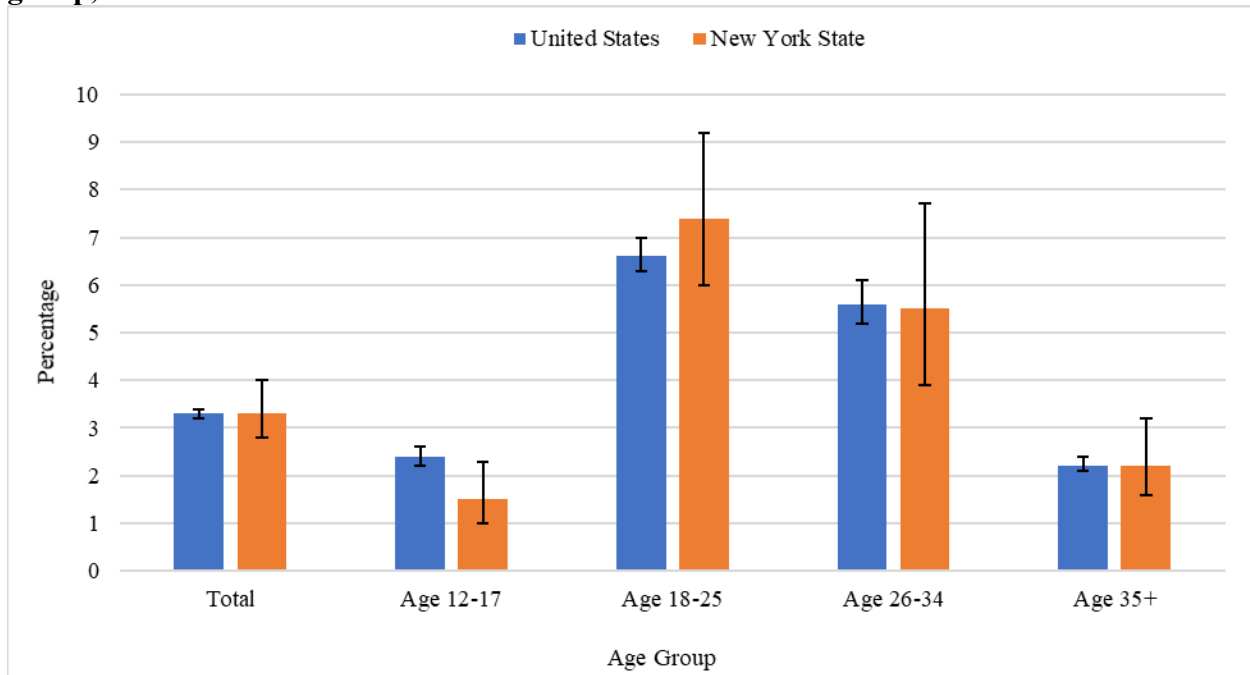
In 2018, there were 23,514 opioid overdose hospitalizations including opioid abuse, dependence, and unspecified use in NYS, as well as 11,006 ED visits for opioid overdose (crude rates per 100,000 population of 120.3 and 56.3, respectively). The number of NYS residents admitted to treatment programs also indicates that the opioid burden across the state is high. In 2019, over 112,000 admissions (673.4 per 100,000) were processed by NYS OASAS certified treatment programs for opioids.

The SAMHSA funds the National Survey on Drug Use and Health (NSDUH), an annual nationwide survey involving interviews with approximately 70,000 randomly selected individuals aged 12 years and older. This survey provides estimates on the use of tobacco products, alcohol, illicit drugs and mental health in the US. These data are used to provide state and national estimates, to track trends in the use of substances, assess the consequences of substance use and abuse, and identify those groups at high risk for OUD.⁷

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During 2017-2018, 3.3 percent of the population aged 12 years and older in both NYS and in the US reported using illicit drugs other than marijuana in the past month (Figure 2). For both NYS and the US, the percentage was highest in the 18-25 year-old age group (7.4 percent in NYS, 6.6 percent in the US), followed by the 26-34 year-old age group (5.5 percent in NYS, 5.6 percent in the US). The percentages were significantly higher among these two age groups as compared to those aged 12-17 years old, and 35 years and older for both NYS and the US.

Figure 2. Prevalence of illicit drug use other than marijuana in the past month, by age group, 2017-2018

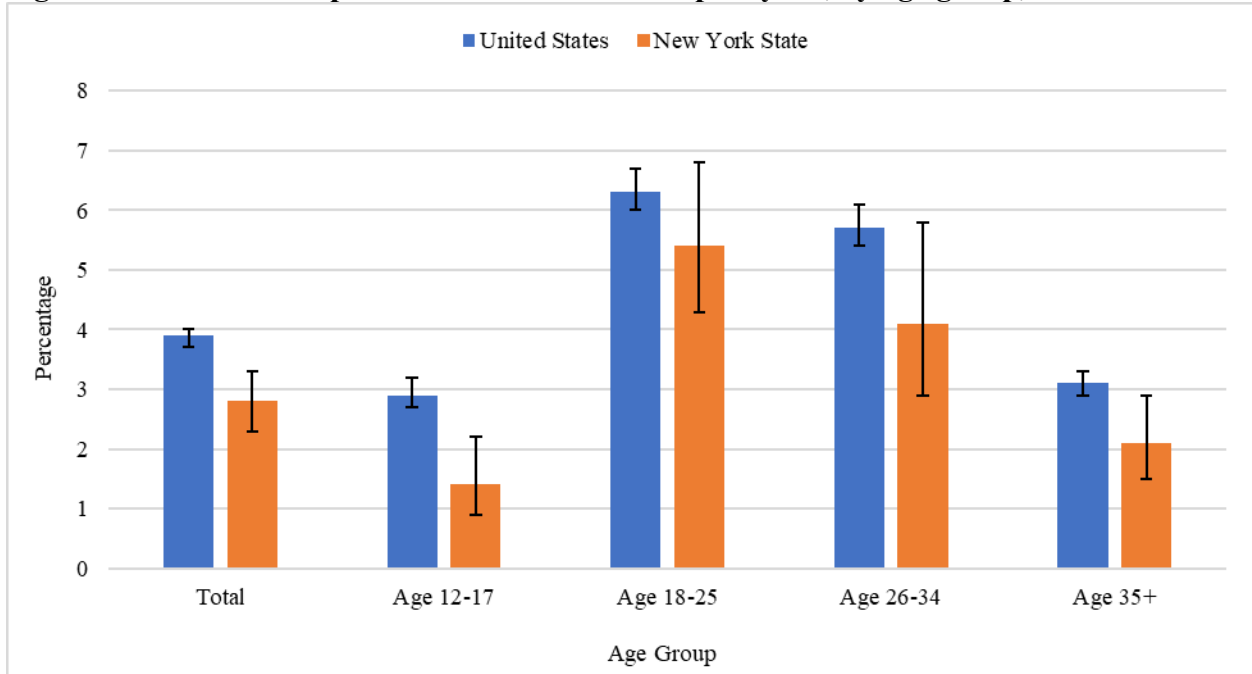


Data source: National Survey on Drug Use and Health (NSDUH); Accessed June 2020
For complete data, see [Data Table 2, Appendix, page 19](#).

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During 2017-2018, 2.8 percent of the population aged 12 years and older in NYS reported having misused pain relievers in the past year. This was significantly lower than 3.9 percent of the population aged 12 years and older in the US (Figure 3). Among both NYS and US populations aged 12 years and over, the percentage was highest among the 18-25 year-old age group (5.4 percent in NYS, 6.3 percent in the US), followed by the 26-34 year-old age group (4.1 percent in NYS, 5.7 percent in the US), and those aged 35 years and older (2.1 percent in NYS, 3.1 percent in the US). Those aged 12-17 years had the lowest percentage of pain reliever misuse reported (1.4 percent in NYS, 2.9 percent in the US).

Figure 3. Prevalence of pain reliever misuse in the past year, by age group, 2017-2018

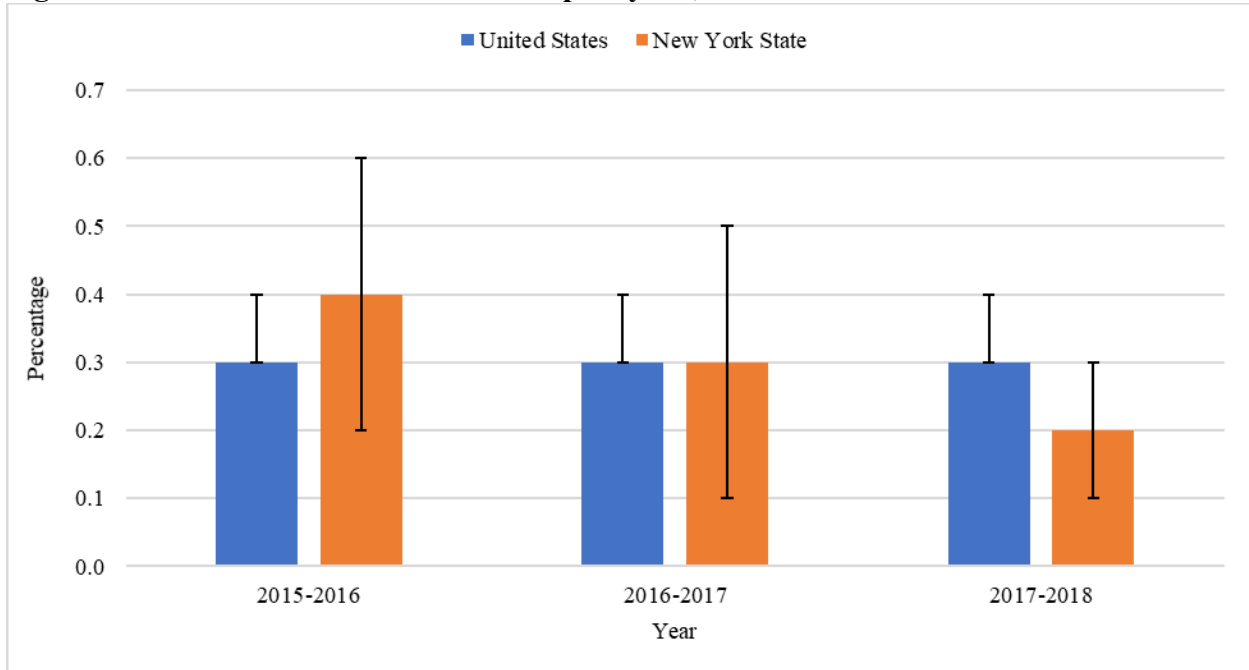


Data source: National Survey on Drug Use and Health (NSDUH); Accessed June 2020
For complete data, see [Data Table 3, Appendix, page 19](#).

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Between 2015-2016 and 2017-2018 in NYS, the percentage of reported heroin use in the past year decreased from 0.4 percent to 0.2 percent (Figure 4), while the percentage of reported heroin use has remained constant in the US; however, the decrease in NYS was not statistically significant. During the same period, reported use of heroin in the past year in the US remained steady at 0.3 percent.

Figure 4. Prevalence of heroin use in the past year, 2015-2016 to 2017-2018



Note: Confidence intervals for NSDUH percentages are constructed on the logit scale, resulting in asymmetric intervals. Point estimates and confidence intervals are then rounded to one decimal place. This could lead to overlapping between the small estimates and the confidence limits.

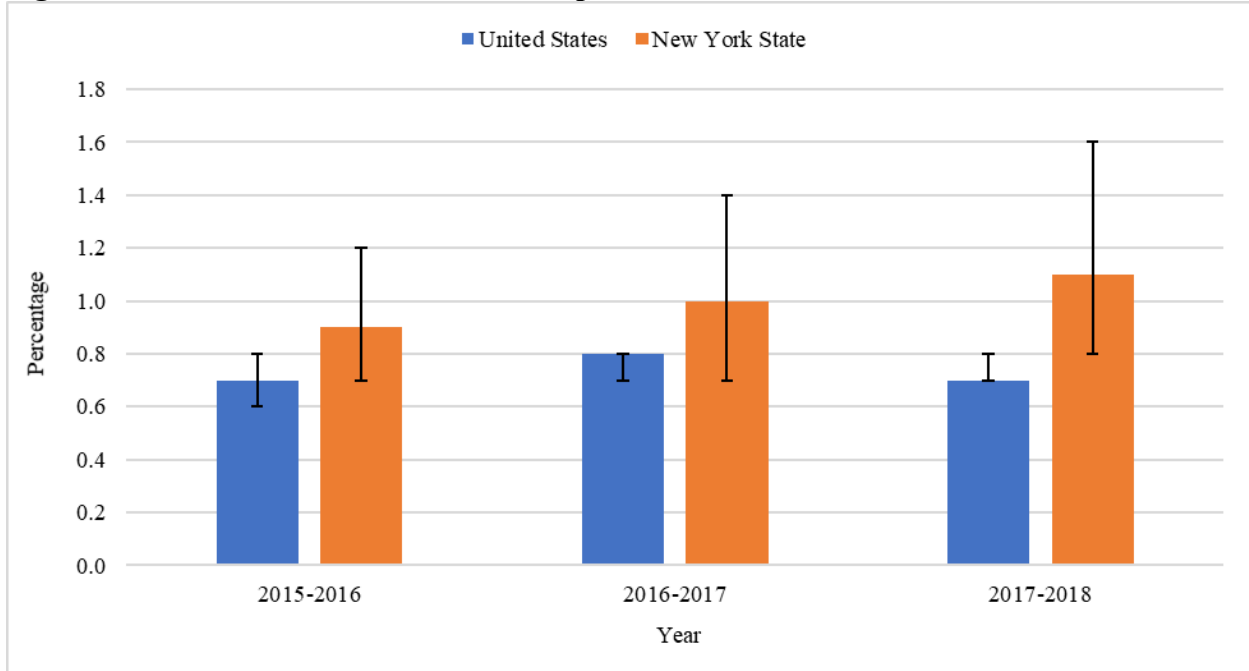
Data source: National Survey on Drug Use and Health (NSDUH); Accessed June 2020

For complete data, see [Data Table 4, Appendix, page 19](#).

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Between 2015-2016 and 2017-2018 in NYS, the prevalence of reported cocaine use (including crack cocaine) in the past month increased from 0.9 percent to 1.1 percent (Figure 5). During the same period, the US percentage increased from 0.7 percent in 2015-2016 to 0.8 percent in 2016-2017, before going back to 0.7 percent in 2017-2018.

Figure 5. Prevalence of cocaine use in the past month, 2015-2016 to 2017-2018



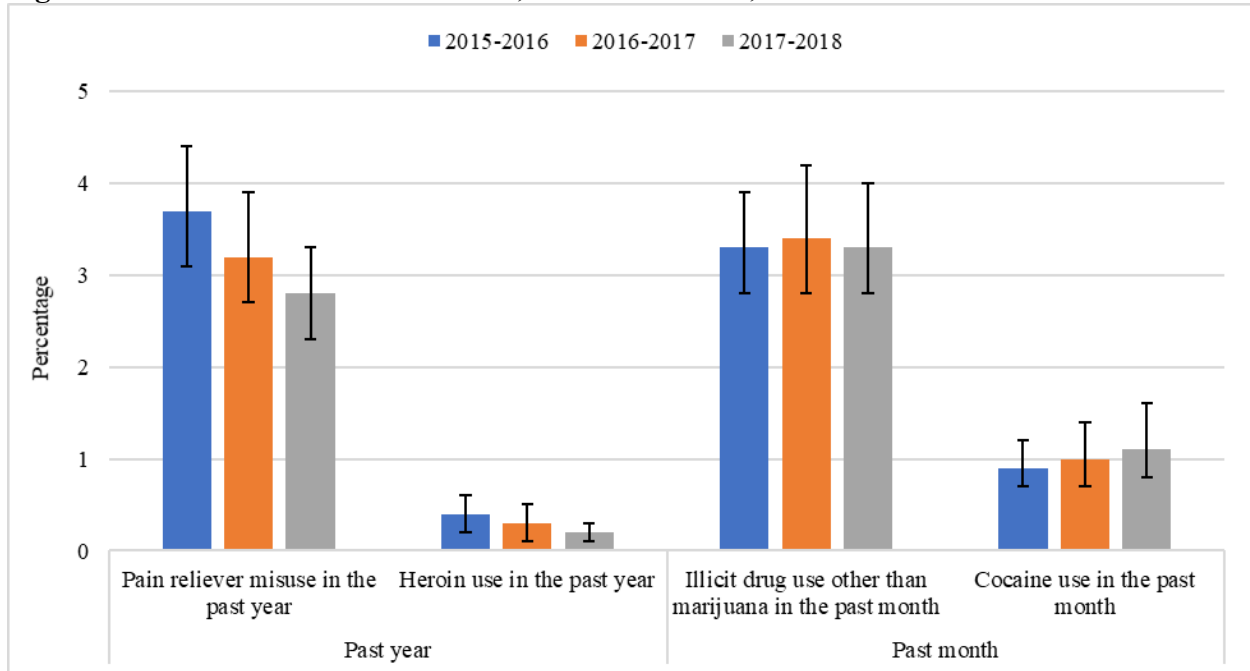
Note: Confidence intervals for NSDUH percentages are constructed on the logit scale, resulting in asymmetric intervals. Point estimates and confidence intervals are then rounded to one decimal place. This could lead to overlapping between the small estimates and the confidence limits.

Data source: National Survey on Drug Use and Health (NSDUH); Accessed June 2020
For complete data, see [Data Table 5, Appendix, page 20](#).

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Between 2015-2016 and 2017-2018, in NYS, the percentage of reported illicit drug use other than marijuana in the past month among those 12 years and older remained relatively steady (Figure 6). During the same period, reported pain reliever misuse in the past year decreased among New Yorkers 12 years and older by 24 percent, from 3.7 percent in 2015-2016 to 2.8 percent in 2017-2018. Reports of heroin use in the past year also decreased from 0.4 percent in 2015-2016, to 0.2 percent in 2017-2018. Reported cocaine use in the past month, however, increased from 0.9 percent in 2015-2016 to 1.1 percent in 2017-2018.

Figure 6. Prevalence of substance use, New York State, 2015-2016 to 2017-2018

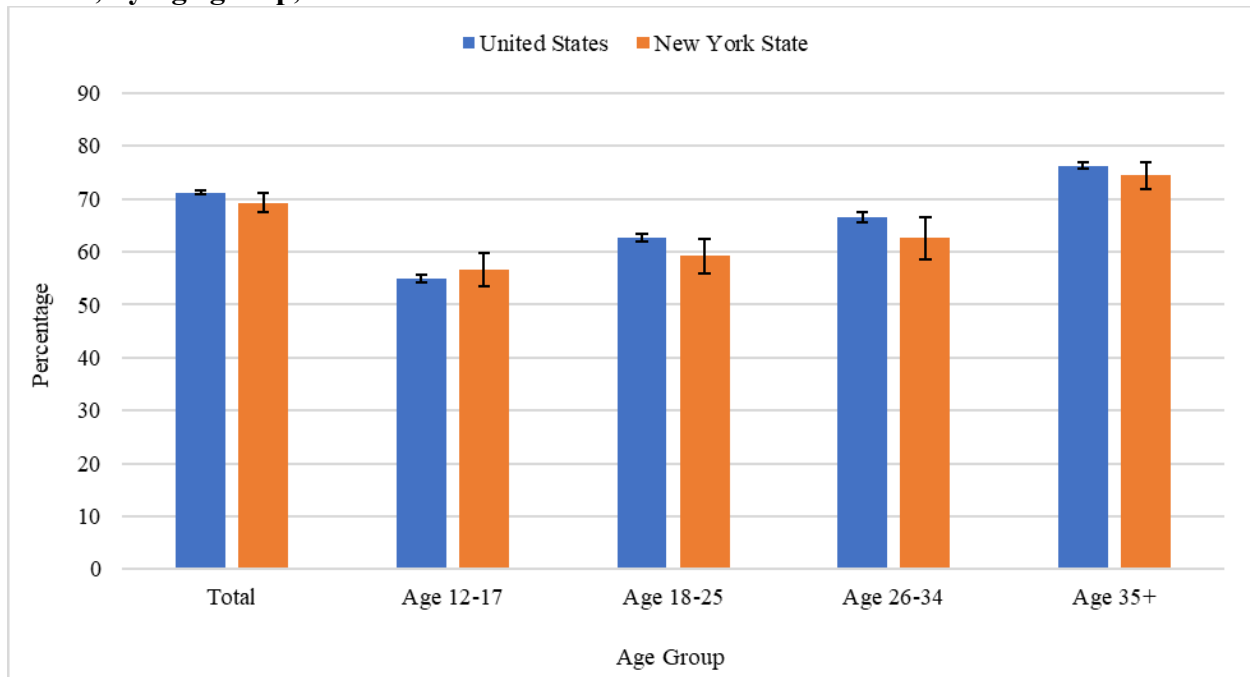


Data source: National Survey on Drug Use and Health (NSDUH); Accessed June 2020
 For complete data, see [Data Table 6, Appendix, page 20](#).

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During 2017-2018, 69.3 percent of the population aged 12 years and older in NYS and 71.2 percent of the population aged 12 years and older in the US reported perceiving great risk from using cocaine once a month (Figure 7). The percentage was highest among those aged 35 years and older (74.5 percent in NYS, 76.3 percent in the US), followed by the 26-34 year-old age group (62.7 percent in NYS, 66.5 percent in the US), and the 18-25 year-old age group (59.2 percent in NYS, 62.7 percent in the US). Those aged 12-17 years had the lowest prevalence of perceiving great risk from using cocaine once a month (56.6 percent in NYS, 55.0 percent in the US).

Figure 7. Percentage of population who perceived great risk from using cocaine once a month, by age group, 2017-2018

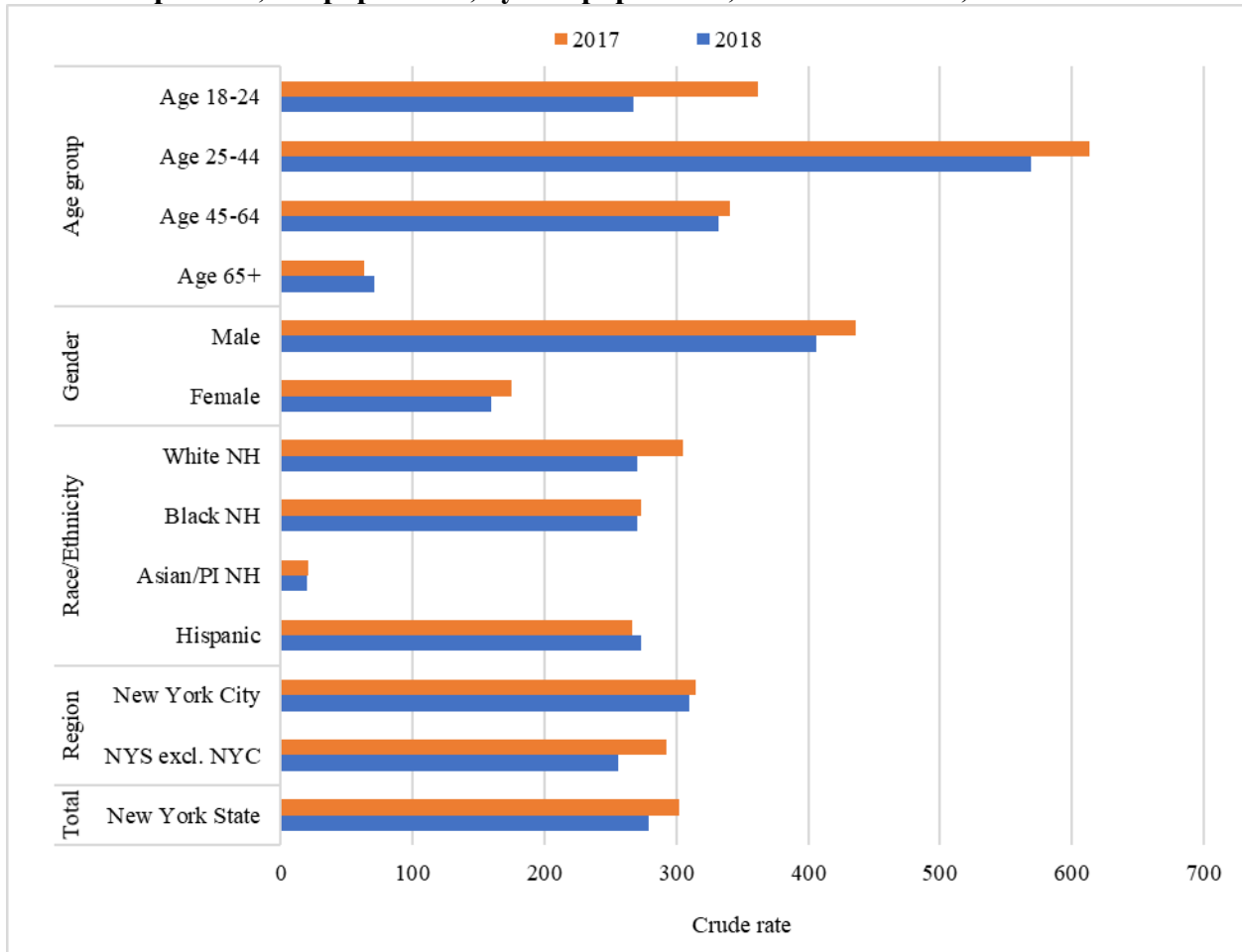


Data source: National Survey on Drug Use and Health (NSDUH); Accessed June 2020
For complete data, see [Data Table 7, Appendix, page 20](#).

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Among NYS residents, the number of opioid burden events (including opioid overdose deaths, non-fatal outpatient ED visits and hospital discharges involving opioid overdose, abuse, dependence and unspecified use) decreased from 59,132 in 2017 to 54,602 in 2018 and the crude rate per 100,000 population decreased from 301.8 to 279.4 (Figure 8). In 2018, the rate was highest among the 25-44 year-old age group (568.7 per 100,000), followed by the rates among the 45-64 year-old age group (331.8 per 100,000) and the 18-24 year-old age group (267.7 per 100,000). The rate was two and a half times higher among males (406.4 per 100,000) than that among females (159.5 per 100,000). The rate in 2018 was highest among Hispanic individuals (273.1 per 100,000), followed by the rates among Black non-Hispanic (NH) individuals (270.4 per 100,000) and White NH individuals (270.0 per 100,000). In 2017, however, the rate was highest among White NH individuals (304.9 per 100,000), followed by the rates among Black NH individuals (273.5 per 100,000) and Hispanic individuals (266.3 per 100,000). New York City (NYC) had a higher rate in 2018 (310.2 per 100,000) than NYS excluding NYC (256.2 per 100,000).

Figure 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 sub-population, New York State, 2017 and 2018

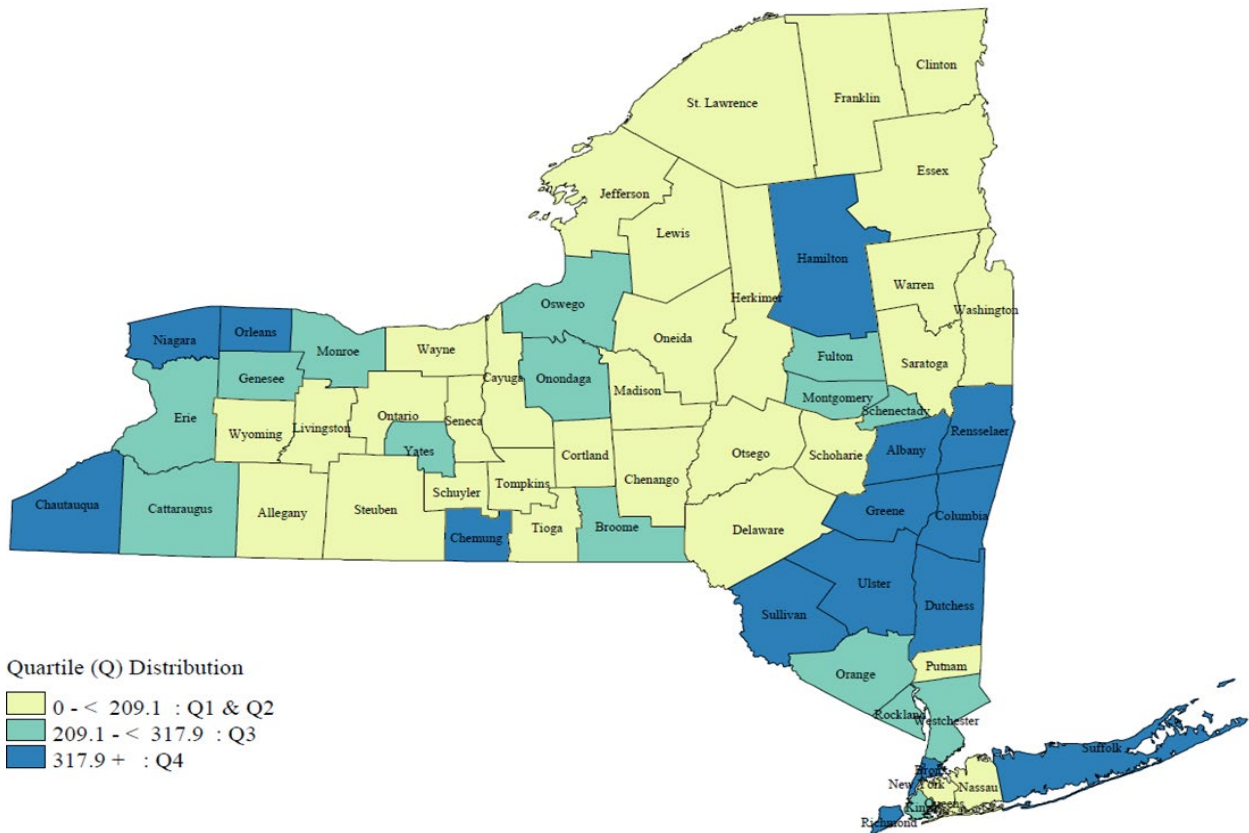


Data source: CDC WONDER, accessed June 2020; New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of January 2021
 For complete data, see [Data Table 8, Appendix, page 21](#).

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In 2018, the 16 counties with opioid burden (including opioid overdose deaths, non-fatal outpatient ED visits and hospital discharges involving opioid overdose, abuse, dependence and unspecified use) in the highest quartile (crude rates greater than or equal to 317.9 per 100,000 population) were, in descending order: Bronx, Chautauqua, Ulster, Sullivan, Dutchess, Richmond, Greene, Rensselaer, New York, Orleans, Chemung, Columbia, Hamilton, Albany, Suffolk, and Niagara (Figure 9).

Figure 9. 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, 2018

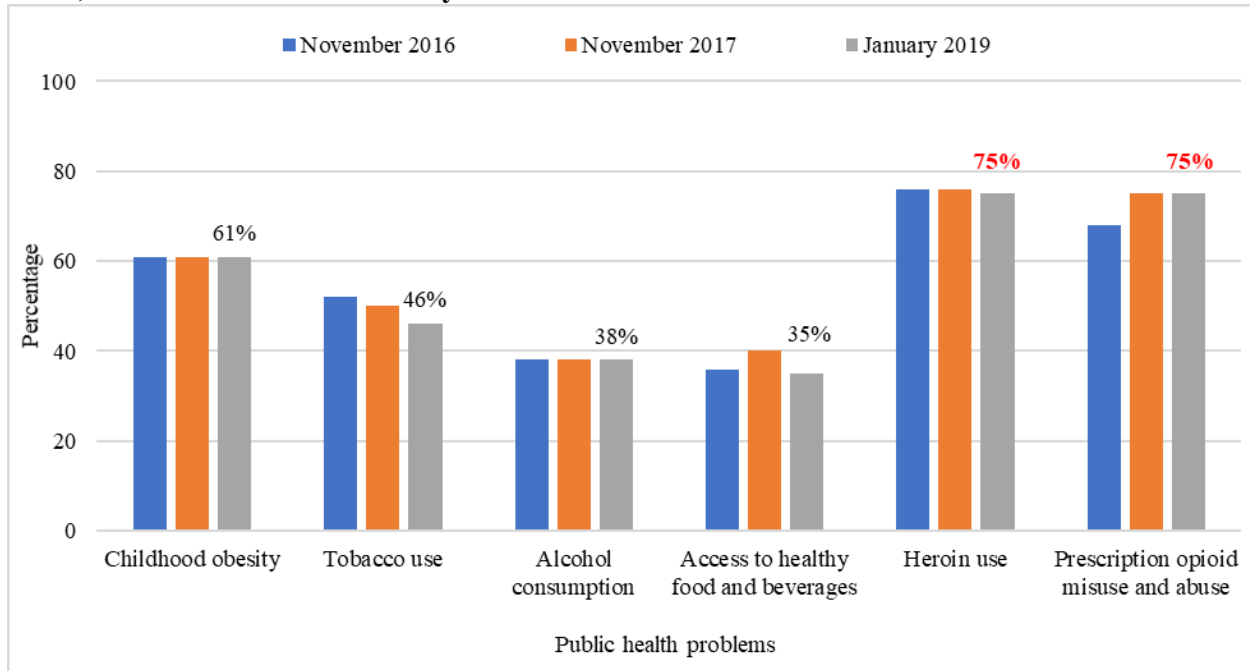


Data sources: NYS excl. NYC death data from New York State Department of Health, Bureau of Vital Statistics, as of July 2020; NYC death data from CDC WONDER, accessed June 2020; ED Visits and Hospital Discharges from New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS), as of January 2021. For complete data, see [Data Table 9, Appendix, page 22](#).

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The Siena College Research Institute administers an annual telephone survey of adult residents of the state of New York on behalf of the NYSDOH. This survey aims to examine the general public’s beliefs about public health issues and to assess public support for priority policies in chronic disease prevention and control. In NYS, reported attitudes about heroin use and prescription opioid misuse indicate an awareness of the risk of overdose involving opioids. In the most recent survey, approximately 75 percent of New Yorkers reported that they consider prescription opioid misuse and abuse to be a “very serious” public health problem. Similarly, about 75 percent of New Yorkers consider heroin use to be a “very serious” public health problem (Figure 10). These were the highest percentages when compared to respondents’ perceptions of “very serious” problems regarding other areas of public health concern. Perception of opioids as a serious public health problem is not restricted to a single geographic region of NYS. Across the state, most New Yorkers surveyed reported that they consider heroin use and prescription opioid misuse and abuse to be a “very serious public health problem.” Compared to the percentage of New Yorkers who consider other issues to be “very serious” public health problems, a greater percentage of New Yorkers consider heroin use and prescription opioid misuse and abuse to be a “very serious” public health problem.

Figure 10. Perceptions of public health problems as “Very Serious” by adults in New York State, November 2016 – January 2019



Data source: New York State Department of Health/Siena College Research Institute, New York State Chronic Disease Public Opinion Poll; Accessed February 2019

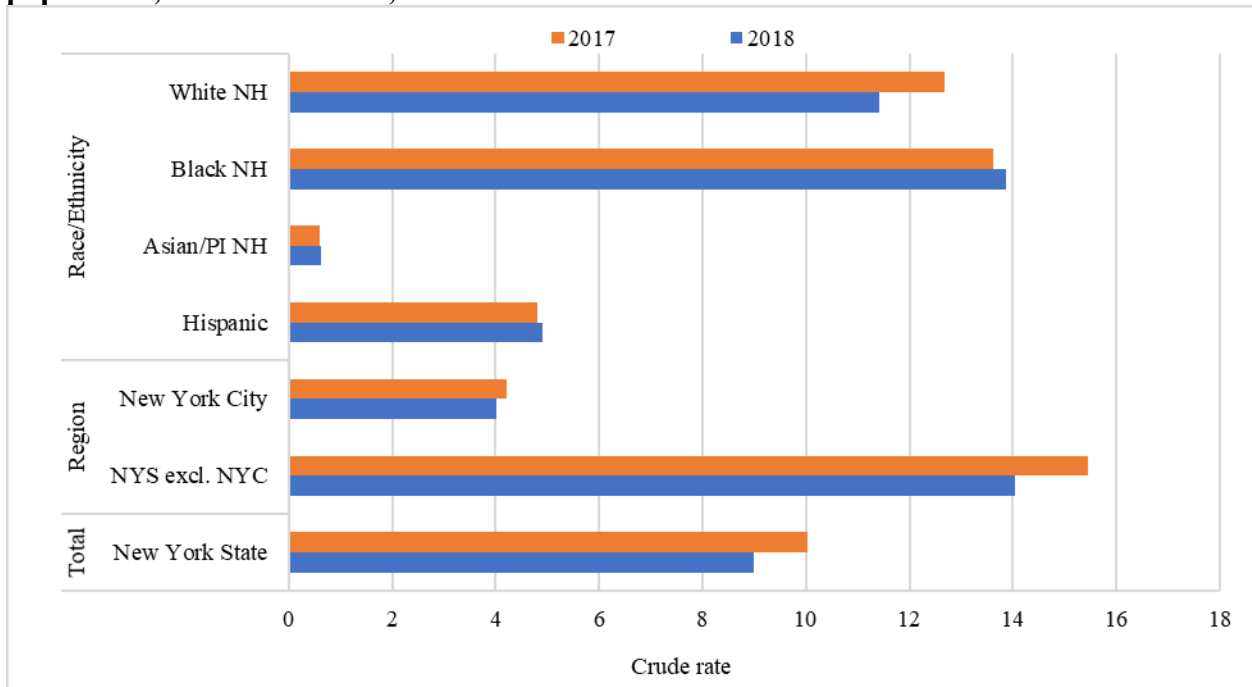
For complete data, see [Data Table 10, Appendix, page 24](#).

3.2.1 - Neonatal Abstinence Syndrome

The prevalence of Neonatal Abstinence Syndrome (NAS) emphasizes the need for targeted interventions aimed at expanding access to various treatment options and other related services for pregnant women struggling with OUD. In response, the NYS Perinatal Quality Collaborative has joined with the American College of Obstetricians and Gynecologists District II (ACOG), Healthcare Association of NYS, Greater New York Hospital Association, and National Institute for Children’s Health Quality to work with 17 pilot site birthing hospitals through a quality improvement learning collaborative, the NYS OUD in Pregnancy and NAS Project. This project is part of the national Alliance for Innovation on Maternal Health program, led by the national ACOG, and seeks to improve the identification and management of women with OUD during pregnancy and the identification, standardization of therapy, and coordination of aftercare of infants with NAS. More information regarding the project can be found at www.nyspqc.org.

Among NYS residents, the number of newborns with NAS and/or affected by maternal use of drugs of addiction decreased from 2,103 in 2017 to 1,731 in 2018, and the crude rate per 1,000 newborn discharges decreased from 10.0 to 9.0 (Figure 11). In 2018, the rate was highest among Black NH newborns (13.9 per 1,000), followed by rates among White NH (11.4 per 1,000) and Hispanic newborns (4.9 per 1,000). The rate for NYS excluding NYC (14.0 per 1,000) was three and a half times higher than NYC (4.0 per 1,000). It is important to note that research on the long-term effects of neonatal withdrawal syndrome on developmental outcomes are limited.¹⁶

Figure 11. Newborns with neonatal abstinence syndrome and/or affected by maternal use of drugs of addiction, crude rate per 1,000 newborn discharges (any diagnosis), by sub-population, New York State, 2017 and 2018



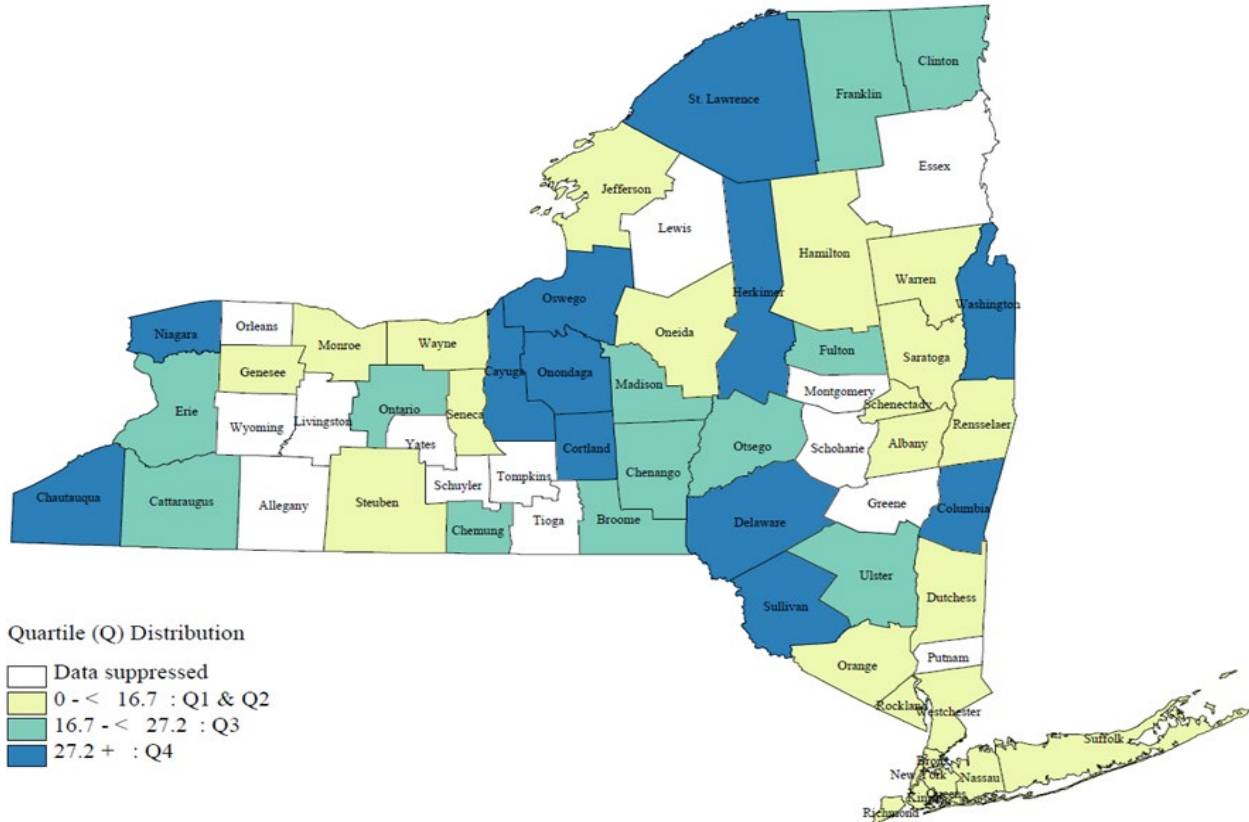
Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of January 2021.

For complete data, see [Data Table 11, Appendix, page 24](#).

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In 2018, the 12 counties in the highest quartile (crude rates greater than or equal to 27.2 per 1,000 newborn discharges) for newborns with NAS and/or affected by maternal use of drugs of addiction were, in descending order, Cortland, Sullivan, Oswego, St. Lawrence, Niagara, Onondaga, Chautauqua, Cayuga, Washington, Delaware, Herkimer, and Columbia (Figure 12).

Figure 12. Newborns with neonatal abstinence syndrome and/or affected by maternal use of drugs of addiction, crude rate per 1,000 newborn discharges (any diagnosis), by county, New York State, 2018



Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of January 2021. For complete data, see [Data Table 12, Appendix, page 25](#).

4 - OPIOID-RELATED OVERDOSE DATA IN NYS

The NYSDOH has initiated several surveillance activities to further understand opioid poisoning prevalence and mortality. An interagency opioid surveillance workgroup to coordinate data sources and indicators to monitor and address opioid overdoses has been formed. The NYSDOH has led this effort, and established an opioid data core team to analyze all available databases, and incorporate results into comprehensive surveillance data reports and a dashboard for distribution to appropriate audiences. As a result of these ongoing efforts, local communities are better informed of opioid trends within their areas, and officials are empowered to respond as needed. In accordance with the recommendations of the NYS Heroin and Opioid Task Force and 2016 legislation, the NYSDOH Opioid Prevention Program’s surveillance team provided opioid overdose quarterly data (deaths, ED visits, and hospitalizations) by county in the first quarterly report released and made available on the opioid website in October 2016. To date, multiple quarterly reports and annual reports have been published on the NYSDOH Opioid Data website: <https://health.ny.gov/statistics/opioid>. Each quarter, in addition to being posted on the Opioid Data website, these reports are emailed to county officials, including 57 county health departments, county executives, NYC borough presidents, and the NYC Department of Health and Mental Hygiene. Recent reports were also disseminated to the state and local law enforcement agencies in the state. The NYS Opioid Data Dashboard – an interactive visual presentation of indicators tracking opioid data at state, county, and sub-county levels – has been launched at: <https://www.health.ny.gov/opioiddashboard>.

Most of the data provided through the Opioid Data website are also used throughout this 2020 Annual Opioid Report to provide a comprehensive description of the opioid burden in NYS, highlight early impacts of prevention initiatives, and indicate gaps and challenges for future directions and improvement.

4.1 - Opioid Overdose Mortality

The confirmation and recording of opioid-related deaths are often delayed due to factors such as pending toxicology test results and ongoing challenges to coroner and medical examiner capacity. Because NYS has a decentralized coroner/medical examiner system, there is no standardized approach for ascertaining the cause of death, including which toxicology tests to conduct. As a result, there is variation in the information available with respect to specific substances involved. This may impact the ability to identify the extent of the public health problem. This epidemic has contributed to a shortfall of funding for conducting autopsies and toxicology tests deemed necessary for the appropriate identification of substances involved in deaths. This may result in misidentification or lack of identification of deaths caused by an opioid overdose. The county of death, available resources, and whether the case is investigated by a coroner or medical examiner will impact the extent of the toxicology testing conducted. This means that some counties may be able to test for novel substances such as fentanyl analogs, while other counties may rely on private laboratories for testing or law enforcement forensic reports to confirm the substance. Concurrent with the opioid epidemic is a national suicide epidemic. Intentionality of drug overdoses (including the use of other substances in conjunction

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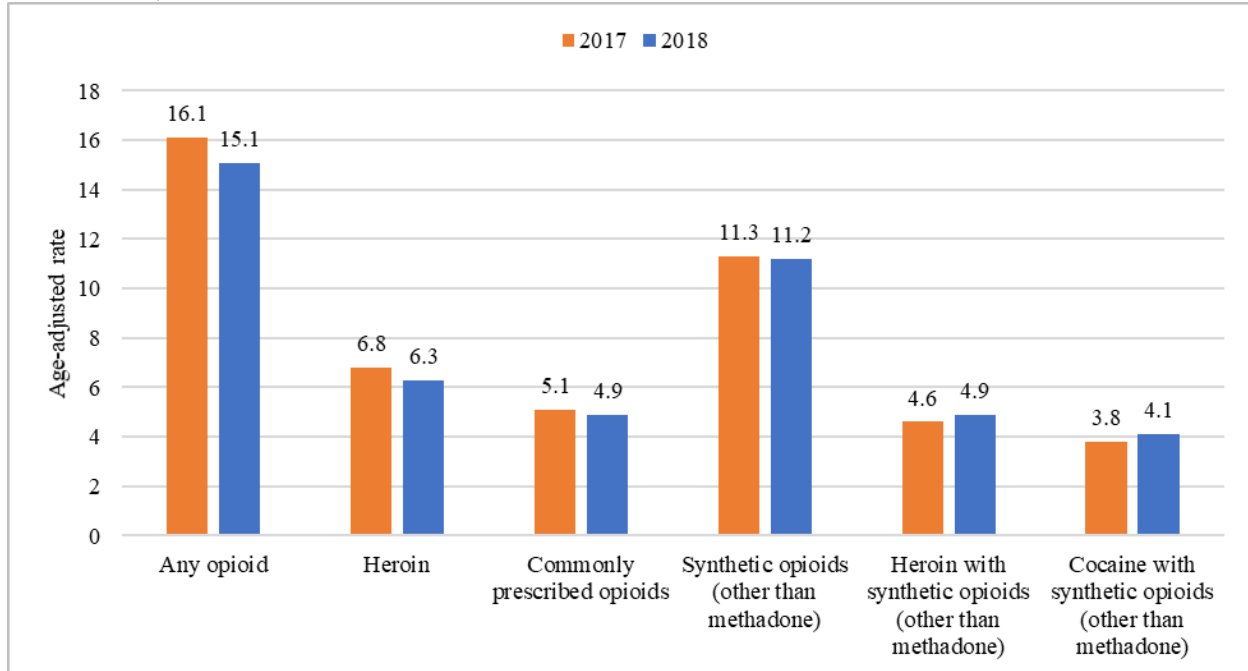
with opioids) is difficult to define, and it is unknown how many suicides may be misclassified as drug overdoses. All drug overdoses, regardless of intent, are included in this report.

Fentanyl is a potent synthetic opioid with medical uses; as such, it is classified in the International Classification of Disease, Tenth Revision (ICD-10) category “synthetic opioids (other than methadone)” (SOOTM) under ICD-10 code T40.4, along with other synthetic opioid analgesics, such as tramadol. Fentanyl is 50-100 times more potent than morphine.¹⁷ Prescription fentanyl is primarily prescribed to manage acute and chronic pain associated with advanced cancer. Non-pharmaceutical grade fentanyl is illicitly manufactured. Illegal fentanyl is often mixed with heroin or cocaine, and has also been identified in counterfeit pills, formed to look like oxycodone and other prescription medications.¹⁸ Because it is not possible to distinguish illicit fentanyl from medically administered fentanyl in postmortem toxicology testing, all fentanyl-related deaths are classified in the same way – as “synthetic opioids (other than methadone)” (SOOTM) – and are assigned ICD-10 code T40.4. Due to the potency of these substances, multiple doses of naloxone, a drug that can reverse the effects of an opioid overdose, are often required to revive individuals who have overdosed on fentanyl or fentanyl analogs.

In NYS, the age-adjusted rate of overdose deaths involving any opioid (15.1 per 100,000 population in 2018) was largely comprised of deaths involving SOOTM. The rate of overdose deaths involving SOOTM fell by 0.88 percent from 2017 to 2018 (11.3 per 100,000 and 11.2 per 100,000, respectively) (Figure 13). According to death certificate data reported to the NYSDOH, an overwhelming majority of these deaths involved fentanyl.^{4,19} In light of this, the category that includes fentanyl (ICD-10 code T40.4) is shown separately from other commonly prescribed opioids (ICD-10 codes T40.2 and T40.3), such as hydrocodone and oxycodone. Compared to 2017, the age-adjusted rate of overdose death per 100,000 population decreased in 2018 for both heroin (7 percent) and commonly prescribed opioids (4 percent).

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Figure 13. Overdose deaths, age-adjusted rate per 100,000 population, by substance, New York State, 2017 and 2018



Multiple cause of death ICD-10 definitions: Any opioids – T40.0 (Opium), T40.1 (Heroin), T40.2 (Other opioids), T40.3 (Methadone), T40.4 (Synthetic opioids (other than methadone)), T40.6 (Other and unspecified narcotics); Heroin – T40.1; Commonly prescribed opioids – T40.2, T40.3 (e.g., hydrocodone, oxycodone); Synthetic opioids (other than methadone) – T40.4; Heroin with synthetic opioids (other than methadone) – T40.1 AND T40.4; Cocaine with synthetic opioids (other than methadone) – T40.5 (cocaine) AND T40.4.

Data source: CDC WONDER; Accessed June 2020

For complete data, see [Data Table 13, Appendix, page 27](#).

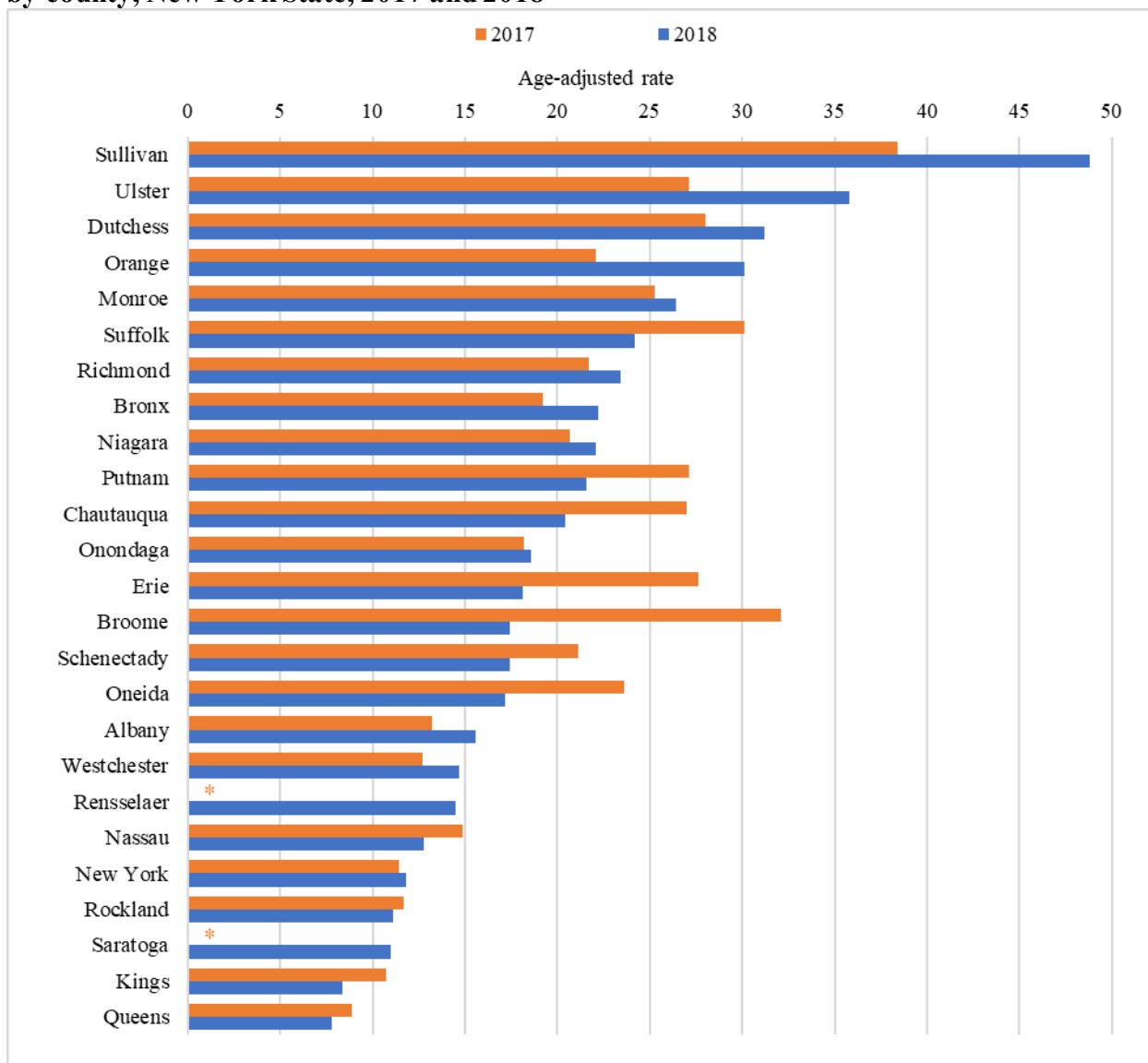
Categories of opioids and other substances involved in overdose deaths are not mutually exclusive, as a death can involve multiple substances (Figure 13). Between 2017 and 2018, the age-adjusted rate of overdose deaths involving heroin with SOOTM increased by 6.5 percent, from a rate of 4.6 per 100,000 population to 4.9 per 100,000 population. A similar pattern was observed for deaths involving cocaine with SOOTM, with the rate increasing by 7.9 percent from 3.8 per 100,000 in 2017 to 4.1 per 100,000 in 2018.

It is also important to note that although there have been increases in the number of overdose deaths involving opioids with cocaine, some of the observed increase has likely been due to raised awareness of opioid overdoses, improvements in technology and resources for toxicological testing, and improved cause-of-death reporting.

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In NYS during 2018, the age-adjusted rate per 100,000 population for overdose deaths involving any opioid was highest in Sullivan County (48.8 per 100,000) (Figure 14). Among counties with 20 or more overdose deaths involving any opioid in 2018, the ten counties with the highest age-adjusted rates were located in the Mid-Hudson (Sullivan, Ulster, Dutchess, Orange, Putnam), Finger Lakes (Monroe), Long Island (Suffolk), NYC (Richmond, Bronx), and Western NY (Niagara) regions.

Figure 14. Overdose deaths involving any opioid, age-adjusted rate per 100,000 population, by county, New York State, 2017 and 2018



*: Rates are unreliable for years with fewer than 20 deaths.

Note: For counties with fewer than 10 deaths in a year, rates are not shown for that year.

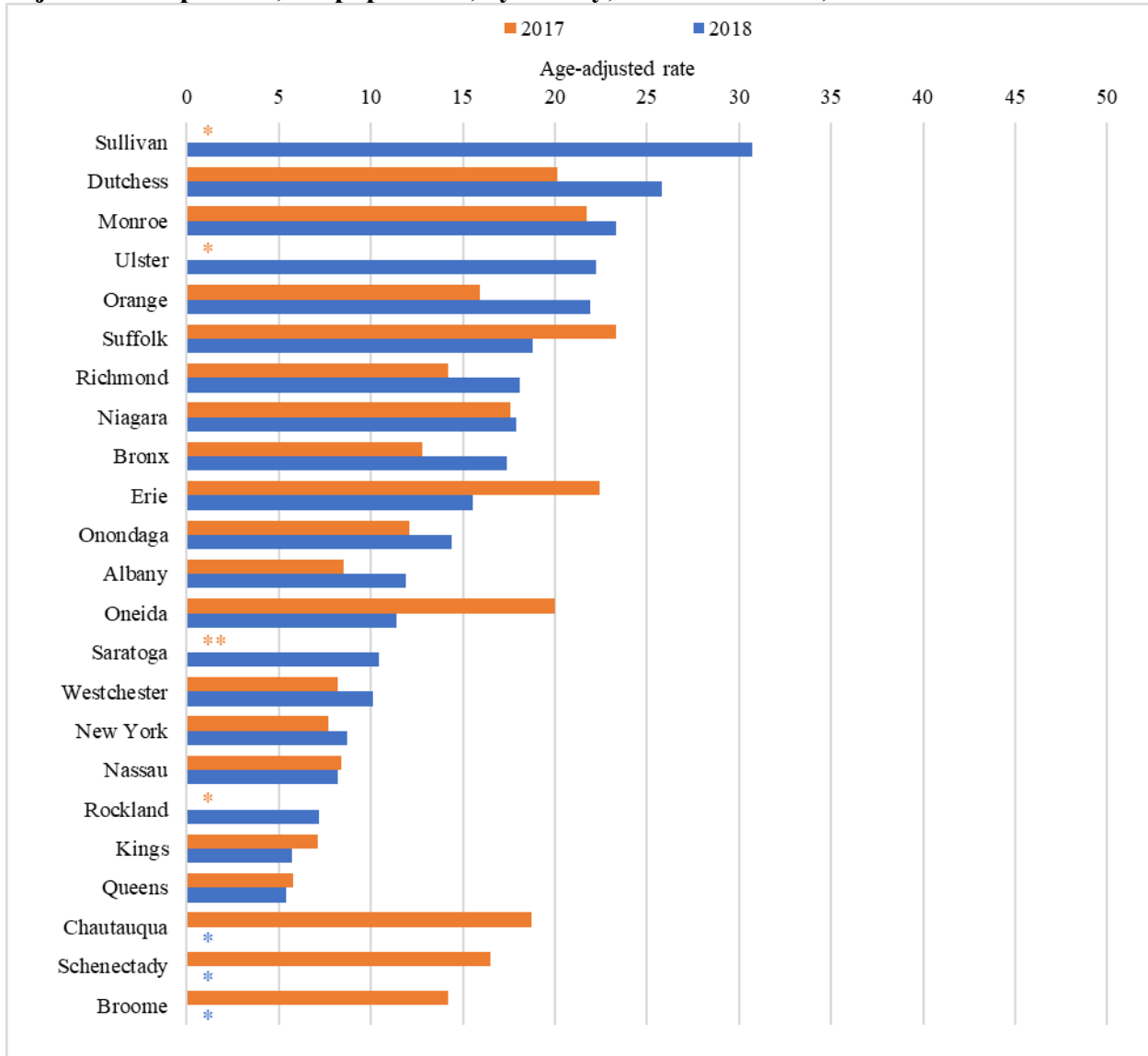
Data source: CDC WONDER; Accessed June 2020

For county data on overdose deaths involving any opioid, see [Data Table 14, Appendix, page 28](#).

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In NYS during 2018, the age-adjusted rate per 100,000 population for overdose deaths involving SOOTM was highest in Sullivan County (30.7 per 100,000) (Figure 15). Among counties with 20 or more overdose deaths involving SOOTM in 2018, the ten counties with the highest age-adjusted rates were located in the Mid-Hudson (Sullivan, Dutchess, Ulster, Orange), Finger Lakes (Monroe), Long Island (Suffolk), NYC (Richmond, Bronx), and Western NY (Niagara, Erie) regions.

Figure 15. Overdose deaths involving synthetic opioids (other than methadone)[^], age-adjusted rate per 100,000 population, by county, New York State, 2017 and 2018



[^]Synthetic opioids other than methadone (SOOTM) are identified by ICD-10 code T40.4 and serve as a proxy for fentanyl, which is a highly potent opioid now commonly found in the illicit drug market.

*: Rates are unreliable for years with fewer than 20 deaths.

** : For counties with fewer than 10 deaths in a year, rates are not shown for that year.

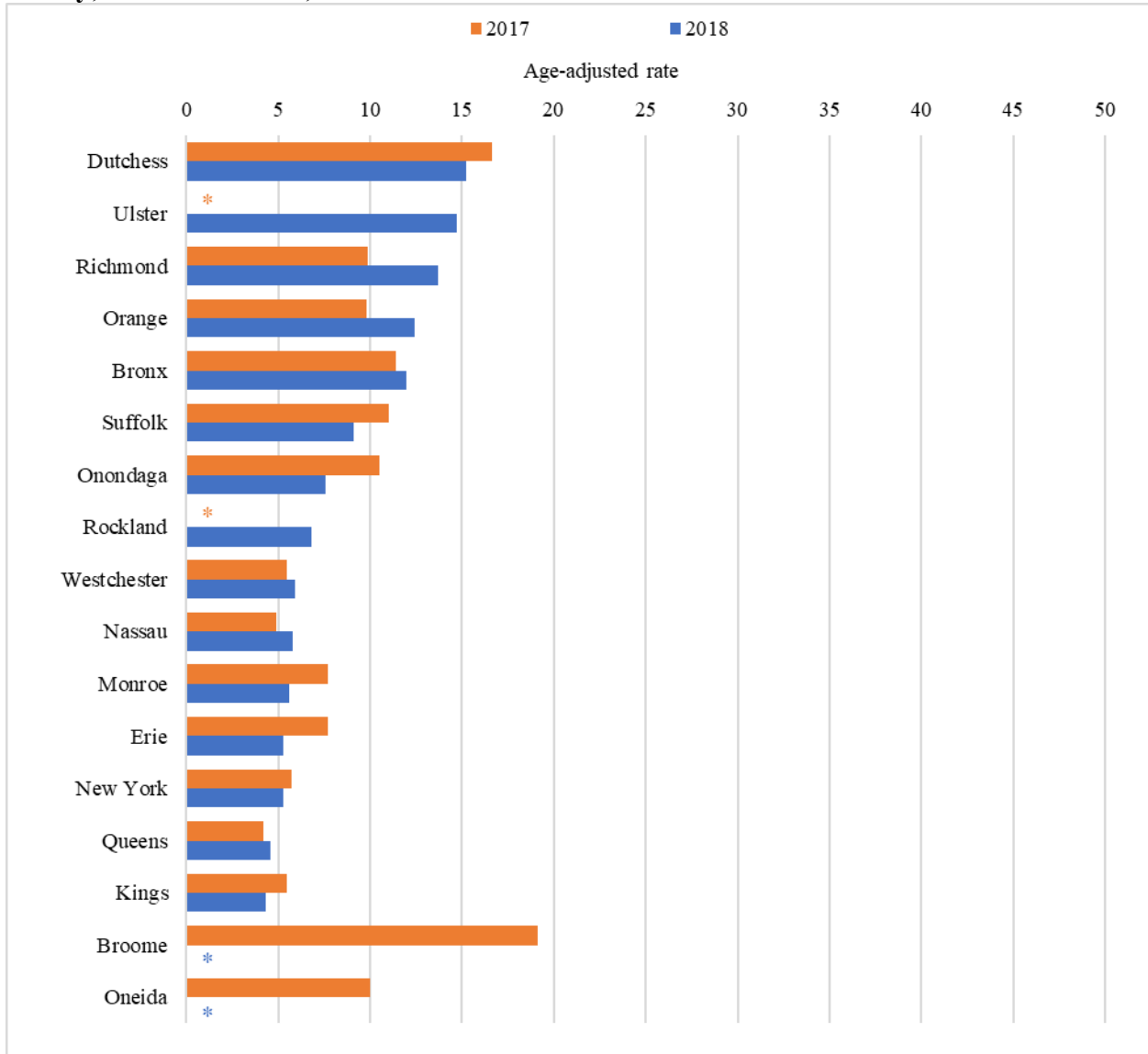
Data source: CDC WONDER; Accessed June 2020

For county data on overdose deaths involving synthetic opioids other than methadone, see [Data Table 15, Appendix, page 30](#).

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In NYS during 2018, the age-adjusted rate per 100,000 population for overdose deaths involving heroin was highest in Dutchess County (15.2 per 100,000) (Figure 16). Among counties with 20 or more overdose deaths involving heroin in 2018, the ten counties with the highest age-adjusted rates were located in the Mid-Hudson (Dutchess, Ulster, Orange, Rockland, Westchester), NYC (Richmond, Bronx), Long Island (Suffolk, Nassau), and Central NY (Onondaga) regions.

Figure 16. Overdose deaths involving heroin, age-adjusted rate per 100,000 population, by county, New York State, 2017 and 2018



*: Rates are unreliable for years with fewer than 20 deaths.

Note: For counties with fewer than 10 deaths in a year, rates are not shown for that year.

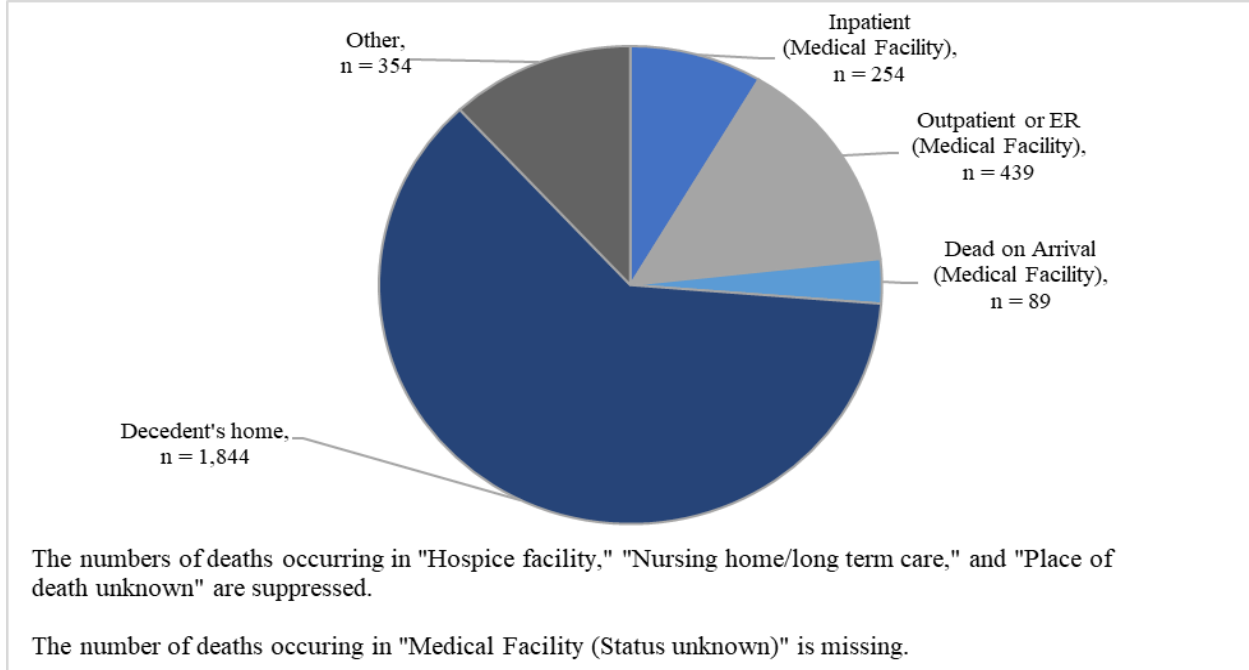
Data source: CDC WONDER; Accessed June 2020

For county data on overdose deaths involving heroin, see [Data Table 16, Appendix, page 32](#).

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In NYS during 2018, most overdose deaths involving any opioid occurred at the decedent's home (62 percent) (Figure 17). For overdose deaths, knowing the most common place of death can inform programmatic and policy responses.

Figure 17. Overdose deaths involving any opioid, by place of death, New York State, 2018



Data source: CDC WONDER; Accessed June 2020

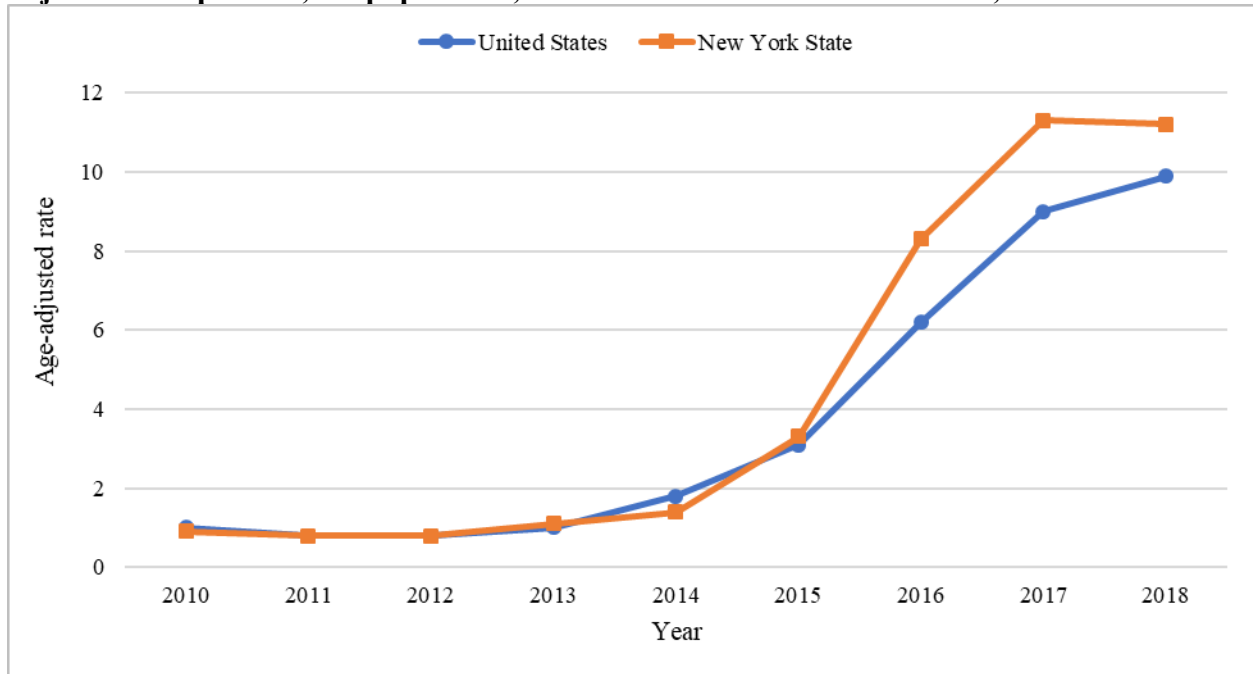
For complete data, see [Data Table 17, Appendix, page 34](#).

Substance and use trends change over time, as well. Next, this report presents long-term trends for selected substances, followed by demographic descriptions of decedents by substance type. These data help to better understand variation over time and among different populations, and can assist in public health response to the affected populations.

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The age-adjusted rates of overdose death involving SOOTM increased sharply in both NYS and the US, from 1.4 per 100,000 population in NYS and 1.8 per 100,000 in the US for 2014, to 11.3 per 100,000 in NYS and 9.0 per 100,000 in the US for 2017 (Figure 18). In 2017-2018, the NYS rate dropped by 0.88 percent to 11.2 per 100,000, coming closest to the national age-adjusted rate (9.9 per 100,000) since 2016. Though the decrease is only over one year, it marks the beginning of a departure from the national trend of fentanyl-involved overdose death, which continues to increase.²⁰

Figure 18. Overdose deaths involving synthetic opioids (other than methadone)*, age-adjusted rate per 100,000 population, New York State and United States, 2010-2018



*Synthetic opioids other than methadone (SOOTM) are identified by ICD-10 code T40.4 and serve as a proxy for fentanyl, which is a highly potent opioid now commonly found in the illicit drug market.

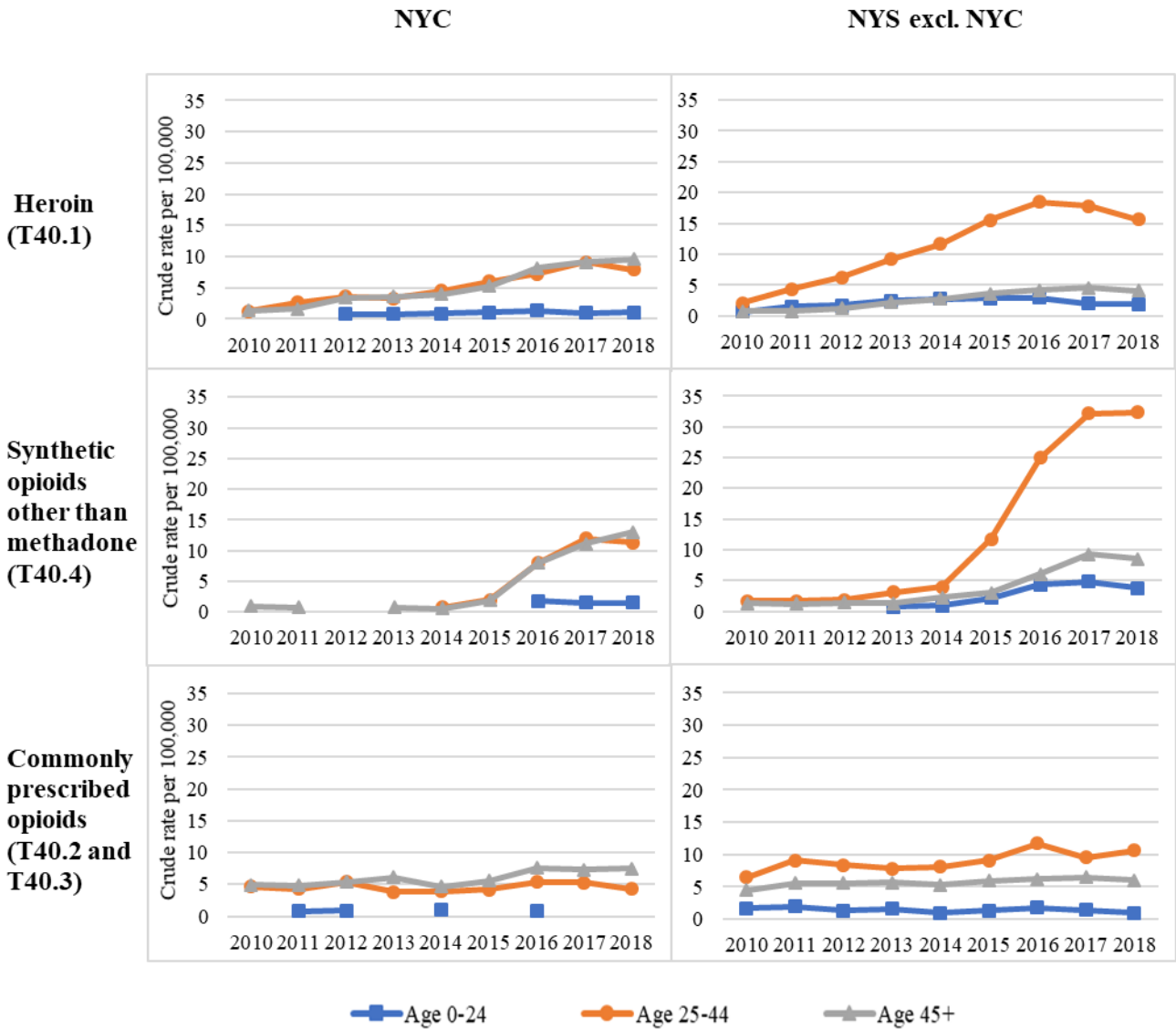
Data source: CDC WONDER; Accessed June 2020

For complete data, see [Data Table 18, Appendix, page 34](#).

Among New Yorkers aged 25-44 years, the crude rate of overdose deaths involving heroin was lower in NYC than it was in NYS excluding NYC for every year during 2010-2018 (Figure 19). In particular, the 2018 crude rate of overdose deaths involving heroin among those aged 25-44 years was almost two times higher in NYS excluding NYC (15.6 per 100,000 population) than it was in NYC (7.9 per 100,000). Similarly, among New Yorkers aged 25-44 years, the crude rate of overdose deaths involving SOOTM (primarily fentanyl) was lower in NYC than it was in NYS excluding NYC for every year during 2010-2018. The 2018 crude rate of overdose deaths involving fentanyl among those aged 25-44 years was about three times higher in NYS excluding NYC (32.4 per 100,000) than it was in NYC (11.3 per 100,000). The crude rate of overdose deaths involving commonly prescribed opioids remained steady among all age groups and across regions during 2010-2018, with the highest rates among those aged 25-44 years residing in NYS excluding NYC.

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Figure 19. Overdose deaths involving heroin (T40.1), synthetic opioids (other than methadone) (T40.4)*, and commonly prescribed opioids (T40.2 and T40.3), crude rates per 100,000, by region, year, and age group, New York State, 2010-2018



*Synthetic opioids other than methadone (SOOTM) are identified by ICD-10 code T40.4 and serve as a proxy for fentanyl, which is a highly potent opioid now commonly found in the illicit drug market.

Note: For years and age groups with fewer than 20 deaths, rates are not shown.

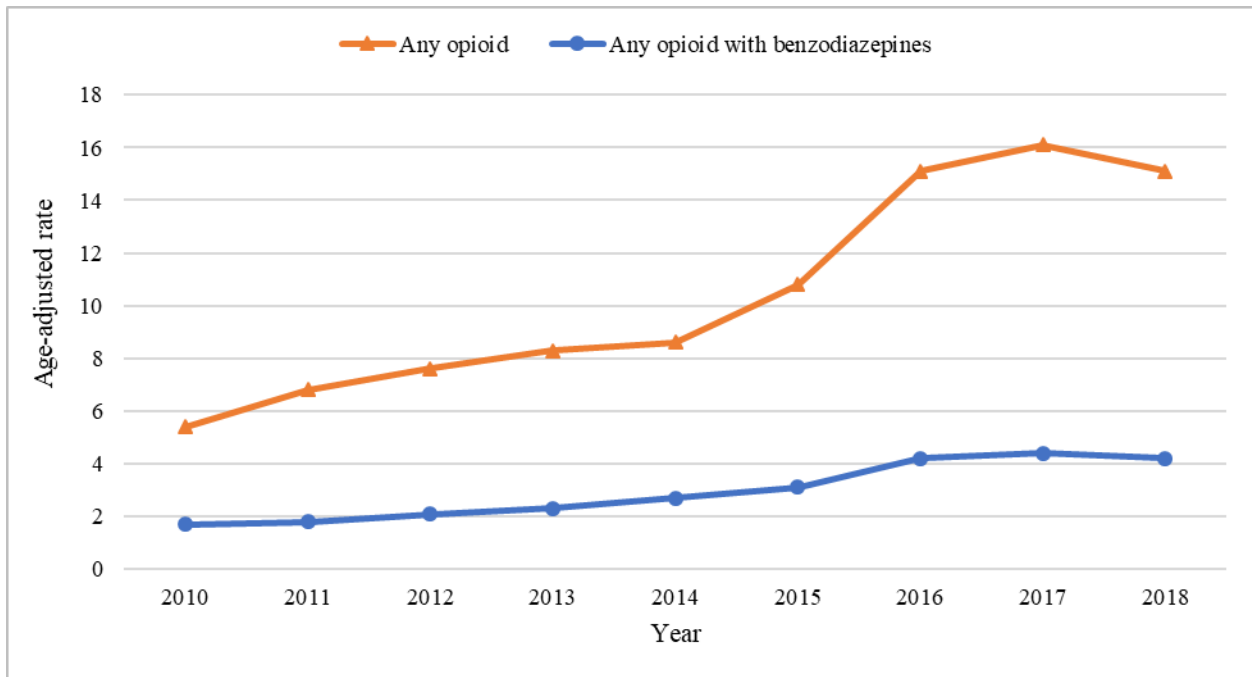
Data source: CDC WONDER; Accessed June 2020

For complete data, see [Data Table 19, Appendix, page 35](#).

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The risk of opioid overdose increases when taken in combination with benzodiazepines (e.g., Xanax® [alprazolam], Valium® [diazepam]).⁹ In NYS, the age-adjusted rate of overdose deaths involving the concurrent use of any opioids with benzodiazepines increased from 1.7 per 100,000 population in 2010 to 4.2 per 100,000 in 2018 – a smaller increase than was seen over the same period in the age-adjusted rate of overdose death involving any opioid (Figure 20). While the rate of overdose death involving any opioid with benzodiazepines is increasing more slowly than the rate of overdose death involving any opioid, it is important to monitor the involvement of other substances and to provide information to the public about the increased risk of overdose when combining opioids and other substances.

Figure 20. Overdose deaths involving any opioid and overdose deaths involving any opioid with benzodiazepines, age-adjusted rate per 100,000 population, New York State, 2010-2018



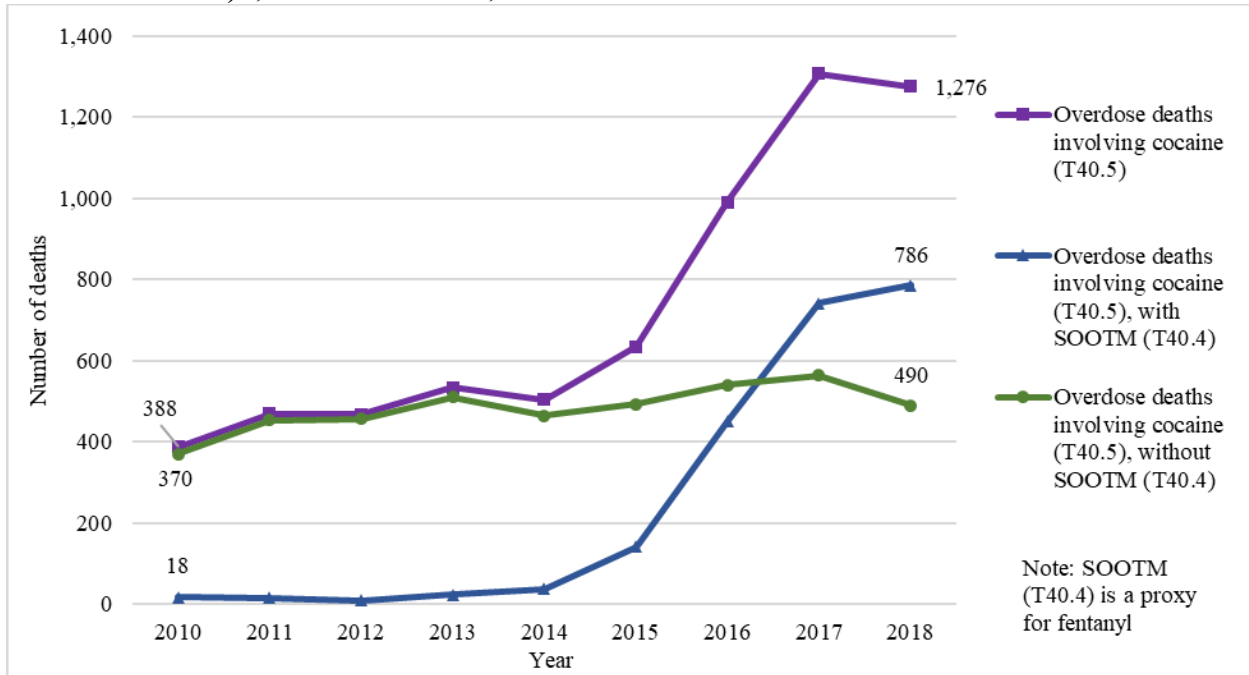
Data source: CDC WONDER; Accessed June 2020

For complete data, see [Data Table 20, Appendix, page 36](#).

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The number of overdose deaths involving cocaine in NYS increased by 237 percent from 388 in 2010 to 1,306 in 2017, then decreased by 2.3 percent between 2017 and 2018 to 1,276 (Figure 21). The sharp increase since 2012 was largely driven by the involvement of SOOTM (ICD-10 code T40.4), predominantly illicit fentanyl.¹⁸ The number of overdose deaths involving cocaine without SOOTM increased by 52 percent, from 370 deaths in 2010 to 564 deaths in 2017, and decreased to 490 deaths in 2018. However, the number of overdose deaths involving cocaine *with* SOOTM increased by 768 deaths over the same period, marking a 4,267 percent increase since 2010.

Figure 21. Overdose deaths involving cocaine with and without synthetic opioids (other than methadone)*, New York State, 2010-2018



*Synthetic opioids other than methadone (SOOTM) are identified by ICD-10 code T40.4 and serve as a proxy for fentanyl, which is a highly potent opioid now commonly found in the illicit drug market.

Note: Cocaine overdose is identified by ICD-10 code T40.5.

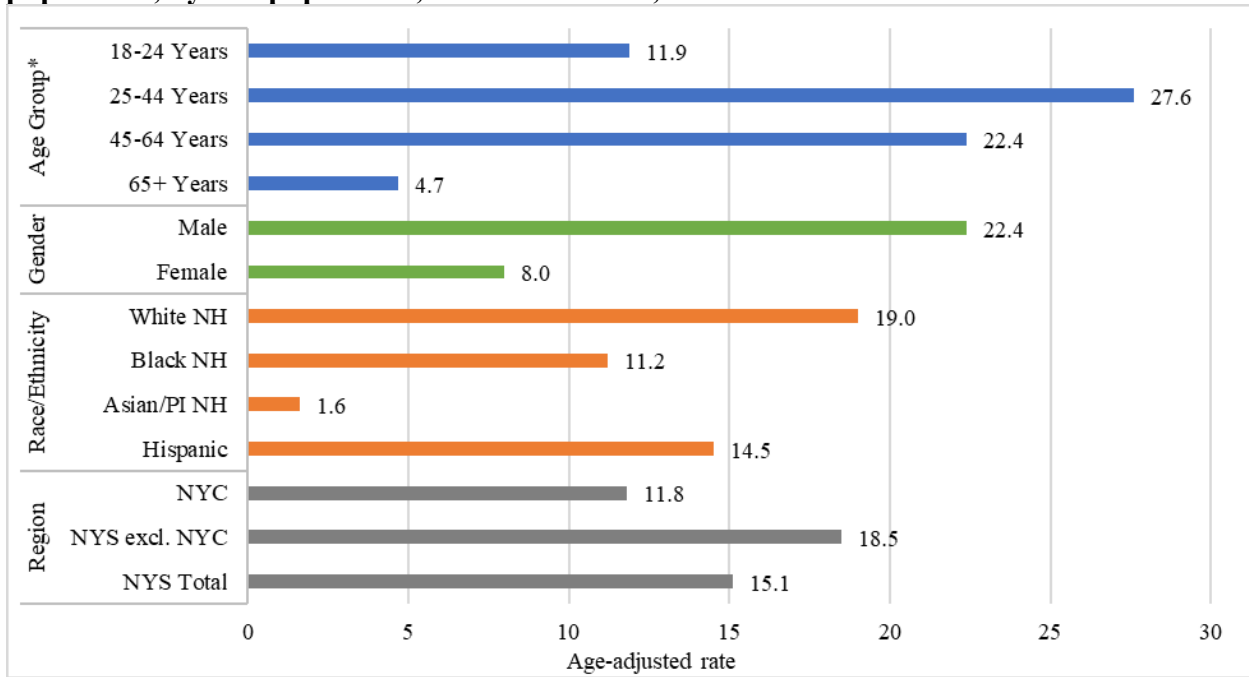
Data source: CDC WONDER; Accessed June 2020

For complete data, see [Data Table 21, Appendix, page 36](#).

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In NYS during 2018, the crude rates of overdose death involving any opioid were highest among those aged 25-44 years (27.6 per 100,000 population) and 45-64 years (22.4 per 100,000) (Figure 22). The age-adjusted rates of overdose death involving any opioid were highest among males (22.4 per 100,000), White non-Hispanics (19.0 per 100,000), and residents of NYS excluding NYC (18.5 per 100,000).

Figure 22. Overdose deaths involving any opioid, age-adjusted* rates per 100,000 population, by sub-population, New York State, 2018



*Age groups show crude rates.

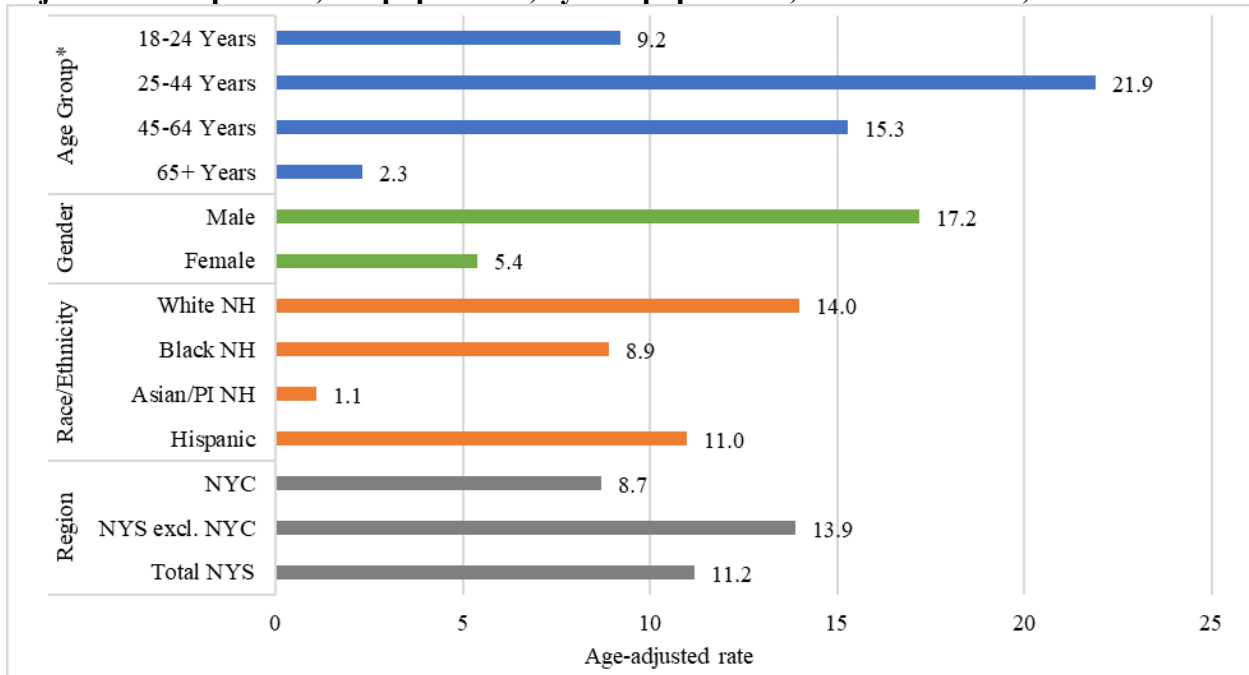
Data source: CDC WONDER; Accessed June 2020

For complete data, see [Data Table 22, Appendix, page 37](#).

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In NYS during 2018, the crude rates of overdose death involving SOOTM were highest among those aged 25-44 years (21.9 per 100,000 population) and 45-64 years (15.3 per 100,000) (Figure 23). The age-adjusted rates of overdose death involving SOOTM were highest among males (17.2 per 100,000), White non-Hispanics (14.0 per 100,000), and residents of NYS excluding NYC (13.9 per 100,000).

Figure 23. Overdose deaths involving synthetic opioids (other than methadone), age-adjusted* rate per 100,000 population, by sub-population, New York State, 2018**



*Age groups show crude rates.

**Synthetic opioids other than methadone (SOOTM) are identified by ICD-10 code T40.4 and serve as a proxy for fentanyl, which is a highly potent opioid now commonly found in the illicit drug market.

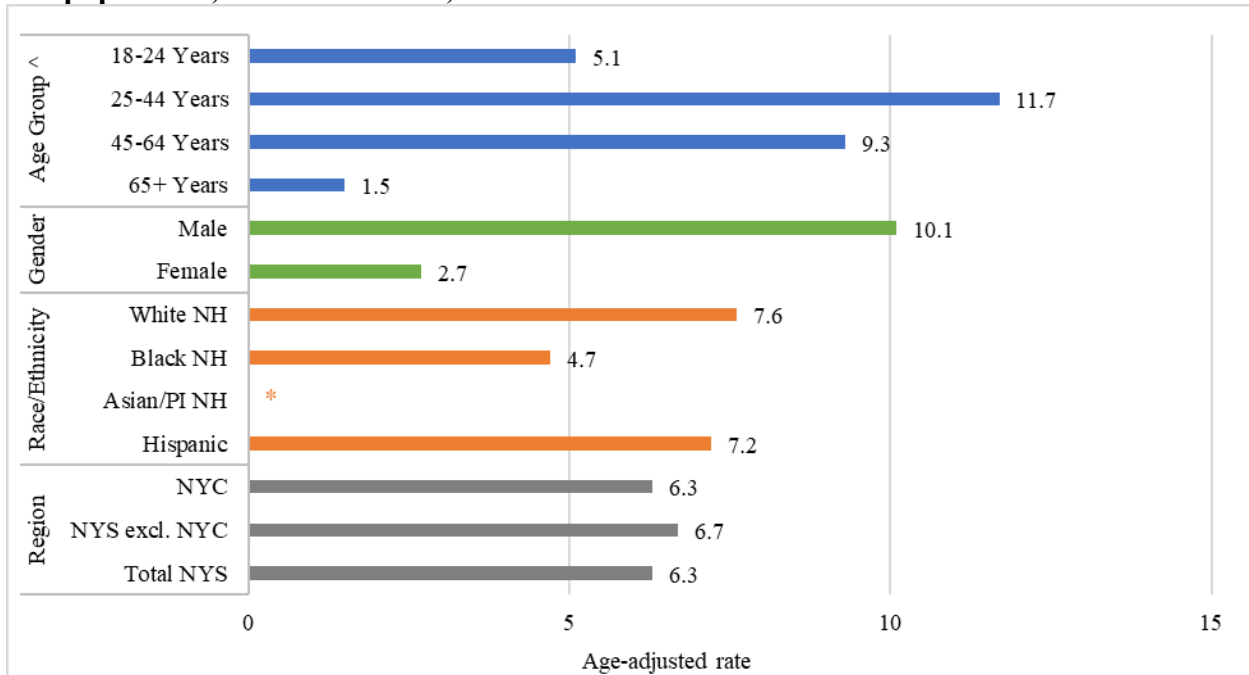
Data source: CDC WONDER; Accessed June 2020

For complete data, see [Data Table 23, Appendix, page 38](#).

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In NYS during 2018, the crude rates of overdose death involving heroin were highest among those aged 25-44 years (11.7 per 100,000 population) and 45-64 years (9.3 per 100,000) (Figure 24). The age-adjusted rates of overdose death involving heroin were highest among males (10.1 per 100,000), White non-Hispanics (7.6 per 100,000), Hispanics (7.2 per 100,000) and residents of NYS excluding NYC (6.7 per 100,000).

Figure 24. Overdose deaths involving heroin, age-adjusted[^] rate per 100,000 population, by sub-population, New York State, 2018



[^]Age groups show crude rates.

*: Rates are unreliable for death counts fewer than 20.

Data source: CDC WONDER; Accessed June 2020

For complete data, see [Data Table 24, Appendix, page 39](#).

4.2 - Opioid Overdose Morbidity

Hospitals, through both ED visits and inpatient admissions, play an important role in the treatment of drug poisoning, and they also see many individuals who are at risk for opioid overdoses. Information for ED visits and hospitalizations is obtained from the Statewide Planning and Research Cooperative System (SPARCS) database.

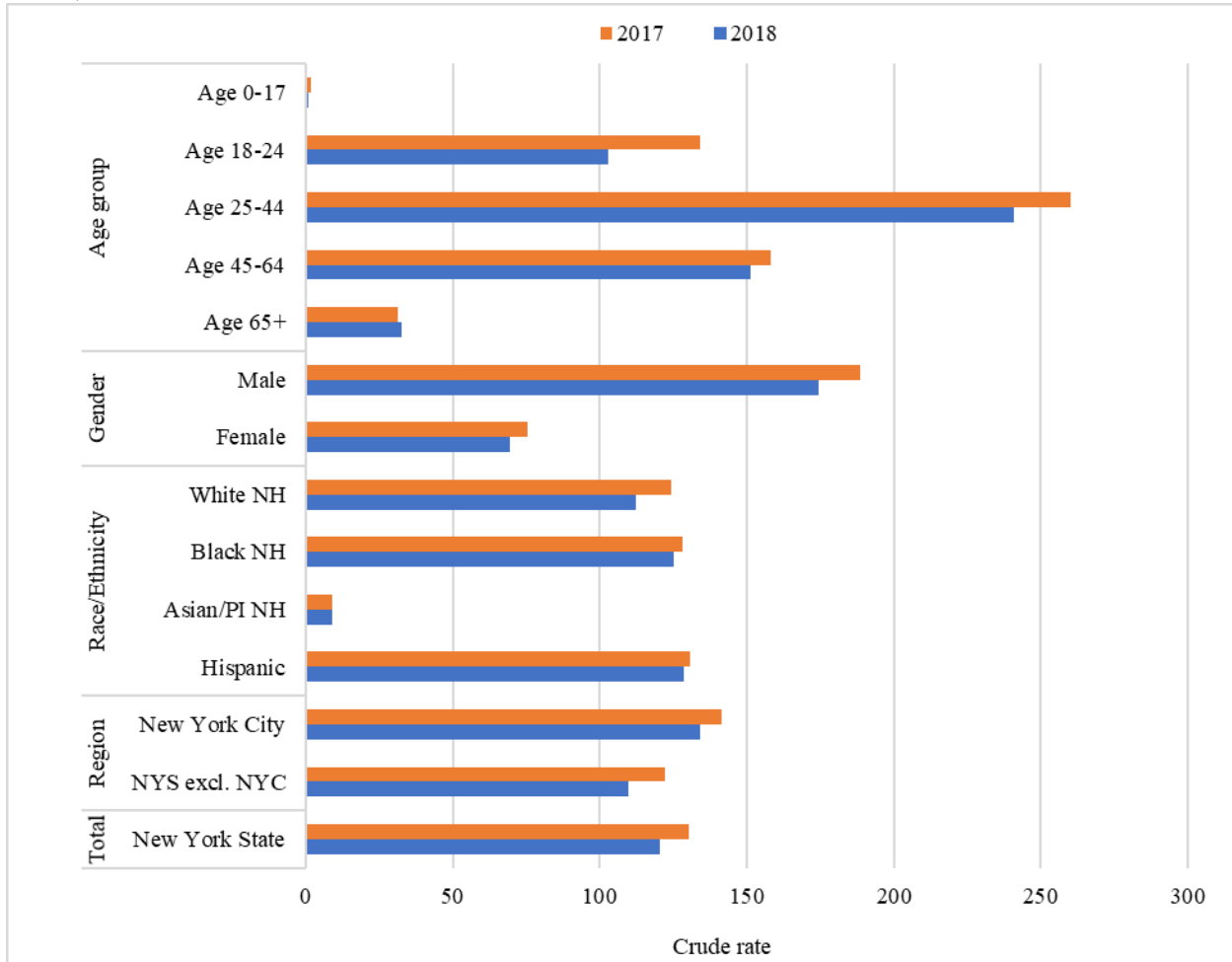
Morbidity indicators are based on diagnosis codes (International Classification of Diseases, Ninth Revision, Clinical Modification, or ICD-9-CM, codes prior to October 1, 2015 and International Classification of Diseases, Tenth Revision, Clinical Modification, or ICD-10-CM, on/after October 1, 2015) reported in the data by the EDs and hospital facilities, and are limited by the quality of reporting and coding by the facilities. The indicators are defined based on the principal diagnosis code or first-listed, valid, external cause of injury code only. The change from the ICD-9-CM to ICD-10-CM coding system has caused inconsistency in defining measures over time for opioid overdose, dependency and abuse. For some measures, definitions using ICD-10-CM codes tend to generate lower counts than definitions using the previous ICD-9-CM codes. This impacts the ability to compare burden over time, especially during the transitioning period between the two ICD-coding systems.

4.2.1 - Hospital Discharges

Among NYS residents, the number of hospital discharges for opioid use (including overdose, abuse, dependence and unspecified use) decreased from 25,535 in 2017 to 23,514 in 2018, and the crude rate per 100,000 population decreased from 130.3 to 120.3 (Figure 25). In 2018, the rate was highest among the 25-44 year-old age group (240.7 per 100,000), followed by the rates among the 45-64 year-old age group (151.1 per 100,000) and the 18-24 year-old age group (103.0 per 100,000). The rate among males (174.4 per 100,000) was two and a half times higher than that among females (69.3 per 100,000). The rate was highest among Hispanic individuals (128.6 per 100,000), followed by the rates among Black NH individuals (125.0 per 100,000) and White NH individuals (112.4 per 100,000). NYC (134.1 per 100,000) had a higher rate than NYS excluding NYC (109.9 per 100,000).

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Figure 25. Hospital discharges involving opioid use (including overdose, abuse, dependence and unspecified use), crude rate per 100,000 population, by sub-population, New York State, 2017 and 2018



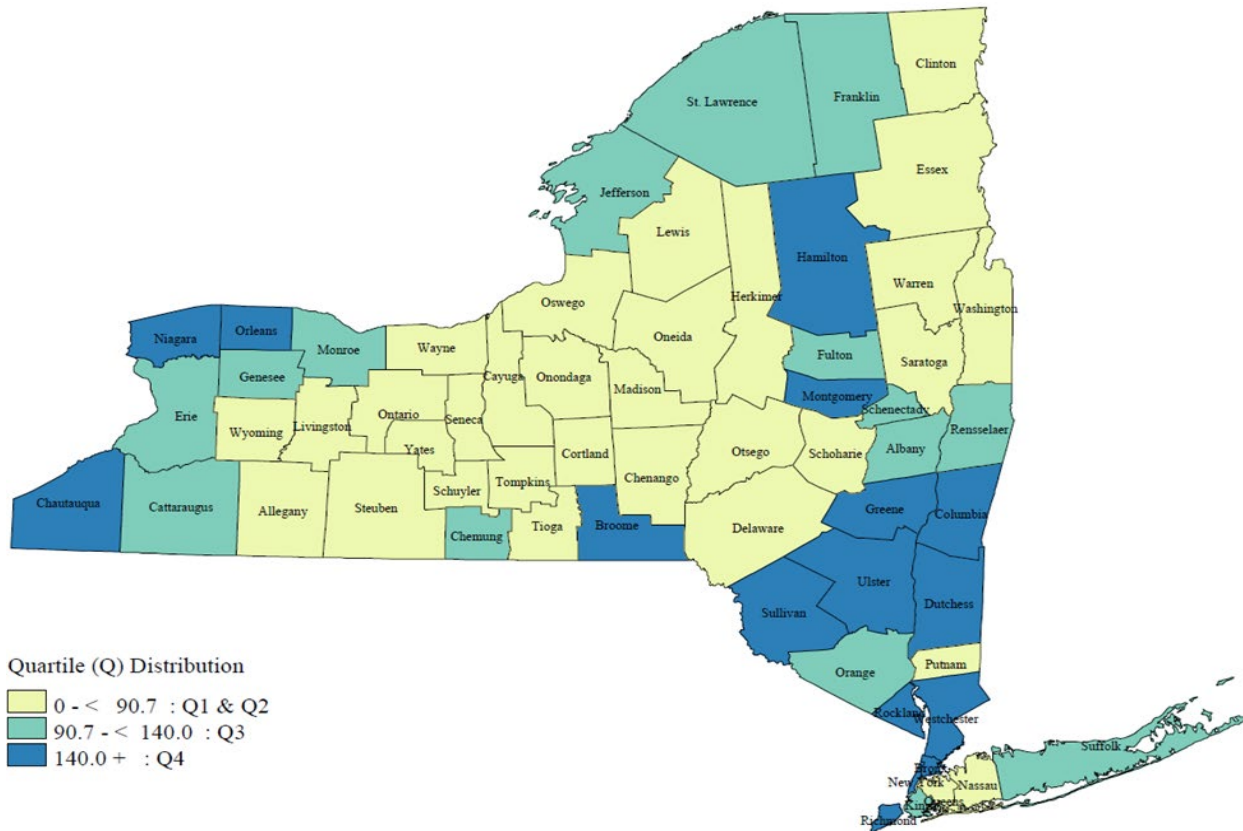
Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of January 2021

For complete data, see [Data Table 25, Appendix, page 40](#).

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The 16 counties in the highest quartile (crude rates greater than or equal to 140.0 per 100,000 population) for hospital discharges due to opioid use (including overdose, abuse, dependence and unspecified use) in 2018 included, in descending order, Chautauqua, Ulster, Bronx, Hamilton, Greene, Richmond, Dutchess, Sullivan, Montgomery, Columbia, Broome, Orleans, New York, Westchester, Niagara and Rockland (Figure 26).

Figure 26. Hospital discharges involving opioid use (including overdose, abuse, dependence and unspecified use), crude rate per 100,000 population, by county, New York State, 2018



Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of January 2021

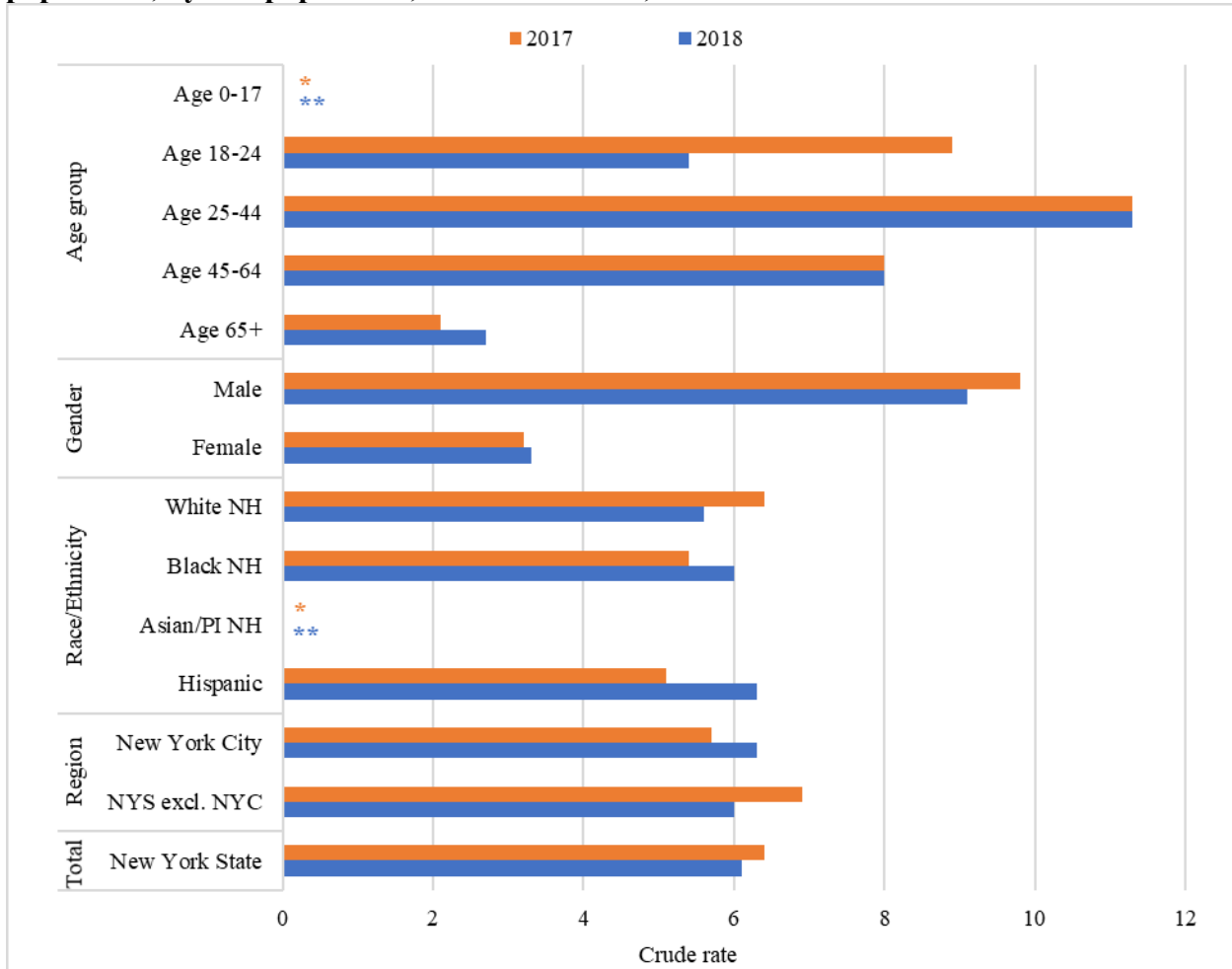
For complete data, see [Data Table 26, Appendix, page 41](#).

Among NYS residents, the number of hospital discharges involving heroin overdose decreased from 1,257 in 2017 to 1,199 in 2018, and the crude rate per 100,000 population decreased from 6.4 to 6.1 (Figure 27). In 2018, the rate was highest among the 25-44 year-old age group (11.3 per 100,000), followed by the rates among the 45-64 year-old age group (8.0 per 100,000), and the 18-24 year-old age group (5.4 per 100,000). From 2017 to 2018 there was a large reduction (39 percent) in the rates among the 18-24 year-old age group. With an exception of 28.6 percent increase among the 65+ year-old age group, the rates for the other groups remained unchanged. The 2018 rate was about three times higher among males (9.1 per 100,000) than that among females (3.3 per 100,000). The rate in 2018 was highest among Hispanic individuals (6.3 per 100,000), followed by the rates among Black NH individuals (6.0 per 100,000) and White NH individuals (5.6 per 100,000). Compared to 2017, the 2018 rates decreased among White NH

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individuals, while increasing among Black NH and Hispanic individuals. NYC, in 2018, had a higher rate (6.3 per 100,000) than NYS excluding NYC (6.0 per 100,000). In 2017, NYS excluding NYC had a higher rate (6.9 per 100,000) than NYC (5.7 per 100,000).

Figure 27. Hospital discharges involving heroin overdose, crude rate per 100,000 population, by sub-population, New York State, 2017 and 2018



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

** : Data do not meet reporting criteria.

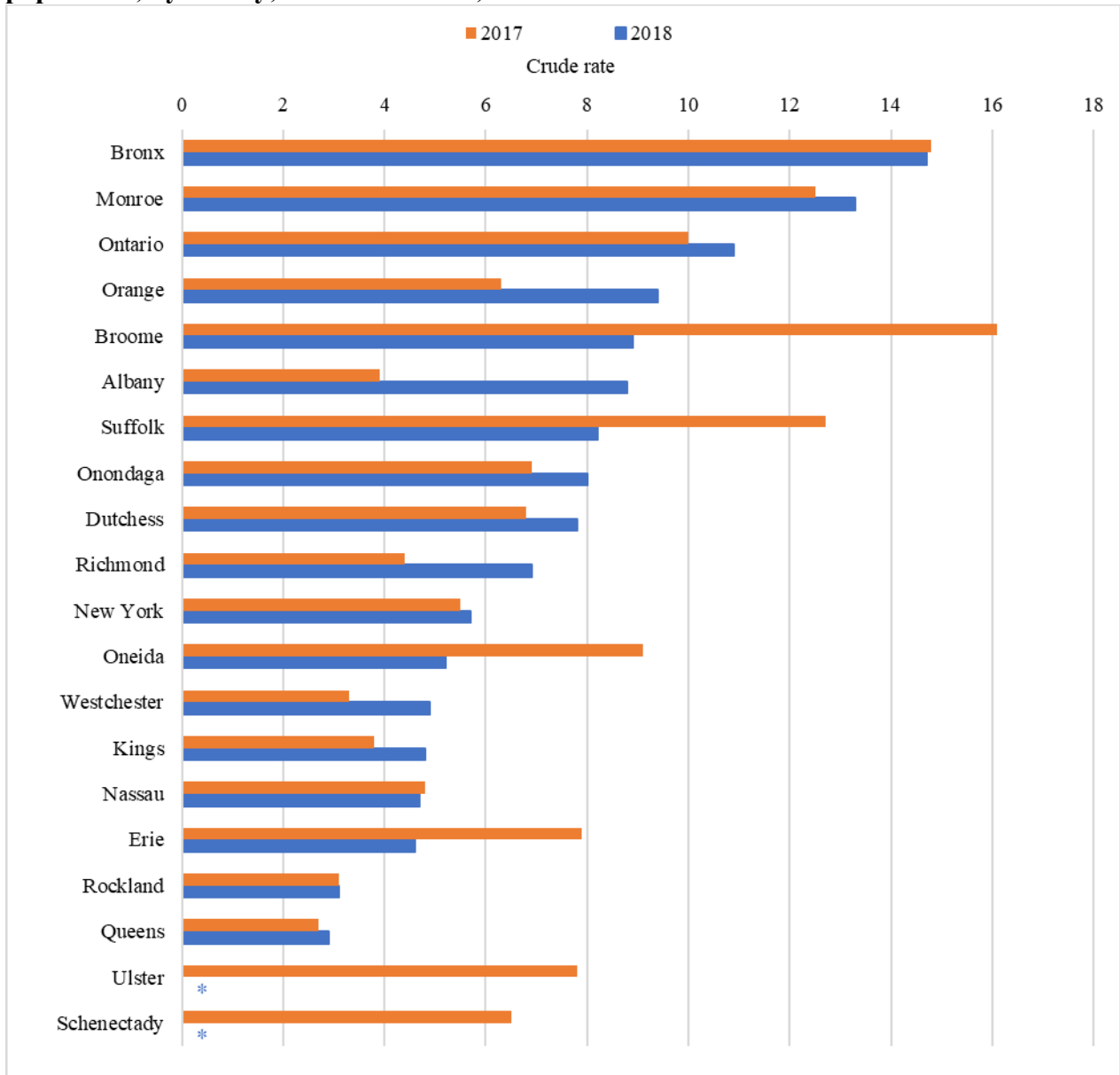
Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of January 2021

For complete data, see [Data Table 27, Appendix, page 43.](#)

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In 2018, among counties with ten or more hospital discharges involving heroin overdose, the ten counties with the highest crude rates were Bronx, Monroe, Ontario, Orange, Broome, Albany, Suffolk, Onondaga, Dutchess, and Richmond (Figure 28). There were several counties that experienced large decreases in crude rates, including Broome, Suffolk, Oneida, and Erie.

Figure 28. Hospital discharges involving heroin overdose, crude rate per 100,000 population, by county, New York State, 2017 and 2018



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

Note: For counties that do not meet reporting criteria, rates are not shown for that year.

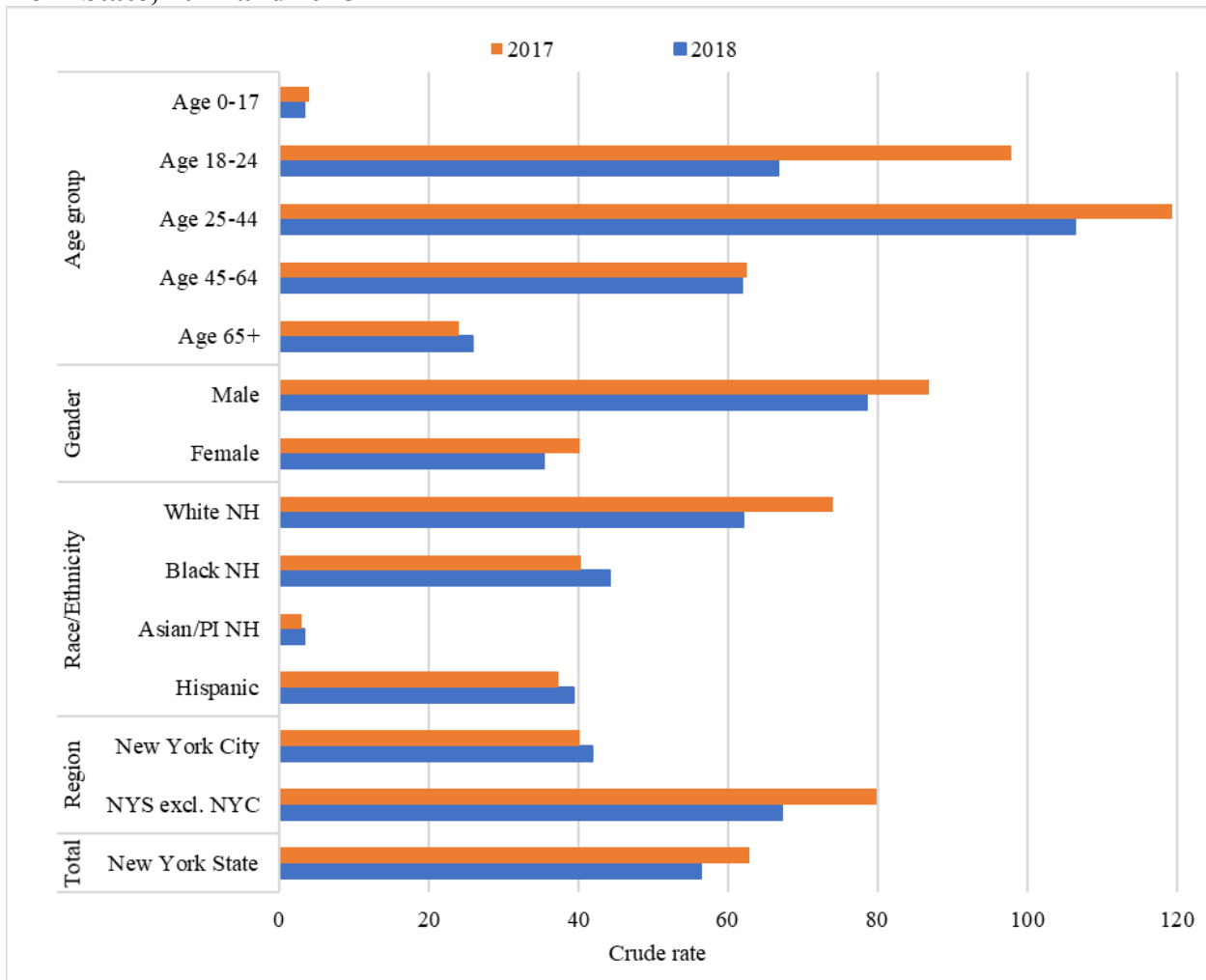
Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of January 2021

For complete data, see [Data Table 28, Appendix, page 44.](#)

4.2.2 - Emergency Department Visits

Among NYS residents, the number of all ED visits (including outpatients and admitted patients) involving any opioid overdose decreased from 12,297 in 2017 to 11,006 in 2018, and the crude rate per 100,000 decreased from 62.8 to 56.3 (Figure 29). In 2018, the rate was highest among the 25-44 year-old age group (106.4 per 100,000) followed by the rates among the 18-24 year-old age group (66.7 per 100,000), and the 45-64 year-old age group (61.9 per 100,000). The rate was more than two times higher among males (78.6 per 100,000) than that among females (35.3 per 100,000), and over one and a half times higher for NYS excluding NYC (67.2 per 100,000) than NYC (41.9 per 100,000). The rate was highest among White NH individuals (62.0 per 100,000), followed by the rates among Black NH individuals (44.1 per 100,000) and Hispanic individuals (39.3 per 100,000).

Figure 29. 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, 2017 and 2018



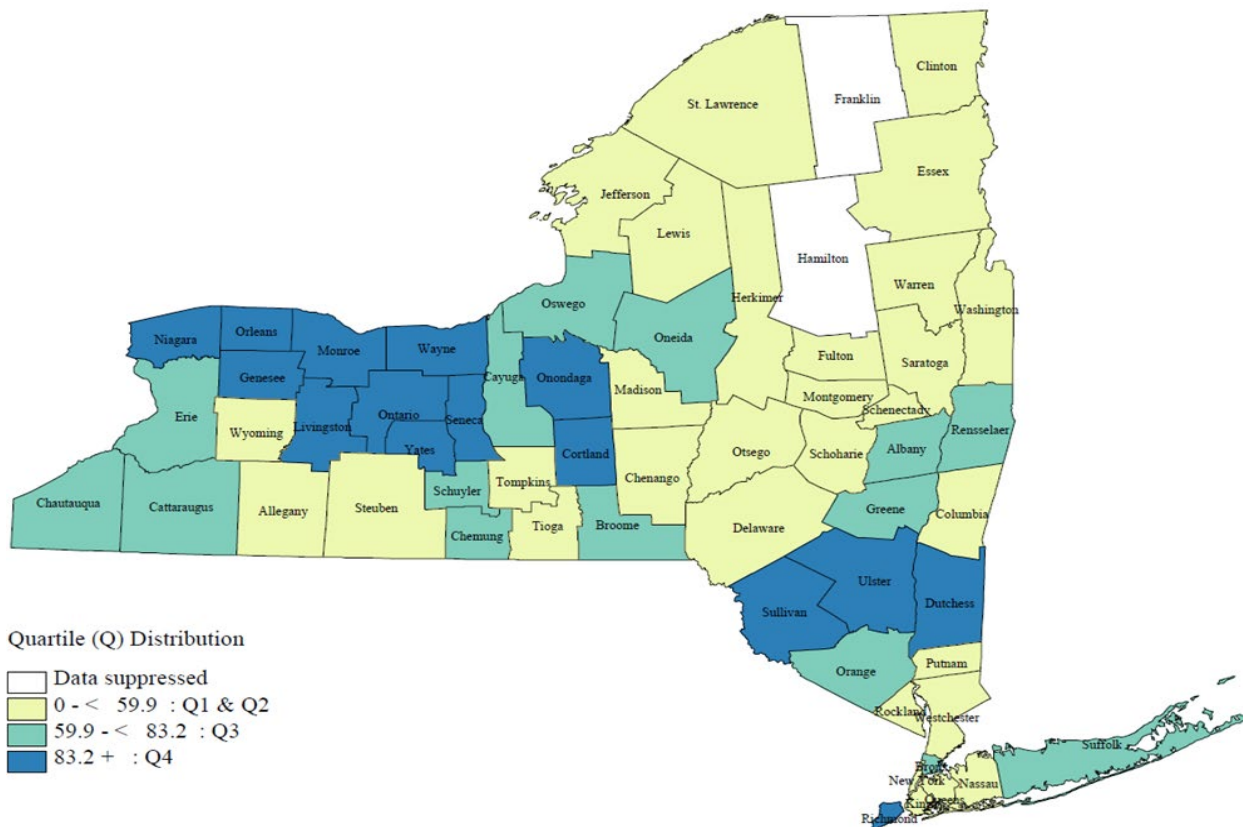
Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of January 2021

For complete data, see [Data Table 29, Appendix, page 46.](#)

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The 15 counties in the highest quartile (crude rates greater than or equal to 83.2 per 100,000 population) for ED visits due to any opioid overdose included, in descending order, Orleans, Monroe, Dutchess, Genesee, Yates, Ulster, Seneca, Sullivan, Wayne, Ontario, Niagara, Livingston, Richmond, Cortland, and Onondaga (Figure 30).

Figure 30. All emergency department visits (including outpatients and admitted patients) involving any opioid overdose, crude rate per 100,000 population, by county, New York State, 2018



Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of January 2021

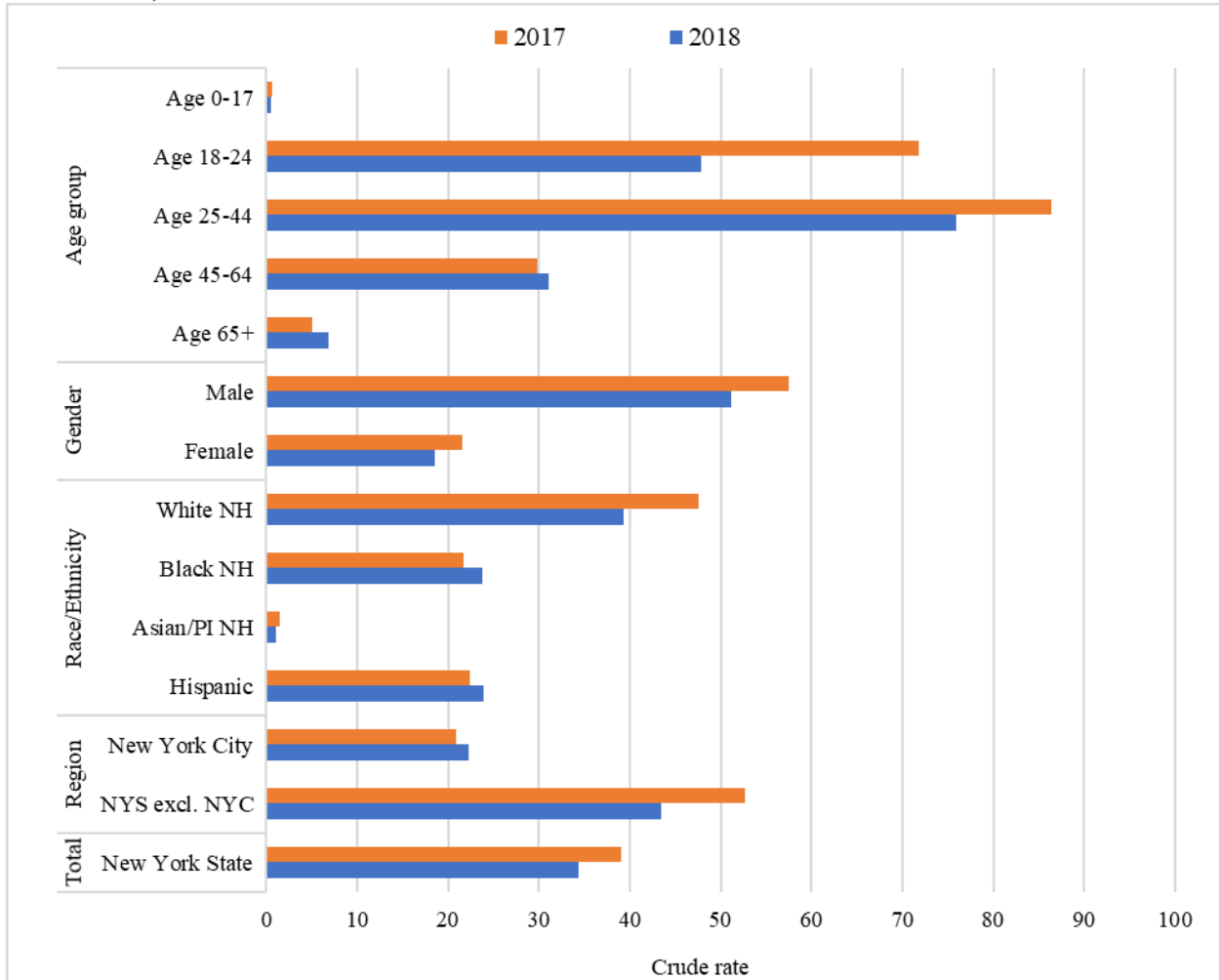
For complete data, see [Data Table 30, Appendix, page 47](#).

Among NYS residents, the number of ED visits (including outpatients and admitted patients) involving any heroin overdose decreased from 7,634 in 2017 to 6,727 in 2018, a 12 percent decline (Figure 31). The crude rate per 100,000 population decreased from 39.0 to 34.4. In 2018, the rate was highest among the 25-44 year-old age group (75.9 per 100,000), followed by the rates among the 18-24 year-old age group (47.9 per 100,000) and the 45-64 year-old age group (31.0 per 100,000). The rate was more than two and a half times higher for males (51.2 per 100,000) than that for females (18.6 per 100,000). The rate was highest among White NH individuals (39.3 per 100,000), followed by the rates for Hispanic individuals (23.9 per 100,000)

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and Black NH individuals (23.8 per 100,000). NYS excluding NYC (43.5 per 100,000) had a rate about twice that of NYC (22.3 per 100,000).

Figure 31. All emergency department visits (including outpatients and admitted patients) involving heroin overdose, crude rate per 100,000 population, by sub-population, New York State, 2017 and 2018



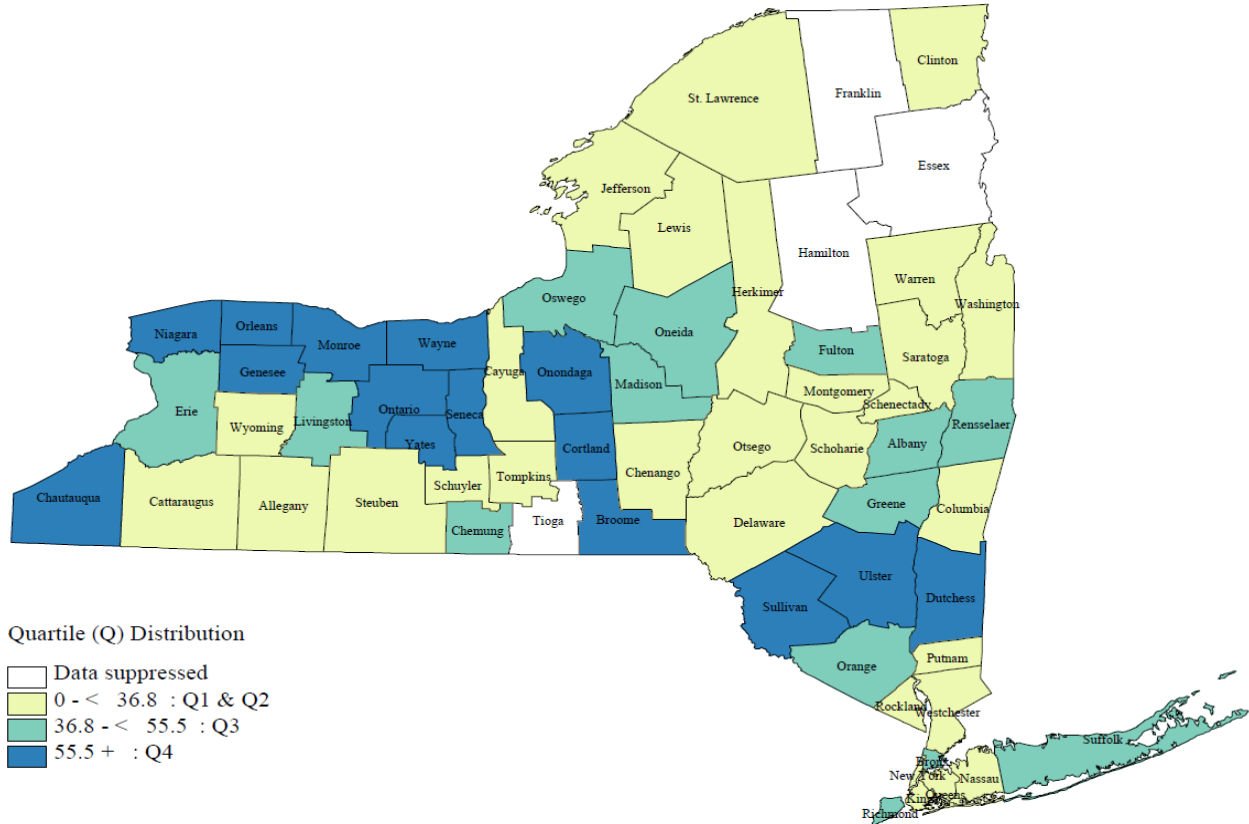
Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of January 2021

For complete data, see [Data Table 31, Appendix, page 49](#).

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The 15 counties in the highest quartile (crude rates greater than or equal to 55.5 per 100,000 population) for ED visits due to heroin overdose included, in descending order, Orleans, Yates, Dutchess, Monroe, Seneca, Genesee, Sullivan, Ontario, Wayne, Ulster, Broome, Onondaga, Niagara, Cortland, and Chautauqua (Figure 32).

Figure 32. All emergency department visits (including outpatients and admitted patients) involving heroin overdose, crude rate per 100,000 population, by county, New York State, 2018



Data source: New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS); Data as of January 2021
 For complete data, see [Data Table 32, Appendix, page 50](#).

5 - THE PRESCRIPTION MONITORING PROGRAM REGISTRY

The Bureau of Narcotic Enforcement's (BNE) Prescription Monitoring Program (PMP) Registry collects and analyzes dispensed controlled substance prescription data from pharmacies and dispensers. In February 2010, BNE implemented a PMP that provided secure online access for practitioners to their patients' recent controlled substance prescription histories. The data, consisting of patient, prescriber, pharmacy and controlled substance prescription information, are the basis for the information available to practitioners and pharmacists through the online PMP. It provides a patient's current controlled substance prescription information and up to a one-year history to practitioners and pharmacists to better evaluate drug therapy and to inform a practitioner of other controlled substance use. These data also identify potential sources of prescription drug diversion or abuse, including prescription fraud, "doctor-shopping" or multiple-provider episodes, and improper prescribing and dispensing.

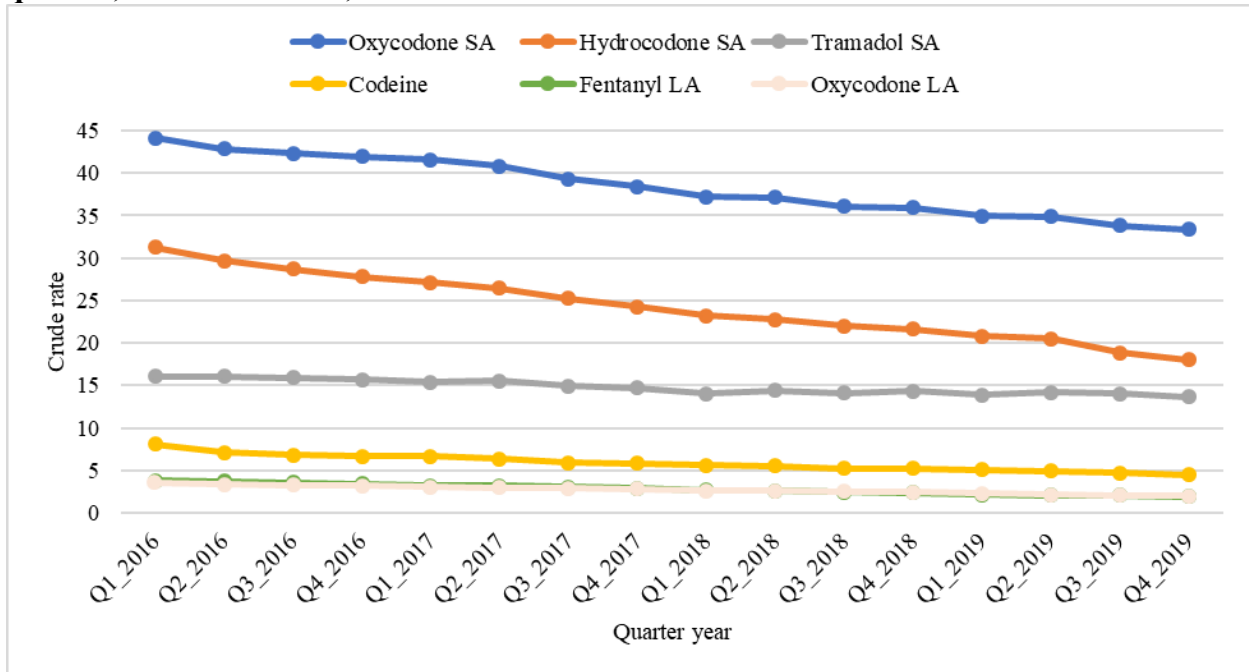
The Prescription Drug Reform Act of 2012 required "real time" submission of dispensed controlled substance data, authorized PMP access for pharmacists, updated the 2010 PMP system, and mandated its use by any practitioner writing prescriptions for a Schedule II, III or IV controlled substance, with limited exceptions. Thus, controlled substance data is provided to the PMP within 24 hours of dispensing. In 2019 alone, there were over 20 million searches by over 74,000 searchers (including practitioners or their designees) for over 4,300,000 patients. The PMP Registry is processing over 47 searches per second, and has the capacity to accommodate more.

In April 2016, the NYSDOH began sharing PMP registry data with other states. Sharing prescription dispensing data across state lines allows practitioners to make better-informed decisions about prescribing based on a fuller picture of the patient's controlled substance history. States can also work together to prevent patients from stockpiling or reselling dangerous controlled substances for nonmedical use. The NYSDOH is currently sharing patient prescription data with 30 states plus Washington, D.C., Puerto Rico and the Federal Military Health System, including all states bordering New York, and all New England states. The NYSDOH maintains ownership and control of all PMP registry data.

5.1 - Opioid Prescribing History

Since 2016, the rate of prescribing has remained low for long acting (LA) oxycodone, tramadol, codeine and LA fentanyl (Figure 33). A quarterly average crude prescription rate for each year was calculated based on the crude rate for each quarter of that year. Between 2016 and 2019, there was a 20 percent decline in the quarterly average crude prescription rate for short acting (SA) oxycodone and a 33.5 percent decline in the quarterly average crude prescription rate for SA hydrocodone. Note, the trend in LA fentanyl is obscured by the similar trend in LA oxycodone.

Figure 33. Commonly prescribed opioid analgesics, crude rate per 1,000 population, by quarter, New York State, 2016-2019



SA=Short-acting; LA=Long-acting

The data exclude buprenorphine prescriptions for the treatment of OUD.

New York State total contains number with county unknown.

Data Source: NYS Prescription Monitoring Program; Data as of May 2020

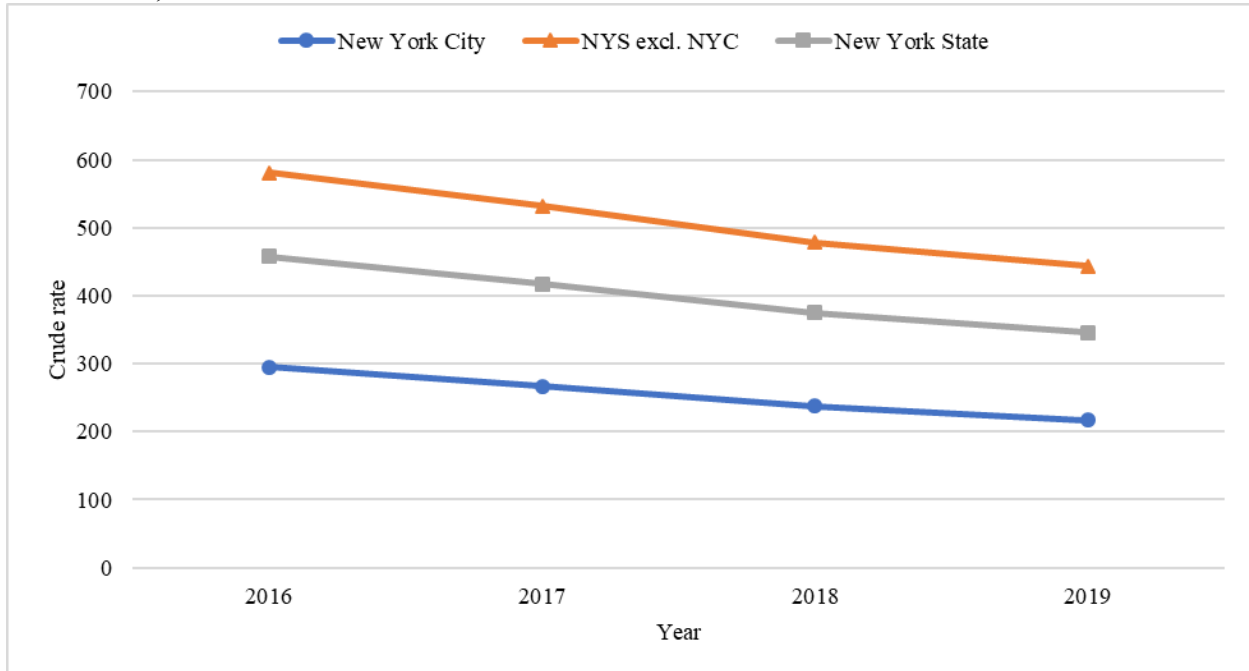
For complete data, see [Data Table 33, Appendix, page 52](#).

For the purposes of this report, many statistics were calculated using the CDC national standard set of indicators. Therefore, the data in this report may not always be exactly comparable to other similar data the NYSDOH has reported in earlier publications. Specifically for this section, CDC’s standards exclude from the analysis drugs that are not typically used in outpatient settings or are otherwise not critical for morphine milligram equivalents (MME) purposes.

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In NYS, the crude rate of opioid analgesic prescriptions declined consistently between 2016 (457.9 per 1,000 population) and 2019 (347.5 per 1,000), representing about a 24 percent reduction (Figure 34). During 2016-2019, NYS excluding NYC consistently had the higher rate of opioid analgesic prescriptions, compared to NYC. In 2019, more than six and a half million opioid prescriptions were filled for the state residents; the rate was two times higher for NYS excluding NYC (444.3 per 1,000) than NYC (218.1 per 1,000).

Figure 34. Opioid analgesic prescriptions, crude rate per 1,000 population, by region, New York State, 2016-2019



The data exclude buprenorphine prescriptions for the treatment of OUD.

New York State total contains number with county unknown.

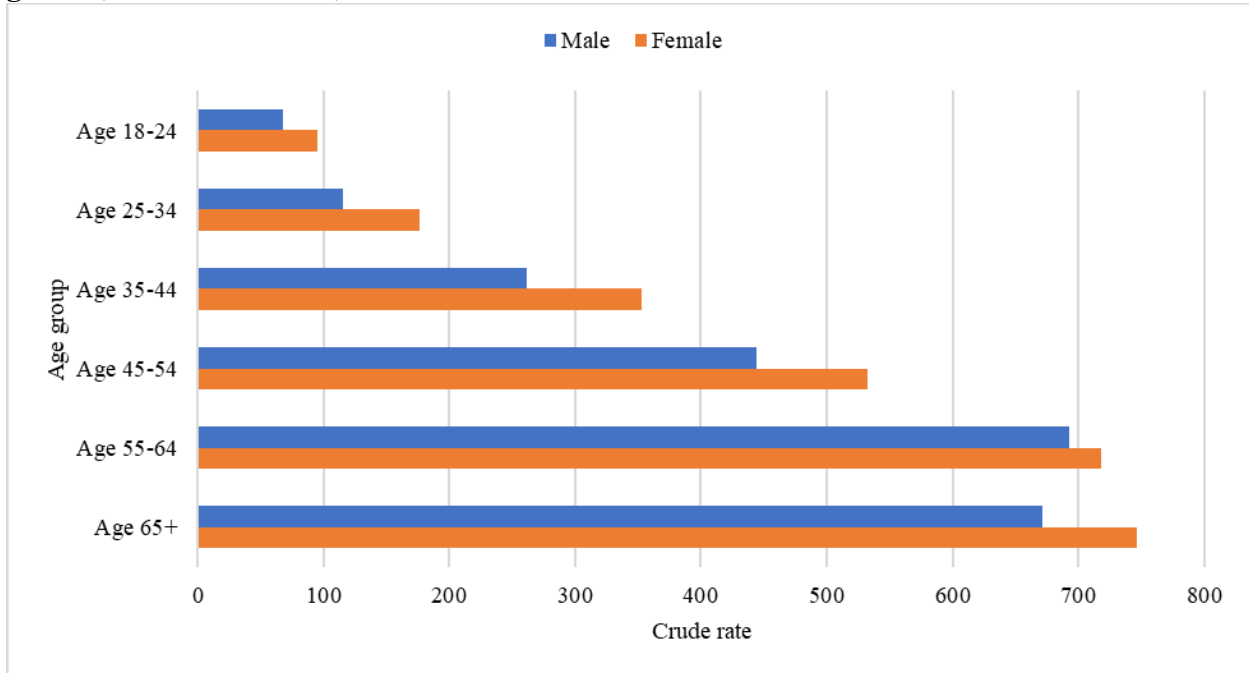
Data Source: NYS Prescription Monitoring Program; Data as of May 2020

For complete data, see [Data Table 34, Appendix, page 53](#).

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In 2019, the crude rate of opioid analgesic prescriptions per 1,000 population was higher for females than it was for males across all age groups (Figure 35). The gap between genders was highest among the 35-44 year-old age group, with crude rates of 261.9 per 1,000 for males and 352.4 per 1,000 for females.

Figure 35. Opioid analgesic prescriptions, crude rate per 1,000 population, by age and gender, New York State, 2019



The data exclude buprenorphine prescriptions for the treatment of OUD.

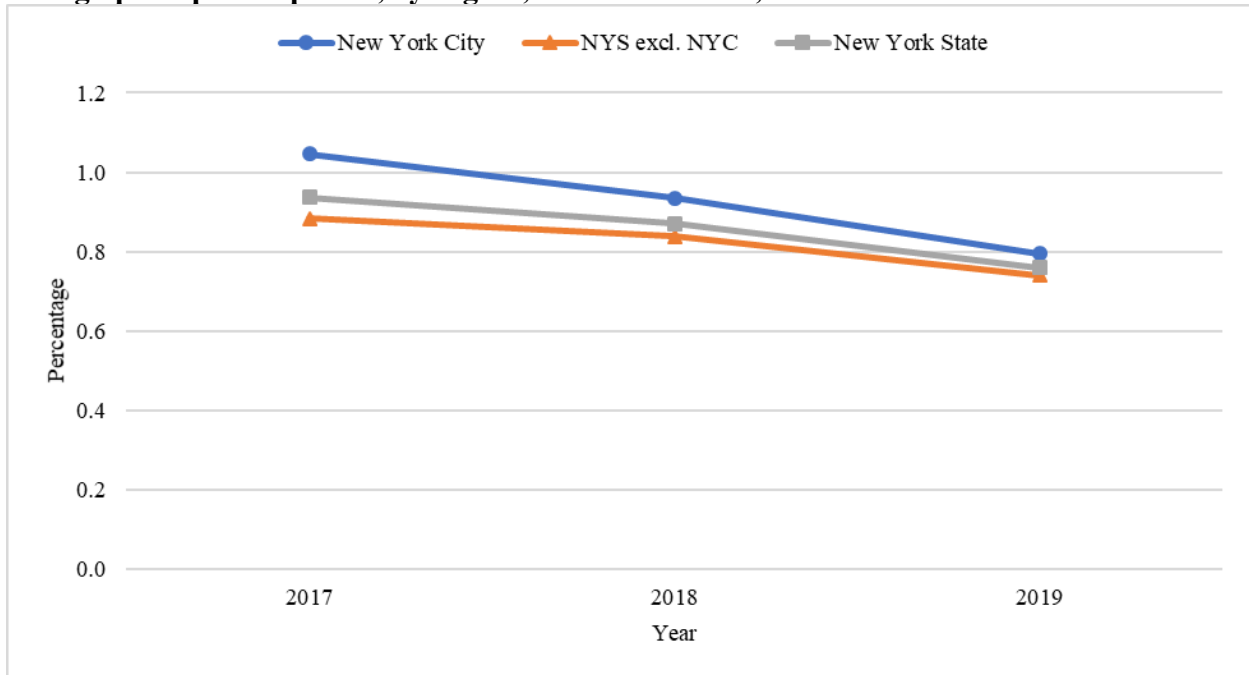
Data Source: NYS Prescription Monitoring Program; Data as of May 2020

For complete data, see [Data Table 35, Appendix, page 53](#).

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Initiating treatment for chronic pain with long-acting or extended release opioids is associated with higher risk of overdose than the initiation of treatment with immediate-release opioids.⁹ The percentage of incidents in which patients were both opioid-naïve and received long-acting opioid prescriptions declined between 2017 (0.9 percent) and 2019 (0.8 percent) in NYS (Figure 36). During 2017-2019, the percentage was consistently higher in NYC than in NYS excluding NYC.

Figure 36. Percentage of incidents when patients were opioid-naïve and received long-acting opioid prescription*, by region, New York State, 2017-2019



The data exclude buprenorphine prescriptions for the treatment of OUD.

Opioid-naïve was defined as patients with no opioid prescription for pain in last 45 days.

New York State total contains number with county unknown.

* Patient received index prescription of long-acting opioid and was opioid-naïve.

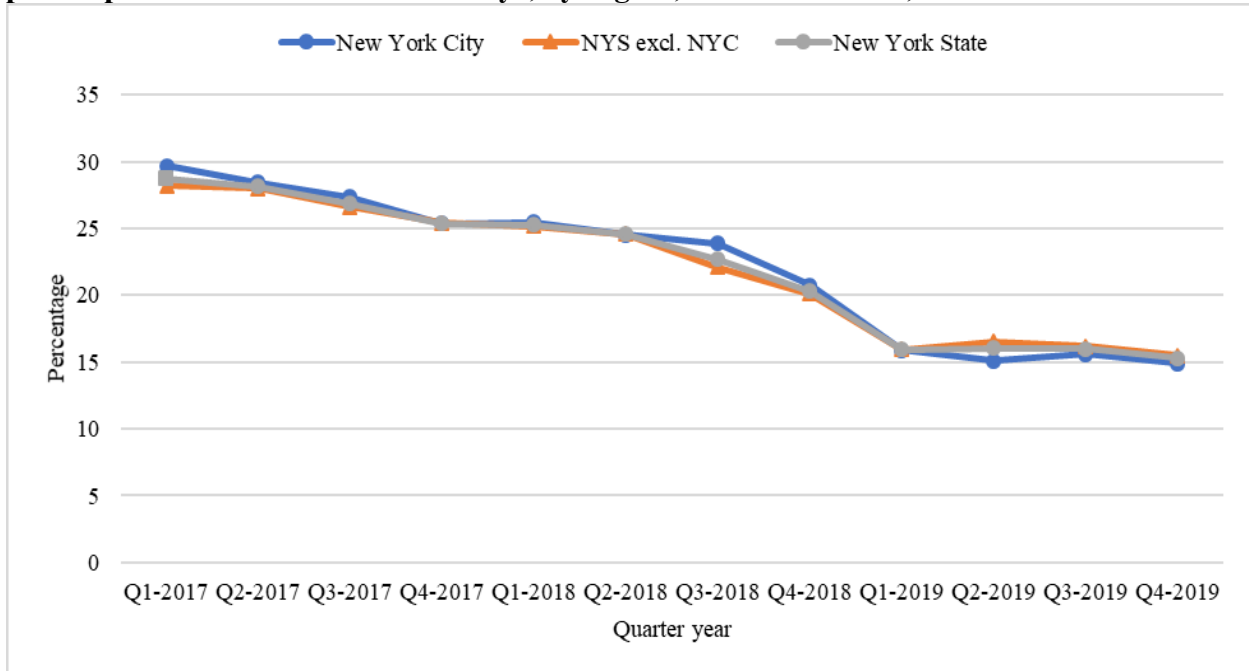
Data Source: NYS Prescription Monitoring Program; Data as of May 2020

For complete data, see [Data Table 36, Appendix, page 54](#).

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Opioid use for acute pain is associated with long-term opioid use, and physical dependence on opioids is an expected physiologic response in patients exposed to opioids for more than a few days.⁹ In July 2016, New York State limited the initial prescribing of opioids for acute pain to no more than a 7-day supply.¹⁰ In NYS, opioid prescriptions for more than a 7-day supply decreased steadily, from 28.7 percent in the first quarter of 2017 to 15.3 percent in the fourth quarter of 2019 (Figure 37). No significant regional differences were observed.

Figure 37. Percentage of incidents when patients were opioid-naïve and received an opioid prescription* of more than seven days, by region, New York State, 2017-2019



The data exclude buprenorphine prescriptions for the treatment of OUD.

Opioid-naïve was defined as patients with no opioid prescription for pain in last 45 days.

New York State total contains number with county unknown.

* Patient received opioid index prescription of more than seven days and was opioid-naïve.

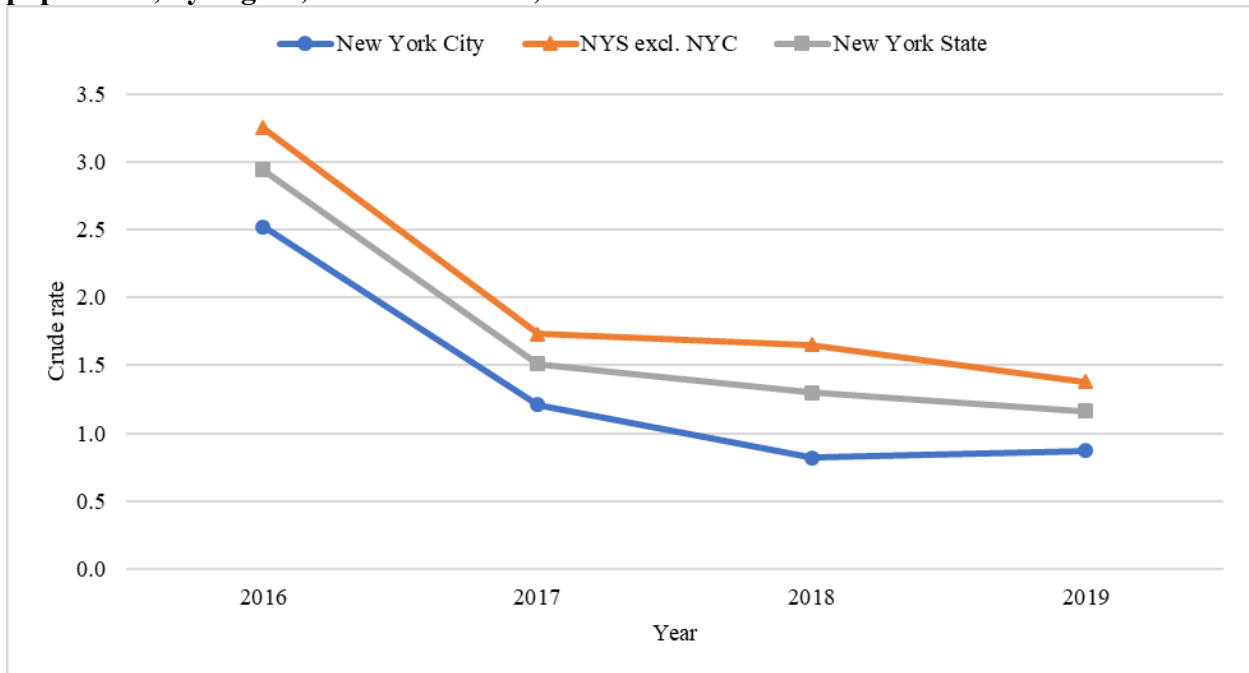
Data Source: NYS Prescription Monitoring Program; Data as of May 2020

For complete data, see [Data Table 37, Appendix, page 54](#).

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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 substantially across NYS between 2016 to 2019 (Figure 38). In NYS, the crude rate per 100,000 population declined from 2.9 per 100,000 in 2016 to 1.2 per 100,000 in 2019. In NYS, the crude rate per 100,000 population in 2012, prior to the implementation of I-STOP was 27.0.²¹

Figure 38. 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, 2016-2019



The data exclude buprenorphine prescriptions for the treatment of OUD.

A patient will be counted twice if they were included in each 6-month time period for the year.

New York State total contains number with county unknown.

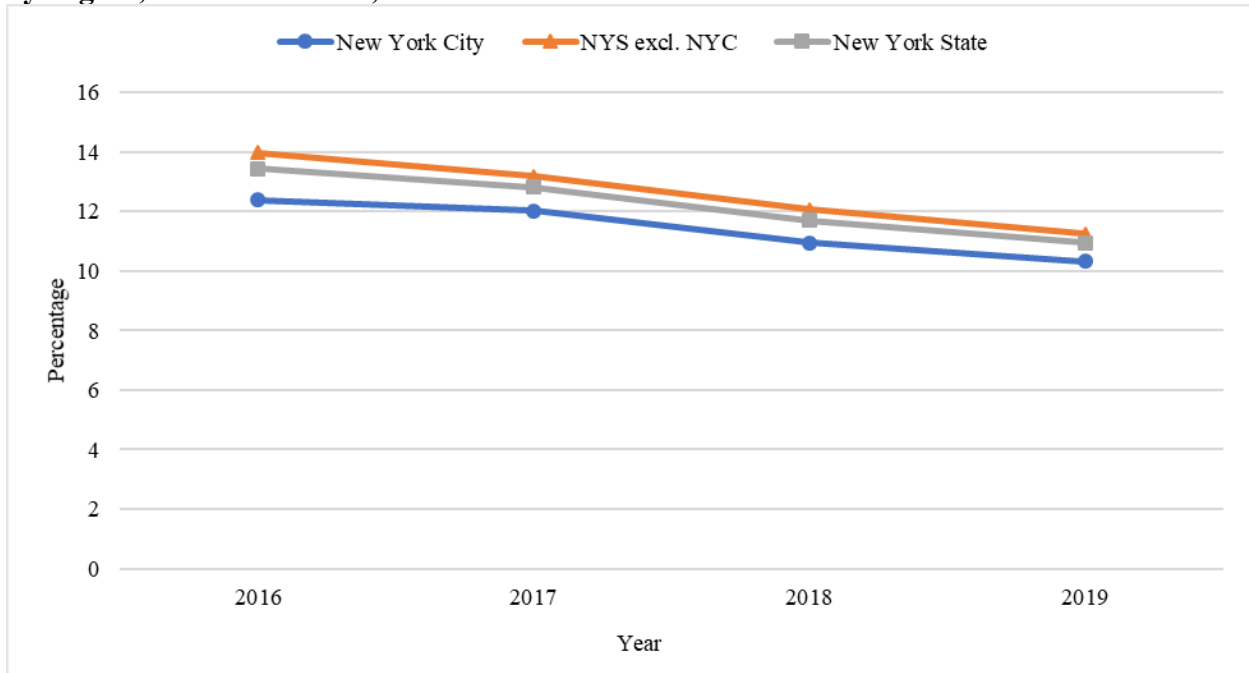
Data Source: NYS Prescription Monitoring Program; Data as of May 2020

For complete data, see [Data Table 38, Appendix, page 55](#).

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Opioid analgesics prescribed in higher dosages (≥ 90 MME) are associated with higher risk of overdose and death.⁹ 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 2016 (13.5 percent) and 2019 (11.0 percent) in NYS (Figure 39). During 2016-2019, the percentage was consistently higher in NYS excluding NYC than in NYC.

Figure 39. Percentage of patients with a total daily dose of ≥ 90 MME on at least one day, by region, New York State, 2016-2019



The data exclude buprenorphine prescriptions for pain and treatment of OUD.

New York State total contains number with county unknown.

MME: morphine milligram equivalents

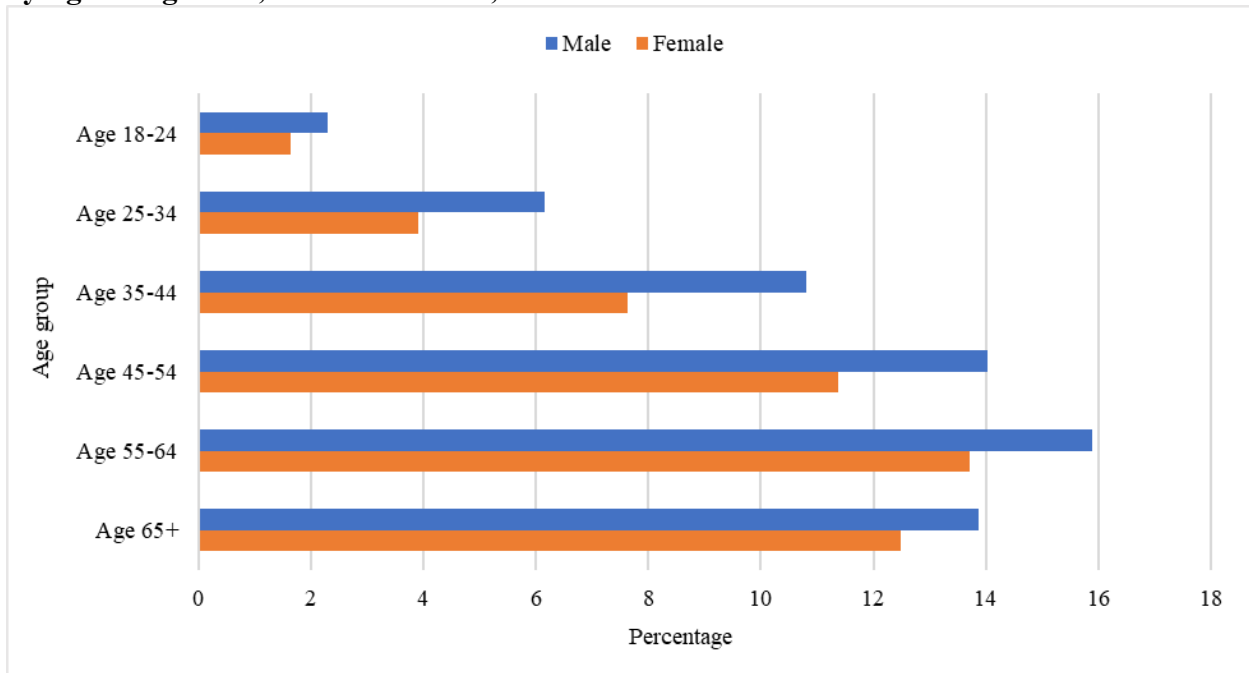
Data Source: NYS Prescription Monitoring Program; Data as of May 2020

For complete data, see [Data Table 39, Appendix, page 55](#).

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In 2019, 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 (15.9 percent) and females (13.7 percent), followed by the 45-54 year-old age group for males (14.0 percent) and the 65+ age group for females (12.5 percent). The percent of males receiving a daily dose of ≥ 90 MME was consistently higher than females for all age groups (Figure 40).

Figure 40. Percentage of patients with a total daily dose of ≥ 90 MME on at least one day, by age and gender, New York State, 2019



The data exclude buprenorphine prescriptions for pain and treatment of OUD.

MME: morphine milligram equivalents

Data Source: NYS Prescription Monitoring Program; Data as of May 2020

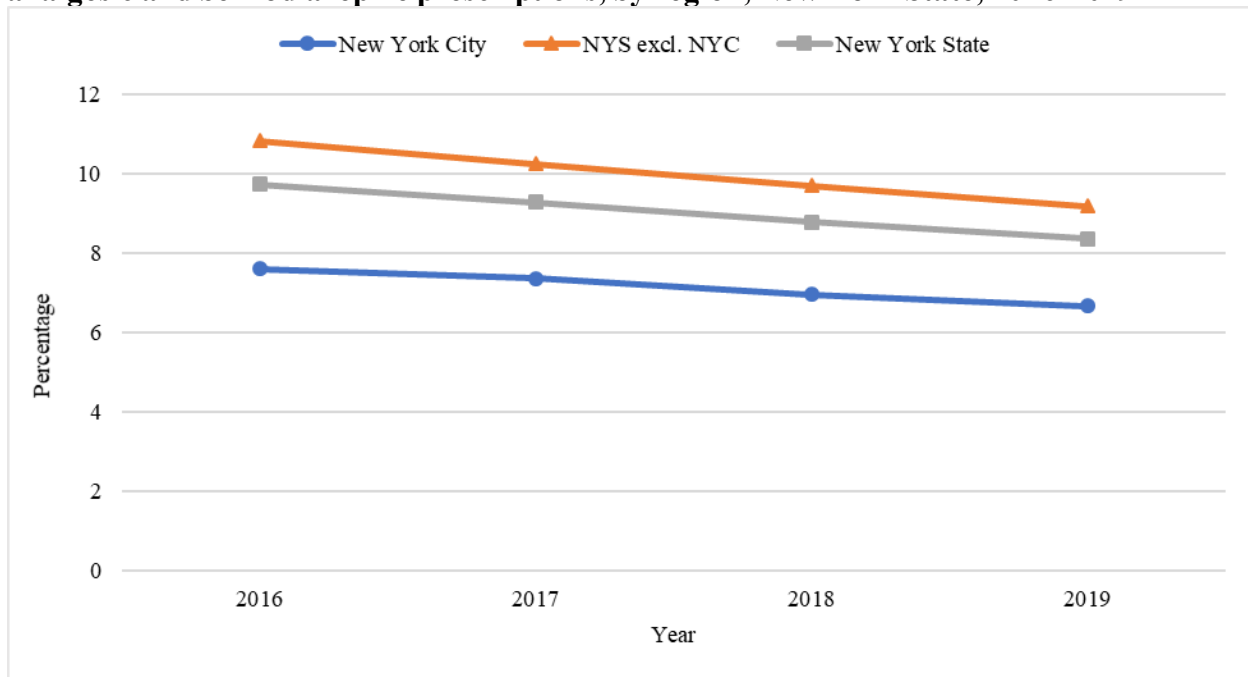
For complete data, see [Data Table 40, Appendix, page 56](#).

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The risk of opioid overdose increases when taken in combination with other drugs, including benzodiazepines (e.g., Xanax® [alprazolam], Valium® [diazepam]).⁹ As such, it is important to monitor the co-prescribing and co-dispensing of these medications, as well as the potential for their prescriptions to overlap, and to provide information to the public about the increased risk of overdose when combining opioids and benzodiazepines, as well as other substances.

Among patients receiving at least one prescription for opioid analgesics or benzodiazepines, the percentage with two or more calendar days of overlapping opioid analgesic and benzodiazepine prescriptions declined between 2016 (9.7 percent) and 2019 (8.4 percent) in NYS (Figure 41). During 2016-2019, compared to NYC, NYS excluding NYC had consistently higher percentages of patients with two or more calendar days of overlapping opioid analgesic and benzodiazepine prescriptions. In 2019, the percentage was higher for NYS excluding NYC (9.2 percent) than for NYC (6.7 percent).

Figure 41. Percentage of patients* with two or more calendar days of overlapping opioid analgesic and benzodiazepine prescriptions, by region, New York State, 2016-2019



The data exclude buprenorphine prescriptions for treatment of OUD.

New York State total contains number with county unknown.

*Patients with at least one prescription for opioid analgesics or benzodiazepines during a given year

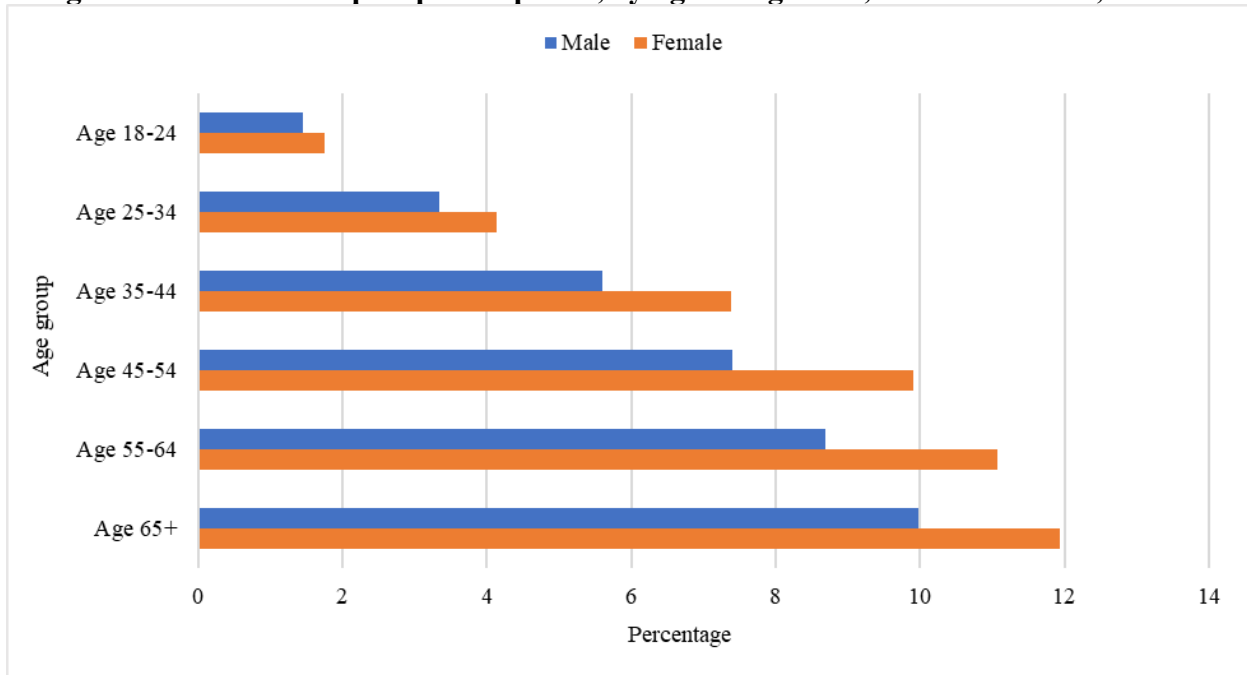
Data Source: NYS Prescription Monitoring Program; Data as of May 2020

For complete data, see [Data Table 41, Appendix, page 57](#).

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In 2019, among patients with at least one prescription for opioid analgesics or benzodiazepines, the percentage who received two or more calendar days of overlapping opioid analgesic and benzodiazepine prescriptions was higher among females than among males (Figure 42). The largest gap in percentage between genders was seen among the 45-54 year-old age group (7.4 percent for males, 9.9 percent for females).

Figure 42. Percentage of patients* with two or more calendar days of overlapping opioid analgesic and benzodiazepine prescriptions, by age and gender, New York State, 2019



The data exclude buprenorphine prescriptions for treatment of OUD.

*Patients with at least one prescription for opioid analgesics or benzodiazepines during a given year

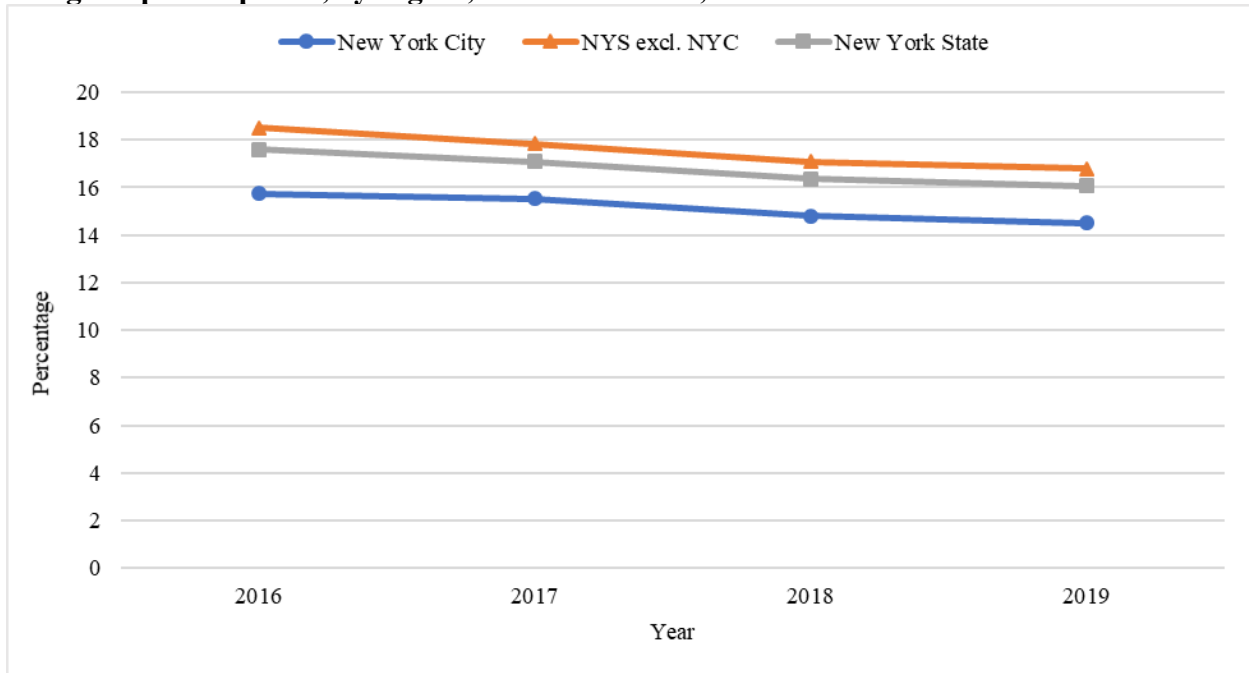
Data Source: NYS Prescription Monitoring Program; Data as of May 2020

For complete data, see [Data Table 42, Appendix, page 58](#).

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Among patients receiving one or more opioid analgesic prescriptions, the percentage with two or more calendar days of overlapping opioid analgesic prescriptions declined between 2016 (17.6 percent) and 2019 (16.1 percent) in NYS (Figure 43). During 2016-2019, NYS excluding NYC had consistently higher percentages compared to NYC. In 2019, the percentage was higher for NYS excluding NYC (16.8 percent) than for NYC (14.5 percent).

Figure 43. Percentage of patients* with two or more calendar days of overlapping opioid analgesic prescriptions, by region, New York State, 2016-2019



The data exclude buprenorphine prescriptions for treatment of OUD.

New York State total contains number with county unknown.

*Patients with at least one prescription for opioid analgesics during a given year

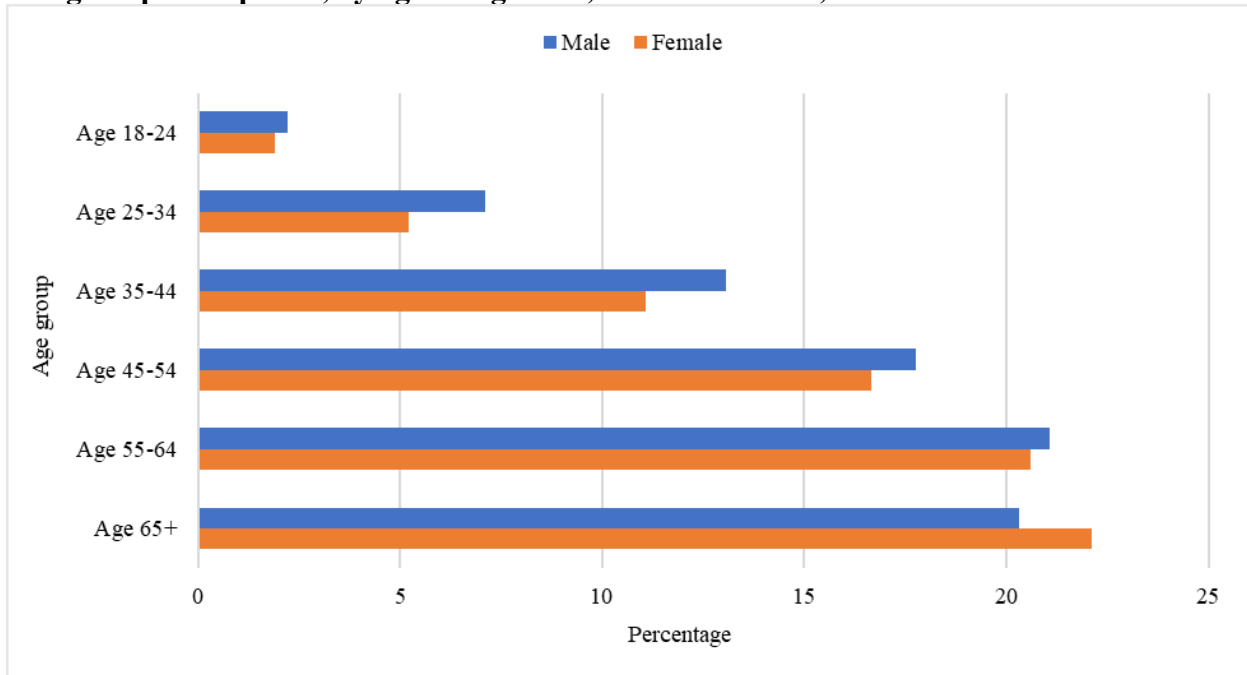
Data Source: NYS Prescription Monitoring Program; Data as of May 2020

For complete data, see [Data Table 43, Appendix, page 59](#).

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In 2019, among patients with at least one prescription for opioid analgesics, the percentage who had two or more calendar days of overlapping opioid analgesic prescriptions was higher among males than among females, except among those aged 65 years and older (Figure 44). The largest gap in the percentage between genders was seen among the 35-44 year-old age group (13.1 percent for males, 11.1 percent for females).

Figure 44. Percentage of patients* with two or more calendar days of overlapping opioid analgesic prescriptions, by age and gender, New York State, 2019



The data exclude buprenorphine prescriptions for treatment of OUD.

*Patients with at least one prescription for opioid analgesics during a given year

Data Source: NYS Prescription Monitoring Program; Data as of May 2020

For complete data, see [Data Table 44, Appendix, page 60](#).

6 - STANDARD TREATMENT FOR OPIOID USE DISORDER

“Substance use disorder is a chronic brain disorder from which people can and do recover.”²² Research indicates that the use of “addictive substances can lead to dramatic changes in brain function and reduce a person’s ability to control his or her substance use, and that repeated use of these substances powerfully alters brain chemistry and the function of brain circuitry to create a neurobiological disorder.” OUD is not the result of a personal failing; people do not choose the disorder, nor do they lack the willpower or character to control their substance use.²²

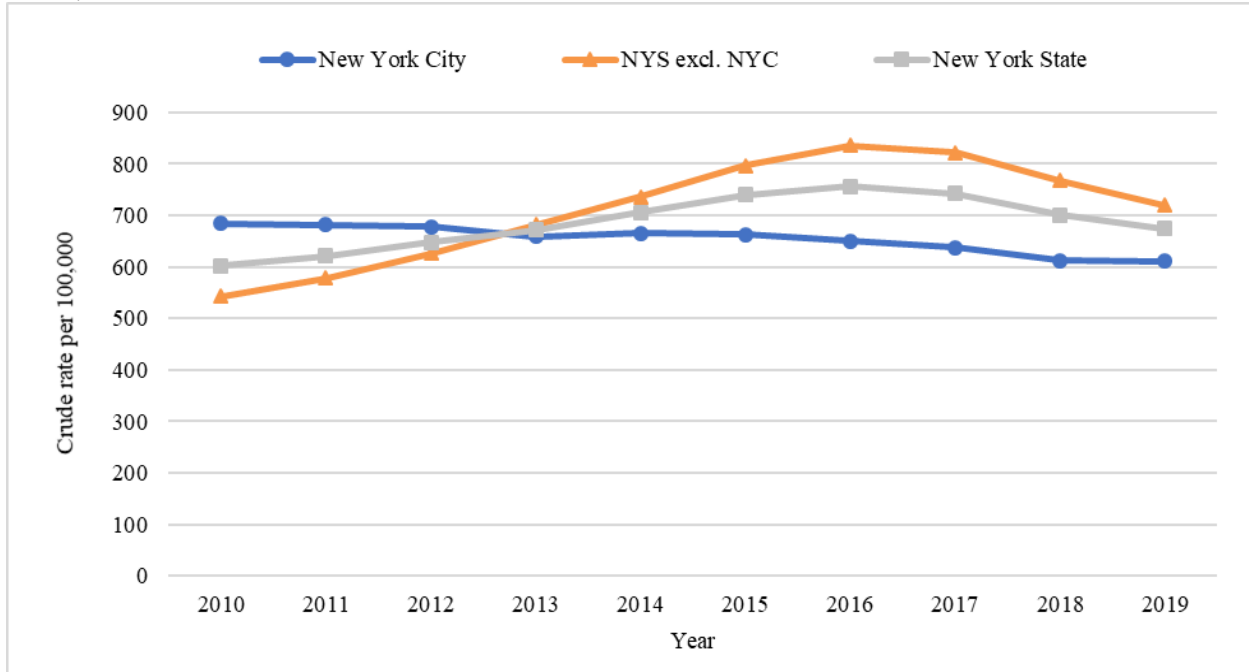
6.1 - OASAS Treatment Services

NYS’s treatment system for OUD through OASAS consists of crisis services and non-crisis treatment services. Crisis services include hospital-based detoxification and medically monitored or supervised services in free-standing or hospital settings. Non-crisis treatment services include opioid (methadone, long-acting injectable naltrexone, and buprenorphine) treatment programs, other outpatient treatment, inpatient rehabilitation, and residential programs. Lengths of stay in these settings vary.

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Among NYS residents in 2019, there were 112,959 admissions to OASAS-certified chemical dependence treatment programs for any opioid, including heroin (Figure 45). This represented a crude rate of 673.4 per 100,000 population, a 12 percent increase from the 2010 rate of 602.4 per 100,000 population. The rate for NYS excluding NYC increased 32.6 percent from 543.1 to 720.1, while the NYC rate decreased each year except 2014. Rates across all regions have been decreasing since 2016.

Figure 45. Admissions* to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by region, New York State, 2010-2019



*An individual admitted to more than one level of care or admitted multiple times would count as multiple admissions.

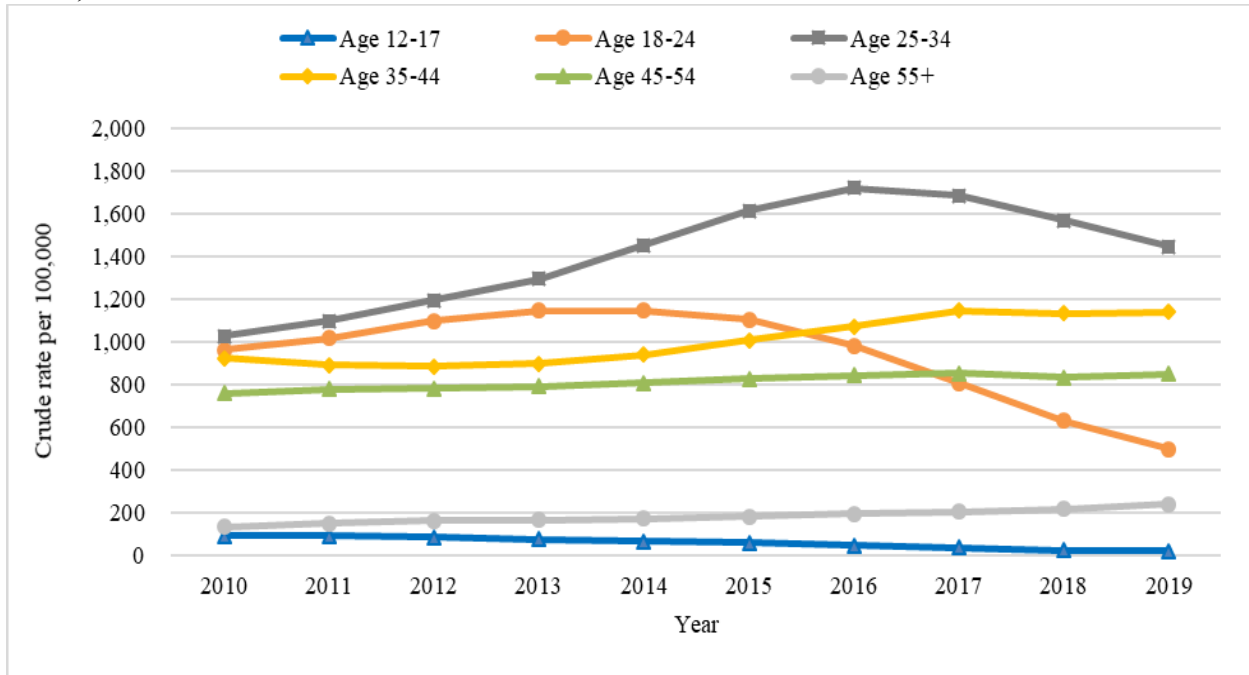
Data source: New York State Office of Addiction Services and Supports (OASAS) Client Data System (CDS); Data as of June 2020

For complete data on OASAS client admissions, see [Data Table 45, Appendix, page 61](#).

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Since 2010, New Yorkers aged 25-34 years had the highest crude rate per 100,000 population for admissions to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), while those aged 12-17 years had the lowest rate per 100,000 among all age groups (Figure 46). From 2013 to 2017, the rates increased for those aged 35-44 years and 55+ years. However, since 2014, the rates decreased for those aged 18-24 years. In 2019, New Yorkers aged 25-34 years had the highest rate of admissions (1,443.8 per 100,000), followed by those aged 35-44 years (1,138.1 per 100,000) and 45-54 years (846.1 per 100,000).

Figure 46. Admissions* to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by age group, New York State, 2010-2019



*An individual admitted to more than one level of care or admitted multiple times would count as multiple admissions.

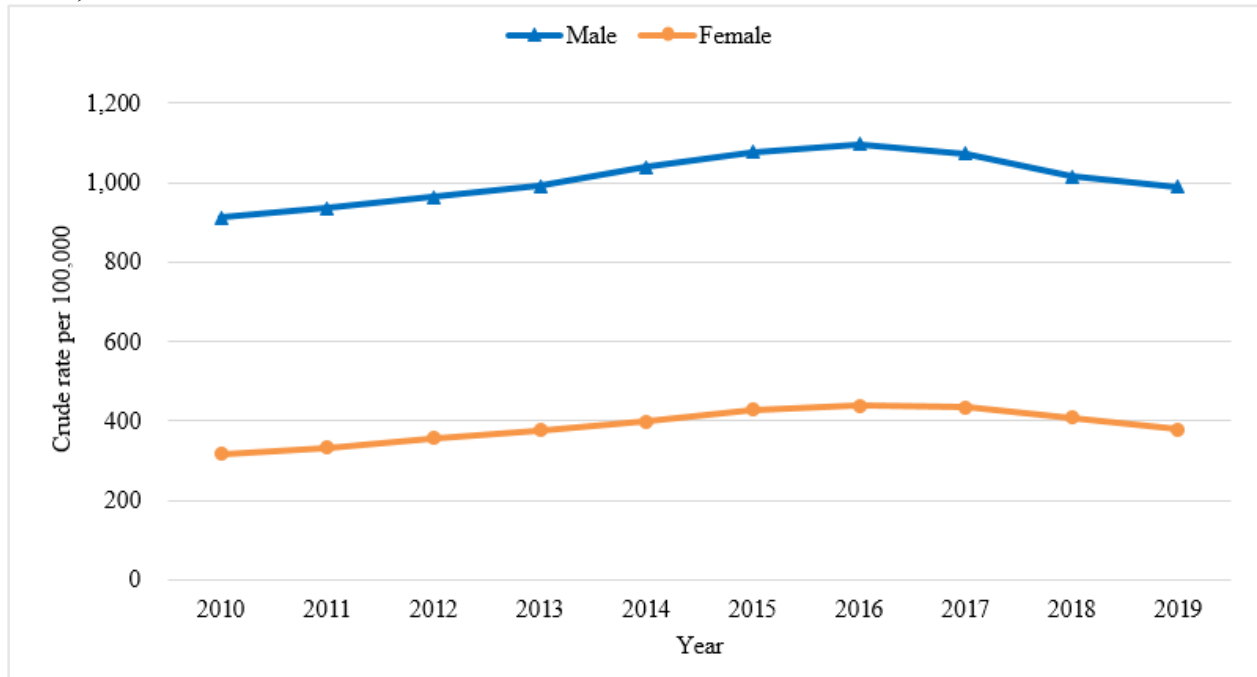
Data source: New York State Office of Addiction Services and Supports (OASAS) Client Data System (CDS); Data as of June 2020

For complete data on OASAS client admissions by age group, see [Data Table 46, Appendix, page 62](#).

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During 2010-2019, the crude rates of admissions to OASAS-certified chemical dependence treatment programs for any opioid (including heroin) for males were consistently over two times higher than the rates for females (Figure 47). In 2019, the rates for males and females were 989.7 and 379.7 per 100,000, respectively. From 2010 to 2016, the rates steadily increased, then subsequently decreased for both sexes after 2016.

Figure 47. Admissions* to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by sex at birth, New York State, 2010-2019



*An individual admitted to more than one level of care or admitted multiple times would count as multiple admissions.

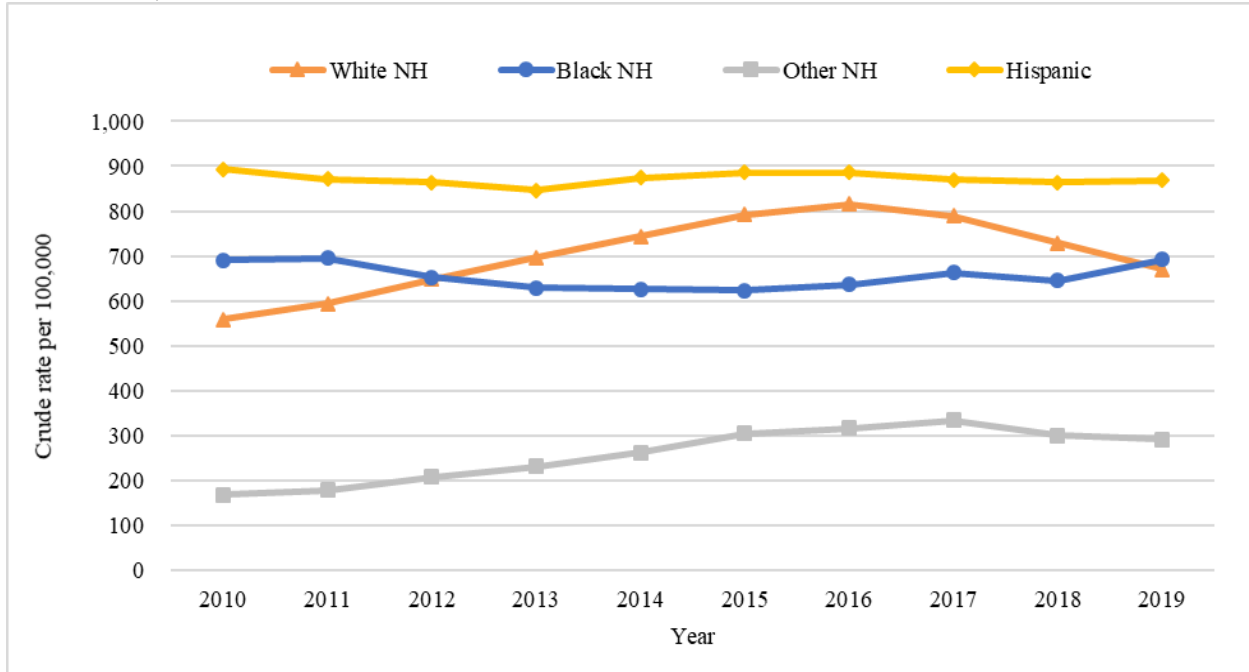
Data source: New York State Office of Addiction Services and Supports (OASAS) Client Data System (CDS); Data as of June 2020

For complete data on OASAS client admissions by age group, see [Data Table 47, Appendix, page 64](#).

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Hispanics had consistently higher crude rates per 100,000 population for admissions to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), than any other racial/ethnic group during 2010 to 2019 (Figure 48). The admission rate for White non-Hispanics had increased from 2010 to 2016 and decreased after that. In 2019, Hispanics had the highest rate (867.6 per 100,000), as compared to White non-Hispanics (NH) (670.5 per 100,000) and Black non-Hispanics (692.6 per 100,000).

Figure 48. Admissions* to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by race/ethnicity, New York State, 2010-2019



*An individual admitted to more than one level of care or admitted multiple times would count as multiple admissions.

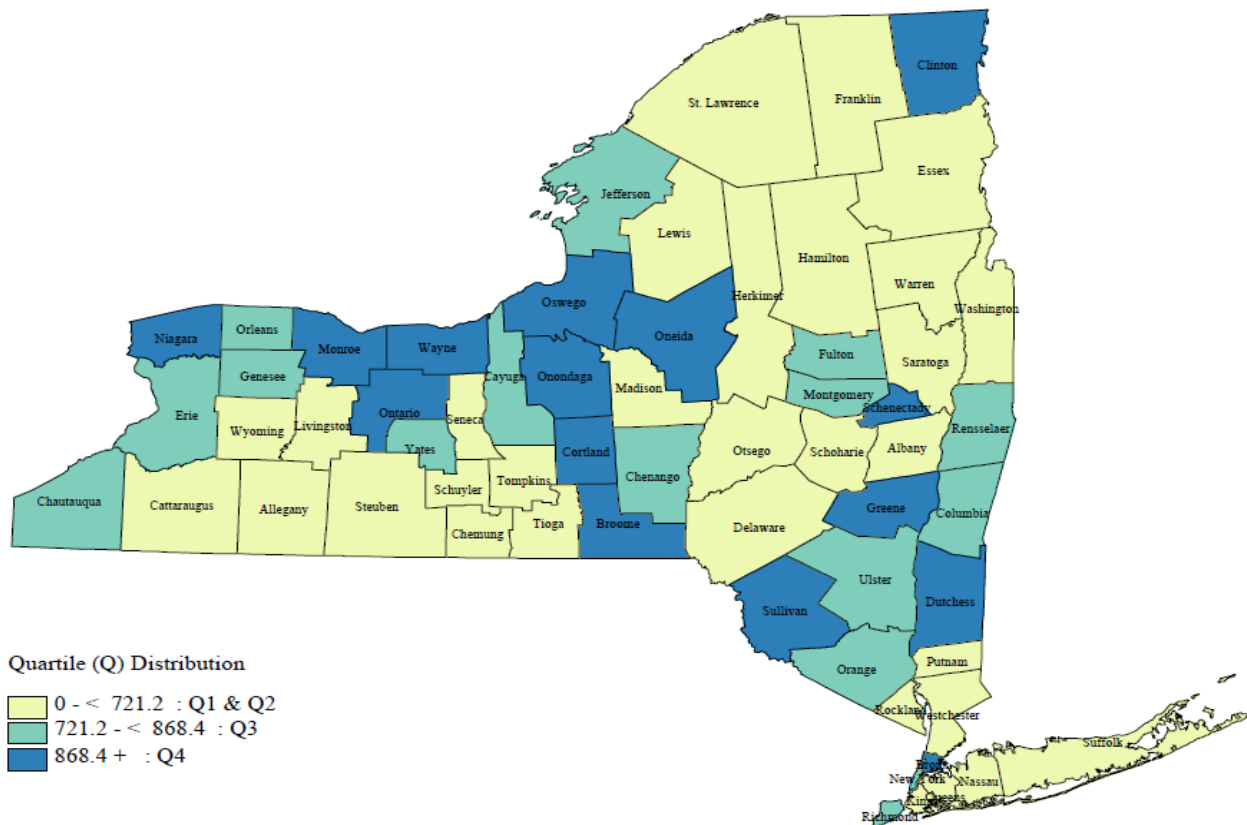
Data source: New York State Office of Addiction Services and Supports (OASAS) Client Data System (CDS); Data as of June 2020

For complete data on OASAS client admissions by age group, see [Data Table 48, Appendix, page 65](#).

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Counties that had the highest crude rates per 100,000 population for admissions to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), in 2019 are shaded in blue (Figure 49). In 2019, the 15 counties in the highest quartile (crude rates greater than or equal to 868.4 per 100,000 population) were, in descending order, Sullivan, Broome, Niagara, Cortland, Oswego, Onondaga, Bronx, Ontario, Monroe, Schenectady, Wayne, Oneida, Dutchess, Greene, and Clinton.

Figure 49. Admissions* to OASAS-certified chemical dependence treatment programs for any opioid (including heroin), crude rate per 100,000 population, by county, New York State, 2019



*An individual admitted to more than one level of care or admitted multiple times would count as multiple admissions. In addition, there is a variation in the levels of care (inpatient, outpatient, or both) provided by local facilities. County rates could be impacted, in part, by the levels of care available. Data source: New York State Office of Addiction Services and Supports (OASAS) Client Data System (CDS); Data as of June 2020

For complete data on OASAS client admissions by age group, see [Data Table 49, Appendix, page 66](#).

6.2 - Buprenorphine Access Initiative

Practitioners who take specialized training and receive federal certification (“waiver”) may prescribe the opioid buprenorphine to their patients in general practice settings to treat opioid dependence and addiction.²³ This has the potential to expand access to medication-assisted

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treatment (MAT), while addressing demographic and geographic changes in opioid use and misuse. The NYSDOH has prioritized the expansion of access to buprenorphine due to the well-documented benefits including:

- Protecting people from experiencing an opioid overdose. If individuals continue to use additional opioids while on buprenorphine, buprenorphine provides a protective factor from a lethal overdose;²⁴
- Improving adherence to other medications/therapies (HIV, HCV, Diabetes, Hypertension, Mental Health);^{25, 26}
- Providing pharmacological stability to meet responsibilities (work, childcare, maintain housing, legal, etc.);²⁷
- Reducing HIV and hepatitis transmission for those who are injecting opioids;²⁸ and
- Increasing access points for meaningful engagement with supportive and healthcare services.²⁹

The NYSDOH Buprenorphine Access Initiative began in July 2016. The overall goal is to increase the number of healthcare practitioners certified to prescribe buprenorphine and thus, increase the number of patients receiving buprenorphine. By incorporating buprenorphine prescribing more broadly, individuals will have access to buprenorphine at a range of settings including primary care clinics, harm reduction programs, Federally Qualified Health Centers, EDs, obstetrician and gynecologists' offices, housing services, jails and prisons, and other community-based organizations. This can help reach populations rather than by using the traditional drug treatment settings, including younger opioid users and women of child-bearing age.

As part of the NYSDOH assessment of the current capacity of buprenorphine providers who meet the needs of current and potential buprenorphine consumers, various databases were explored. The SAMHSA Buprenorphine Treatment Practitioner Locator (<https://www.samhsa.gov/medication-assisted-treatment/physician-program-data/treatment-physician-locator>) provides information on providers who are waived and have volunteered to have their information on their public directory. This directory does not give any information on the number of patients they are prescribing to, nor does it include providers who are waived and may be prescribing but did not wish to be listed in this directory. The NYSDOH acquired the Drug Enforcement Administration (DEA) buprenorphine-waived provider list in October 2017. Table 1a displays the number of providers publicly accessible via the SAMHSA buprenorphine provider directory, compared to the potential "universe" of waived providers extracted from the DEA dataset. The DEA dataset includes all individuals who are waived, but some of these individuals may not be actively prescribing. In 2018, the NYSDOH launched the new statewide AIDS Institute Provider Directory which now includes a directory for Buprenorphine Providers, in addition to the existing HIV, HCV, Pre-exposure Prophylaxis (PrEP), and Post-exposure Prophylaxis (PEP) provider directories. This new combined directory creates one consolidated location for interested parties to search for specific providers based on their location. <https://providerdirectory.aidsinstituteny.org>.

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Table 1a. Rate of Buprenorphine Providers per 10,000 Population, 2019

Region	DEA	SAMHSA
Capital Region	3.35	1.83
Central NY	2.51	1.72
Finger Lakes	3.76	2.14
Long Island	3.10	2.04
Mid-Hudson	2.87	1.63
Mohawk Valley	3.93	1.81
New York City	3.81	2.45
North Country	3.20	1.72
Southern Tier	3.08	1.80
Tug Hill Seaway	3.20	2.17
Western NY	3.54	2.13

Data Source: SAMHSA Buprenorphine Treatment Practitioner Locator and DEA Controlled Substances Act Registration Information Database

The NYSDOH also worked with the State Education Department and SAMHSA to change NYS regulatory language in May 2017 to clarify changes required in the NYS buprenorphine prescribing regulations to enable Nurse Practitioners and Physician Assistants to prescribe buprenorphine and to clarify requirements around collaborating physicians. A significant increase in waived buprenorphine providers in NYS has occurred. Based upon the DEA record of waived buprenorphine providers in NYS, there has been an increase of 1,182 providers in 2018, with a total of 5,174 at the end of 2018 (Table 1b).

Table 1b. Number of Buprenorphine-Waived Providers in NYS, by Type of Waiver

	2017	2018	2019
MD/DO- 30 patients	2,716	3,302	4,190
MD/DO- 100 patients	672	742	762
MD/DO- 275 patients	236	280	318
NP- 30 patients	287	567	928
NP- 100 patients	N/A*	69	143
NP- 275 patients	N/A*	N/A*	18
PA- 30 patients	81	185	282
PA- 100 patients	N/A*	29	62
PA- 275 patients	N/A*	N/A*	8
Total providers	3,992	5,174	6,711

* Note: NP/PAs could not prescribe in NYS until May 2017

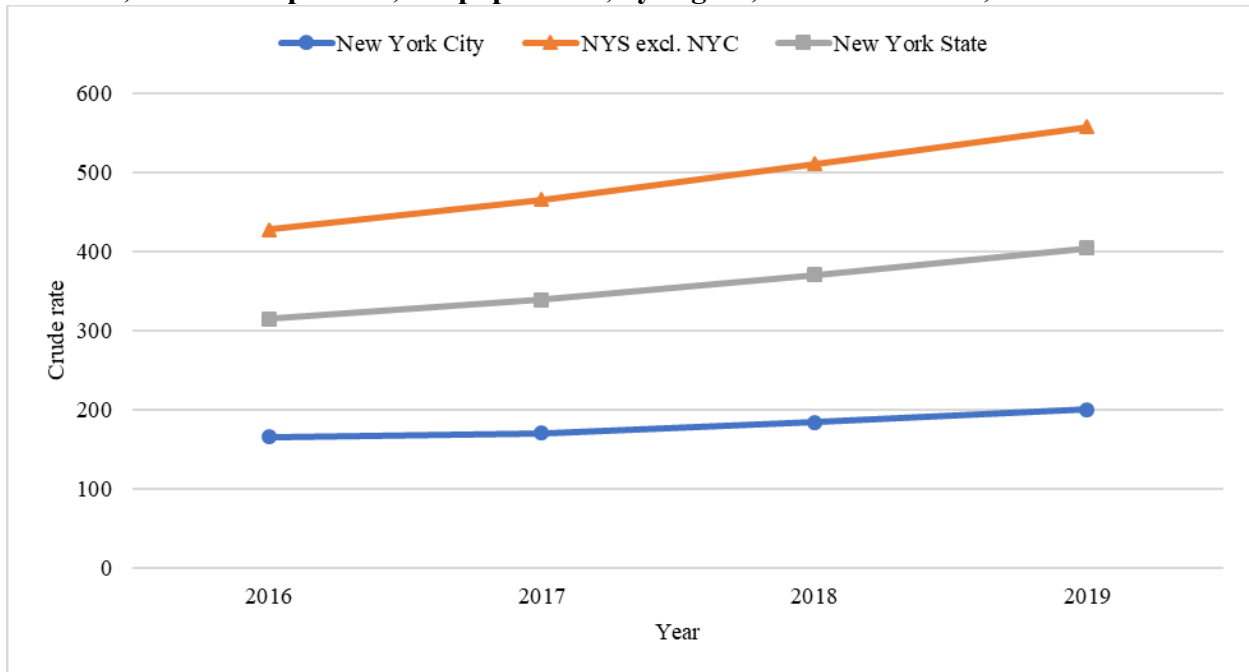
The NYSDOH and OASAS recognize that successful MAT incorporates medications for OUD combined with other therapies, including psychosocial services. Current research and best practices, however, indicate that access to medication is paramount to retention in care and the individual's opportunity to address his or her OUD. The NYSDOH and OASAS have been

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working with community-based providers to establish referral systems and strategies into regional point-of-contact care oriented to the health needs of the opioid users.²⁹

In NYS, the crude rate of patients who received at least one buprenorphine prescription for OUD increased between 2016 (314.8 per 100,000 population) and 2019 (404.5 per 100,000), representing a 29 percent increase (Figure 50). The rate was more than two times higher in NYS excluding NYC than in NYC during 2016-2019. It is encouraging that more qualified practitioners have completed the required training and have received their SAMHSA DATA 2000 waiver²³ and DEA x-designation so that they have the capacity to prescribe buprenorphine for the treatment of OUD. These qualified practitioners include physicians, Nurse Practitioners (NPs), Physician Assistants (PAs), Clinical Nurse Specialists (CNSs), Licensed Midwives (LMs) and are in various settings increasing access for this life-saving medication.

Figure 50. Patients who received at least one buprenorphine prescription for opioid use disorder, crude rate per 100,000 population, by region, New York State, 2016-2019



New York State total contains number with county unknown.

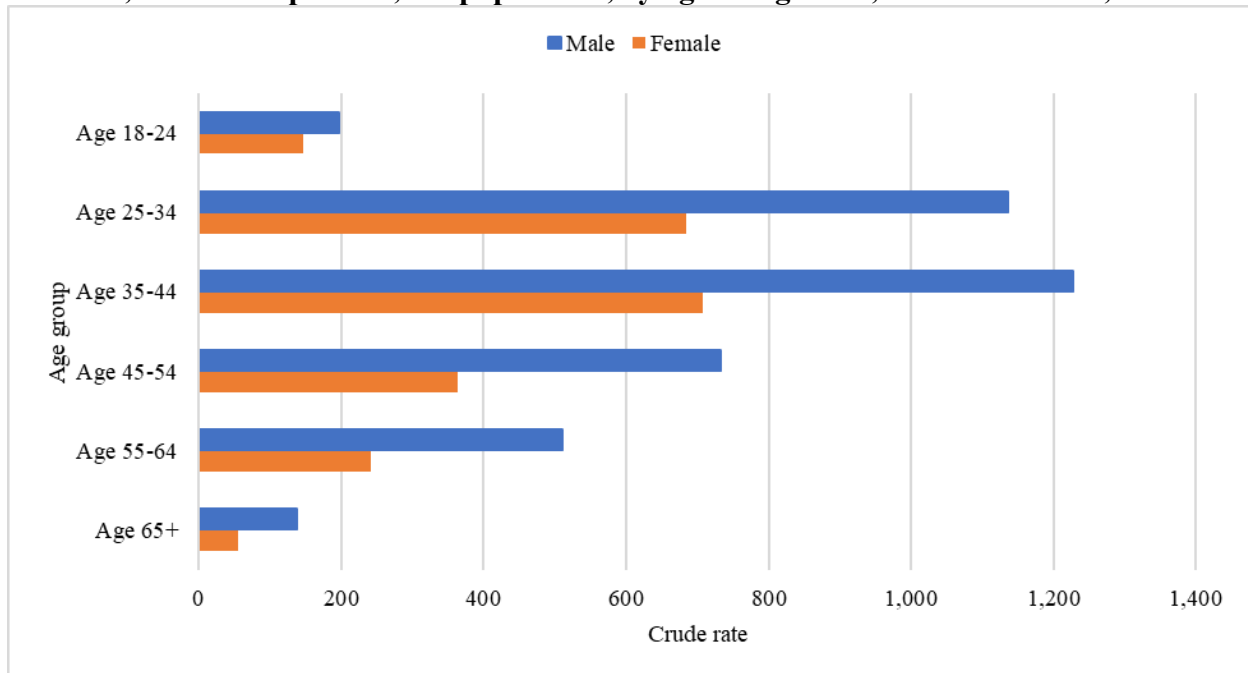
Data Source: NYS Prescription Monitoring Program; Data as of May 2020

For complete data, see [Data Table 50, Appendix, page 68.](#)

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In 2019, the crude rate of patients who received at least one buprenorphine prescription for OUD per 100,000 population was highest among the 35-44 year-old age group in both males (1,227.9 per 100,000) and females (708.0 per 100,000), followed by the 25-34 year-old age group with a rate of 1,135 per 100,000 for males and 684.7 per 100,000 for females. The crude rate of patients who received at least one buprenorphine prescription for OUD was consistently higher in males than females for all age groups (Figure 51).

Figure 51. Patients who received at least one buprenorphine prescription for opioid use disorder, crude rate per 100,000 population, by age and gender, New York State, 2019



Data Source: NYS Prescription Monitoring Program; Data as of May 2020

For complete data, see [Data Table 51, Appendix, page 68](#).

6.3 - High-risk Populations

As shown through the Buprenorphine Access Initiative, engaging those at high risk for drug overdoses is a priority for the NYSDOH. This work has focused on reaching individuals who are at high-risk, both in the community and in settings such as correctional facilities and EDs.

6.3.1 - Buprenorphine Pilot in Correctional Setting: Albany County

Through collaborative efforts which began in 2018 between state and local entities, the NYSDOH collaborated with the Albany County Sheriff's Office to introduce a robust, multi-phase MAT program to operate within the Albany County Correctional and Rehabilitative Services Center (ACCRSC). In the beginning stages of implementation, the NYSDOH provided support to the ACCRSC staff in the in-person and remote provision of technical assistance relating to buprenorphine education and structuring of programmatic service delivery. The

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NYSDOH also served as the lead for developing policies and procedures for clinical staff relating to buprenorphine identification and provision.

Once the planning and preparation stage concluded, the ACCRSC initiated its MAT program through a “phased-in approach” to ensure that it adequately addressed any logistical barriers and would not overburden staff when becoming operational.

- Phase 1: Continuation of MAT – Patients arriving to the ACCRSC currently receiving MAT from the community will have their medication maintained while in the facility.
- Phase 2: Sentenced with OUD – Patients reporting OUD upon admission who are now sentenced, have a release date, and will be housed in facility for sentence can be inducted into MAT.
- Phase 3: All individuals with an OUD – Offer buprenorphine for detox and/or begin new patients reporting OUD on treatment with buprenorphine or naltrexone and maintain while in facility, regardless of release date.

Counseling will continue to be available through the facility’s Credentialed Alcohol and Substance Abuse Counselors. In all cases, discharge planning prior to release by the credentialed counselors will include case management and linkage and referral services provided by the NYSDOH’s regional health hub, Catholic Charities Care Coordination Services, to ensure that housing, employment, insurance, treatment, medical and psychological care, and other needs are addressed using the full array of services and organizations available. In addition, the NYSDOH created an evaluation plan and various assessment tools have been developed to capture individual-level and facility-level data from both ACCRSC and Catholic Charities, with the intention of linking data sources and tracking participant outcomes. The program served more than 134 participants from January 2019 to November 2019. To date, outcomes include 84% connected to MAT services upon release, 9% recidivism (re-arrest) and 68% of the participants have been retained into MAT services for greater than six months.

More recently, ACCRSC has been selected by the Bureau of Justice Assistance to become a peer mentor site to correctional facilities around the country. As a peer mentor, ACCRSC will be providing targeted technical assistance for facilities looking to integrate medications for OUD within their setting.

6.3.2 - Buprenorphine Pilot in Emergency Department Setting: New York State MATTERS Program

The NYSDOH has identified that settings such as EDs are on the frontline of the opioid crisis and can serve as a crucial point of engagement of people with OUD. Whether patients are in the ED as a result of an opioid overdose or withdrawal symptoms, or for an opioid-related medical issue like an abscess or infection, the ED is one of the few places where patients may be contemplating treatment.

The NYSDOH has partnered with Buffalo Medication Assisted Treatment and Emergency Referrals (MATTERS) to expand access to buprenorphine in EDs. Since 2017, this partnership has made great strides with the expansion of buprenorphine in 17 EDs with over 40 community providers engaged as part of the referral network for ongoing care. This innovative model has

altered the way EDs can intervene and serve the OUD population by integrating MAT into the ED care protocols. In addition to the provision of buprenorphine, the model also involves a comprehensive discharge protocol that rapidly transitions individuals to appropriate services in the community. This transition and care coordination are facilitated within 48 hours and often involve a peer support from one of the community organizations to help the individual navigate to services. The MATTERS program plan to integrate this model into the eastern New York region and will continue to serve as the model for other regions looking to integrate similar services and build upon their comprehensive referral systems to ensure successful care coordination.

6.3.3 - Women Who Use Drugs

Growing health disparities related to the opioid epidemic are occurring among women of reproductive age who use illicit/licit opioids and who commonly engage in polysubstance use (such as cocaine and alcohol). The NYSDOH created a workgroup to address this high-risk population, engaging both state and local governmental agencies, not-for-profits, and academia in monthly meetings. The focus of this workgroup is to explore and identify regional trends impacting or pertaining to women who use drugs; to understand barriers to care among this population; and to develop strategies to decrease stigma and increase opportunities to engage this population in care.

7 - HARM REDUCTION PROGRAMS

7.1 - Syringe Exchange Programs

Community-based harm reduction services have led the public health response to reducing morbidity and mortality related to injection drug use.³⁰ Syringe Exchange Program (SEPs) were the first and have been the largest group of community programs to train people in the community to recognize overdose risks and respond when they occur.

NYS first authorized SEPs in 1992. There are currently 24 SEPs in NYS, with 14 programs comprising 54 sites in NYC and 10 programs with 26 sites in the rest of the state. In addition, 23 SEPs offer Peer Delivered Syringe Exchange (PDSE), where peers are recruited, trained, and supervised to conduct syringe exchange in their social networks. PDSE brings syringe exchange to individuals who would not access a program site because of geographic distance, lifestyle or lack of willingness to identify as a person who uses drugs. In March 2019, a new model of syringe services program, Technology Enhanced Access to Syringes (TEAS), was approved. TEAS enables people who inject drugs to access new, sterile syringes, harm reduction supplies, naloxone, and referrals to services via a website. The SEP using TEAS is able to reach persons who inject drugs in rural or suburban areas of the state where there are no SEPs or where is a reluctance to go to a SEP. SEPs offer an array of services including individual and group harm- and risk-reduction counseling, HIV/HCV/STI counseling, screening and testing, behavioral interventions, mental health counseling, opioid overdose prevention training, safety planning and provision of naloxone, aftercare for overdose, care management, holistic health care including ear-point acupuncture, peer training, cultural competency training for other providers to better serve people who use drugs (PWUD), and linkage, navigation and escort to medical, mental health, and substance use treatment. There is one new SEP application in the authorization process. That new program offers services from a rental car via “rideabout” SEP.

In November 2019, new regulations were promulgated that allowed for the creation of Second Tier Syringe Exchange Programs (STSEP). Article 28 facilities, EDs, local health departments, and community based organizations that are providing services to people who inject drugs may apply to become a STSEP and furnish syringes and other harm reduction supplies to their clients. There is no funding provided to authorized STSEPs, however, NYSDOH furnishes the syringes and other harm reduction supplies that are needed. At this time, there is one STSEP application in the authorization process and two pending applications.

In 2019, the SEPs served 31,483 clients, 10,661 of whom were new. They furnished 10.9 million syringes to these individuals in 183,191 transactions. Of these clients, 5,686 were young people (under 30 years of age) who inject drugs. Thirty-eight percent of all clients received services via PDSE (some of these also used a standard SEP). These SEPs made 31,255 referrals in 2019: 27 percent for substance use treatment, 54 percent for medical/health services, 8 percent for food, and the remaining 11 percent for entitlements, housing, and other supportive services.

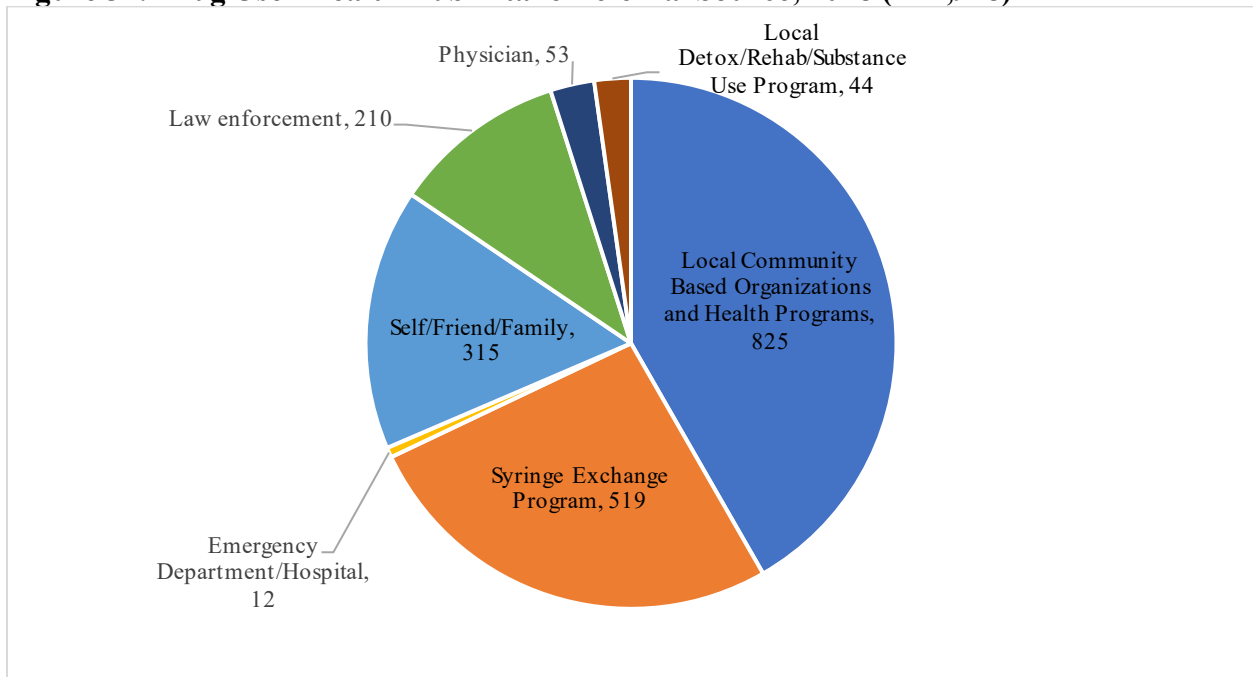
7.2 - Drug User Health Hubs

The NYSDOH continues to fund and support a novel model of care for PWUD, called the Drug User Health Hubs (Hubs). The Hubs were started in 2016 to improve the availability and accessibility of culturally competent health care and MAT for PWUD – especially those who had not yet engaged in care or services, had not yet had effective treatment, and were at greatest risk for opioid overdose. Hubs are located at existing SEPs and enhance and expand services that are already provided at these programs, with the primary aim of reducing opioid overdoses by improving the overall health and well-being of PWUD. Hubs are simultaneously creating a new system of health care for PWUD by providing low-barrier, a la carte medical services on-site at the SEP, and strengthening the ability of other providers in their community to meet the needs of PWUD with respect and compassion (by providing anti-stigma and cultural competency trainings for local medical providers, medical students, pharmacists, law enforcement officers, ED staff members, addiction treatment providers, and more). The Drug User Health Hubs improve appropriate health, mental health, and access to assisted treatment services for PWUD, especially but not solely injection drug users. These services are provided on-site and/or through facilitated linkage to culturally competent care and treatment services. Referral networks are also established through these partnerships. The Hub model is community-specific, meaning each Hub designs its own way of building partnerships with emergency responders and community providers based on what is possible politically and socially in its community.

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Hubs have experienced great success as they have become established resources in their communities. Calendar year 2018 saw tremendous growth, both of the scale of programming of each Hub and in the name recognition of the model among other providers and stakeholders in their communities. Figure 52 shows some of the community partnerships used in the referral networking. Hubs have collaborated with law enforcement, the NYS OASAS Addiction Treatment Programs, hospitals, EDs, and medical providers.

Figure 52. Drug User Health Hub Intake Referral Source, 2018 (n=1,978)



7.3 - Naloxone Administration

NYS is a leader in the implementation of public health programming to prevent death from opioid overdoses. Its multi-pronged approach focuses on building overdose response capacity within communities throughout the State. The core of this program is for community laypersons to be trained, by organizations registered with the NYSDOH, to administer naloxone (an opioid antagonist also known by the brand name Narcan) in the event of a suspected opioid overdose. Through NYSDOH-registered Community Opioid Overdose Prevention (COOP) programs, members of the community are trained to identify signs and symptoms of opioid overdose, and to respond by administering naloxone and then calling 911. There are currently more than 800 registered opioid overdose prevention programs, with over half a million individuals trained by them since the initiative's inception in 2006. Of these, 78,000 were public safety personnel and the rest were community responders. In 2019, there were 1,558 naloxone administration reports by law enforcement (LE) to the NYSDOH and 2,749 reports by community programs.

The protocol for the administration of naloxone by Emergency Medical Technicians (EMTs) certified in Basic Life Support (BLS) includes presenting signs and symptoms of a suspected opioid overdose, pinpoint pupils, diminished respiratory status, and diminished level of consciousness. Naloxone may be administered by BLS responders in these circumstances, or as other conditions dictate by EMTs certified in Advanced Life Support (ALS). There was a total of 12,403 administrations reported by Emergency Medical Services (EMS) agencies during 2019, about a 21 percent increase from 10,201 administrations in 2015; a decrease of 10 percent occurred between 2018 and 2019. Combined with administrations reported by COOP programs and LE agencies, unique administrations by EMS agencies accounted for 74 percent of the 16,710 total reported naloxone administrations in NYS in 2019 (see [Data Table 60, Appendix, page 74](#)).

7.3.1 - Furnishing and Administration of Naloxone by the Community Opioid Overdose Prevention Programs and Law Enforcement

Registered COOP programs outside of NYC order naloxone from the NYSDOH at no cost using the online NYS Opioid Overdose Prevention Program System (NYSOOPPS). NYSOOPPS is also used by registered programs statewide to maintain their registrations, to report administration of naloxone by trained responders, and to submit mandated quarterly reports on the number of individuals trained and the quantity of naloxone furnished. The turnaround time for naloxone orders is under 2 weeks. In Fiscal Year 2019-2020, 140,000 two-dose overdose kits were furnished to registered programs by the NYSDOH. Registered programs located in NYC order their overdose supplies from the NYC Department of Health and Mental Hygiene.

The NYSDOH registers and regulates opioid overdose prevention programs under New York Public Health Law Section 3309 and its regulations in 10 NYCRR 80.138. Complementing the longstanding efforts by EMS agencies throughout NYS, these programs train non-medical individuals to recognize opioid overdoses, administer naloxone, and call 911. These responders include persons who use substances, their families and friends, staff of agencies who work with

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PWUD, law enforcement personnel, firefighters, drug treatment providers, correctional facility guards, incarcerated persons about to be released and their family members, and others.

Law enforcement personnel are frequently the first on the scene of an overdose. In 2014, the NYS Division of Criminal Justice Services (DCJS) worked with the NYSDOH, the Harm Reduction Coalition (HRC), and Albany Medical College to develop a slide-based curriculum and naloxone administration reporting protocol for public safety personnel. Over 61,000 officers have been trained, and naloxone has been administered by them nearly 7,500 times through December 31, 2019. More than 1,150 of these administrations occurred in 2019. A similar collaboration began in 2015 with the State's Office of Fire Prevention and Control (OFPC) to ensure opioid overdose response capacity among non-EMS fire fighters where over 8,000 firefighters and more than 13,000 EMS personnel have been trained. These fire fighters have administered naloxone more than 1,000 times, with 179 of these occurring in 2019. Both DCJS and OFPC have their own training infrastructure to facilitate overdose trainings.

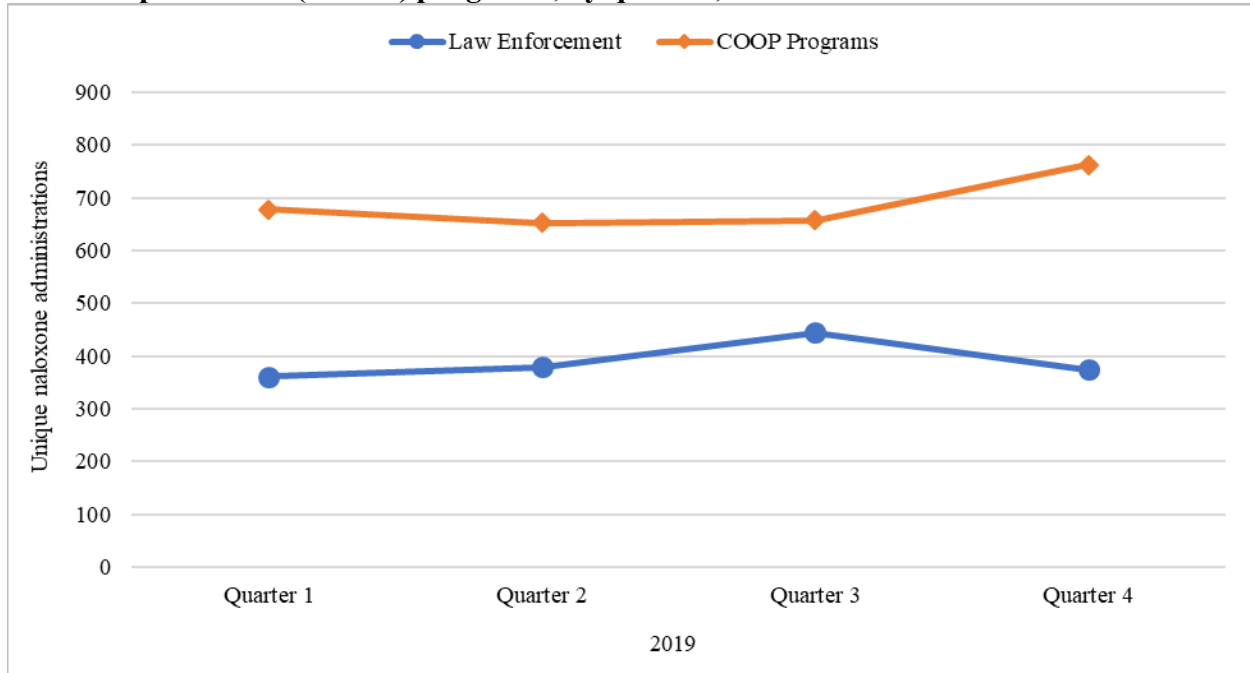
Law enforcement agencies from 60 counties have submitted reports of naloxone administrations to the NYSDOH. Naloxone administration reporting by LE responders is mandated under regulation in 10 NYCRR 80.138.

Data in this report are presented on administrations of naloxone reported by COOP programs registered with the NYSDOH, as well as by LE agencies, firefighters, and EMS personnel. Naloxone administration data from COOP programs are based on self-report. For all naloxone data, there are instances in which not all data fields are completed by the reporter, and there is often a lag in data reporting for LE and COOP administrations. Increases seen over time may represent expansions of program reach and may or may not indicate an increase in overdose events, thus all data should be interpreted with caution. Naloxone data reflect the county in which the overdose occurred and in which the naloxone was administered – not necessarily the county of the overdosed person's residence.

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In NYS during 2019, the quarters during which LE agencies and COOP programs reported the highest number of naloxone administrations were July through September (Quarter 3), and October through December (Quarter 4), respectively (Figure 53).

Figure 53. Naloxone administration reports by law enforcement and community opioid overdose prevention (COOP) programs, by quarter, New York State 2019



Note: The law enforcement category does not capture administrations reported in New York City, and does not comprehensively capture administrations reported in Nassau County.

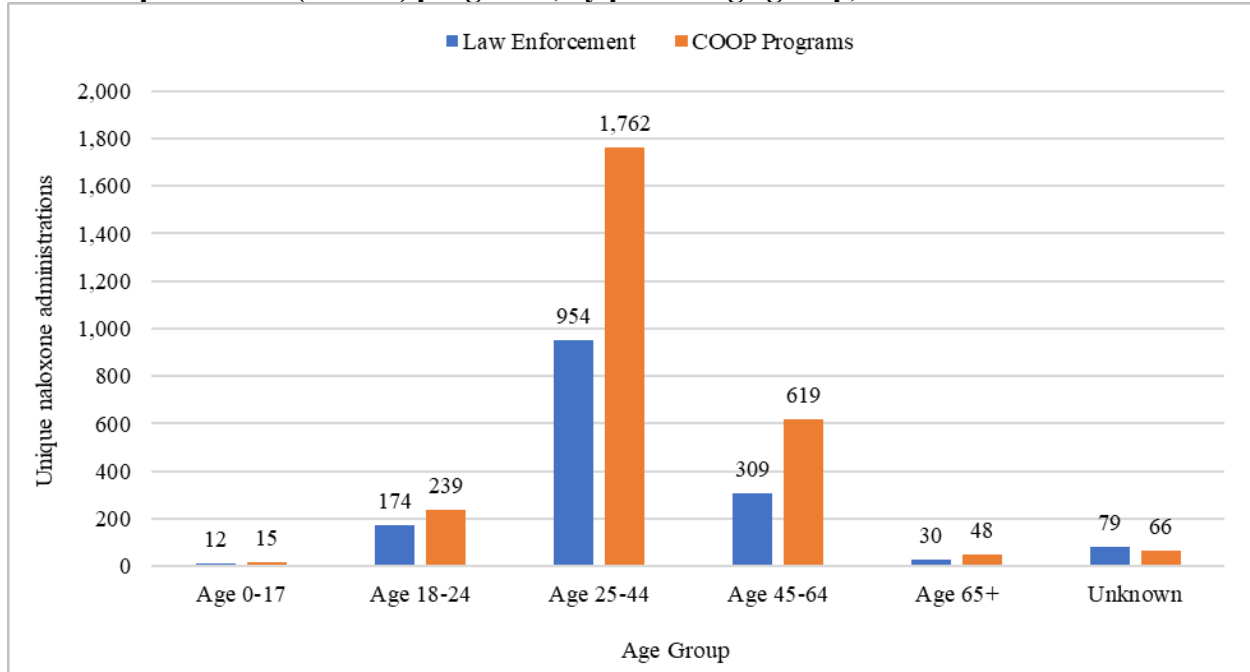
Data source: New York State Department of Health AIDS Institute; Data as of June 2020

For complete data, see [Data Table 53, Appendix, page 69](#).

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Figure 54 shows that in NYS, during 2019, most naloxone administration reports from law enforcement agencies and COOP programs were for patients aged 25-44 years.

Figure 54. Naloxone administration reports by law enforcement and community opioid overdose prevention (COOP) programs, by patient age group, New York State 2019



Note: The law enforcement category does not capture administrations reported in New York City, and does not comprehensively capture administrations reported in Nassau County.

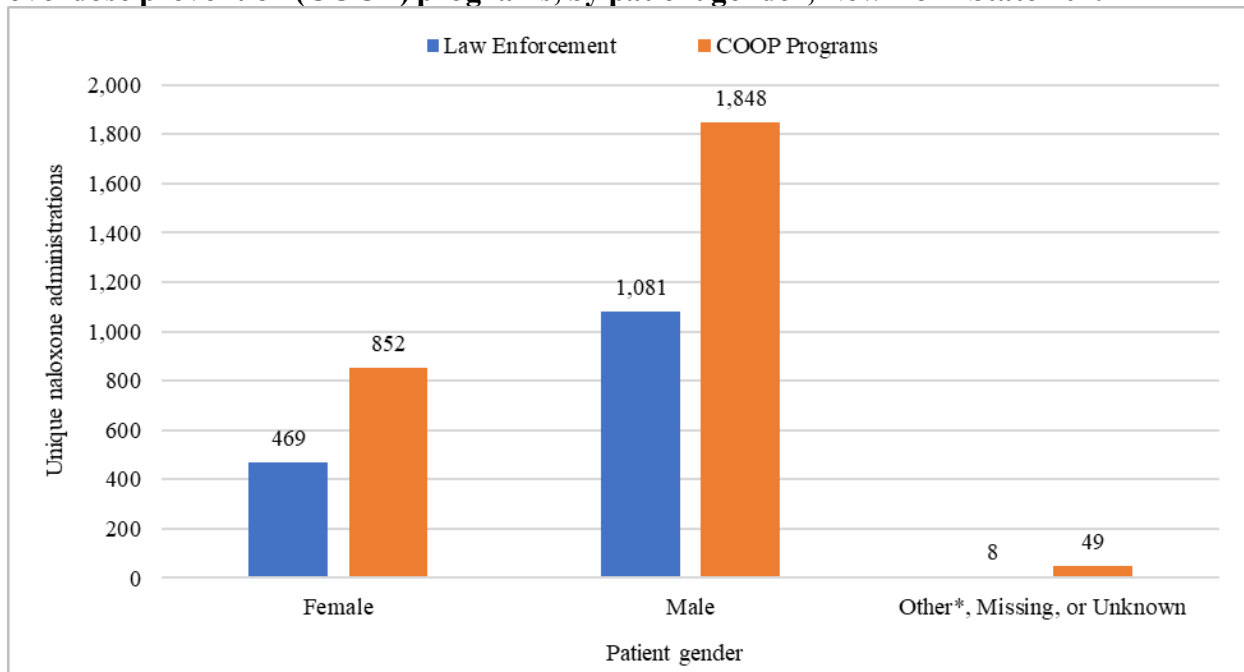
Data source: New York State Department of Health AIDS Institute; Data as of June 2020

For complete data, see [Data Table 54, Appendix, page 69](#).

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In NYS during 2019, both law enforcement agencies and community opioid overdose prevention programs reported that most of their administrations were among male patients (Figure 55).

Figure 55. Naloxone administration reports by law enforcement and community opioid overdose prevention (COOP) programs, by patient gender, New York State 2019



Note: The law enforcement category does not capture administrations reported in New York City, and does not comprehensively capture administrations reported in Nassau County.

*Other includes "Transgender", "Intersex", and "Other, not specified".

Data source: New York State Department of Health AIDS Institute; Data as of June 2020

For complete data, see [Data Table 55, Appendix, page 69](#).

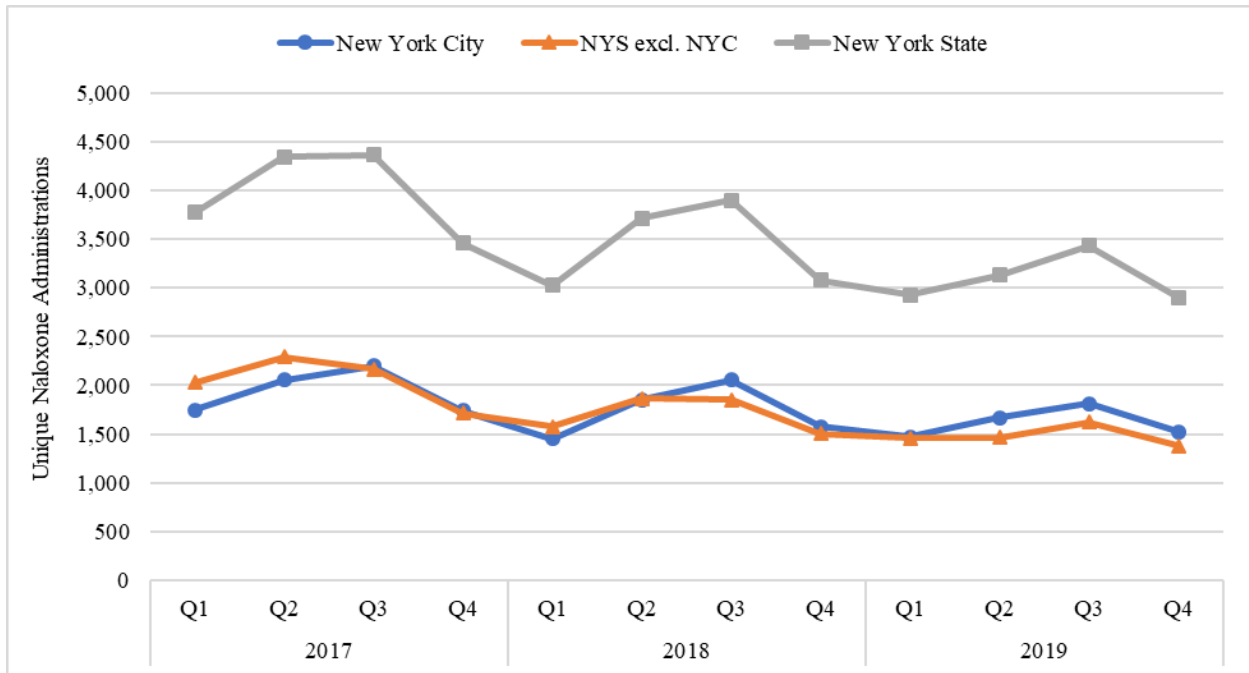
7.3.2 - Naloxone Administrations by Emergency Medical Services

Although naloxone has been used for decades by Advanced Life Support (ALS) Emergency Medical Services (EMS) agencies, naloxone use by Basic Life Support (BLS) EMS agencies is more recent. Many areas of NYS rely on BLS agencies to provide emergency medical response through EMTs and Certified First Responders (CFRs). Equipping BLS agencies with intranasal naloxone has significantly expanded the reach of this life-saving medicine into communities where it is needed. EMS agencies provide the most naloxone administrations to suspected overdose events in NYS. Counts of unique administrations of naloxone by EMS agencies in NYS are based on information submitted to the NYSDOH Bureau of Emergency Medical Services through electronic Patient Care Reports (e-PCRs).

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The number of electronically reported unique naloxone administrations by EMS per quarter in NYS decreased by 23 percent from 3,777 in Quarter 1 of 2017, to 2,904 in Quarter 4 of 2019 (Figure 56). During that time, Quarter 3 of 2017 had the highest number of reported administrations (4,365). There was a total of 12,403 administrations reported during 2019, about a 10 percent decrease from 13,724 administrations in 2018. (For data from years prior to 2017, please see the New York State [Opioid Annual Report, 2019](#).)

Figure 56. Unique naloxone administrations by EMS agencies, by region, New York State, 2017-2019

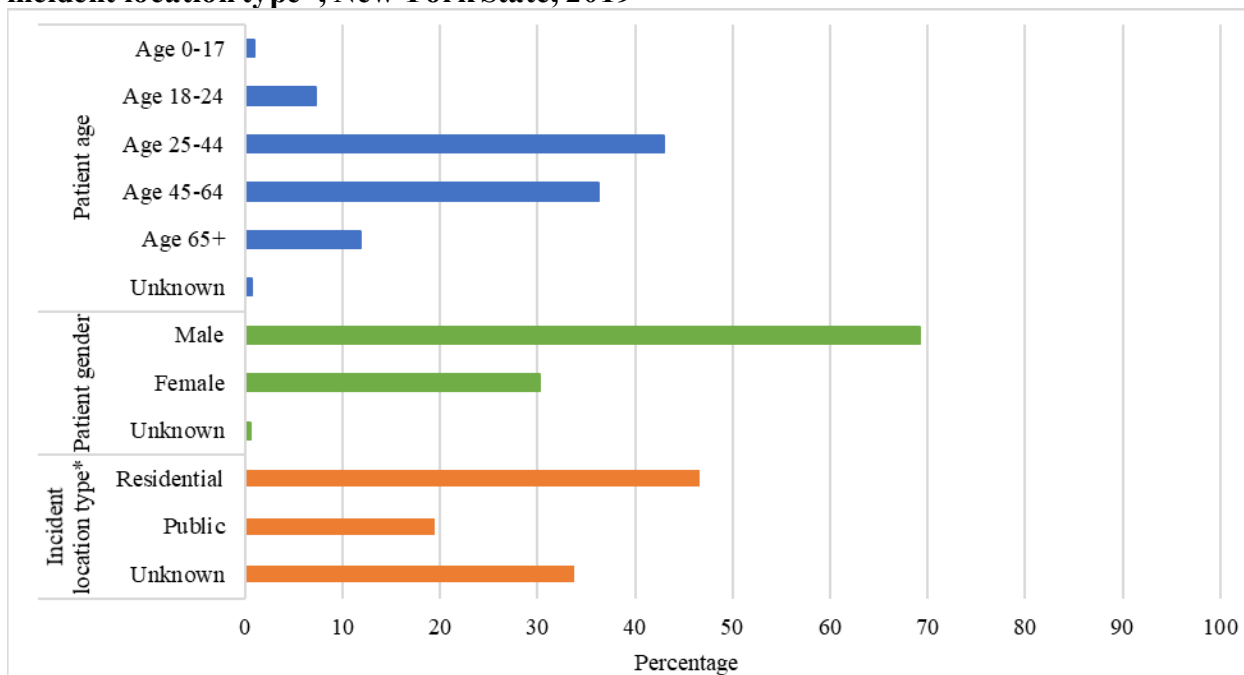


Note: Counts may have been affected by changes in documentation systems used by EMS agencies. Additional data validation steps have been taken to de-duplicate multiple naloxone administrations for the same patient encounter. As a result, counts may differ from previous reports.
 Data source: NYSDOH, Bureau of Emergency Medical Services; Data as of July 2020
 For complete data, see [Data Table 56, Appendix, page 70](#).

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In 2019, the majority of unique naloxone administrations by EMS personnel involved male patients (8,588 administrations, or 69 percent) (Figure 57). Unique naloxone administrations were highest among patients in the 25-44 year-old age group (5,328 administrations, or 43 percent). Most of the EMS unique naloxone administrations occurred in residential settings (5,623 administrations, or 47 percent), similar to overdose deaths, as shown in Figure 17.

Figure 57. Unique naloxone administrations by EMS agencies, by age group, gender, and incident location type*, New York State, 2019



*Incident location type excludes Suffolk County, as data were not available. As such, the total count for this category will differ from other categories shown.

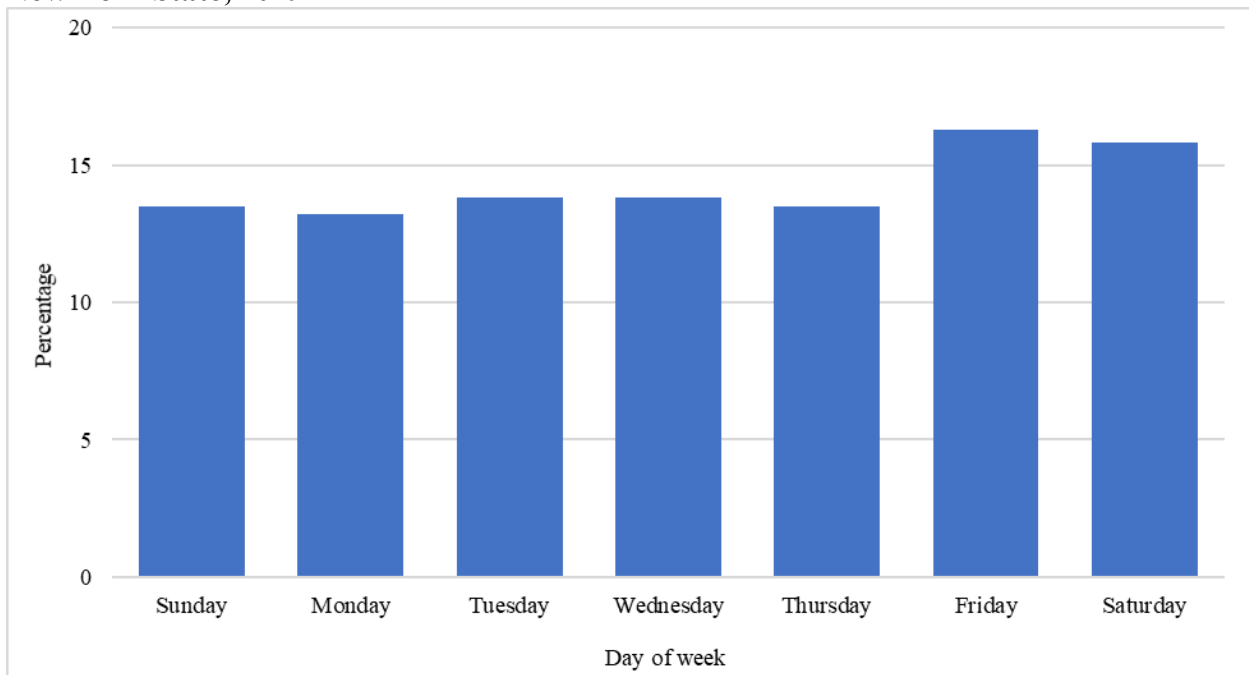
Data source: NYSDOH, Bureau of Emergency Medical Services; Data as of July 2020.

For complete data, see [Data Table 57, Appendix, page 71](#).

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In 2019, Friday was the day of the week during which the highest number of unique naloxone administrations by EMS occurred (2,020 administrations, or 16 percent), followed by Saturday with 15.8 percent (Figure 58). The day of the week with the fewest administrations during 2019 was Monday (1,642 administrations, or 13 percent). This highlights the need for individuals using substances such as opioids, as well as cocaine and other drugs, to obtain naloxone in their communities and have it available over weekends. The number of unique naloxone administrations by EMS during 2019 was distributed fairly evenly across months, with slightly greater administrations occurring during the summer months, and fewer occurring during winter (data not shown). The month with the highest number of naloxone administrations in 2019 was July (1,235 administrations, or 10 percent), while the month with the lowest number was December (918 administrations, or 7 percent).

Figure 58. Unique naloxone administrations by EMS agencies, by incident day of week, New York State, 2019

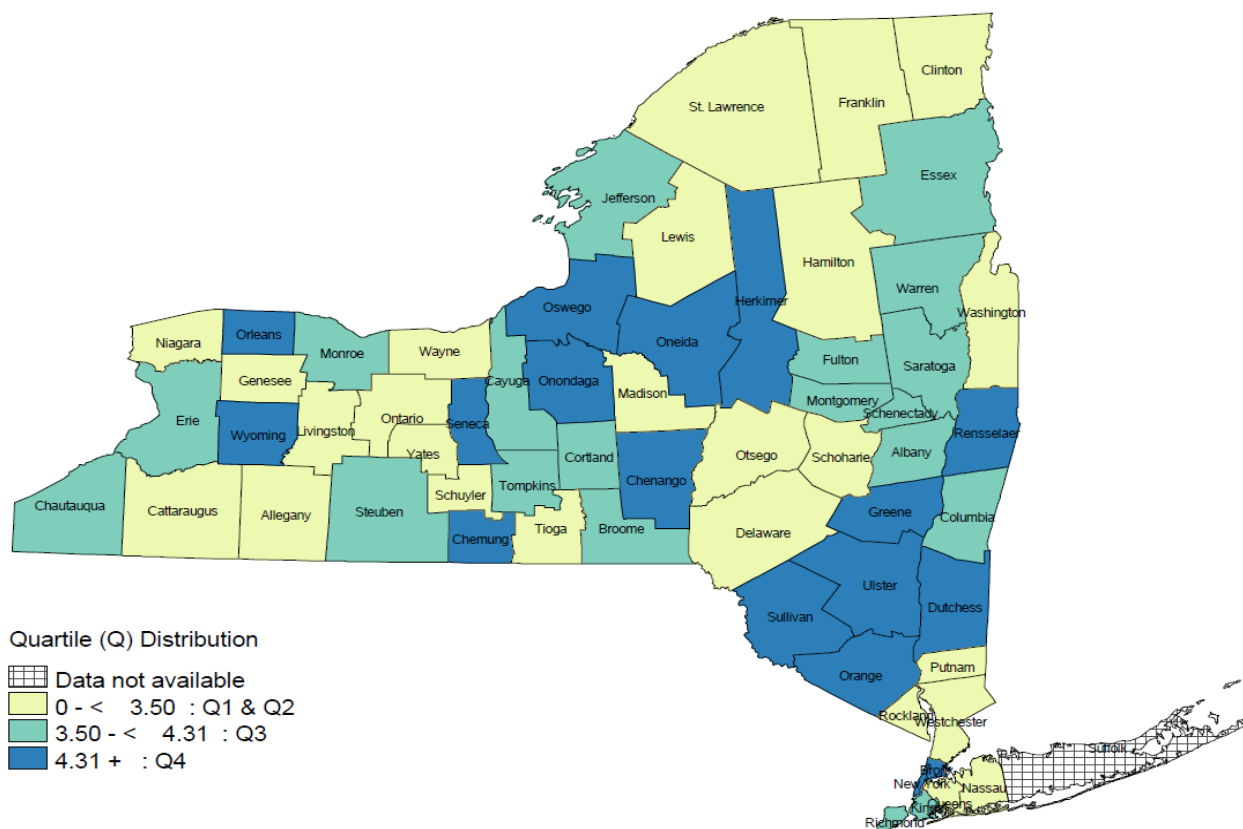


Data source: NYSDOH, Bureau of Emergency Medical Services; Data as of July 2020
For complete data, see [Data Table 58, Appendix, page 71](#).

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Figure 59 shows variation in the county rate of unique naloxone administrations per 1,000 unique 911 EMS dispatches in 2019. The counties shown in blue had the highest crude rates (rates greater than or equal to 4.31 per 1,000) of naloxone administration per 1,000 unique 911 EMS dispatches. The ten counties with the highest stable rates of unique naloxone administrations in 2019 were Chemung (10.30), Rensselaer (6.43), Sullivan (5.66), Chenango (5.62), Dutchess (5.43), Oswego (5.43), Bronx (5.37), Ulster (5.31), Oneida (5.17), and Onondaga (5.13). 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 dispatch data were unavailable.

Figure 59. Unique naloxone administrations by EMS agencies, crude rate per 1,000 unique 911 EMS dispatches, by county, New York State*, 2019



Data source: NYSDOH, Bureau of Emergency Medical Services; Data as of July 2020

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

*Dispatch data for Suffolk County were not available and, as a result, no rate could be calculated. Both the NYS excluding NYC and NYS totals exclude the number of unique naloxone administrations reported and the number of unique dispatches for Suffolk County.

For complete data, see [Data Table 59, Appendix, page 72](#).

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