



The Opioid Epidemic: Madison County, NY



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Executive Summary

Since 2016, Madison County Department of Health has published an annual report on the Opioid Epidemic and the impact on the local community. This year the report reflects an abbreviated version, removing data sources that are no longer available or have not been updated between reports. Previous reports are still available on the Madison County website: <https://www.madisoncounty.ny.gov/1754/Opioid-Epidemic-Annual-Reports>.

The report aims to provide a snapshot describing the current state of the opioid epidemic on a national, state, and local level. The goal is to provide updated information to guide future actions, initiatives, and policies aimed at reducing the burden of substance use within our community.

Some key points outlined in the report include:

- On a national and state-level, synthetic opioids (e.g. fentanyl) have surpassed both heroin and prescription opioids in terms of opioid-related overdose deaths.
- The number of all opioid-related overdose deaths in Madison County has increased steadily between 2019 and 2021. Despite this increase, Madison County has the lowest rate among Central New York (CNY) counties based on the most recent data (2021).
- Despite an increase in overdose deaths, both hospital admissions and emergency department visits related to opioids declined in 2021.
- The rate of opioid prescribing continues to decrease on a national, state, and county level. However, the opioid prescription rate in Madison County remains above CNY and New York State (NYS) (excluding New York City).
- The annual number of opioid-related treatment admissions to OASAS-certified chemical dependence programs has steadily decreased since a peak in 2016.
- Naloxone (Narcan®), a life saving drug that can reverse the effects of an opioid overdose, has observed an increase in usage since 2019.

Background

The opioid overdose epidemic in the United States is characterized as a multi-layered problem, with three distinct waves (Fig 1). It is pervasive, spanning across all socio-economic, cultural, and geographic boundaries, and its prominent effects ripple across all aspects of our society. The 1990s (Wave 1) marked the rise of prescription opioids, including oxycodone (OxyContin®), hydrocodone (i.e. Vicodin®), and methadone (CDC, 2021). In 2010, dramatic increases from heroin-involved deaths occurred (Wave 2). Individuals at highest risk for heroin addiction include those with concurrent addiction (i.e. prescription opioids, cocaine, alcohol).

Wave 3 of the opioid epidemic is characterized by the spike in overdose deaths involving synthetic opioids other than methadone (e.g., illicitly manufactured fentanyl). From 2016 to 2017 alone, synthetic opioid-involved overdose deaths increased by 45.2% (CDC, 2019). Fentanyl has contributed to the rising number of fatal and non-fatal drug overdoses due to it being 50 to 100 times more potent than morphine or any other opioids (NIH, 2021).

The national increase in deaths from opioid overdoses is dramatic. It is estimated that 44 people die each day from overdoses involving prescription opioids, and 187 deaths per day from both prescription and illicit opioids.

Of the 92,000 overdose deaths in 2020, nearly 75% (69,000) involved an opioid. Overdose deaths involving synthetic drugs increased by 56% from 2019 to 2020. Nationally, the age-adjusted rate of overdose deaths involving any opioid was 21.4 per 100,000 in 2020. On a state level, the age-adjusted rate of overdose deaths involving any opioid was 21.8 per 100,000.

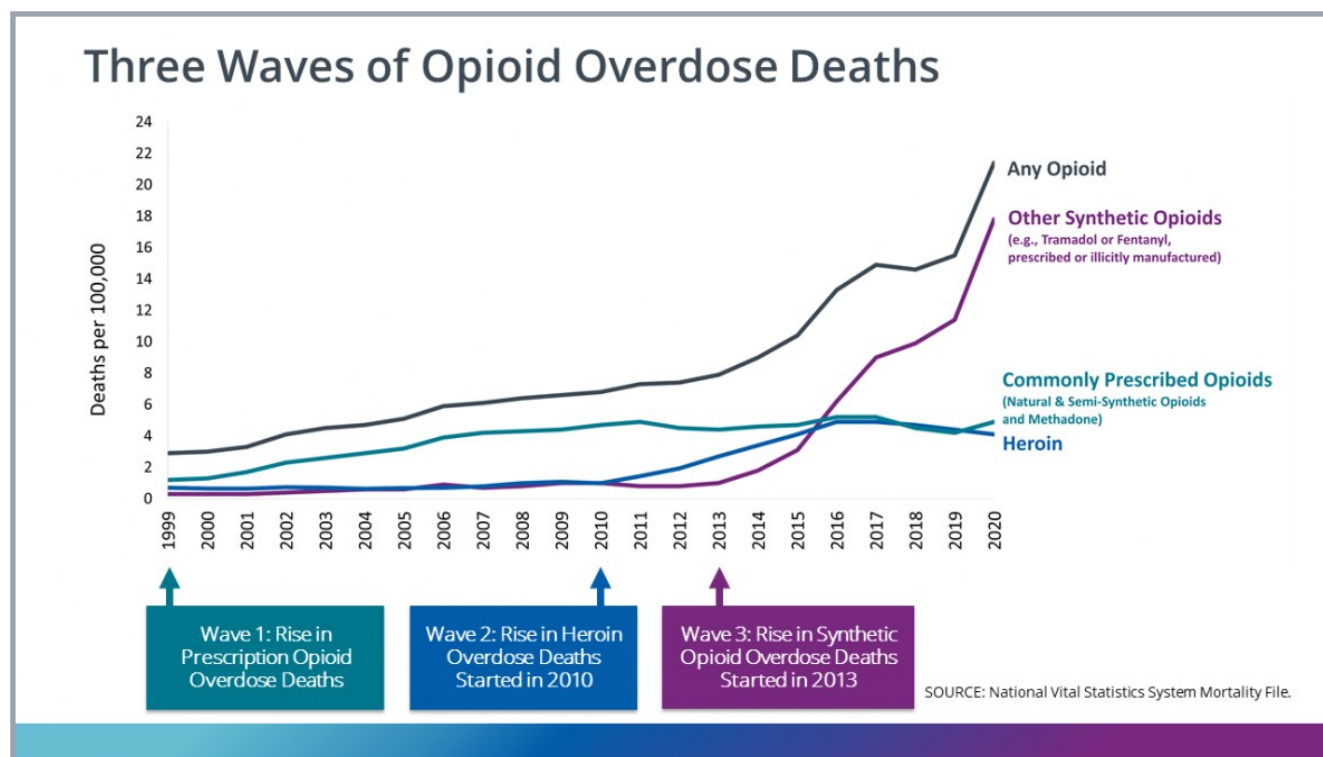


Figure 1. Opioid overdose death rates per 100,000 population among waves 1-3 of the opioid epidemic. Source: National Vital Statistics System Mortality File. Accessed 4/2023.

The Heart of the Epidemic

Overdose Deaths

All of the counties in the Central New York region have been affected by the opioid epidemic. Annual overdose death rates have fluctuated and often exceed rates in the remainder of NYS (excluding NYC) (Fig 2). The 2021 annual overdose death rate in Madison County was 19.8 per 100,000 population. Although this rate remains lower than surrounding CNY counties, Madison County observed an increase in overdose death rate to date between 2019 and 2021 (5.6 to 19.8 per 100,000 population) (Fig 2).

There has been an increase in the number of all opioid overdose deaths in Madison county. Overdose deaths involving opioid pain relievers appear to be increasing rapidly, increasing by 40% from 2020 to 2021 (Fig 3).

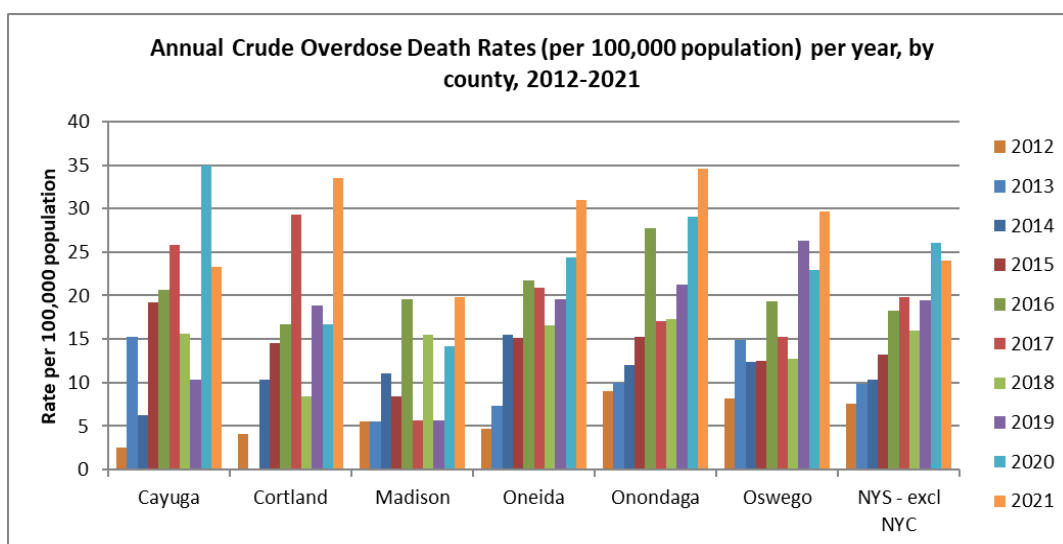


Figure 2. Annual overdose death rate among Central New York counties compared with NYS (excluding NYC), 2012–2021. Source: 2010-2013 — NYSDOH Vital Statistics; 2014-2021 — NYSDOH, New York State County Opioid Quarterly Reports. Accessed 03/2023.

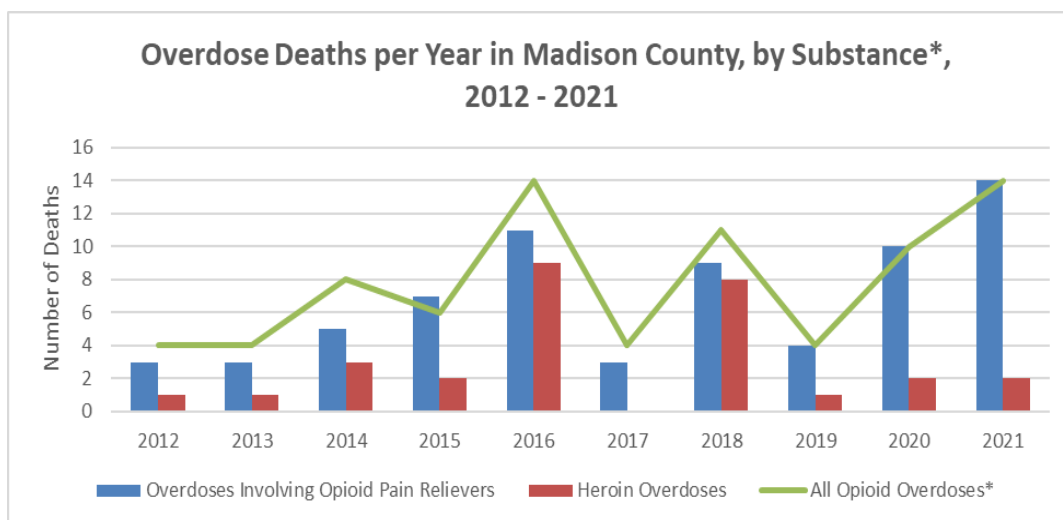


Figure 3. Annual overdose deaths by substance, Madison County, 2012-2021. *Indicators are not mutually exclusive. Decedents and patients may have multiple substances in their system. Thus, overdoses involving heroin and overdoses involving prescription opioid pain relievers will not add up to the overdoses involving all opioids. Source: 2011-2013 — NYSDOH Vital Statistics; 2014-2021 — NYSDOH, New York State County Opioid Quarterly Reports. Accessed 3/2023.

Effects on the Healthcare System

Hospitalization and Emergency Department Visits

Although overdose deaths drive the conversation about the national opioid epidemic, the toll on the healthcare system has also been significant. Of the \$786.8 billion in societal costs attributed to opioid use disorder, \$89.1 billion was accounted for by specifically healthcare expenditures. Nationally, the cost of opioid-related visits and hospitalization continues to increase each year.

Hospitalization and ED visits in New York State related to opioid overdoses are monitored by the Statewide Planning and Research Cooperative System (SPARCS). Hospital admission rates in NYS (excluding NYC) began to decline in 2018 and have since stabilized. Madison County has demonstrated a decline in hospital admissions from 2019 to 2021, with rates remaining lower than CNY and NYS (excluding NYC) since 2020 (Fig 4).

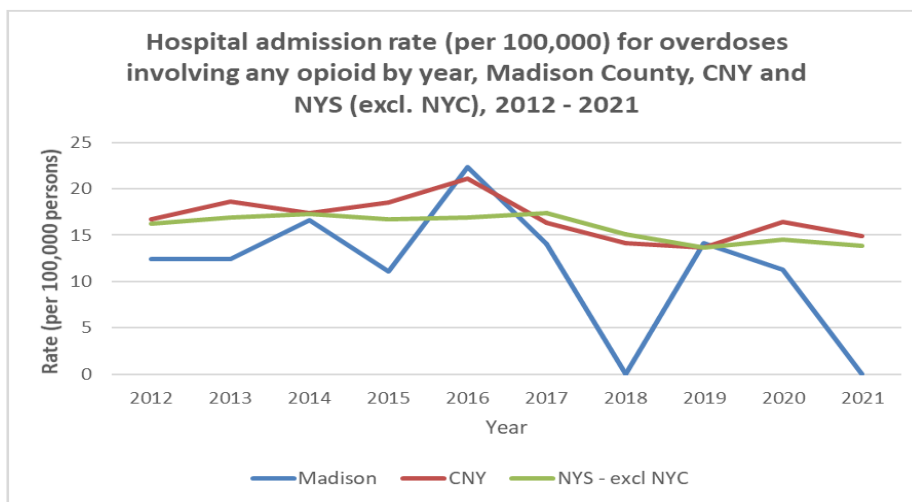


Figure 4. Annual inpatient hospitalization admissions rates due to a opioid overdose in Madison County, CNY, and NYS (excluding NYC) from 2012 – 2021.
Source: NYSDOH, New York State County Opioid Quarterly Reports. Accessed 3/2023.

ED visit rates due to opioid overdose have increased steadily since 2010, peaking in 2016. CNY and Madison County rates have been similar to state trends most years; however, beginning in 2017, Madison County's ED visit rate has remained lower than the state and CNY region and has declined in 2021 (Fig 5).

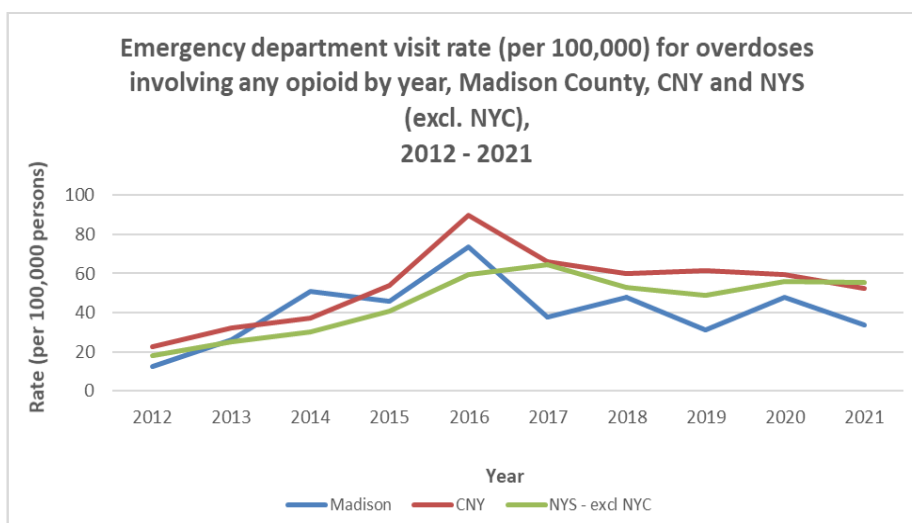


Figure 5. Annual emergency department visit rates due to an opioid overdose in Madison County, CNY, and NYS (excluding NYC) from 2012 – 2021.
Source: NYSDOH, New York State County Opioid Quarterly Reports. Accessed 3/2023.

Access to Opioids

Opioid Prescribing Trends

Nationally, the total number of prescriptions dispensed reached its peak in 2012, though this rate has declined between 2012 to 2020 (CDC, 2021). Notably, 2020 marked the lowest dispensing rate observed in the past 15 years which equates to 43.3 prescriptions per 100 people or a total of 142 million opioid prescriptions (CDC, 2021).

Information on New York State (NYS) opioid prescribing is collected from the online New York State (NYS) Prescription Monitoring Program Registry (PMP), maintained by the NYS Department of Health's Bureau of Narcotic Enforcement. Any NYS licensed prescriber, excluding veterinarians, is required to consult the PMP registry when writing prescriptions for Schedule II, III, and IV controlled substances.

Opioid prescription rates in NYS (excluding NYC), Central New York and Madison County peaked in 2016 following a steady trend. Rates have steadily declined since, dropping below the baseline rates that were first measured in 2012. Madison County's prescribing rates are consistently higher than overall rates for CNY And NYS (excluding NYC) (Fig 6). As of 2021, there were 398 opioid analgesic prescriptions per 1,000 Madison County residents. Madison County falls within the highest third among NYS counties for opioid prescription rates.

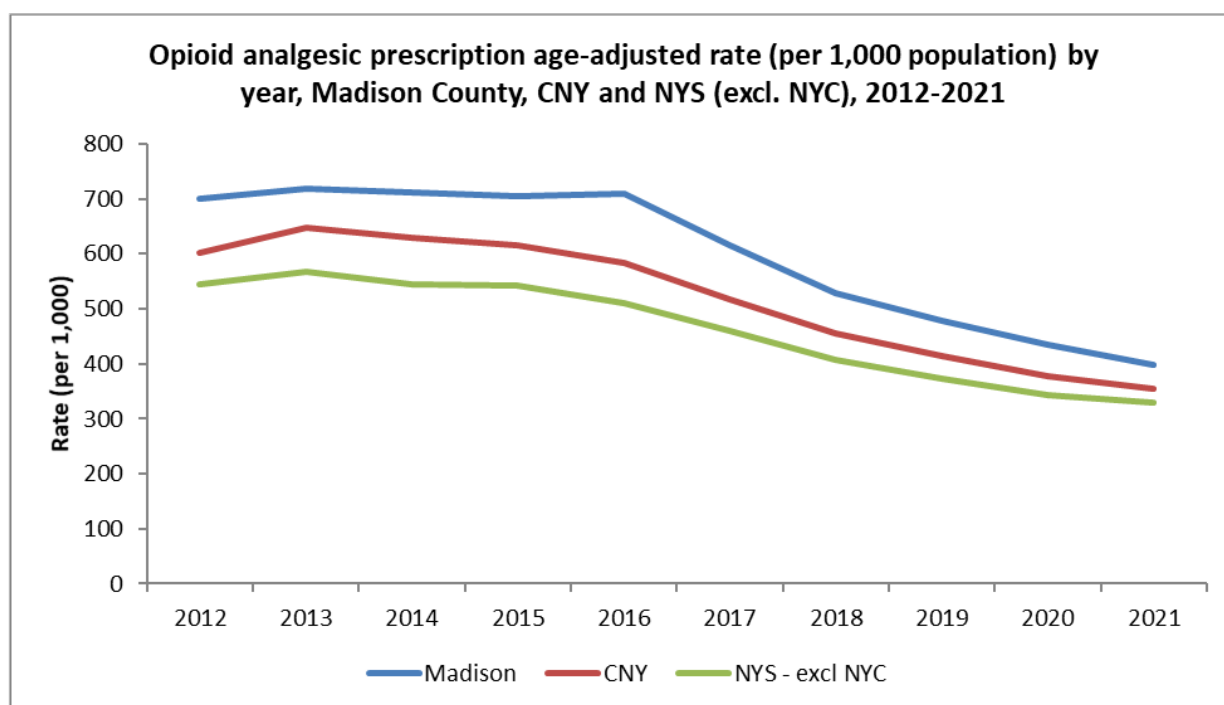


Figure 6. Opioid analgesic prescription rates, Madison County, CNY, and NYS (excluding NYC), 2012 – 2021.
Source: NYSDOH, Opioid-related Data in New York State. Accessed 4/2023.

Drug Sales

According to the American Society of Interventional Pain Physicians, the United States accounts for roughly 80% of the global opioid supply and 99% of the global hydrocodone supply, in spite of comprising only 4.6% of the world's population.

The Automated Reports and Consolidated Ordering System (ARCOS) is a data collection system in which drug manufacturers and distributors report their retail transactions (to hospitals, retail pharmacies, practitioners, mid-level practitioners, and teaching institutions) of controlled substances to the Drug Enforcement Administration (DEA).

The graph below (Fig 7) displays retail opioid sales per 100,000 population in the Central New York region and New York State from 2012-2021. While the rate of opioid sales has been decreasing across the region and state since 2011, they remain higher in CNY than statewide with the exception of 2018. Please note though that oxycodone distribution was excluded from the CNY total in 2018 and likely accounts for the significant difference in the rate.

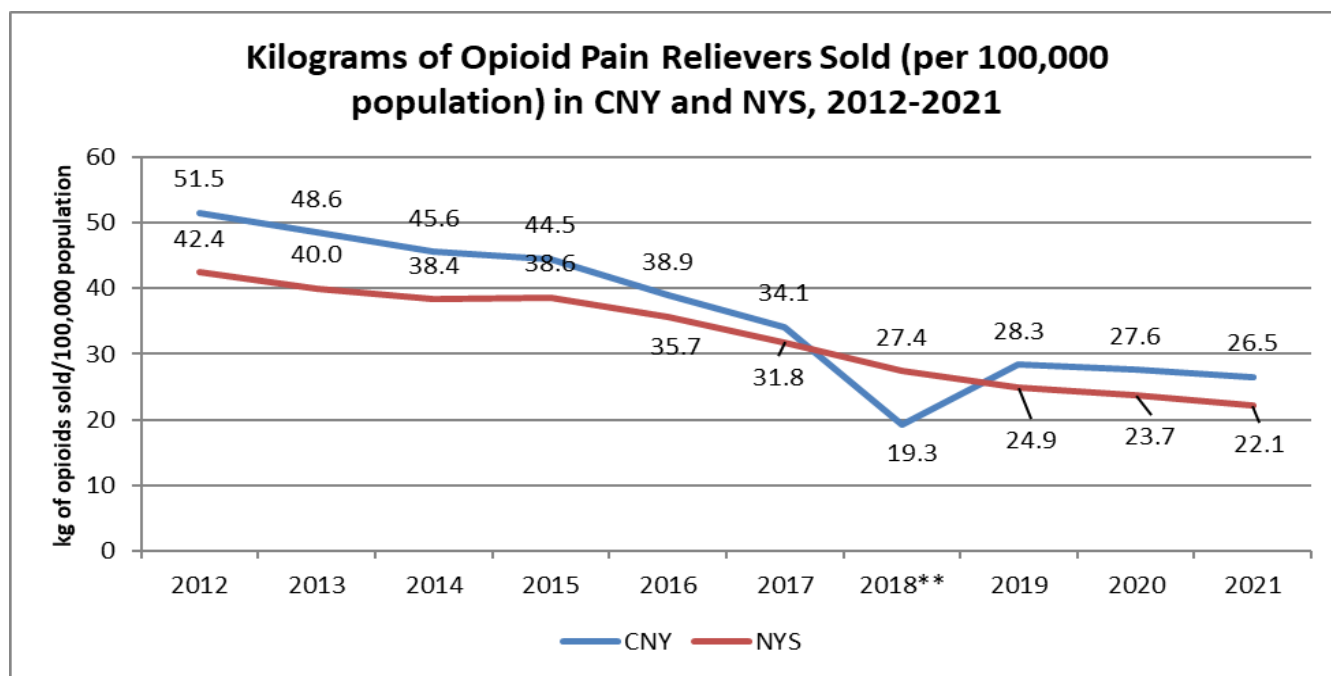


Figure 7. Opioid sales per 100,000 population in CNY and NYS, 2012 – 2021.

Drug sales data collected for: CNY zip codes 130XX-135XX; New York statewide; and drugs: Codeine, Fentanyl, Hydrocodone, Hydro-morphine, Meperidine (Pethidine), Methadone, Morphine, and Oxycodone.

Source: Automated Reports and Consolidated Ordering System (ARCOS). Accessed 3/2023.

**Oxycodone distribution was excluded from CNY total, likely accounting for the significant difference between NYS and CNY rates.

Treatment and Other Interventions

Opioid-Related Treatment Facility Admissions

In 2019, 4.2 million individuals received treatment for substance use disorder. Although more updated data is not currently available, it is estimated that less than one quarter of patients who met criteria for substance abuse treatment in 2020 received it (Addiction Resource, 2021).

The NYS Office of Alcoholism and Substance Abuse Services (OASAS) certified chemical dependence treatment programs report admissions of people served in programs throughout New York State. The annual number of opioid-related treatment admissions to OASAS certified chemical dependence programs rose from 2007-2016. Since 2016, the number of admissions among Madison County residents has declined (Fig 8).

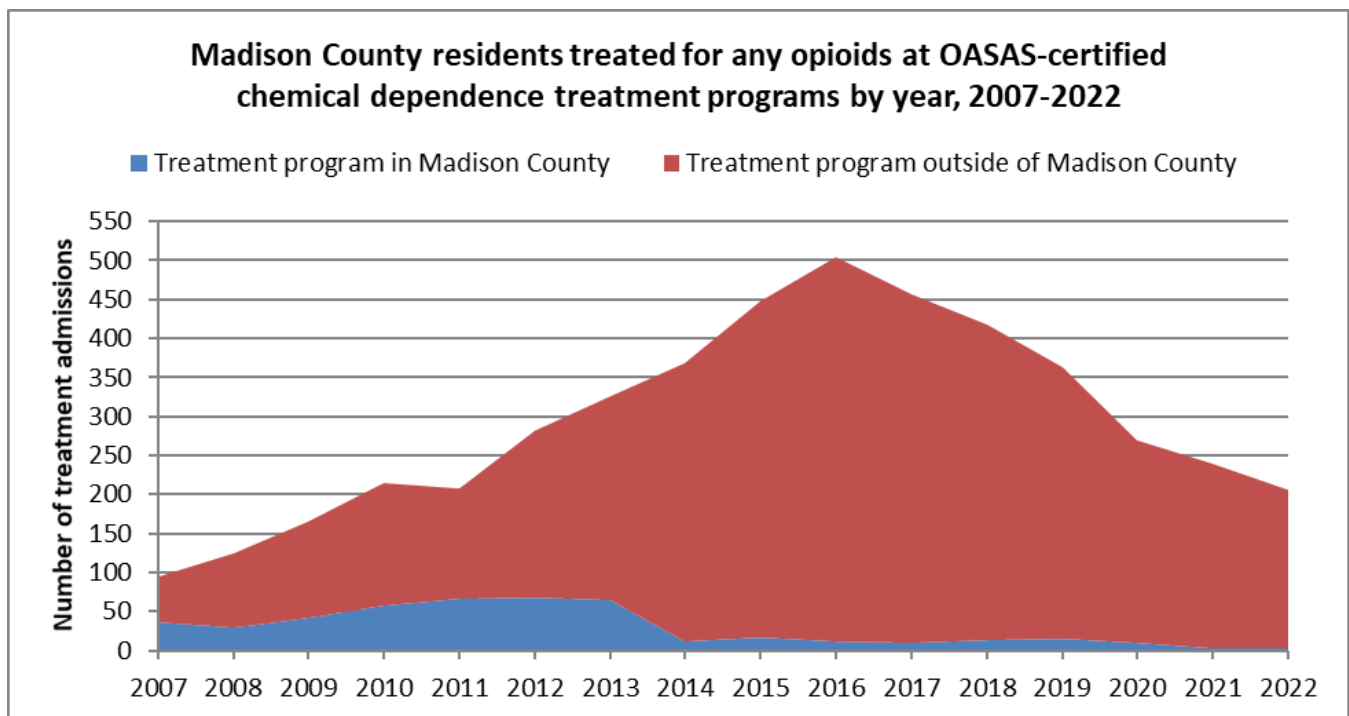


Figure 8. Admissions rates to OASAS-certified treatment programs for use of heroin and/or any opioid (2007-2022).

Source: NYSDOH, OASAS Data Warehouse. Note: Treatment admissions are not a unique count of individuals.

*Individuals may be admitted more than once in a given year. Requested 03/2023.

Safe Disposal Programs

Safe Disposal refers to the opportunities to safely dispose of most types of unused, unwanted, and expired prescription and nonprescription medicines. This program aims to reduce accidental use, intentional misuse, and reduce potential environmental damage. Options for safe disposal of these medicines include permanent kiosks or at-home disposal.

There are several permanent kiosks for safe medication and syringe disposal throughout Madison County. Residents can utilize these kiosks year-round to dispose of unused or unwanted prescription drugs. If residents are unable to bring unwanted prescriptions to a kiosk, contact BRIDGES to receive a Detera bag for safe, at-home disposal. Additionally, community members can participate in a bi-annual Drug Take Back Day events.

Naloxone Use to Prevent Overdose Deaths

Naloxone (commonly referred to by the brand name, Narcan®) is a life-saving drug that can reverse the effects of a prescription opioid and/or heroin overdose. Narcan® is non-addictive, and expanding training on how to administer the drug can help reverse opioid overdoses and support efforts by emergency medical services (EMS) to save more lives.

In New York State, regulations require that naloxone administration is reported and this information is made available to the public. There has been a steady increase in the number of doses administered between 2019 and 2021 (Fig 9). EMS organizations continue to administer the most doses; however, the number of doses administered by registered community opioid overdose prevention (COOP) programs increased substantially in 2021. There has been 47 doses of naloxone administered in the first three quarters of 2022.

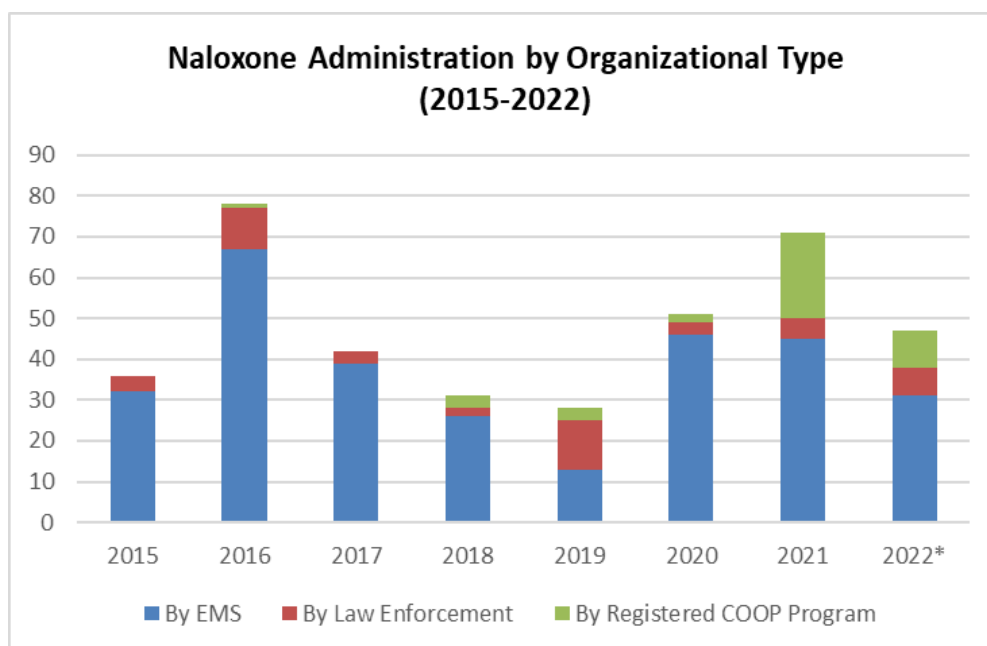


Figure 9. Naloxone Administration in Madison County by Organizational Type, 2015-2022. Source: NYSDOH, County Opioid Quarterly Report For Counties Outside of New York City. Accessed 04/2023.

*Note: 2022 values consist of preliminary data up to quarter 3.

Note: Naloxone administration reporting is mandated under regulation. All Naloxone administration data are based on self-report.

Naloxone data in the report 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. Increases may represent expansion of program and may or may not indicate an increase in overdose events. COOP – Community Opioid Overdose Prevention.

Community Efforts

The Madison County community continues to identify substance use disorders, including opioids, as a priority area. In 2022, the Madison County Department of Health facilitated a community health assessment and improvement planning process, which identified strategies to address substance use. For more information on the Madison County Community Health Improvement Plan (CHIP), please visit the Madison County website: <https://www.madisoncounty.ny.gov/2482/Community-Health-Assessment-Improvement->

In addition, there are continued efforts by local organizations to prevent and reduce harm of substance use. The funding from the New York State Opioid Settlements is intended to support prevention, treatment, and recovery initiatives specifically.

Appendix A. Data Tables

Table 1. Overdose Deaths — Madison County

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|
| All opioid overdoses* | 4 | 6 | 4 | 4 | 8 | 7 | 14 | 3 | 11 | 4 | 10 | 14 |
| Heroin overdoses | 0 | 2 | 1 | 1 | 3 | 2 | 9 | 0 | 8 | 1 | 2 | 2 |
| Overdoses involving opioid pain relievers | 4 | 5 | 3 | 3 | 5 | 7 | 11 | 3 | 9 | 4 | 10 | 14 |

*Indicators are not mutually exclusive. Decedents and patients may have multiple substances in their system. Thus, overdoses involving heroin and overdoses involving prescription opioid pain relievers will not add up to the overdoses involving all opioids.

Source: 2010-2013 — NYSDOH Vital Statistics; 2014-2021 — NYSDOH, New York State County Opioid Quarterly Reports. Accessed 4/2023.

Table 2. Hospitalization and Emergency Department Visit Rates (per 100,000 population) for Overdoses Involving Any Opioid

| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Hospitalizations rate | | | | | | | | | | | | | | |
| Madison County | s | 8.6 | s | 9.5 | 12.4 | 12.4 | 16.6 | 11.1 | 22.3 | 14.0 | s | 14.1 | 11.3 | s |
| CNY | 9.4 | 13.6 | 14.8 | 16.1 | 16.7 | 18.6 | 17.4 | 18.6 | 21.1 | 16.3 | 14.1 | 13.6 | 16.2 | 14.9 |
| NYS (excl. NYC) | 12.1 | 13.0 | 14.3 | 16.1 | 16.2 | 16.9 | 17.3 | 16.7 | 16.9 | 17.4 | 15.1 | 13.7 | 14.0 | 13.8 |
| Emergency department visit rate | | | | | | | | | | | | | | |
| Madison County | 8.6 | s | 13.6 | 9.5 | 12.4 | 26.2 | 51.1 | 45.9 | 73.8 | 37.9 | 47.9 | 31.0 | 47.9 | 33.8 |
| CNY | 12.4 | 12.9 | 14.9 | 17.5 | 22.5 | 32.3 | 37.4 | 53.8 | 89.9 | 66.1 | 59.8 | 61.7 | 55.9 | 52.4 |
| NYS (excl. NYC) | 11.3 | 11.7 | 13.2 | 15.8 | 18.0 | 25.0 | 30.2 | 41.0 | 59.4 | 64.4 | 53.0 | 49.0 | 53.3 | 55.6 |

s: Data for indicator are suppressed for confidentiality purposes if there are less than 6 discharges.

Source: NYSDOH, New York State County Opioid Quarterly Reports. Accessed 3/2023.

Table 3. Opioid Analgesic Prescription Age-Adjusted Rate (per 1,000 population)

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Madison County | 682.4 | 699.4 | 698.4 | 687.5 | 640.4 | 580.0 | 528.1 | 478.1 | 433.9 | 398.3 |
| Central New York | 601.1 | 646.9 | 630.3 | 612.9 | 561.9 | 509.9 | 454.6 | 414.5 | 377.4 | 355.4 |
| NYS (excl. NYC) | 545.4 | 566.4 | 543.6 | 537.6 | 496.2 | 453.1 | 407.5 | 372.7 | 342.6 | 329.6 |

Source: NYSDOH, New York State County Opioid Quarterly Reports. Accessed 3/2023.

Table 4. Drug Sales (Kilograms of Opioid Pain Relievers Sold per 100,000 population)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|
| CNY | 42.1 | 45.7 | 47.5 | 50.2 | 52.4 | 53.2 | 51.5 | 48.6 | 45.6 | 44.5 | 38.9 | 34.1 | 19.3* | 28.3 | 27.6 | 26.5 |
| NYS | 34.6 | 38.3 | 39.7 | 41.9 | 42.9 | 44.3 | 42.4 | 40.0 | 38.4 | 38.6 | 35.7 | 31.8 | 27.4 | 24.9 | 23.7 | 22.1 |

Drug sales data collected for: CNY zip codes 130XX-135XX; New York statewide; and drugs: Codeine, Fentanyl, Hydrocodone, Hydromorphone, Meperidine (Pethidine), Methadone, Morphine, and Oxycodone. Source: Automated Reports and Consolidated Ordering System (ARCOS).

*Sales of oxycodone was excluded from CNY total in 2018 . Accessed 3/2023

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