



Epi Data Brief

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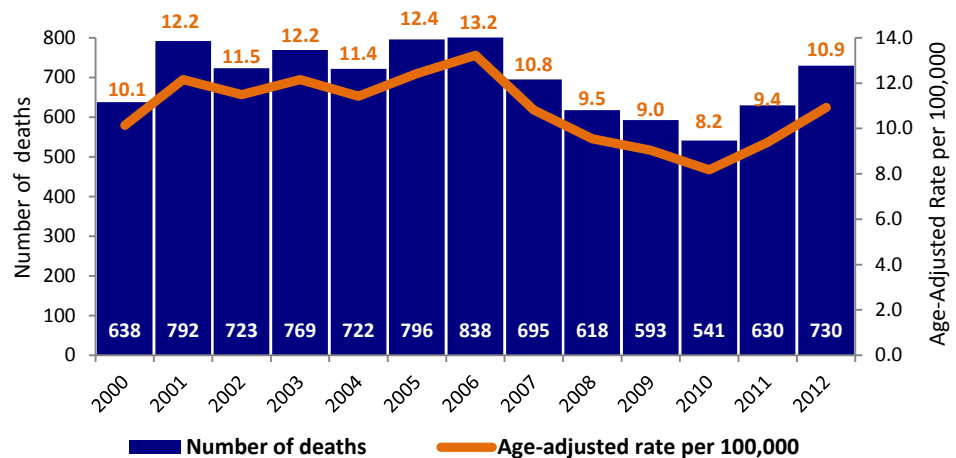
New York City Department of Health and Mental Hygiene

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Unintentional Drug Poisoning (Overdose) Deaths in New York City, 2000-2012

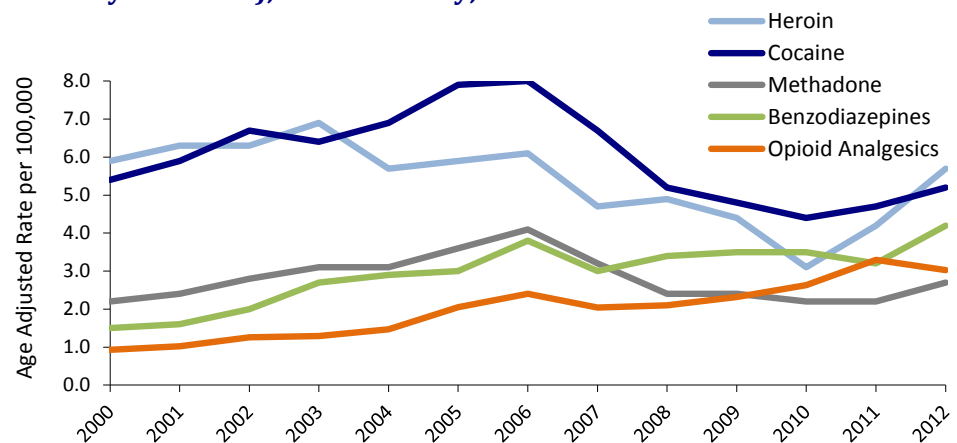
- Approximately 9,000 New York City residents died of an unintentional drug poisoning (overdose) during the years 2000-2012, an average of 700 overdose deaths per year.
- The rate of unintentional overdose deaths was highest in 2006 (13.2 per 100,000 New Yorkers) and decreased on average by 22% per year from 2006 through 2010.
- The rate of unintentional drug poisoning deaths increased by 25% between 2010 and 2012, from 8.2 to 10.9 per 100,000 New Yorkers (541 deaths vs. 730 deaths).
- In 2012, nearly all (97%) unintentional drug poisoning deaths involved more than one substance, including alcohol, licit, and illicit drugs.
- The drugs most commonly identified were heroin, cocaine, benzodiazepines, prescription opioid analgesics, and methadone.
- The rate of drug poisoning deaths involving opioid analgesics increased by 267% between 2000 and 2011, from 0.9 to 3.3 per 100,000 New Yorkers (59 deaths vs. 220 deaths). From 2011 to 2012, the rate decreased 9%, to 3.0 per 100,000.
- From 2010 to 2012, heroin-involved deaths increased 84%, from 3.1 to 5.7 per 100,000, and in 2012 had a higher rate than overdose deaths involving any other substance.
- The rate of benzodiazepine-involved deaths increased by 180% between 2000 and 2012, from 1.5 to 4.2 per 100,000 New Yorkers.
- [Benzodiazepines](#) were found in 58% of deaths involving [opioid analgesics](#), 40% of deaths involving heroin, and 32% of deaths involving cocaine in 2012.

Unintentional drug poisoning deaths, New York City, 2000-2012



Source: NYC Office of the Chief Medical Examiner & NYC DOHMH Bureau of Vital Statistics

Unintentional drug poisoning deaths by drug type involved (not mutually exclusive), New York City, 2000-2012



Source: NYC Office of the Chief Medical Examiner & NYC DOHMH Bureau of Vital Statistics

Definitions:

Unintentional drug poisoning deaths:

Derived from death certificates and include deaths from both illicit drugs and licit drugs taken for non-medical reasons. Unintentional drug poisoning death excludes poisonings where the manner of death was intentional (suicide), undetermined, or homicide. Toxicology findings were abstracted from medical examiner files. Drugs are not mutually exclusive.

Opioids: Cover the entire family of opiates and opioids. Opiates are narcotic analgesics derived from “natural” opium, such as morphine, heroin, or codeine. Opioids are synthetic drugs, such as methadone, and possess narcotic properties similar to opiates, but are not derived from opium. Opioid analgesics, also known as prescription pain relievers, such as oxycodone (Percocet®) and hydrocodone (Vicodin®).

High dose: Defined as any opioid analgesic prescription with a calculated morphine equivalent dose (MED) greater than 100. Among patients receiving opioid prescriptions, overdose rates increase with increasing doses of prescribed opioids.

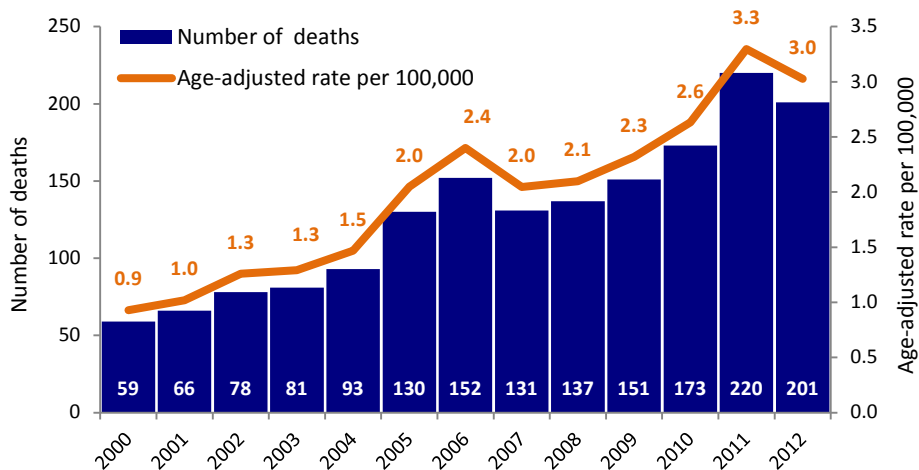
Population rates: Calculated using NYC DOHMH population estimates, modified from US Census Bureau intercensal population estimates 2000-2012, updated July 22, 2013. These rates will differ from previously reported rates based on census counts or previous versions of population estimates. Rates are age-adjusted to Census 2000 US standard population, except those for specific age groups.

Neighborhood poverty: The United Hospital Fund (UHF) classifies New York City into 42 neighborhoods, comprised of contiguous zip codes. Neighborhood poverty was defined by the percent of residents in each UHF neighborhood with incomes below 100% of the federal poverty level (Census 2000), separated into four groups: low (<10%), medium (10%-<20%), high (20%-<30%), and very high (>30%) neighborhood poverty.

Unintentional drug poisoning deaths involving opioid analgesics

- Prescription opioid analgesics were involved in 28% of overdose deaths in 2012. Between 2011 and 2012, the rate of drug poisoning deaths involving opioid analgesics decreased across all boroughs except Manhattan. Staten Island continued to have the highest rate of death (10.0 per 100,000).

Unintentional drug poisoning deaths involving opioid analgesics, New York City, 2000-2012

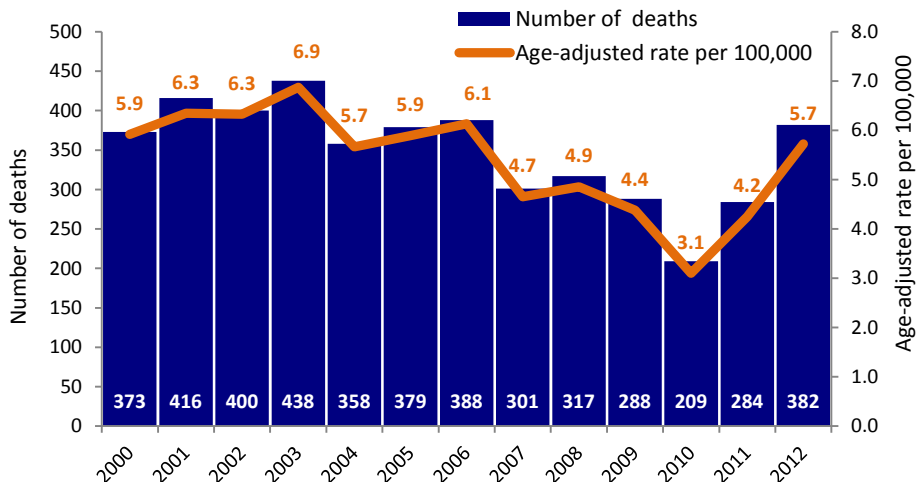


Source: NYC Office of the Chief Medical Examiner & NYC DOHMH Bureau of Vital Statistics

Unintentional drug poisoning deaths involving heroin

- Heroin was involved in 52% of all overdose deaths in 2012.
- The rate of drug poisoning deaths involving heroin increased from 4.2 per 100,000 New Yorkers in 2011 (284 deaths) to 5.7 per 100,000 New Yorkers in 2012 (382 deaths).
- The rate of drug poisoning deaths involving heroin was highest in 2003 (6.9 per 100,000 -- 438 deaths).

Unintentional drug poisoning deaths involving heroin, New York City, 2000-2012

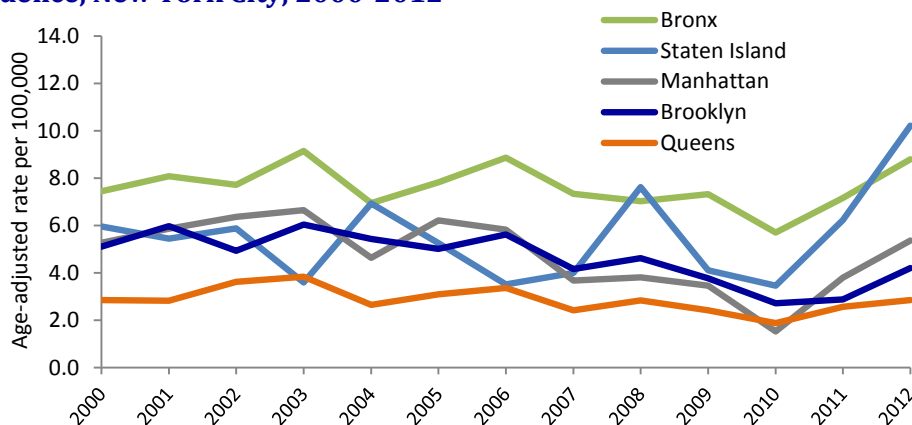


Source: NYC Office of the Chief Medical Examiner & NYC DOHMH Bureau of Vital Statistics

Demographics of unintentional drug poisoning deaths involving heroin

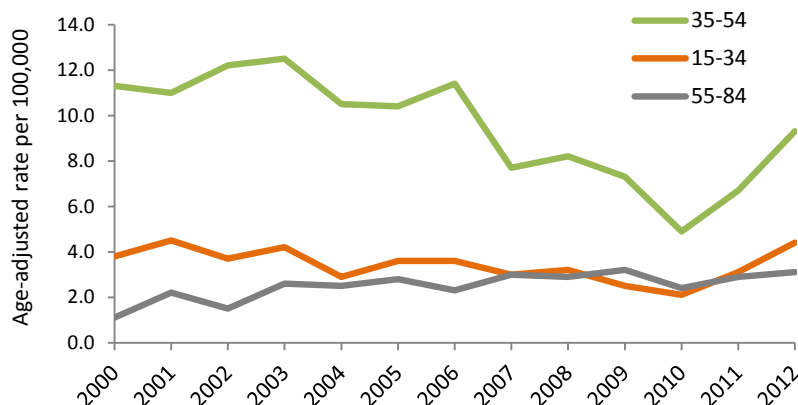
- In 2012, Staten Island residents had the highest rate (10.2 per 100,000) of drug poisoning deaths involving heroin, followed by the Bronx (8.8 per 100,000).
- The rate in Staten Island was more than three times that in Queens (2.8 per 100,000), more than double the rate in Brooklyn (4.2 per 100,000), and nearly double the rate in Manhattan (5.4 per 100,000).

Unintentional drug poisoning deaths involving heroin by borough of residence, New York City, 2000-2012



Source: NYC Office of the Chief Medical Examiner & NYC DOHMH Bureau of Vital Statistics

Unintentional drug poisoning deaths involving heroin by age, New York City, 2000-2012

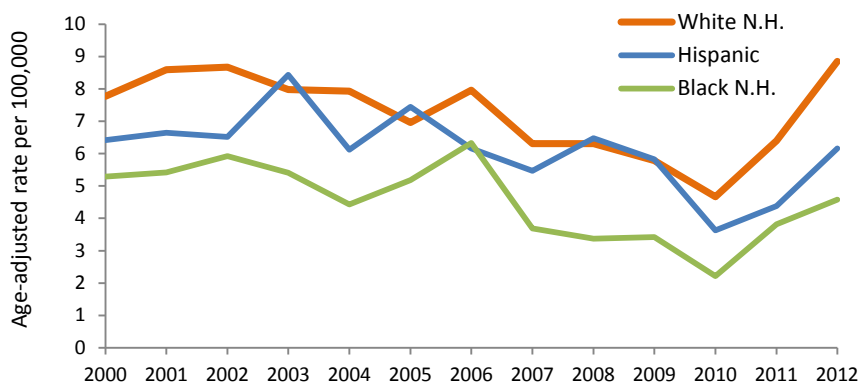


Source: NYC Office of the Chief Medical Examiner & NYC DOHMH Bureau of Vital Statistics

- From 2000 through 2012, New Yorkers aged 35 to 54 had the highest rate of drug poisoning deaths involving heroin.
- In 2012, the rate among New Yorkers aged 35 to 54 (9.3 per 100,000) was more than two times higher than the rate for those under 35 years of age (4.4 per 100,000), and three times the rate of New Yorkers 55 and older (3.1 per 100,000).
- Between 2010 and 2012, the rate increased 110% among New Yorkers under 35 years of age (2.1 to 4.4 per 100,000---55 deaths and 115 deaths, respectively).

- Residents of highest-poverty neighborhoods had a higher rate of heroin overdose deaths (7.9 per 100,000) than residents of all other neighborhoods in 2012.
- From 2010 to 2012, residents of lowest-poverty neighborhoods had the largest increase in rates (300%).
- The rate of drug poisoning deaths involving heroin among white New Yorkers (8.9 per 100,000) in 2012 was higher than Hispanic New Yorkers (6.2 per 100,000), and black New Yorkers (4.6 per 100,000).

Unintentional drug poisoning deaths involving heroin by race/ethnicity, New York City, 2000-2012



N.H.=Non-Hispanic

Source: NYC Office of the Chief Medical Examiner & NYC DOHMH Bureau of Vital Statistics

Comment: For the second year in a row, the rate of overdose deaths increased in New York City, after four successive years of decreases. Increases in heroin-related overdose deaths beginning in 2011 preceded decreases in opioid analgesic-related overdose deaths in 2012. Similarly, the increase in heroin deaths in New York City after 2010 was not preceded by a decrease in the prescribing of opioid analgesics, suggesting that the heroin overdose increase occurred independent of any changes in prescription opioid availability.

DOHMH prevention and treatment activities

To prevent overdose and reduce adverse health consequences of heroin and prescription opioid use:

1. **Public awareness.** The Department of Health and Mental Hygiene (DOHMH) has conducted public awareness campaigns through television about overdose risk from prescription opioids.
2. **Overdose prevention.** DOHMH funds training of responders in overdose treatment and distributes naloxone, a medicine that reverses the effects of prescription opioids and heroin.
3. **Effective treatment for opioid dependence.** DOHMH funds and promotes quality improvement among substance use disorder treatment programs. DOHMH also conducts training, disseminates practice guidelines, and provides technical assistance to promote effective practice, particularly with buprenorphine, an effective medication for opioid dependence.
4. **Policy development and program initiatives.** DOHMH uses data to inform policy-makers and initiate new programs such as: advocating for relabeling of opioids to discourage their use for treatment of chronic non-cancer pain, making naloxone an over-the-counter medication, and urging hospital adoption of guidelines for judicious opioid prescribing in emergency departments.

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Data Source

BVS/OCME: Mortality data were collected through an in-depth review of data and charts from the Health Department's Bureau of Vital Statistics and the Office of the Chief Medical Examiner for 2000-2012. Methadone is reported separately and not included in opioid analgesic analyses.

MORE New York City Health Data and Publications

- For complete tables of data presented in this Brief, visit nyc.gov/html/doh/downloads/pdf/epi/datatable33.pdf
- For more information on drug use, check out the following Health Department resources:
 - [Unintentional Opioid Analgesic Poisoning \(Overdose\) Deaths in New York City, 2011](#)
 - [Opioid Analgesics in New York City: Prescriber Practices](#)
 - [Drugs in New York City: Misuse, Morbidity and Mortality Update](#)
 - [Patterns of Opioid Analgesic Prescriptions for New York City Residents](#)
 - [Prescription Drug Misuse and Illicit Drug Use among New York City Youth](#)
 - [City Health Information: Preventing Misuse of Prescription Opioid Drugs](#) (includes prescribing guidelines)
 - [ED Guidelines](#)
 - [Vital Signs: Illicit Drug Use in New York City](#)
- Visit EpiQuery – the Health Department's online, interactive health data system: nyc.gov/health/EpiQuery

Data & Statistics at nyc.gov/health/data