NYC

Mayor's Task Force on Prescription Painkiller Abuse

RxStat: Opioid Analgesic Use and Misuse in New York City

September 2013

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Executive Summary

In late 2011, in response to a growing epidemic, Mayor Bloomberg created the Mayor's Task Force on Prescription Painkiller Abuse. The Task Force is led by Deputy Mayor for Health and Human Services Linda Gibbs and Chief Policy Advisor and Criminal Justice Coordinator John Feinblatt. Its mission is to develop and implement strategies for responding to the growth of opioid painkiller misuse and diversion in New York City.

Combating prescription painkiller abuse presents unique challenges and opportunities. Since they can be legally obtained, prescription painkillers are easier to acquire than illegal drugs like heroin and cocaine. At the same time, it is easier for law enforcement and public health officials to track data about the drugs' source and usage.

The Task Force created RxStat to provide a "bird's eye view" of the problem of prescription painkiller abuse in New York City. RxStat, for the first time, monitors public health and safety data from city, state and federal agencies to help analyze and combat prescription painkiller abuse and its associated public health and safety consequences. This critical information has helped the Task Force advance strategies set forth in the Interim Report of January, 2013 (click here).

Key findings in this report include:

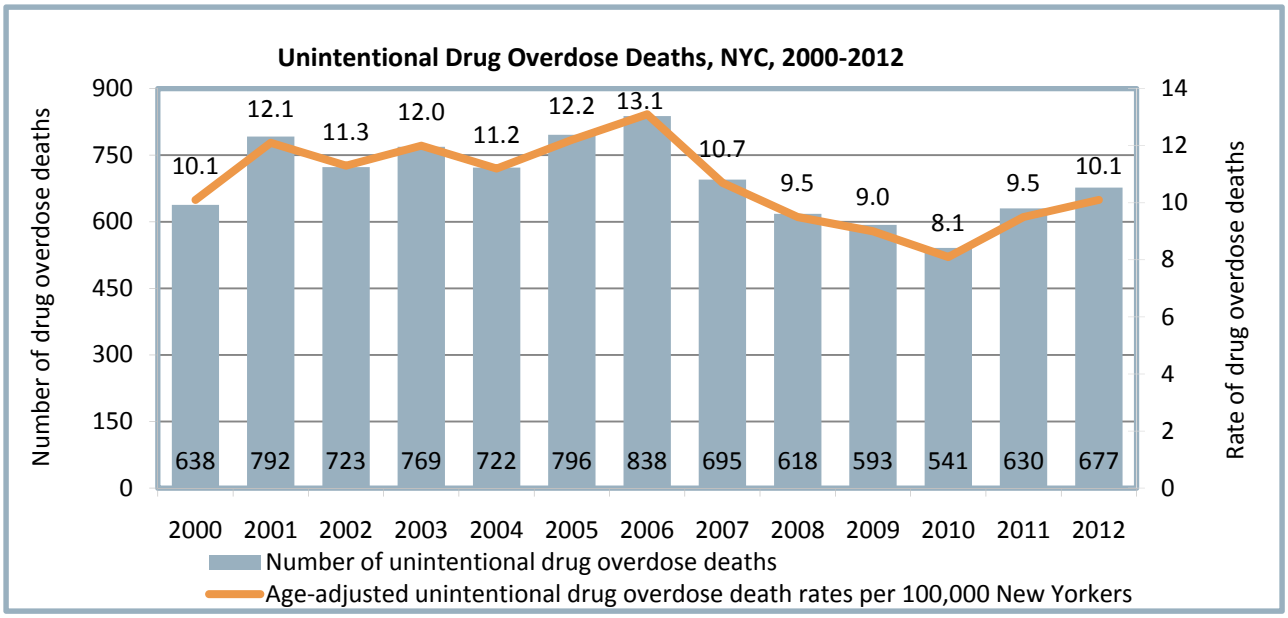
- **Opioid Analgesic Overdose Deaths are Beginning to Decrease:**
  - After increasing 267% between 2000 and 2011, unintentional opioid analgesic overdose deaths decreased by 12% in 2012.
  - In 2012, 27% of unintentional drug overdose deaths involved prescription painkillers.
- **Staten Island Faces the Highest Risks:**
  - In 2012, Staten Island residents filled prescriptions at higher rates than residents of all other boroughs.
  - Residents of Staten Island are more than three times as likely to die from an unintentional opioid analgesic overdose compared to residents of any other borough.
  - More Staten Island residents seek treatment for opioid analgesics than the residents of any other borough and the number has nearly tripled since 2007.
- **Doctors are Prescribing More Powerful Opioid Painkillers:**
  - The number of oxycodone prescriptions filled in 2012 increased 83% from 2008 to 2012, while the number of hydrocodone prescriptions has decreased by 15%.
- **More People are Seeking Treatment for Opioid Analgesics:**
  - Treatment admissions for opioid analgesic dependence tripled between 2007 and 2012.

Task Force Members

- *Linda Gibbs,* Deputy Mayor for Health and Human Services
- *John Feinblatt,* Chief Policy Advisor and Criminal Justice Coordinator
- *Alan Aviles*, President of the Health and Hospitals Corporation
- *Bridget Brennan*, the City's Special Narcotics Prosecutor
- *Andrea Cohen*, the City's Director of Health Services
- *Brian Crowell,* Special Agent-in-Charge of the New York Field Division of the Drug Enforcement Administration (DEA)
- *Robert Doar*, Commissioner of the City Human Resources Administration
- *Chief John Donohue*, New York Police Department (NYPD)
- *Daniel Donovan*, District Attorney of Staten Island
- *Dr. Thomas Farley*, Commissioner of the New York City Department of Health and Mental Hygiene (DOHMH)
- *Kathleen Grimm,* Deputy Chancellor of the Department of Education
- *Michael Flowers*, the City's Chief Analytics Officer
- *Dr. Adam Karpati*, Executive Deputy Commissioner of DOHMH
- *Chauncey Parker*, Director of NY/NJ HIDTA

Unintentional Drug Overdose Deaths in New York City

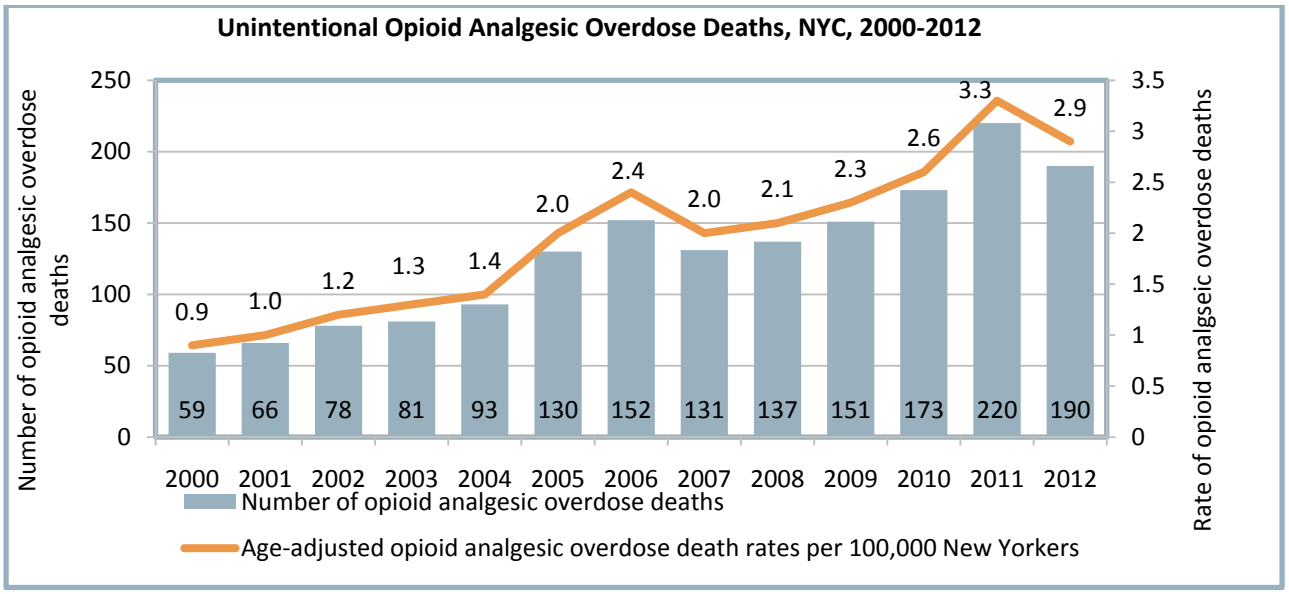
Between 2000 and 2012, approximately 9,000 New York City residents died of an unintentional drug overdose, an average of 700 deaths per year. After declining 38% between 2006 and 2010, the rate of overdoses has increased by 25% since 2010.

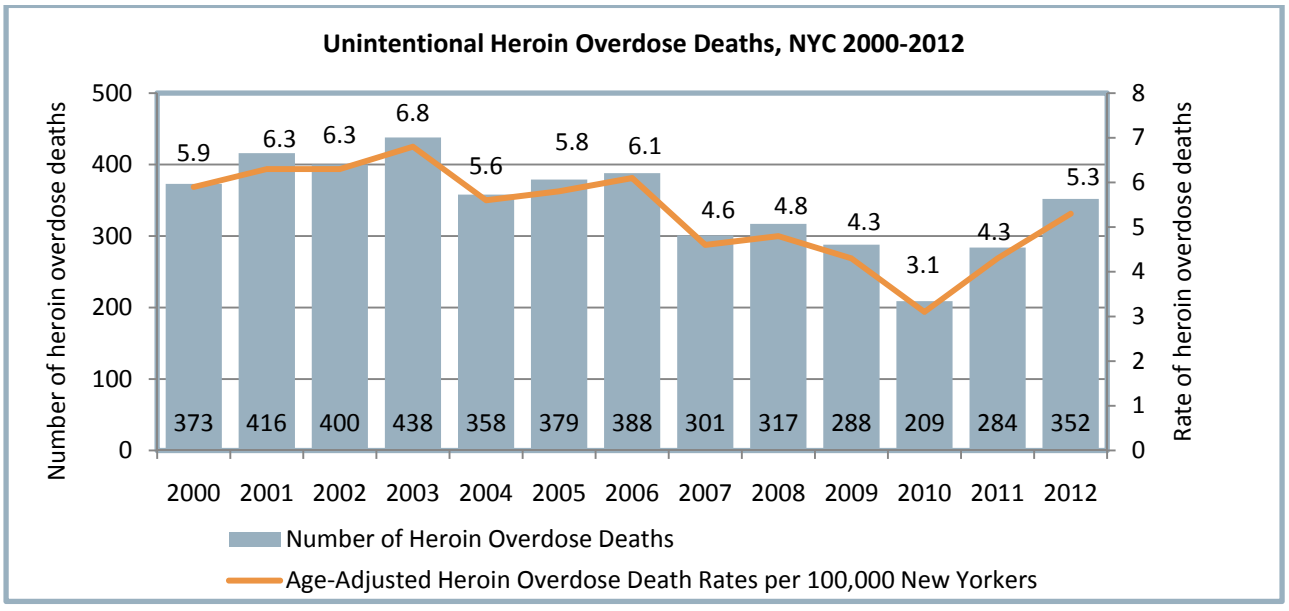


Source: New York City Office of the Chief Medical Examiner & New York City Department of Health and Mental Hygiene 2000-2012

Unintentional Opioid Analgesic and Heroin Overdose Deaths

New York City unintentional opioid analgesic overdose deaths more than tripled between 2000 and 2012. Between 2000 and 2010, heroin overdose deaths decreased by 47%. Since 2010, the rate of heroin overdose deaths has increased by 71%, to the highest level since 2006.



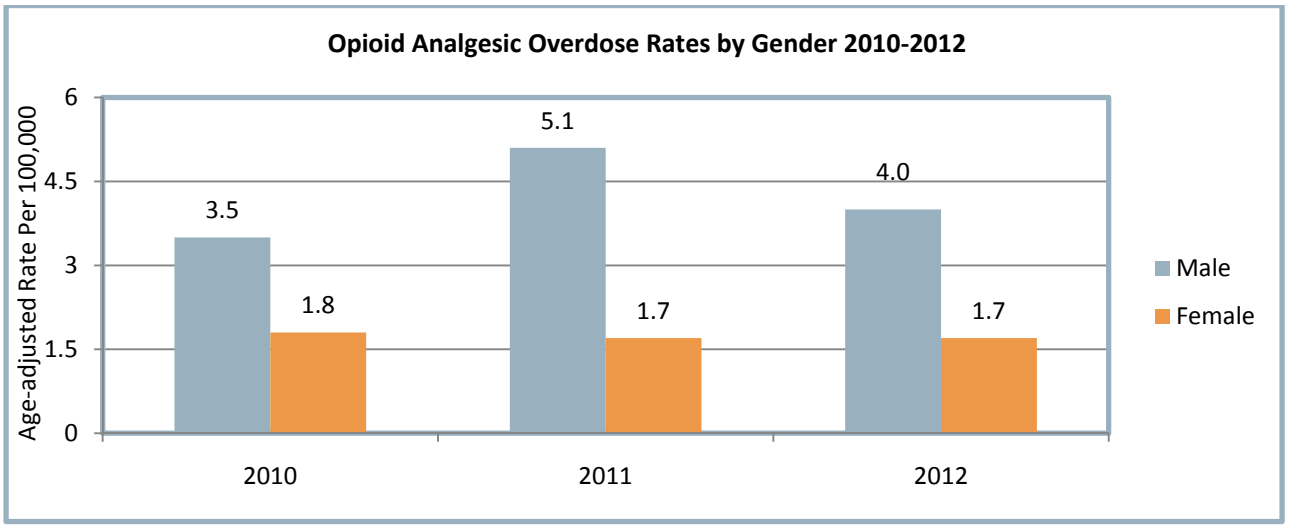


Source: New York City Office of the Chief Medical Examiner & New York City Department of Health and Mental Hygiene 2000-2012

Unintentional Opioid Analgesic Overdose Deaths by Gender, Race, Age, and Borough of Residence (Age-Adjusted[1])

In 2012, there were critical differences in the rates of unintentional opioid analgesic overdose deaths among certain populations:

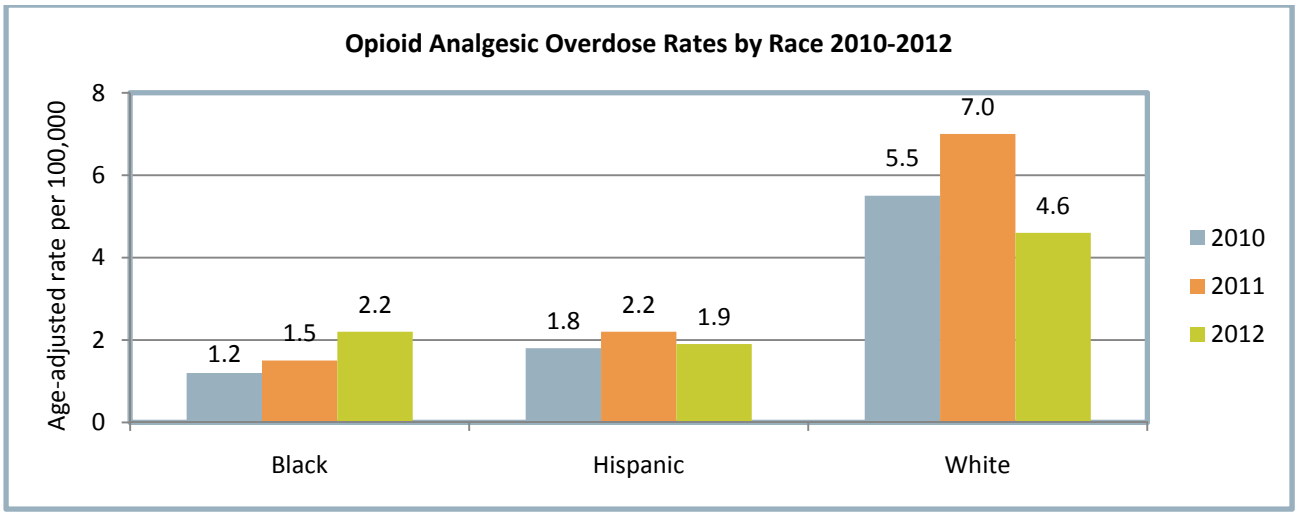
- The rate of unintentional opioid analgesic overdose deaths for men was more than double that for women.[2]
- The rate of unintentional opioid analgesic overdoses for white New Yorkers was more than double that of Hispanic New Yorkers and black New Yorkers.
- Individuals between the ages of 45-54 had the highest rate of unintentional opioid analgesic overdoses.
- The rate of unintentional opioid analgesic overdoses for residents of Staten Island was more than three times as high as the rate for residents of any other borough.

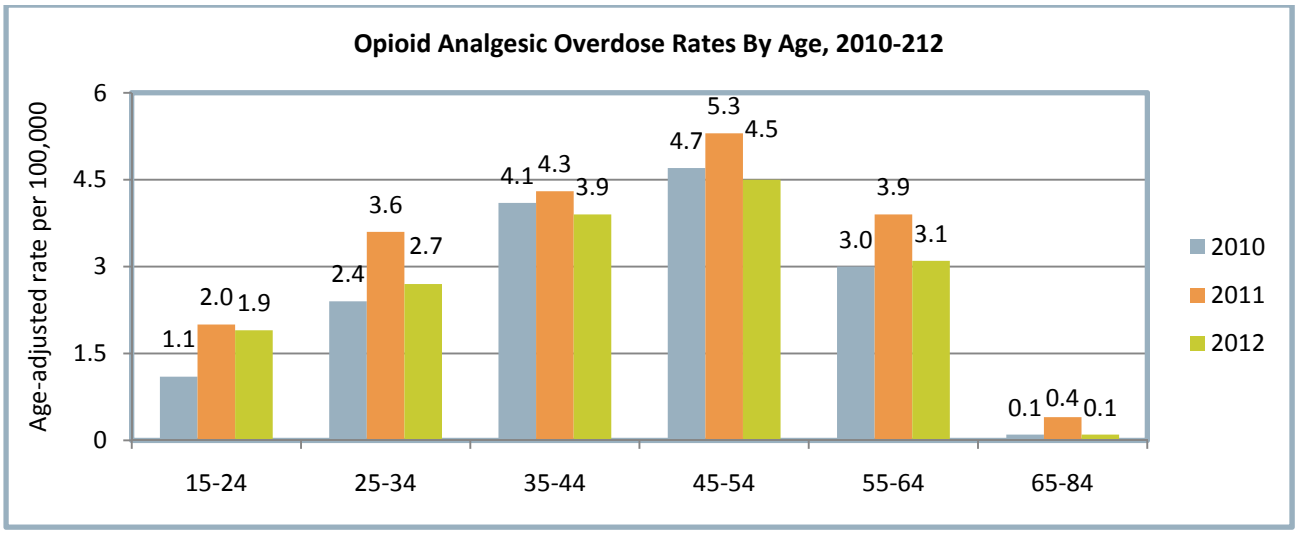


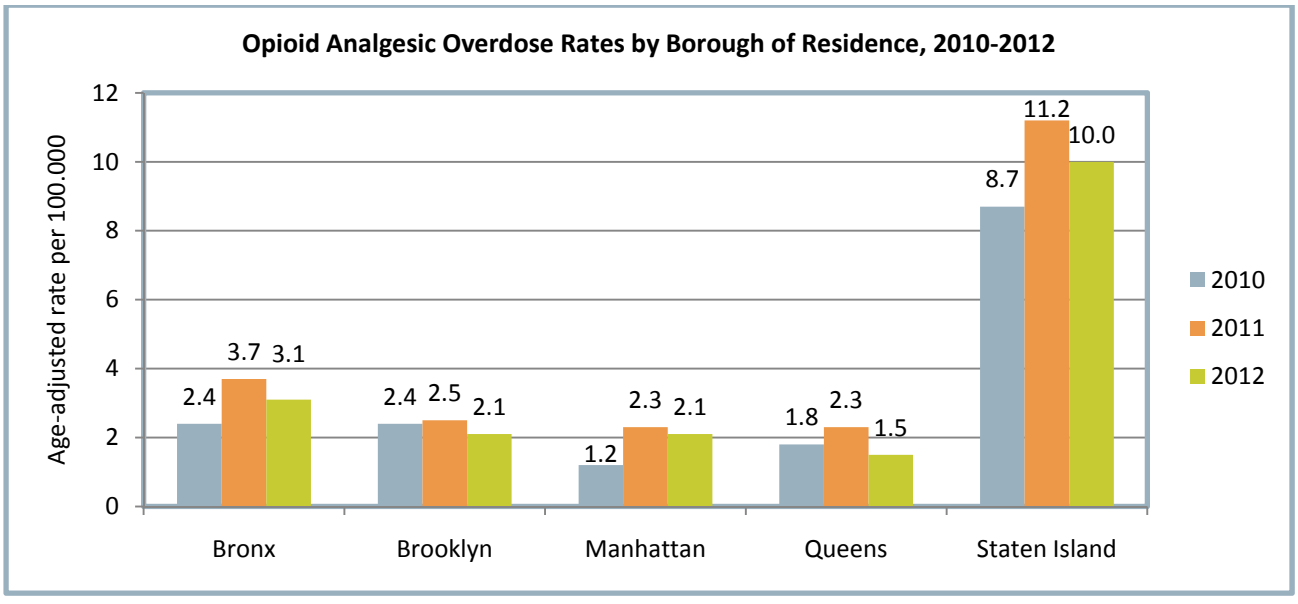
Source: New York City Office of the Chief Medical Examiner & New York City Department of Health and Mental Hygiene 2010-2012

[1] Age adjustment is a technique used to allow populations to be compared when the age profiles of the populations are different.

[2] Nationwide, there were 6,631 overdose deaths among women in 2010 and over 10,000 overdoses among men. Since 1999, overdoses for opioid analgesics have increased 400% for women and 265% for men. (National data includes intentional and unintentional overdose deaths)





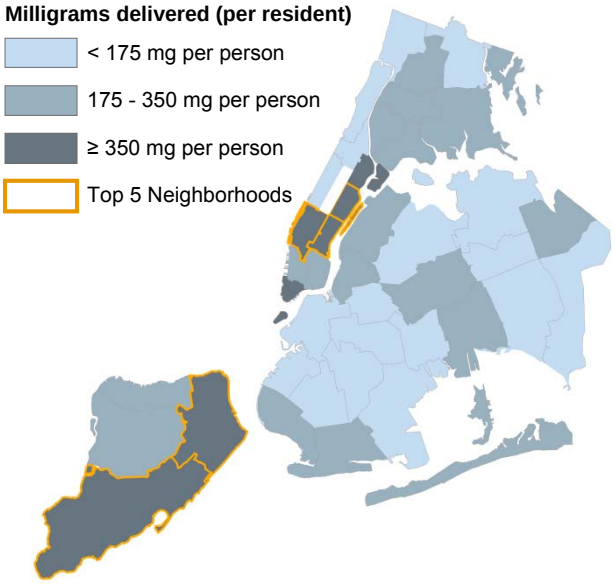


Source: New York City Office of the Chief Medical Examiner & New York City Department of Health and Mental Hygiene 2010-2012

Neighborhood* Rates of Hydrocodone and Oxycodone Distribution to Pharmacies and Rates of Unintentional Opioid Analgesic Overdose Deaths

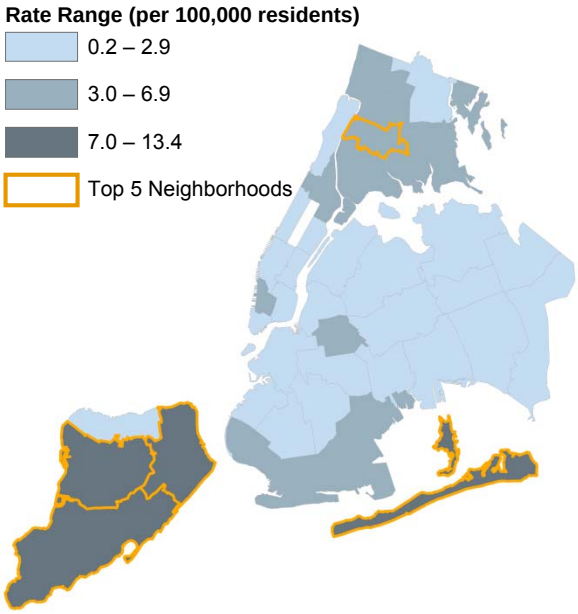
These maps illustrate neighborhoods that have the highest rate of oxycodone and hydrocodone distribution to New York City pharmacies and the highest rates of opioid analgesic overdose deaths. Staten Island is heavily represented in both categories.

Rates of milligrams of hydrocodone and oxycodone delivered to pharmacies by NYC neighborhood[3] (UHF 42), 2012



Source: United States Drug Enforcement Administration Automation of Reports and Consolidated Orders System, 2012

Rates of unintentional opioid analgesic overdose deaths by New York City neighborhood (UHF 42) of residence, 2011-2012



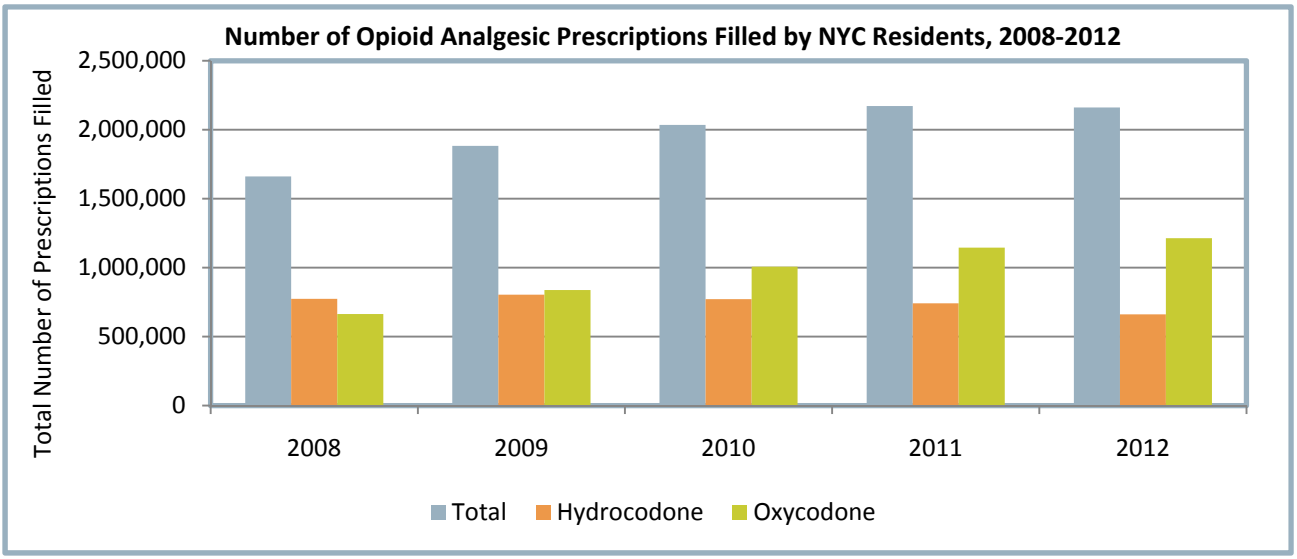
Source: New York City Office of the Chief Medical Examiner & New York City Department of Health and Mental Hygiene 2011-2012

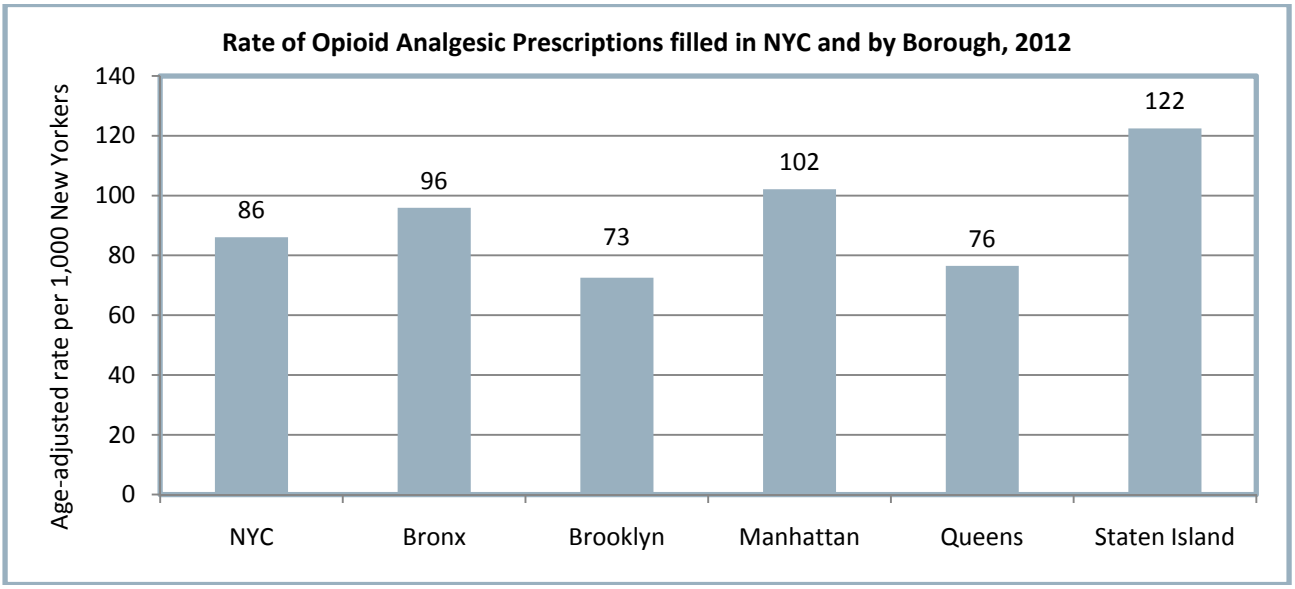
*The United Hospital Fund (UHF) classifies NYC into 42 neighborhoods, comprised of contiguous zip codes.

[3] The highlighted neighborhoods in Manhattan have a high concentration of hospitals which frequently administer opioid analgesics directly to patients.

Prescriptions for Opioid Analgesics Filled in New York City

In 2012, 739,810 New Yorkers filled more than 2 million opioid analgesic[4] prescriptions. Oxycodone was the most common opioid analgesic prescribed, accounting for 56% of all opioid analgesic prescriptions filled in 2012. Hydrocodone accounted for 31% of prescriptions filled[5]. The number of oxycodone prescriptions filled increased 83% from 2008, while the number of hydrocodone prescriptions has decreased 15%. In 2012, Staten Island had the highest rate of prescriptions filled for opioid analgesics, about 20% higher than any other borough.





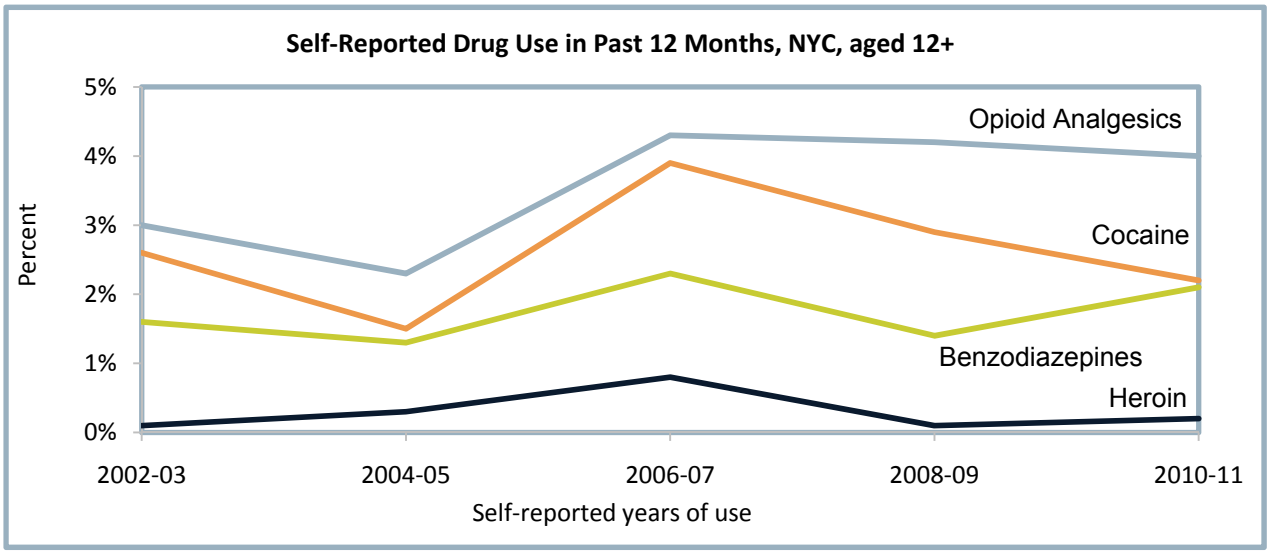
Source: New York State Department of Health Bureau of Narcotic Enforcement Prescription Monitoring Program (PMP) Data, 2008-2012

[4] Oxycodone and hydrocodone are both opioid analgesics. Oxycodone is generally considered to be a more powerful drug and is available as a single ingredient medication. Hydrocodone is considered less powerful and must be combined with other products. Federally, Hydrocodone is a schedule III controlled substance while oxycodone is a schedule II controlled substance. New York State changed its law in 2012 so that both oxycodone and hydrocodone are schedule II controlled substances.

[5] Nationally, hydrocodone is the most common opioid analgesic prescription filled.

Self-reported Drug Use Among New Yorkers

The rate of New York City residents[6] reporting opioid analgesic misuse in the past year increased from 3% in 2002-03 to 4% in 2010-2011. Excluding marijuana, opioid analgesics are the most commonly reported misused drug.

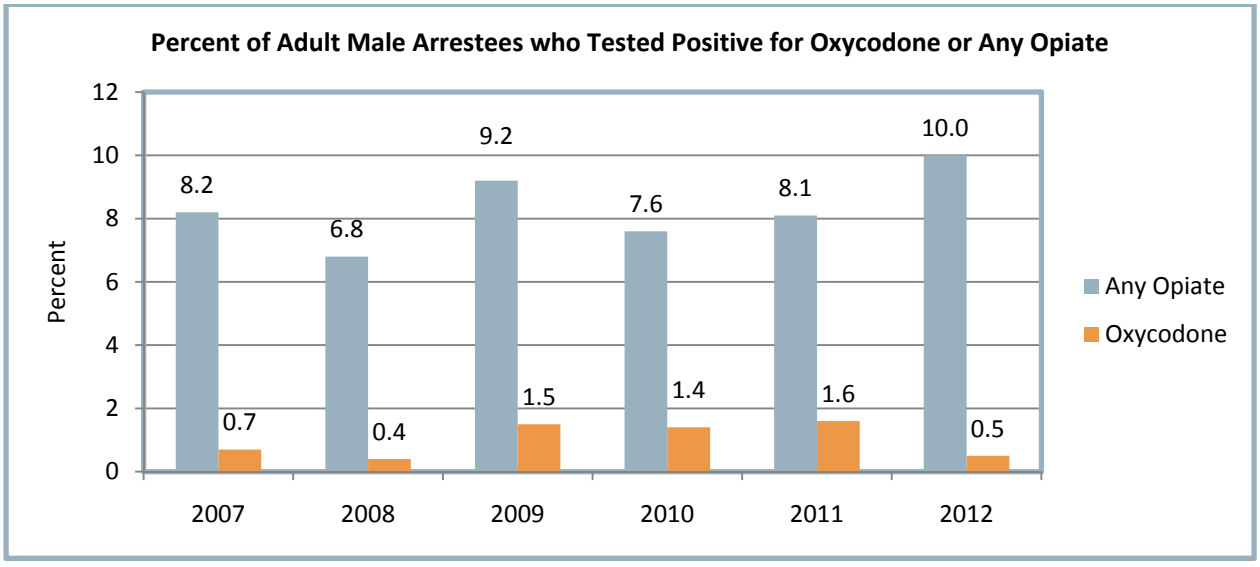


Note: Excludes marijuana
Source: Substance Abuse Mental Health Services Administration, Office of Applied Studies, 2002-2011 National Surveys on Drug Use and Health

[6] Nationwide, the self-reported misuse of prescription painkillers, within the last twelve months, increased by 12%, from roughly 11,143,000 to 12,489,000 people between 2011 and 2012. Self-reported heroin misuse rose 7% between 2011 and 2012 from roughly 620,000 to 669,000 people.

Percent of Adult Male Arrestees Testing Positive for Oxycodone and Any Opiate

The percent of adult males arrested in New York County who tested positive for oxycodone doubled between 2007 and 2011.[7] In 2012, the percentage was one-third that of 2011. Since 2007, there has been a 22% increase in the number of adult males who tested positive for any opiate, including oxycodone.

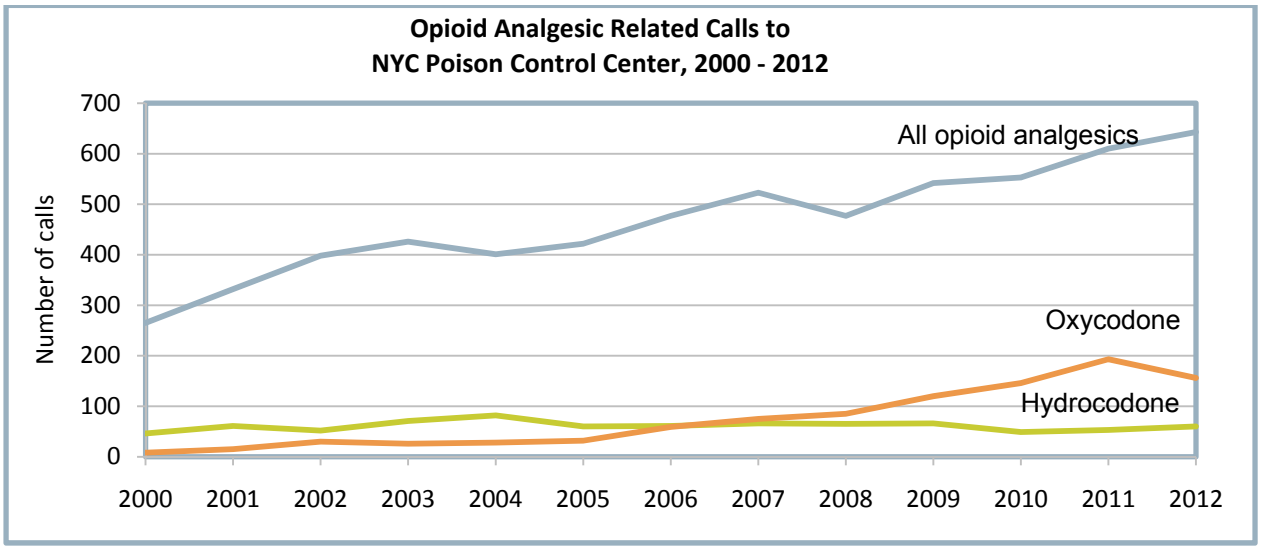


Source: Office of National Drug Control Policy, Arrestee Drug Abuse Monitoring Program II

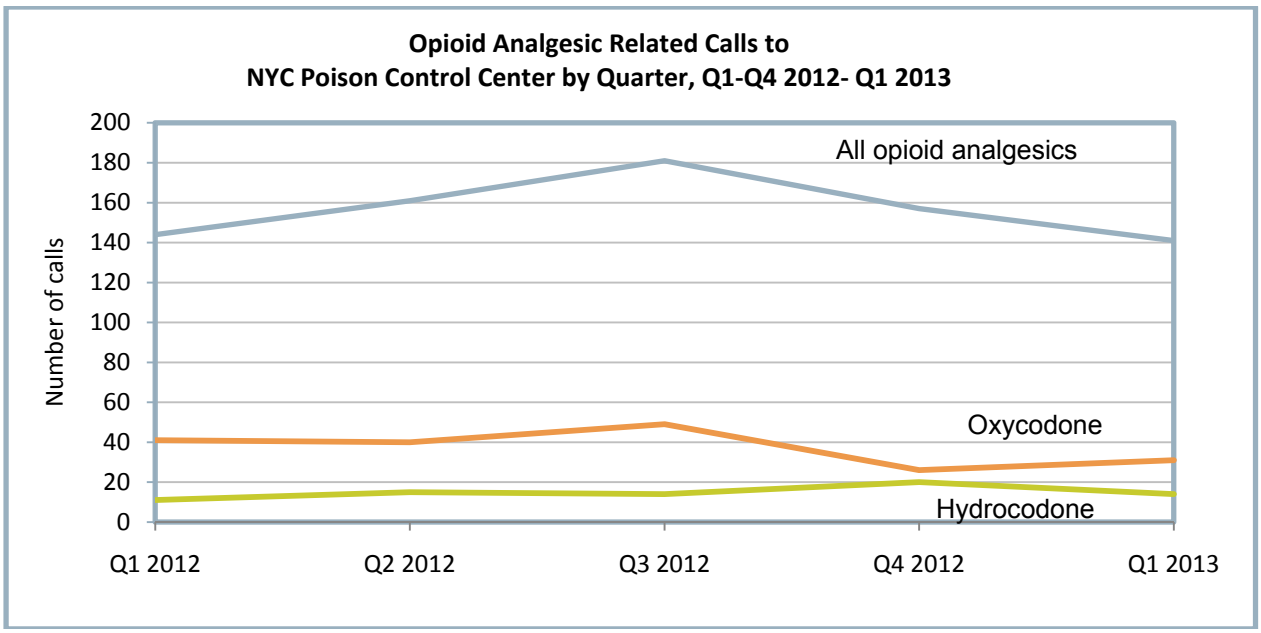
[7] The Arrestee Drug Abuse Monitoring Program II is produced by the Office of National Drug Control Policy which conducts annual two-week surveys and drug tests of arrestees in five counties nationwide (Atlanta, Chicago, New York, Sacramento and Denver).

Reports to Poison Control

Calls to the NYC Poison Control Center involving opioid analgesics increased 143% from 2000 to 2012. Since 2007, the number of calls involving oxycodone has surpassed the number of calls involving hydrocodone.



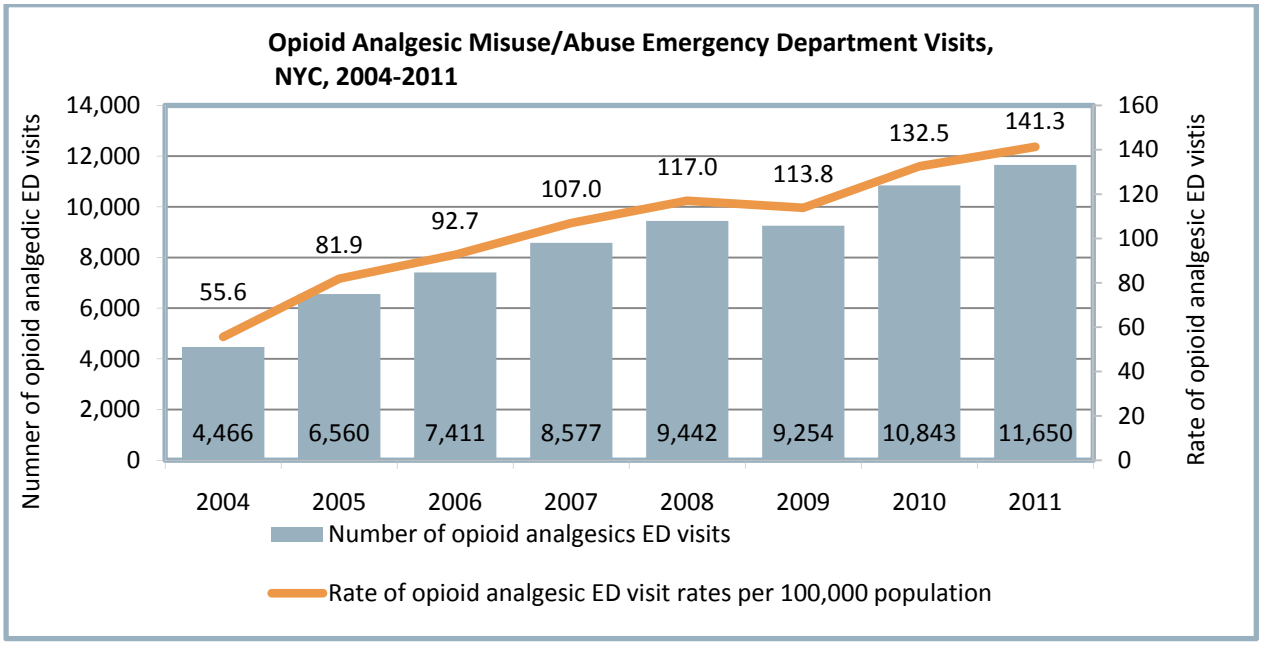
Source: NYC DOHMH Poison Control Center, 2000-2012



Source: NYC DOHMH Poison Control Center, 2012-2013

Opioid Analgesic-Related Emergency Department Visits

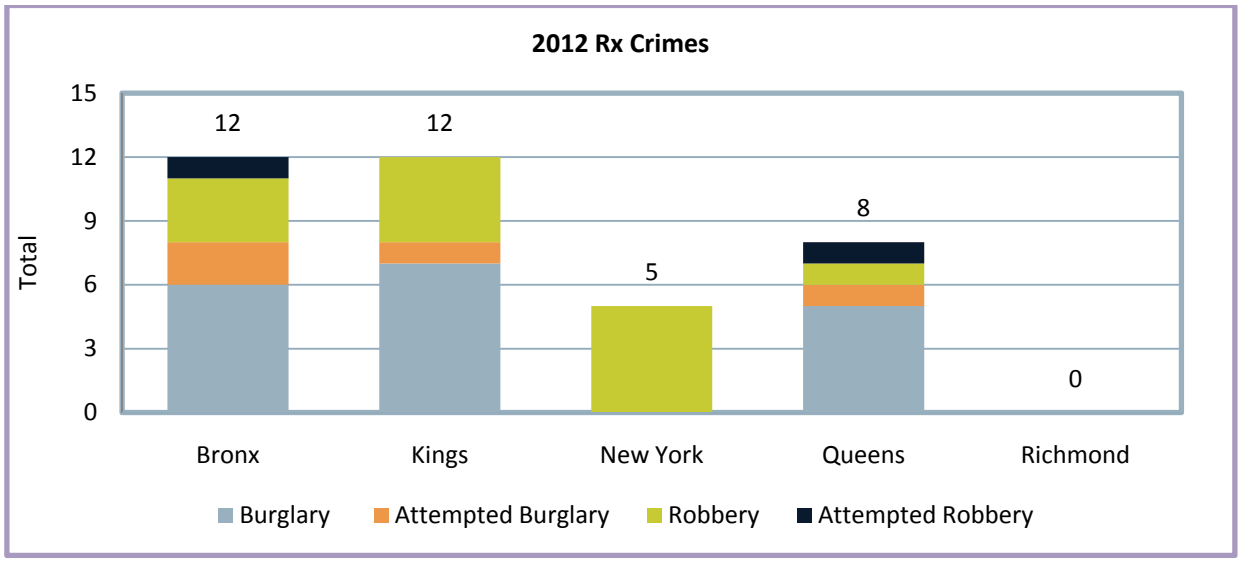
In NYC, opioid analgesic-related emergency department (ED) visits more than doubled between 2004 and 2011. In 2011, the rates of NYC ED opioid analgesic-related visits was 26% lower than the national rate (141.3 vs. 178.6).

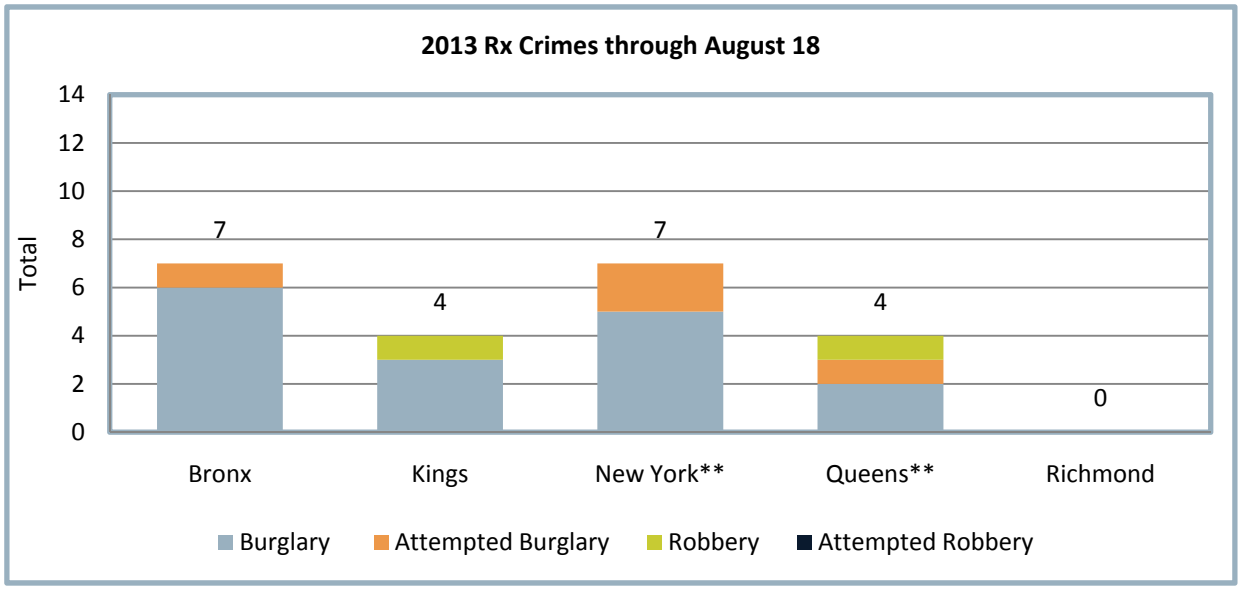


Source: Drug Abuse Warning Network, Center for Behavioral Health Statistics and Quality, Substance Abuse Mental Health Services Administration, 2004-2011

Prescription Drug* Related Robberies and Burglaries of Pharmacies by County

Despite having the highest usage and overdose rates, Richmond County had no robberies or burglaries of pharmacies involving prescription drugs in 2012 and in 2013.[8] In 2012, New York County had the highest number of robberies (5) and Kings County had the highest number of burglaries (7).



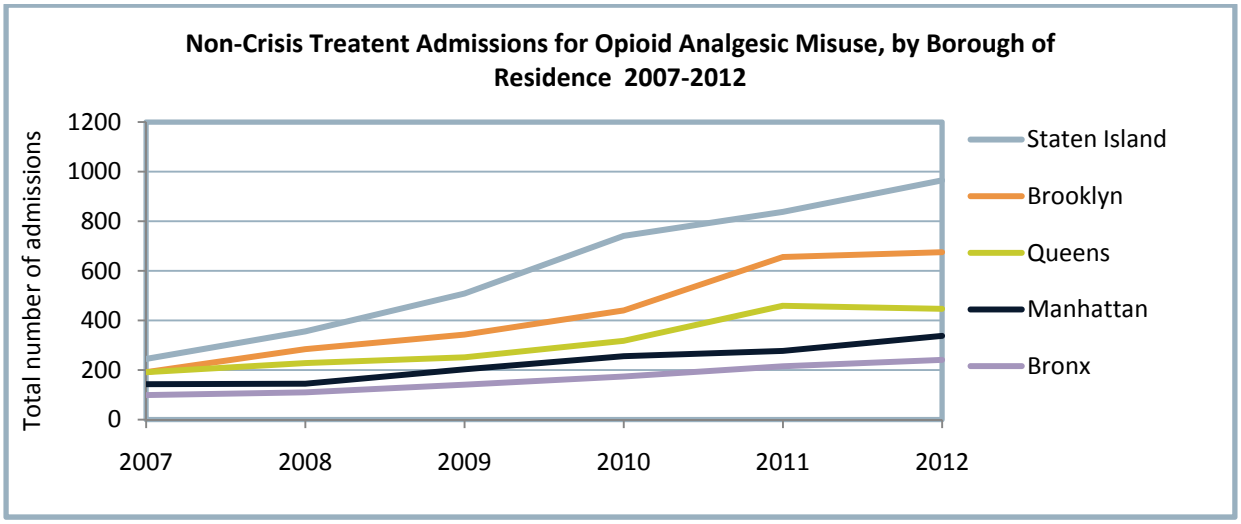


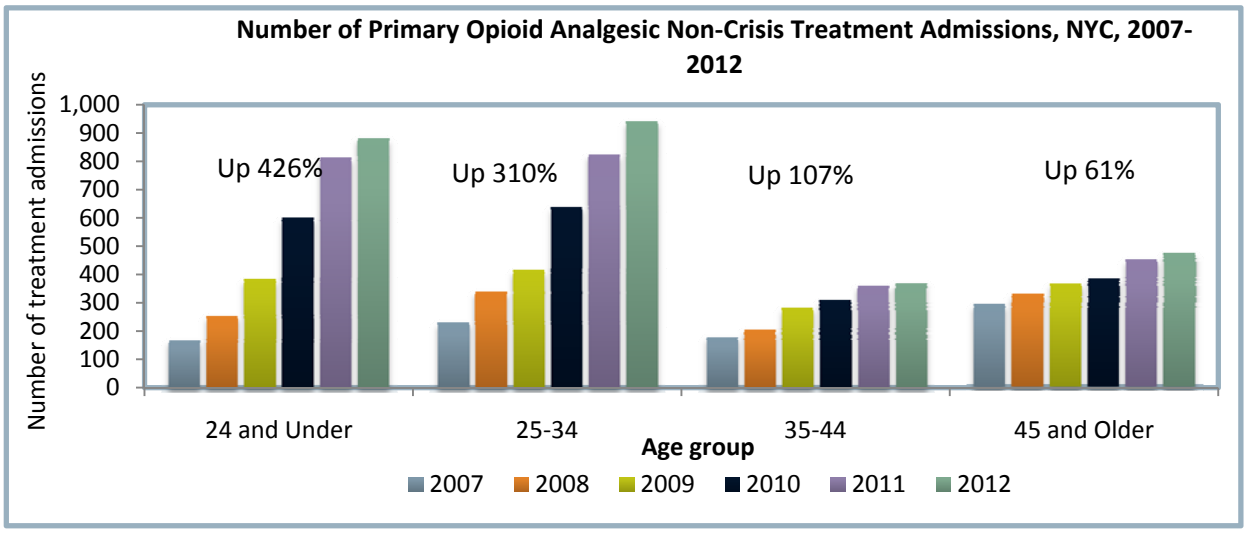
Source: New York City Police Department, 2012-2013
* According to HIDTA, "Prescription drugs include any scheduled prescription drug, any prescription drug that is anticipated to be scheduled, and any other prescription drug with a nexus to prescription drug abuse."
**Robberies and burglaries at locations with a nexus to the pharmaceutical industry or health care profession, e.g., pharmacies, doctors' offices, dispensaries, and hospitals.

[8] Through August 18th.

Treatment Admissions for Non-Crisis Opioid Analgesic Misuse

The number of treatment admissions[9] for non-crisis opioid analgesic misuse is highest for Staten Islanders. In 2012, opioid analgesics were listed as the primary drug in 7% of non-crisis[10] admissions, up from 2% in 2007. Approximately 36% of the non-crisis treatment admissions for primarily for opioid analgesics were from Staten Island. Citywide, between 2007 and 2012, non-crisis treatment admissions for opioid analgesics more than tripled (from 869 to 2666).





Source: NYS Office of Alcoholism and Substance Abuse Services Treatment Data

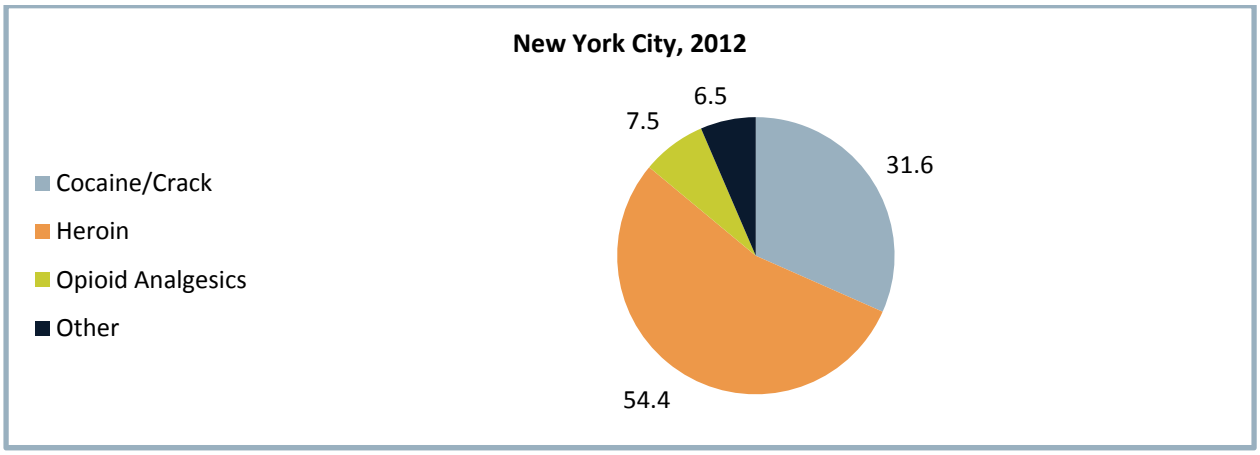
[9] **Primary alcohol** and **primary marijuana treatment** admissions were excluded from analysis.

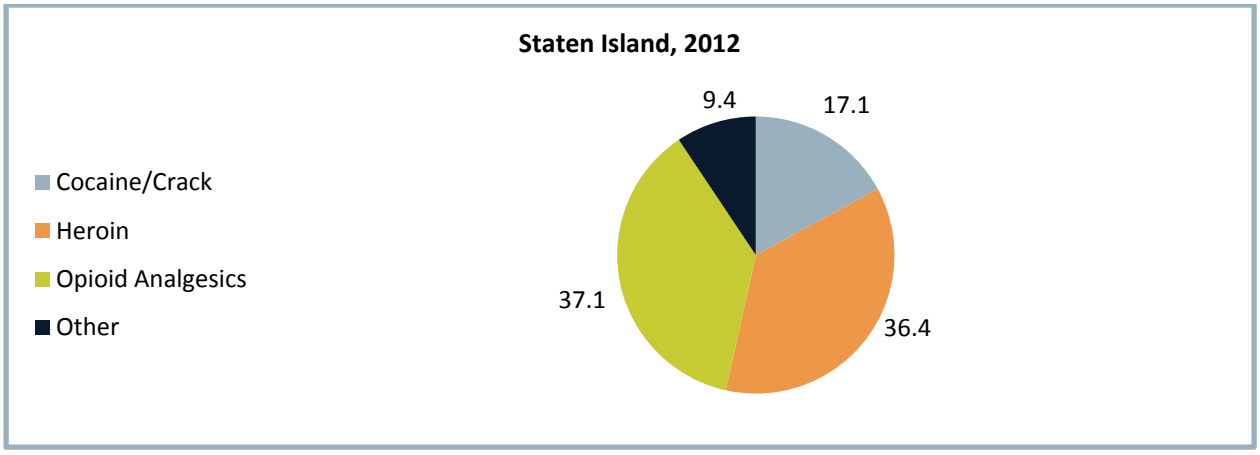
[10] **Non-crisis admissions** include non-intensive outpatient services; intensive outpatient services; outpatient rehabilitation services; methadone treatment; inpatient rehabilitation; intensive residential rehabilitation; community residential services; and supportive living services.

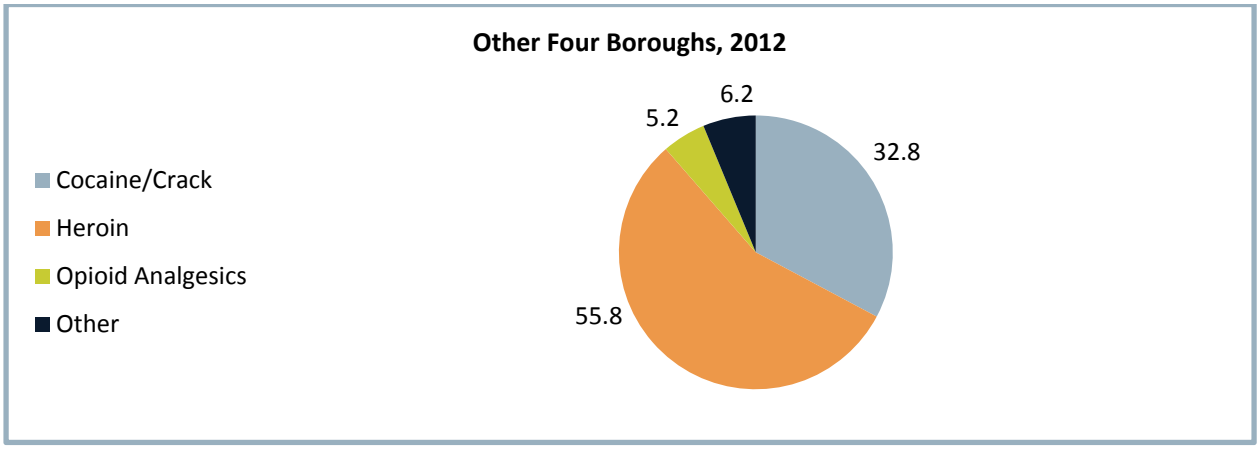
Treatment Admissions by Primary Substance Type

Between 2007 and 2012, the percent of non-crisis treatment admissions involving opioid analgesics as the primary substance, increased from 2% to 7% in New York City and from 15% to 37% in Staten Island. In Staten Island, opioid analgesic non-crisis primary admissions outnumbered all other drug categories (excluding marijuana and alcohol).

While the New York State Office of Alcoholism and Substance Abuse Services would normally include marijuana in these charts, it has been excluded from these charts in order to be consistent with the rest of the RxStat report.







Source: NYS Office of Alcoholism and Substance Abuse Services, Data Warehouse, May 17, 2013

Appendix

Any self-reported drug use in the past year among those aged 12 and older, New York City and United States, 2010-2011

	NYC 2010-2011		US 2011	
	N	%	N	%
Any Drug	1,055,555	16.5%	38,287,000	14.9%
Marijuana	794,000	12.4%	29,739,000	11.5%
Cocaine (incl. crack)	138,000	2.2%	3,857,000	1.5%
Heroin	13,000	0.2%	620,000	0.2%
Opioid Analgesics (misuse*)	256,000	4.0%	11,143,000	4.3%
Benzodiazepines (misuse*)	134,000	2.1%	5,109,000	2.0%
Any Drug Except Marijuana	516,000	8.0%	18,959,000	7.4%

Demographics of self-reported opioid analgesic misuse* in the past year among those aged 12 and older, New York City, 2002-2011

Past-year Opioid	**2002-2003**		**2004-2005**		**2006-2007**		**2008-2009**		**2010-2011**	
Analgesic Misuse	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Total	181,000	3.0%	145,000	2.3%	263,000	4.3%	263,000	4.2%	256,000	4.0%
Sex										
Male	101,000	3.3%	92,000	3.3%	179,000	6.5%	136,000	4.8%	128,000	4.6%
Female	80,000	2.7%	53,000	1.6%	84,000	2.5%	127,000	3.7%	137,000	4.0%
Race/Ethnicity										
Black	28,000	1.8%	15,000	0.9%	24,000	1.5%	32,000	1.9%	56,000	3.7%
Hispanic	49,000	3.0%	41,000	2.6%	73,000	4.5%	50,000	3.1%	40,000	2.2%
White	89,000	4.2%	79,000	3.6%	106,000	5.1%	158,000	7.0%	122,000	5.4%
Age (years)										
12-17	25,000	4.1%	18,000	3.5%	28,000	5.0%	23,000	4.3%	24,000	4.5%
18-25	57,000	6.5%	44,000	5.6%	49,000	5.4%	85,000	9.0%	60,000	6.2%
26-34	45,000	3.7%	57,000	5.5%	54,000	5.1%	85,000	6.9%	39,000	3.3%
>35	54,000	1.6%	26,000	0.7%	133,000	3.7%	70,000	2.0%	134,000	3.6%

Source: National Survey on Drug Use and Health (NSDUH); analysis by Substance Abuse Mental Health Services Administration (SAMHSA)

NYC Data presented as two-year averages of 2002-2003, 2004-2005, 2006-2007, 2008-2009, and 2010-2011. National data presented for 2011

*Misuse: Defined as use of these drugs without a prescription or use that occurred simply for the experience or feeling the drug caused

Distribution of drug type for Schedule II + Hydrocodone PMP prescriptions filled by New York City residents, Prescription Monitoring Program, New York City, 2008-2012

	2008*		2009*		2010*		2011*		2012*	
	Number	%†	Number	%†	Number	%†	Number	%†	Number	%†
Total prescriptions filled	1,661,465	100%	1,883,364	100%	2,035,010	100%	2,172,238	100%	2,161,787	100%
Drug Type										
FENTANYL	76,117	4.6%	76,973	4.1%	76,617	3.8%	76,750	4.0%	76,418	3.5%
HYDROCODONE	774,442	46.6%	804,449	42.7%	772,130	37.9%	742,052	34.0%	662,086	30.6%
HYDROMORPHONE	36,939	2.2%	39,915	2.1%	46,705	2.3%	54,287	3.0%	59,135	2.7%
MEPERIDINE	2,543	0.2%	2,133	0.1%	2,117	0.1%	1,952	0.1%	1,521	0.1%
METHADONE	34,901	2.1%	37,366	2.0%	38,114	1.9%	40,112	1.9%	41,963	1.9%
MORPHINE	66,797	4.0%	75,419	4.0%	78,157	3.8%	82,037	3.8%	88,556	4.1%
OXYCODONE	663,639	39.9%	837,659	44.5%	1,006,862	49.5%	1,145,200	52.7%	1,213,744	56.1%
OXYMORPHIONE	6,087	0.4%	9,450	0.5%	14,308	0.7%	29,848	1.4%	18,364	0.8%

*Year prescription filled

† Column Percent

Demographics of opioid analgesic-related calls to New York City poison control center, 2012

	Opioid Analgesic Calls, 2012	
	N	**(%)**
Total	643	100%
Sex		
Female	340	53%
Male	299	47%
Unknown	4	
Age-group		
< 6 years old	44	7%
6-14	17	3%
15-24	105	16%
25-34	130	20%
35-44	74	12%
45-54	93	14%
55-64	60	9%
> 65	120	19%
Borough of call*		
Bronx	109	17%
Brooklyn	173	27%
Manhattan	185	29%
Queens	109	17%
Staten Island	40	6%
Unknown	27	4%

Source: NYC DOHMH Poison Control Center
*Borough refers to the location of the caller and may not represent patient's location. 51% of calls originated from a medical professional; the relationship between the caller and the patient was unknown in 32% of calls.

Rates of opioid analgesic-related emergency room visits, overall and by age, New York City, 2004-2011

	2004		2005		2006		2007		2008		2009		2010		2011	
	NYC	US	NYC	US	NYC	US	NYC	US	NYC	US	NYC	US	NYC	US	NYC	US
Total	55.6	67.7	81.9	82.6	92.7	93.7	107.0	109.0	117.0	138.0	113.8	155.9	132.5	177.2	141.3	178.6
Sex																
Male	75.5	71.1	113.2	87.3	129.5	101.3	154.9	115.8	164.8	144.3	165.7	166.1	196.2	195.1	209.6	190.4
Female	37.7	64.3	53.6	78.1	59.5	86.3	63.8	102.1	73.5	131.9	66.7	146.0	74.6	159.8	79.1	167.1
Age (years)																
18-20	*	91.0	*	109.2	33.7	125.1	35.5	133.6	50.6	200.1	36.3	214.6	46.9	217.9	40.3	210.3
21-24	46.7	115.2	55.6	155.7	61.8	180.1	89.9	187.2	67.9	270.6	70.9	278.9	113.7	358.4	96.8	394.3
25-29	52.6	103.2	78.6	137.8	86.4	164.9	107.8	208.2	115.9	270.7	102.7	350.3	137.4	352.3	142.1	355.5
30-34	74.3	117.5	119.1	124.2	108.0	138.8	137.5	179.7	139.7	220.0	131.1	261.8	175.0	327.9	184.2	339.0
35-44	121.3	117.9	190.6	140.9	217.7	149.7	234.2	169.8	244.9	207.5	235.0	231.4	240.6	258.2	259.7	252.5
45-54	123.2	100.5	174.0	118.6	200.5	141.3	232.9	166.6	269.4	188.4	262.9	209.5	285.3	257.6	316.7	223.2
55-64	48.3	5.2	69.9	11.8	83.6	10.9	98.9	14.1	122.3	13.9	135.3	24.1	165.1	34.1	181.7	36.4
≥65	10.9	26.4	12.6	33.5	21.4	39.6	20.4	42.8	27.7	66.3	29.6	64.7	43.7	68.7	41.3	85.5

Source: Drug Abuse Warning Network, Center for Behavioral Health Statistics and Quality, Substance Abuse Mental Health Services Administration, 2004-2011
Rates per 100,000 New Yorkers presented.
* No estimate available.

Demographics of unintentional opioid analgesic overdose decedents, and age-adjusted rates[1], New York City, 2010-2012, OCME

Variables	Any Opioid Analgesics 2010			Any Opioid Analgesics 2011			Any Opioid Analgesics 2012		
	N	(%)	AAR	N	(%)	AAR	N	%	AAR
Total	173	100%	2.6	220	100%	3.3	183	100%	2.8
Sex									
Female	64	37%	1.8	60	27%	1.7	55	162%	1.7
Male	109	63%	3.5	160	73%	5.1	128	376%	4.0
Race/Ethnicity[2]									
Black	21	18%	1.2	24	15%	1.5	34	35%	2.2
Hispanic	32	27%	1.8	40	26%	2.2	35	36%	1.9
White	115	96%	5.5	152	97%	7.0	96	100%	4.6
Other	5	X	X	4	X	X	X	X	
Age-group[3]									
15-24	13	8%	1.1	24	13%	2.0	22	13%	1.9
25-34	33	19%	2.4	50	27%	3.6	37	22%	2.7
35-44	47	28%	4.1	49	26%	4.3	45	27%	3.9
45-54	52	31%	4.7	59	31%	5.3	50	30%	4.5
55-64	27	16%	3.0	35	19%	3.9	28	17%	3.1
65-84	1	1%	0.1	3	2%	0.4	1	1%	0.1
Unknown	0	X	X	0	X	X	0	0%	
Mean Age	42.5	X		41.5	X		41.1		
Borough of Residence[4]									
Bronx	25	25%	2.4	40	30%	3.7	33	36%	3.1
Brooklyn	46	45%	2.4	48	36%	2.5	40	43%	2.1
Manhattan	15	15%	1.2	31	23%	2.3	29	32%	2.1
Queens	34	33%	1.8	42	32%	2.3	27	29%	1.5
Staten Island	31	30%	8.7	40	30%	11.2	36	39%	10.0
Other	22	X	X	19	X	X	X	X	
Borough of Death									
Bronx	27	28%	2.6	41	32%	3.8	35	32%	3.3
Brooklyn	50	52%	2.6	52	41%	2.7	39	36%	2.0
Manhattan	25	26%	1.9	38	30%	2.9	40	37%	3.0
Queens	40	42%	2.2	45	35%	2.4	32	29%	1.8
Staten Island	31	32%	8.9	44	35%	12.4	37	34%	10.1

[1]Age adjusted rates (AAR) are calculated using intercensal New York City population denominators, and are weighted to New York City population Census 2000.
[2]Other race/ethnicity or missing race/ethnicity are collapsed into "Other", and are not included in the percent of total calculation.
[3]Age standardized rates are presented. Unknown age is not included in the percent of total calculation.
[4]Decedents with missing residence information or non-NYC residence on death certificate are collapsed into "Other" and are not included in the percent of total calculation.
[5]United Health Fund (UHF) income of residence is assigned based on zip code of residence. Decedents with missing residence information or non-NYC residence on death certificate are collapsed into "Unknown/Other" are not included in the percent of total calculation.

Data Sources

National Survey on Drug Use and Health (NSDUH)

The National Survey on Drug Use and Health (NSDUH) conducted annually by the Substance Abuse and Mental Health Services Administration [SAMHSA] includes a representative sample of NYC residents aged 12 years and older. Results are presented in two-year averages for years 2002-2011.

Drug Abuse Warning Network (DAWN) Opioid Analgesic-related misuse/abuse emergency department visits

The Drug Abuse Warning Network (DAWN), managed by SAMHSA, is a database of drug-related visits to hospital emergency departments (EDs), including 61 NYC EDs. Data were weighted to produce citywide estimates of drug-related ED visits for 2004-2011.

New York City Department of Health and Mental Hygiene Poison Control Center

The NYC Poison Control Center (NYC PCC) collects data on the total number of calls coming into the Poison Control Center. There is an average of 30,000 calls per year. Patient level characteristics include gender, age, exposure, caller location, caller relation to patient, initial health care facility where treated, date of the call, and date of exposure. Notably, many overdoses involving opioid analgesics are not reported. These calls represent only a fraction of the total number of opioid analgesic overdoses in NYC from 2000-2013.

New York State Department of Health (NYS DOH) Bureau of Narcotic Enforcement (BNE) Prescription Monitoring Program (PMP)

The Prescription Monitoring Program (PMP) managed by the New York State Department of Health collects data from drug dispensers on schedule II-V controlled substances.

Drug Enforcement Administration (DEA) Automation of Reports and Consolidated Orders System (ARCOS)

ARCOS monitors the flow of DEA controlled substances from their point of manufacture through commercial distribution channels to point of sale at the retail level. The RxStat analysis will focus on the distribution to the retail level. ARCOS data is currently available for 2012.

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

Drug treatment utilization data were derived from an administrative data system maintained by the Offices of Alcohol and Substance Abuse Services (OASAS), the State agency responsible for licensing and regulating drug treatment services in New York State. All licensed providers of drug treatment services are required to complete and submit admission and discharge forms on every patient. This system does not capture NYC residents who seek treatment at unlicensed providers or providers outside New York State; thus, the true number of NYC residents seeking treatment for addiction will be higher than what is reported in OASAS data.

NYC Office of the Chief Medical Examiner (OCME) and DOHMH Office of Vital Statistics (OVS)

Mortality data were collected through a retrospective review of mortality data from two linked sources: Death Certificates and Medical examiner files.

Office of National Drug Control Policy

The Arrestee Drug Abuse Monitoring Program II is produced by the Office of National Drug Control Policy which conducts annual two-week surveys and drug tests of arrestees in five counties nationwide (Atlanta, Chicago, New York, Sacramento and Denver).

Reference Material

New York City Government Agencies: www.nyc.gov

New York City Department of Health and Mental Hygiene Data Publications: www.nyc.gov/html/doh/html/data/epidata.shtml

Unintentional Opioid Analgesic Overdose (Overdose) Deaths in New York City, 2011 and accompanying data tables

Opioid Analgesics in New York City: Misuse, Morbidity and Mortality Update and accompanying data tables

Opioid Analgesics in New York City: Prescriber Practices and accompanying data tables

Drugs in New York City: Misuse, Morbidity and Mortality Update and accompanying data tables

New York City Police Department: www.nyc.gov/html/nypd/html/home/home.shtml

New York County District Attorney's Office: manhattanda.org/