



# Epi Data Brief

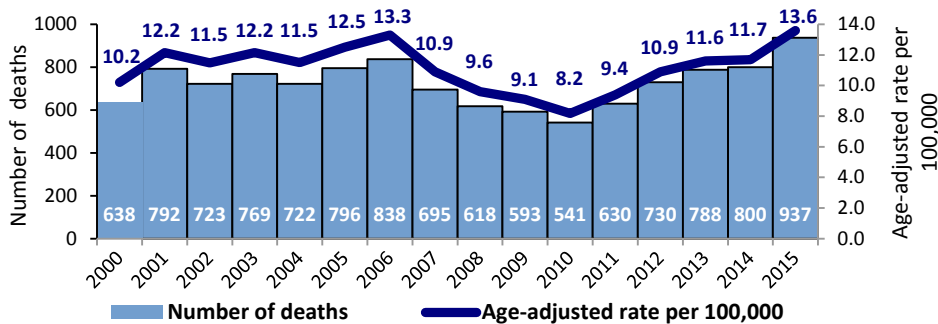
New York City Department of Health and Mental Hygiene

August 2016, No. 74

## Unintentional Drug Poisoning (Overdose) Deaths Involving Heroin and/or Fentanyl in New York City, 2000–2015

- In 2015, there were 937 unintentional drug overdose deaths in New York City (NYC) compared with 800 unintentional drug overdose deaths in 2014.
- The rate of unintentional drug overdose death increased for the fifth consecutive year, from 8.2 per 100,000 residents in 2010 to 13.6 per 100,000 residents in 2015, a 66% increase.

### Unintentional overdose deaths, New York City, 2000–2015\*

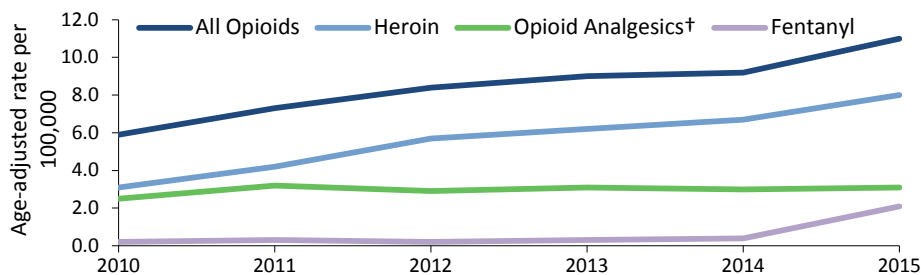


\*Data for 2015 are provisional and are subject to change.

Source: NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics, 2000-2015

- In 2015, the rate was highest among Bronx residents, 22.6 per 100,000 residents, a 46% increase from 15.5 per 100,000 residents in 2014.
- Latino New Yorkers had the largest increase (46%) compared with all other races/ethnicities. The rate increased from 11.2 per 100,000 residents in 2014 to 16.4 per 100,000 residents in 2015.
- In 2015, nearly all (97%) overdose deaths involved more than one substance. Eight in ten (80%) overdose deaths involved an opioid.
- Heroin was involved in 556 (59%) of all overdose deaths in NYC in 2015, making it the most common substance involved in overdose deaths. Opioid analgesics, excluding fentanyl, were involved in 214 (23%) of overdose deaths in 2015. A total of 146 (16%) overdose deaths involved fentanyl.

### Unintentional overdose deaths by opioid type (not mutually exclusive), New York City, 2010–2015\*



\*Data for 2015 are provisional and are subject to change.

†Opioid analgesics excludes fentanyl.

Source: NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics, 2010-2015

#### Data Source:

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

Mortality data for 2000-2015 were collected through an in-depth review of data and charts from DOHMH Bureau of Vital Statistics and NYC Office of the Chief Medical Examiner. Data for 2015 are provisional and subject to change.

**Rate calculation:** DOHMH population estimates, modified from US Census Bureau intercensal population estimates 2000-2014, updated October, 2015. Rates from 2015 use estimates from 2014. 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.

#### Definitions:

**Opioid analgesics:** Commonly known as prescription pain relievers, such as oxycodone (Percocet®) and hydrocodone (Vicodin®).

†For this analysis, opioid analgesics exclude fentanyl.

**Fentanyl:** a synthetic and short-acting opioid analgesic 50-100 times more potent than morphine.

**Race/ethnicity:** White and Black race categories exclude Latino ethnicity. Latino includes Hispanic and Latino origin.

**Neighborhood poverty:** Based on ZIP code and defined as percentage of residents with incomes below 100% of the federal poverty level (FPL), per American Community Survey 2007-2011, in four groups: low (<10% FPL), medium (10 %-< 20% FPL), high (20 %-< 30% FPL), and very high (>=30% FPL).

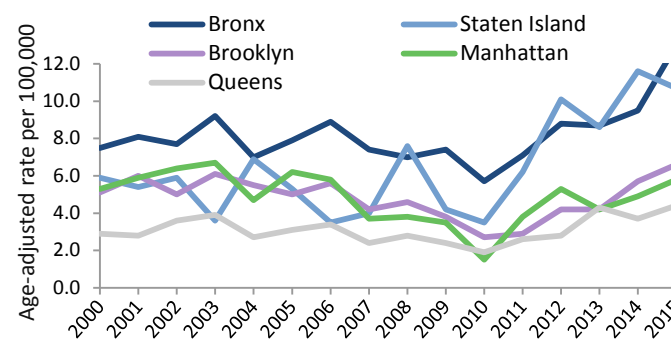
## Unintentional overdose deaths involving opioid analgesics (excluding fentanyl)

- The rate of overdose death involving opioid analgesics, excluding fentanyl, has been stable for the last five-years, 2011 to 2015 (3.1 per 100,000 residents).
- In 2015, the rate of overdose deaths involving opioid analgesics was highest among residents of Staten Island; the rate decreased by 8%, from 7.6 in 2014 to 7.0 per 100,000 Staten Island residents in 2015.
- The largest increase (44%) was among residents of the Bronx; the rate of opioid analgesic-involved overdose deaths (excluding fentanyl) increased from 3.4 to 4.9 per 100,000 residents from 2014 to 2015.

## Unintentional overdose deaths involving heroin

- The rate of heroin-involved overdose death in NYC increased for the fifth consecutive year since 2010.
- The rate increased 158%, from 3.1 per 100,000 residents in 2010 to 8.0 per 100,000 residents in 2015.
- In 2015, heroin-involved overdose death rates increased in all boroughs except Staten Island.
- Bronx residents had the highest rate of heroin-involved overdose death, 13 per 100,000 residents (146 deaths) in 2015.
- The rate in the Bronx was more than double the rate in Queens (4.4 per 100,000; 83 deaths), Manhattan (5.8 per 100,000; 78 deaths), and Brooklyn (6.6 per 100,000 ; 136 deaths). The rate in Staten Island was 10.7 per 100,000 (38 deaths).

### Unintentional overdose deaths involving heroin by borough of residence, New York City, 2000–2015\*

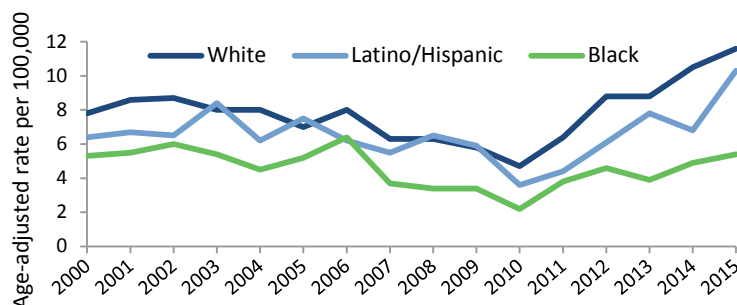


\* Data for 2015 are provisional and are subject to change.

Source: NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics, 2000-2015

- In 2015, four of the five neighborhoods with the highest rates of heroin-involved overdose death were in the Bronx: Hunts Point-Mott Haven (18.8 per 100,000), Crotona-Tremont (18.4 per 100,000), Highbridge-Morrisania (15.9 per 100,000), and Fordham-Bronx Parkway (15.4 per 100,000). South Beach-Tottenville in Staten Island had the fifth highest rate, 14.9 per 100,000.
- From 2014 to 2015, the rate of heroin-involved overdose death more than doubled among residents of Downtown Brooklyn-Heights-Slope (Brooklyn), an increase of 170%. Rates increased more than 50% in Flushing (Queens), Washington Heights-Inwood (Manhattan), Highbridge-Morrisania (Bronx), Fordham-Bronx Parkway (Bronx), Borough Park (Brooklyn), and Southwest Queens (Queens).

### Unintentional overdose deaths involving heroin by race/ethnicity, New York City, 2000–2015\*



\* Data for 2015 are provisional and subject to change.

White and Black race categories exclude Hispanic/Latino ethnicity.

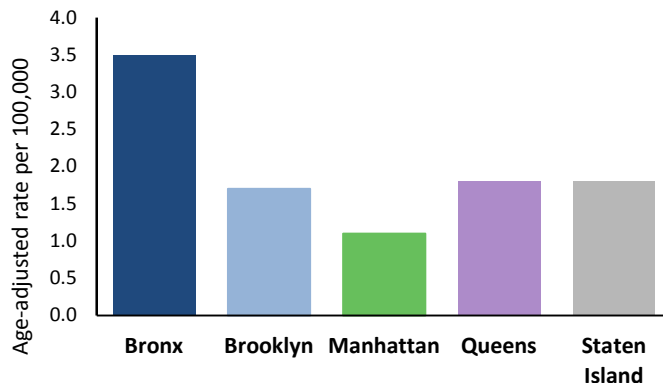
Source: NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics, 2000-2015

- In 2015, the rate was highest among White New Yorkers (11.6 per 100,000). The rate increased 51% among Latino New Yorkers from 6.8 per 100,000 in 2014 to 10.3 per 100,000 in 2015.
- Residents of the highest poverty neighborhoods had a higher rate of overdose death involving heroin (12.5 per 100,000) than residents of the lowest poverty neighborhoods (5.5 per 100,000) in 2015.
- From 2010 to 2015, New Yorkers aged 35 to 54 had the highest rates. The rate increased 135% from 4.9 per 100,000 residents in 2010 to 11.5 per 100,000 residents in 2015.
- New Yorkers aged 15 to 34 had the largest increase in heroin-related overdose deaths. The rate increased by 248%, from 2.1 per 100,000 residents in 2010 to 7.3 per 100,000 residents in 2015.

## Unintentional overdose deaths involving fentanyl

- In 2015, 146 (16%) overdose deaths involved fentanyl (2.1 per 100,000 residents).
- Data from the previous ten years show that at most 3% of overdose deaths annually involved fentanyl.
- In 2015 the rate of fentanyl-involved overdose was highest among Bronx residents, 3.5 per 100,000 residents, double the rate of all other boroughs.
- Of the 146 fentanyl-involved overdose deaths in 2015, 102 (70%) also involved heroin.
- In 2015, the rates of overdose death involving both fentanyl and heroin were highest among residents of very high poverty neighborhoods (2.3 per 100,000), New Yorkers aged 25 to 34 (2.4 per 100,000), and residents of the Bronx (2.4 per 100,000).
- Rates of overdose death involving fentanyl without heroin differed only by age, and were highest among New Yorkers aged 45 to 54 (1.3 per 100,000).

### Unintentional overdose deaths involving fentanyl by borough of residence, New York City, 2015\*



\* Data for 2015 are provisional and are subject to change.

Source: NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics, 2015

### COMMENT

- Fentanyl, a synthetic and short-acting opioid analgesic, is 50 to 100 times more potent than morphine and approved for managing acute or chronic pain associated with advanced cancer.<sup>1</sup>
- While pharmaceutical fentanyl can be diverted for misuse, most cases of fentanyl-related morbidity and mortality have been linked to illicitly manufactured fentanyl and fentanyl analogues.<sup>2</sup>
- While fentanyl-involved overdoses can be reversed with naloxone, patients may require a higher dose or multiple doses due to fentanyl's high potency.<sup>1</sup>
- Early results have identified three issues related to fentanyl:
  - Survey data collected from syringe exchange program (SEP) participants in NYC found that the vast majority of drug users buying heroin were not intentionally seeking fentanyl, thus were not aware if they had used fentanyl.<sup>3,4</sup>
  - Thus, drug users that are not aware that they are using fentanyl are at increased of overdose. This suggests the need to educate users on risk reduction practices, such as not using alone and having naloxone.
  - Street level sellers who use drugs may not know their drug products are tainted and may not want to be associated with deaths among users they have supplied.<sup>3</sup>

1. Centers for Disease Control and Prevention. Increases in Fentanyl Drug Confiscations and Fentanyl-related Overdose Fatalities. HAN Health Advisory. October 26, 2015.

2. National Heroin Threat Assessment Summary. DEA Intelligence Report. April 2015.

3. An Open Letter to United States Public Health Agencies. Johns Hopkins University and Brown University. May 4, 2016.

4. NYC Department of Health and Mental Hygiene. Unpublished data. May 2016.

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# Epi Data Tables

New York City Department of Health and Mental Hygiene

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## Unintentional Drug Poisoning (Overdose) Deaths Involving Heroin and/or Fentanyl in New York City, 2012-2015

### Data Tables

- Table 1.** Number and rate of unintentional drug poisoning (overdose) deaths, New York City, 2012-2015
- Map 1 & 2.** Top five New York City neighborhoods: Rates of unintentional drug poisoning (overdose) deaths by neighborhood of residence, 2012-2013 and 2014-2015
- Table 2.** Number and rate of unintentional drug poisoning (overdose) deaths involving heroin, New York City, 2012-2015
- Table 3.** Number and rate of unintentional drug poisoning (overdose) deaths involving fentanyl, New York City, 2015
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### Data Sources

**NYC Office of the Chief Medical Examiner and NYC DOHMH Bureau of Vital Statistics:** 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 2000-2015. Data for 2015 are provisional and subject to change.

**Rate Calculation:** NYC DOHMH population estimates, modified from US Census Bureau intercensal population estimates 2000-2014, updated October 2015. 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, except those for specific age groups.

**Neighborhood poverty** is based on ZIP code and is defined as the percentage of residents with incomes below 100% of the Federal Poverty Level, per American Community Survey 2007-2011, in four groups: low (<10%), medium (10 %-< 20%), high (20 %-< 30%), and very high (>=30%).

**Table 1. Number and rate of unintentional drug poisoning (overdose) deaths, New York City, 2012-2015\***

Source: Bureau of Vital Statistics/Office of the Chief Medical Examiner, New York City; Rates calculated using NYC DOHMH population estimates, modified from US Census Bureau intercensal population estimates 2000-2014 updated October 2015. Analysis by Health Department's Bureau of Alcohol and Drug Use Prevention, Care and Treatment.

Rates per 100,000 New Yorkers are age adjusted, except those for specific age groups.

	2012			2013			2014			2015*		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
<b>Total Unintentional Drug Poisoning Deaths</b>	<b>730</b>	<b>100%</b>	<b>10.9</b>	<b>788</b>	<b>100%</b>	<b>11.6</b>	<b>800</b>	<b>100%</b>	<b>11.7</b>	<b>937</b>	<b>100%</b>	<b>13.6</b>
<b>Gender</b>												
Male	534	73%	16.6	570	72%	17.7	589	74%	18.1	705	75%	21.5
Female	196	27%	5.7	218	28%	6.1	211	26%	5.8	232	25%	6.5
<b>Race/Ethnicity<sup>†</sup></b>												
Black (non-Hispanic)	180	25%	11.6	172	23%	10.6	170	22%	10.4	178	20%	10.9
Hispanic	192	27%	10.4	222	30%	12.0	208	27%	11.2	310	34%	16.4
White (non-Hispanic)	336	47%	15.6	358	48%	16.4	387	51%	17.5	414	46%	19.1
<b>Age (years)</b>												
15-24	48	7%	4.2	45	6%	4.0	51	6%	4.6	71	8%	6.5
25-34	140	19%	9.6	137	17%	9.2	166	21%	11.0	195	21%	12.9
35-44	158	22%	13.5	159	20%	13.5	165	21%	14.0	182	19%	15.4
45-54	245	34%	22.0	251	32%	22.5	232	29%	20.8	277	30%	24.8
55-64	122	17%	13.0	163	21%	17.1	151	19%	15.5	177	19%	18.2
65-84	17	2%	1.9	33	4%	3.6	35	4%	3.7	35	4%	3.7
<b>Age (years-collapsed)</b>												
15-34	188	26%	7.2	182	23%	7.0	217	27%	8.3	266	28%	10.2
35-54	403	55%	17.6	410	52%	17.9	397	50%	17.3	459	49%	20.0
55-84	139	19%	7.6	196	25%	10.4	186	23%	9.7	212	23%	11.1
<b>Borough of Residence<sup>†</sup></b>												
Bronx	171	26%	16.0	162	24%	14.9	170	24%	15.5	252	30%	22.6
Brooklyn	179	27%	8.9	165	25%	8.2	195	28%	9.6	223	27%	10.8
Manhattan	131	20%	9.8	136	20%	9.7	141	20%	10.4	145	17%	10.8
Queens	105	16%	5.5	145	22%	7.5	131	18%	6.8	144	17%	7.5
Staten Island	74	11%	19.9	64	10%	17.6	74	10%	20.6	69	8%	19.2
<b>Borough of Death</b>												
Bronx	175	24%	16.5	184	23%	17.1	182	23%	16.6	273	29%	24.4
Brooklyn	188	26%	9.4	197	25%	9.8	220	28%	10.8	258	28%	12.5
Manhattan	172	24%	12.8	191	24%	13.8	184	23%	13.4	187	20%	13.9
Queens	120	16%	6.4	152	19%	7.9	141	18%	7.3	150	16%	7.8
Staten Island	75	10%	20.1	64	8%	17.5	73	9%	20.2	69	7%	19.2
<b>Neighborhood Poverty<sup>†0</sup></b>												
Low (wealthiest)	119	18%	8.6	147	22%	10.6	143	20%	10.4	135	16%	9.8
Medium	194	29%	7.5	183	27%	7.1	208	29%	8.1	247	30%	9.4
High	164	25%	10.5	160	24%	10.0	169	24%	10.6	211	25%	13.4
Very High	182	28%	16.1	181	27%	15.8	189	27%	16.3	240	29%	20.1
<b>Drug Type**</b>												
Alcohol	316	43%	4.7	342	43%	5.0	359	45%	5.2	372	40%	5.4
Benzodiazepines	278	38%	4.2	298	38%	4.4	301	38%	4.4	370	39%	5.4
Cocaine	348	48%	5.2	364	46%	5.4	326	41%	4.7	394	42%	5.7
Heroin	382	52%	5.7	424	54%	6.2	460	57%	6.7	556	59%	8.0
Methadone	184	25%	2.7	169	21%	2.5	127	16%	1.8	152	16%	2.2
Opioid Analgesics <sup>††</sup>	192	26%	2.9	213	27%	3.1	200	25%	3.0	214	23%	3.1
<b>Top 5 NYC Neighborhoods<sup>^</sup></b>	<b>2012-2013 Rate</b>						<b>2014-2015* Rate</b>					
	Hunts Point-Mott Haven			28.1			Hunts Point-Mott Haven			30.0		
	South Beach-Tottenville			23.2			South Beach-Tottenville			24.9		
	Willowbrook			21.0			Crotona-Tremont			24.4		
	Highbridge-Morrisania			19.0			East Harlem			23.8		
	Central Harlem			18.8			Highbridge-Morrisania			22.2		

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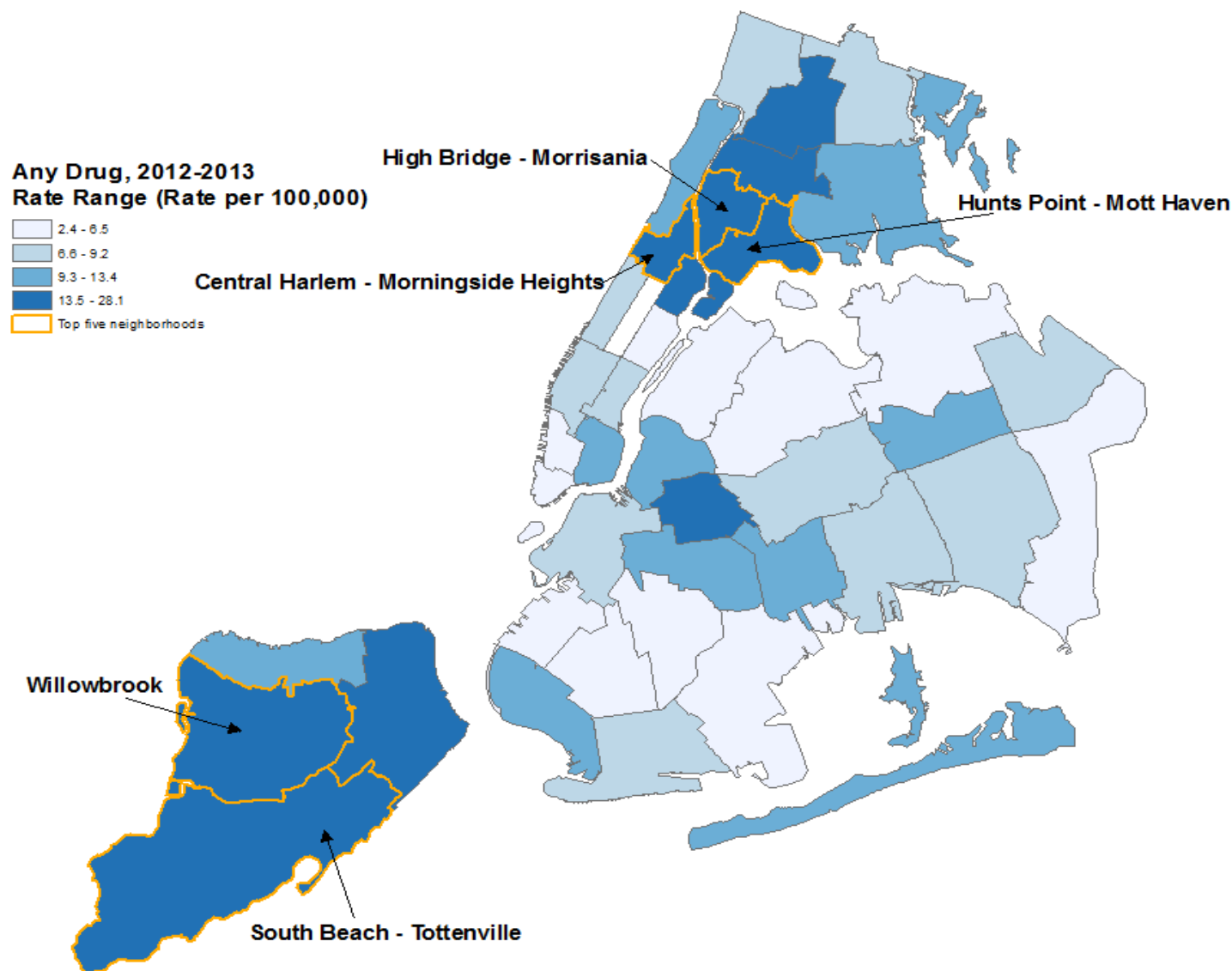
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\*\*Drug Type, not mutually exclusive.; percent will not equal 100%. ††For this analysis, opioid analgesics exclude fentanyl.

<sup>^</sup>Top five of 42 NYC Neighborhoods

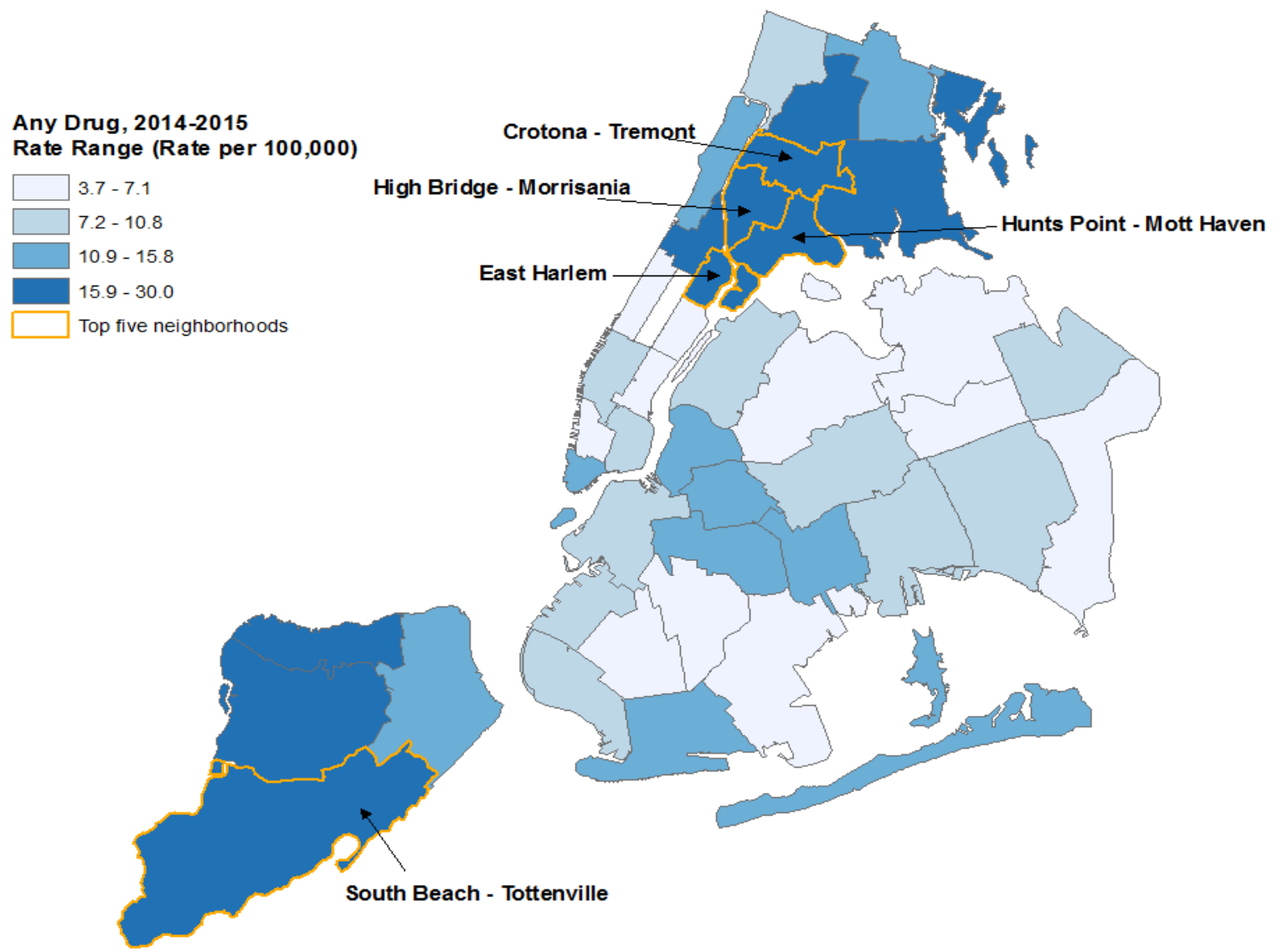
**Map 1. Top five New York City neighborhoods: Rates of unintentional drug poisoning (overdose) by neighborhood^ of residence, 2012-2013**

Source: Bureau of Vital Statistics/Office of the Chief Medical Examiner, New York City; Rates calculated using NYC DOHMH population estimates, modified from US Census Bureau intercensal population estimates 2000-2014 updated October 2015. Analysis by Health Department's Bureau of Alcohol and Drug Use Prevention, Care and Treatment.



^The United Hospital Fund (UHF) classifies New York City into 42 neighborhoods, comprised of contiguous ZIP codes.

**Map 2. Top five New York City neighborhoods: Rates of unintentional drug poisoning (overdose) by neighborhood^ of residence, 2014-2015\***



<sup>^</sup>The United Hospital Fund (UHF) classifies New York City into 42 neighborhoods, comprised of contiguous ZIP codes.

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**Table 2. Number and rate of unintentional drug poisoning (overdose) deaths involving heroin, New York City, 2012-2015\***

Source: Bureau of Vital Statistics/Office of the Chief Medical Examiner, New York City; Rates calculated using NYC DOHMH population estimates, modified from US Census Bureau intercensal population estimates 2000-2014 updated October 2015. Analysis by Health Department's Bureau of Alcohol and Drug Use Prevention, Care and Treatment.

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	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
<b>Total Unintentional Drug Poisoning Deaths</b>	<b>730</b>	<b>100%</b>	<b>10.9</b>	<b>788</b>	<b>100%</b>	<b>11.6</b>	<b>800</b>	<b>100%</b>	<b>11.7</b>	<b>937</b>	<b>100%</b>	<b>13.6</b>
<b>Total Unintentional Drug Poisoning Deaths Involving Heroin</b>	<b>382</b>	<b>52%</b>	<b>5.7</b>	<b>424</b>	<b>54%</b>	<b>6.2</b>	<b>460</b>	<b>58%</b>	<b>6.7</b>	<b>556</b>	<b>59%</b>	<b>8.0</b>
<b>Gender</b>												
Male	297	78%	9.2	326	77%	10.0	350	76%	10.7	434	78%	13.2
Female	85	22%	2.5	98	23%	2.7	110	24%	3.0	122	22%	3.3
<b>Race/Ethnicity<sup>†</sup></b>												
Black (non-Hispanic)	70	19%	4.6	64	16%	3.9	81	18%	4.9	89	17%	5.4
Hispanic	114	30%	6.1	146	36%	7.8	126	29%	6.8	196	36%	10.3
White (non-Hispanic)	191	51%	8.8	195	48%	8.8	229	53%	10.5	252	47%	11.6
<b>Age (years)</b>												
15-24	27	7%	2.4	32	8%	2.9	34	7%	3.1	44	8%	4.0
25-34	88	23%	6.0	92	22%	6.2	105	23%	7.0	146	26%	9.7
35-44	80	21%	6.8	84	20%	7.1	95	21%	8.0	110	20%	9.3
45-54	130	34%	11.6	125	29%	11.2	129	28%	11.5	154	28%	13.8
55-64	50	13%	5.3	78	18%	8.2	80	17%	8.2	90	16%	9.3
65-84	7	2%	0.8	13	3%	1.4	17	4%	1.8	12	2%	1.3
<b>Age (years-collapsed)</b>												
15-34	115	30%	4.4	124	29%	4.8	139	30%	5.3	190	34%	7.3
35-54	210	55%	9.2	209	49%	9.1	224	49%	9.7	264	47%	11.5
55-84	57	15%	3.1	91	21%	4.9	97	21%	5.1	102	18%	5.3
<b>Borough of Residence<sup>†</sup></b>												
Bronx	93	27%	8.8	94	27%	8.7	103	26%	9.5	146	30%	13.0
Brooklyn	84	25%	4.2	84	24%	4.2	116	29%	5.7	136	28%	6.6
Manhattan	73	22%	5.3	61	17%	4.2	69	17%	4.9	78	16%	5.8
Queens	53	16%	2.8	81	23%	4.3	71	18%	3.7	83	17%	4.4
Staten Island	36	11%	10.1	32	9%	8.6	42	11%	11.6	38	8%	10.7
<b>Borough of Death</b>												
Bronx	98	26%	9.3	109	26%	10.1	112	24%	10.3	165	30%	14.7
Brooklyn	96	25%	4.8	102	24%	5.0	138	30%	6.8	164	29%	7.9
Manhattan	96	25%	7.1	89	21%	6.2	90	20%	6.3	103	19%	7.6
Queens	59	15%	3.2	91	21%	4.8	79	17%	4.1	86	15%	4.6
Staten Island	33	9%	9.2	33	8%	9.1	41	9%	11.2	38	7%	10.6
<b>Neighborhood Poverty<sup>†0</sup></b>												
Low (wealthiest)	64	19%	4.6	78	22%	5.7	67	17%	4.9	75	16%	5.5
Medium	86	25%	3.4	90	26%	3.5	120	30%	4.7	143	30%	5.4
High	92	27%	5.9	73	21%	4.5	91	23%	5.7	112	23%	7.1
Very High	96	28%	8.5	110	31%	9.7	121	30%	10.4	151	31%	12.5
<b>Top 5 NYC Neighborhoods<sup>^</sup></b>	<b>2012-2013 Rate</b>						<b>2014-2015 Rate</b>					
	Hunts Point-Mott Haven			16.3			Hunts Point-Mott Haven			20.2		
	South Beach- Tottenville			12.9			Crotona-Tremont			17.6		
	Willowbrook			10.7			South Beach-Tottenville			14.5		
	Fordham-Bronx Park			10.6			East Harlem			13.9		
	Crotona-Tremont			10.3			Highbridge-Morrisania			12.5		

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**Table 3. Number and rate of unintentional drug poisoning (overdose) deaths involving fentanyl, New York City, 2015\***

Source: Bureau of Vital Statistics/Office of the Chief Medical Examiner, New York City; Rates calculated using NYC DOHMH population estimates, modified from US Census Bureau intercensal population estimates 2000-2014 updated October 2015. Analysis by Health Department's Bureau of Alcohol and Drug Use Prevention, Care and Treatment.

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	Unintentional drug poisoning (overdose) deaths involving fentanyl			Unintentional drug poisoning (overdose) deaths involving fentanyl, no heroin			Unintentional drug poisoning (overdose) deaths involving fentanyl and/or heroin		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
<b>Total Unintentional Drug Poisoning Deaths</b>	<b>937</b>	<b>100%</b>	<b>13.6</b>	<b>937</b>	<b>100%</b>	<b>13.6</b>	<b>937</b>	<b>100%</b>	<b>13.6</b>
<b>Total Unintentional Drug Poisoning Deaths by Drug Type</b>	<b>146</b>	<b>16%</b>	<b>2.1</b>	<b>44</b>	<b>5%</b>	<b>0.6</b>	<b>600</b>	<b>64%</b>	<b>8.7</b>
<b>Gender</b>									
Male	115	79%	3.4	35	80%	1.0	469	78%	14.2
Female	31	21%	0.9	9	20%	0.3	131	22%	3.6
<b>Race/Ethnicity<sup>†</sup></b>									
Black (non-Hispanic)	25	18%	1.5	6	14%	0.4	95	16%	5.8
Hispanic	50	35%	2.6	15	35%	0.8	211	36%	11.0
White (non-Hispanic)	67	47%	3.1	22	51%	1.0	274	47%	12.6
<b>Age (years-collapsed)</b>									
15-34	56	38%	2.1	13	30%	0.5	203	34%	7.8
35-54	64	44%	2.8	20	45%	0.9	284	47%	12.4
55-84	26	18%	1.4	11	25%	0.6	113	19%	5.9
<b>Borough of Residence<sup>†</sup></b>									
Bronx	40	30%	3.5	12	29%	1.0	158	30%	14.0
Brooklyn	36	27%	1.7	13	31%	0.6	149	28%	7.2
Manhattan	16	12%	1.1	8	19%	0.6	86	16%	6.4
Queens	33	25%	1.8	X	X	X	89	17%	4.7
Staten Island	7	5%	1.8	X	X	X	41	8%	11.4
<b>Borough of Death</b>									
Bronx	43	29%	3.6	12	27%	1.0	177	30%	15.7
Brooklyn	41	28%	2	15	34%	0.7	179	30%	8.6
Manhattan	25	17%	1.8	9	20%	0.6	112	19%	8.2
Queens	29	20%	1.6	X	X	X	92	15%	4.9
Staten Island	8	5%	2.1	X	X	X	40	7%	11.0
<b>Neighborhood Poverty<sup>*∅</sup></b>									
Low (wealthiest)	21	16%	1.6	6	14%	0.5	81	15%	6.0
Medium	40	30%	1.5	10	24%	0.4	153	29%	5.8
High	32	24%	1.9	16	38%	0.9	128	24%	8.0
Very High	39	30%	3.3	10	24%	0.9	161	31%	13.4

\*Data for 2015 are provisional and are subject to change.

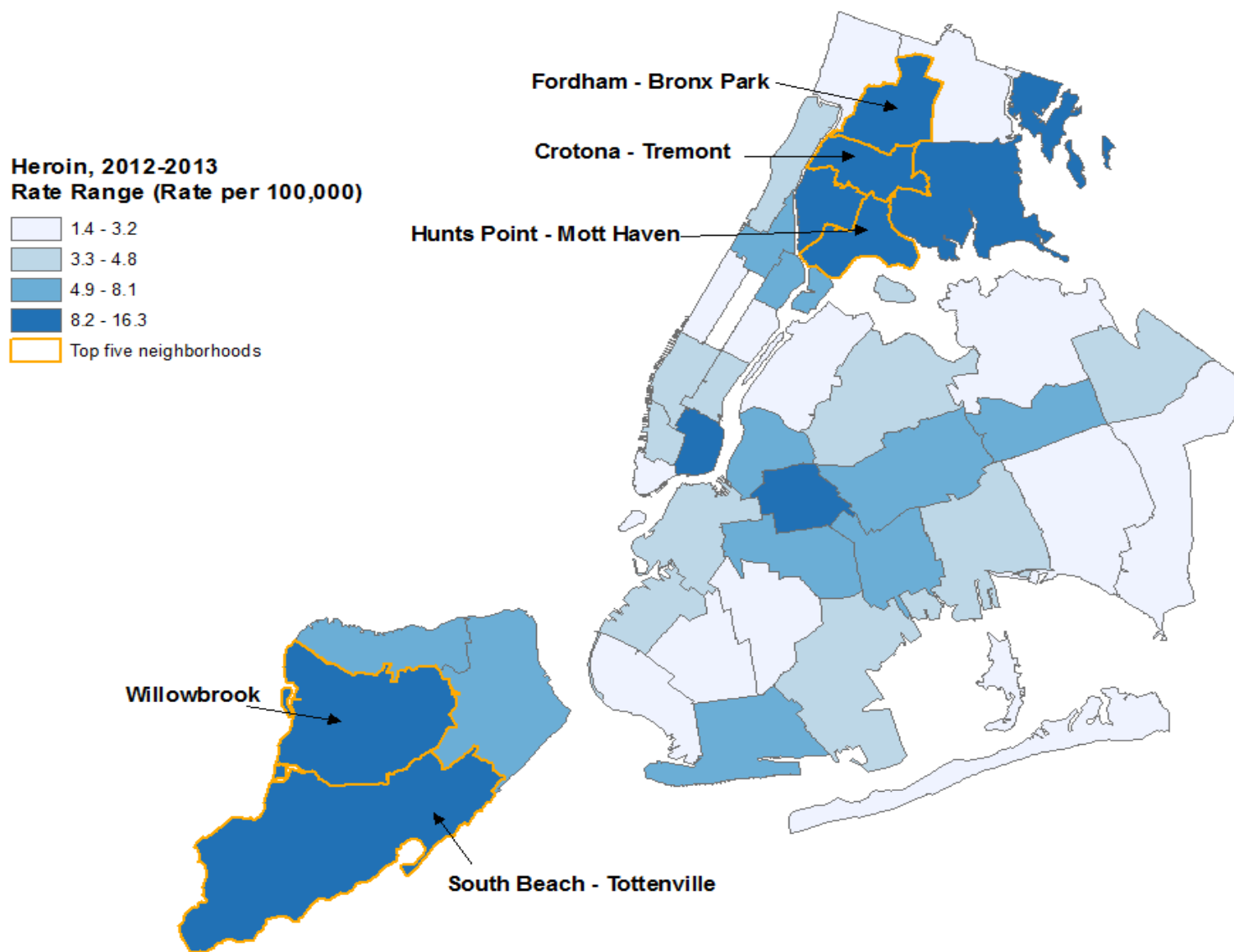
†Percentage of deaths within subgroup are calculated among categories presented.

∅Neighborhood poverty (based on ZIP code) was defined as percent of residents with incomes below 100% of the federal poverty level (FPL) (Census 2000), separated into four groups: low (<10% FPL), medium (10%-<20% FPL), high (20%-<30% FPL) and very high (>=30% FPL).

^Top five of 42 NYC Neighborhoods

**Map 3. Top five New York City neighborhoods: Rates of unintentional drug poisoning (overdose) deaths involving heroin by neighborhood^ of residence, 2012-2013**

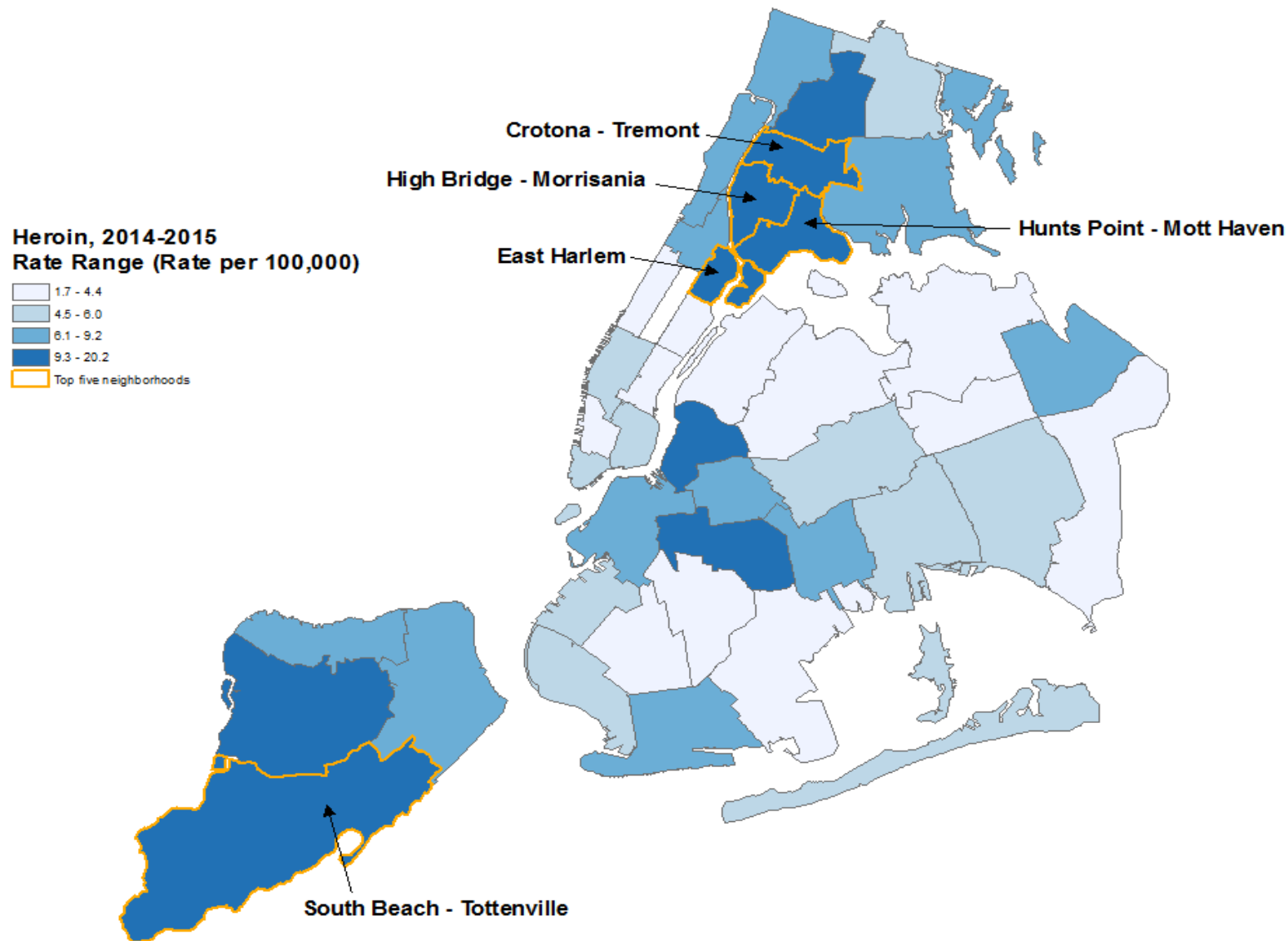
Source: Bureau of Vital Statistics/Office of the Chief Medical Examiner, New York City; Rates calculated using NYC DOHMH population estimates, modified from US Census Bureau intercensal population estimates 2000-2014 updated October 2015. Analysis by Health Department's Bureau of Alcohol and Drug Use Prevention, Care and Treatment.



^The United Hospital Fund (UHF) classifies New York City into 42 neighborhoods, comprised of contiguous ZIP codes.

**Map 4. Top five New York City neighborhoods: Rates of unintentional drug poisoning (overdose) deaths involving heroin by neighborhood^ of residence, 2014-2015\***

Source: Bureau of Vital Statistics/Office of the Chief Medical Examiner, New York City; Rates calculated using NYC DOHMH population estimates, modified from US Census Bureau intercensal population estimates 2000-2014 updated October 2015. Analysis by Health Department's Bureau of Alcohol and Drug Use Prevention, Care and Treatment.



<sup>^</sup>The United Hospital Fund (UHF) classifies New York City into 42 neighborhoods, comprised of contiguous ZIP codes.

\*Data for 2015 are provisional and are subject to change.