# Opioid Overdose Surveillance Georgia, 2016

Drug Surveillance Unit

Epidemiology Section

Division of Health Protection

Georgia Department of Public Health

https://dph.georgia.gov/drug-surveillance-unit



## Opioid Overdose Surveillance, Georgia, 2016

The purpose of this report is to describe fatal (mortality) and nonfatal (morbidity) opioid-involved overdoses, which occurred in Georgia during 2016, including prescription opioids, and illicit opioids such as heroin, fentanyl, and fentanyl analogs. Opioid overdose data were analyzed by the Georgia Department of Public Health (DPH) Epidemiology Program, Drug Surveillance Unit, using Georgia hospital discharge inpatient and emergency department (ED) visit data, and DPH Vital Records death data.

#### **Key Findings**

- Opioid-involved overdose deaths rapidly increased in Georgia from 2010-2016, driven initially by increased use and misuse of prescription opioids (e.g., Oxycodone and Hydrocodone). Beginning in 2013, illicit opioids, such as heroin and fentanyl, drove the sharp increase in opioid-involved overdose deaths
  - o From 2010 to 2016, the number of opioid-involved overdose deaths occurring in Georgia increased by 86%, from 514 to 954 deaths.
- In 2016, among Georgia residents:
  - Any opioid-involved overdoses accounted for 5,195 ED visits, 2,639 hospitalizations, and 904 deaths.
  - o Heroin-involved overdoses accounted for 1,204 ED visits, 306 hospitalizations, and 214 deaths.
  - o Fentanyl-involved overdoses accounted for 227 deaths.
  - Persons aged 25-34 years more frequently died from an opioid-involved overdose, and visited an ED for an opioid-involved overdose than persons of other age categories, yet older persons were more frequently hospitalized because of an opioid-involved overdose.
  - o Males aged 25-34 years died from an opioid-involved overdose more frequently than any other age category, and were 2.1 times more likely to die from an overdose than females of the same age.
  - Males were 1.6 times more likely to die from any opioid-involved overdose than females. However, females, particularly those aged 45 years and older, were more frequently hospitalized for an opioidinvolved overdose than males.
  - Whites were 4.2 times more likely to die from an opioid-involved overdose, 2.6 times more like to visit an ED for any opioid-involved overdose, and 4.3 times more likely to visit an ED for a heroininvolved overdose than Blacks.
  - The highest numbers of heroin- and opioid-involved overdose deaths, ED visits, and hospitalizations occurred predominantly in urban areas (Atlanta Metropolitan Area, Augusta, Macon, Columbus, and Savannah). However, high rates of opioid overdose-involved ED visits and hospitalizations occurred in both urban and rural areas, particularly in North, South Central, and Southeast Georgia.

#### For more information:

- County level data and other Georgia drug surveillance reports: https://dph.georgia.gov/drug-surveillance-unit
- Georgia Department of Public Health (DPH) Main Opioid Page:
- <a href="https://dph.georgia.gov/stopopioidaddiction">https://dph.georgia.gov/stopopioidaddiction</a>
- Georgia drug overdose mortality interactive maps and statistics: https://oasis.state.ga.us/PageDirect.aspx?referer=MortalityDrugOverdoses
- Prescription Drug Monitoring Program (PDMP) information: GA PDMP Overview and FAQs https://dph.georgia.gov/pdmp

### Fatal Drug Overdoses (Mortality), Georgia, 2016

#### **Data Source**

Overdose-involved deaths were derived from DPH Vital Records death certificates. The following data include all deaths that occurred in Georgia among Georgia residents and deaths that occurred outside of Georgia among Georgia residents, unless otherwise specified.

#### **Case Definitions**

(Note: categories are not mutually exclusive, includes only drug overdose deaths caused by acute poisoning)

#### Any drug overdose death

May involve any over-the-counter, prescription, or illicit drug

• Deaths with any of the following ICD-10 codes as any underlying cause of death: X40-44, X60-64, X85, Y10-14

#### Drug overdose death involving any opioid

Involves both prescription opioid pain relievers (e.g., hydrocodone, oxycodone, and morphine), opioids used to treat addiction (e.g., methadone), as well as heroin, opium, and synthetic opioids (e.g., tramadol and fentanyl that may be prescription or illicitly manufactured)

- Deaths with any of the following ICD-10 codes as any underlying cause of death: X40-44, X60-64, X85, Y10-14 AND one of the following:
- Any of the following ICD-10 codes as any other listed cause of death: T40.0, T40.1, T40.2, T40.3, T40.4, T40.6
- Any cause of death text field contains one of the following terms (or common misspelling): heroin, fentanyl (and fentanyl analogs), methadone, buprenorphine, butalbital, codeine, eddp, hydrocodone, hydromorphone, levorphanol, meperidine, norbuprenorphine, oxycodone, oxymorphone, tapentadol, tramadol

OR (for cases without an X or Y code in the underlying cause of death):

 Any cause of death text field contains the word "TOXIC" AND at least one of the following terms (or common misspelling): heroin, fentanyl (and fentanyl analogs), methadone, buprenorphine, butalbital, codeine, eddp, hydrocodone, hydromorphone, levorphanol, meperidine, norbuprenorphine, oxycodone, oxymorphone, tapentadol, tramadol

#### Drug overdose death involving synthetic opioids other than methadone

Involves synthetic opioids other than methadone (e.g., tramadol and fentanyl that may be prescription or illicitly manufactured). Note: polysubstance abuse deaths may also involve methadone or other opioids

- Deaths with any of the following ICD-10 codes as any underlying cause of death: X40-44, X60-64, X85, Y10-14 AND one of the following:
- The following ICD-10 code as any other listed cause of death: T40.4
- Any cause of death text field contains the following keywords and common misspellings: fentanyl (and fentanyl analogs), tramadol

OR (for cases without an X or Y code in the underlying cause of death):

• Any cause of death text field contains the word "TOXIC" AND at least one of the following terms (or common misspelling): fentanyl (and fentanyl analogs), tramadol

#### Drug overdose death involving heroin

Involves heroin. Note: polysubstance abuse deaths may also involve other opioids

- Deaths with any of the following ICD-10 codes as any underlying cause of death: X40-44, X60-64, X85, Y10-14 AND one of the following:
- The following ICD-10 code as any other listed cause of death: T40.1
- Any cause of death text field contains the following keywords and common misspellings: heroin, morphine

OR (for cases without an X or Y code in the underlying cause of death):

• Any cause of death text field contains the word "TOXIC" AND at least one of the following terms (or common misspelling): heroin, morphine

#### Drug overdose death involving fentanyl

Note: polysubstance abuse deaths may also involve other opioids

Any cause of death text field contains the word "TOXIC" AND at least one of the following terms (or common misspelling): fentanyl (and fentanyl analogs)

#### **Other Definitions or Limitations**

Deaths represent individual people who died in Georgia and deaths among Georgia residents outside of Georgia.

Overdose death county represents the county of residence, or the place of injury (where the overdose occurred) as specified; when the place of injury field or the county of residence field was blank the county of the death certifier was used.

Rate indicates the number of deaths among Georgia residents per 100,000 population using 2016 Census data as the denominator, and all rates are age-adjusted unless age category is presented.

Rates for categories with fewer than 5 deaths may not be accurate and are not presented in this report.

#### **ICD-10 Code Description**

X40-X44 (accidental poisonings by drugs), X60-X64 (intentional self-poisoning by drugs), X85 (assault by drug poisoning), Y10-Y14 (drug poisoning of undetermined intent), T40.0 (opium), T40.1 (heroin), T40.2 (natural and semisynthetic opioids), T40.3 (methadone), T40.4 (synthetic opioids, other than methadone, T40.6 (other and unspecified narcotics)

### Nonfatal Overdoses (Morbidity), Georgia, 2016

#### **Data Source**

**AND** 

Nonfatal overdose counts were derived from Georgia hospitalization and emergency department (ED) visit discharge data, and included all ED visits or hospitalizations occurring in a non-Federal acute care hospital in Georgia, among Georgia residents, with a discharge diagnosis indicating acute drug overdose during 2016.

#### **Case Definitions (categories are not mutually exclusive)**

#### ED visit or hospitalization involving any drug overdose

May include any over-the-counter, prescription, or illicit drug

- Any mention of ICD-10CM codes: T36-T50 AND
- 6<sup>th</sup> character: 1-4, and a 7<sup>th</sup> character of A or missing

#### ED visit or hospitalization involving any opioid overdose

Includes prescription opioid pain relievers (e.g., hydrocodone, oxycodone, and morphine), opioids used to treat addiction (e.g., methadone), as well as heroin, opium, and synthetic opioids (e.g., tramadol and fentanyl that may be prescription or illicitly-manufactured)

- Any mention of ICD-10CM codes: T40.0X, T40.1X, T40.2X, T40.3X, T40.4X, T40.60, T40.69
   AND
- 6<sup>th</sup> character: 1-4, and a 7<sup>th</sup> character of A or missing

#### ED visit or hospitalization involving a heroin overdose

- Any mention of ICD-10CM code: T40.1X
- 6<sup>th</sup> character: 1-4, and a 7<sup>th</sup> character of A or missing

#### Other Definitions or Limitations

Please Note: The case definition has changed and cannot be compared to previous reports.

Any opioid may include prescription or illicit opioids.

ED Visits and Hospitalization categories are not mutually exclusive. Hospitalizations may also appear in the ED Visits category if they were admitted to the hospital through the ED.

ED visits and hospitalizations may represent multiple visits by individuals in Georgia.

County indicates the patient's county of residence.

Only Black and White are indicated for race because of incomplete or sparse data on other races and ethnicities.

Rate indicates the number of ED visits or hospitalizations among Georgia residents per 100,000 population using 2016 Census data as the denominator, and all rates are age-adjusted unless age category is presented.

Rates for categories with fewer than 5 ED visits or hospitalizations may not be accurate and are not presented in this report.

#### **ICD-10 CM Code Description**

Poisoning by: T36-T50 (range includes all drugs), T40.0X (opium), T40.1X (heroin), T40.2X (other opioids), T40.3X (methadone), T40.4X (synthetic narcotics), T40.60 (unspecified narcotics), T40.69 (other narcotics)

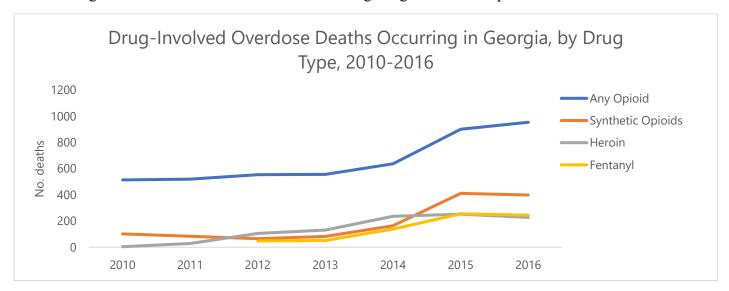
6<sup>th</sup> Character: 1 (accidental, unintentional), 2 (intentional self-harm), 3 (assault), 4 (undetermined intent)

7<sup>th</sup> Character: A (initial encounter) or missing

### **Drug Overdose Deaths (Mortality)**

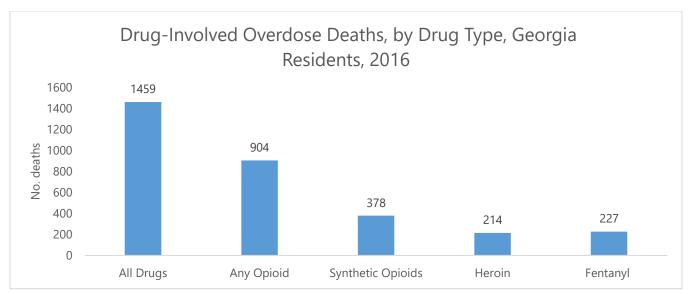
Note: Any opioid may include prescription or illicit opioids. Categories are not mutually exclusive. Overdose-involved deaths were derived from DPH Vital Records death certificates.

The following data include deaths that occurred in Georgia regardless of the patient's residence state.

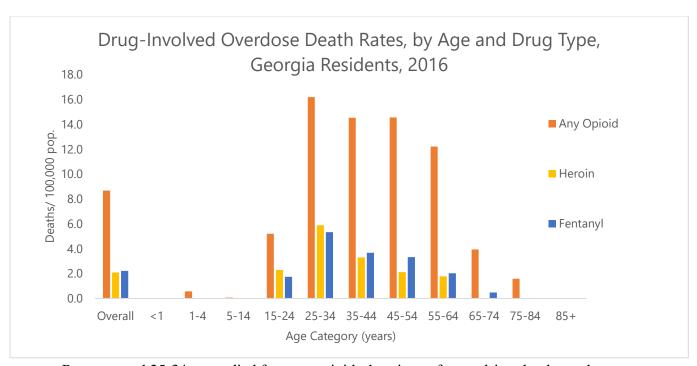


- From 2010 to 2016, the number of opioid-involved overdose deaths in Georgia increased by 86%, from 514 to 954 deaths.
- Beginning in 2013, illicit opioids, such as heroin and fentanyl, drove the sharp increase in opioid-involved overdose deaths in GA. Note: fentanyl is included in the synthetic opioid category.

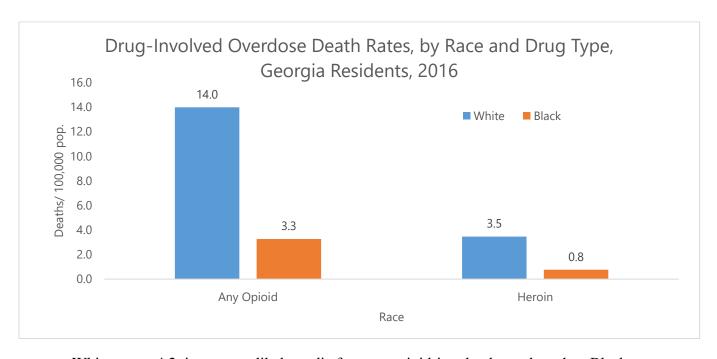
Note: The following data include all deaths that occurred in Georgia among Georgia residents, and deaths that occurred outside of Georgia among Georgia residents, unless otherwise specified.



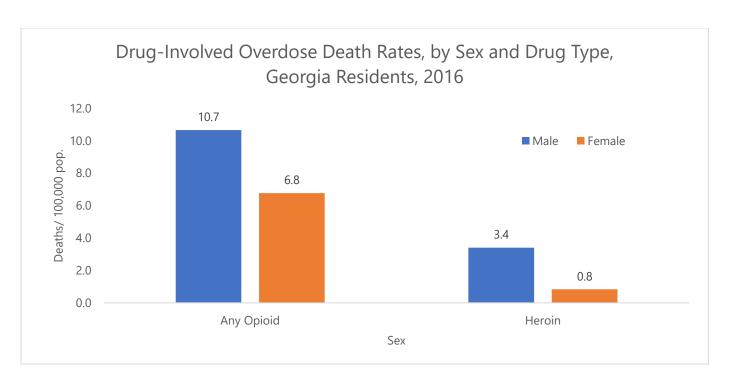
• In 2016 in Georgia, overdose deaths involving fentanyl (227) were slightly higher than deaths involving heroin (214). Note: fentanyl is included in the synthetic opioid category.



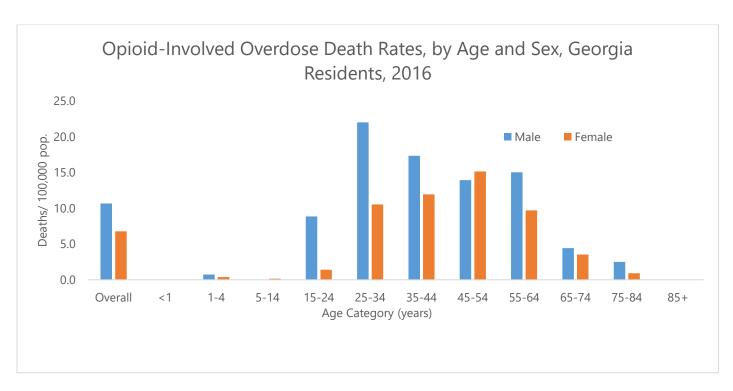
• Persons aged 25-34 years died from an opioid-, heroin- or fentanyl-involved overdose more frequently than persons of other age categories.



• Whites were 4.2 times more likely to die from an opioid-involved overdose than Blacks.



• Males were 1.6 times more likely to die from any opioid-involved overdose.



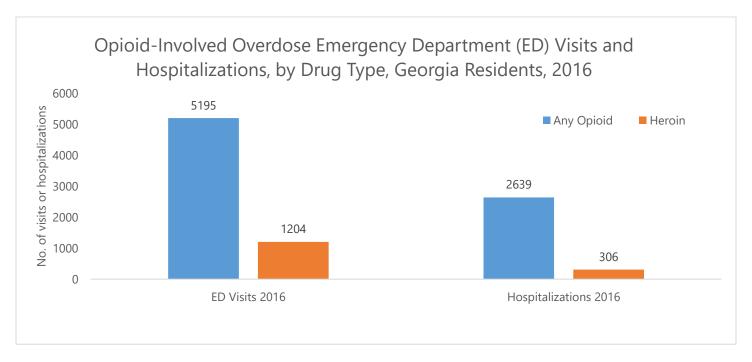
 Males aged 25-34 years died from an opioid-involved overdose more frequently than persons of any other age category, and were 2.1 times more likely to die from an overdose than females of the same age.

### **Opioid-Involved Emergency Department Visits and Hospitalizations (Morbidity)**

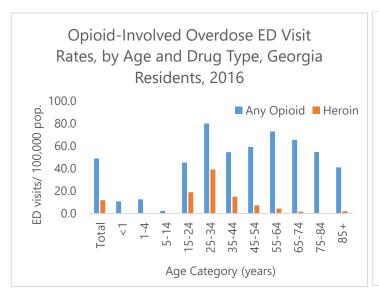
Note: The case definition has changed and cannot be compared to previously published reports. Any opioid may include prescription or illicit opioids. ED visits and hospitalization categories are not mutually exclusive; hospitalizations may also appear in the ED visits category if they were admitted to the hospital through the ED (95% of opioid hospitalizations were admitted from the ED in 2016).

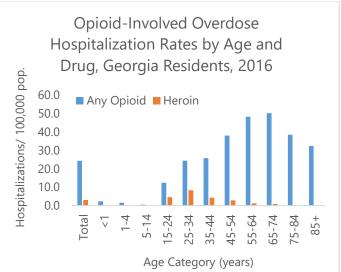
Opioid-Involved Emergency Department Visits and Hospitalizations, by Drug Type, Georgia, 2016						
Any opioid	may include prescription and/or illicit opioids; categor	ies are not mutually exclusive				
Number represents events that occurred in Georgia regardless of the patient's residence state  Number represents events that occurred in Georgia among Georgia residence state						
Drug Category	No.	No.				
Any Opioid ED Visits	5534	5195				
Any Opioid Hospitalizations	2809	2639				
Heroin ED Visits	1305	1204				
Heroin Hospitalizations	334	306				

Note: The following data include all ED visits and hospitalizations that occurred in Georgia among Georgia residents.

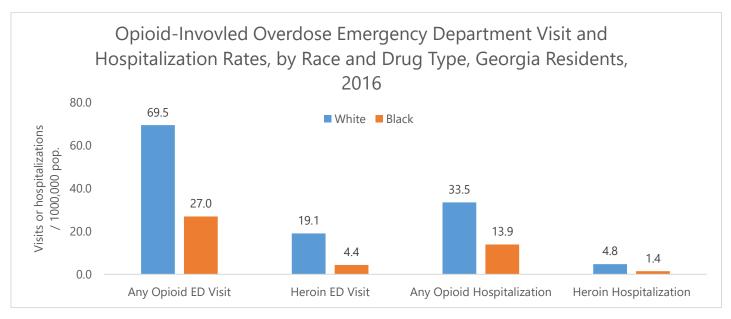


• There were twice as many ED visits as hospitalizations for any opioid-involved overdose, however there were fewer heroin-involved overdose hospitalizations compared to heroin-involved ED visits.

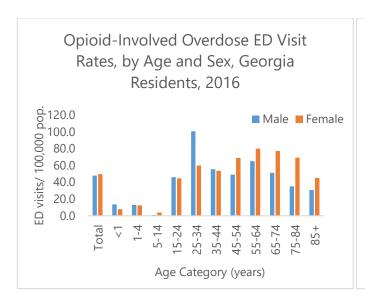


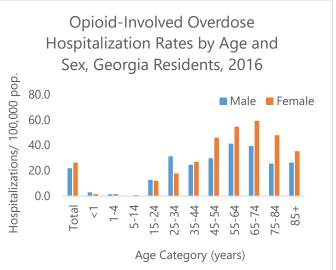


- Persons aged 25-34 years were more likely to visit an ED because of an opioid-involved overdose than persons of other age categories, yet older persons were more frequently hospitalized because of an opioid-involved overdose.
- Heroin-involved overdoses occurred most frequently among persons aged 25-34 years, and were less common among younger and older persons.



• Whites were 2.6 times more likely to visit an ED for any opioid-involved overdose, and 4.3 times more likely to visit an ED for a heroin-involved overdose than Blacks.

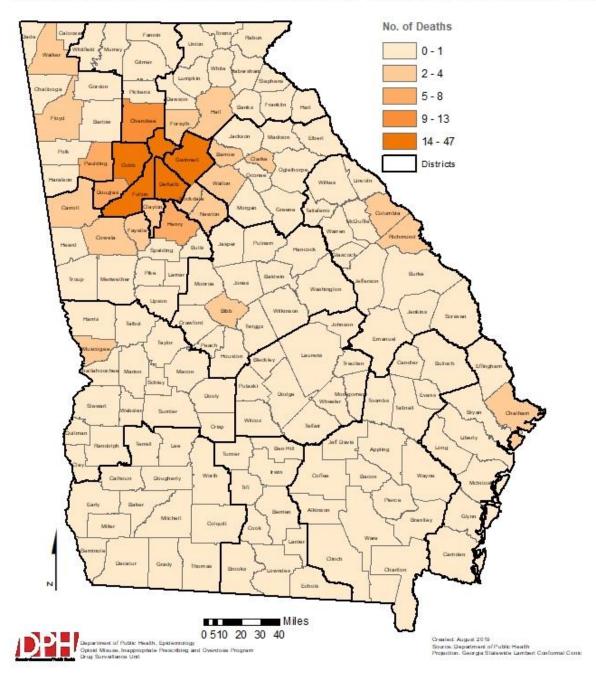




- Males aged 25-34 years visited an ED and/or died from an opioid-involved overdose more frequently than females of the same age category.
- Females, particularly those aged 45 years and older, more frequently visited an ED, and were more frequently hospitalized for an opioid-involved overdose than males.

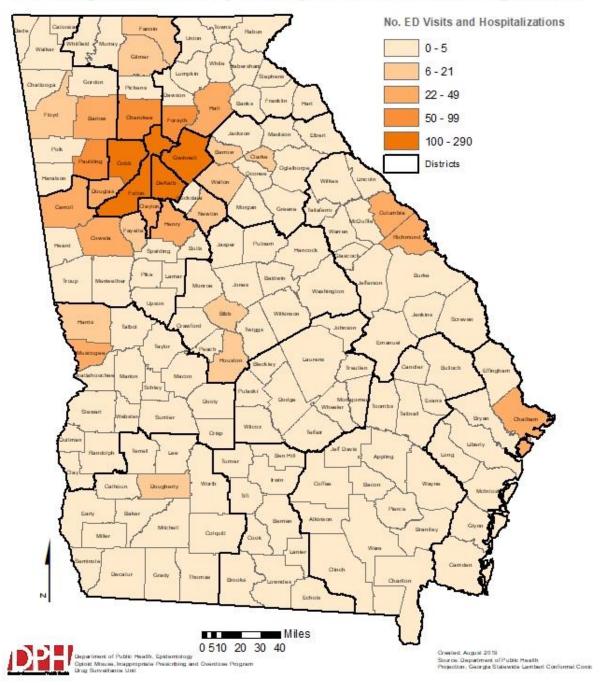
# **HEROIN-INVOLVED OVERDOSES**

## Heroin-Involved Overdose Deaths, by County of Residence, Georgia, 2016



NOTE: Rates could not be calculated for most counties due to the low number of heroin-involved overdose deaths, ED visits and hospitalizations. Therefore, the number (not rate) of overdoses are presented in this map.

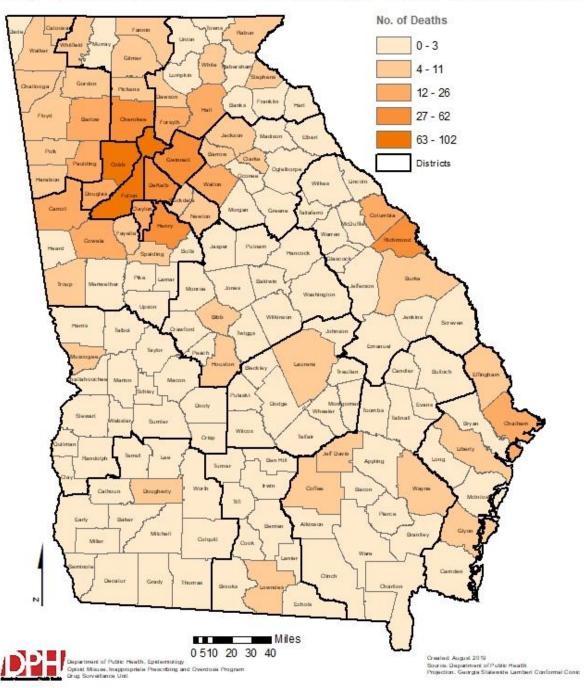
# Heroin-Involved Overdose Emergency Department Visits and Hospitalizations, by County of Residence, Georgia, 2016



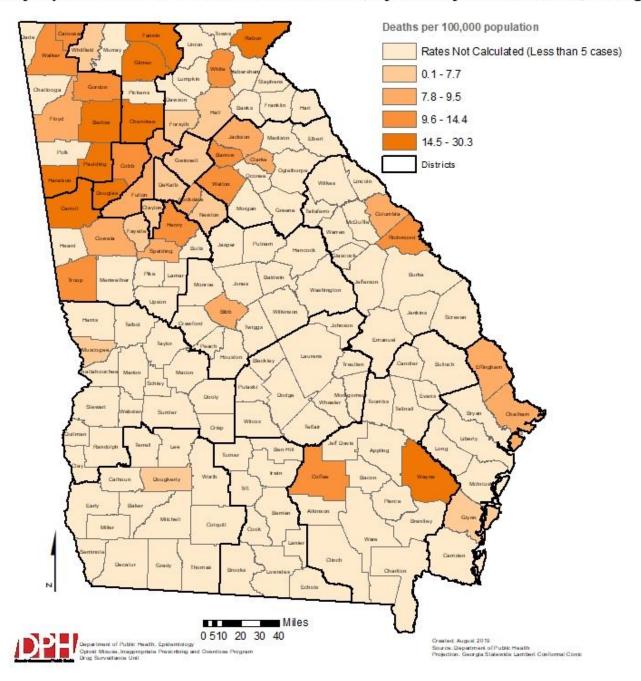
NOTE: Rates could not be calculated for some counties due to the low number of heroin-involved overdose deaths, ED visits and hospitalizations. Therefore, the number (not rate) of overdoses are presented in this map.

# ANY OPIOID-INVOLVED OVERDOSES

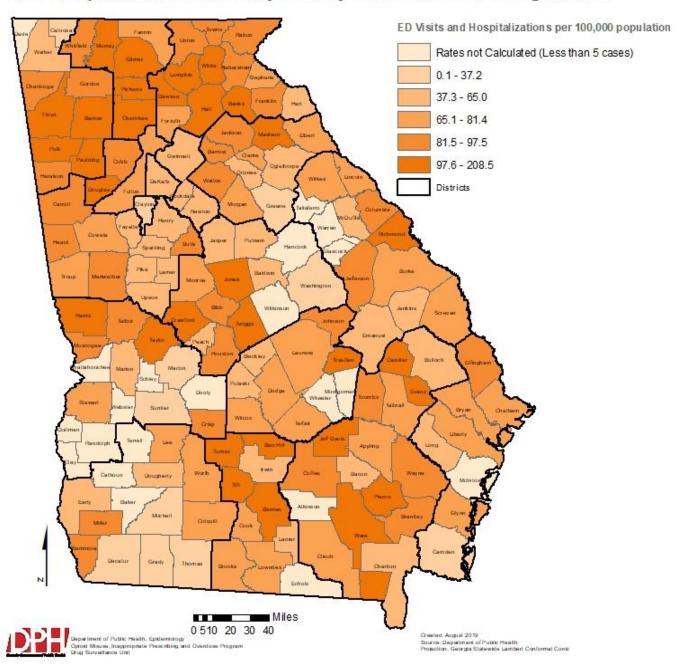
## Any Opioid-Involved Overdose Deaths, by County of Residence, Georgia, 2016



## Any Opioid-Involved Overdose Death Rate, by County of Residence, Georgia, 2016

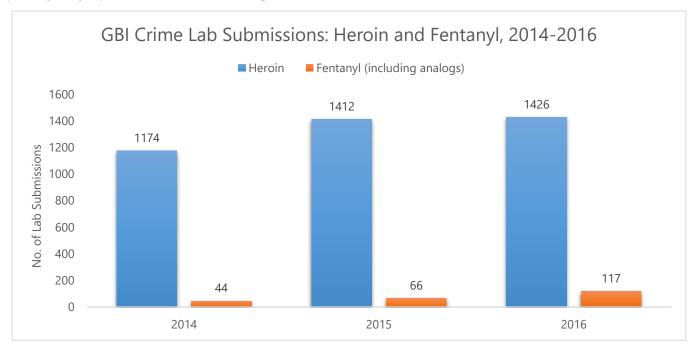


# Any Opioid-Involved Overdose Emergency Department Visit and Hospitalization Rates, by County of Residence, Georgia, 2016

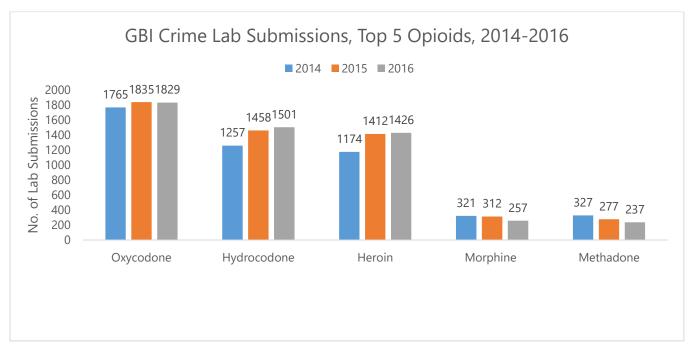


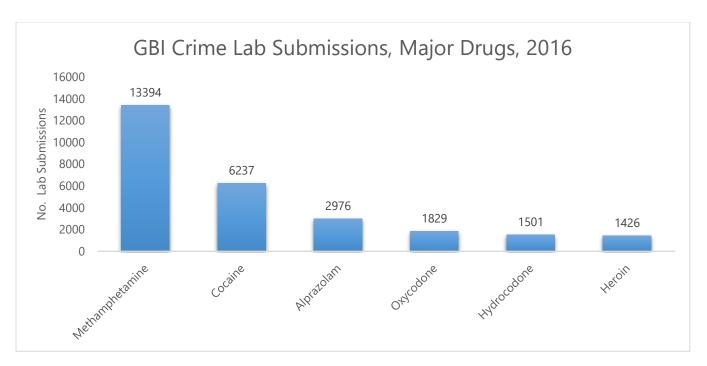
## Georgia Bureau of Investigations (GBI) Crime Laboratory Submissions

Crime laboratory submissions are evidence items (pills, powders, etc.) seized by law enforcement and submitted to the GBI Crime Laboratory (<a href="https://dofs-gbi.georgia.gov/">https://dofs-gbi.georgia.gov/</a>) for forensic chemical identification. A case may contain one submission or several. For example, a case may consist of a single plastic bag with powder material inside, or a case may have been a result of a massive search warrant and contain many bags of powder, plus pills and liquids. Each submission that is tested is recorded and tracked. These data represent only items tested during each calendar year; these numbers may change slightly as untested items are completed.



Submissions to the GBI Crime Laboratory for Heroin and Fentanyl increased by 21.5% and 165.9% respectively from 2014 to 2016.





 Oxycodone, hydrocodone, and heroin were the opioids most frequently submitted to the GBI Crime Laboratory for identification, and in the top six drugs most commonly submitted. Oxycodone and hydrocodone were also the two most frequently prescribed opioids in Georgia in 2016. (see the Georgia PDMP 2016-2017 Report available at <a href="https://dph.georgia.gov/drug-overdose-surveillance-unit">https://dph.georgia.gov/drug-overdose-surveillance-unit</a>).

# Counties with the Highest Number or Rate of Any Opioid-Involved Overdose Deaths, Emergency Depart (ED) Visits and Inpatient Hospitalizations — Georgia, 2016

Number, and age-adjusted rate per 100,000 population. Note: rates could not be calculated for some counties due to the low number of any opioid-involved overdose ED visits, hospitalizations, and deaths, only counties with >15 were included in the top 10 rate ranking

Rank	No. deaths County of residence	No. deaths County of injury	Death rate County of residence	No. ED visits and hospitalizations County of residence	ED visit and hospitalization rate County of residence
1	Fulton (102)	Fulton (131)	Carroll (19.6)	Fulton (717)	Crawford (208.5)
2	Cobb (100)	Cobb (107)	Douglas (16.8)	Cobb (650)	Jeff Davis (184.3)
3	Gwinnett (60)	Gwinnett (54)	Bartow (16.3)	Gwinnett (505)	Evans (148.6)
4	DeKalb (50)	DeKalb (49)	Cherokee (15.5)	DeKalb (326)	Polk (144.8)
5	Cherokee (36)	Henry (24)	Paulding (15.4)	Hall (261)	Bartow (143.7)
6	Henry (30)	Carroll (23)	Henry (13.3)	Cherokee (237)	Lumpkin (141.0)
7	Richmond (28)	Douglas (21)	Cobb (13.0)	Paulding (214)	Paulding (140.7)
8	Paulding (25)	Chatham (20)	Richmond (12.4)	Richmond (213)	Tift (136.3)
9	Douglas (24)	Cherokee (20)	Fulton (9.4)	Chatham (203)	Madison (130.6)
10	Chatham (23)	Paulding (19)	Chatham (8.8)	Muscogee (186)	Dawson (125.6)

Note: The following data include deaths that occurred in Georgia regardless of the patient's residence state.

Drug Overdose Deaths (Mortality) — Georgia, 2010–2016  Any opioid may include prescription and/or illicit opioids; categories are not mutually exclusive Number represents events that occurred in Georgia regardless of the patient's residence state							
- Trum	Any Drug	Any Opioid	Synthetic Opioids	Heroin Heroin	Fentanyl		
Year	No.	No.	No.	No.	No.		
2016	1436	954	399	228	245		
2015	1364	901	411	252	255		
2014	1041	637	164	236	138		
2013	1113	556	82	131	52		
2012	1066	554	65	106	48		
2011	1042	519	84	29	N/A		
2010	1059	514	102	4	N/A		

# Opioid Related Overdose Morbidity and Mortality — Georgia Residents, 2016 (for emergency department (ED) visits, inpatient hospitalizations, and deaths)

Number and rate per 100,000 population (rate is age-adjusted except when age categories are presented) Any opioid may include prescription and/or illicit opioids; categories are not mutually exclusive

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	ED Visits		Hospitalizations		Deaths	
	No.	Rate	No.	Rate	No.	Rate
Total	5195	48.9	2639	24.3	904	8.7
Age group (yrs)						
<1 year	14	10.7	3	N/A	0	N/A
1-4 years	67	12.7	8	1.5	3	N/A
5 -14 years	33	2.3	7	0.5	1	N/A
15-24 years	652	45.3	178	12.4	75	5.2
25-34 years	1140	80.0	348	24.4	231	16.2
35-44 years	742	54.5	351	25.8	198	14.5
45-54 years	836	59.1	538	38.0	206	14.6
55-64 years	900	72.8	595	48.2	151	12.2
65-74 years	548	65.4	421	50.2	33	3.9
75-84 years	206	54.6	145	38.5	6	1.6
85+ years	57	41.0	45	32.4	0	N/A
Sex (age group)						
Male	2447	47.8	1133	21.9	541	10.7
<1 year	9	13.6	2	N/A	0	N/A
1-4 years	35	13.0	4	N/A	2	N/A
5-14 years	7	1.0	1	N/A	0	N/A
15-24 years	338	46.0	94	12.8	65	8.8
25-34 years	709	100.6	220	31.2	155	22.0
35-44 years	365	55.5	162	24.6	114	17.3
45-54 years	337	48.9	205	29.8	96	13.9
55-64 years	381	65.0	241	41.1	88	15.0
65-74 years	196	51.1	151	39.3	17	4.4
75-84 years	56	35.0	41	25.6	4	N/A
85+ years	14	30.7	12	26.3	0	N/A
Female	2746	49.4	1505	26.2	363	6.8
<1 year	5	7.8	1	N/A	0	N/A
1-4 years	32	12.3	4	N/A	1	N/A
5-14 years	26	3.8	6	0.9	1	N/A
15-24 years	314	44.5	84	11.9	10	1.4
25-34 years	431	59.7	128	17.7	76	10.5
35-44 years	377	53.5	189	26.8	84	11.9
45-54 years	499	68.7	333	45.9	110	15.1
55-64 years	519	79.9	354	54.5	63	9.7
65-74 years	351	77.3	269	59.2	16	3.5

75-84 years	150	69.1	104	47.9	2	N/A
85+ years	42	44.9	33	35.3	0	N/A
Race						
White	4053	69.5	2103	33.5	776	14.0
Black	882	27.0	448	13.9	109	3.3

### Opioid Overdose Surveillance and Response Information/Resources

To report an increase in overdoses, a potential overdose cluster, or any other unusual drug-related event, call the Georgia Poison Center at 1-800-222-1222.

Please see <a href="https://dph.georgia.gov/stopopioidaddiction">https://dph.georgia.gov/stopopioidaddiction</a> for more information on how the Georgia Department of Public Health (DPH) is working to combat the opioid epidemic, including:

- Opioid and substance misuse response: https://dph.georgia.gov/georgias-opioid-response
- Prescription Drug Monitoring Program (PDMP): https://dph.georgia.gov/pdmp
- Drug Surveillance Unit: https://dph.georgia.gov/drug-surveillance-unit

Please see <a href="https://dph.georgia.gov/opioid-epidemic-individuals-and-families">https://dph.georgia.gov/opioid-epidemic-individuals-and-families</a> for information on the opioid epidemic for **individuals and families**, including:

- Addiction prevention
- Drug take-back
- Signs of an overdose and steps to take
- Naloxone information
- Georgia's Prescription Drug Monitoring Program (PDMP)
- Georgia's Medical Amnesty Law
- Harm reduction
- Neo-natal abstinence syndrome
- Treatment resources

Please see <a href="https://dph.georgia.gov/opioid-epidemic-medical-providers-and-pharmacists">https://dph.georgia.gov/opioid-epidemic-medical-providers-and-pharmacists</a> for information on the opioid epidemic for **medical providers and pharmacists**, including:

- Steps providers can take to help prevent opioid misuse and addiction in their patients
- Prescribing guidelines
- Georgia's Prescription Drug Monitoring Program (PDMP)
- Georgia's Naloxone Standing Order
- Georgia's Medical Amnesty Law

Please see <a href="https://dph.georgia.gov/opioid-epidemic-first-responders-and-ems">https://dph.georgia.gov/opioid-epidemic-first-responders-and-ems</a> for information on the opioid epidemic for **Law Enforcement and EMS**, including:

- Georgia's Prescription Drug Monitoring Program (PDMP)
- Responder safety
- Georgia's Medical Amnesty Law
- Georgia's Naloxone Standing Order
- Naloxone administration
- Case documentation guidelines

Georgia Department of Public Health (DPH), Epidemiology Section, Drug Surveillance Unit https://dph.georgia.gov/drug-surveillance-unit